

January 16, 2020

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

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JAN 17 2020

PUBLIC SERVICE COMMISSION

Ms. Gwen R. Pinson Executive Director Public Service Commission 211 Sower Boulevard, P.O. Box 615 Frankfort, Kentucky 40602-0615

VIA FedEx Overnight Delivery

Re: In The Matter Of: Application of Big Rivers Electric Corporation for a Certificate of Public Convenience and Necessity to Construct a 345 kV Transmission Line in Meade County, Kentucky – Case No. 2019-00417

Dear Ms. Pinson:

Enclosed for filing pursuant to 807 KAR 5:120 are (a) an original and six (6) copies of the Application of Big Rivers Electric Corporation for a certificate of public convenience and necessity in the aforementioned docket; (b) three maps showing the location of the proposed transmission lines; and (c) one map showing the alternate route considered.

Please feel free to contact me if you have any questions.

Sincerely,

Tyson Kamuf Corporate Attorney Big Rivers Electric Corporation <u>tkamuf@bigrivers.com</u>





Your Touchstone Energy® Cooperative 😥

#### COMMONWEALTH OF KENTUCKY BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

APPLICATION OF	)	
<b>BIG RIVERS ELECTRIC CORPORATION</b>	)	
FOR A CERTIFICATE OF	)	Case No.
PUBLIC CONVENIENCE AND NECESSITY	)	2019-00417
TO CONSTRUCT A 345 KV TRANSMISSION	)	
LINE IN MEADE COUNTY, KENTUCKY	)	

#### APPLICATION

and

**APPLICATION EXHIBITS** 

FILED: January 17, 2020



1	COMMONWEALTH OF KENTUCKY			
2	BEFORE THE PUBLIC SERVICE COMMISSION			
3				
4 5	In the Matter of:			
7	APPLICATION OF BIG RIVERS ELECTRIC )			
8	CORPORATION FOR A CERTIFICATE OF			
9	PUBLIC CONVENIENCE AND NECESSITY ) Case No.			
10	TO CONSTRUCT A 345 KV TRANSMISSION ) 2019-00417			
11	LINE IN MEADE COUNTY, KENTUCKY )			
12				
13	APPLICATION			
15				
16	1. Big Rivers Electric Corporation (" <u>Big Rivers</u> ") files this application			
17	(" <u>Application</u> ") pursuant to KRS 278.020, 807 KAR 5:001 Section 19, and 807 KAR			
18	5:120, seeking (i) a certificate of public convenience and necessity (" <u>CPCN</u> ") to			
19	construct a 2.7 mile long 345 kV transmission line in Meade County, Kentucky, and			
20	) (ii) a finding that no CPCN is required for the switching station associated with the			
21	new transmission line. If the Public Service Commission (" <u>Commission</u> ")			
22	determines that a CPCN is required for the switching station, Big Rivers			
23	alternatively requests that the Commission grant a CPCN for that project. In			
24	support of this Application, Big Rivers states as follows.			
25	5 <u>Introduction</u>			
26	2. As discussed in Big Rivers' application filed in <i>In the Matter of:</i>			
27	7 Application of Big Rivers Electric Corporation for a Certificate of Public Convenience			
28	3 and Necessity to Construct a 161 kV Transmission Line, and a 345 kV Transmission			
29	) Line in Meade County, Kentucky, Case No. 2019-00270, Big Rivers proposes to			
30	construct the seven transmission line or transmission substation projects listed			

1	below to se	rve the new Nucor Corporation (" <u>Nucor</u> ") steel mill in Brandenburg,	
2	Kentucky, and to strengthen the Big Rivers transmission system.		
3	• Proj	An 8.8 mile, 161 kV transmission line circuit will be added from	
4	Mea	de County Substation to Otter Creek Substation. This circuit will be	
5	buil	above the existing 69 kV Garrett transmission line.	
6	• Proj	An 8.6 mile, 345 kV transmission line circuit will be added from	
7	Otte	r Creek Substation to Brandenburg Steel Mill (" <u>BSM</u> ") Substation. This	
8	circu	it will be built above the existing 69 kV transmission lines extending	
9	from	Garrett Substation to Buttermilk Falls Substation.	
10	• Proj	ect C A 161 kV line terminal will be constructed completely within the	
11	exis	ing Meade County Substation.	
12	• Proj	ect D The greenfield 345/161 kV Otter Creek Substation will be built	
13	nort	h of the intersection of Joe Prather Highway (KY-313) and Garrett Road	
14	(KY	1238).	
15	• Proj	ect E The greenfield 345/34.5 kV BSM Substation will be built	
16	adja	cent to, and will serve as the delivery point for, the new Nucor steel mill.	
17	• Proj	ect F The greenfield 345 kV Redmon Road Switching Station will be	
18	buil	just south of US Highway 60 (Owensboro Highway) at Joe Prather	
19	Hig	lway.	
20	• Proj	ect G A 2.7 mile, 345 kV transmission line will be constructed from	
21	Red	non Road Switching Station to Otter Creek Substation. This line will be	
22	buil	over new right-of-way.	

Big Rivers' requests for authority to construct Projects A through E are
 addressed in Case No. 2019-00270. This Application and the accompanying Direct
 Testimony of Michael W. Chambliss, attached hereto as Exhibit A, address Projects
 F and G. 807 KAR 5:120 Sections 2(1)(b); 807 KAR 5:001 Section 15(2)(c).

5 4. All proposed facilities will be located in Meade County, Kentucky. 6 As the all-requirements wholesale supplier for Meade County Rural 5. Electric Cooperative Corporation ("Meade County RECC"), one of Big Rivers' three 7 distribution cooperative members, Big Rivers is obligated to provide Meade County 8 RECC, with adequate voltage levels and acceptable facility loadings under all 9 normal and single contingency conditions. The proposed construction projects are 10 needed to enable Big Rivers to fulfill that obligation in light of projected load 11 growth in the Meade County area, including the new \$1.35 billion steel plate 12 13 manufacturing mill that Nucor will build in Meade County, and other load growth that is likely as a result of the new Nucor facility. Nucor projects that the new steel 14 15 mill will create more than 2000 construction jobs and more than 400 full-time jobs. The proposed construction projects will also provide Big Rivers the ability to 16 enhance reliability to existing retail members of Big Rivers' Members. 807 KAR 17 5:120 Section 2(1)(b); 807 KAR 5:001 Section 15(2)(c). 18

Due to the length and voltage of the Project G transmission line, KRS
 278.020 requires Big Rivers to obtain a CPCN for its construction. The authority of
 the Commission to grant CPCNs is found in KRS 278.020. 807 KAR 5:120 Section
 2(1)(a); 807 KAR 5:001 Section 14(1).

1 7. Big Rivers believes that the Project F switching station is an ordinary 2 extension of existing systems in the usual course of business, and Big Rivers is therefore seeking a finding from the Commission that no CPCN is required for that 3 4 project. The authority of the Commission to issue such a finding is found in 807 KAR 5:001 Section 19. 807 KAR 5:120 Section 2(1)(a); 807 KAR 5:001 Section 14(1). 5 6 8. If the Commission disagrees that no CPCN is required for Project F, then Big Rivers requests in the alternative that the Commission grant a CPCN for 7 8 that project.

9

#### **Filing Requirements**

9. The applicant, Big Rivers Electric Corporation, is a rural electric
 cooperative corporation organized pursuant to KRS Chapter 279. Its mailing
 address is P.O. Box 24, Henderson, Kentucky 42419-0024. Its street address is 201
 Third Street, Henderson, Kentucky 42420. Its address for electronic mail service is
 <u>regulatory@bigrivers.com</u>. 807 KAR 5:120 Section 2(1)(a); 807 KAR 5:001 Section
 14(1).

10. Big Rivers owns generating assets and purchases, transmits and sells 17 electricity at wholesale. Its principal purpose is to provide the wholesale electricity 18 requirements of its three distribution cooperative members: Jackson Purchase 19 Energy Corporation, Kenergy Corp., and Meade County RECC (collectively, the 20 "<u>Members</u>"). The Members in turn provide retail electric service to approximately 21 117,000 consumer/retail members located in 22 western Kentucky counties: 22 Ballard, Breckenridge, Caldwell, Carlisle, Crittenden, Daviess, Graves, Grayson,

Hancock, Hardin, Henderson, Hopkins, Livingston, Lyon, Marshall, McCracken,
 McLean, Meade, Muhlenberg, Ohio, Union and Webster.

3 11. Big Rivers was incorporated in the Commonwealth of Kentucky on
4 June 14, 1961, and hereby attests that it is currently in good standing in Kentucky.
5 807 KAR 5:120 Section 2(1)(a); 807 KAR 5:001 Section 14(2).

6 12. A table of each regulatory requirement for this filing, cross-referenced 7 to the location in this Application where that requirement is satisfied, is attached 8 hereto as Exhibit B.

9

14

#### **Description of the Projects**

10 13. Three copies of the proposed route map, with a scale of one inch equals
11 1000 feet, and showing the location of the proposed construction, are hereby filed
12 with the Commission along with this Application. 807 KAR 5:120 Section 2(2).
13 14. The proposed construction projects are required for the public

convenience and necessity. The additional transmission facilities will allow

acceptable service to be provided to Meade County RECC in light of expected load
growth in its service territory due to the new steel mill as well as other growth that
is likely to result from such a large economic development project. The new
construction will also enhance reliability for existing retail members. Additionally,
Big Rivers anticipates a return on its investment that could serve as an offset to

20 future rate increases for Big Rivers' Members. 807 KAR 5:120 Section 2(1)(b); 807

21 KAR 5:001 Section 15(2)(a).

1 15. The proposed 2.7 mile, 345 kV transmission line will be constructed on
 2 new right-of-way. The evaluation of this route and the reasons supporting the
 3 selection of this route are discussed in the routing study attached hereto as Exhibit
 4 C.

5 16. Big Rivers considered an alternate route for Project G. This route is 6 depicted on the alternate route map filed with this Application. This alternate 7 route was rejected due to the additional tree clearing required along this right-of-8 way. 807 KAR 5:120 Section 2(2)(c).

9 17. The Project G transmission line will typically be constructed using 10 monopole steel structures for tangent structures, and three-pole steel for angle 11 structures and large angled dead-end structures. Conventional construction 12 equipment will be used to frame and install the poles. The electrical conductors will 13 then be strung, dead-ended, and clipped-in using conventional equipment and 14 processes. Sketches of proposed typical structures are attached hereto as Exhibit D. 15 807 KAR 5:120 Sections 2(1)(b), (2)(b); 807 KAR 5:001 Section 15(2)(c).

16 18. The proposed construction is currently expected to be financed by Big 17 Rivers through the Rural Utilities Service of the United States Department of 18 Agriculture (the "<u>RUS</u>"). Project F is expected to cost approximately \$10.4 million, 19 and Project G is expected to cost approximately \$4.8 million. The estimated cost of 20 operation of the new construction, including the cost of taxes and operation and 21 maintenance, based on historical averages is approximately \$14,700 per year for the 22 Project G transmission line. The Project F switching station will be transferred to

Louisville Gas & Electric upon its completion, and so, there will be no ongoing
 operation and maintenance costs to Big Rivers for that project. The construction of
 these projects by Big Rivers does not involve sufficient capital outlay to materially
 affect the existing financial condition of Big Rivers. The proposed construction will
 not result in any increased retail rates to the retail customers of a Big Rivers
 Member; however, the construction costs will result in higher rates for transmission
 service on Big Rivers' system under MISO's Open Access Transmission Tariff. 807
 KAR 5:120 Sections 2(1)(b), (7); 807 KAR 5:001 Section 15(2)(e)-(f).

9 19. Big Rivers has not yet obtained any permits for the proposed 10 construction, but any permits from public authorities required for the construction 11 of the transmission lines and substations will be obtained prior to commencing 12 construction. 807 KAR 5:120 Section 2(1)(b); 807 KAR 5:001 Section 15(2)(b).

13 20. The proposed construction will not compete with any other public
14 utilities, corporations, or persons. 807 KAR 5:120 Section 2(1)(b); 807 KAR 5:001
15 Section 15(2)(c).

16

#### Notice of Proposed Construction

17 21. Big Rivers has sent by first-class mail to each property owner over 18 whose property the proposed transmission line circuits are proposed to cross, 19 addressed to the property owner at the owner's address as indicated by the county 20 property valuation administrator records, or has hand-delivered, notice of the 21 proposed construction stating:

1	(a) The Commission case number under which this Application will be
2	processed and a map showing the proposed routes of the lines;
3	(b) The address and telephone number of the Executive Director of the
4	Commission;
5	(c) A description of his or her rights to request a local public hearing and
6	to request to intervene in the case; and
7	(d) A description of the project.
8	807 KAR 5:120 Section 2(3). A sample copy of the notice letter is attached hereto as
9	Exhibit E. A list of the names and addresses of the property owners to whom Big
10	Rivers sent the notices is attached hereto as Exhibit F. 807 KAR 5:120 Section 2(4).
11	22. A notice of intent to construct these transmission lines was published
12	on December 5, 2019, in the Brandenburg-Meade County Messenger, a newspaper of
13	general circulation in Meade County. The notice included:
14	(a) A map showing the proposed routes;
15	(b) A statement of the right to request a local public hearing; and
16	(c) A statement that interested persons have the right to request to
17	intervene.
18	807 KAR 5:120 Section 2(5). A copy of the newspaper notice is attached hereto as
19	Exhibit G. 807 KAR 5:120 Section 2(6).
20	Requested Relief
21	23. Big Rivers requests that the Commission grant it a CPCN pursuant to
22	KRS 278.020 for the Project G transmission line for the reasons stated in this

1 Application and the accompanying testimony. Big Rivers further requests the 2 authority to move the location of the line up to 500 feet on either side of the 3 centerline shown on the maps filed with this Application to account for unexpected 4 conditions that could be discovered during the construction process. 5 24. Additionally, Big Rivers requests a finding from the Commission 6 pursuant to 807 KAR 5:001 Section 19 that the Project F switching station is an 7 ordinary extension in the usual course of business not requiring a CPCN under 8 KRS 278.020(1)(a)(2). 807 KAR 5:001 Section 15(3) provides: 9 A certificate of public convenience and necessity shall not be required for extensions that do not create wasteful duplication of plant, 10 equipment, property, or facilities, or conflict with the existing 11 12 certificates or service of other utilities operating in the same area and 13 under the jurisdiction of the [C]ommission that are in the general or 14 contiguous area in which the utility renders service, and that do not

involve sufficient capital outlay to materially affect the existing
 financial condition of the utility involved, or will not result in

17 increased charges to its customers.

18 As discussed above, Project F satisfies these criteria, and therefore does not require

19 a CPCN. If the Commission disagrees, Big Rivers requests in the alternative that

- 20 the Commission grant a CPCN for Project F. Big Rivers further requests the
- 21 authority to move the switching station from the location shown on the maps filed
- 22 with this Application to account for unexpected conditions that could be discovered
- 23 during the construction process, so long as the switching station is not moved onto

24 property owned by different property owners.

25 WHEREFORE, Big Rivers respectfully requests that the Commission issue 26 an order granting it the relief requested in this Application, and all other relief to 27 which it may be entitled.

1	On this the <u>16</u> day of January, 2020.	
2		Respectfully submitted,
4		TEP
5		Tyson Kamuf
7		Corporate Attorney
8		Big Rivers Electric Corporation
9		201 Third Street
10		P.O. DOX 24 Handarson Kantucky 42419-0024
12		Phone: (270) 827-2561
13		Facsimile: (270) 844-6417
14		tyson.kamuf@bigrivers.com
15		
16		
17		

#### **BIG RIVERS ELECTRIC CORPORATION**

#### APPLICATION OF BIG RIVERS ELECTRIC CORPORATION FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY TO CONSTRUCT A 345 KV TRANSMISSION LINE IN MEADE COUNTY, KENTUCKY CASE NO. 2019-00417

#### **VERIFICATION**

I, Michael W. Chambliss, Vice President, System Operations 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 the  $\frac{16^{27}}{1000}$  day of January, 2020.

Michael W. ("Mike") Chambliss Vice President, System Operations Big Rivers Electric Corporation

9
10
11 COMMONWEALTH OF KENTUCKY )
12 COUNTY OF HENDERSON )
13
14
15 SUBSCRIBED AND SWORN TO before me by Michael W. ("Mike") Chambliss
16 on this the <u>ibth</u> day of January, 2020.
17
18

Joy P. Parsley

Notary Public, Kentucky State at Large

**My Commission Expires** 

19

1

2

7 8

> Notary Public, Kentucky State-At-Large My Commission Expires: July 10, 2022 ID: 604480

# Filing

# CONTAINS

## LARGE OR OVERSIZED

# MAP(S)

RECEIVED ON: (01/17/2020)





Your Touchstone Energy® Cooperative K

#### COMMONWEALTH OF KENTUCKY BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

APPLICATION OF BIG RIVERS ELECTRIC CORPORATION FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY TO CONSTRUCT A 345 KV TRANSMISSION LINE IN MEADE COUNTY, KENTUCKY

Case No. 2019-00417

)

)

)

#### DIRECT TESTIMONY

OF

MICHAEL W. CHAMBLISS VICE PRESIDENT OF SYSTEM OPERATIONS

#### **ON BEHALF OF**

#### **BIG RIVERS ELECTRIC CORPORATION**

FILED: January 17, 2020

**Application Exhibit A** 

1	DIRECT TESTIMONY		
2	OF		
3	MICHAEL W. CHAMBLISS		
4	I. INTRODUCTION		
5 Q.	Please state your name, your position, and give a summary of your		
6	education and work experience.		
7 A.	My name is Michael W. Chambliss. My position with Big Rivers Electric		
8	Corporation (" <u>Big Rivers</u> ") is Vice President of System Operations. I graduated		
9	from the University of Southern Indiana with a Bachelor of Science in		
10	Business Administration and from Oakland City University with a Master of		
11	Science in Management. In my 35-year career at Vectren Corporation, I		
12	served in various positions in the operations area, including roles in the		
13	transmission and energy delivery division of the organization, along with		
14	serving on multiple Midcontinent Independent System Operator, Inc. (" <u>MISO</u> ")		
15	transmission committees. I served as a District Manager, General Foreman of		
16	Substation Construction and Maintenance, Supervisor of Protective Relays and		
17	Gas Turbines, Electrical Maintenance Foreman and Director Network		
18	Operations. I was employed by Big Rivers in my current position as Vice		
19	President System Operations in January 2014.		
20			

Case No. 2019-00417 Application Exhibit A Direct Testimony of Michael W. Chambliss Page 1 of 7

1	Q.	Have you previously testified before the Kentucky Public Service		
2		Commission (" <u>Commission</u> ")?		
3	<b>A</b> .	Yes. I have testified before the Commission in several proceedings, including		
4		In the Matter of: Joint Application of Kenergy Corp. and Big Rivers Electric		
5		Corporation for Approval of Contracts, PSC Case No. 2016-00117; In the Matter		
6		of: The Application of Big Rivers Electric Corporation for a Certificate of Public		
7		Convenience and Necessity, PSC Case No. 2018-00004; In the Matter of:		
8		Application of Big Rivers Electric Corporation for Enforcement of Rate and		
9		Service Standards, PSC Case No. 2019-00269; and In the Matter of:		
10		Application of Big Rivers Electric Corporation for a Certificate of Public		
11		Convenience and Necessity to Construct a 161 kV Transmission Line, and a 345		
12		kV Transmission Line in Meade County, Kentucky, PSC Case No. 2019-00270.		
13		II. BACKGROUND		
14	Q.	Please explain why you are filing testimony in this proceeding.		
15	A.	I am filing this testimony in support of Big Rivers' application (" <u>Application</u> ")		
16		for the necessary authority to construct certain transmission system		
17		improvements necessary to provide wholesale electric service to Meade County		
18		Rural Electric Cooperative Corporation (" <u>Meade County RECC</u> ") in light of the		
19		load growth anticipated in the Meade County area resulting from the recently		
20		announced Nucor Corp. (" <u>Nucor</u> ") steel mill at the Buttermilk Falls Industrial		
21		Park in Brandenburg, Kentucky.		

1		III.	NEED FOR THE TRANSMISSION SYSTEM IMPROVEMENTS	
2	Q.	Please describe the proposed transmission system improvements.		
3	A.	. There are seven transmission system construction improvements needed to		
4		continue to provide reliable electric service to Meade County RECC:		
5		٠	Project A An 8.8 mile, 161 kV transmission line circuit will be added from	
6			Meade County Substation to Otter Creek Substation. This circuit will be	
7			built above the existing 69 kV Garrett transmission line.	
8		٠	Project B An 8.6 mile, 345 kV transmission line circuit will be added from	
9	Otter Creek Substation to Brandenburg Steel Mill (" <u>BSM</u> ") Substation.		Otter Creek Substation to Brandenburg Steel Mill (" <u>BSM</u> ") Substation.	
10		This circuit will be built above the existing 69 kV transmission lines		
11			extending from Garrett Substation to Buttermilk Falls Substation.	
12		•	Project C A 161 kV line terminal will be constructed completely within the	
13			existing Meade County Substation.	
14		٠	Project D The greenfield 345/161 kV Otter Creek Substation will be built	
15			north of the intersection of Joe Prather Highway (KY-313) and Garrett	
16			Road (KY 1238).	
17		٠	Project E The greenfield 345/34.5 kV BSM Substation will be built	
18			adjacent to, and will serve as the delivery point for, the new Nucor steel	
19			mill.	

Case No. 2019-00417 Application Exhibit A Direct Testimony of Michael W. Chambliss Page 3 of 7

1		Project F The greenfield 345 kV Redmon Road Switching Station will be			
2		built just south of US Highway 60 (Owensboro Highway) at Joe Prather			
3	Highway.				
4		<ul> <li>Project G A 2.7 mile, 345 kV transmission line will be constructed from</li> </ul>			
5	Redmon Road Switching Station to Otter Creek Substation.				
6		Big Rivers' requests relating to Project A through E are the subject of Big			
7		Rivers' application in Case No. 2019-00270. Big Rivers' Application in this			
8	case addresses Project F and G. More specifically, in this case, Big Rivers is				
9		requesting a certificate of public convenience and necessity (" <u>CPCN</u> ") for the			
10		Project G transmission line and a finding that no CPCN is required for the			
11		Project F switching station. However, if the Commission determines that a			
12	CPCN is required for Project F, Big Rivers requests in the alternative that the				
13	Commission grant a CPCN for that project.				
14					
15	Q.	Are any interstate benefits expected to be achieved by the			
16		construction projects?			
17	A.	Yes. The construction projects are needed not only to serve the new Nucor			
18		facility, but they will also enable Big Rivers and Meade County RECC to			
19		provide electric service to other new and expanded loads in the Meade County			
20		area, as well provide the ability to enhance reliability to existing members.			
21		Because of the size of the Nucor facility and the number of jobs Nucor			

Case No. 2019-00417 Application Exhibit A Direct Testimony of Michael W. Chambliss Page 4 of 7

anticipates creating, additional load growth in the area is a given. The 2 construction projects will additionally strengthen the transmission system.

1

3

Why does Big Rivers believe no CPCN is required for Project F? 4 Q. 5 A. The Project F switching station does not require a CPCN because the 6 investment required is insufficient to cause a material financial impact to Big Rivers and will not result in increased electric service rates to retail customers 7 8 on the Big Rivers system. Customers who pay for transmission service on Big 9 Rivers' system will pay increased transmission charges as a result of the 10 increased investment on the transmission system, but the construction will not 11 cause changes in Big Rivers' wholesale electric service rates or the retail 12 electric service rates of its Members. 13 Have the necessary parties executed the Nucor-related wholesale and 14 Q. 15 retail electric service agreements? 16 A. Yes. Those agreements are subject to the approval of both the Commission and 17 the United States Department of Agriculture's Rural Utilities Service ("RUS"). 18 RUS has approved the contracts, and Big Rivers and Meade County RECC 19 have jointly filed an application with the Commission in Case No. 2019-00365 20 for approval of the contracts.

> Case No. 2019-00417 **Application Exhibit A Direct Testimony of Michael W. Chambliss** Page 5 of 7

1	Q.	What happens if the Commission or RUS does not approve the
2		wholesale or retail electric service agreement?
3	A.	Because of the long lead time on certain of the projects, Big Rivers informed
4		Nucor that in order to meet Nucor's desired construction timeline, Big Rivers
5		would have to begin incurring costs prior to receiving all approvals of the
6		wholesale and retail electric service agreements. To do this, Big Rivers would
7		need Nucor to reimburse Big Rivers in the event the electric service
8		agreements were not approved. Nucor agreed to reimburse Big Rivers for its
9		actual costs incurred, up to \$3,500,000 in the event the electric service
10		agreements are not approved and consummated.
11		
12	Q.	What is the estimated construction cost for the projects?
13	A.	Big Rivers estimates that the total construction costs for Projects F and G will
14		be \$15.2 million.
15		
16	Q.	Will Big Rivers finance the construction costs?
17	A.	Big Rivers continues to investigate the best source of financing for the
18		construction costs, but Big Rivers believes it is likely that it will seek financing
19		for the projects from RUS. However, Big Rivers may utilize its cash reserves.
20		
21		

Case No. 2019-00417 Application Exhibit A Direct Testimony of Michael W. Chambliss Page 6 of 7

1	Q.	How will Big Rivers recover the construction costs?	
2	A.	The construction costs will be an input into the MISO Attachment O formula	
3		rate for transmission service on Big Rivers' system under MISO's Open Access	
4		Transmission Tariff.	
5		IV. CONCLUSION	
6	Q.	What action by the Commission does Big Rivers seek in this	
7		proceeding?	
8	A.	Big Rivers requests that the Commission find that the public convenience and	
9		necessity require the construction by Big Rivers of the Project G transmission	
10		line and issue a CPCN for that project. Big Rivers requests that the	
11		Commission find that the Project F switching station is an ordinary extension	
12		of existing systems in the usual course of business for which no CPCN is	
13		required. Alternatively, Big Rivers requests that the Commission grant a	
14		CPCN for Project G. Additionally, Big Rivers requests the flexibility to move	
15		the line up to 500 feet in either direction of the centerline shown on the route	
16		maps filed with the Application, and Big Rivers requests the flexibility to move	
17		the switching station from the location shown on the route maps so long as the	
18		station is not moved onto a different property owner.	
19			
20	Q.	Does this conclude your testimony?	
21	A.	Yes.	

Case No. 2019-00417 Application Exhibit A Direct Testimony of Michael W. Chambliss Page 7 of 7

#### **BIG RIVERS ELECTRIC CORPORATION**

#### APPLICATION OF BIG RIVERS ELECTRIC CORPORATION FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY TO CONSTRUCT A 345 KV TRANSMISSION LINE IN MEADE COUNTY, KENTUCKY CASE NO. 2019-00417

#### **VERIFICATION**

I, Michael W. ("Mike") Chambliss, 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 formed after a reasonable inquiry.

Michael W. ("Mike") Chambliss

COMMONWEALTH OF KENTUCKY ) COUNTY OF HENDERSON )

SUBSCRIBED AND SWORN TO before me by Michael W. ("Mike") Chambliss on this the  $_{/b}th_{}$  day of January, 2020.

Parsley

Notary Public, Kentucky State at Large

**My Commission Expires** 

Datary Public, Kentucky State-At-Large My Commission Expires: July 10, 2022 ID: 604480

## Big Rivers Electric Corporation Case No. 2019-00417 References for Compliance with Regulatory Requirements

Regulation	Filing Requirement	Location in Application
807 KAR 5:120 Section 1	Notice of intent to file application.	Big Rivers filed its notice of intent on November 18, 2019.
807 KAR 5:120 Section 2(1)	All documents and information required by: (a) 807 KAR 5:001 Section 14, except the applicant shall file an original and six copies of the application; and (b) 807 KAR 5:001 Section 15(2)(a) through (c) and (e) through (f).	See below; original and six copies of Application filed
807 KAR 5:120 Section 2(2)(a)	Three (3) maps of suitable scale, but no less than one (1) inch equals 1,000 feet for the project proposed.	Filed with the Application; See Application ¶ 13
807 KAR 5:120 Section 2(2)(b)	Sketches of proposed typical transmission line support structures shall also be provided.	Exhibit D
807 KAR 5:120 Section 2(2)(c)	A separate map of the same scale shall show any alternative routes that were considered.	Filed with the Application; See Application ¶ 16
807 KAR 5:120 Section 2(3)	A verified statement that each property owner properly notifed.	Application ¶ 21
807 KAR 5:120 Section 2(4)	A sample copy of the property owner notice.	Exhibit E
807 KAR 5:120 Section 2(4)	A list of the names and addresses of the property owners to whom the notice has been sent.	Exhibit F
807 KAR 5:120 Section 2(5)	A statement that a notice was properly published.	Application ¶ 22; Exhibit G
807 KAR 5:120 Section 2(6)	A copy of the newspaper notice.	Exhibit G
807 KAR 5:120 Section 2(7)	A statement as to whether the project involves sufficient capital outlay to materially affect the existing financial condition of the utility involved.	Application ¶ 18
807 KAR 5:001 Section 14(1)	The full name, mailing address, and electronic mail address of the applicant.	Application ¶ 9

### Big Rivers Electric Corporation Case No. 2019-00417 References for Compliance with Regulatory Requirements

Regulation	Filing Requirement	Location in Application	
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; Application ¶¶ 23-24	
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, and, if it is not a Kentucky corporation, state if it is authorized to transact business in Kentucky.	Application ¶ 11	
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 ¶ 14; Exhibit A	
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 ¶ 19	
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 ¶¶ 2, 13-17, and Exhibit A; See also the Maps of the Proposed Route filed with the Application	
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 ¶ 18	
807 KAR 5:001 Section 15(2)(f) An estimated annual cost of operation after the proposed facilities are placed into service.		Application ¶ 18	

## Big Rivers Electric Corporation Case No. 2019-00417 References for Compliance with Regulatory Requirements

Regulation	Filing Requirement	Location in Application	
807 KAR 5:001 Section 19(2)	<ul> <li>An application for declaratory order shall:</li> <li>(a) be in writing;</li> <li>(b) contain a complete, accurate, and concise statement of facts upon which the application is based;</li> <li>(c) fully disclose the applicant's interest;</li> <li>(d) identify all statues, administrative regulations, and orders to which the application relates; and</li> <li>(e) state the applicant's proposed resolution or conclusion.</li> </ul>	See Application. The Application is in writing.	
807 KAR 5:001 Section 19(6)	Applications for declaratory orders shall be supported by affidavit or shall be verified.	The Application is verified.	





# 345 & 161 kV Transmission Lines Brandenburg Steel Mill Routing Study

# **Project Report**

Prepared by: Jesse Glasgow and Nicholas Arjona, Team Spatial Date: November 7, 2019



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#### **Project Overview**

Big Rivers Electric Corporation plans to construct three transmission lines that connect the proposed Brandenburg Steel Mill Substation, proposed Otter Creek Substation, proposed Redmon Road Substation, and Meade County Substation.

The project involves constructing one 2.58 mile 345 kV transmission line northwestward out of the proposed Redmon Road Substation. The northwestern end point for this proposed transmission line will terminate at the proposed Otter Creek Substation.

From the proposed Otter Creek Substation, a second 345 kV line will extend to the north approximately 8.79 miles to the proposed steel mill.

A 161 kV transmission line will extend 8.52 miles eastward from the existing Meade County Substation at the intersection of KY-79 and Guston Road. The eastern terminal will be the proposed Otter Creek Substation.

In support of this project, Team Spatial performed a siting study to help the Big Rivers team identify the preferred routes to construct the new lines. The siting study considered the natural environment and people as well as cost and engineering concerns. The route selection process is described in this report.

#### Study Area Description

The Brandenburg Steel Mill project is in Meade County, Kentucky. Meade County is home to about 28,000 residents and has a population density of about 85 people per square mile.

The study area is mainly agricultural with some forested land in the northwest and an urban portion in the center. The terrain is relatively flat with the Ohio River serving as a northern border to the county. There is a park in the southern center of the study area with special areas such as schools and churches near the urban portion.





Figure 1 Study Area Map



#### Siting Methodology Overview

The EPRI (Electric Power Research Institute) - GTC (Georgia Transmission Corporation) Siting Methodology<sup>1</sup> and the Kentucky Siting Model<sup>2</sup> was used on this project. The methodology uses a data driven objective process that leverages external stakeholder input from representative organizations to help calibrate the Alternative Corridor model using the Analytical Hierarchy and the Modified Delphi processes. It relies on routing experts to identify alternate routes using the Alternative Corridors as a guide. The method leverages internal experts to calibrate the Alternative Route Evaluation Model and uses the Alternative Route Evaluation Model to help identify the top routes. Finally, the Expert Judgment Model is used to select the preferred route.

The Methodology is analogous to a funnel used to process information. Into the funnel goes geographic information which is calibrated with community concerns, natural concerns, and engineering considerations. Each phase of the process is like a filter in the funnel which is used to reduce the area of consideration. As the area of focus is reduced, users are able to invest more effort into studying the area at a greater level of detail. More detailed information are collected as one proceeds through the funnel. The bottom of the funnel results a preferred route for the transmission line.



<sup>&</sup>lt;sup>1</sup> https://www.epri.com/#/pages/product/1013080/?lang=en-US

<sup>&</sup>lt;sup>2</sup> https://www.epri.com/#/pages/product/1016198/?lang=en-US



#### Alternative Corridors

Engineering Environment		Natural Environment		Built Environment			
Linear Infrastructure	85.2%	Floodplain	5.6%	Proximity to Buildings	17.5%	Land Use	37.3%
Parallel Existing Transmission Lines	1.0	Background	1.0	Background	1.0	Commercial/Industrial	1.0
Rebuild Existing Transmission Lines (good)	2.3	100 Year Floodplain	9.0	900-1200	3.4	Agriculture (crops)	3.5
Background	4.6	Streams/Wetlands	35.4%	600-900	5.7	Agriculture (other livestock)	4.6
Parallel Interstates ROW		Background	1.0	300-600	8.0	Silviculture	1
Parallel Roads ROW	5.6	Streams < 5cf+Regulatory Buffer	6.2	0-300	9.0	Other (forest)	6.7
Parallel Pipelines	5.8	Streams > 5cf+Regulatory Buffer		Building Density	8.7%	Equine Agri-Tourism	
Future DOT Plans		Wetlands + 30'Buffer	8.7	0 - 0.05 Buildings/Acre	1.0	Residential	9.0
Parallel Railway ROW	6.4	Outstanding State Resource Waters	9.0	0.05 - 0.2 Buildings/Acre	3.1	Proximity to Eligible Historic and Archeological Sites	32.3%
Road ROW	7.5	Public Lands		0.2 - 1 Buildings/Acre	5.9	Background	1.0
Rebuild Existing Transmission Lines (bad)	9.0	Background	101-06	1 - 4 Buildings/Acre	9.0	900-1200	4.6
Scenic Highways ROW		WMA + Not State Owned	-	>4 Buildings/Acre		600-900	7.9
Slope	13.8%	USFS (proclamation area)	120.40	Proposed Development		0-300	8.6
Slope 0-15%	1.0	Other Conservation Land		Background		300-600	9.0
Slope 15-30%	4.0	USFS (actually owned)		Proposed Development		Areas of Least Preference	-
Stope 30-40%	6.7	State Owned Conservation Land		Spannable Lakes and Ponds	4.2%	Listed Archaeology Sites and Districts	8
Slope >40%	9.0	Land Cover	24.1%	Background	1.0	Listed NRHP Districts and Buildings	
Areas of Least Preference		Developed Land	1.0	Spannable Lakes and Ponds	9.0	Day Care Parcels	
Non-Spannable Waterbodies		Agriculture	4.6			City and County Parcels	
Mines and Quarries (Active)		Forests	9.0			Cemetery Parcels	
Buildings		Wildlife Habitat	34.9%	2		School Parcels (K-12)	1
Airports		Background	1.0			Church Parcels	
Military Facilities		Species of Concern Habitat	9.0				
Center Pivot Irrigation		Areas of Least Preference					
		EPA Superfund Sites					
		State and National Parks					
		USFS Wilderness Area					
		Wild/Scenic Rivers					
		Wildlife Refuge	0				
		State Nature Preserves					
		Designated Critical Habitat					

Figure 3 Alternate Corridor Model



The above model is the Kentucky Siting Model that was developed with input from subjectmatter experts and stakeholders. Each perspective (Built, Engineering, and Natural) represent the three groupings of considerations in the model. Within the perspectives, there are layers like Linear Infrastructure that further specify the groups. Finally, there are features that lie in the layers that tie to specific features such as Road ROW.

Each feature is given a value 1-9 depending on the relative suitably for a potential transmission line to intersect with said feature. 1 being the most suitable and 9 being the least. At the layer level, all of the layers within a perspective are given a weight and all of the weights have to equal 100%. The features and layers that are not present in this project are grayed out in the table above.



#### Areas of Least Preference

Figure 4 Areas of Least Preference



#### **Built Criteria**

The Built portion of the Alternate Corridor Model considers places where people live, work, and play. The Built Environment contains six layers: Building Density, Building Proximity, Proposed Development, Spannable Lakes and Ponds, Land Use, and Proximity to Eligible Historic and Archaeological Sites.



Figure 5 Built Source Data

The above map shows the source data in the Built Environment. We aren't aware of proposed developments within the study area.





Figure 6 Building Density Suitability Grid

The Building Density layer is classified by the number of buildings per acre. The higher the density, the less suitable that location is for a potential transmission line. *Note: The legend of the following maps illustrates the categories from the Kentucky model, and the relative suitability values. Within each layer the number 1 represents the most suitable place for a transmission line (in that layer) and the number 9 represents the least suitable place.*


Figure 7 Building Proximity Suitability Grid

For the Building Proximity layer, the most suitable location for a potential transmission line is beyond 1,200 feet from a building. These areas are shown in dark green in the map above. The least suitable areas are within 300 feet of a building.



Figure 8 Spannable Lakes and Ponds Suitability Grid

The Spannable Lakes and Ponds suitability grid is characterized by two options, either the location is within a spannable lake and pond or the location is not. The areas that are not in a spannable lake or pond are more suitable for a potential transmission line. A maximum span distance of 800' was used for this analysis



Figure 9 Land Use Suitability Grid

According to the Kentucky Model, from a Built Perspective the most suitable land use classification for a potential transmission line is an area with a commercial or industrial land use. While the least suitable classification is residential areas. An area with an Agricultural land use classification is the second most suitable, while any other land use classification would be the third most suitable area. In this case "other" consist of areas with trees.





Figure 10 Proximity to Historic Sites Suitability Grid

The Proximity to Historic Sites and Archaeological layer is meant to protect the Historic and Archaeological sites in or near the study area. This is done by making the areas near the sites to be the least suitable, while the farthest away from the sites is the most suitable location for a potential transmission line. There was no Archaeological sites within the study area that were classified as "eligible" in their status.



Figure 11 Built Suitability Grid

The suitability grids for each perspective are created by multiplying the values of the individual layer grids by the weights in the model and combining to create a weighted average suitability grid.



## Natural Criteria



Figure 12 Source Data for the Natural Perspective

The Natural Perspective considers rivers and streams throughout the study area with a 100year floodplain near an Outstanding State Resource Water in the eastern portion of the study area. The land cover is also considered when assessing the natural suitability of a potential transmission line in the area. The Wildlife Habitat was modeled utilizing a combination of forested lands and rivers. Public Lands were also considered with the Natural Perspective, however, none are present in the study area.



Figure 13 Floodplain Suitability Grid

The most suitable areas are not within a 100-year floodplain.





Figure 14 Streams and Wetlands Suitability Grid

Outstanding State Resource Waters, plus a 30-foot buffer, are the least suitable area within the Streams and Wetlands layer. Wetlands are the next least suitable location for a potential transmission line. The most suitable areas do not contain wetlands or streams/rivers.



Figure 15 Land Cover Suitability Grid

The land cover is classified by developed land, agriculture, and forest. From a Natural Perspective, forested land is the least suitable area for a potential transmission line. Developed land is the most suitable area and agriculture land is rated near the middle.





Figure 16 Wildlife Habitat Suitability Grid

The wildlife habitat within the study area considered the following species: Northern Long-Eared Bat, Clubshell, Gray Bat, Indiana Bat, Ring Pink, and Rough Pigtoe. The habitats for these species are modeled based off the U.S Forest and Wildlife descriptions of their habitats. The Northern Long-Eared Bats and Indiana Bats are found in forested areas. The Clubshell and Rough Pigtoe species are found in rivers and streams. The Gray Bat is found near the Ohio River, so the Ohio River was buffered by one mile to model the potential habitat. The Ring Pink species are found in open waterbody coastlines, therefore the boundaries of the Doe Valley Lake were buffered by 30 feet and other waterbodies modeled as the habitat. Forested land, open water, and surrounding areas, were used to model potential wildlife habitat of the threatened and endangered species.



Figure 17 Overall Natural Suitability Grid



## Engineering Criteria



Figure 18 Engineering Perspective Source Data

The Engineering Perspective of the Alternate Corridor Model considers existing linear infrastructure and slope.





Figure 19 Linear Infrastructure Suitability Grid

The Linear Infrastructure layer considers co locating with roads, railroads, and transmission lines. The least suitable is an existing transmission line ROW which can not be leveraged for this new line construction (AKA rebuild existing transmission line bad). Parallel or rebuilding existing transmission lines are considered the most suitable areas within this layer. The existing 69kV line owned by Big Rivers and running from Brandenburg Substation to Garrett Substation was considered as an opportunity for rebuilding with a new double circuit line. Also, the existing 2.7-mile 69 kV transmission line running radially into Buttermilk Falls Substation was considered as an opportunity for rebuilding with a new double circuit line, as well as, the existing 69kV line owned by Big Rivers and running from Meade County Substation to Garrett Substation was considered an opportunity for rebuilding with a double circuit line.





Figure 20 Linear Infrastructure Suitability Grid



Figure 21 Slope Suitability Grid

The slope layer assesses the suitability in regards to the degree slope of the land with the higher the slope being the least suitable location. Most of the study area has a slope less than 15%, which is the most suitable location for a transmission line.





Figure 22 Engineering Suitability Grid



## Built Emphasis Corridor

Figure 23 Built Suitability Grid

The Built suitability grid is created by putting emphasis (5x) on the built perspective while taking into consideration the other two perspectives (1x).





Figure 24 Built Suitability Grid with the Alternate Corridor

The Built Alternate Corridor was created by calculating the top 3% of routes between the Meade County Substation, Proposed Otter Creek Substation, Brandenburg Steel Mill Substation, and Proposed Redmon Road Substation.



Figure 25 Built Alternate Corridor



## Natural Emphasis Corridor



Figure 26 Natural Suitability Grid

The Natural suitability grid is created by putting emphasis (5x) on the natural perspective while taking into consideration the other two perspectives (1x).



Figure 27 Natural Suitability Grid with the Alternate Corridor

The Natural Alternate Corridor was created by calculating the top 3% of routes between the Meade County Substation, Proposed Otter Creek Substation, Brandenburg Steel Mill Substation, and Proposed Redmon Road Substation.



Figure 28 The Natural Alternate Corridor





Figure 29 Engineering Suitability Grid

The Engineering suitability grid is created by putting emphasis (5x) on the engineering perspective while taking into consideration the other two perspectives (1x).





Figure 30 Engineering Suitability Grid with the Alternate Corridor



The Engineering Alternate Corridor was then created by calculating the top 3% of routes between the Meade County Substation, Proposed Otter Creek Substation, Brandenburg Steel Mill Substation, and Proposed Redmon Road Substation.



Figure 31 Engineering Alternate Corridor



# Simple Emphasis Corridor

Figure 32 Simple Suitability Grid

The Simple suitability grid is created by putting equal emphasis on the Built, Natural, and Engineering perspectives.



Figure 33 Simple Suitability Grid with the Alternate Corridor

The Simple Alternate Corridor is then created by taking the least cost path between the Big Meade County Substation, Proposed Otter Creek Substation, Brandenburg Steel Mill Substation, and Proposed Redmon Road Substation.





Figure 34 Simple Alternate Corridor





Figure 35 All Alternate Corridors



## Preferred Routes



Figure 36 Alternate Routes with the Alternate Corridors

The Preferred Routes were created using the alternate corridors as guidelines to go from the Meade County Substation to Proposed Otter Creek Substation. The preferred route will rebuild the existing 69kV in the existing ROW.

The preferred route from Brandenburg Steel Mill Substation to Proposed Otter Creek Substation will rebuild the existing 69kV and expand the existing ROW by 12.5 feet on both sides.

The alternative routes developed from the proposed Otter Creek Substation to the Proposed Redmon Road Substation are described in the next section.





Figure 37 Brandenburg Steel Mill to Otter Creek Preferred Route with the Alternate Corridors



Figure 38 Meade County to Otter Creek Preferred Route with the Alternate Corridors



	Route A
Built	
Residences Within the ROW	3
Residences Within 300' of the Centerline	31
Commercial Buildings within 300' of the Centerline	5
Industrial Buildings within 300' of the Centerline	0
Agricultural Buildings within 100' of the Centerline	0
School, Daycare, Church, Cemetery, & Park within 50' of the ROW	0
Historic structures within 600' of the Centerline	0
Natural	
Tree Clearing (Acres)	7.78
Stream / River Crossings	3
Wetlands (Acres)	0
Engineering	
% Rebuild of Existing Transmission Lines	91%
% Parallel with Existing Transmission Lines	0%
% Parallel Roads	38%
Total Project Costs	\$17,184,205
Construction Cost (\$1.7M/mile)	\$14,943,000
Land Acquisition Cost (\$6,271/acre )	\$226,195
Major Angle	\$1,980,000
0-45° Angle (\$90K)	8
45-90° Angle (\$240K)	4
>90° Angle (\$300K)	1
Clearing Cost (\$4.5K/Acre)	\$35,010
Length (Miles)	8.79
Approximate new ROW required (Acres)	36

Figure 39 Route Data Brandenburg Steel Mill Substation to Otter Creek Substation



	Route A
Built	
Residences Within the ROW	1
Residences Within 300' of the Centerline	14
Commercial Buildings within 300' of the Centerline	C
Industrial Buildings within 300' of the Centerline	C
Agricultural Buildings within 100' of the Centerline	11
School, Daycare, Church, Cemetery, & Park within 50' of the ROW	C
Historic structures within 600' of the Centerline	C
Natural	
Tree Clearing (Acres)	0
Stream / River Crossings	C
Wetlands (Acres)	0.04
Engineering	
% Rebuild of Existing Transmission Lines	95%
% Parallel with Existing Transmission Lines	1%
% Parallel Roads	0%
Total Project Costs	\$7,808,353
Construction Cost (\$820K/mile)	\$6,986,400
Land Acquisition Cost (\$6,271/acre )	\$41,953
Major Angle	\$780,000
0-45° Angle (\$90K)	6
45-90° Angle (\$240K)	1
>90° Angle (\$300K)	C
Clearing Cost (\$4.5K/Acre)	\$0
Length (Miles)	8.52
Approximate new ROW required (Acres)	7

Figure 40 Route Data Meade County Substation to Otter Creek Substation



## Alternate Routes



Figure 41 Redmon Road to Otter Creek Alternate Routes with Composite Corridors





Figure 42 Redmon Road to Otter Creek Alternate Routes with Composite Corridors




Figure 43 Redmon Road to Otter Creek Alternate Routes

The Alternate Route Evaluation Model leverages weighted metrics to compare the Alternate Routes. The first step of the process is to compile data for each route. The metrics are grouped into three categories: Built, Natural, and Engineering.

The route data (Figure 32) are normalized on a scale from 0 to 1 with 0 being the best and 1 being the worst in each category. This allows comparisons of metrics in different units such as counts, acreage and dollars. The percent colocation with roads and existing distribution lines are inverted since the higher the number, the better it is for an alternate route.

The criteria are assigned weights based on their relative importance to the siting process. The weight for each criterion is represented by percentages such as 50% residences and 20% special areas. The weights within a perspective (built, natural, engineering) must total 100%.

The Alternate Route Evaluation Model places 5 times emphasis on each perspective to produce Built, Natural, and Engineering Emphasis Models. In addition, a Simple Average Model is implemented which places equal emphasis on the three perspectives.

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	Route A East	<b>Route B West</b>	
Built			
Residences Within the ROW	0	0	
Residences Within 300' of the Centerline	4	2	
Commercial Buildings within 300' of the Centerline	0	0	
Industrial Buildings within 300' of the Centerline	0	0	
Agricultural Buildings within 300' of the Centerline	1	0	
School, Daycare, Church, Cemetery, & Park within 50' of the ROW	0	0	
Historic structures within 600' of the Centerline	0	0	
Natural			
Tree Clearing (Acres)	1.03	4.9	
Stream / River Crossings	0	0	
Wetlands (Acres)	0	0	
Engineering			
% Rebuild of Existing Transmission Lines	0%	0%	
% Parallel with Existing Transmission Lines	0%	0%	
% Parallel Roads	8%	34%	
Total Project Costs	\$5,627,023	\$5,315,721	
Construction Cost (\$1.7M/mile)	\$4,386,000	\$4,216,000	
Land Acquisition Cost (\$6,271/acre )	\$246,388	\$237,671	
Major Angle	\$990,000	\$840,000	
0-45° Angle (\$90K)	3	4	
45-90° Angle (\$240K)	3	2	
>90° Angle (\$300K)	0	0	
Clearing Cost (\$4.5K/Acre)	\$4,635	\$22,050	
Length (Miles)	2.58	2.48	
Approximate new ROW required (Acres)	39.29	37.9	

Figure 44 Route Data Redmon Road Substation to Otter Creek Substation



Built	Route A East	<b>Route B West</b>
Residences Within the ROW	0.0	0.0
Normalized	-	
Residences Within 300' of the Centerline	4.0	2.0
Normalized	1.0	0.0
Commercial Buildings within 300' of the Centerline	0.0	0.0
Normalized		-
Industrial Buildings within 300' of the Centerline	0.0	0.0
Normalized	-	
Agricultural Buildings within 300' of the Centerline	1.0	0.0
Normalized	1.0	0.0
School, Daycare, Church, Cemetery, & Park within 50' of the ROW	0.0	0.0
Normalized		
Historic structures within 600' of the Centerline	0.0	0.0
Normalized		
Natural		
Tree Clearing (Acres)	1.0	4.9
Normalized	0.0	1.0
Stream / River Crossings	0.0	0.0
Normalized	2.00	
Wetlands (Acres)	0.0	0.0
Normalized		-
Engineering		
% Rebuild of Existing Transmission Lines	0.00	0.00
Normalized		-
Inverted		-
% Parallel with Existing Transmission Lines	0	0
Normalized	-	
Inverted	•	-
% Parallel Roads	0.08	0.34
Normalized	0.0	1.0
Inverted	1.0	0.0
Total Project Costs	\$ 5,627,023	\$ 5,315,721
Normalized	1.0	0.0

Figure 45 Normalized Data Redmon Road Substation to Otter Creek Substation



Built	72%	<b>Route A East</b>	<b>Route B West</b>
Feature		Unit	Unit
Residences Within the ROW	0.0%	-	-
Weighted			-
Residences Within 300' of the Centerline	95.0%	1.00	0.00
Weighted		0.95	0.00
Commercial Buildings within 300' of the Centerline	0.0%	-	· ·
Weighted			
Industrial Buildings within 300' of the Centerline	0.0%	-	
Weighted		-	
Agricultural Buildings within 300' of the Centerline	5.0%	1.00	0.00
Weighted		0.05	0.00
	Contraction (Section Contraction		
School, Davcare, Church, Cemetery, & Park within 50' of the ROW	0.0%		
Weighted			
Historic structures within 600' of the Centerline	0.0%	-	
Weighted			-
TOTAL	100.0%	1.00	0.00
WEIGHTED TOTAL		0.72	0.00
Natural	14%		
Tree Clearing (Acres)	100.0%	0.00	1.00
Weighted		0.00	1.00
Stream / River Crossings	0.0%	-	
Weighted			-
Wetlands (Acres)	0.0%		
Weighted			
TOTAL	100.0%	0.00	1.00
WEIGHTED TOTAL		0.00	0.14
Engineering	14%		
% Rebuild of Existing Transmission Lines	0.0%	-	-
Weighted			-
% Parallel with Existing Transmission Lines	0.0%	-	-
Weighted		-	-
% Parallel Roads	% Parallel Roads 1.0		0.00
Weighted		0.20	0.00
Total Project Costs	80.0%	1.00	0.00
Weighted		0.80	0.00
TOTAL	100.0%	1.00	0.00
WEIGHTED TOTAL		0.14	0.00
SUM OF WEIGHTED TOTALS		0.86	0.14

Figure 45 Built Emphasis Redmon Road Substation to Otter Creek Substation



Built	14%	<b>Route A East</b>	<b>Route B West</b>
Feature		Unit	Unit
Residences Within the ROW	0.0%	-	-
Weighted		-	
Residences Within 300' of the Centerline	95.0%	1.00	0.00
Weighted		0.95	0.00
Commercial Buildings within 300' of the Centerline	0.0%	-	· •
Weighted			
Industrial Buildings within 300' of the Centerline	0.0%	-	-
Weighted		Caracter - Alandi	£
Agricultural Buildings within 300' of the Centerline	5.0%	1.00	0.00
Weighted		0.05	0.00
	Contraction of the		
School Daycare Church Cemetery & Park within 50' of the ROW	0.0%		
Weighted	0.070	-	
Historic structures within 600' of the Centerline	0.0%		
Weighted	0.070		
TOTAL	100.0%	1.00	0.00
WEIGHTED TOTAL	100.070	0 14	0.00
Natural	72%		And a state of the state of the
Tree Clearing (Acres)	100.0%	0.00	1.00
Weighted		0.00	1.00
Stream / River Crossings	0.0%	-	-
Weighted			
Wetlands (Acres)	0.0%		
Weighted			-
TOTAL	100.0%	0.00	1.00
WEIGHTED TOTAL		0.00	0.72
Engineering	14%		Ing. ter
% Rebuild of Existing Transmission Lines	0.0%	-	-
Weighted		- 1	
% Parallel with Existing Transmission Lines	0.0%	-	-
Weighted		•	-
% Parallel Roads	20.0%	1.00	0.00
Weighted		0.20	0.00
Total Project Costs	80.0%	1.00	0.00
Weighted		0.80	0.00
TOTAL	100.0%	1.00	0.00
WEIGHTED TOTAL		0.14	0.00
SUM OF WEIGHTED TOTALS		0.28	0.72

Figure 46 Natural Emphasis Redmon Road Substation to Otter Creek Substation



Built	14%	<b>Route A East</b>	<b>Route B West</b>
Feature		Unit	Unit
Residences Within the ROW	0.0%	-	-
Weighted			
Residences Within 300' of the Centerline	95.0%	1.00	0.00
Weighted		0.95	0.00
Commercial Buildings within 300' of the Centerline	0.0%		-
Weighted			-
Industrial Buildings within 300' of the Centerline	0.0%	-	
Weighted		-	
Agricultural Buildings within 300' of the Centerline	5.0%	1.00	0.00
Weighted		0.05	0.00
School Daycare, Church, Cemetery, & Park within 50' of the ROW	0.0%	_	
Weinbted	0.070		
Historic structures within 600' of the Centerline	0.0%		
Weighted	0.070		1
TOTAI	100 0%	1 00	0.00
WEIGHTED TOTAL	100.070	0 14	0.00
Natural	14%	0	
Tree Clearing (Acres)	100.0%	0.00	1.00
Weighted		0.00	1.00
Stream / River Crossings	0.0%	-	
Weighted		-	-
Wetlands (Acres)	0.0%	-	
Weighted		-	
TOTAL	100.0%	0.00	1.00
WEIGHTED TOTAL		0.00	0.14
Engineering	72%		
% Rebuild of Existing Transmission Lines	0.0%	- -	-
Weighted		-	
% Parallel with Existing Transmission Lines	0.0%	-	-
Weighted			and the second sec
% Parallel Roads	20.0%	1.00	0.00
Weighted		0.20	0.00
Total Project Costs	80.0%	1.00	0.00
Weighted		0.80	0.00
TOTAL	100.0%	1.00	0.00
WEIGHTED TOTAL		0.72	0.00
SUM OF WEIGHTED TOTALS		0.86	0.14

Figure 47 Engineering Emphasis Redmon Road Substation to Otter Creek Substation

1	<u></u>
TEAM	SPATIAL

Built	13%	<b>Route A East</b>	<b>Route B West</b>
Feature		Unit	Unit
Residences Within the ROW	0.0%	-	•
Weighted			-
Residences Within 300' of the Centerline	95.0%	1.00	0.00
Weighted		0.95	0.00
Commercial Buildings within 300' of the Centerline	0.0%	-	-
Weighted		-	
Industrial Buildings within 300' of the Centerline	0.0%	-	-
Weighted		-	-
Agricultural Buildings within 300' of the Centerline	5.0%	1.00	0.00
Weighted		0.05	0.00
School Davcare Church Cemetery & Park within 50' of the ROW	0.0%		
Weighted	0.070		
Historic structures within 600' of the Centerline	0.0%	-	
Weighted	0.070		-
TOTAL	100.0%	1.00	0.00
WEIGHTED TOTAL		0.33	0.00
Natural	33%		
Tree Clearing (Acres)	100.0%	0.00	1.00
Weighted		0.00	1.00
Stream / River Crossings	0.0%	-	-
Weighted			
Wetlands (Acres)	0.0%	-	-
Weighted			
TOTAL	100.0%	0.00	1.00
WEIGHTED TOTAL		0.00	0.33
Engineering	33%		In the second second
% Rebuild of Existing Transmission Lines	0.0%	-	-
Weighted			
% Parallel with Existing Transmission Lines	0.0%	-	-
Weighted		- 1	-
% Parallel Roads	20.0%	1.00	0.00
Weighted		0.20	0.00
Total Project Costs	80.0%	1.00	0.00
Weighted		0.80	0.00
TOTAL	100.0%	1.00	0.00
WEIGHTED TOTAL		0.33	0.00
SUM OF WEIGHTED TOTALS		0.67	0.33

Figure 48 Simple Average Redmon Road Substation to Otter Creek Substation





Figure 49 Alternate Route Graph

Route B scores the lowest (most suitable) from a Built perspective. This is due to the fact that Route B does not have any agricultural buildings with 300 feet of the route and less residences within 300 feet. While Route A has more residences and agricultural buildings within 300 feet of the route.

The Natural perspective is dictated by the tree clearing difference in both routes. Route A necessitates about 1 acre of tree clearing, while Route B would need about 5 acres of tree clearing making it less suitable.

In the Engineering perspective, Route B has the lowest score with the lowest cost being the main factor. The cost is lower since there is one less 45-90 degree angle in the route compared to Route A. Route B also has a higher percentage of colocation with roads when compared to Route A.

Route B has the lowest Simple Average score which is logical given the fact that it was either the most suitable in two of the three perspectives.

It should be noted that the Alternate Route Evaluation Model is commonly used to evaluate a larger number of routes for the purpose of identifying the top routes to carry on to the Expert Judgement model. There are usually more data in the model as well. For example, in the Natural criteria the only measured difference between these routes are less than 4 acres of tree clearing. One of the disadvantages of using this model to evaluate only two routes, that are very similar, is that the differences between the routes are exaggerated. This model is not used to select the preferred route. However, it was used on this project to help evaluate the route alternatives.



# Preferred Route Selection

The Expert Judgment Model is used by the transmission line experts on the project team to select the preferred route. The team determined the high-level siting criteria and assigned weights to represent the relative importance. Cost was weighed the most at 40% followed by Construction/Maintenance Accessibility at 30%, Community Considerations at 20%, and Schedule Delay Risk at 10%.

Next the experts ranked each route for each of the criteria. Finally, the weights are applied, and the preferred route has the lowest total score. Both Route A and B were considered in the Expert Judgement analysis.

For the Community criteria, Route A was given the best score since the route goes on the outside of a property near the proposed Redmon Road substation. Route B also may affect by a possible new apartment complex mentioned by the landowner, while Route A would not affect the possible apartment.

Route A has a lower risk of a schedule delay when compared to Route B because there are less trees and seasonal clearing restrictions due to the sensitive bat.

Route A has a slightly better score than Route B in terms of reliability due to the fact that Route A has less angles.

For the Natural Environment Considerations, Route A scores better because Route B has more tree clearing and is in proximity to a cave which may be bat habitat.

Both Route A and Route B scored the same when it comes to Accessibility.

Route B scores slightly better in terms of Cost according to the Alternate Route Evaluation Model estimation.

In consideration of all of these factors, Route A was selected as the preferred route.



Criteria	Weight	Route A East	Route B West
Community Issues	30%	1.0	1.5
Weighted		0.3	0.5
Schedule Delay Risk	15%	1.0	1.5
Weighted		0.2	0.2
Reliability	5%	1.0	1.2
Weighted		0.1	0.1
Natural Environment Considerations	10%	1.0	1.5
Weighted		0.1	0.2
Construction/Maintenance			
Accessibility	5%	1.0	1.0
Weighted		0.1	0.1
Cost	35%	1.1	1.0
Weighted		0.4	0.4
TOTAL	100%	1.02	1.29

Figure 50 Expert Judgement Model



#### Preferred Routes Description

Route A comes out of the Proposed Otter Creek Substation to the southwest. The route then goes to the southeast to parallel Brandenburg Road and continues to go southeast until the route goes east to avoid a series of residences along Osborne Road. Then the route goes south into the Proposed Redmon Road Substation.



Figure 51 Redmon Road to Otter Creek Preferred Route



The preferred route for the Proposed Brandenburg Steel Mill to the Proposed Otter Creek Substation is a rebuild of the two existing Big Rivers transmission lines.



Figure 52 Brandenburg Steel Mill to Otter Creek Preferred Route

# 

The preferred route for the Meade County Substation to the Proposed Otter Creek Substation is rebuilding the existing Big Rivers transmission line.



Figure 53 Meade County to Otter Creek Preferred Route



# Source Data Appendix A

Parallel Existing Transmission Lines	Big Rivers	
Rebuild Existing Transmission Lines (good)	Big Rivers	
Parallel Interstates ROW	Kentucky Transportation Cabinet	
Parallel Roads ROW	Meade County PVA	
	National Pipeline Mapping	
Parallel Pipelines	System	
Future DOT Plans	Kentucky Transportation Cabinet	
Parallel Railway ROW	Kentucky Transportation Cabinet	
Road ROW	Meade County PVA	
Rebuild Existing Transmission Lines (bad)	Big Rivers	
Scenic Highways ROW	Kentucky Transportation Cabinet	
Slope		
Slope 0-15%	USGS	
Slope 15-30%	USGS	
Slope 30-40%	USGS	
Slope >40%	USGS	
Areas of Least Preference		
Non-Spannable Waterbodies	Aerial Interpretation	
Mines and Quarries (Active)	Kentucky Geological Survey	
Buildings	Aerial Interpretation	
Airports	Aerial Interpretation	
Military Facilities	USGS	
Center Pivot Irrigation	Aerial Interpretation	
Natural Perspective		
Floodplain		
100 Year Floodplain FEMA		
Streams/Wet	lands	
Streams < 5cf+Regulatory Buffer	USGS	
Streams > 5cf+Regulatory Buffer	USGS	
Wetlands + 30'Buffer	USGS	
	Kentucky Energy and	
Outstanding State Resource Waters	Environment Cabinet	
Public Lan	ds	
WMA + Not State Owned	Aerial Interpretation	
USFS (proclamation area)	USFS	
Other Conservation Land	Aerial Interpretation	
USFS (actually owned)	USFS	
State Owned Conservation Land	Kentucky FWS	
Land Cover		
Developed Land	Aerial Interpretation	
Agriculture	Aerial Interpretation	



Forests	Aerial Interpretation	
Wildlife Habitat		
Species of Concern Habitat	USFWS and Kentucky FWS	
Areas of Least Pr	eference	
EPA Superfund Sites	EPA	
State and National Parks	NPS and Kentucky State Parks	
USFS Wilderness Area	USFS	
	National Wild and Scenic Rivers	
Wild/Scenic Rivers	System	
Wildlife Refuge	USFWS	
State Nature Preserves	Kentucky State Parks	
Designated Critical Habitat	USFWS	
Built Perspec	tive	
900-1200	Aerial Interpretation	
600-900	Aerial Interpretation	
300-600	Aerial Interpretation	
0-300	Aerial Interpretation	
Building Density		
0 - 0.05 Buildings/Acre	Aerial Interpretation	
0.05 - 0.2 Buildings/Acre	Aerial Interpretation	
0.2 - 1 Buildings/Acre	Aerial Interpretation	
1 - 4 Buildings/Acre	Aerial Interpretation	
>4 Buildings/Acre	Aerial Interpretation	
Proposed Development		
Proposed Development Big Rivers		
Spannable Lakes and Ponds		
Spannable Lakes and Ponds Aerial Interpretation		
Land Use		
Commercial/Industrial	Aerial Interpretation	
Agriculture (crops)	Aerial Interpretation	
Agriculture (other livestock)	Aerial Interpretation	
Silviculture	Aerial Interpretation	
Other (forest)	Aerial Interpretation	
Equine Agri-Tourism	Aerial Interpretation	
Residential	Aerial Interpretation	
Proximity to Eligible Historic a	nd Archeological Sites	
	Kentucky Office of Archaeology	
Background	and Kentucky Heritage Council	
	Kentucky Office of Archaeology	
900-100	and Kentucky Heritage Council	
	Kentucky Office of Archaeology	
600-900	and Kentucky Heritage Council	



0-300	Kentucky Office of Archaeology and Kentucky Heritage Council	
300-600	Kentucky Office of Archaeology and Kentucky Heritage Council	
Areas of Least Preference		
Listed Archaeology Sites and Districts	Kentucky Office of Archaeology	
Listed NRHP Districts and Buildings	Kentucky Heritage Council	
Day Care Parcels	Meade County PVA	
City and County Parcels	Meade County PVA	
Cemetery Parcels	Meade County PVA	
School Parcels (K-12)	Meade County PVA	
Church Parcels	Meade County PVA	



Case No. 2019-00417 Application Exhibit D Page 1 of 1 December \_\_\_\_, 2019

Name Address Brandenburg, KY

RE: Notice of Proposed Electric Transmission Line Construction Project in Meade County

Dear Mr. & Mrs. \_\_\_\_:

Big Rivers Electric Corporation ("Big Rivers"), a western Kentucky electric generation and transmission cooperative ("Big Rivers"), proposes to construct a 2.7 mile 345 kilovolt transmission line in eastern Meade County, Kentucky. The purpose of this transmission line is to serve the proposed Nucor Brandenburg Steel Mill and to strengthen the Big Rivers transmission system.

It is expected that this line will cross property you own in Meade County. As such, Hunter Rickard, Real Estate Agent at Big Rivers, will be in contact with you to discuss a line-of-sight centerline survey, and will discuss purchasing an easement from you for the proposed electric line.

The proposed route for the new transmission line is shown on the attached map. The line will extend from the Redmon Road Switching Station that will be constructed 0.9 miles southeast of the intersection of US 60 and Joe Prather Highway. It will run northward to the Otter Creek Substation that will be constructed 0.6 miles northeast of Garrett.

Big Rivers plans to file an application with the Kentucky Public Service Commission ("Commission"), in or before January of 2020, seeking a certificate of public convenience and necessity authorizing this project. The purpose of the Commission's review of Big Rivers' application is to determine whether the proposed transmission line is required by the public convenience and necessity. You have the right to move to intervene and participate in the proceeding. You also have the right to request the Commission to conduct a public hearing on that application in Meade County.

To request to intervene in the Commission's proceeding on Big Rivers' application for a certificate of public convenience and necessity, or to request a public hearing in that case, you should contact the Executive Director, Public Service Commission, 211 Sower Boulevard, P.O. Box 615, Frankfort, Kentucky 40602-0615, telephone number (502) 564-3940. The docket number under which this application will be processed is 2019-00417.

A motion to intervene shall include the movant's full name, mailing address, and electronic mail address and shall state his or her interest in the case and how intervention is likely to present issues or develop facts that will assist the Commission in fully considering the matter without unduly complicating or disrupting the proceedings. The motion may also include a request for delivery of Commission orders by United States mail and shall state how good cause exists for that means of delivery.

A request for a public hearing shall be requested no later than thirty (30) days after Big Rivers files its application, and shall contain the docket number of the case; the name, address, and telephone number of the person requesting the hearing; and a statement as to if the person requesting the hearing wishes to participate in an evidentiary hearing or to make unsworn public comments. If a person requesting a local public hearing wises to participate in an evidentiary hearing as well, that person shall also apply to intervene in the Commission case.

If you have any questions for me, you may contact me at (270) 844-6212 or via email at Bob.Warren@BigRivers.com.

Sincerely yours,

### **BIG RIVERS ELECTRIC CORPORATION**

Robert M. Warren, P.E. Director Engineering

# Big Rivers Electric Corporation Case No. 2019-00417 Property Owner Listing Redmon Road - Otter Creek 345 kV Transmission Line

Property Owner's Last Name	Property Owner's First Name	Property Owner's Adress	
	Redmon R	load Switching Station	
Whelan	Eric M.	635 Whelan Road, Vine Grove, KY 40175	
	U.S. 60		
Huffines	Jerome L.	280 Sneling Road, Ekron, KY 40117	
Cooper	Robert & Michelle	375 Blackburn Road, Rineyville, KY 40162	
Masden	Mary	350 Osborne Road, Ekron, KY 40117	
WCM <sup>1</sup>	Land, LLC Series 7	P.O. Box 309, Brandenburg, KY 40117	
Redmon	Danny & Teresa	8500 Brandenburg Road, Ekron, KY 40117	
Hunt	Luwanna J.	2125 Singleton Road, Battletown, KY 40104	
	County Road 1238		
Curran	Thomas J.	3955 Garrett Road, Ekron, KY 40117	
Dowells	Donald	3845 Garrett Road, Ekron, KY 40117	

Footnote(s) - 1. - WCM Land company is owned by Chris McGehee at McGehee Insurance Agency INC, 1141 High Street, Brandenburg, KY 40108.

> Case No. 2019-00417 Application Exhibit F Page 1 of 1

The Meade County Messenger, Brandenburg, Kentucky

# AGRICULTURE

# Hubbard finds hornet nest



Mike Hubbard found a large hornet nest on his property in Guston two we ago. He said he didn't notice the nest until all the leaves fell off the trees. It was approximately 30 feet off the ground, which Hubbard says means there won't be much snow this year. Hubbard shook the nest and some hornets fell out, but he believes the ten erature kept them from moving much. He plans to have the nest shellacked.

Livestock reports were not available at time of press



## Poinsettias are a holiday staple

500 leaves to have any ANDYMILLS leaves, we grow poinsettias as indoor potted plants, lion poinsettias are

be surprised to know

Growers cultivate summer can compete

more than 100 variet- with labor for tobacco ies of poinsettias, but harvest, housing and the red leaf variety stripping. is the most popular. Contrary to popu- for most poinsettia lar belief, poinsettias

of this charge by the National Poison Center and the American Medical Association. A study at Ohio State University found that a 50-pound child would have to eat more than

harmful effect. How-With their bright ever, the leaves have red, pink or white an awful taste, so you poinsettias probably don't want wholesale and retail herald the approach to make them part of of the holiday season. your salad. It's still a den centers, florists They are beautiful as good idea to keep pets stand-alone plants or away from the plants, stands, farmer's maras components of big- because consuming ger holiday displays. them can cause diges-In the United States, tive upset.

most in heated green- sold each year, acquarter of the sales of that in its native cli- all flowering potted mate, this subtropical plants. Even though species can grow to that may seem like a more than 10 feet tall. big money-maker for The person re- growers, production sponsible for bring- is a high-risk venture ing poinsettias to the that has significant United States was Joel start-up costs and re-Roberts Poinsett, a quires demanding labotanist, physician and bor and management. the first U.S. ambas- Growers must have sador to Mexico. Dec. a heated greenhouse 12 is officially Poinset- structure. You can tia Day and marks the use tobacco green-1851 death of Poin- houses, but poinsettia production in late

are not poisonous. The plant was cleared

More than 34 mil-

The profit margin



College of Agriculture, Food and Environment **Cooperative Extension Service** 

AGRICULTURE AND NATURAL RESOURCES

le County Extension Office

Notice of Proposed Electric Transmission Line Construction Project

Big Rivers Electric Corporation ("Big Rivers"), a western Kentucky electric generation and transmission cooperative, proposes to construct a 2.7 mile 345 kilovolt transmission line in eastern Meade County, Kentucky. The purpose of this transmission line is to serve the proposed Nucor Brandenburg Steel Mill and to strengthen the **Big Rivers transmission system.** 

The line will extend from the Redmon Road Switching Station that will be constructed 0.9 miles southeast of the intersection of US 60 and Joe Prather Highway. It will run northward to the Otter Creek Substation that will be constructed 0.6 miles northeast of Garrett. The line will be constructed using steel monopole structures. Big Rivers either has or will send a letter to each property owner (according to Property Valuation Administrators records) over whose property the proposed line is expected to cross.

Big Rivers plans to file an application with the Kentucky Public Service Commission ("Commission"), in or before January of 2020, seeking a certificate of public convenience and necessity authorizing this project. The purpose of the Commission's review of Big Rivers' application is to determine whether the proposed line is required for public convenience and necessity. Interested persons have the right to move to intervene and participate in the proceeding. They MEADE COU also have the right to request the **Commission** to -60 conduct a public hearing in Meade County on that application. MEADE COUNTY **Interested** parties HARDIN COUNTY may request to intervene in the PROPOSED Commission's TRANSMISSION LINE proceeding on Big MEADE COUNTY **Rivers' applica**tion, or may request a public hearing in that case, by contacting the Executive Director, Public Service Commission, 211 Sower Boulevard, P.O. Box 615, Frankfort, Kentucky 40602-0615, telephone number (502) 564-3940. The docket number under which this application will be processed is 2019-00417. You may also direct questions to Big Rivers by contacting Robert M. Warren, Big Rivers Director Engineering, at (270) 827-2561.

growers is very low because of the highly competitive marketing environment of markets like local garand grocers, roadside kets, fundraisers and direct sales from the farm. Another consideration is the short sale window of about six weeks beginning houses, but you might counting for about a in early November. Still, growers see a value in producing a crop of poinsettias, because it allows for spreading capital investments over the whole year versus having the greenhouse sit idle during later summer and fall. Growers who culti-

vate multiple varieties can distinguish themselves a bit from the competition and have a market advantage.

For more information on poinsettias or other horticulture topics, contact the Meade County Cooperative Extension



# reade.ca.uky.edu

Andy Mills

sett.



Application Exhibit G Page 1 of 1 Case No. 2019-00417