

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

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In the Matter of:

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

Case No.
2022-00433

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VERIFIED APPLICATION

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1. Big Rivers Electric Corporation (“*Big Rivers*”) files this Application pursuant to KRS 278.020(1), KRS 278.218, 807 KAR 5:001 Sections 14 and 15, and other applicable law, and hereby requests that the Kentucky Public Service Commission (the “*Commission*”) enter an Order granting a Certificate of Public Convenience and Necessity for the construction of Big Rivers’ new Transmission Operations Center (the “*Operations Center*” or “*TOC*”) and authorizing Big Rivers to sell its Energy Transmission and Substation facility (“*ET&S*”). In support of this Application, Big Rivers states as follows.

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I. INTRODUCTION

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2. Big Rivers is a rural electric cooperative corporation organized pursuant to KRS Chapter 279. It incorporated in the Commonwealth of Kentucky on June 14,


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1 1961. Big Rivers attests that it is currently in good standing in Kentucky. Big Rivers’
2 mailing address is P.O. Box 24, Henderson, Kentucky 42419-0024, and its street
3 address is 201 Third Street, Henderson, Kentucky 42420.¹ Big Rivers’ address for
4 electronic mail service is regulatory@bigrivers.com. See 807 KAR 5:001 Section 14.

5 3. Big Rivers owns generating assets and purchases, transmits and sells
6 electricity at wholesale. Its principal purpose is to provide the wholesale electricity
7 requirements of its three distribution cooperative members: Jackson Purchase
8 Energy Corporation, Kenergy Corp., and Meade County Rural Electric Cooperative
9 Corporation (collectively, the “*Members*”). The Members in turn provide retail electric
10 service to approximately 121,000 consumer/retail members located in 22 western
11 Kentucky counties: Ballard, Breckenridge, Caldwell, Carlisle, Crittenden, Daviess,
12 Graves, Grayson, Hancock, Hardin, Henderson, Hopkins, Livingston, Lyon,
13 Marshall, McCracken, McLean, Meade, Muhlenberg, Ohio, Union, and Webster.

14 4. A table of each regulatory requirement for this filing, cross-referenced
15 to the location in this Application where that requirement is satisfied, is attached as
16 **Exhibit A**.

17 II. **BACKGROUND**

18 5. Since the 1960’s, Big Rivers’ Energy Control, Planning & Compliance
19 Department, its Engineering Department, an IT/IS Department data center (“*Data*
20 *Center*”), and key transmission support personnel 

¹ Big Rivers is currently constructing a new headquarters facility in Owensboro, Kentucky, pursuant to the authorization granted by the Kentucky Public Service Commission’s Order in Case No. 2021-00314. Big Rivers will provide notice of its updated business address at such time as the transition to the new space is made final.

1 [REDACTED]. At a separate facility in
2 Henderson, namely its Energy Transmission and Substation facility, Big Rivers has
3 stationed approximately thirty-five (35) transmission personnel, as well as extensive
4 transmission-related equipment and materials. Big Rivers seeks to combine these
5 operations at the new TOC.

6 6. Big Rivers' need for the TOC was introduced to the Commission in Case
7 No. 2021-00314, *In the Matter of: Electronic Application of Big Rivers Electric*
8 *Corporation for a Certificate of Public Convenience and Necessity Authorizing*
9 *Construction of a New Headquarters Facility and an Order Authorizing Big Rivers to*
10 *Sell Its Existing Headquarters Facility* (Application filed Aug. 26, 2021).² There, and
11 particularly in the testimonies of Big Rivers' Chief Executive Officer, Robert W.
12 Berry, and its now-retired Supply Chain Director, Robert F. Toerne, Big Rivers
13 described the operational inefficiencies, security concerns, and other issues
14 associated with the existing ET&S and headquarters facilities. As it relates to
15 engineering and transmission-related operations, these concerns continue and are
16 discussed in more detail in this Application and the testimony submitted herewith.
17 For the reasons stated in this Application and the attached exhibits, Big Rivers seeks
18 the authority to proceed with construction of the TOC, as further described.

² The Commission granted Big Rivers the authority to proceed with its new headquarters facility in Owensboro, Kentucky, through its Order entered on December 7, 2021.

1 **III. THE TOC**

2 7. The TOC is to be located at property purchased by Big Rivers on the
3 west side of Owensboro, at 90 Industrial Drive, Owensboro, Kentucky 42301. At
4 approximately 100,358 square feet, the TOC will house offices, warehouses, and
5 enclosed and covered vehicle maintenance and storage space.³ It is designed to
6 accommodate Big Rivers' needs related to its engineering and transmission control
7 operations. The TOC's central location in Big Rivers' service area and its access to
8 major thoroughfares in Owensboro, and particularly the Owensboro bypass, offer
9 important benefits for Big Rivers, as more fully described in the testimony submitted
10 herewith.

11 8. The scope and design of the TOC was determined in collaboration with
12 Cooperative Building Solutions ("*CBS*"). CBS provides a turnkey project approach of
13 facility planning, design, and construction management services to electric
14 cooperatives throughout the country. CBS's extensive project experience working
15 with electric cooperatives helped Big Rivers with the scope and design of the new
16 TOC that will use low maintenance materials to create optimum functionality,
17 operational efficiency, and energy efficiency—all while providing a cost-effective
18 solution. CBS has a proven track record of delivering projects on time and within
19 budget.⁴

³ The proposed TOC building includes Office Space (29,691 S.F.); Vehicle Maintenance (13,067 S.F.); and Warehouse/Storage (57,600 S.F.).

⁴ Jackson Purchase Energy Corporation provided a reference for CBS to Big Rivers. CBS completed a renovation of an existing facility for a new headquarters for Jackson Purchase Energy Corporation in the summer of 2021. See Case No. 2019-00326, *In the Matter of: Electronic Application of Jackson*

1 9. The scope and design of the TOC reflects the results of a needs
 2 assessment developed by Big Rivers and CBS with input from each relevant Big
 3 Rivers department. Site studies were prepared to determine the most effective layout
 4 on the site. Design standards for the TOC were used based upon years of cooperative
 5 experience and past project performance. CBS's strategic partner, M+H Architects,
 6 confirmed that the design of the facility satisfies all local and state building codes,
 7 while still meeting the established goals and requirements for the project. *See Direct*
 8 *Testimony of Tim Masa, attached as **Exhibit F**.*

9 10. If the Commission grants Big Rivers' request for a CPCN, construction
 10 of the TOC is expected to commence in May of 2023 and conclude by November of
 11 2024.

12 **IV. REQUESTS FOR RELIEF**

13 **A. CPCN UNDER KRS 278.020.**

14 11. Pursuant to KRS 278.020(1), Big Rivers requests that the Commission
 15 issue a CPCN for the construction of the TOC. There is a demonstrated need for the
 16 TOC; its construction will not result in wasteful duplication; and the proposal
 17 represents a reasonable, cost-effective solution in the best interest of Big Rivers and
 18 its Members.

Purchase Energy Corporation for a Certificate of Public Convenience and Necessity to Construct a New Headquarters Facility (Order granted CPCN entered Jan. 14, 2020). The project was completed on time and under budget.

1 12. Pursuant to 807 KAR 5:001 Section 15(2)(a), Big Rivers states that the
2 facts relied upon to show that construction of the TOC is required by public
3 convenience and necessity are set forth throughout this Application and its
4 accompanying exhibits.

5 13. Pursuant to 807 KAR 5:001 Section 15(2)(b), Big Rivers states that the
6 permits and approvals needed to construct and operate the TOC will be acquired at
7 the appropriate time and in accordance with relevant law. As further detailed in the
8 testimony of Tim Masa, Big Rivers anticipates needing and obtaining, *inter alia*: (1)
9 rezoning of the property to Industrial use; (2) final development plan approval; (3) a
10 Kentucky Transportation Cabinet Encroachment Permit; (4) a Sanitary Sewer
11 Kentucky Department of Water Permit; (5) a Kentucky Division of Water Permit for
12 a water main extension; (6) a Notice of Intent Permit with the Kentucky Division of
13 Water; (7) a Footings & Foundations Permit; and (8) a Building Permit. See **Exhibit**
14 **F**.

15 14. Pursuant to 807 KAR 5:001 Section 15(2)(c), Big Rivers states that a full
16 description of the proposed location of the TOC, including a description of the manner
17 in which it will be constructed, is contained herein and in the attached Direct
18 Testimony of Tim Masa. See **Exhibit F**. Big Rivers further states that there are no
19 public utilities, corporations, or persons with whom the TOC is likely to compete.

20 15. Pursuant to 807 KAR 5:001 Section 15(2)(d)(1), Big Rivers states that
21 maps to suitable scale showing the proposed location of the TOC are included with

1 this filing at **Exhibit B**. Big Rivers further states that there are no like facilities
2 owned by others located anywhere within the map area.

3 16. Pursuant to 807 KAR 5:001 Section 15(2)(d)(2), Big Rivers states that
4 plans and specifications and drawings of the TOC are included with this filing at
5 **Exhibit C**.

6 17. Pursuant to 807 KAR 5:001 Section 15(2)(e), as discussed in more detail
7 in the Direct Testimony of Big Rivers' Chief Financial Officer, Talina R. Mathews,
8 Big Rivers is pursuing financing of the project through a loan from the Federal
9 Financing Bank and guaranteed by the Rural Utilities Service of the U.S.
10 Department of Agriculture (the "*RUS*"), and potentially partial funding of the project
11 through the U.S. Treasury Department's New Markets Tax Credits ("*NMTC*")
12 Program. See **Exhibit E**. Big Rivers is also exploring financing project costs through
13 Cooperative Finance Corporation and local banks. Big Rivers will seek approval as
14 necessary under KRS 278.300 of any financing related to the project's cost in a
15 subsequent proceeding.

16 18. Pursuant to 807 KAR 5:001 Section 15(2)(f), Big Rivers states that the
17 total estimated annual cost of operation of the TOC after it is placed into service is
18 \$158,113. Additional detail with respect to expected costs of operation are provided
19 in the attached direct testimonies.

20 19. For the reasons stated herein, construction of the TOC is necessary, is
21 in the public interest, and will not result in wasteful duplication of facilities. Big

1 Rivers therefore respectfully requests that the Commission issue a CPCN for the
2 TOC.

3 **B. REQUEST TO DISPOSE OF UTILITY PROPERTY UNDER KRS**
4 **278.218.**

5 20. Pursuant to KRS 278.218(1), Commission approval is required prior to
6 the transfer of ownership of certain assets owned by a utility. If the Commission
7 authorizes the construction of the new TOC, Big Rivers' existing ET&S facility is
8 expected to be sold. Recognizing that any prospective purchaser would be unable to
9 take possession until such time as the TOC is constructed and occupied, Big Rivers
10 anticipates that any transfer of the property will occur only after the project is
11 complete and occupancy has been established. The disposition of the existing ET&S
12 facility will be at market value. These matters are discussed in more detail in the
13 Direct Testimony of Big Rivers' CEO, Robert W. Berry. *See **Exhibit D.***

14 21. Because Big Rivers' ET&S facility will not be utilized following
15 completion of the TOC, and because the fair-market disposition of this asset is
16 expected to result in financial gain to Big Rivers, the anticipated sale of the facility
17 consistent with the representations made herein is in accordance with law, for a
18 proper purpose, and consistent with the public interest. Consequently, Big Rivers
19 requests approval to proceed with the disposition of its ET&S facility under KRS
20 278.218 once the TOC is completed.

1 **C. TIMING**

2 22. Big Rivers' is working diligently toward confirmation of the loan from
 3 RUS by the end of April of 2023, in order to begin construction in May of 2023, and
 4 meet the construction timeline as discussed in Mr. Masa's testimony. Therefore, Big
 5 Rivers respectfully requests that the Commission issue an Order in this proceeding
 6 no later than April 30, 2023. Big Rivers is committed to timely progression of the
 7 case consistent with the Commission's procedural schedule.

8 **V. OVERVIEW OF TESTIMONY**

9 23. In support of this Application, Big Rivers tenders the direct testimony
 10 of the following witnesses:

11 a. **Robert W. Berry, Chief Executive Officer, Big Rivers.** Mr.
 12 Berry offers testimony describing (1) Big Rivers' existing
 13 transmission operations facilities; (2) Big Rivers' review of
 14 alternatives to meet its transmission operations needs; and (3) the
 15 reasonableness of selecting the option of constructing a new TOC on
 16 the west side of Owensboro, Kentucky, including incentives from the
 17 City of Owensboro that make the proposed location of the TOC
 18 economically desirable for Big Rivers. Mr. Berry's testimony is
 19 attached hereto as **Exhibit D** and is incorporated herein by
 20 reference.

21 b. **Talina R. Mathews, Chief Financial Officer, Big Rivers.** Dr.
 22 Mathews offers testimony in support of Big Rivers' request for a

1 CPCN and (1) describes and summarizes the financial impacts of
2 constructing and operating the TOC in Owensboro, Kentucky, and
3 selling Big Rivers' existing ET&S property; (2) describes the various
4 financial components of the project, including (i) the net capital
5 investment; (ii) the financing; and (iii) the annual operating cost; and
6 (3) provides a financial perspective of alternatives considered. Dr.
7 Mathews' testimony is attached hereto as Exhibit E and is
8 incorporated herein by reference.

9 c. **Tim Masa, President, Cooperative Building Solutions.** Mr.
10 Masa offers testimony that (1) provides insight into the design and
11 construction – including the specifications, notable technical details,
12 and the timeline – of Big Rivers' new TOC; (2) discusses the
13 anticipated costs of the proposed construction project; and (3)
14 provides information regarding the feasibility of the overall project,
15 and how this project will benefit Big Rivers. Mr. Masa's testimony is
16 attached hereto as Exhibit F and is incorporated herein by
17 reference.

18 VI. CONCLUSION

19
20 **WHEREFORE**, Big Rivers respectfully requests that the Commission enter
21 an Order (1) granting a CPCN authorizing the proposed construction of the TOC; (2)
22 granting approval under KRS 278.218 for Big Rivers to sell its existing ET&S facility,
23 as described herein; and (3) granting all other relief to which Big Rivers is entitled.

1 Dated this 24th day of January, 2023.

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Respectfully submitted,

/s/Edward T. Depp
Edward T. Depp
DINSMORE & SHOHL LLP
101 South 5th Street, Suite 2500
Louisville, KY 40202
Telephone: (502) 540-2347
Facsimile: (502) 585-2207
tip.depp@dinsmore.com

M. Evan Buckley
DINSMORE & SHOHL LLP
100 West Main Street, Suite 900
Lexington, KY 40507
Telephone: (859) 425-1000
Facsimile: (859) 425-1099
evan.buckley@dinsmore.com

Counsel to Big Rivers Electric Corporation

LIST OF EXHIBITS

EXHIBIT A – REGULATORY REQUIREMENTS TABLE

EXHIBIT B – MAP OF PROPOSED LOCATION

EXHIBIT C – DRAWINGS OF PROPOSED CONSTRUCTION

EXHIBIT D – DIRECT TESTIMONY OF ROBERT W. BERRY

EXHIBIT E – DIRECT TESTIMONY OF TALINA R. MATHEWS

EXHIBIT F– DIRECT TESTIMONY OF TIM MASA

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 OPERATIONS CENTER AND AN
ORDER AUTHORIZING BIG RIVERS TO DISPOSE OF PROPERTY**

CASE NO. 2023-00433

VERIFICATION

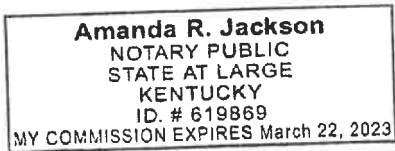
I, Robert W. Berry, President and Chief Executive Officer for Big Rivers Electric Corporation, hereby state that I have read the foregoing Application and that the statements contained therein are true and correct to the best of my knowledge and belief, on this 20th day of January, 2023.




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

COMMONWEALTH OF KENTUCKY)
)
COUNTY OF Henderson)

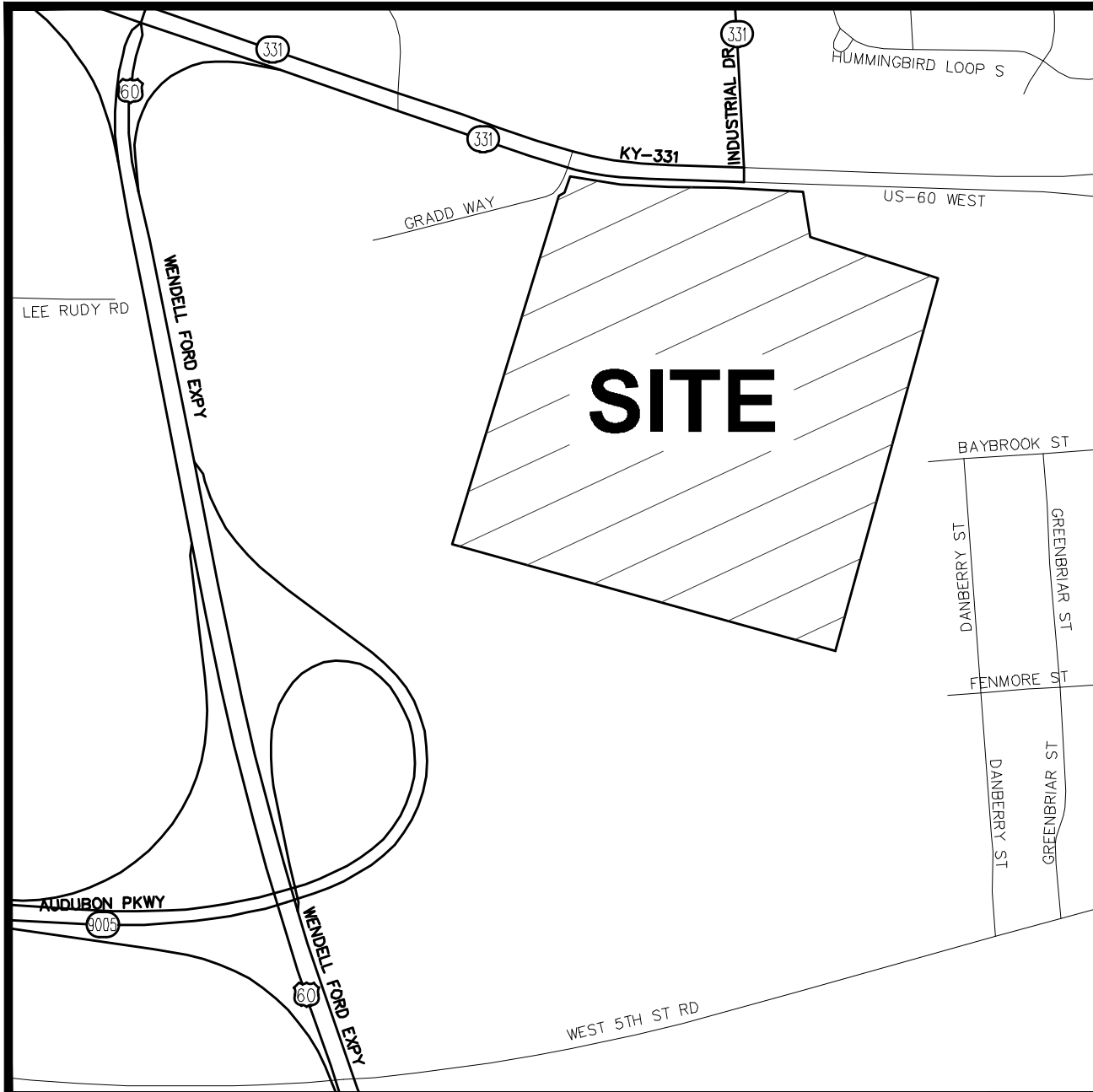
SUBSCRIBED AND SWORN TO before me by Robert W. Berry on this the 20th day of January, 2023.




Notary Public, State at Large
My Commission Expires March 22, 2023

BIG RIVERS ELECTRIC CORPORATION
REFERENCES FOR COMPLIANCE WITH REGULATORY REQUIREMENTS
Case No. 2022-00433

Regulation	Filing Requirement	Location in Application
807 KAR 5:001 Section 14(1)	The full name, mailing address, and electronic mail address of the applicant.	Application ¶¶ 2-3
807 KAR 5:001 Section 14(1)	Fully the facts on which the application is based, with a request for the order, authorization, permission, or certificate desired and a reference to the particular law requiring or providing for the information.	Application generally, but particularly ¶¶ 1, 5-6, 11, 20-21, Exhibits.
807 KAR 5:001 Section 14(2)	If a corporation, the applicant shall identify in the application the state in which it is incorporated and the date of its incorporation, attest that it is currently in good standing in the state in which it is incorporated.	Application ¶ 2
807 KAR 5:001 Section 15(2)(a)	The facts relied upon to show that the proposed construction or extension is or will be required by public convenience or necessity.	Application ¶¶ 5-9, Exhibit D (Berry Testimony), Exhibit E (Mathews Testimony), Exhibit F (Masa Testimony)
807 KAR 5:001 Section 15(2)(b)	Copies of franchises or permits, if any, from the proper public authority for the proposed construction or extension, if not previously filed with the commission.	Application ¶ 13, Exhibit F (Masa Testimony)
807 KAR 5:001 Section 15(2)(c)	A full description of the proposed location, route, or routes of the proposed construction or extension, including a description of the manner of the construction and the names of all public utilities, corporations, or persons with whom the proposed construction or extension is likely to compete.	Application ¶¶ 7, 14, Exhibit B (maps), Exhibit C (plans and specifications), Exhibit D (Berry Testimony), Exhibit F (Masa Testimony)
807 KAR 5:001 Section 15(2)(d)	One (1) copy in portable document format on electronic storage medium and two (2) copies in paper medium of:	
	1. Maps to suitable scale showing the location or route of the proposed construction or extension, as well as the location to scale of like facilities owned by others located anywhere within the map area with adequate identification as to the ownership of the other facilities; and	Application Exhibit B
	2. Plans and specifications and drawings of the proposed plant, equipment, and facilities.	Application Exhibit C
807 KAR 5:001 Section 15(2)(e)	The manner in detail in which the applicant proposes to finance the proposed construction or extension.	Application ¶ 17, Exhibit E (Mathews Testimony)
807 KAR 5:001 Section 15(2)(f)	An estimated annual cost of operation after the proposed facilities are placed into service.	Application ¶ 18, Exhibit E (Mathews Testimony)



VICINITY MAP

EXHIBIT C

DRAWINGS OF PROPOSED CONSTRUCTION

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



**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.
AUTHORIZING CONSTRUCTION OF A NEW)	2022-00433
TRANSMISSION OPERATIONS CENTER AND)	
AN ORDER AUTHORIZING BIG RIVERS TO)	
DISPOSE OF PROPERTY)	

**DIRECT TESTIMONY
OF
ROBERT W. BERRY
PRESIDENT AND CHIEF EXECUTIVE OFFICER
ON BEHALF OF
BIG RIVERS ELECTRIC CORPORATION**

FILED: January 24, 2023

**Case No. 2022-00433
Application Exhibit D
Direct Testimony of Robert W. Berry**

DIRECT TESTIMONY
OF
ROBERT W. BERRY
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1 Energy Corporation (“WKE”), an affiliate of Louisville Gas & Electric Company
2 (“LG&E”), until I assumed the role of COO. The Unwind Transaction was the subject
3 of Case No. 2007-00455.

4 Before the closing of the Unwind Transaction, I was employed by WKE for 11
5 years, beginning as a Maintenance Manager in 1998. I held the position of Plant
6 Manager at the Big Rivers-owned Coleman Generating Station from 2000 until 2003,
7 at which time I became the Plant Manager of Big Rivers-owned Sebree Generating
8 Station. Altogether, I have over 40 years of experience in the Big Rivers system,
9 having worked for both Big Rivers and WKE since 1981. A copy of my professional
10 summary is attached hereto as **Exhibit Berry-1**.

11

12 **Q. Have you previously testified before the Kentucky Public Service**
13 **Commission (the “Commission”)?**

14 A. Yes. I testified on behalf of Big Rivers in Case No. 2019-00269² in which Big
15 Rivers requested that the Commission enforce the series of contracts between Big
16 Rivers and the City of Henderson and the City of Henderson Utility Commission
17 (collectively, the “HMP&L”) related to HMP&L’s William L. Newman Station
18 (“Station Two”) generating plant and associated facilities, and in Case No. 2018-
19 00146,³ in which the Commission found, among other things, that various Station

² *In the Matter of: Application of Big Rivers Electric Corporation for Enforcement of Rate and Service Standards* (filed July 31, 2019).

³ *See In the Matter of: Notice of Termination of Contracts and Application of Big Rivers Electric Corporation for a Declaratory Order and for Authority to Establish a Regulatory Asset*, P.S.C. Case No. 2018-00146, Order (Aug. 29, 2018).

1 Two contracts had terminated. Additionally, I submitted testimony in support of the
2 Joint Application filed by Big Rivers and Meade County Rural Electric Cooperative
3 Corporation in Case No. 2019-00365,⁴ in which the Commission approved contracts
4 to provide electric service to Nucor Corporation’s (“*Nucor*”) new, 400-job, \$1.7 billion
5 steel plate manufacturing mill under construction in Brandenburg, Kentucky. I also
6 testified on behalf of Big Rivers in the Unwind Transaction case (Case No. 2007-
7 00455), in two cases seeking approval of contracts relating to two aluminum smelters
8 owned by subsidiaries of Century Aluminum Company (Case Nos. 2013-00221 and
9 2013-00413), in Big Rivers’ last two general rate cases (Case Nos. 2012-00535 and
10 2013-00199), and in its 2012 Environmental Compliance Plan case (Case No. 2012-
11 00063). Finally, and most recently, I submitted testimony in support of Big Rivers’
12 Application for a certificate of public convenience and necessity (“*CPCN*”) to construct
13 a new headquarters building in Owensboro, Kentucky.⁵

14

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

16 A. The purpose of my testimony is first to provide a description and history of Big
17 Rivers’ existing Energy Transmission & Substation (“*ET&S*”) facility, as well as the
18 departments that Big Rivers proposes to combine at the new Transmission

⁴ *In the Matter of: Electronic Joint Application of Big Rivers Electric Corporation and Meade County Rural Electric Cooperative Corporation for (1) Approval of Contracts for Electric Service with Nucor Corporation; and (2) Approval of Tariff* (filed Sept. 26, 2019).

⁵ *See In the Matter of: Electronic Application of Big Rivers Electric Corporation for a Certificate of Convenience and Necessity Authorizing Construction of a New Headquarters Facility and an Order Authorizing Big Rivers to Sell its Existing Headquarters Facility*, P.S.C. Case No. 2021-00314, Order (Dec. 7, 2021).

1 Operations Center (“TOC”). Next, I will describe the need for the proposed
2 construction of the new TOC. I will also provide information regarding the process
3 Big Rivers employed to determine the best option to meet its present and future TOC
4 needs, including the reasons why it selected the construction of the proposed TOC in
5 Owensboro, Kentucky, as the best option. Finally, I will provide information
6 regarding Big Rivers’ intention to sell the existing ET&S facility, as it will no longer
7 be needed following the Commission’s approval of the new TOC and Big Rivers’
8 unification of its ET&S, Energy Control, and transmission Engineering staff.

9

10 **Q. Has Big Rivers previously advised the Commission of Big Rivers’**
11 **plans for a new TOC to house the combined ET&S Facility, Energy Control,**
12 **and Engineering operations?**

13 A. As part of Case No. 2021-00314, Big Rivers provided testimony and responses
14 to data requests covering various matters related to its energy transmission, control
15 and engineering operations. Much of that information is relevant to the present
16 preceding, and the subject matter of portions of my testimony should already be
17 familiar to the Commission.

18

19 **Q. Are you sponsoring any exhibits?**

20 A. Yes. I am sponsoring the following exhibits:

21 **Exhibit Berry-1**, Professional Summary

22 **Exhibit Berry-2**, Existing ET&S Facility Flood Maps

1 **Exhibit Berry-3**, Kentucky Tornado Maps

2 **Exhibit Berry-4**, Memorandum of Agreement between Big Rivers and City of
3 Owensboro.

4
5 **THE ET&S FACILITY, ENERGY CONTROL, AND ENGINEERING**

6
7 **Q. Please generally describe Big Rivers' existing ET&S Facility.**

8 A. Big Rivers' existing ET&S facility is located on 5.6 acres at 5650 Airline Road
9 in Henderson, Kentucky. The main building on the site was constructed in 1979, and
10 it encloses 23,000 ft², including 5,000 ft² of office space, as well as 18,000 ft² of
11 warehouse and vehicle storage. An additional warehouse for vehicle storage was
12 constructed in 1984. This additional building encloses another 6,000 ft². The current
13 facility has on-site fueling, compressed gas storage, a loading dock, and a 3,500 ft²
14 vehicle maintenance and oil storage area. A substantial portion of the 5.6 acre site is
15 situated within an area identified by FEMA⁶ as a Special Flood Hazard Area
16 (“*SFHA*”). Maps attached hereto as Exhibit Berry-2 show the existing ET&S facility
17 within the flood zone, which is not usable for additional facility construction.

⁶ United States Federal Emergency Management Agency.

1 **Q. How many individuals are employed at the ET&S facility, and what**
2 **role does the facility serve within Big Rivers' operations?**

3 A. Thirty-five (35) employees currently work at the ET&S facility, with operations
4 divided into four (4) areas: Vegetation Management, Line Maintenance, Substation
5 Maintenance, and Substation/Communication Operations. The
6 Substation/Communication Operations group maintains system communication
7 networks, protective relaying, and revenue metering equipment.

8 The ET&S location is the main facility for field operations and maintenance
9 for the entire Big Rivers transmission system. It is the primary warehouse and
10 vehicle storage for all transmission line and substation materials. Though becoming
11 increasingly inadequate (as discussed below), the ET&S facility and off-site storage
12 locations provide storage for vehicles and all other equipment needed to maintain the
13 safe and reliable operation of the transmission system. These off-site storage
14 locations include an unmanned substation utilized for the outdoor storage of tanker
15 trailers and mobile substations. Various other transmission-related equipment is
16 currently stored at the Sebree generation facility.

17

18 **Q. Are all of Big Rivers' energy transmission, control and engineering**
19 **personnel and functions located at the ET&S facility?**

20 A. No. Big Rivers' Energy Control, Planning & Compliance Department, its
21 Engineering Department, an IT/IS Department data center ("*Data Center*"), and key
22 support personnel, totaling twenty-seven (27) individuals, are presently housed

1 separate and apart from the ET&S facility [REDACTED]
2 [REDACTED]
3 [REDACTED]
4 [REDACTED]
5 [REDACTED]

6 The Energy Control, Planning & Compliance Department operates the 24-
7 hour, 365-days-a-year Control Center, whose primary responsibility is to monitor and
8 safely control the flow of electricity through Big Rivers' substations and power lines.
9 North American Electric Reliability Counsel (NERC) certified system operators
10 perform their operational duties within the Control Center while engineers work to
11 enhance the electric system and ensure compliance.

12 [REDACTED]
13 [REDACTED]
14 [REDACTED]
15 [REDACTED]

16 [REDACTED] As a whole, the Energy Control, Planning & Compliance
17 department includes eleven (11) employees.

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

1 The Data Center is [REDACTED]

2 [REDACTED]

3 [REDACTED]

4 [REDACTED]

5 [REDACTED] the IT/IS department will include five (5) full time
6 employees. Additionally, there are four (4) transmission-related positions relocating
7 to the proposed TOC from the supply chain, budget, safety, and environmental
8 departments.

9

10 **Q. Please explain why Big Rivers needs a new TOC, and please identify**
11 **the overall benefits that will result from the new TOC.**

12 A. The existing ET&S facility does not adequately meet the operational needs of
13 Big Rivers. In addition to the above-described off-site storage, indoor storage
14 limitations force inventory material, other trailers, various transmission equipment,
15 and bushings to be stored outdoors. Our ability to store critical materials and
16 equipment indoors will help guard against theft or vandalism, while simultaneously
17 extending the expected service life of those facilities.

18 Likewise, the current location of Big Rivers' Energy Control Department is
19 inadequate for the safety and efficiency upgrades needed to remain compliant and
20 ensure safe and reliable operations. [REDACTED]

1 [REDACTED]
2 [REDACTED]. Since 2012,
3 three hundred and ninety-five (395) tornadoes have been recorded in Kentucky,
4 causing ninety-seven (97) deaths and eight hundred seventy-nine (879) recorded
5 direct injuries. See <https://data.theleaner.com/tornado-archive/>. Exhibit Berry-3,
6 consists of maps showing tornados in Kentucky in 2021, and the deadliest tornados
7 in Kentucky since 1950. [REDACTED]

8 [REDACTED]
9 [REDACTED]
10 [REDACTED]
11 [REDACTED]

12 [REDACTED] NERC Critical Infrastructure Protection (“CIP”) regulations
13 require these assets to have increased physical and cybersecurity requirements.
14 These physical security requirements have proven to be burdensome [REDACTED]

15 [REDACTED]
16 [REDACTED]
17 [REDACTED]
18 [REDACTED]
19 [REDACTED]
20 [REDACTED]
21 [REDACTED].

1 Additionally, given the operational connections between our staffs at the ET&S
2 facility, in the transmission Engineering Department, and in our Energy Control
3 Department, it is more efficient for Big Rivers to house these operations together in
4 a unified and modern TOC. (A Map, Drawings and a Construction Timeline of the
5 Proposed TOC are attached as **Application Exhibits A and B**, and **Exhibit Masa-**
6 **3**, respectively.) Locating all transmission staff in one location will improve
7 communication and work flow, better enabling Big Rivers' ability to reduce outage
8 response times. Combining these functions at one facility likewise enables basic
9 efficiencies like reduced costs for utility services. Ultimately, the new TOC facilitates
10 better coordination of transmission activities, and it addresses all of Big Rivers'
11 physical facility needs in one centralized and suitable location that remains central
12 to the Big Rivers footprint.

13

14 **II. DUE DILIGENCE AND THE REVIEW OF ALTERNATIVES**

15

16 **Q. Please describe the development of Big Rivers' decision-making with**
17 **respect to the future of its existing ET&S facility.**

18 A. The need for additional warehouse space at Big Rivers' existing ET&S facility
19 initially led Big Rivers to consider options for the future of the ET&S facility,
20 including constructing additional warehouse space offsite, purchasing Henderson
21 Municipal Power & Light's ("*HMPL*") electric system and using HMP&L's facilities
22 for ET&S operations, or relocating ET&S. HMP&L rejected Big Rivers' offer on July

1 13, 2021. Moreover, it is simply not efficient or feasible for us to upgrade and then
2 maintain a location for the Engineering and Energy Control Departments that is
3 separate from ET&S, and that situation would become even worse because Big Rivers
4 would have to add another separate location for the additional warehouse that is
5 needed to serve ET&S. Therefore, it made sense to focus on a suitable location for a
6 combined transmission operations facility meeting operational and reliability needs.

7 Big Rivers negotiated with the City of Owensboro for incentives that would
8 make the ET&S relocation cost-effective and that would allow the new TOC remain
9 centrally located in Big Rivers' service area and near Big Rivers' new headquarters.
10 In its search for suitable properties, Big Rivers located the property that is the
11 proposed site of the construction. Negotiations with the City concerning the proposed
12 property then focused on how to realize incentive value for the development, despite
13 the fact that the City was not the owner of this particular property. Ultimately, the
14 City did not want to purchase the property itself. Instead, the City desired that Big
15 Rivers purchase the property, and the City indicated that it could potentially rebate
16 one-third of the purchase price for the property. As such, Big Rivers purchased the
17 property for the proposed facility from a private landowner (Audubon Loans I, LLC)
18 on November 23, 2021.

19 The property acquired for Big Rivers for this project is situated in the
20 northwest corner of Owensboro on a relatively-flat greenfield site just inside the
21 bypass and easily accessible to and from major thoroughfares. Its buildable area,
22 features and location are well suited to the needs of Big Rivers and its Members; in

1 fact, Big Rivers and one of its Members, Kenergy Corp. (“Kenergy”), explored jointly
2 utilizing the property for the new TOC and a new headquarters for Kenergy, but
3 Kenergy determined that its headquarters needs could wait. A map showing the
4 property and the proposed TOC is attached as **Application Exhibit B**. The design
5 of the TOC would allow Kenergy to co-locate a new headquarters there in the future
6 if needed.

7
8 **Q. Has the City of Owensboro offered any incentives in exchange for Big**
9 **Rivers constructing the TOC and relocating its employees to the proposed**
10 **location?**

11 A. Yes. The City of Owensboro has offered a rebate of \$18,360.00 per acre, up to
12 45 acres, for the acres Big Rivers selects for construction. The City has also agreed to
13 build a road, pay \$30,000 to help cover utility connections, and rebate fifty percent
14 (50%) of the General Occupational Fund Occupational Fee on gross employee wages
15 for ten years. See **Exhibit Berry-4**.

16
17 **Q. Did Big Rivers consider using its existing Henderson headquarters**
18 **facilities to accommodate its TOC needs?**

19 A. Yes, Big Rivers considered the potential of retrofitting its existing
20 headquarters to satisfy its TOC needs. The location of Big Rivers’ existing
21 headquarters facility in downtown Henderson is suited for business offices and light

1 vehicle traffic, not for the industrial operations required at the ET&S facility, nor for
2 the housing of large vehicles and equipment.

3 Additionally, the age and design of the 50+ year old facility renders its reuse
4 generally unattractive for Big Rivers' needs. Moreover, [REDACTED]

5 [REDACTED]

6 [REDACTED]

7 [REDACTED]

8 [REDACTED]

9 [REDACTED]

10 [REDACTED]

11 [REDACTED]

12 [REDACTED]

13 [REDACTED]

14 [REDACTED]

15 [REDACTED]

16

17 **Q. Why has Big Rivers chosen to combine its ET&S, Energy Control, and**
18 **transmission Engineering departments at the proposed TOC, rather than at**
19 **Big Rivers' new headquarters?**

20 A. Big Rivers originally considered relocating all employees currently housed at
21 Big Rivers' existing headquarters to its new headquarters location in downtown
22 Owensboro. Ultimately, given the need to relocate ET&S since the current facility

1 does not allow for needed additional warehouse space, Big Rivers concluded that
2 combining the Energy Control and Engineering departments and other key support
3 personnel with its employees and operations currently housed at its ET&S facility
4 will provide better efficiencies through a combination of proximity and greater
5 operational integrity than relocating the Engineering and Energy Control
6 Departments to the new headquarters facility.

7

8 **III. PLANNING, DESIGN, AND BENEFITS OF THE TOC**

9

10 **Q. Please describe the TOC, including the site proposed for its**
11 **construction, square footage, and primary attributes.**

12 A. The TOC is to be located at property purchased by Big Rivers on the northwest
13 side of Owensboro, at 90 Industrial Drive, Owensboro, Kentucky 42301. At
14 approximately 100,358 square feet, the new TOC will house offices, warehouse space,
15 enclosed and covered vehicle storage and maintenance space, a fuel island, and a
16 loading dock. It is designed to accommodate Big Rivers' needs related to its
17 transmission control operations. The TOC's access to major thoroughfares in
18 Owensboro, and particularly the Owensboro bypass, offers an important benefit for
19 Big Rivers.

1 **Q. Did Big Rivers engage any consultants to assist with the planning and**
2 **design of the proposed TOC?**

3 A. Yes. Big Rivers' member Jackson Purchase Energy Cooperative ("*JPEC*") had
4 recently worked with Cooperative Building Solutions ("*CBS*") during the renovation
5 of *JPEC*'s new headquarters facility. *CBS* completed that project on time and under
6 budget, and so on *JPEC*'s recommendation, we reached out to *CBS* for its assistance
7 on our project. *CBS* and Big Rivers have worked closely together to design the
8 proposed TOC based on Big Rivers' current and immediately foreseeable needs. Tim
9 Masa, President of *CBS*, has filed testimony in support of this application, and he
10 speaks in more detail about the nature of the planning and design process, cost of
11 alternatives considered, and the anticipated benefits of the TOC.

12

13 **Q. How many Big Rivers employees are expected to work at the TOC?**

14 A. Thirty-five (35) employees are located at the existing ET&S facility, with
15 operations divided into four (4) areas: Vegetation Management, Line Maintenance,
16 Substation Maintenance, and Substation/Communication Operations. Big Rivers'
17 Energy Control, Engineering, Transmission Planning & Compliance departments
18 and key IT/IS EMS and Data Center support personnel, consisting of an additional
19 twenty-seven (27) employees, will be relocated from the existing headquarters facility
20 to the new TOC. Thus, a total of approximately sixty-two (62) employees are planned
21 to move into the new TOC.

1 **Q. What is the estimated cost of the proposed TOC?**

2 A. The TOC project investment is expected to cost approximately \$52,779,254.
3 Further detail on cost information is provided as part of Mr. Masa's and Dr. Mathews'
4 testimonies.

5

6 **Q. How will the proposed TOC allow Big Rivers to better serve its**
7 **Members and their retail electric ratepayers?**

8 A. As I mentioned, the TOC will allow us to unify our ET&S, Energy Control, and
9 Engineering operations at one central facility. As Mr. Masa discusses in more detail,
10 the TOC will create many construction and operational efficiencies, as well as some
11 much needed operational and safety and reliability enhancements. And as Dr.
12 Mathews testifies, the costs of the TOC will not create the need for a wholesale rate
13 increase.

14

15 **Q. Do you believe the TOC represents a necessary and reasonable project**
16 **in the best interest of Big Rivers and its Member-Owners?**

17 A. Yes. Big Rivers has conducted extensive due diligence and determined that the
18 short-term and long-term needs of its energy transmission, control and engineering
19 operations require a new facility.

1 **IV. SALE OF THE ET&S FACILITY**

2 **Q. If this application is granted, what does Big Rivers plan to do with its**
3 **existing ET&S campus?**

4 A. Big Rivers plans to sell the existing ET&S Facility as soon as possible. For that
5 reason, Big Rivers also seeks authority from the Commission, pursuant to KRS
6 278.218, to sell and transfer the existing ET&S property in an arms-length
7 transaction with a third party at a date to be determined following granting of the
8 requested CPCN.

9

10 **Q. Did the original book value of the existing ET&S facility exceed \$1**
11 **million?**

12 A. Yes.

13

14 **Q. What process do you plan to follow to market and sell the existing**
15 **ET&S facility?**

16 A. We have listed the existing ET&S property on the market. The property's
17 appraised value on February 5, 2021 was [REDACTED] Prior to listing the property,
18 we will conduct an updated appraisal and offer the property for sale at a price
19 consistent with that value set by a qualified real estate appraiser. The property will
20 ultimately be sold in an arms-length transaction at market price.

1 **V. CONCLUSION**

2 **Q. Please summarize the relief requested by Big Rivers in this**
3 **proceeding.**

4 A. Due to its size constraints, aging, and inefficiencies, as well as Big Rivers’
5 evolving operational requirements, the existing ET&S Facility can no longer
6 adequately satisfy the current and future needs of Big Rivers and its Members. It is
7 not feasible to retrofit the existing ET&S Facility to meet those needs. The proposed
8 TOC is reasonable in terms of investment and scope, and it will not result in wasteful
9 duplication of facilities. Big Rivers has thoroughly reviewed and considered
10 alternatives to the proposed TOC and determined that the proposed TOC represents
11 a reasonable, cost-effective solution to meet Big Rivers’ needs. As such, Big Rivers
12 requests that the Commission grant Big Rivers a CPCN to construct the proposed
13 TOC.

14 Big Rivers also requests authority under KRS 278.218 to sell its existing ET&S
15 Facility as described herein, as that property will no longer be useful to Big Rivers
16 following approval and construction of the new TOC.

17

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

19 A. Yes.

Professional Summary

Robert W. Berry
President and Chief Executive Officer
Big Rivers Electric Corporation
201 Third Street
Henderson, KY 42420
Phone: 270-844-6031

Professional Experience

Big Rivers Electric Corporation
President and Chief Executive Officer – 2014 to Present
Vice President, Production – 2009 to 2014

Western Kentucky Energy – 1998 to 2009
General Manager
Plant Manager, Reid/Green/HMP&L Station
Plant Manager, Coleman Station – 2000 to 2003
Maintenance Manager, Reid/Green/HMP&L Station – 1998 to 2000

Big Rivers Electric Corporation – 1981 to 1998
Maintenance Superintendent, Green Station
Maintenance Supervisor, Green Station
Various and Sundry Maintenance and Operations Positions

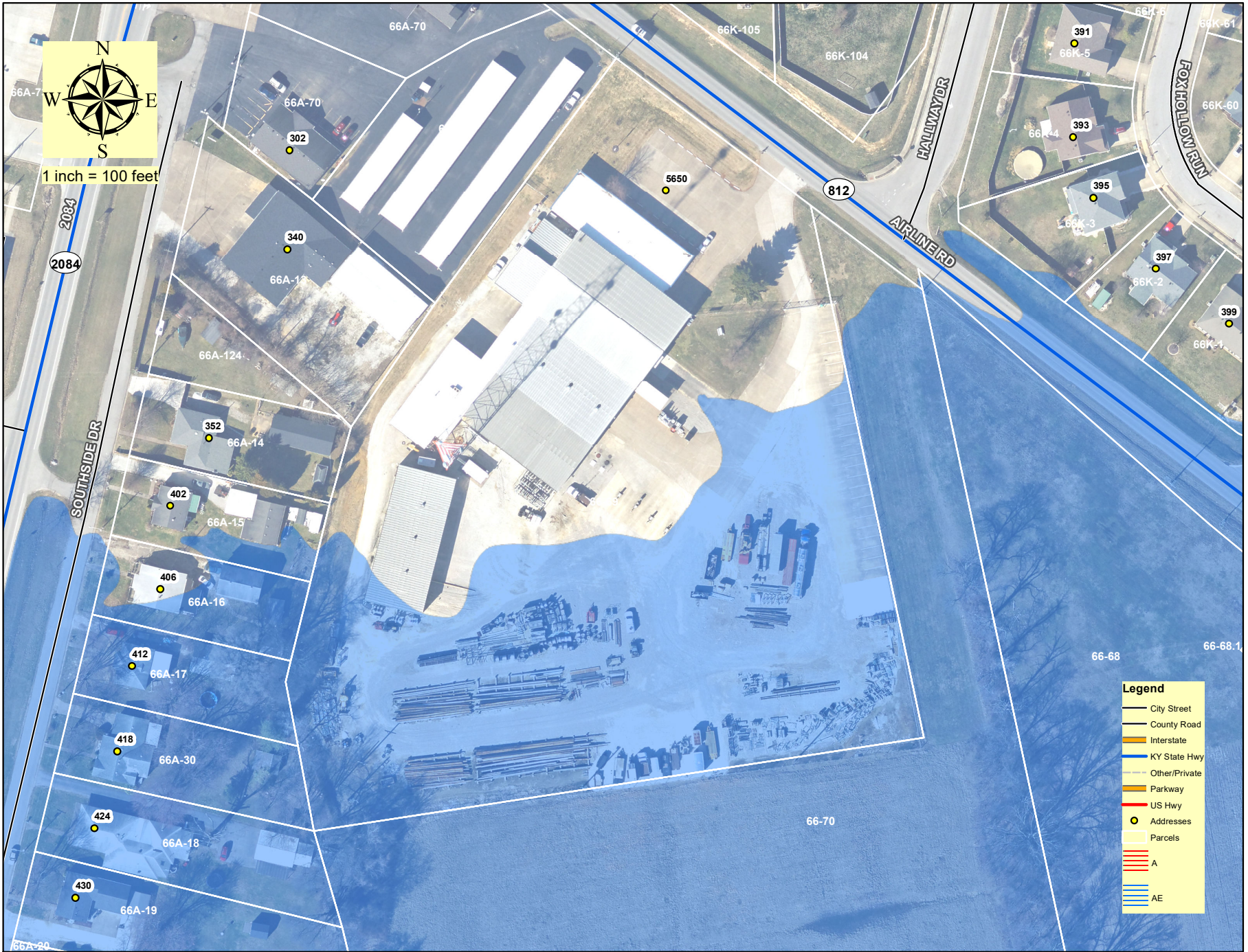
Education

BS Business Management
Mid-Continent University

Associate in Applied Science, Mechanical Engineering Technology
University of Kentucky Community College

System Mechanical Maintenance Apprentice Program
Certified by Kentucky Department of Higher Education

Management, Leadership and Communication Training
Employer-sponsored programs



National Flood Hazard Layer FIRMeTte



37°49'14.29"N



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS	Without Base Flood Elevation (BFE) Zone A, V, A99
	With BFE or Depth Zone AE, AO, AH, VE, AR
	Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD	0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
	Future Conditions 1% Annual Chance Flood Hazard Zone X
	Area with Reduced Flood Risk due to Levee. See Notes. Zone X
	Area with Flood Risk due to Levee Zone D
OTHER AREAS	Area of Minimal Flood Hazard Zone X
	Effective LOMRs
	Area of Undetermined Flood Hazard Zone D
GENERAL STRUCTURES	Channel, Culvert, or Storm Sewer
	Levee, Dike, or Floodwall
OTHER FEATURES	Cross Sections with 1% Annual Chance Water Surface Elevation
	Coastal Transect
	Base Flood Elevation Line (BFE)
	Limit of Study
	Jurisdiction Boundary
	Coastal Transect Baseline
	Profile Baseline
	Hydrographic Feature
MAP PANELS	Digital Data Available
	No Digital Data Available
	Unmapped

USGS The National Map: Orthoimagery. Data refreshed April, 2019. 37°48'45.87"N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

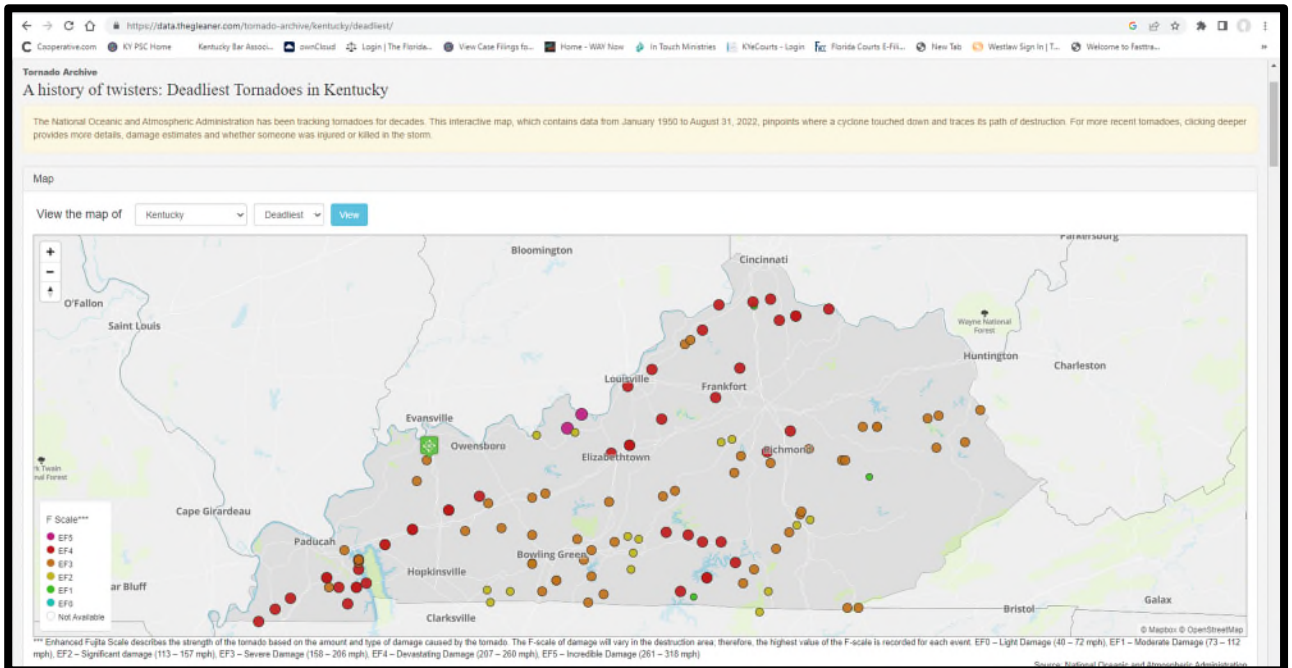
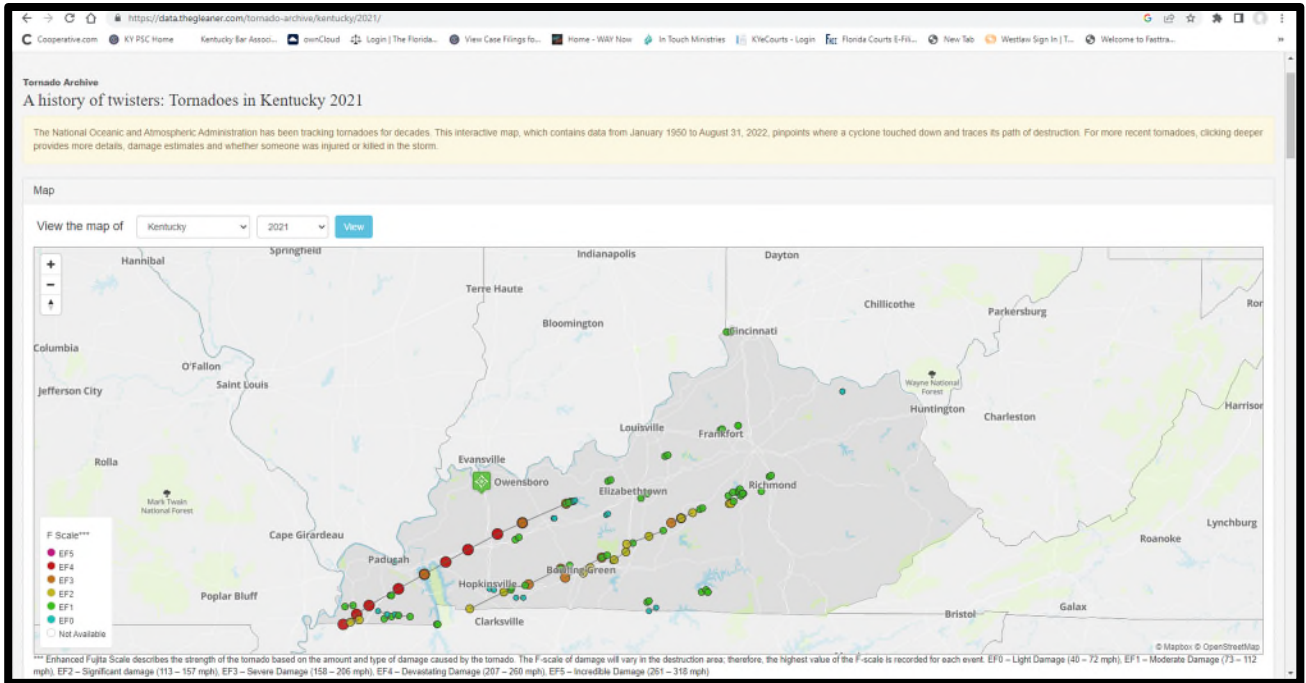
This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 4/27/2020 at 3:09:03 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

KENTUCKY TORNADO HISTORY

<https://data.theleaner.com/tornado-archive/>



MEMORANDUM OF AGREEMENT

This Memorandum of Agreement (hereinafter "Agreement"), dated as of December 20, 2022, is made by and between the **CITY OF OWENSBORO**, a municipal corporation of the Home Rule Class created and existing under the laws of the Commonwealth of Kentucky, 101 East Fourth Street, P. O. Box 10003, Owensboro, Kentucky 42302-9003 (hereinafter the "City"), and **BIG RIVERS ELECTRIC CORPORATION**, a Kentucky cooperative corporation, P.O. Box 24, Henderson, Kentucky 42419-0024 (hereinafter the "Corporation").

RECITALS

WHEREAS, the Corporation desires to relocate its linemen, dispatch and other technical employees to the City of Owensboro, Kentucky which will create jobs and further stimulate local commerce; and

WHEREAS, the City recognizes the economic impact of the Corporation's move to Owensboro and hereby agrees to incentivize the Corporation for its relocation and job creation initiative in our community.

NOW THEREFORE, in consideration of these premises and the terms and conditions hereinafter set forth, the parties to this Agreement hereby agree as follows:

Section 1. City Obligations. In consideration of the Corporation relocating its linemen, dispatch and other technical employees to the City of Owensboro, the City agrees to provide the following incentives:

- (1) The Corporation has purchased a tract containing 114.238 acres of land, more or less, comprising PVA Tract No. 47-3, formerly owned by Audubon Loans I, LLC, for the construction of a building housing the Corporation's

linemen, dispatch and other technical employees. The Corporation will select the size, layout, and location of property within the larger tract that the Corporation will retain. The property is valued at \$45,000.00 per acre. The City will rebate to the Corporation \$18,360.00 per acre for the acres selected by the Corporation as shown on Exhibit A, with the rebate being limited to 45 acres, as a part of the incentive for the Corporation to relocate its employees to the City of Owensboro.

- (2) The City agrees to equally divide the cost of a site intelligence report.
- (3) The City will pay the Corporation \$1,500,000.00 for money the Corporation will spend on road and related infrastructure construction in a manner substantially similar to the road shown on the attached Exhibit A, and in accordance with public improvement specifications. No through streets will be constructed on PVA Tract No. 47-3 (or any tracts resulting from subdivision of that tract) without the Corporation's consent.
- (4) The City will pay the Corporation \$30,000.00 to help cover its cost to connect utilities to the property.
- (5) The rebate of fifty percent (50%) of the General Fund Occupational Fee on gross employee wages for a period of ten (10) years upon the relocation of the Corporation's linemen, dispatch and other technical employees to the City of Owensboro. The ten-year incentive period will begin no later than January 1, 2026.

Section 2. Corporation Obligations. In consideration of the incentives provided by the City, and subject to satisfying the Conditions Precedent in Section 5, the Corporation agrees to:

- (1) Have its linemen, dispatch and other technical employees housed in the facility to be constructed on the property described in Section 1(1) for a period of at least twenty (20) years.
- (2) Obtain and maintain an active City business license, as well as timely comply with all contractual and financial obligations to the City under this Agreement.
- (3) Consent to annexation of the tract containing 114.238 acres, more or less.

Section 3. Conditions Precedent. The Corporation's relocation of its linemen, dispatch and other technical employees to the City of Owensboro is subject to the approval of the Kentucky Public Service Commission and the Rural Utilities Service, and any necessary rezoning of the property.

Section 4. Waiver. The failure on the part of either Party hereto to insist in any instance upon a strict observance by the other Party of any provision of this Agreement, shall not be construed as a waiver of that or any other provision of this Agreement and it shall not diminish the right of either Party to demand compliance therewith on any subsequent occasion.

Section 5. Entire Agreement; Binding Effect. This Agreement shall constitute the entire agreement between the Parties. Any prior understandings or representations, or any subsequent oral representations or modifications of any kind shall not be binding

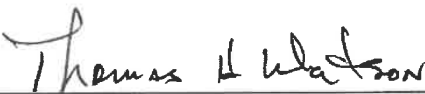
on either Party except to the extent incorporated herein, in writing, by agreement of the Parties.

Section 6. Governing Law. This Agreement shall be governed by and be construed in accordance with, the laws of the Commonwealth of Kentucky in all respects, including all matters of construction, validity and performance. Any dispute involving the terms of this Memorandum of Agreement shall be brought in the state or federal courts of Daviess County, Kentucky.

Section 7. Partial Invalidity. If any term, covenant or condition of this Agreement or the application thereof to any person or circumstance shall, to any extent, be invalid or unenforceable, the remainder of this Agreement, or the application of such term, covenant or condition to the persons or circumstances other than those to which it is held invalid or unenforceable, shall not be affected thereby, and such remaining terms, covenants or conditions of this Agreement shall be valid and enforceable to the fullest extent permitted by law.

IN TESTIMONY WHEREOF, witness the signatures of the Parties hereto on this the day and date first hereinabove written.

CITY OF OWENSBORO:



Thomas H. Watson, Mayor

ATTEST:



Beth Davis, City Clerk

BIG RIVERS ELECTRIC CORPORATION:

Robert W. Berry
Robert W. Berry, President

ATTEST:

Amanda Jackson
Amanda Jackson, Executive Secretary

COMMONWEALTH OF KENTUCKY)
) Sct.
COUNTY OF DAVIESS)

SUBSCRIBED, SWORN TO AND ACKNOWLEDGED before me by Thomas H. Watson, as Mayor, and attested by Beth Davis, as City Clerk, for and on behalf of the City of Owensboro, Kentucky, on this the 20th day of December, 2022.

Adrienne Renee Carrico
Notary Public, State of Kentucky at Large
Notary ID# KY NP 58504
My commission expires: 10/15/26

COMMONWEALTH OF KENTUCKY)
) Sct.
COUNTY OF Henderson)

SUBSCRIBED, SWORN TO AND ACKNOWLEDGED before me by Robert W. Berry, as President, and attested by Amanda Jackson, as Executive Secretary, for and on behalf of Big Rivers Electric Corporation, on this the 30 day of December, 2022.

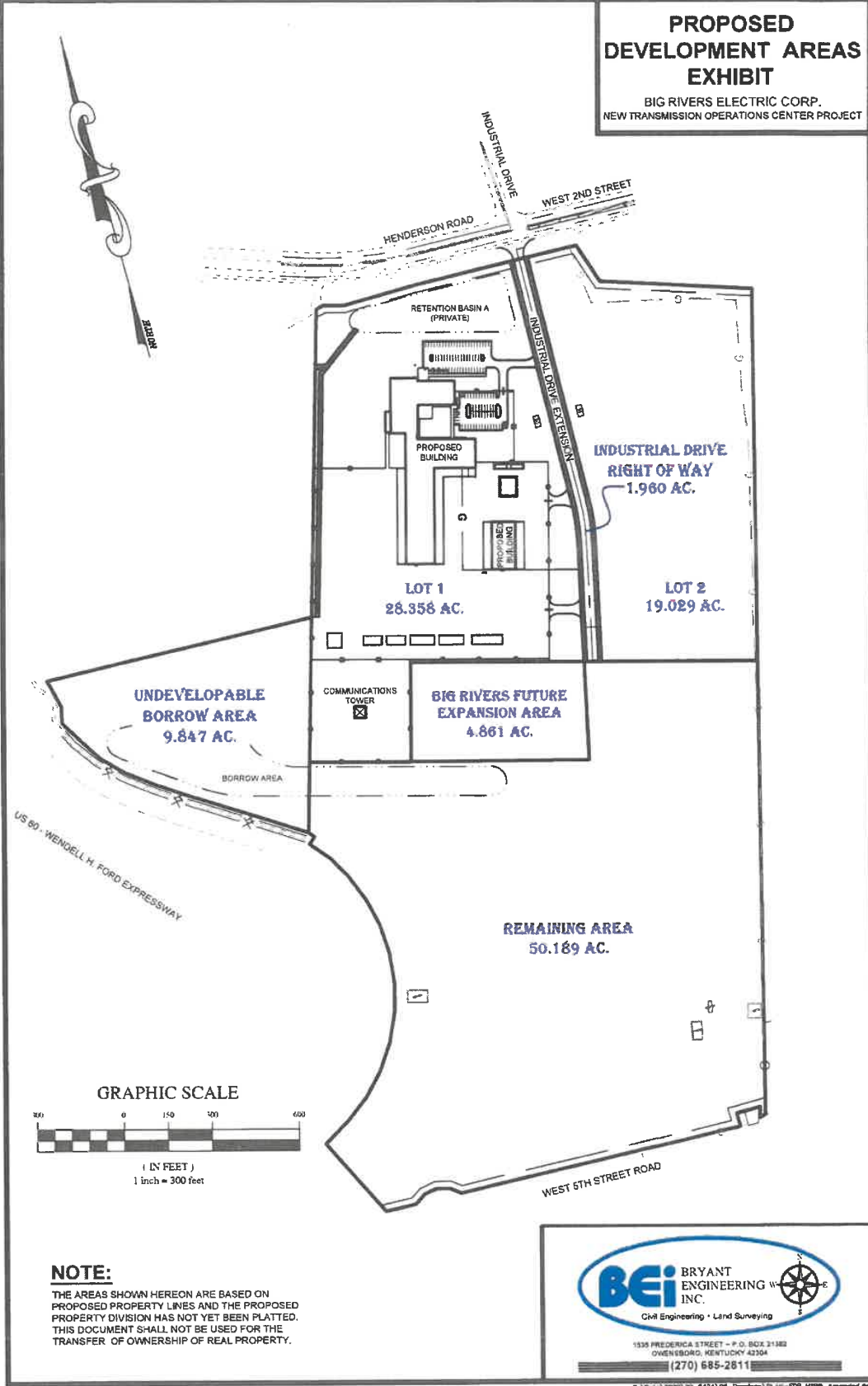
Amanda Jackson
Notary Public, State of Kentucky at Large
Notary ID# 109869
My commission expires: March 22, 2023

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

EXHIBIT "A"

**PROPOSED
DEVELOPMENT AREAS
EXHIBIT**

BIG RIVERS ELECTRIC CORP.
NEW TRANSMISSION OPERATIONS CENTER PROJECT



NOTE:
THE AREAS SHOWN HEREON ARE BASED ON PROPOSED PROPERTY LINES AND THE PROPOSED PROPERTY DIVISION HAS NOT YET BEEN PLATTED. THIS DOCUMENT SHALL NOT BE USED FOR THE TRANSFER OF OWNERSHIP OF REAL PROPERTY.

BEI BRYANT ENGINEERING INC.
Civil Engineering • Land Surveying
1335 PRECERCA STREET - P.O. BOX 31182
OWENSBORO, KENTUCKY 42304
(270) 685-2811

**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)
AUTHORIZING CONSTRUCTION OF A NEW)
TRANSMISSION OPERATIONS CENTER AND)
AN ORDER AUTHORIZING BIG RIVERS TO)
DISPOSE OF PROPERTY)**

**Case No.
2022-00433**

DIRECT TESTIMONY

OF

TALINA R. MATHEWS, Ph.D.

ON BEHALF OF

BIG RIVERS ELECTRIC CORPORATION

FILED: January 24, 2023

**Case No. 2022-00433
Application Exhibit E
Direct Testimony of Talina R. Mathews, Ph.D.**

**DIRECT TESTIMONY
OF
TALINA R. MATHEWS, Ph.D.**

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VI. FINANCIAL ANALYSIS.....	12
VII. CONCLUSION	16

1 Director of State Regulatory Policy at Southwest Power Pool (“*SPP*”). I moved into
2 my current position of CFO for Big Rivers in August of 2022.

3 As Commissioner, I was active within the National Association of Utility
4 Regulatory Commissioners (“*NARUC*”), where I served as a board director, co-vice
5 chair of the Committee on Electricity, and member of the Committee on Critical
6 Infrastructure. I also served on MISO’s Organization of MISO States and as PJM’s
7 Organization of PJM States (“*OPST*”) president. In addition, I was president of the
8 Southeastern Association of Regulatory Utility Commissioners.

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

10 A. As CFO, I oversee the financial and strategic planning activities. Such
11 activities include accounting and financial reporting, payroll, budgets and financial
12 forecasts, finance, tax, rates and strategic planning.

13 **Q. Have you previously testified before the Kentucky Public Service
14 Commission?**

15 A. No, I have not.

16

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

18 A. The purpose of my testimony is to describe and summarize the financial
19 impacts of constructing and operating a new Transmission Operations Center (the
20 “*TOC*”) in Owensboro, Kentucky, and selling Big Rivers’ existing ET&S facility in

1 Henderson, Kentucky. The financial summary highlights the economic impact on Big
2 Rivers' net margins, cash flow, and balance sheet. My testimony further describes the
3 project's various financial considerations, including (i) the net capital investment; (ii)
4 the financing of the project; and (iii) the incremental annual operating costs and
5 savings. Finally, my testimony also provides a financial perspective of alternatives
6 considered and supports Big Rivers' request for authorization to construct the
7 proposed TOC and sell its existing ET&S Facility.

8

9 **Q. Are you sponsoring any exhibits?**

10 A. Yes. The following exhibits were prepared by me or under my supervision:

- 11 • **Exhibit Mathews-1**: Professional Summary
- 12 • **Exhibit Mathews-2**: Detailed Listing of the Anticipated Project Costs
- 13 • **Exhibit Mathews-3**: Financial Analysis

14

15 **II. BACKGROUND AND OVERVIEW**

16

17 **Q. Please generally describe Big Rivers' recent financial performance.**

18 A. In 2021, which reflects the most recent annual data presently available, Big
19 Rivers had sales of 6,572,030 MWh resulting in total revenue of \$393.1 million. Big
20 Rivers earned a net margin of \$54.1 million prior to a one-time equity reduction and
21 the TIER Credit, and Big Rivers had an equity-to-assets ratio of 38%. Its Debt Service

1 Coverage (“DSC”) and TIER (excluding the equity utilization and TIER Credit) were
2 2.22 and 2.70, respectively.

3

4 **Q. Has Big Rivers recently undertaken any major projects?**

5 A. Yes, Big Rivers is currently constructing a new headquarters facility in
6 Owensboro, Kentucky, pursuant to the Kentucky Public Service Commission’s Order
7 in Case No. 2021-00314. The total estimated cost of the new headquarters is
8 approximately \$11.1 million, inclusive of anticipated incentives and tax credits. The
9 new headquarters facility is expected to be completed in the first quarter of 2023. Big
10 Rivers continues to explore the financing of the new headquarters costs through the
11 Cooperative Finance Corporation and local banks, and will seek approval as
12 necessary in connection therewith under KRS 278.300. I further discuss cash flow
13 and Big Rivers’ plans with respect to financing of the TOC, below.

14

15 **Q. Where does Big Rivers intend to construct the proposed TOC?**

16 A. Big Rivers intends to construct the proposed TOC at an undeveloped property
17 on the west side of Owensboro, Kentucky. The Direct Testimony of Robert W. Berry
18 explains the principal details surrounding the decision to construct the proposed TOC
19 at this location.

1 **Q. What is the cost and value of the real estate for the proposed TOC?**

2 A. Big Rivers bought the property outright from a private landowner, Audubon
 3 Loans I, LLC on November 23, 2021, for a purchase price of \$5,140,710. The property
 4 is presently valued at \$5,140,000 according to the Daviess County Property Valuation
 5 Administrator. Only a portion of the property will be used to site the TOC, and if the
 6 Commission authorizes Big Rivers to construct the TOC, Big Rivers will explore the
 7 best use for the remainder of the site, including potentially selling the unneeded
 8 portion of the land to a third-party.

9

10 **Q. What is the estimated total cost and total value of the proposed TOC?**

11 A. The estimated total cost of the project is approximately \$52.8 million (see
 12 **Exhibit Mathews-2** for a detailed listing of the anticipated costs of this project). The
 13 following table summarizes the total cost and the total value of the proposed TOC:

	Total Cost	Total Value
Land ²	\$1,199,864	\$2,026,064
Building & Improvements	\$44,142,000	45,672,000
Other System Upgrades	7,437,390	7,437,390
Total	\$52,779,254	\$55,135,454

² It is estimated that 45 acres of the land will be used for the TOC.

1 **Q. Is Big Rivers in a financial position to undertake a new TOC at this**
2 **junction?**

3 A. Yes. The total estimated cost of the TOC represents just 5.8% of Big Rivers'
4 net utility plant of approximately \$908 million as of December 31, 2021. Although
5 the total cost is not insignificant, the proposed project is not expected to materially
6 impact Big Rivers' existing financial condition.

7

8 **Q. What does Big Rivers intend to do with its existing ET&S and**
9 **headquarters properties?**

10 A. Big Rivers plans to sell the existing ET&S and headquarters properties. Upon
11 the move to the TOC, the ET&S and headquarters properties will no longer be needed
12 for Big Rivers' purposes.

13

14 **Q. What are the financial impacts of selling the existing ET&S and**
15 **headquarters properties?**

16 A. There are three primary financial impacts related to the sale of the existing
17 ET&S and headquarters properties: (i) the cash proceeds from the sale of the
18 properties; (ii) the avoided future capital investments that otherwise would be
19 required to upgrade the existing ET&S and headquarters properties; and (iii) the
20 realized gain on the sale of those properties. Each of these financial impacts will
21 mitigate the cost of the proposed project and are more fully described as follows:

1 (i) Cash Proceeds from the Sale of the Properties – The existing ET&S
2 Facility is anticipated to be sold at a price of approximately [REDACTED]. The
3 headquarters properties are anticipated to be sold at a price of approximately
4 [REDACTED]. These prices reflect formal property appraisals, as well as market
5 analyses performed in 2021 for the ET&S Facility and 2019 for the headquarters
6 properties. The two studies performed by independent third-parties yielded very
7 similar valuations.

8 (ii) Avoided Capital Investments – As more fully discussed by Mr. Berry,
9 the existing ET&S Facility was constructed in phases between 1979 and 1984. Due
10 to a lack of buildable acreage onsite and other operational inadequacies, we have
11 simply outgrown the space. As a consequence of those constraints and numerous
12 operational deficiencies associated with the property, there was no feasible way to
13 accommodate our current needs for ET&S operations at the current location.

14 Moreover, keeping the existing ET&S Facility, and incurring expenses to
15 maintain and upgrade that facility, is simply not a realistic or financially
16 advantageous plan. As we have noted, the existing ET&S facility is aged; it is too
17 small for our needs; and the property is not suitable for the necessary facilities and
18 functionalities. Investments to maintain the facility would have included significant
19 costs, including costs to maintain the structures, grounds, parking lots and critical
20 building systems (HVAC, electric, plumbing, and back-up generation), and costs to
21 perform general cosmetic improvements (painting, flooring, lighting). Additional

1 capital investments would be needed to upgrade safety features and to improve
2 handicap accessibility (bathroom, building entrance). The estimated capital
3 investment to maintain and upgrade the existing ET&S facility and headquarters
4 properties are approximately \$34.6 million, which will be avoided by the construction
5 of the TOC.

6 (iii) Gain on Sale of the Existing Facilities – The current net book value of
7 the ET&S facility is [REDACTED] and that amount will decrease as additional
8 depreciation expense is recorded each month. The projected net book value at
9 December 31, 2024 (the estimated date on which the property will no longer be needed
10 and will be available to be sold) is [REDACTED]. The amount by which the sales price
11 exceeds the net book value at the time of sale, is estimated to be [REDACTED]. The
12 current net book value of the existing headquarters is [REDACTED], and will decrease
13 as additional depreciation expense is recorded each month. The projected net book
14 value at December 31, 2024, the estimated date on which the properties will no longer
15 be needed and will be available to be sold, is [REDACTED]. The amount by which the
16 sales price exceeds the net book value at the time of sale is estimated to be [REDACTED]
17 [REDACTED]. The sale amounts that exceed the net book values will be recognized as a one-
18 time windfall to Big Rivers' net margins, a portion of which will be used to reduce the
19 company's regulatory asset balance and a portion of which will flow back to retail
20 customers through Big Rivers' MRSM mechanism.

1 **III. DUE DILIGENCE**

2 **Q. Did Big Rivers consider potential alternatives to constructing the**
3 **proposed TOC?**

4 A. Yes, Big Rivers considered multiple options for addressing its operational
5 needs, as discussed in Mr. Berry’s testimony (see **Application Exhibit D**). Before
6 Big Rivers began pursuing the TOC project, it had become readily apparent that the
7 existing ET&S facility was inadequate for its present functions. As Mr. Berry notes,
8 we considered constructing warehouse space offsite; and prior to HMP&L’s July 2021
9 rejection of our offers to purchase its electric system, we also considered using
10 HMP&L’s existing facilities. With HMP&L’s decision, however, and to gain the
11 operational efficiencies of combining ET&S with the Engineering and Energy Control
12 Departments, the only option effectively left to us was to build-to-suit.

13

14 **Q. How does Big Rivers intend to finance the cost of constructing the**
15 **proposed TOC?**

16 A. Big Rivers intends to fund the investment in the proposed TOC through a loan
17 with the Rural Utilities Service (“RUS”), as the RUS typically offers the most
18 attractive debt terms, including lower interest rates. If such a loan is not available,
19 several financial institutions, including the National Rural Utilities Cooperative
20 Finance Corporation (“CFC”) and local Owensboro lenders, have expressed an
21 interest in financing the proposed TOC. Big Rivers will seek approval of any

1 financing related to the project in a subsequent proceeding as necessary under KRS
2 278.300. The anticipated project cash flow is shown on **Exhibit Mathews-3**.

3

4 **Q. Has Big Rivers considered leveraging the New Market Tax Credits**
5 **Program (“NMTC Program”) as a means of helping finance the TOC?**

6 A. Yes. We are presently exploring potential opportunities to obtain financing
7 assistance through the NMTC Program.

8

9 **Q. What is the NMTC Program?**

10 A. The NMTC Program was established by the Community Renewal Tax Relief
11 Act of 2000 with the goal of stimulating investment and economic growth in low-
12 income communities. Certain census tracts in and around Owensboro have been
13 identified as qualifying “Opportunity Zones” for the NMTC Program, and the
14 proposed location of the new TOC is located within a qualified census tract. The
15 economic benefit of the loan forgiveness associated with the NMTC Program typically
16 equates to approximately 20-25% of the project cost financed. For the proposed
17 project, such benefit could reduce the overall cost by approximately \$10.6 million to
18 \$13.2 million. Participation in the NMTC Program is not guaranteed, as the
19 community development entities that receive allocations of program funds select the
20 projects they wish to invest in. For this reason, the financial projections presented
21 in **Exhibit Mathews-3** do not assume any NMTC Program assistance.

1 If the Commission grants Big Rivers a certificate of public convenience and
2 necessity (“*CPCN*”) for the proposed TOC, and if Big Rivers is a successful applicant
3 to the NMTC Program, Big Rivers will seek approval of the financing in a subsequent
4 proceeding as necessary under KRS 278.300.

5

6 **Q. What is the estimated total annual cost of operation of the TOC after**
7 **it is placed into service?**

8 A. The total estimated annual cost of operation of the TOC (excluding property
9 tax, depreciation and rebates) after it is placed into service is \$156,853. There will
10 be an increase in property tax expense as a result of the proposed TOC’s higher
11 assessed value, along with higher depreciation expense. Mitigating these higher
12 costs include a reduction in operation and maintenance (“*O&M*”) expense related to
13 the new and more-efficient building. Other operating cost savings include savings
14 from no longer maintaining [REDACTED] or a
15 substitute location for the Energy Control and Engineering Departments and
16 supporting Information Systems personnel. The following table presents a
17 comparison of the proposed vs. existing ET&S Facility and Transmission Related
18 Functions annual operating costs for the initial year of operation:

	Proposed Transmission Operations Center	Existing ET&S, Energy Control, Information Systems and Engineering	Savings/ (Cost)
Operation and Maintenance			
Utilities	33,210	137,018	103,308
Insurance	74,353	34,270	(40,083)
Building& Grounds	29,250	111,971	82,721
Elevator	0	1,965	1,965
Contractor/Janitorial	<u>20,040</u>	<u>83,350</u>	63,310
Total O&M	156,853	368,574	211,721
Property Tax	705,970	31,227	(674,743)
Depreciation	1,031,588	244,368	(787,220)
Occupational Tax Rebate	<u>(66,721)</u>	<u>0</u>	<u>66,721</u>
Net Operating Costs	1,827,690	644,169	(1,183,521)

1 *Note: The operating costs in the above table reflect the proposed TOC cost on a*
2 *comparable square footage basis. Also, the operating costs reflect the projected*
3 *year 1 amounts. Some of the line items may be subject to inflation.*
4

5 VI. FINANCIAL ANALYSIS

6 **Q. Have you analyzed the impact of the proposed TOC on Big Rivers'**
7 **financial condition?**

8 A. Yes. A 10-year projection of the proposed TOC's impact on Big Rivers' financial
9 condition, specifically as it relates to net margins, cash flow, and balance sheet, is
10 attached as Exhibit Mathews-3. Based on my analyses, the proposed TOC will have
11 a slightly negative impact on Big Rivers' financials, but will not create the need to
12 increase Big Rivers' base rates to its Members. Based on year 2 projections, there will

1 be a small decrease in the bill credits returned through the Member Rate Stability
 2 Mechanism (MRSM) of approximately \$0.22 per MWh.

3 The following table summarizes the projected financial impact during the
 4 TOC's initial year in service, and over the first 10 years:

5

Summary of Projected Financial Impacts During Years 1-10		
(Nominal \$)	Year 1	Total Years 1-10
Net Margin Increase/(Decrease)	3,361,723	(12,884,903)
Cash Flow Inc/(Dec)	2,726,033	(11,155,314)
Balance Sheet Inc/(Dec):		
Property Value	55,135,454	
Incremental Net Utility Plant	50,942,261	
Incremental Long-term Debt	13,479,254	

6

7 **Q. Based on your projections, how will the proposed TOC impact Big**
 8 **Rivers' net margins?**

9 A. As summarized in the table above, and as shown in Exhibit Mathews-3, the
 10 proposed TOC will have a positive impact on Big Rivers' net margins in the initial
 11 year, but negative in total over years 1-10. The positive net margin is largely
 12 attributable to the year 1 gain on sale of the existing ET&S Facility, as previously
 13 discussed. If a denial of the CPCN for the TOC is issued, then net margins in year 1

1 will not realize the increase related to the sale of the existing HQ facility, as was
2 projected in the HQ CPCN case.³

3

4 **Q. Based on your projections, how will the proposed TOC impact Big
5 Rivers' cash flow?**

6 A. The proposed TOC will have an unfavorable impact on Big Rivers' cash flow of
7 approximately \$1.0 million per year. This cash flow effect would be largely
8 attributable to the proposed TOC's annual debt service.

9

10 **Q. Based on your projections, how will the proposed TOC impact Big
11 Rivers' balance sheet?**

12 A. Big Rivers' balance sheet will be positively impacted by the proposed TOC. The
13 new property will increase the net utility plant balance by approximately
14 \$55,135,454, while the incremental long-term debt will increase only \$13,479,254. By
15 year 10, long-term debt is projected to decrease to \$8,351,907.

16 Further, Big Rivers' Members will benefit from the incremental value created
17 by the proposed TOC. The property's value when placed in-service will be
18 \$55,135,454, yet the investment is only \$52,779,254 after any local incentives are
19 applied, and only \$39,579,254 if the project receives NMTC Program financing.

³ *In the Matter of: Electronic Application of Big Rivers Electric Corporation for a Certificate of Public Convenience and Necessity Authorizing Construction of a New Headquarters Facility and an Order Authorizing Big Rivers to Sell Its Existing Headquarters Facility*, P.S.C. Case. No. 2021-00314.

1 **Q. Do Exhibit Mathews-3 and the above financial summary assume any**
2 **financing benefits of participating in the NMTC Program?**

3 A. No. While the NMTC Program creates significant financing savings, because
4 of the uncertainty discussed previously, such savings are not a base assumption of
5 the 10-year projection. Any additional economic benefit of the potential NMTC
6 Program financing enhances net margins and cash flow by approximately \$10.6 to
7 \$13.2 million.

8

9 **Q. Has Big Rivers identified any opportunities for federal funding**
10 **(grants or forgivable loans) related to this project from the recent**
11 **Congressional action to spur investment in energy infrastructure**
12 **(Infrastructure Investment and Jobs Act, or the Inflation Reduction Act)?**

13 A. Big Rivers has not identified any specific funding streams or attractive loan
14 instruments but is actively researching any opportunities that would benefit this
15 project, including programs aimed at hardening the transmission system, protecting
16 against cyber and physical threats and increasing economic development in regions
17 impacted by the closure of energy infrastructure such as power plants. Many of the
18 regulations and rules for eligibility are still being developed by the federal agencies
19 responsible for implementing the laws as passed by Congress in prior sessions. Big
20 Rivers continues to engage with the National Rural Electric Cooperative Association

1 (NRECA), the RUS, and the Kentucky Office of Energy Policy in helping to identify
2 opportunities to reduce the cost of the TOC to our members.

3

4 **VII. CONCLUSION**

5 **Q. Please summarize your testimony.**

6 A. As described above and in the testimony of Mr. Berry and Mr. Masa, it
7 is not reasonable to maintain, renovate and retrofit the existing ET&S facility, to add
8 an additional location to construct needed warehouse space that will not fit at the
9 existing ET&S facility, and to maintain another separate location to house Big Rivers'
10 Energy Control and Engineering Departments. Construction of the proposed TOC is
11 in the best interests of Big Rivers and its Members. The proposed construction will
12 have a minimal impact on Big Rivers' overall financial condition that is far
13 outweighed by its operational benefits. Further, the proposed TOC will not create the
14 need for a wholesale base rate increase. The proposed TOC represents a reasonable
15 and economic solution to Big Rivers' corporate and operational needs, and Big Rivers
16 respectfully requests that the Commission approve the requested CPCN for
17 construction of the proposed TOC and grant the requested authorization to sell the
18 existing ET&S facility.

19

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

21 A. Yes.


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 OPERATIONS CENTER AND AN
ORDER AUTHORIZING BIG RIVERS TO DISPOSE OF PROPERTY**

CASE NO. 2022-00433

VERIFICATION

I, Talina R. Mathews for Big Rivers Electric Corporation, verify, state, and affirm that I prepared or supervised the preparation of the Direct Testimony filed with this Verification, and that Direct Testimony is true and accurate to the best of my knowledge, information, and belief after a reasonable inquiry on this January day of 18th, 2023.




Talina R. Mathews
Chief Financial Officer
Big Rivers Electric Corporation

COMMONWEALTH OF KENTUCKY)

COUNTY OF Daviess)

18th SUBSCRIBED AND SWORN TO before me by Talina R. Mathews on this the January day of 2023.


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

Professional Summary

Talina R. Mathews, PhD
Chief Financial Officer
Big Rivers Electric Corporation
201 Third Street
Henderson, KY 42420

Professional Experience

Big Rivers Electric Corporation
Chief Financial Officer 2022-present

Southwest Power Pool
Director, State Regulatory Policy– 2021-2022

Kentucky Public Service Commission 2016-2021
Commissioner 2017-2021
Executive Director 2016-2017

Organization of MISO States 2015-2016
Director, Member Services

Kentucky Department of Energy Development and Independence 2013-2015
Director, Energy Generation, Transmission and Distribution

Kentucky Public Service Commission 2011-2013
Staff Advisor for Policy

Kentucky Department for Energy Development and Independence 2009-2011
Assistant Director, Carbon Management

ECSI 2008-2009
Executive Vice-President

Kentucky Office of Energy Policy 2006-2008
Executive Director

Kentucky Public Service Commission 2000-2006
Executive Staff Advisor
Economist

Kentucky Division of Water 1998-2000
Economist

University of Kentucky 1995-1998
Research Analyst

Michigan Technological University 1993-1995
Assistant Professor

Education

PhD, Economics
University of Kentucky

MA, Economics
University of Kentucky

BA, Mathematics and Economics
Berea College

TRANSMISSION OPERATIONS CENTER COST DETAIL

Building / Description	SF/AC	10/31/22 Total	Cost/SF/AC
1. SITEWORK	51	\$13,946,000	\$273,451
2. OFFICE	29,691	\$17,100,000	\$576
3. WAREHOUSE	24,400	\$4,819,000	\$198
4. VEHICLE STORAGE	33,200	\$4,717,000	\$142
5. VEHICLE MAINTENANCE	13,067	\$3,317,000	\$254
Sub-Total Construction Costs (w/ permits, insurance program, project staffing, design fees, consulting fees and construction management fees, etc.)		\$43,899,000	\$437
Project Contingency		\$1,200,000	
Total Project		\$45,099,000	\$449
Henderson Road Turn Lane		\$116,000	
Industrial Drive		\$457,000	
Total Development		\$45,672,000	\$455

Big Rivers Additional Costs

Land	\$5,140,710
TOC Communications	\$3,783,100
TOC EMS & Energy Control Room Relocation	\$450,000
Corporate IT	\$280,000
Phone System	\$50,000
Development & Other Costs incurred prior to 2023	\$2,874,290

Total Project	\$58,250,100
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Less:

Road Rebate Incentive	(\$1,500,000)
Land Rebate Incentive (45 acres @ \$18,360 per acre)	(\$826,200)
Utility Connection Rebate	(\$30,000)

Less:

Land not assigned to CPCN (69 acres not used for TOC)	(\$3,114,646)
---	---------------

Total Investment by Big Rivers Electric Corporation	\$52,779,254
--	---------------------

Less:

Potential New Market Tax Credits	(\$13,194,813)
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Total Investment if New Market Tax Credits are Utilized	\$39,584,440
--	---------------------

BIG RIVERS ELECTRIC CORPORATION
Financial Analysis of Proposed Transmission Operations Center

	NPV 5.00%	Nominal Year 1 - 10	Year											
			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		(7,735,175)	(674,743)	(694,986)	(715,835)	(737,310)	(759,429)	(782,212)	(805,679)	(829,849)	(854,745)	(880,387)		
Depreciation		(7,872,197)	(787,220)	(787,220)	(787,220)	(787,220)	(787,220)	(787,220)	(787,220)	(787,220)	(787,220)	(787,220)		
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											
Land Rebate		826,200	826,200											
Utility Connection Rebate		30,000	30,000											
Gain on Sale of Existing ET&S														
Gain on Sale of Existing HQ														
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)	\$	(12,884,903)	\$ 3,361,723	\$ (1,848,991)	\$ (1,839,835)	\$ (1,829,977)	\$ (1,819,373)	\$ (1,807,979)	\$ (1,795,748)	\$ (1,782,630)	\$ (1,768,572)	\$ (1,753,519)		
Cash Flow														
Total Net Margin Fav/(Unfav)	\$	(9,044,268)	\$ (12,884,903)	\$ 3,361,723	\$ (1,848,991)	\$ (1,839,835)	\$ (1,829,977)	\$ (1,819,373)	\$ (1,807,979)	\$ (1,795,748)	\$ (1,782,630)	\$ (1,768,572)	\$ (1,753,519)	
Less: Gain on Sale of Existing ET&S														
Add Back: Depreciation		6,078,702	7,872,197	787,220	787,220	787,220	787,220	787,220	787,220	787,220	787,220	787,220	787,220	787,220
Subtotal		(3,932,482)	(6,027,968)											
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)	\$	(7,814,839)	\$ (11,155,314)	\$ 2,726,033	\$ (1,489,801)	\$ (1,502,047)	\$ (1,514,660)	\$ (1,527,652)	\$ (1,541,033)	\$ (1,554,815)	\$ (1,569,012)	\$ (1,583,634)	\$ (1,598,694)	
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												
Less: Existing ET&S Net Book Value														
Less: Existing HQ Net Book Value														
Incremental Net Utility Plant														
Less: Existing ET&S Proceeds & Avoided Capex														
Incremental Long-Term Debt														

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

**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.
AUTHORIZING CONSTRUCTION OF A NEW)	2022-00433
TRANSMISSION OPERATIONS CENTER AND)	
AN ORDER AUTHORIZING BIG RIVERS TO)	
DISPOSE OF PROPERTY)	

**DIRECT TESTIMONY
OF
TIM MASA
PRESIDENT OF COOPERATIVE BUILDING SOLUTIONS
ON BEHALF OF
BIG RIVERS ELECTRIC CORPORATION**

FILED: January 24, 2023

**Case No. 2022-00433
Application Exhibit F
Direct Testimony of Tim Masa**

**DIRECT TESTIMONY
OF
TIM MASA
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IV. CONCLUSION	11

1 leading CBS in the planning, design and construction of facilities for electric
2 cooperatives since 2009. These facilities have included new headquarters, district
3 offices, operations centers, vehicle maintenance buildings, vehicle storage facilities,
4 and warehouses.

5 Further, as a LEED¹ Accredited Professional, I have been involved with rural
6 electric cooperative projects over the past several years. A copy of my professional
7 resume is attached hereto as **Exhibit Masa-1**.

8

9 **Q. Have you previously testified before the Kentucky Public Service**
10 **Commission (the “Commission”)?**

11 A. Yes. I previously testified before the Commission on behalf of Jackson
12 Purchase Energy Corporation (“*JPEC*”) in connection with its application for a new
13 headquarters facility.² I have not offered other testimony to this Commission.

14

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

16 A. The purpose of my testimony is first to provide insight into the design and
17 construction – including the specifications, notable technical details, and the timeline
18 – of a new facility proposed to serve as Big Rivers’ new Transmission Operations
19 Center (“*TOC*”). Next, I will discuss the estimated costs of the proposed construction

¹ Leadership in Energy and Environmental Design (“*LEED*”).

² See *In the Matter of: The Electronic Application of Jackson Purchase Energy Corporation for a Certificate of Public Convenience and Necessity to Construct a New Headquarters Facility*, P.S.C. Case No. 2019-00326 (filed Sept. 13, 2019).

1 project. Finally, I will provide information regarding the feasibility of the overall
2 project, and how this project will benefit Big Rivers.

3

4 **Q. Please describe the nature of CBS's business and its experience and**
5 **success planning and constructing facilities like the TOC at issue in this**
6 **proceeding.**

7 A. CBS provides a turnkey project approach of facility planning, design and
8 construction management services to electric cooperatives throughout the country.
9 CBS has worked with over 120 electric cooperatives in 28 different states, building
10 over 2,500,000 square feet ("*SF*") of facilities that include new headquarters,
11 operations centers, district offices, and similar structures. CBS's extensive project
12 experience working with electric cooperatives will help deliver Big Rivers a new TOC
13 that will provide optimum functionality, operational efficiency, and energy efficiency,
14 while providing a low-maintenance, cost-effective solution. CBS has a proven track
15 record of delivering projects on time and within budget.

16

17 **Q. Has CBS conducted facilities planning studies or other analyses for**
18 **Big Rivers in connection with this project?**

19 A. Yes. We have had numerous meetings and discussions with Big Rivers
20 regarding its anticipated needs, and our present designs and plans for the proposed
21 TOC account for Big Rivers' needs in a manner that provides operational efficiencies.

1 **Q. Are you sponsoring any exhibits?**

2 A. Yes. I am sponsoring the following exhibits:

- 3 ▪ **Exhibit Masa-1** – Professional Summary
- 4
- 5 ▪ **Exhibit Masa-2** – CBS Project Summary Presentation
- 6

7 I am also sponsoring **Application Exhibit B**, which contains the required
8 map of the proposed location, and **Application Exhibit C**, which contains the
9 required project drawings.

10

11 **II. DESIGN & CONSTRUCTION OF THE PROPOSED TOC**

12 **Q. Please describe the proposed TOC.**

13 A. Projected at approximately 100,358 square feet, the TOC will house multiple
14 offices, a warehouse and loading dock, enclosed spaces for vehicles and maintenance,
15 and a fuel island.

16

17 **Q. Please briefly describe the property on which the proposed TOC will
18 be constructed.**

19 A. The property that Big Rivers acquired for this project is situated in the
20 northwest corner of Owensboro on a relatively-flat greenfield site just inside the
21 bypass and easily accessible to and from major thoroughfares. It is well suited to the
22 needs of Big Rivers and its Member-Owners. A map showing the property and the
23 proposed TOC is attached as **Application Exhibit B**.

1 **Q. What process was employed to determine the design of the proposed**
2 **TOC?**

3 A. The specifications for the proposed TOC were designed by the CBS team in
4 consultation with Big Rivers. Big Rivers engaged CBS under a preconstruction
5 contractor agreement to consult regarding, among other things, facility planning
6 study and conceptual design.³ As part of those efforts, Big Rivers' department heads
7 were surveyed to identify each department's needs. CBS has leveraged its extensive
8 experience working with cooperatives on projects like this, and it continues to conduct
9 routine meetings with Big Rivers to ensure that its needs are identified and met in
10 an efficient manner.

11

12 **Q. How were the design specifications established?**

13 A. Once we had a solid understanding of Big Rivers' needs, we worked with Big
14 Rivers to develop and refine departmental needs assessments in order to determine
15 the space needs of the facility. With this information, we were also able to perform
16 site studies to determine the most effective site layout to meet those needs.

17 As a consequence of CBS's extensive experience working with electric
18 cooperatives, we have become skilled in understanding the amount of real estate and
19 square footage required for the efficient and effective operation of electric cooperative
20 facilities. With this experience, we then work closely with our strategic partner M+H

³ See Case No. 2021-00314, Big Rivers' Response to Commission Staff's Second Request for Information, Item 17 (filed Nov. 9, 2021).

1 Architects, to ensure that the plans will satisfy all applicable local and state building
2 codes requirements, consistent with the established project design goals and
3 requirements.

4
5 **Q. Were there design challenges that you encountered during the**
6 **planning of this project?**

7 A. No project is without its design challenges, of course, and so coordination on
8 needs and intended uses is an important part of the process. On this project, and
9 given the intended facility uses, traffic flow was a significant consideration.
10 Consequently, we reviewed planned traffic patterns of Big Rivers' vehicles to ensure
11 operational efficiency. As a result, the site plan includes two separate entrances and
12 provides for a fuel island with a canopy to ensure maximum efficiency and safety.

13
14 **Q. Do the project plans allow for future expansion, if needed?**

15 A. Yes. Again, CBS's extensive experience working with electric cooperatives
16 allows us to understand the space needed to meet current needs, as well as expected
17 and reasonable near-term expansion requirements. Our goal is to ensure that all
18 immediate needs are met and that there is appropriate opportunity to expand, as
19 needed. In this case and to that end, the master site plan makes provisions for
20 possible future growth. Ultimately, we anticipate the TOC will serve Big Rivers'
21 reasonably anticipated needs for decades to come.

1 **Q. Has CBS prepared a project schedule that details the planned**
2 **activities involved in the construction of the TOC?**

3 A. Yes. A detailed project schedule is attached to my testimony as **Exhibit Masa-**
4 **2**. The project schedule identifies in detail the various tasks that must be
5 accomplished from start to finish on the project, along with anticipated timelines
6 associated with each.

7
8 **Q. What permits or approvals are necessary in connection with this**
9 **project?**

10 A. Aside from obtaining Commission approval, we anticipate that the project will
11 require the following additional permits and approvals.

- 12 • Rezoning of the Property to Industrial (I1 Industrial Use)
- 13 • Final Development Plan Approval
- 14 • KYTC (Kentucky Transportation Cabinet) Encroachment Permit
- 15 • Sanitary Sewer KYDOW Permit
- 16 • Kentucky Division of Water Permit for water main extension
- 17 • Footings & Foundations Permit
- 18 • Notice of Intent Permit with Kentucky Division of Water
- 19 • Building Permit

20
21
22 **Q. What is the estimated timeline for this project?**

23 A. As described in more detail at **Exhibit Masa-2**, and subject to the approval of
24 this Commission and RUS financing, we are planning to break ground in May of 2023
25 and proceed diligently with construction to permit owner occupancy by approximately
26 November 2024.

1 **Q. How does CBS plan to proceed with construction activity for the TOC?**

2 A. CBS will be acting as the Construction Manager for the project. All
3 subcontractor work packages for the project will be awarded through competitive
4 bidding, with the lowest-price, qualified vendor being recommended to Big Rivers for
5 its approval. We estimate that there will be approximately forty (40) subcontractor
6 bid packages for this project. Each subcontractor recommended for the project will be
7 required to complete a prequalification application that we will evaluate in order to
8 ensure that they can demonstrate appropriate experience, an appropriate safety
9 record, and appropriate financial capabilities to professionally perform the required
10 work.

11

12 **III. REVIEW OF FINANCIAL IMPLICATIONS**

13 **Q. What are the anticipated costs of this project and estimated cash**
14 **flows?**

15 A. As reflected in Exhibit Masa-2, the total construction cost of the new TOC
16 facility is estimated at \$45,672,000. Dr. Mathews attached copies of the estimated
17 total project cost details and estimated cash flows information to her testimony.

18

19 **Q. What are the methods by which various estimated cost components of**
20 **the proposed TOC were calculated?**

21 A. As a consequence of our long history working on similar projects for electric
22 cooperatives, CBS has access to significant institutional data regarding cost

1 expectations for projects like the TOC. Here, CBS utilized its cost history database
 2 with detailed quantity and scope information from the schematic drawings.
 3 Combined with initial subcontractor budgets for major scope of work packages, this
 4 data has enabled us to calculate the expected cost of the TOC facility. Obviously, there
 5 are ongoing cost and timing risks associated with logistical supply chain issues;
 6 however, we continually monitor these issues, and we have accounted for that risk in
 7 our project estimate.

8

9 **Q. Are there notable features of the TOC that would offer Big Rivers any**
 10 **operational and safety benefits?**

11 A. Yes. We have also been able to incorporate many important features that will
 12 aid both Big Rivers’ operational and safety capabilities. Those features include:

- 13 • Bullet-resistant lobby spaces for increased security.
- 14 [REDACTED]
- 15 [REDACTED]
- 16 [REDACTED]
- 17 [REDACTED]
- 18 [REDACTED]
- 19 • Energy efficient HVAC system utilizing a VRF mechanical system.
- 20
- 21 • Hardened enclosure for back-up generator.
- 22
- 23 • Designing a portion of the roof to allow for a more efficient use of mechanical
- 24 equipment.
- 25
- 26 • Security fencing and gates for materials and equipment, as well as employee
- 27 parking lots.
- 28
- 29 • Pull-thru vehicle storage building for increased safety (reduces backing-up).
- 30
- 31 • Electric Vehicle charging stations for employees.
- 32

- 1 • Passive daylighting with clerestories and glass office fronts.
- 2
- 3 • Storm shelters for employee protection.
- 4
- 5 • Enclosed vehicle storage buildings to protect vehicles & equipment from
- 6 weather and UV exposure.
- 7
- 8 • Overhead trolley cranes for flexibility of storage and maintenance.
- 9
- 10 • Low maintenance materials for the façades of the buildings.
- 11
- 12 • Downspouts tied-in to underground storm sewer (increasing safety by reducing
- 13 standing water/ice).
- 14

15 In our opinion, this is a sound, efficient project that reflects the careful planning and
 16 cooperative effort of Big Rivers.

17

18 **Q. Please briefly describe any cost associated with options Big Rivers**
 19 **and CBS considered to meet Big Rivers' needs?**

20 A. [REDACTED]

21 [REDACTED]

22 [REDACTED]

23 [REDACTED]

24 [REDACTED]

25 [REDACTED]

26 [REDACTED]

27 Also as discussed in Mr. Berry's direct testimony, expansion of the existing
 28 ET&S facility is not practical. Therefore, a new warehouse and vehicle maintenance
 29 garage are needed. One option would be to construct a new facility for lines and right

1 of way and use ET&S for communication/substation. Below is an estimate of the
2 associated cost for that Option 1:

- 3 1. 15 Acres of site development and land cost
- 4 2. Operations office space at 10,000 SF
- 5 3. Warehouse space at 10,000 SF
- 6 4. Vehicle storage at 20,000 SF
- 7 5. Wash bay and maintenance facility at 10,000 SF

8

9 **Total facility (50,000 SF) estimated cost** is \$19.5 to \$20.5 million.

10 A second option would be to construct a warehouse for storing as much
11 equipment as possible off-site (mobile substations trailers, and etc.). Below is an
12 estimate of the associated cost for that Option 2:

- 13 1. 15 Acres of site development and land cost
- 14 2. Operations office space at 5,000 SF
- 15 3. Warehouse space at 11,000 SF
- 16 4. Vehicle storage at 20,000 SF
- 17 5. Wash bay and maintenance facility at 4,000 SF

18

19 **Total facility (40,000 SF) estimated cost** is \$15.8 to \$16.6 million.

20

21 Additionally, the existing fuel system at the ET&S facility will need to be updated, at
22 an estimated cost of \$500,000.

23

24

25 **IV. CONCLUSION**

26 **Q. Please summarize your overarching view of the proposed TOC.**

27 A. In my professional opinion, the project is feasible and reasonable, and it will
28 accrue to the benefit of Big Rivers. I encourage the Commission to approve this
29 project.

30

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

2 **A. Yes.**

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

CASE NO. 2022-00433

VERIFICATION

I, Tim Masa, President of Cooperative Building Solutions, verify, state, and affirm that I prepared or supervised the preparation of the Direct Testimony filed with this Verification, and that Direct Testimony is true and accurate to the best of my knowledge, information, and belief after a reasonable inquiry on this 17th day of January, 2023.



Tim Masa
President
Cooperative Building Solutions

STATE OF MISSOURI)
)
COUNTY OF St. Louis)

SUBSCRIBED AND SWORN TO before me by Tim Masa on this the 17th day of Jan., 2023.

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, Missouri
My Commission Expires 9-23-24



TIM MASA, LEED AP

PRESIDENT

EDUCATION

Washington University
in St. Louis, Missouri

MS Construction
Management

BS Civil Engineering

CERTIFICATIONS

LEED Accredited
Professional

ASSOCIATIONS

Board Member -
Logos School

Board Member -
Lutheran High School
St. Charles

In Cooperative Building Solutions' client-centered business model, Tim serves as the primary customer advocate and team facilitator.

Tim develops an intimate knowledge of each client's goals, expectations, and business plans. He is responsible for marshaling all of the necessary in-house and external resources to achieve success for CBS' clients. He holds all team members accountable to perform their tasks on time, professionally, and in context with the overall project strategies and objectives.



PROJECT EXPERIENCE

Midwest Energy & Communications, Tecumseh, Michigan - Southeast Solutions Center
This new 43,000 sf operations facility includes office space, warehouse, vehicle storage, covered material storage, and 10 acres of site development.

Midwest Energy & Communications, Cassopolis, Michigan - This 129,000 sq. ft., \$35MM headquarters facility consists of a two-story tilt-up office building, a warehouse, vehicle and material storage, and maintenance building

Karnes Electric Cooperative, Pleasanton, Texas - This new 46,500 sq. ft. project includes a new district office facility including office space, vehicle storage, warehouse space, and associated site improvements

Karnes Electric Cooperative, Karnes City, Texas - New 108,800 sq. ft. headquarters facility including an office building, enclosed vehicle storage, warehouse, vehicle maintenance building and associated sitework on over 20 acres.

Cimarron Electric Cooperative, Kingfisher, Oklahoma - New 21,110 sq. ft. warehouse facility and a 15,750 sq. ft. renovation to their existing warehouse.

Tri-County Electric Cooperative, Hooker, Oklahoma - New 116,228 sq. ft. and 22 acre site headquarters facility which will allow all operations to take place in one location

Red River Valley REA, Marietta, Oklahoma - 71,614 sq. ft. facility including office space, warehouse, maintenance areas, and a parking structure.

Dixie Power Electric Cooperative, St. George, Utah - 11,500 sq. ft. customer service building on a live campus.

Dixie Power Electric Cooperative, St. George, Utah - 18,000 sq. ft. Engineering and Operations office building located off-campus.

Central Rural Electric Cooperative, Stillwater, Oklahoma - 43,774 new two story office building

Rita Blanca Electric Cooperative, Dalhart, Texas - New 13,985 sq. ft. office building

Berkeley Electric Cooperative, John's Island, South Carolina - This new building is a 108,000 sq. ft. district office facility including office space, vehicle storage, warehouse space, a vehicle maintenance building, and associated site improvements.

PROJECT EXPERIENCE, CONT.

Jackson Purchase Energy Corporation Headquarters Renovation, Paducah, Kentucky - This project involves the transformation of an existing sports complex facility into a new 78,000 sq. ft. headquarters facility for Jackson Purchase Energy Corporation. Included are: vehicle storage building, warehouse space, vehicle maintenance, and an additional covered storage building.

Karnes Electric Cooperative Headquarters, Karnes City, Texas - New 75,795 sq. ft. headquarters facility consisting of a new office, warehouse/vehicle storage, and a maintenance building

Karnes Electric Cooperative Pleasenton, Texas - This 46,500 sq. ft. project includes a new district office facility for Karnes Electric including office space, vehicle storage, warehouse space, and associated site improvements

Pee Dee Electric Headquarters, Lilesville, North Carolina - New 66,000 sq. ft. headquarters which includes an office building, warehouse, covered vehicle storage, covered material storage, and associated site work on 33 acres

Berkeley Electric Highway 52 Headquarters, Moncks Corner, South Carolina - This new 202,000 sq. ft. facility includes a warehouse, vehicle storage, a two-story office space, and a 25,000 sq. ft. stand alone vehicle maintenance building

Rappahannock Electric Building 247 Refresh, Fredricksberg, Virginia - This 35,000 sq. ft. renovation includes new finishes, new furniture, renovated break rooms, and a revamped HVAC system

Wake Electric Membership Corp, Youngsville, North Carolina - This project includes an 11,500 sq. ft. office renovation, a 15,900 sq. ft. warehouse, 14,350 sq. ft. of enclosed vehicle storage, 4,865 sq. ft. of covered material storage, a 10,000 sq. ft. maintenance building and covered material building, storage, and yard expansion at the existing property

Mt. Wheeler Power, Ely, Nevada - This project consists of a new 6,300 sq. ft. warehouse and a 16,500 sq. ft. vehicle storage building. In addition to the new buildings, the existing facility will be renovated to accommodate future growth and expansion.

Floresville Electric Light & Power System, Floresville, Texas - This new headquarters facility for Floresville Electric Light and Power Systems (FELPS) includes a 28,000 sq. ft. office and warehouse building and a 6,200 sq. ft. maintenance building

Cuivre River Electric Cooperative, Troy, Missouri - The facility includes a 64,900 sf office, warehouse and vehicle storage building, and a 12,000 sf vehicle maintenance and covered storage building located on 14 acres

Tri-County Electric Cooperative, Hooker, Oklahoma - New headquarters facility which will allow all operations to take place in one location

Woodruff Electric Cooperative Forrest City, Arkansas - New facility which includes a 35,500 sq. ft. office, a 10,800 sq. ft. warehouse, and an 11,680 sq. ft. covered vehicle storage area

South Central Arkansas Electric Cooperative, Arkadelphia, Arkansas - New facility on 15 acres with adjacent warehouse and vehicle storage buildings

Twin Valley, Altamont, Kansas - 22,000 sq. ft. office operations facility, vehicle storage and warehouse

Consolidated Electric Cooperative, Mexico, Missouri - Design build construction of new 16,000 sq. ft. office building and construction of pre-engineered metal building, as well as, relocation of existing utilities and provisions for future expansion

Crawford Electric Cooperative, Bourbon, Missouri - 67,000 sq. ft. new office, warehouse and vehicle storage

Mercedes Benz of St. Louis, St. Louis, Missouri - Built on a small urban footprint, the dealership includes a 2 story, 27,000 sq. ft. steel-framed office and showroom building, a 30,000 sq. ft. service workshop area built with cast-in-place concrete, and a 2 story 30,000 sq. ft. post-tensioned concrete parking garage

John Burroughs School, St. Louis, Missouri - Construction services for a 180,000 SF, Athletic Center, Performing Arts Center, and renovation of existing buildings

Citizens Electric, Perryville, Missouri - New 84,000 sq. ft. Headquarters Facility and two satellite facilities totaling 96,000 sq. ft.

DS&O Electric Cooperative, Solomon, Kansas - New Headquarters Facility

Northeast Missouri Power Cooperative, Palmyra, Missouri - Renovations to a 17,700 sq. ft. facility which added 3,000 sq. ft. of additional space and addressed safety concerns and water runoff issues



COOPERATIVE BUILDING SOLUTIONS

BIG RIVERS ELECTRIC TRANSMISSION OPERATIONS CENTER

OCTOBER 31, 2022

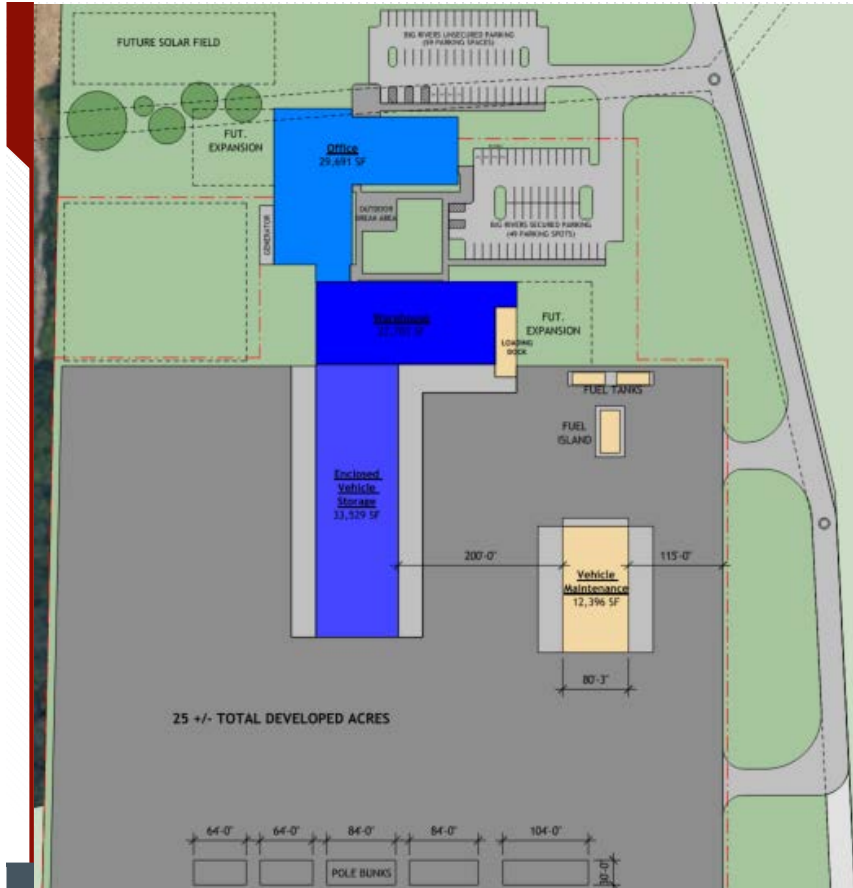
COST ESTIMATE SUMMARY

DESIGN DEVELOPMENT COST CHANGE UPDATES

Building / Description	SF/AC	10/31/22
1. SITEWORK	51	\$13,946,000
2. OFFICE	29,691	\$17,100,000
3. WAREHOUSE	24,400	\$4,819,000
4. VEHICLE STORAGE	33,200	\$4,717,000
5. VEHICLE MAINTENANCE	13,067	\$3,317,000
Sub-Total Construction Costs (w/ permits, insurance program, project staffing, design fees, consulting fees and construction management fees, etc.)		\$43,899,000
Project Contingency		\$1,200,000
Total Project		\$45,099,000
Henderson Road Turn Lane		\$116,000
Industrial Drive		\$457,000
Total Development		\$45,672,000

ALLOWANCES INCLUDED

<u>SCOPE DESCRIPTION</u>	<u>10/6/22</u>
Warehouse Shelving Allowance	\$157,000
Audio Visual Allowance	\$400,000
Furniture Allowance	\$1,000,000
Unsuitable Soil Allowance	\$2,760,000
Landscaping & Irrigation Allowance	\$135,000
Total =	\$4,452,000



ESTIMATE SUMMARY CLARIFICATIONS

- Cost Does Not Include Owner Financing
- Primary Power Supply by Owner
- Excludes Land Cost (Purchasing or Selling)
- Walking Trail Not Included
- Assumes All Existing Utilities are at Property Lines with Adequate Pressure, Flow, & Capacity
- Offsite Road Improvements at Henderson Rd Only
- No Utility Relocations
- Material Supply Chain Discussion

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Case No. 2022-00433

Masa - Exhibit 2

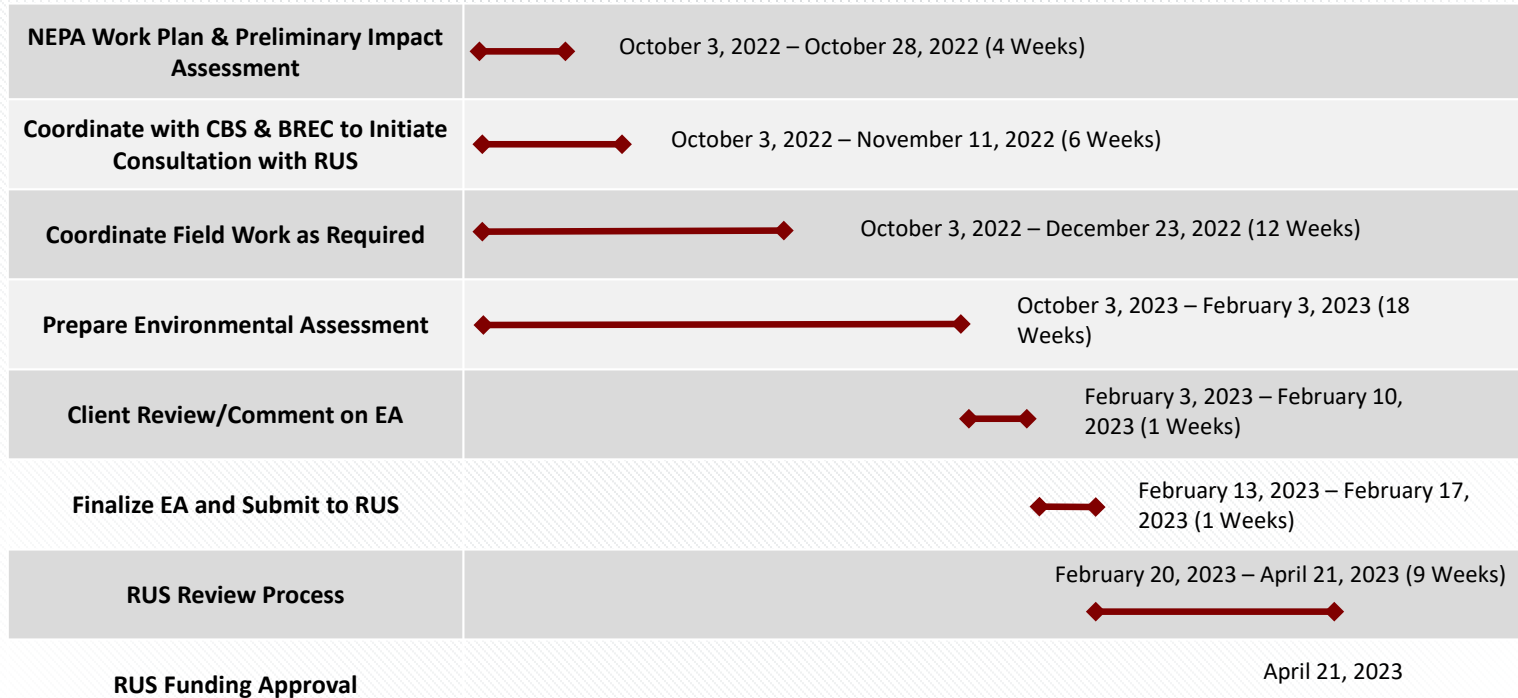
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PROPOSED PROJECT SCHEDULE

Environmental Report Approval by RUS	 October 3, 2022 - April 21, 2023
PSC Submission	 November 14, 2022 – February 17, 2023
PSC Approval	 February 17, 2023
Release Long Lead Materials (*)	 December 2, 2022 – March 1, 2024
Complete 100% Construction Documents	 Current – January 19, 2023
Subcontractor Bidding	 January 20, 2023 – March 1, 2023
Construction	 May 1, 2023 – November 1, 2024 (18 Months)

* Required to meet current production deliveries in order to meet the overall project schedule (i.e. electrical switch gear, generators, mechanical equipment, etc.)

ENVIRONMENTAL REPORT APPROVAL



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Case No. 2022-00433

Masa - Exhibit 2

Page 6 of 8

PROPOSED CONSTRUCTION SCHEDULE

Estimated Construction Start = 5/1/2023 ; Estimated Construction Completion = 11/1/2024; 18 Months Total Duration

SITWORK & BUILDING PAD	 75 Working Days
FOOTINGS & FOUNDATIONS	 35 Working Days
STRUCTURAL CORE	 35 Working Days
ENVELOPE	 85 Working Days
INTERIOR FINISHES	 95 Working Days
FURNITURE & AUDIO VISUAL	 20 Working Days
PUNCHLIST ACITIVITES & WEATHER DAYS	 45 Working Days



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QUESTIONS & ANSWERS

Thank you!