COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of*:*

ELECTRONIC APPLICATION OF	**)**	
BIG RIVERS ELECTRIC CORPORATION	**)**	
FOR A CERTIFICATE OF PUBLIC	**)**	
CONVENIENCE AND NECESSITY	**)**	**Case No. 2022-00433**
AUTHORIZING CONSTRUCTION OF A NEW	**)**	
TRANSMISSION OPERATIONS CENTER AND	**)**	
AN ORDER AUTHORIZING BIG RIVERS TO	**)**	
DISPOSE OF PROPERTY	**)**	

BIG RIVERS ELECTRIC CORPORATION'S
RESPONSE TO COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

Big Rivers Electric Corporation ("Big Rivers" or the "Company"), by counsel, files its Response to the Commission Staff's First Request for Information, issued in the above-captioned case on February 24, 2023.

FILED: March 6, 2023

ELECTRONIC APPLICATION OF BIG RIVERS ELECTRIC CORPORATION FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY AUTHORIZING CONSTRUCTION OF A NEW TRANSMISSION OPERATION CENTER AND AN ORDER AUTHORIZING BIG RIVERS TO DISPOSE OF PROPERTY
CASE NO. 2022-00433

BIG RIVERS ELECTRIC CORPORATION'S RESPONSE
TO THE COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

REQUEST NO. 1: Refer to the Application, page 5, line 9. Provide copies of any site studies generated for BREC.

RESPONSE: Attached are three different site plans that were reviewed during the design process. These site plans are the "site studies" referenced in the Application and my Direct Testimony.

Witness: Tim Masa, President of Cooperative Building Solutions

COOPERATIVE BUILDING SOLUTIONS

06/23/22

1 **BIG RIVERS SITE PLAN - OPTION 1**
1" = 100'-0"

OWENSBORO, KENTUCKY

BIG RIVERS ELEC. CORP.

M+H ARCHITECTS

PARIC

Big Rivers ELECTRIC CORPORATION

1 **BIG RIVERS SITE PLAN - OPTION 2**
1" = 100'-0"

OWENSBORO, KENTUCKY
BIG RIVERS ELEC. CORP.

M+H ARCHITECTS PARIC Big Rivers ELECTRIC CORPORATION

1 **BIG RIVERS SITE PLAN - OPTION 3**
1" = 100'-0"

OWENSBORO, KENTUCKY
BIG RIVERS ELEC. CORP.

M+H ARCHITECTS PARIC Big Rivers ELECTRIC CORPORATION

ELECTRONIC APPLICATION OF BIG RIVERS ELECTRIC CORPORATION FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY AUTHORIZING CONSTRUCTION OF A NEW TRANSMISSION OPERATION CENTER AND AN ORDER AUTHORIZING BIG RIVERS TO DISPOSE OF PROPERTY
CASE NO. 2022-00433

BIG RIVERS ELECTRIC CORPORATION'S RESPONSE
TO THE COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

REQUEST NO. 1-2: Refer to the Application, page 7, line 17. Provide copies of any loan applications or correspondence with lenders regarding financing of the proposed project.

RESPONSE: Big Rivers intends to fund the investment in the proposed TOC through a loan with the Rural Utilities Service ("RUS"). As such, Big Rivers has submitted to RUS an amendment (Amendment 2022-1) to Big Rivers' 2020-2023 Construction Work Plan to include the Transmission Operations Center. Amendment 2022-1 is provided as an attachment to this response. The RUS-required review under the National Environmental Policy Act is ongoing, and the Big Rivers environmental group is working with Sargent & Lundy to coordinate the effort with the RUS. Once Big Rivers receives environmental and technical approval of the project from RUS, the RUS loan application will be filed.

Witness: Talina R. Mathews, Ph.D., Big Rivers' CFO

Big Rivers
ELECTRIC CORPORATION

2022-1 AMENDMENT TO THE
2020-2023
CONSTRUCTION WORK PLAN

Prepared by

Big Rivers Electric Corporation

October 18, 2022

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I INTRODUCTION

The purpose of this report is to provide a description and history of Big Rivers' existing Energy Transmission & Substation ("ET&S") facility and the Energy Control and Transmission Engineering departments, which Big Rivers proposes to combine at the new Transmission Operations Center ("TOC"). The need for the proposed construction of the new TOC is documented along with the process Big Rivers employed to determine the best option to meet its present and future TOC needs. Additionally, Big Rivers intends to sell the existing ET&S and Headquarters facilities as they will no longer be needed following completion of the new TOC.

II THE ET&S FACILITY, ENERGY CONTROL, AND ENGINEERING

The existing ET&S facility is located on 5.6 acres at 5650 Airline Road in Henderson, Kentucky. The main building on the site was constructed in 1979 and it encloses 23,000 ft^2, including 5,000 ft^2 of office space, 18,000 ft^2 of warehouse and vehicle storage. An additional warehouse for vehicle storage was constructed in 1984. This additional building encloses 6,000 ft^2. The current facility has on-site fueling, compressed gas storage, a loading dock, and a 3,500 ft^2 vehicle maintenance and oil storage area. Approximately half of the 5.6 acre site is within the flood hazard zone and is not usable for additional facility construction.

The ET&S facility is the sole operations facility for the entire Big Rivers transmission system. It is the primary warehouse for all transmission line and substation materials. Though becoming increasingly inadequate, the ET&S facility and off-site locations provide storage for vehicles and all other equipment needed to

maintain the safe and reliable operation of the transmission system. Off-site storage includes an unmanned substation utilized for the outdoor storage of tanker trailers and mobile substations. Various transmission related equipment is stored at the Sebree generation facility. Due to indoor storage limitations, inventory material, other trailers, various transmission equipment, and bushings are stored outdoors.

The Energy Control Department operates a control center primarily needed to monitor and safely control the flow of electricity through Big Rivers' substations and power lines on a 24 hour x 7 day a week basis. North American Electric Reliability Corporation ("NERC") certified system operators perform their operational duties within the control room while engineers work to enhance the electric system and ensure compliance.

[redacted]

The Engineering Department is responsible for designing and building the miles of transmission line, other transmission facilities including substations, and the state-of-the art communication technology connecting the complex system, and supporting ET&S in day-to-day operations as needed. The Engineering department includes 7 engineers and supporting personnel.

[redacted]

[redacted] The IT department will include 5 full-time employees located at the TOC and at least 2 employees located at the TOC on a part-time basis.

Thirty-five (35) employees are located at the ET&S facility, with operations divided into four (4) areas: Vegetation Management, Line Maintenance, Substation Maintenance, and Substation/Communication Operations. Big Rivers' Energy Control, Engineering, Transmission Planning & Compliance departments and key IT/IS EMS and data center support personnel, consist of Thirty (30) employees which, as noted above, are presently not housed in the ET&S facility. Thus a total of 65 employees are planned to move into the new TOC.

III DUE DILIGENCE AND REVIEW OF ALTERNATIVES

As discussed, the existing ET&S facility does not adequately meet the operational needs of Big Rivers. The need for additional warehouse and garage space at the existing ET&S facility initially led Big Rivers to consider options for the ET&S facility, including constructing warehouse space offsite, or purchasing Henderson Municipal Power &Light's ("HMPL") electric system and using HMP&L's facilities for ET&S operations which HMP&L rejected Big Rivers' offer on July 13, 2021, or relocating ET&S.

Big Rivers considered retrofitting its existing Henderson headquarters building to satisfy its TOC needs. However, just as the location of Big Rivers future headquarters in downtown Owensboro is not suitable for an operations center, the existing Henderson location will be impractical to use as a TOC. The location of Big Rivers' existing headquarters facility in downtown Henderson is suited for business offices and light vehicle traffic, not for the industrial operations required at the ET&S facility, nor for the housing of large vehicles and equipment. [redacted]

Given the need to relocate the ET&S facilities (along with the other transmission related functions), and the in-progress headquarters relocation, Owensboro was the logical location for the new TOC due to proximity to the new headquarters facility.

Big Rivers initially identified a location near the Owensboro airport as its preferred location. That property was jointly owned by the City of Owensboro, Daviess County, and the Owensboro-Daviess County Industrial Foundation. After reviewing the intended property use, the ownership group did not approve the sale to Big Rivers.

Big Rivers ultimately selected an available property at 90 Industrial Drive, Owensboro for the TOC location. This large undeveloped property has desirable road access needed for the large vehicles utilized by Big Rivers to maintain its transmission facilities. Additionally, Big Rivers has negotiated incentives with the City of Owensboro that make the relocation cost-effective. As such, Big Rivers purchased the property for the proposed Facility from a private landowner (Audubon Loans I, LLC) on November 23, 2021. Big Rivers is in continuing negotiations with the City regarding the final incentive package.

Big Rivers originally planned to relocate all employees currently housed at Big Rivers' existing headquarters to its new headquarters location in downtown Owensboro. Ultimately, Big Rivers concluded that combining the Energy Control and Engineering departments and other key support personnel with its employees and operations currently housed at its ET&S facility will provide more operational efficiencies.

IV. PLANNING, DESIGN, AND BENEFITS OF THE TOC

The TOC Facility is to be located at property purchased by Big Rivers at 90 Industrial Drive, Owensboro, Kentucky 42301. At approximately 98,000 square feet, the new TOC Facility will house offices, warehouses, enclosed and covered vehicle storage space, and a loading dock. The TOC Facility's access to major thoroughfares in Owensboro, and particularly the Owensboro bypass.

All ET&S, Energy Control, Engineering Department, and other technical support personnel will move to the new TOC Facility. In total, that amounts to approximately 65 employees.

The TOC Facility is expected to cost approximately $44,263,000. The TOC will allow Big Rivers to unify ET&S, Energy Control, Planning & Compliance, Engineering, and other technical support operations at one central facility. The TOC Facility will create many construction and operational efficiencies, as well as some much needed operational and safety and reliability enhancements. The TOC Facility will not create the need for a wholesale rate increase. Big Rivers has selected the TOC Facility as the best option for its present and future needs. The TOC Facility is designed to address the issues related to safety, security, and efficiency identified herein, and will ensure Big Rivers' continued provision of service in a reasonable, least cost manner. Locating all of our transmission staff in one location will improve communication and work flow, better enabling our ability to reduce outage response times. It improves our Energy Control operations and reliability significantly. In addition, our ability to store critical materials and equipment indoors will help guard

against theft or vandalism, while simultaneously extending the service life of those facilities. Combining these functions at one facility likewise enables basic efficiencies like reduced costs for utility services. Ultimately, it facilitates the efficient coordination of transmission activities, and it addresses all of our physical facility needs in one centralized and suitable location that remains in the center of the Big Rivers footprint.

V. SALE OF ET&S AND HENDERSON HEADQUARTER'S FACILITIES

Big Rivers plans to sell the existing ET&S Facility and its Henderson headquarters building. The existing ET&S property is currently listed as for sale. The property is being offered for sale at a price consistent with that value set by a qualified real estate appraiser. The property will ultimately be sold in an arms-length transaction at market price.

Multiple parties have indicated an interest in the ET&S property. It is clear that there is bona fide interest in the property. Big Rivers plans to sell each upon completion of Big Rivers' new facilities in Owensboro.

VI. CONCLUSION

Due to its size constraints, aging, and inefficiencies, as well as Big Rivers' evolving operational requirements, the existing ET&S Facility can no longer adequately satisfy the current and future needs of Big Rivers and its Members. It is not feasible to retrofit the existing ET&S Facility to meet those needs. The proposed TOC Facility is reasonable in terms of investment and scope, and it will not result in wasteful

duplication of facilities. Big Rivers has thoroughly reviewed and considered alternatives to the proposed TOC Facility and determined that the proposed TOC represents a reasonable, cost-effective solution to meet Big Rivers' needs.

Amendment to Current Approved
Construction Work Plan

Amendment # **2022-1** Borrower Designation **KY 62**

Work Plan Period 2020-2023

Change Proposed

740c Codes

1301: Transmission Operations Center

Reason for Change

See Attachment (KY 62 Big Rivers TOC CWP 2020-2023 Amendment 10-18-22.pdf)

Method of Financing

Loan Funds **X**
General Funds
Contributions in Aid

Status of Borrowers Environmental Report: (In Progress)

Estimated Cost of New Projects $44,263,000

Engineering Support: See Attachment (KY 62 Big Rivers TOC CWP 2020-2023 Amendment 10-18-22.pdf)

Registered Engineer (Christopher S. Bradley) (KY P.E.18311)

Requested By: President & CEO Robert W. Berry Date: 10-19-22
Robert W. Berry

Approved By:

Subject to ER approval? Yes X No _
Status of Construction: Proposed

ELECTRONIC APPLICATION OF BIG RIVERS ELECTRIC CORPORATION FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY AUTHORIZING CONSTRUCTION OF A NEW TRANSMISSION OPERATION CENTER AND AN ORDER AUTHORIZING BIG RIVERS TO DISPOSE OF PROPERTY
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BIG RIVERS ELECTRIC CORPORATION'S RESPONSE
TO THE COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

REQUEST NO. 1-3: Refer to the Application, page 8, lines 20-21.

a. Provide copies of any appraisals of the existing Energy Transmission and Substation facility (ET&S) property.

b. State the accumulated depreciation and remaining undepreciated amounts for the ET&S property.

c. State the number of employees currently housed in in each of the areas of the ET&S facility described in the Direct Testimony of Robert W. Berry (Berry Testimony), page 5.

RESPONSE:

a. Please see the attached copy of the two appraisals that were performed.

b. The accumulated depreciation for the ET&S facility as of 12/31/2022 is $827,031 and the remaining net book value is $545,022.

c. As described in Mr. Berry's testimony, the proposed TOC will permit Big Rivers to both relocate the thirty-five (35) employees presently working at the ET&S facility and combine them with approximately twenty-seven (27) additional employees performing Energy Control, Engineering, and IT/IS related functions presently housed elsewhere. The thirty-five (35) employees who currently work at the ET&S facility are within the following areas:

1) Administration: Three Employees, including the Director of Transmission Systems, Senior Secretary, and Storekeeper.
2) Vegetation Management: Four Employees, including the Vegetation Management Supervisor and three Forester "A" employees.

3) (Right-of-Way) Line Maintenance: Nine Employees, including the Line Maintenance Supervisor, three Senior Linemen, three Linemen, and two Apprentice Linemen.

4) Substation Maintenance: Twelve Employees, including the Substation Maintenance Supervisor, a Substation Field Specialist, five Senior Technicians (Substation), three Technicians (Substation), and two Utility (Substation).

5) Substation/Communication Operations: Seven Employees, including the Substation Operations Supervisor, a Senior Systems Operations Specialist, three Senior Technicians (Communications), a Technician (Communications), and a Senior Technician (Metering).

Witness: **Subparts a – b: Talina R. Mathews, Ph.D., Big Rivers' CFO**

Subpart c: Christopher S. Bradley, Big Rivers' VP of System Operations

Robert W. Berry, Big Rivers' President and CEO

ATTACHMENT 1-3

APPRAISAL

This Exhibit, in its entirety, has been submitted under seal with an accompanying request for confidential treatment.

ELECTRONIC APPLICATION OF BIG RIVERS ELECTRIC CORPORATION FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY AUTHORIZING CONSTRUCTION OF A NEW TRANSMISSION OPERATION CENTER AND AN ORDER AUTHORIZING BIG RIVERS TO DISPOSE OF PROPERTY
CASE NO. 2022-00433

BIG RIVERS ELECTRIC CORPORATION'S RESPONSE
TO THE COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

REQUEST NO. 1-4: Refer to the Application, Berry Testimony, pages 10–11, lines 18–6.

a. State the amount of the rejected Henderson Municipal Power & Light's (HMPL) facility offer.

b. State the square footage of the HMPL facility.

c. Explain in greater detail why it was not feasible to use the HMPL facility separate from the ET&S facility.

d. Provide the estimated cost of upgrading the HMPL facility.

RESPONSE:

Big Rivers did not offer to purchase any particular HMPL facility. The testimony is referencing the offer made by Big Rivers in early 2021 to purchase the entirety of HMPL's electric system, including the right to provide electric service to HMPL's customers. The purchase would have allowed for both companies to reduce costs through certain efficiencies, such as potentially combining transmission and distribution personnel and facilities. The offer included several aspects, including the settlement of all litigation between the parties. HMPL rejected the offer in July of 2021. The offer is attached as an exhibit to this response.

Because HMPL rejected the offer, utilizing any of HMPL's facilities is not a viable alternative to the proposed TOC.

b. – d.. Please see the answer to subpart (a) of this response.

ELECTRONIC APPLICATION OF BIG RIVERS ELECTRIC CORPORATION FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY AUTHORIZING CONSTRUCTION OF A NEW TRANSMISSION OPERATION CENTER AND AN ORDER AUTHORIZING BIG RIVERS TO DISPOSE OF PROPERTY
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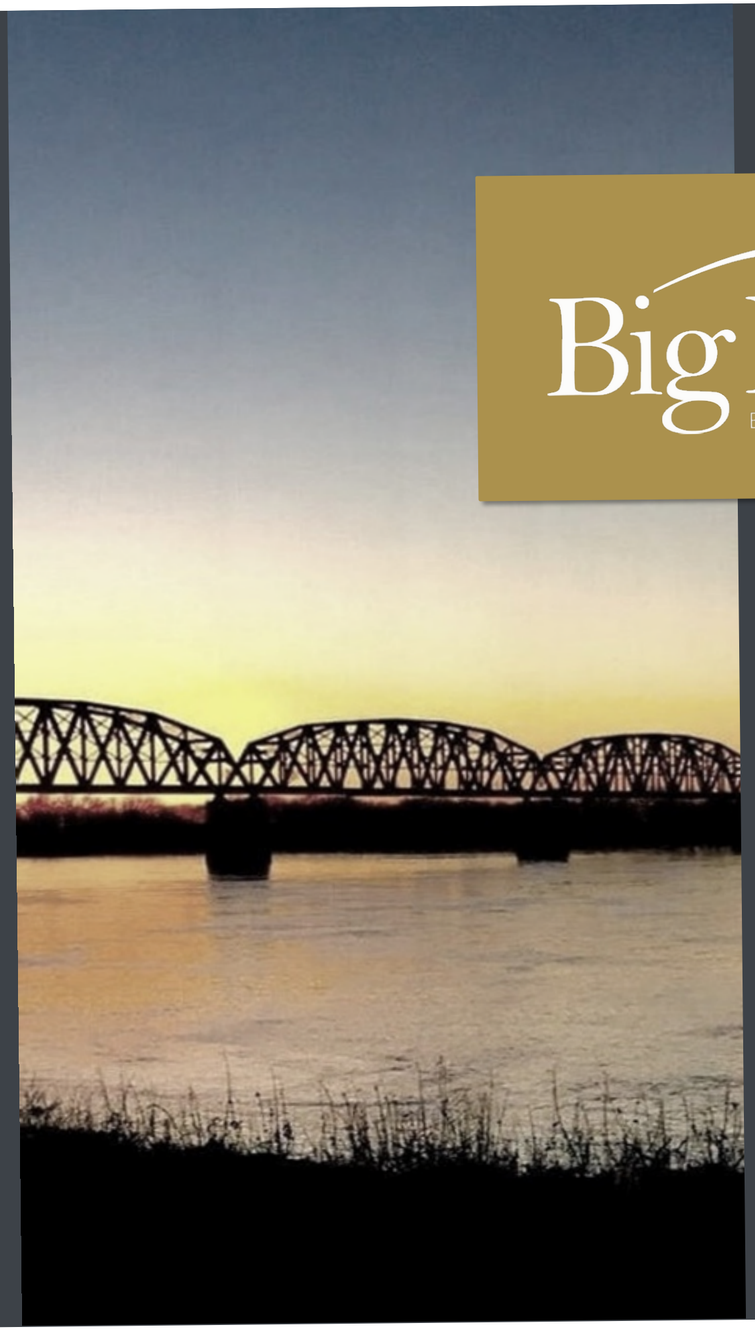
BIG RIVERS ELECTRIC CORPORATION'S RESPONSE
TO THE COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

Witness: Robert W. Berry, Big Rivers' President and CEO

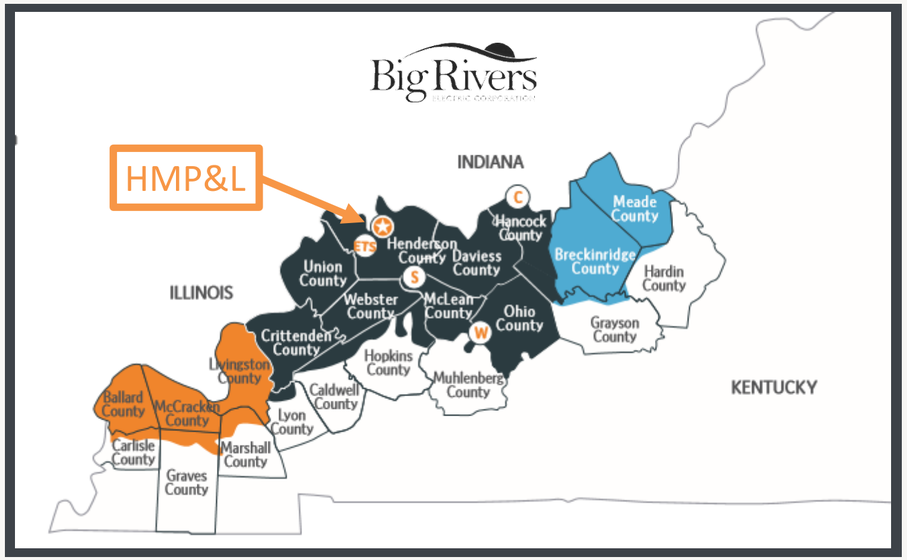


Big Rivers
ELECTRIC CORPORATION

CITY OF HENDERSON

Board of Commissioners

FEBRUARY 23, 2021



WHO IS BIG RIVERS?

Big Rivers Electric Corporation is a **member-owned**, **not-for-profit**, generation and transmission cooperative. We provide wholesale electric power and services to three distribution cooperative members that serve 118,000 consumer/members located across 22 counties in western Kentucky, and we sell wholesale power to entities across the country.

Why Selling HMP&L Assets Makes Sense

Selling HMP&L to Big Rivers makes sense because it provides the city with a cash windfall, financial stability, rate stability, continued local control, and an end to all outstanding disputes between Big Rivers and the City of Henderson. It also keeps 34 jobs in the city ($3.2M annual payroll).

Case No. 2022-00433
Attachment 1-4
Page 3 of 30

Big Rivers
ELECTRIC CORPORATION

FIRST AND FOREMOST:

- This offer is a good deal for the city and for Big Rivers' member-owners, but I'm not here today to ask you to take my word for it.
- Big Rivers is offering to reimburse the city up to $50,000 for the cost of an independent third party to perform an economic evaluation of this offer.
- The city may choose whomever you desire to evaluate the offer.
- There are no strings attached. If the city performs the analysis and decides that you are not interested in our offer, we request a copy of the evaluation and both parties will continue litigating existing issues.
- Any agreement reached is contingent on typical due diligence by both parties and various approvals.

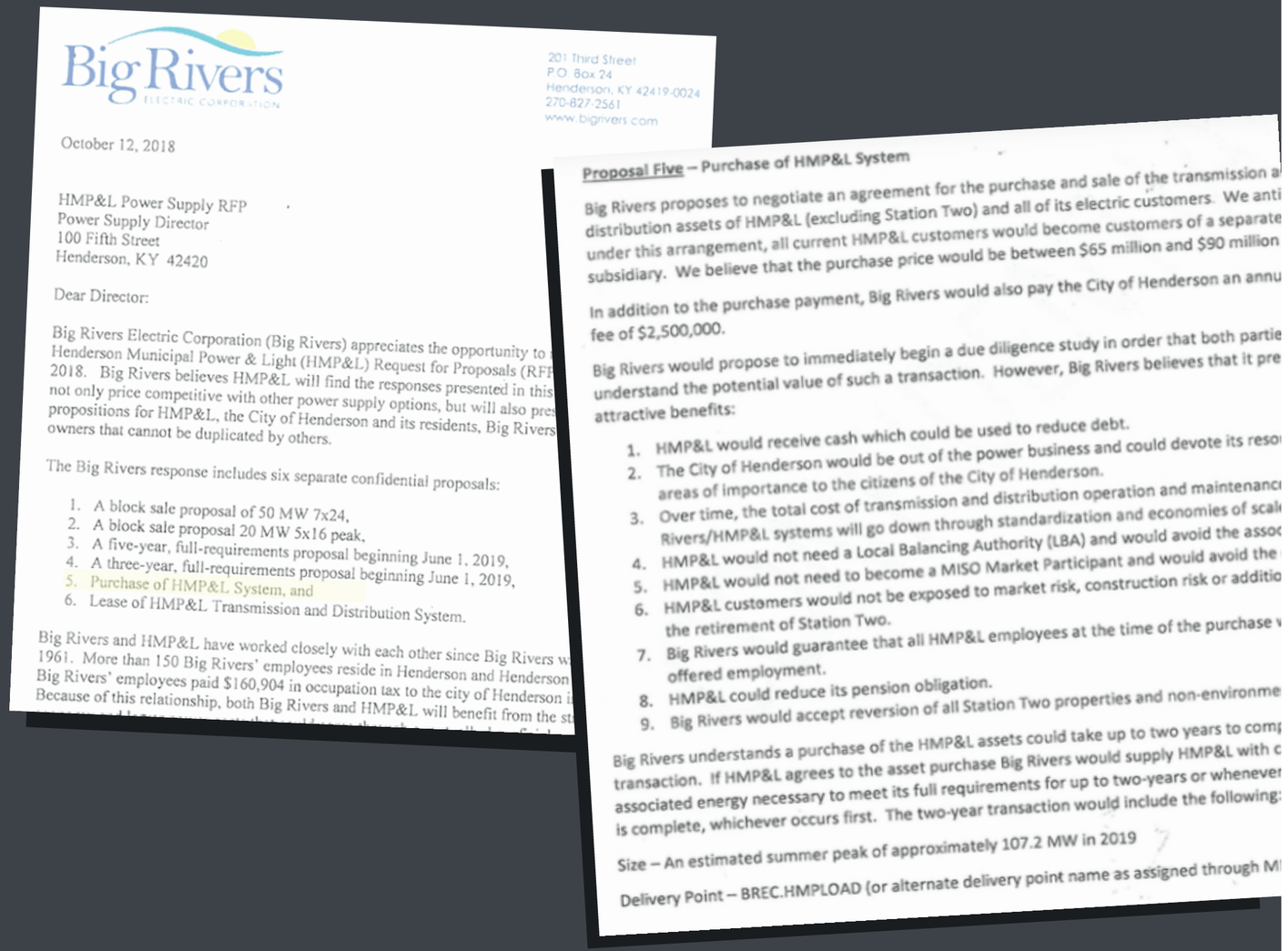
Big Rivers
ELECTRIC CORPORATION

OUR PROPOSAL

Big Rivers
ELECTRIC CORPORATION

2018

In 2018, Big Rivers responded to a Request for Proposals from HMP&L for power supply options. In our proposal, we proposed the purchase of HMP&L assets for essentially the same terms we have offered today.



Big Rivers
ELECTRIC CORPORATION

201 Third Street
P.O. Box 24
Henderson, KY 42419-0024
270-827-2561
www.bigrivers.com

October 12, 2018

HMP&L Power Supply RFP
Power Supply Director
100 Fifth Street
Henderson, KY 42420

Dear Director:

Big Rivers Electric Corporation (Big Rivers) appreciates the opportunity to
Henderson Municipal Power & Light (HMP&L) Request for Proposals (RF
2018. Big Rivers believes HMP&L will find the responses presented in this
not only price competitive with other power supply options, but will also pre
propositions for HMP&L, the City of Henderson and its residents, Big Rivers
owners that cannot be duplicated by others.

The Big Rivers response includes six separate confidential proposals:

1. A block sale proposal of 50 MW 7x24,
2. A block sale proposal 20 MW 5x16 peak,
3. A five-year, full-requirements proposal beginning June 1, 2019,
4. A three-year, full-requirements proposal beginning June 1, 2019,
5. Purchase of HMP&L System, and
6. Lease of HMP&L Transmission and Distribution System.

Big Rivers and HMP&L have worked closely with each other since Big Rivers w
1961. More than 150 Big Rivers' employees reside in Henderson and Henderson
Big Rivers' employees paid $160,904 in occupation tax to the city of Henderson i
Because of this relationship, both Big Rivers and HMP&L will benefit from the st

Proposal Five – Purchase of HMP&L System

Big Rivers proposes to negotiate an agreement for the purchase and sale of the transmission a
distribution assets of HMP&L (excluding Station Two) and all of its electric customers. We anti
under this arrangement, all current HMP&L customers would become customers of a separate
subsidiary. We believe that the purchase price would be between $65 million and $90 million

In addition to the purchase payment, Big Rivers would also pay the City of Henderson an annu
fee of $2,500,000.

Big Rivers would propose to immediately begin a due diligence study in order that both partie
understand the potential value of such a transaction. However, Big Rivers believes that it pre
attractive benefits:

1. HMP&L would receive cash which could be used to reduce debt.
2. The City of Henderson would be out of the power business and could devote its reso
areas of importance to the citizens of the City of Henderson.
3. Over time, the total cost of transmission and distribution operation and maintenanc
Rivers/HMP&L systems will go down through standardization and economies of scal
4. HMP&L would not need a Local Balancing Authority (LBA) and would avoid the assoc
5. HMP&L would not need to become a MISO Market Participant and would avoid the
6. HMP&L customers would not be exposed to market risk, construction risk or additio
the retirement of Station Two.
7. Big Rivers would guarantee that all HMP&L employees at the time of the purchase v
offered employment.
8. HMP&L could reduce its pension obligation.
9. Big Rivers would accept reversion of all Station Two properties and non-environme

Big Rivers understands a purchase of the HMP&L assets could take up to two years to comp
transaction. If HMP&L agrees to the asset purchase Big Rivers would supply HMP&L with c
associated energy necessary to meet its full requirements for up to two-years or whenever
is complete, whichever occurs first. The two-year transaction would include the following:

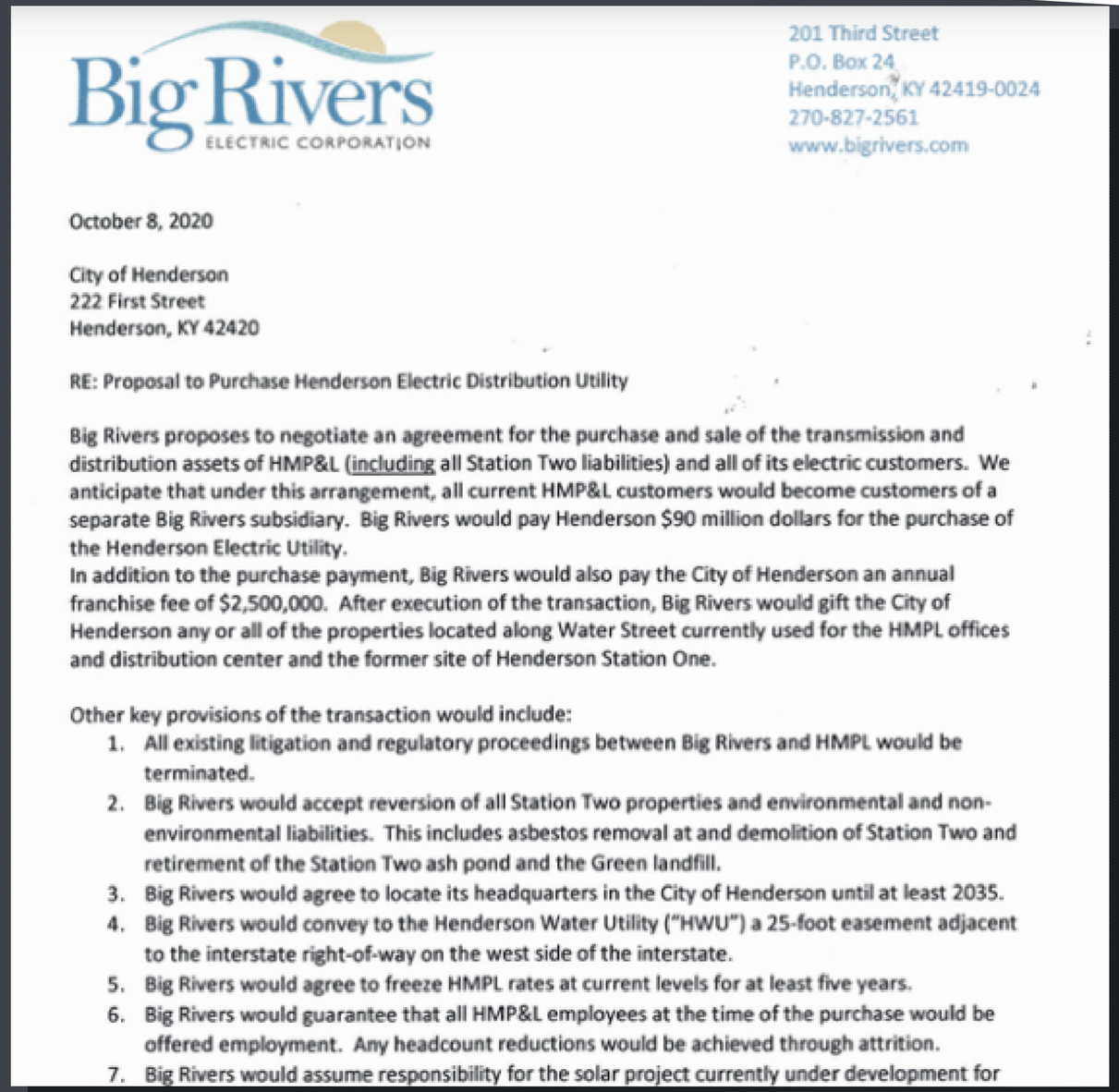
Size – An estimated summer peak of approximately 107.2 MW in 2019

Delivery Point – BREC.HMPLOAD (or alternate delivery point name as assigned through MI

Big Rivers

2020

In 2020, Big Rivers both verbally and formally renewed our proposal.



Big Rivers
ELECTRIC CORPORATION

201 Third Street
P.O. Box 24
Henderson, KY 42419-0024
270-827-2561
www.bigrivers.com

October 8, 2020

City of Henderson
222 First Street
Henderson, KY 42420

RE: Proposal to Purchase Henderson Electric Distribution Utility

Big Rivers proposes to negotiate an agreement for the purchase and sale of the transmission and distribution assets of HMP&L (including all Station Two liabilities) and all of its electric customers. We anticipate that under this arrangement, all current HMP&L customers would become customers of a separate Big Rivers subsidiary. Big Rivers would pay Henderson $90 million dollars for the purchase of the Henderson Electric Utility.
In addition to the purchase payment, Big Rivers would also pay the City of Henderson an annual franchise fee of $2,500,000. After execution of the transaction, Big Rivers would gift the City of Henderson any or all of the properties located along Water Street currently used for the HMPL offices and distribution center and the former site of Henderson Station One.

Other key provisions of the transaction would include:

1. All existing litigation and regulatory proceedings between Big Rivers and HMPL would be terminated.
2. Big Rivers would accept reversion of all Station Two properties and environmental and non-environmental liabilities. This includes asbestos removal at and demolition of Station Two and retirement of the Station Two ash pond and the Green landfill.
3. Big Rivers would agree to locate its headquarters in the City of Henderson until at least 2035.
4. Big Rivers would convey to the Henderson Water Utility ("HWU") a 25-foot easement adjacent to the interstate right-of-way on the west side of the interstate.
5. Big Rivers would agree to freeze HMPL rates at current levels for at least five years.
6. Big Rivers would guarantee that all HMP&L employees at the time of the purchase would be offered employment. Any headcount reductions would be achieved through attrition.
7. Big Rivers would assume responsibility for the solar project currently under development for

Today, We Renew Our Proposal

1. Big Rivers would pay $90 million for the assets of HMP&L.

2. Big Rivers would pay an annual franchise fee to the city of $2.5 million.

3. Henderson would have no obligation for any environmental or decommissioning costs of Station Two.

4. All existing litigation and regulatory proceedings between Big Rivers and HMP&L would be terminated.

5. The city would retain the HMP&L properties located along Water Street.

6. Immediate rate freeze and Big Rivers will not increase rates for at least the next five years.

Today, We Renew Our Proposal (continued)

7. The governance structure would allow local control with elected city officials sitting on both the subsidiary board and Big Rivers board.

8. Big Rivers would maintain its ET&S organization at the current location and continue to pay Occupational Tax on the $3.2 million annual payroll at the facility.

9. Guaranteed employment opportunities for all existing HMP&L employees.

10. Big Rivers would convey to HWU a 25-foot easement (or alternative pump solution) at Sebree Station.

11. Big Rivers will reimburse the city $50,000 for the cost of an independent third party evaluation of this offer.

Big Rivers
ELECTRIC CORPORATION

HOW DOES THIS OFFER BENEFIT THE CITY OF HENDERSON?

Case No. 2022-00433
Attachment 1-4

Long-Term Financial Stability for the City

- Big Rivers would purchase HMP&L assets for $90 million.

- City would have the ability to spend $90 million as it sees fit:
    - Workforce development, sports complex, attract new industry, convention center, museums, or parks,
    - Fully fund outstanding city pension liabilities,
    - Or save the significant windfall for future unexpected needs.

- Big Rivers would pay an annual franchise fee of $2.5 million to the city.

- Big Rivers' annual franchise fee exceeds the annual payment and services HMP&L currently provides to the city.

- Henderson would have no obligation for any environmental or decommissioning costs of Station Two.
    - HMP&L has acknowledged these costs are at least $8 million…and Big Rivers thinks the cost could be much higher.

Case No. 2022-00433
Attachment 1-4
Page 11 of 30

Long-Term Financial Stability for the City (continued)

- All existing litigation and regulatory proceedings between Big Rivers and HMP&L would be terminated resulting in a significant reduction in annual legal fees by each party.
- Big Rivers would assume all energy contracts held by the city.
- Henderson would retain the HMP&L properties on Water Street.
- Henderson would avoid the $13 million expenditure announced for a new HMP&L office.
- Big Rivers would keep its Airline Road operation in the city until at least 2035 ($3.2 million payroll, 34 jobs).
- Big Rivers would provide an easement or alternative pump solution at Sebree Station.

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Attachment 1-4
Page 12 of 30

Resolve All Outstanding Disputes Between Big Rivers and the City of Henderson

- Today, there are currently 7 pending lawsuits:
  - 1 at Kentucky Public Service Commission (KPSC)
  - 1 in Franklin Circuit Court
  - 2 in Webster Circuit Court
  - 2 in Henderson Circuit Court
  - 1 at Federal Energy Regulatory Commission (FERC)

- Big Rivers would accept reversion of all Station Two properties and City of Henderson would have no decommissioning cost obligation for Station Two.

- City of Henderson would have no future environmental liability for Station Two or Green Station landfill.

- Big Rivers would convey to HWU a 25-foot easement adjacent to the interstate at the Sebree Station or allow HWU to install a smaller pump at the current intake structure. Adding the pump is a significant savings to the other options for HWU.

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City Exits the Electric Power Business

- City customers benefit from Big Rivers' dedicated power market employees and economies of scale.
- Big Rivers assumes responsibility for Henderson's SEPA hydro allocation.
- Big Rivers assumes responsibility for Henderson's solar purchase.
- Big Rivers assumes responsibility for all operations of the local electric network.
- City avoids significant future legal fees to litigate disputes.
- City avoids $13 million expenditure for new office building.
- City eliminates the need to pay consultants to assist with managing its power supply and infrastructure.
- Big Rivers assumes Local Balancing Authority responsibility, a savings of $600,000 per year.

Economic Summary

Note: Big Rivers' proposal was reviewed by a consultant with experience in municipal acquisitions and it was deemed to be at the high-end of the valuation range ($/customer; EBITDA multiple; NBV multiple).

Financial Windfall: Cash and Avoided Expenditures	
Purchase Price	$ 90 million
Avoided Station Two Decommissioning & Environmental Costs	8 million
Avoided Investment in New Office Building	13 million
Total Cash and Avoided Expenditures	$111 million

Annual Financial Benefit	
Additional Annual Franchise Fee	$500,000 - $750,000
Avoided Local Balancing Authority Cost	600,000
Avoided Attorney Fees	500,000 - 1 million
Avoided Annual Pension Cost	300,000 – 700,000
Avoided Other Energy Consultant Fees	100,000 - 300,000
Total Annual Expense Savings	$2.0 - $3.35 million

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Attachment 1-4
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HOW DOES THIS OFFER BENEFIT HENDERSON RATEPAYERS?

Rate Stability

- Big Rivers would implement an immediate rate freeze for Henderson ratepayers and will not increase rates for at least five years.

- As a reference, HMP&L rates appear to have increased 1%-2% per year during the past 5 years.

- Avoid $13 million expenditure for new office building. This single expenditure would exceed total existing utility investment (poles, wires, substations, vehicles, etc.).

- HMP&L touts having some of the lowest rates in the nation. Big Rivers and its members have also had some of the lowest rates in the nation for years prior to the smelter departure. Big Rivers has successfully mitigated the loss of the smelter load and has emerged stronger and better diversified.

- Big Rivers has not increased base rates since 2013 and our long-range forecast does not assume an increase before 2034.

- In 2020, Big Rivers returned $33 million to its Member-Owners.

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Attachment 1-4
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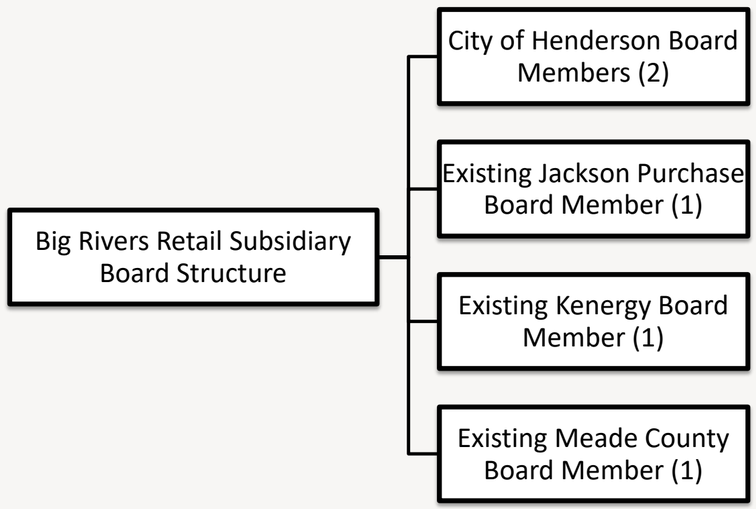
Rate Stability (continued)

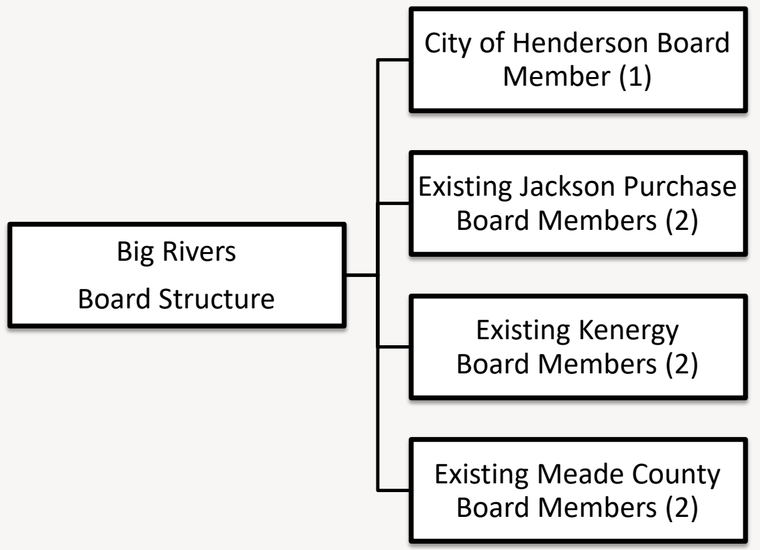
- Big Rivers' members serve 118,000 consumer/members in 22 counties.
- HMP&L serves approximately 80 customers/mile; Kenergy serves 9 customers/mile.
- Future costs for the Big Rivers/Henderson system will decrease through standardization and economies of scale.
- The rate freeze and future cost reductions will strengthen the local economy and make the region more competitive in its economic development efforts.
- Electric rates would be governed by the Kentucky Public Service Commission, which is good for the individual ratepayer.

Continued Local Control

- Our proposed Governance Structure includes City of Henderson representation on both the Retail Subsidiary's Board of Directors and the Big Rivers Board of Directors.

- All Board members are compensated.





- Proposed structure would have elected officials sitting on the board, not appointees—giving a true voice to ratepayers.

HOW DOES THIS OFFER BENEFIT HMP&L EMPLOYEES?

HMP&L Employees

- Big Rivers will guarantee comparable employment opportunities for all existing employees.
- More attractive compensation and benefit package at Big Rivers.
- Acceptance into a fully funded Defined Contribution retirement plan.
- Employment at a larger corporation with a broader scope of operations provides employees with greater career opportunities.

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How Does This Offer Benefit Big Rivers?

Load Diversification

- Big Rivers learned the hard way in 2013 what having disproportionally large industrial loads could do to your system.
- When the smelters left their contracts, the remaining homes and small businesses were left holding the bag.
- Big Rivers recognizes that having well diversified loads help us to manage our risk and keep rates as low as possible.
- Every decision we make is focused on keeping our rates low and our service reliable.

Resolve All Outstanding Disputes Between Big Rivers and the City of Henderson

- Today, there are currently 7 pending lawsuits
  - 1 at KPSC
  - 1 in Franklin Circuit Court
  - 2 in Webster Circuit Court
  - 2 in Henderson Circuit Court
  - 1 at FERC

- We are confident in our legal position, but we feel we are wasting time and resources padding attorney's pockets as we continue to fight on so many levels in so many venues.

- If this offer is accepted by Henderson, we feel that the long-term benefits to our members of another stable, steady load for our resources will outweigh the costs we incur to purchase the city's assets and settle our outstanding differences.

Big Rivers
ELECTRIC CORPORATION

Executive Summary

Case No. 2022-00433
Attachment 1-4

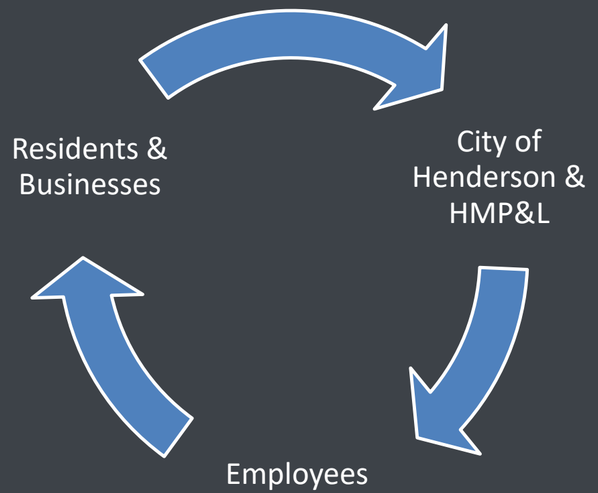
Municipal Utility Transactions

Privatization of municipal electric utility systems is fairly common, including in Kentucky.

Municipality	Utility	Year
Anchorage, AK	Chugach Cooperative	2021
Murfreesboro, TN	Middle Tennessee Electric	2020
Vero Beach, FL	Florida Power & Light	2018
Seward, KS	Midwest Energy	2015
Eagle Mountain, UT	Rocky Mountain Power	2015
Hercules, CA	Pacific Gas & Electric	2014
Owensville, MO	Ameren	2012
Readsboro, VT	Central Vermont PSC	2011
Fort Wayne, IN	Indiana Michigan Power	2011
Somerville, TN	Chickasaw Electric Cooperative	2010
Elk City, OK	American Electric Power	2010
Monticello, KY	South Kentucky RECC	2008

Big Rivers' Proposal Benefits the City, Residents, Businesses, and Employees

- Long-term Rate Freeze
- Accelerate Fiber Optic Expansion
- Strengthened Local Economy



- Cash Windfall
- Increased Annual Franchise Fee
- Resolves All Litigation
- Avoids Station Two Decommissioning Cost and Environmental Liability
- Exit from Electric Power Business
- Big Rivers' ET&S Remains Local Activity
- Reduced Future Pension Obligation
- Resolves HWU Desired Easement
- HMP&L Valuation Performed at No Cost

- No Layoffs
- Enhanced Wages & Benefits
- Secure Retirement Program
- Greater Career Opportunity

Approvals

- The Big Rivers Board of Directors
- City of Henderson Referendum
- The Kentucky Public Service Commission
- The Rural Utilities Service (RUS)
- Others?

Timeline and Next Steps

- City of Henderson Hires Third Party Consultant (Big Rivers will reimburse up to $50,000)
- Consultant Prepares Economic Analysis of Proposal (30 Days)
- Legal & Regulatory Documents Prepared
- Transition Planning
- PSC Approval
- Referendum (November)
- Transaction Close

THANK YOU

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WWW.BIGRIVERS.COM

ELECTRONIC APPLICATION OF BIG RIVERS ELECTRIC CORPORATION FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY AUTHORIZING CONSTRUCTION OF A NEW TRANSMISSION OPERATION CENTER AND AN ORDER AUTHORIZING BIG RIVERS TO DISPOSE OF PROPERTY
CASE NO. 2022-00433

BIG RIVERS ELECTRIC CORPORATION'S RESPONSE
TO THE COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

REQUEST NO. 1-5: Refer to the Application, Berry Testimony, page 11, lines 16–18. Identify any other sites that were evaluated for construction of the proposed Transmission Operations Center (TOC) facility and any offers or listed prices.

RESPONSE: A preliminary evaluation of multiple locations was performed, but only two locations provided the central location and road access to meet Big Rivers' needs. In addition to the proposed location, Big Rivers identified a location near the Owensboro airport. That property was jointly owned by the City of Owensboro, Daviess County, and the Owensboro-Daviess County Industrial Foundation. As a consequence, selling the property to Big Rivers required a vote of both the City and the County. While the City was willing to rebate Big Rivers the City's one-third interest in the property, the County preferred that the property be held for other uses.

Witness: Robert W. Berry, Big Rivers' President and CEO

ELECTRONIC APPLICATION OF BIG RIVERS ELECTRIC CORPORATION FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY AUTHORIZING CONSTRUCTION OF A NEW TRANSMISSION OPERATION CENTER AND AN ORDER AUTHORIZING BIG RIVERS TO DISPOSE OF PROPERTY
CASE NO. 2022-00433

BIG RIVERS ELECTRIC CORPORATION'S RESPONSE
TO THE COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

REQUEST NO. 1-6: Refer to the Application, Berry Testimony, page 8, lines 18–20.

a. State what "compliance" issues make the ET&S facility inadequate, referencing any statutes, regulations, or other laws.

b. State what changes, if any, could be made to the ET&S facility to remedy inadequacies.

c. Provide estimated costs for changes to the ET&S facility to remedy the inadequacies.

RESPONSE:

a. The existing Control Center [redacted]

NERC issued the document "Security Considerations High-Impact Control Centers" in December 12, 2018. This document includes security planning considerations, security measures and other relevant information. Further, the following NERC standards contain control center and data center requirements:

- EOP-008-2 (Loss of Control Center Functionality)
- TOP-003-4 (Operational Reliability Date)
- CIP-006-6 (Cyber Security-Physical Security of BES Cyber Systems)
- CIP-014-3 (Physical Security)

The most significant Control Center and Data Center concerns are described below. Most of these issues are further described in the NERC security considerations document and the referenced NERC standards:

- Due to the flood plain, the ET&S location is not a suitable location for critical facilities such control rooms and data centers.

b. Due to the reasons described above, the existing ET&S facility is not a suitable location for a Control Center or Data Center. Moving the Control Center to the existing ET&S facility would require expansion of the existing facility, which is not feasible due to the lack of space and flood plain issues described above.

c. Since no reasonable alternatives are available, cost estimates for any such remedies are not available.

Witness: Christopher S. Bradley, Big Rivers' VP of System Operations

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Security Considerations High - Impact Control Centers

December 12, 2018

RELIABILITY | ACCOUNTABILITY




3353 Peachtree Road NE
Suite 600, North Tower
Atlanta, GA 30326
404-446-2560 | www.nerc.com

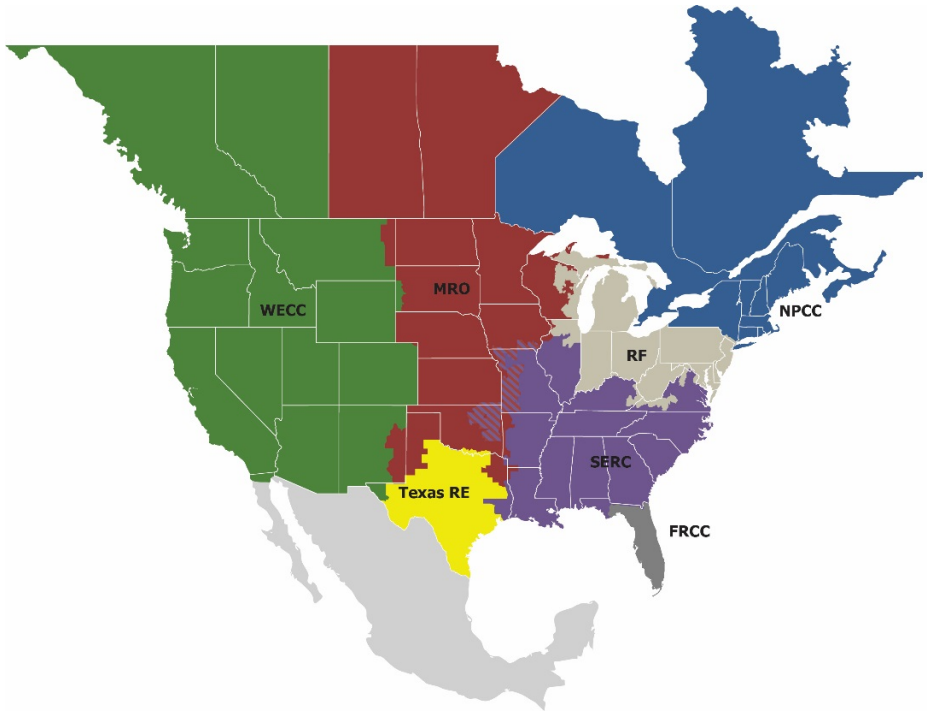
Table of Contents

Preface

This Guideline provides information for organizations to use if they wish to improve security at high-impact control centers. It is a menu of ideas; many of the measures in this document could be used in the design of a new facility, but a few also could be used to enhance security at an existing site. The decision on how much of this Guideline to use rests entirely with the owner/operator of the control center(s).

The vision for the Electric Reliability Organization (ERO) Enterprise, which is comprised of the North American Electric Reliability Corporation (NERC) and the seven Regional Entities (REs), is a highly reliable and secure North American bulk power system (BPS). Our mission is to assure the effective and efficient reduction of risks to the reliability and security of the grid.

The North American BPS is divided into seven RE boundaries as shown in the map and corresponding table below. The multicolored area denotes overlap as some load-serving entities participate in one Region while associated Transmission Owners/Operators participate in another.



FRCC	Florida Reliability Coordinating Council
MRO	Midwest Reliability Organization
NPCC	Northeast Power Coordinating Council
RF	ReliabilityFirst
SERC	SERC Reliability Corporation
Texas RE	Texas Reliability Entity
WECC	Western Electricity Coordinating Council

References

A. CIP-014 Report Physical Security Protection for High Impact Control Centers, 2 Oct 2017
B. Government of Ontario IT Standard Number 25.18 Physical Security Requirements for Data Centres Version #1.2 dated 18 March 2015
C. CIP-004-006 – Cyber Security – Personnel & Training
D. CIP-006-6 – Cyber Security – Physical Security of BES Cyber Systems
E. Royal Canadian Mounted Police G1-026 Guide to the Application of Physical Security Zones
F. Security Management in the North American Electricity Subsector: A Guideline (available from the E-ISAC)
G. CIP-014-2 Physical Security

NERC Definitions

Control Center: One or more facilities hosting operating personnel that monitor and control the Bulk Electric System (BES) in real-time to perform the reliability tasks, including their associated data centers, of: 1) a Reliability Coordinator, 2) a Balancing Authority, 3) a Transmission Operator for transmission Facilities at two or more locations, or 4) a Generator Operator for generation Facilities at two or more locations.

High Impact Control Center: Please see Section 2 of Reference A.

Chapter 1: Threat Assessment

In Reference A, NERC offers the following threat assessment:

> "There are two basic threats to consider relating to the physical security of Control Centers: (1) a physical attack designed to damage, destroy, or otherwise render the Control Center inoperable; or (2) a physical attack designed to gain physical access to the Control Center to operate BES assets in a manner that would adversely affect reliable BES operations.
>
> In the first type of threat, the assailant's objective is to affect the availability or operability of the Control Center. For instance, threat actors could approach the facility housing the Control Center in a vehicle filled with explosives and detonate it close enough to the facility to destroy or damage the facility to render the Control Center inoperable. Similarly, a threat actor could seek to render a Control Center inoperable by cutting off its power sources, including its backup power supplies. Additionally, this type of threat scenario also includes threat actors seeking to gain entry into the facility housing the Control Center to damage or destroy the equipment and systems in the Control Center used to operate the grid.
>
> The second type of threat involves threat actors that seek to gain physical access to the Control Center with the intent to operate the grid in an unreliable manner, by directly operating or directing others to operate the system in a manner that would adversely affect reliable operations, including damaging BES equipment. This type of physical attack may require the threat actors to have a sophisticated knowledge of grid operations and the BES Cyber Systems that control BES Facilities. This type of attack could have a greater impact on BES operations as compared to the first type of attack."

Reference A offers guidance on the threat and vulnerability assessment process for specific facilities, suggesting that the following may be considered when siting the facility:

- Terrain/elevation of surrounding ground or structures providing line of sight.
- Line-of-sight distance from approach avenues (distance and direction that armament can be utilized).
- Proximity to and speed of adjacent vehicular traffic for vehicle-induced damage.
- Proximity to traffic for easy vehicular access and egress (e.g., "drive-by" access).
- Proximity to other targets of interest or critical load (e.g., number of customers affected, densely populated area, high-profile commercial or governmental entities served, etc.).
- Number of operational targets, electrical component assets, etc. at a single site.
- Proximity to company or other response personnel may impact target selection and restoration response.
- Proximity to law enforcement or emergency personnel may impact target selection and restoration response.
- The risk resulting from historical events that have occurred at this location as well as similar facilities nationwide and the proximity of these events to the facility being assessed.
- Location of the Control Center (collocated in a company headquarters, standalone secured facility, collocated in company headquarters with other tenants, located in a multi-tenant facility owned by someone else, etc.).

Chapter 2: Security Planning Considerations

Regulatory

CIP-004-6 Cyber Security – Personnel & Training impose several requirements which must be accounted for in High Impact Control Center security planning as follows:

> "… the registered entity must take the following actions for any individual granted unescorted physical access to High Impact BES Cyber Systems and associated Electronic Access Control and Monitoring Systems (EACMS) and Protected Cyber Assets (PCAs), and Medium Impact BES Cyber Systems with External Routable Connectivity (ERC) and associated EACMS and PCAs:
>
> - Provide the individual training on physical access controls, among other things (Requirement R2).
> - Perform a personnel risk assessment (or background check) of the individual (Requirement R3).
> - Implement an access management program to authorize, based on need, individuals that may have unescorted physical access into a Physical Security Perimeter (PSP), which houses BES Cyber Systems (Requirement R4).
> - Implement an access revocation program to revoke an individual's access authorization (Requirement R5). The requirements in CIP-004-6 are designed to reduce the risk of physical security events at Control Centers and other types of facilities by training individuals on physical access controls (i.e., how they work, what to look for, etc.) and taking steps to eliminate insider threats by ensuring that only individuals with a need for unauthorized physical access have and can be trusted with such access.

CIP-006-6 – Cyber Security – Physical Security of BES Cyber Systems impose additional requirements related to access control, visitor control, and maintenance and testing of physical access control systems.

Zone System

Security planners may want to consider dividing the control center complex into distinct zones. Each zone should have its own threat and vulnerability assessment conducted to ensure that specific threats are adequately addressed.[1] The suggested zones are as follows:

- ***Public Zone***: This zone may include parking lots, grounds surrounding the facility, public corridors or concourses, elevator lobbies (if in a shared facility), and any areas that the public enjoys unimpeded access to during normal business hours.
- ***Reception Zone***: This zone is where the public and facility staff meet, or where staff enter the facility. These areas include the main entrance to the facility, visitor receiving or waiting areas, and public services desks or kiosks.
- ***Support Zone***: This zone is the area of the facility where access is limited to authorized personnel and visitors and does not include the control room floor. Typically, this zone would include hallways, storage closets, employee offices, maintenance, supply, etc.
- ***Operations Zone***: Monitored continuously, this is the main control center floor. It must: have a recognizable perimeter; employ robust and reliable physical barriers to access; be constructed in such a way that all barriers and doors remain closed and locked when not in use; employ active monitoring with immediate response; enjoy positive access control at all times and be located within the support zone.
- ***High Security Zone***: This zone or zones are where sensitive computer equipment, communications equipment, and any other technologies or systems deemed critical to the operation of the center

[1] For further information on the zone system please see References B and E.

technology resides. Contained with the Operations zone, it has an additional layer of access control and monitoring to minimize the number of personnel who have access.

Zone Security Measures and Control Matrix

Functionality and Security Controls[2]	Public Zone	Reception Zone	Support Zone	Operations Zone	High Security Zone
Access Control	N/A	No	Yes	Yes	Yes
Authorized Personnel Only	N/A	No	Yes	Yes	Yes
Barriers (Basic)	Yes	Yes	Yes	No	No
Contractors (Unescorted)	Yes	Yes	Yes	Yes	No
Electronic Access Controls	Consider	Consider	Yes	Yes	Yes
Exterior Barriers (Robust)[3]	Consider	N/A	N/A	N/A	N/A
Exterior Entrances	Yes	Yes	No	No	No
Garbage bins, large/outdoor	Yes	No	No	No	No
Glass or glazed doors	N/A	Yes	Avoid	No	No
Guard	N/A	Yes	No	Consider	No
Interior Barriers (Robust)[4]	N/A	No	No	Yes	Yes
Key Management and Control	N/A	Yes	Yes	Yes	Yes
Locked Door Environment	N/A	No	Consider	Yes	Yes
Lighting	Yes	Yes	Yes	Yes	Yes
Lobby/Greeting Area	Yes	Yes	Avoid	No	No
Maintenance Staff (Security Cleared)	N/A	Yes	Yes	Yes	No
Maintenance Staff (Uncleared)	N/A	No	No	Consider	No
Monitoring (Periodic)[5]	Yes	Yes	Yes	No	No
Monitoring (Continuous)[6]	N/A	Consider	Consider	Yes	Yes
Monitoring (Audited)[7]	N/A	No	No	Consider	Yes
Parking Areas Access	Yes	No	No	No	No
Public Access	Yes	Yes	No	No	No
Recognizable Perimeter	N/A	Consider	Yes	Yes	Yes
Recycled Paper Storage	No	No	Yes	No	No
Roof Hatch	N/A	Yes	Yes	Yes	No
Secure Doors/Locksets	N/A	Yes	Consider	Yes	Yes
Slab-to-Slab Walls	N/A	Yes	Consider	Yes	Yes
Two-Factor Authentication	N/A	No	No	Yes	Yes
Visible ID Required	N/A	Yes	Yes	Yes	Yes
Visitors Escorted	N/A	No	Yes	Yes	Yes
Visitors Reception	N/A	Yes	No	No	No
Windows/Glazing Permissible	N/A	Yes	No	No	No

[2] Adapted from Government of Ontario IT Standard Number 25.18 Physical Security Requirements for Data Centres Version #1.2 dated 18 March 2015 (Reference B) page 12

[3] An example of a robust exterior barrier would be a crash-rated gate at the road entrance to the facility or a bollard

[4] An example of a robust interior barrier would be a man-trap gate or sally port

[5] From Reference D: "**Monitored periodically** - to confirm on a regular basis that there has not been a breach of security. The frequency and diligence of monitoring is based on the recommendations of a Threat and Risk Assessment. Examples include a guard patrol or employees working at the location."

[6] From Reference D: "**Monitored continuously** - to confirm on a continuous basis that there has not been a breach of security. Examples include electronic intrusion detection systems or someone guarding a particular point on a constant basis."

[7] 24/7/365 monitoring where details of access are recorded, stored, and audited.

Facility Location

The location of the control center should not be:

- In an area where there is a history of natural disasters, such as floods, wildfires, or earthquakes;
- Within three miles / five kilometers of an area or a facility with the potential for an industrial disaster, such as truck or rail transportation routes; oil or gas facilities, chemical plants, or airports;
- Within ten miles / sixteen kilometers of a nuclear power plant to ensure that the facility will not be within the evacuation zone in the event of an emergency[8]; and
- In proximity to high profile or high-risk locations, such as military offices, financial districts, or political or symbolic targets.

The control center should be at a location that is serviced by:

- good roads, including local truck routes;
- multiple routes in, and no choke points, such as at a single bridge;
- easily available fire, police, and emergency medical services; and
- redundant supplies of utilities such as water, power, and telecommunications

Construction

Because facility security is central to the operation of a high-impact control center, a threat and risk assessment should be conducted prior to the commencement of the design and construction. Borrowing from the language of CIP-014-2 *Physical Security*, the TRA should consider the following:

> *"4.1. Unique characteristics of the identified and verified Transmission station(s), Transmission substation(s), and primary control center(s);*
>
> *4.2. Prior history of attack on similar facilities taking into account the frequency, geographic proximity, and severity of past physical security related events; and*
>
> *4.3. Intelligence or threat warnings received from sources such as law enforcement, the Electric Reliability Organization (ERO), the Electricity Sector Information Sharing and Analysis Center (ES-ISAC), U.S. federal and/or Canadian governmental agencies, or their successors."*[9]

The design team should include a security engineer, and the final design of the facility should be informed by the results of the threat and risk assessment.

[8] The radius of the evacuation zone should be confirmed with any nuclear power plant within fifty miles or 80 kilometers
[9] Reference G

Chapter 3: Security Measures

Security measures are used to eliminate or reduce the vulnerability articulated in the Threat and Vulnerability Assessment. Taken together, the security measures used should cover the following functions:

- **Access control**
- **Deterrence**
- **Detection**
- **Assessment**
- **Delay**
- **Response**
- **Evidence collection**

The following table shows many of the more common security measures, and the functions that they perform:

Type	Access	Deter	Detect	Delay	Assess	Respond	Evidence
Guards	x	x	x	x	x	x	x
Mobile Patrols		x	x	x	x	x	x
CCTV	x	x	x		x		x
FIDS[10]		x	x				
IDS[11]		x	x				
Locks	x	x		x			
Lights		x	x		x	x	x
Alarms		x				x	
LIDAR[12]			x		x		x
Barrier: Fence/Wall/Door/Man Trap/Bollard	x	x		x			

Security Measure Functions
There should be redundancy for each function. For example, Access Control is achieved through more than just locks: it should include CCTV and a barrier, such as a man-trap.

In the threat assessment provided by Reference A, the two basic threats are:

1. a physical attack designed to damage, destroy, or otherwise render the Control Center inoperable; or
2. a physical attack designed to gain physical access to the Control Center to operate BES assets in a manner that would adversely affect reliable BES operations.

The first threat is external to the control center, and the most likely vector would be an explosives attack of some sort. The security measures would most likely include bollards, crash-rated gates, and fencing. The purpose would be to keep vehicles that potentially could carry improvised explosive devices well back from the exterior of the building and away from the entrances and exits.

[10] Fence Line Intrusion Detection System
[11] Intrusion Detection System
[12] Light Detection and Ranging

The second threat requires that the security plan ensure that an adversary cannot gain access to the control center. This requires a much larger set of security measures, both technical and procedural. Doors, man traps, electronic card access control systems, CCTV cameras, background checks, visitor management programs, key management programs, etc. are all components of a comprehensive plan to ensure that the only people who get into the Operations zone and the High Security zone have proper authorization.

The combination of security measures selected would, as a whole: control access to the control center; deter, detect, and delay adversaries; assist security officers in assessing the nature of an apparent incursion; provide for a response to the attack; and collect and preserve evidence for use in any subsequent legal action.

Security Plans and Threat Response

A security plan is vital to the effective protection of the facility. As a high-impact facility may be one that is regulated by NERC CIP-014-2 *Physical Security*, the plan should incorporate the requirements of R5.

> *"…The physical security plan(s) shall include the following attributes:*
>
> *5.1. Resiliency or security measures designed collectively to deter, detect, delay, assess, communicate, and respond to potential physical threats and vulnerabilities identified during the evaluation conducted in Requirement R4.*
>
> *5.2. Law enforcement contact and coordination information.*
>
> *5.3. A timeline for executing the physical security enhancements and modifications specified in the physical security plan.*
>
> *5.4. Provisions to evaluate evolving physical threats, and their corresponding security measures, to the Transmission station(s), Transmission substation(s), or primary control center(s).*

Security plans should include measures that would allow a control center to increase or decrease security measures in consonance with changes in the threat level. If the threat level goes from low to high, then additional security measures should be brought into play to increase the protection of the facility and to send a message to any adversary who may be conducting pre-attack surveillance that the facility has a robust security plan and that they are exercising it.

Resilience

The control center should be able to support BES operations without external support (power, water, regular telephone and Internet connections, food, or staff changes) as long as required for full services to be restored. The period of self-sufficiency is flexible and depends on the nature of the disaster. For example:

- flooding of the surrounding area could isolate the control center, but supplies and staff can be brought in by boat or helicopter;
- an ice storm can cut off power for days or weeks, but the backup generator can run for as long as it has fuel; and
- a disease pandemic may leave all services available, but operators are in short supply.

The key to self-sufficiency lies in good all-hazards threat and vulnerability assessments, strong business continuity plans, and realistic exercises. As plan execution may require time to assemble transport and other resources, it is recommended that the control center be able to operate entirely on its own for at least 72 hours.

Security Management

Managing the security of a High-Impact Control Center is a challenging and complex task. Organizations should consider recruiting professional security managers to lead the security function at the facility. Professional security managers are usually certified by a professional society. Applicable certifications include:

- ASIS International's Certified Protection Professional (CPP)
- ASIS International's Physical Security Professional (PSP)
- The Security Institute (UK) Chartered Security Professional (CSyP) or Fellow (FSyl)

For further information on security leadership skills and experience please see Reference F.

Change Management and Review

The security plan of the facility should be reviewed as follows:

- As required by regulation;
- Annually:
- Upon an increase in the threat level:
- Upon a change in the security leadership of the organization; or
- After a security incident at the facility or at a similar facility elsewhere in the bulk power system.

The review of the security plan should be documented, and include:

- All information as required by applicable regulation;
- The date of the review;
- The reason for the review;
- An updated threat and risk assessment;
- An update on the completion of security changes required by the previous review;
- All changes required to the security plan; and
- The timeline for the completion of the changes.

ELECTRONIC APPLICATION OF BIG RIVERS ELECTRIC CORPORATION FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY AUTHORIZING CONSTRUCTION OF A NEW TRANSMISSION OPERATION CENTER AND AN ORDER AUTHORIZING BIG RIVERS TO DISPOSE OF PROPERTY
CASE NO. 2022-00433

BIG RIVERS ELECTRIC CORPORATION'S RESPONSE
TO THE COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

REQUEST NO. 1-7: Refer to the Application, Berry Testimony, page 9, lines 12–21.

a. State what changes could be made to the ET&S facility to retrofit the Data Center and estimate costs.

b. Describe the impact on day-to-day business activities that would result from retrofitting the Data Center.

RESPONSE:

a. As discussed in Big Rivers' response to Item 6 of this Request for Information, due to a lack of space in the existing ET&S building, expansion would be necessary to move the Data Center to that location. Further, most of the remaining ET&S property is in a flood plain and is not a suitable location for critical facilities or other new construction. Since no reasonable alternatives are available at that site, cost estimates for an ET&S retrofit are not available.

b. The existing ET&S facility is the main facility for field operations and maintenance for the entire Big Rivers transmission system; assuming the ET&S site could accommodate the expanded facilities necessary to house the Data Center, ongoing construction activities upon and near the ET&S facility would increase disruption among the site's thirty-five (35) existing employees. Additionally, retrofitting the Data Center at its current location [redacted] would similarly present significant challenges. [redacted]

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[redacted] This would add significant cost and complexity to the project. [redacted]

Witness: Christopher S. Bradley, Big River VP of System Operations

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REQUEST NO. 1-8: Refer to the Application, Berry Testimony, page 12, lines 1–3.

a. Even though Kenergy Corporation (Kenergy) decided to not jointly utilize the property for its headquarters, explain whether it will utilize the property for its TOC.

b. In the eventuality that Kenergy decides to utilize the property for its new headquarters and TOC, explain generally the likely financial arrangements under which Kenergy would utilize the property.

RESPONSE:

a. – b. Kenergy has expressed an interest in locating its Owensboro facility on this property in the future. Big Rivers is open to any negotiations that Kenergy may propose to utilize any of the remaining acreage. Should Kenergy seek to utilize a portion of the subject property for a new headquarters facility or other purpose, it would likely lease a portion of the property from Big Rivers and be allocated costs in proportion to its use of the property.

Witness: Robert W. Berry, Big Rivers' President and CEO

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REQUEST NO. 1-9: Refer to the Application, Berry Testimony, page 15, lines 10–11.

a. Describe any alternative TOC facility designs that were considered.

b. Provide the estimated cost of any alternative TOC facility designs that were considered.

c. Explain why you rejected any alternative TOC facility designs that were considered.

d. Explain how you decided the necessary size of the proposed TOC facility.

e. State the employee count for employees housed at the existing ET&S facility when it was first built.

f. State BREC's current customer count and its customer count when the ET&S facility was first built.

RESPONSE:

a. See the response to Item 1 of this Request for Information.

b. Estimated cost was based on the square footage required to meet Big Rivers' reasonable needs and remained essentially the same despite the evaluation of alternative designs.

c. Cooperative Building Solutions ("CBS") received comments from Big Rivers about the preliminary site plans in order to develop the current site plan. The current site plan is the preferred site plan of Big Rivers as it meets expectations regarding operational efficiency, vehicle circulation and general safety of employees and visitors. Overall, the current site plan reflects less square footage than originally designed, which speaks to a due diligence process focused on need and value.

d. Big Rivers worked closely with CBS to determine the necessary size and design of the proposed TOC facility. Big Rivers' management and department leaders met with CBS on many occasions to ensure the proposed space considered Big Rivers' historical experience and operational realities, as well as reflected only the scope reasonably necessary to meet Big Rivers' current needs and reasonably expected needs. The needs-assessment process was an ongoing, collaborative effort for Big Rivers with goals including functionality, efficiency and value.

e. When the existing ET&S facility was built in 1978, there were approximately thirty (30) ET&S employees. It is not clear from Big Rivers' records whether all of these employees worked at the ET&S facility upon its completion, or whether certain employees may have worked from another location (e.g., headquarters).

f. Currently, Big Rivers' three (3) Member Cooperatives serve over 121,000 consumers /retail customers. In 1978, Big Rivers had four Members (Green River RECC, Henderson-Union RECC, Jackson Purchase Energy Corporation, and Meade County RECC), which then served approximately 65,000 consumers. Additionally, in 1978, there were approximately 813.5 miles of Big Rivers' transmission lines in service. In 2023, there are approximately 1,338 miles of transmission lines.

Witness: **Subparts a-d: Tim Masa, President of Cooperative Building Solutions**

Subparts e-f: Robert W. Berry, Big Rivers' President and CEO

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REQUEST NO. 1-10: Refer to the Application, Berry Testimony page 17, lines 16–20. Clarify if the existing ET&S Facility has been listed on the market without receiving an updated appraisal considering the previous appraisal was February 5, 2021.

RESPONSE: The existing ET&S Facility has not been formally listed on the market; however, Big Rivers has had discussion with multiple parties who have expressed interest in the property.

Witness: Robert W. Berry, Big Rivers' President and CEO

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REQUEST NO. 1-11: Refer to the Application, Direct Testimony of Talina R. Mathews (Mathews Testimony) page 5, lines 6–8 and footnote 2. State the total acreage of the land purchased and the number of acres that could potentially be sold.

RESPONSE: The total acreage of land purchased was 114 acres, and approximately 69 acres could potentially be sold for economic development.

Witness: Talina R. Mathews, Ph.D., Big Rivers' CFO

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REQUEST NO. 1-12: Refer to the Application, Mathews Testimony page 5, line 13. Explain how BREC was able to purchase the land for a cost for significantly less than its value. Include in the response the basis for the listed land value.

RESPONSE: BREC purchased 114 acres of land for $5,140,710. In connection with the proposed TOC project, Big Rivers will only utilize 45 acres or 45% of the land purchased, and 45% of the purchase price totals $2,026,064. This figure is included in the table on page 5, line 13 of my testimony as "Total Value." The $1,199,864 figure under "Total Cost" in that table represents the "Total Value" minus the land rebate from the City of Owensboro of $826,200.00 ($18,360.00 per acre x 45 acres) shown in Mathews- Exhibit 3 and described on page 12 of the Direct Testimony of Robert W. Berry.

Witness: Talina R. Mathews, Ph.D., Big Rivers' CFO

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REQUEST NO. 1-13: Refer to the Application, Mathews Testimony page 7, lines 1–4. Explain the basis for the estimated value of the ET&S facility and the headquarters.

RESPONSE: The estimated values for the ET&S and headquarters facilities, respectively, were based on third-party appraisals along with discussions with realtors and potential purchasers. Please see the copies of the confidential appraisal reports for the ET&S facility provided in response to Item 3(a) of this Request for Information. The [redacted] estimated value of the former headquarters building was discussed in Big Rivers' response to the Commission Staff's First Request for Information in Case Number 2021-00314. In response to Item 18 of that request, Big Rivers provided appraisal reports, and in response to Item 15 of that request, Big Rivers explained price/square foot estimates obtained from a commercial realtor. Copies of the previously-submitted confidential appraisal reports with respect to the former headquarters facility are provided herewith for ease of reference.

Witness: Talina R. Mathews, Ph.D., Big Rivers' CFO

ATTACHMENT 1-13

APPRAISAL

This Exhibit, in its entirety, has been submitted under seal with an accompanying request for confidential treatment.

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REQUEST NO. 1-14: Refer to the Application, Mathews Testimony page 7, lines 16–21 and page 8, lines 1–5.

a. Provide an estimated breakdown of the estimated upgrade and maintenance costs.

b. Provide the cost benefit study supporting the decision to sell the existing facilities and build a new combined structure in Owensboro.

RESPONSE:

a. The breakdown of the estimated upgrade and maintenance costs are provided in the table below. The annual operation and maintenance costs for the existing ET&S facility are $368,574. The new facility would lower operation and maintenance costs $211,721 in the first year and $2,427,142 over the first 10 years. An estimated $34.6 million dollars would be required to upgrade the current facilities. For Energy Control and Information Technology, $13.6 million is projected to demolish the existing two-story portion [redacted]. For the ET&S upgrade, a new warehouse, vehicle storage and maintenance facility would be constructed at a cost of $21.0 million. Using this approach would continue the loss of operational efficiencies due to the Energy Control and Information Technology being located at a separate location from Transmission and Right of Way functions.

OPERATING COSTS	Existing ET&S, Energy Control, Information Systems and Engineering
Operation & Maintenance	
Utilities	$ 137,018
Insurance	34,270
Buildings & Grounds	111,971
Elevator	1,965
Contractor/Janitorial	83,350
Total Annual Operation & Maintenance	$ 368,574
Capital Upgrade Costs	
New two-story portion [redacted] for Energy Control and IT	$ 13,600,000
Construct a new facility for transmission/right-of-way and use ET&S location for communication/substation	20,500,000
Upgrade ET&S Fuel System	500,000
Total Capital Upgrade Costs	$ 34,600,000

b. The benefit cost study showing the analysis supporting the decision to sell the existing facilities and build a new combined structure in Owensboro is provided in the attached exhibits. The results of the study (Attachment 1) shows an increase in annual costs of approximately $100,000 (nominal) with the new Transmission Operations Center and a positive margin impact of $63,449 using a 10-year net present value (Attachment 2). This allows Big Rivers to achieve the safety and reliability enhancements along with operational efficiencies outlined in the application without the need for a wholesale rate increase.

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Witness: Talina R. Mathews, Ph.D., Big Rivers' CFO

REDACTED

	Status Quo			New Transmission Operations Center			
	Nominal Dollars Year 1-10			Nominal Dollars Year 1-10			10 Year Net Margin
	Benefit	Cost	(A) Total	Benefit	Cost	(B) Total	Impact (B) - (A)
Operation & Maintenance Expense	$ -	$ (4,225,288)	$ (4,225,288)	$ -	$ (1,798,146)	$ (1,798,146)	$ 2,427,142
Property Tax	-	(5,291,130)	(5,291,130)	-	(8,093,155)	(8,093,155)	(2,802,025)
Depreciation	-	(9,363,681)	(9,363,681)	-	(10,315,878)	(10,315,878)	(952,197)
Interest Expense	-	(14,602,510)	(14,602,510)	-	(20,291,265)	(20,291,265)	(5,688,755)
Occupational Tax Rebate	-	-	-	764,876	-	764,876	764,876
Road Rebate	-	-	-	1,500,000	-	1,500,000	1,500,000
Land Rebate	-	-	-	826,200	-	826,200	826,200
Utility Connection Rebate	-	-	-	30,000	-	30,000	30,000
[redacted]							
Total Net Margin Fav/(Unfav)	**$ -**	**$ (33,482,609)**	**$ (33,482,609)**	**$ 5,984,083**	**$ (40,498,444)**	**$ (34,514,361)**	**$ (1,031,752)**

REDACTED

BIG RIVERS ELECTRIC CORPORATION
Financial Analysis of Proposed Transmission Operations Center

	NPV	Nominal	Year									
	5.00%	Year 1 - 10	1	2	3	4	5	6	7	8	9	10
Net Margin												
Operation & Maintenance		**$ 2,427,142**	$ 211,721	$ 218,072	$ 224,615	$ 231,353	$ 238,294	$ 245,442	$ 252,806	$ 260,390	$ 268,202	$ 276,248
Property Tax		**(2,802,025)**	(244,422)	(251,755)	(259,307)	(267,087)	(275,099)	(283,352)	(291,853)	(300,608)	(309,627)	(318,915)
Depreciation		**(952,197)**	(95,220)	(95,220)	(95,220)	(95,220)	(95,220)	(95,220)	(95,220)	(95,220)	(95,220)	(95,220)
Occupational Tax Rebate		**764,876**	66,721	68,722	70,784	72,907	75,095	77,347	79,668	82,058	84,520	87,055
Road Rebate		**1,500,000**	1,500,000									
Gain on Sale of Existing ET&S		**1,015,262**	1,015,262	-	-	-	-	-	-	-	-	-
Gain on Sale of Existing HQ		**1,847,745**	1,847,745									
Interest Expense		**(5,688,755)**	(673,963)	(653,580)	(632,179)	(609,707)	(586,112)	(561,337)	(535,324)	(508,009)	(479,329)	(449,215)
Total Net Margin Fav/(Unfav)		**$ (1,031,752)**	**$ 4,484,044**	**$ (713,760)**	**$ (691,307)**	**$ (667,753)**	**$ (643,043)**	**$ (617,119)**	**$ (589,922)**	**$ (561,389)**	**$ (531,454)**	**$ (500,047)**
Cash Flow												
Total Net Margin Fav/(Unfav)	**$ 63,449**	**$ (1,031,752)**	$ 4,484,044	$ (713,760)	$ (691,307)	$ (667,753)	$ (643,043)	$ (617,119)	$ (589,922)	$ (561,389)	$ (531,454)	$ (500,047)
Add Back: Depreciation	**735,261**	**952,197**	95,220	95,220	95,220	95,220	95,220	95,220	95,220	95,220	95,220	95,220
Subtotal	**(1,927,963)**	**(2,942,563)**										
Add Back: Interest Expense	**4,469,550**	**5,688,755**	673,963	653,580	632,179	609,707	586,112	561,337	535,324	508,009	479,329	449,215
Less: Loan Payment	**(8,351,907)**	**(10,816,102)**	(1,081,610)	(1,081,610)	(1,081,610)	(1,081,610)	(1,081,610)	(1,081,610)	(1,081,610)	(1,081,610)	(1,081,610)	(1,081,610)
Net Cash Flow Fav/(Unfav)	**$ (5,810,320)**	**$ (8,069,909)**	**$ 1,308,609**	**$ (1,046,570)**	**$ (1,045,519)**	**$ (1,044,436)**	**$ (1,043,321)**	**$ (1,042,173)**	**$ (1,040,989)**	**$ (1,039,771)**	**$ (1,038,516)**	**$ (1,037,223)**
Balance Sheet												
Land		**$ 2,026,064**										
Building & System Upgrades		**53,109,390**										
Total Property Value		**55,135,454**										
Less: Economic Incentive		**(2,356,200)**										
Net Utility Plant		**$ 52,779,254**										

Note: Above amounts do not include benefits related to New Market Tax Credit Program financing opportunity.

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REQUEST NO. 1-15: Refer to the Application, Mathews Testimony page 9, lines 18–21.

a. Provide the status of discussions regarding potential financing from local financial institutions.

b. Discuss the potential benefits that could result from obtaining financing, in whole or in part, from local financial institutions.

c. Discuss whether the terms of financing from local financial institutions would be materially different than financing terms from RUS.

RESPONSE:

a. Big Rivers intends to fund the investment in the proposed TOC through a loan with the Rural Utilities Service ("RUS"). As such, there have only been preliminary conversations with other lenders such as National Rural Utilities Cooperative Finance Corporation ("CFC") and local Owensboro lenders.

b. Benefits of borrowing from a local financial institution might include the fostering of local relationships which could prove beneficial in future transactions. Also, borrowing from a local financial institution is likely more timely than a borrowing from RUS due to the RUS lengthy environmental review process.

c. Financing through RUS typically offers the most attractive debt terms, including lower interest rates. Since Big Rivers is not seeking financing from local financial institutions at this time, the financing terms and their variance to RUS terms is unknown.

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Witness: Talina R. Mathews, Ph.D., Big Rivers' CFO

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REQUEST NO. 1-16: Refer to the Application, Mathews Testimony page 10, lines 4–7 and lines 18–20.

a. Explain and describe the "community development entities" that will be allocated funds through the New Markets Tax Credits (NMTC) Program.

b. Explain BREC's efforts to date in exploring the potential opportunities to obtain financing through the NMTC Program.

c. If the application is approved as filed, explain the timeline for possibly receiving NMTC funds relative to the completion of the project.

d. If the application is approved as filed and funds are ultimately obtained through the NMTC Program, explain how these funds will be used.

RESPONSE:

a. According to the U.S. Department of the Treasury, a Community Development Entity ("CDE") is a domestic corporation or partnership that is an intermediary vehicle for the provision of loans, investments, or financial counseling in low-income communities. CDE certification is awarded by the Treasury Department and can be awarded to corporations, banks, real-estate developers, governmental entities, mission lenders, and nonprofits if serving low-income communities is one of its primary missions. Certification as a CDE allows organizations to participate either directly or indirectly in the New Markets Tax Credit Program. The U.S. Department of the Treasury has the responsibility of allocating funds to CDE's, which are not guaranteed an annual allocation.

b. Big Rivers has not sought NMTC financing of the project. If the Commission grants Big Rivers a certificate of public convenience and necessity ("CPCN") for the proposed Transmission Operations Center, Big Rivers will explore all opportunities for financing, including NMTC opportunities. Big Rivers will seek approval of the financing in a subsequent proceeding as necessary under KRS 278.300.

c. To be eligible to apply for the next round of allocation, CDEs that received prior allocations of new markets tax credits must submit their qualified equity investment (QEI) issuance threshold by January 31. The QEI issuance threshold varies by calendar year, but is typically 30% of the current allocation. Big Rivers understands that quickly meeting or surpassing the QEI threshold potentially puts the CDE at a competitive advantage over the other CDE's for the next allocation. Once the deal is closed, which typically takes an estimated three months from being approved, the funds are received.

d. If Big Rivers receives funding through the NMTC program, the loan will work generally similar to traditional financing to cover the cost of the project. The notable exception is that after seven years, the remaining principal balance of the loan is forgiven. The economic benefit of the loan forgiveness typically equates to approximately 20-25% of the financed project cost, which would reduce the overall cost of the project by the amount forgiven.

Witness: Talina R. Mathews, Ph.D., Big Rivers' CFO

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REQUEST NO. 1-17: Refer to the Application, Mathews Testimony page 11, lines 8–13.

Provide the approximate cost savings from O&M expenses.

RESPONSE: The cost savings from O&M expenses is $212,721 in the first year and $2,427,142 (nominal dollars) over 10 years.

Witness: Talina R. Mathews, Ph.D., Big Rivers' CFO

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REQUEST NO. 1-18: Refer to the Application, Mathews Testimony, Table, page 12. Also refer to the Berry Testimony, page 8, lines 10–22, page 9, page 10, lines 1–12 and page 11, lines 1–6. Since BREC would have to perform capital expenditures to upgrade, refurbish and harden its existing facilities in order to remain at the same location versus the capital expenditures to build a new facility:

a. Explain whether the figures in the existing ET&S column include capital expenditures necessary to retrofit the Data Center or otherwise continue using the existing ET&S facility. Include in the response whether any of the amounts, especially the property tax and depreciation amounts, would increase after the capital expenditures were to be made to remain in the existing facilities.

b. Explain whether the capital cost of acquiring additional land and constructing an additional separate warehouse needed to serve ET&S is included in the existing ET&S column.

RESPONSE:

a. The figures in the existing ET&S column do not include the additional capital expenditures which would be necessary to retrofit the Data Center or to otherwise continue using the existing ET&S facility. As discussed in Big Rivers' response to Item 7 of this Request for Information, the expansion of the existing ET&S facility required to accommodate the Data Center is not feasible due to the site's layout and location in a flood plain. That said, the amounts contained in the relevant table—and particularly the amounts related to property tax and

depreciation—would likely increase as a result of an influx of capital if continued use of the ET&S facility was a feasible alternative.

b. The capital cost of acquiring additional land and constructing an additional separate warehouse needed to serve ET&S is not included in the existing ET&S column. Big Rivers explored constructing additional warehouse space offsite, but the anticipated cost and logistical inefficiencies of maintaining multiple separate facilities for ET&S personnel, the Engineering and Energy Control Departments, and warehousing further underscored the impracticability of a multi-property approach.

Witness: Talina R. Mathews, Ph.D., Big Rivers' CFO

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REQUEST NO. 1-19: Refer to the Direct Testimony of Tim Masa (Masa Testimony) page 6, lines 5–12.

a. Explain the existing traffic flows that resulted in two separate entrances to the facility.

b. Explain whether the existing traffic flows will be impacted during facility construction, especially during the periods when parents take children to and collect children from schools.

RESPONSE:

a. The two separate entrances mentioned on line 11 of page 6 refer to the two entrances off of Industrial Drive to access the material storage yard, pole bunks, warehouse building, vehicle storage, fueling station and vehicle maintenance of the new facility. The intent is for the two entrances to allow better flexibility for the lineman crew trucks entering and exiting the facility and also to better accommodate semi-truck deliveries. Big Rivers intends to utilize one entrance as the primary entrance to the facility and the other as the primary exit. The third entrance off of Industrial Drive is for visitor and employee traffic to access the facility. This third entrance is an improved safety feature to allow for the separation of Big Rivers' larger commercial vehicles and deliveries from the smaller non-commercial vehicles.

b. The traffic flow mentioned in the testimony is addressing the traffic of the Big Rivers Electric vehicles, visitors, employees and deliveries accessing the facility off of the new road extension of Industrial Drive, not traffic flows of the existing surrounding public roads. With Industrial Drive being a new road extension off of Henderson Road, we do not expect any traffic

flows to be impacted during construction, including traffic flows during typical school drop-off and pick-up time frames.

Witness: Tim Masa, President, Cooperative Building Solutions

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I, Robert W. Berry, President and Chief Executive Officer for Big Rivers Electric Corporation, verify, state, and affirm that the information 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 on this 2 day of March, 2023.

Robert W. Berry
President and Chief Executive Officer
Big Rivers Electric Corporation

COMMONWEALTH OF KENTUCKY)
) ss:
COUNTY OF DAVIESS)

SUBSCRIBED AND SWORN TO before me by Robert W. Berry on this the 2 day of March, 2023.

My commission expires: March 22, 2023

Amanda R. Jackson
NOTARY PUBLIC
STATE AT LARGE
KENTUCKY
ID. # 619869
MY COMMISSION EXPIRES March 22, 2023

Notary Public

BIG RIVERS ELECTRIC CORPORATION

ELECTRONIC APPLICATION OF BIG RIVERS ELECTRIC CORPORATION FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY AUTHORIZING CONSTRUCTION OF A NEW TRANSMISSION OPERATION CENTER AND AN ORDER AUTHORIZING BIG RIVERS TO DISPOSE OF PROPERTY

CASE NO. 2022-00433

BIG RIVERS ELECTRIC CORPORATION'S RESPONSES TO THE COMMISSION STAFF'S FIRST REQUESTS FOR INFORMATION

I, Talina R. Mathews, Chief Financial Officer for Rivers Electric Corporation, verify, state, and affirm that the information 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 on this 2nd day of March, 2023.

Talina R. Mathews
Chief Financial Officer
Big Rivers Electric Corporation

COMMONWEALTH OF KENTUCKY)
) ss:
COUNTY OF DAVIESS)

SUBSCRIBED AND SWORN TO before me by Talina R. Mathews on this the 2nd day of March, 2023.

My commission expires: October 31, 2024

Notary Public KYNP16841

BIG RIVERS ELECTRIC CORPORATION

ELECTRONIC APPLICATION OF BIG RIVERS ELECTRIC CORPORATION FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY AUTHORIZING CONSTRUCTION OF A NEW TRANSMISSION OPERATION CENTER AND AN ORDER AUTHORIZING BIG RIVERS TO DISPOSE OF PROPERTY

CASE NO. 2022-00433

BIG RIVERS ELECTRIC CORPORATION'S RESPONSES TO THE COMMISSION STAFF'S FIRST REQUESTS FOR INFORMATION

I, Christopher S. Bradley, Vice President of System Operations for Rivers Electric Corporation, verify, state, and affirm that the information 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 on this 6th day of March, 2023.

Christopher S. Bradley
Vice President of Systems Operations
Big Rivers Electric Corporation

COMMONWEALTH OF KENTUCKY)
) ss:
COUNTY OF DAVIESS)

SUBSCRIBED AND SWORN TO before me by Christopher S. Bradley on this the 6th day of March, 2023.

My commission expires: October 31, 2024

Notary Public, KYNP16841

BIG RIVERS ELECTRIC CORPORATION

ELECTRONIC APPLICATION OF BIG RIVERS ELECTRIC CORPORATION FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY AUTHORIZING CONSTRUCTION OF A NEW TRANSMISSION OPERATION CENTER AND AN ORDER AUTHORIZING BIG RIVERS TO DISPOSE OF PROPERTY

CASE NO. 2022-00433

BIG RIVERS ELECTRIC CORPORATION'S RESPONSES TO THE COMMISSION STAFF'S FIRST REQUESTS FOR INFORMATION

I, Tim Masa, President of Cooperative Building Solutions, verify, state, and affirm that the information 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 on this 1st day of March, 2023.

Tim Masa
President
Cooperative Building Solutions

STATE OF MISSOURI)
) ss:
COUNTY OF St. Louis)

SUBSCRIBED AND SWORN TO before me by Tim Masa on this the 1st day of March, 2023.

My commission expires: 9-23-24

BETH S. WAGNER
NOTARY PUBLIC - NOTARY SEAL
STATE OF MISSOURI - ST. LOUIS COUNTY
MY COMMISSION EXPIRES SEPTEMBER 23, 2024
COMMISSION NUMBER: 12379390

Beth S. Wagner
Notary Public