

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 AND ACQUIRE A 345 KV TRANSMISSION LINE IN HANCOCK COUNTY, KENTUCKY)))))))	CASE NO. 2018-00004
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ORDER

On March 16, 2018, Big Rivers Electric Corporation (BREC) filed an application, pursuant to KRS 278.020(2) and 807 KAR 5:120, requesting approval for a Certificate of Public Convenience and Necessity (CPCN) to construct and acquire a 345-kilovolt (kV) transmission line in Hancock County, Kentucky.¹ BREC states that the proposed project is needed to relieve transmission line congestion in southern Indiana and western Kentucky as identified by the Midcontinent Independent System Operators (MISO) in its 2015 Transmission Expansion Plan (2015 MTEP).² The entire transmission line project will be approximately 31 miles long extending from BREC's Coleman Extra High Voltage (EHV) substation in Hancock County, Kentucky crossing over the Ohio River and connecting to the Duff substation, which is located in Dubois County, Indiana and owned by Southern Indiana Gas & Electric Company d/b/a Vectren Energy Delivery of Indiana,

¹ Application at 2.

² *Id.* at 3.

Inc.³ The entirety of the transmission line project will be referred to herein as the 2015 MTEP Project. The Kentucky portion of the 2015 MTEP Project is approximately 3.3 miles long, beginning at the Coleman EHV substation and terminating near the Indiana bank of the Ohio River.⁴ The cost of the Kentucky portion of the proposed transmission line, including the purchase price of the necessary easements in Kentucky, is approximately \$6 million.⁵ The annual cost to maintain and operate the proposed Kentucky transmission line, including the cost of taxes and operation and maintenance, is estimated to be \$18,000.⁶ BREC states that its current intention is to finance the proposed construction project through the Rural Utilities Service but that BREC may utilize its cash reserves.⁷

BREC has entered into an Asset Purchase Agreement (APA) to acquire the Kentucky portion of the 2015 MTEP Project. BREC seeks a finding that Commission approval is not required for BREC to enter into and perform the APA, or any of the agreements attached as exhibits to the APA, or in the alternative, granting approval of those documents.

Republic Transmission, LLC (Republic) and the Attorney General of the Commonwealth of Kentucky, by and through the Office of Rate Intervention (Attorney General), are the only intervenors in this matter. By Order dated April 5, 2018, the Commission, pursuant to KRS 278.020(8), extended the statutory period in which a

³ *Id.*; See also Direct Testimony of Michael W. Chambliss (Chambliss Testimony) at 3.

⁴ Application, Exhibit H, at 1.

⁵ Application at 3; See also Chambliss Testimony at 7.

⁶ Application at 3.

⁷ Application at 5; See also Chambliss Testimony at 8.

decision must be issued from 90 days to 120 days from the date of the filing of the application. The April 5, 2018 Order also established a procedural schedule for the processing of this case, which included a deadline for the filing of intervention requests, two rounds of discovery, and a deadline for requesting a public hearing. On June 20, 2018, BREC and Republic filed separate notices stating that the matter can be submitted for a decision based upon the existing record without the need for a hearing. On June 21, 2018, the Attorney General filed a motion requesting leave to submit his notice indicating that a hearing is not necessary and that the matter can be submitted for a decision based on the existing record. The Commission will grant the Attorney General's request for leave to file its notice regarding the submission of this matter for a decision without the need for a hearing.

Given that there have not been any requests for a public hearing, and there being no written comments opposing the proposed transmission lines filed into the record of this proceeding,⁸ the Commission finds that a public hearing is not necessary for the public interest or for the protection of substantial rights. Accordingly, the matter is before the Commission for a decision based upon the evidentiary record. Based on the following reasons and finding that the public convenience and necessity require the construction of the proposed transmission line, the Commission hereby issues a CPCN to BREC.

⁸ The only public comment was submitted by Century Aluminum of Kentucky General Partnership (Century) supporting the proposed transmission line project. Century states that the limitations of the current transmission system that serves Century's aluminum reduction plant in Hawesville, Kentucky subjects the Hawesville smelter to curtailment risks. Century points out that the proposed transmission project would mitigate such risk and create a more reliable environment for the long-term operation of the Hawesville smelter. Century further points out the proposed transmission line project is particularly timely because of its intention to invest over \$100 million to modernize and restart its three idled potlines.

STATEMENT OF THE CASE

BREC, a rural electric cooperative organized pursuant to KRS Chapter 279, owns and operates facilities that generate and transmit electric energy for sale at wholesale to the following member distribution cooperatives, which jointly own it: Jackson Purchase Energy Corporation, Kenergy Corp., and Meade County Rural Electric Cooperative Corporation.⁹ These member cooperatives distribute power to approximately 116,000 retail customers in 22 western Kentucky counties.¹⁰

BREC states that MISO, as part of that organization's annual comprehensive review of reliability issues impacting its footprint in 2015, identified the area with the highest transmission congestion was on the border of Indiana and Kentucky.¹¹ MISO's 2014 analysis also showed the southern Indiana/western Kentucky area as having the greatest reliability need.¹² As part of its Market Congestion Planning Study, MISO conducted a stakeholder process to develop and evaluate various alternatives to address the congested flowgate issue in the southern Indiana and Kentucky area.¹³ According to BREC, transmission outages in this area would result in the supply route to be shifted to lower voltage branches, which would then cause an increase in congestion on the lower

⁹ Application at 1.

¹⁰ *Id.*

¹¹ Application, Exhibit C at 6.

¹² *Id.*

¹³ *Id.*

voltage circuits.¹⁴ BREC notes that congestion relief in this area would mean that the load pocket could be more easily supplied with alternative generation.¹⁵

As a result of the stakeholder process, MISO staff identified the 2015 MTEP Project as the solution to completely mitigate the congestion on the MISO system around the Newtonville and Coleman areas and strengthens the 345 kV backbone in the region.¹⁶ According to MISO staff, the 2015 MTEP Project was found to offer the best value and would have regional and interregional benefits to MISO and PJM Interconnection, LLC (PJM).¹⁷ The 2015 MTEP Project was ultimately approved by MISO as a market efficiency project subject to regional cost allocation.¹⁸ The cost will be allocated as follows: 20 percent across MISO's entire footprint on a postage stamp basis and 80 percent allocated to Local Resource Zones based on the MISO determined beneficiaries of the project.¹⁹

MISO then solicited stakeholder proposals to address the identified congestion.²⁰ MISO evaluated six project alternatives with an estimated cost of \$57 million to \$144 million.²¹ The six alternative projects were analyzed under five future scenarios: business

¹⁴ Chambliss Testimony at 4.

¹⁵ *Id.*

¹⁶ Application, Exhibit C at 6.

¹⁷ *Id.* In conjunction with PJM, a separate project was identified which would alleviate transmission constraints in the same area but within the PJM footprint and would tie into the 2015 MTEP Project to provide interregional benefits to both PJM and MISO.

¹⁸ Chambliss Testimony at 3, 6.

¹⁹ Chambliss Testimony at 9.

²⁰ *Id.* at 5.

²¹ *Id.*

as usual; high growth; limited growth; generation shift, and public policy.²² MISO further screened the proposals against the potential production cost savings relative to the estimated costs and testing for robustness and reliability impacts.²³ The testing for robustness identifies projects that provide the best value to address a specific congested area under most, if not all, future scenarios.²⁴ The reliability assessment ensures that any alternative project does not negatively impact system reliability.²⁵ The 2015 MTEP Project was approved by MISO as a market efficiency project based, in part, upon its weighted benefit to cost ratio of approximately 16 to 1, which implied a total net present value of benefits to MISO customers of approximately \$1 billion.²⁶

As a market efficiency project, the 2015 MTEP Project was a Competitive Transmission Project under MISO's Order No. 1000 competitive transmission process.²⁷ Subsequent to a competitive bidding process, Republic was selected as the developer for the 2015 MTEP Project.²⁸ Republic is owned by an affiliate of LS Power Associates, L.P., and Hoosier Energy Rural Electric Cooperative, Inc.²⁹ The total cost of the 2015 MTEP Project is anticipated to be \$53.8 million.³⁰ The expected in-service date of the

²² *Id.*

²³ *Id.*

²⁴ *Id.*

²⁵ *Id.*

²⁶ Chambliss Testimony at 6.

²⁷ Chambliss Testimony at 6. FERC Order 1000 requires regional and inter-regional transmission planning and cost-allocation procedures for new electrical transmission lines.

²⁸ Application at 2.

²⁹ *Id.*

³⁰ BREC's response to Commission Staff's First Request for Information, Item 20.

2015 MTEP Project is June 1, 2020.³¹ BREC and Republic have entered into an Asset Purchase Agreement (APA), which sets forth the terms of regarding BREC's participation in the construction of the Kentucky portion of the 2015 MTEP Project and BREC's eventual ownership of the Kentucky portion.³² With respect to the Kentucky portion of the 2015 MTEP Project, BREC states that it will have increased ability to import and export electrical power due to reduced transmission congestion.³³ BREC also states that the additional electrical power will allow economic expansion and provide employment opportunities for the residents of Hancock County and the surrounding counties.³⁴ BREC further states that the anticipated return on its investment in the Kentucky portion of the 2015 MTEP Project could serve as an offset to future rate increases for BREC's members.³⁵

BREC points out that it is also constructing a line terminal for the Kentucky portion of the transmission line project at the Coleman EHV substation.³⁶ BREC state that the line terminal at the Coleman EHV substation is not part of the 2015 MTEP Project but is needed by the project to interconnect to BREC transmission system at the first transmission line structure located outside of the Coleman EHV substation fence.³⁷ BREC notes that the line terminal requires an expansion of the existing 345 kV bus into

³¹ *Id.*

³² Application at 2.

³³ Application at 4.

³⁴ *Id.*

³⁵ Application at 4.

³⁶ *Id.*

³⁷ Chambliss Testimony at 3.

a ring to allow the interconnection of the new line.³⁸ The total estimated cost of the new line terminal is approximately \$5.2 million.³⁹ BREC is not requesting a CPCN for constructing the new line terminal, maintaining that such construction is an ordinary extension of BREC's existing system in the usual course of business.⁴⁰

BREC retained an outside consultant to conduct a Technical Report to determine the preferred routes for the Kentucky portion of the 2015 MTEP Project. The route selection study utilized the Electric Power Research Institute/Georgia Transmission Corporation Overhead Electric Transmission Line Siting Methodology (EPRI/GTC Methodology) to identify the preferred route for construction of the two new transmission lines.⁴¹ Using the siting model, BREC's siting team first developed Macro Corridors, which define larger geographic areas, characterized as a study area, in which the transmission line might be sited, but which require more detailed study to determine the actual route.⁴² The Macro Corridors were used to develop a study area of a little over five square miles centered from the area in between the Cole EHV substation and the proposed connection point just inside the Indiana border.⁴³ The northern and southeastern parts of the study area are mostly agricultural with a few forested areas.⁴⁴

³⁸ BREC's response to Commission Staff's First Request for Information, Item 7.

³⁹ *Id.*

⁴⁰ Application at 4.

⁴¹ Application, Exhibit D at 4.

⁴² *Id.* at 1.

⁴³ *Id.*

⁴⁴ *Id.*

The southwestern part of the study area is mostly forested land with a few homes spread around the rest of the area.⁴⁵

From those Macro Corridors, four Alternate Corridors that represent different perspectives for routing transmission lines.⁴⁶ The First Alternate Corridor, the Engineering Considerations Perspective, is geared toward maximizing co-location and consideration of physical restraints.⁴⁷ The Second Alternate Corridor, the Natural Environment Perspective, is concerned with protecting water resources, plants, and animals.⁴⁸ The Third Alternate Corridor, the Built Environment Perspective, seeks to minimize the impact on human development and activities, places, and cultural resources.⁴⁹ The Fourth Alternate Corridor, the Simple Average Perspective, weighs the other three alternate corridors as equally important.⁵⁰ After reviewing the four Alternate Corridors, BREC identified three Alternate Routes along the Alternate Corridors.⁵¹ These Alternate Routes reflect the potential centerline paths of a transmission line.

Route A exits the Coleman EHV substation heading northeast approximately 0.9 miles then takes a 90-degree angle to the northwest.⁵² Route A then continues northwest

⁴⁵ *Id.*

⁴⁶ *Id.* at 2.

⁴⁷ *Id.* at 22–41.

⁴⁸ *Id.* at 43–55.

⁴⁹ *Id.* at 56–69.

⁵⁰ *Id.* at 70–85.

⁵¹ *Id.* at 86.

⁵² *Id.* at 88, 103.

approximately 2.8 miles, paralleling the existing transmission line corridor all the way to the river crossing structure on the northern bank of the Ohio River.⁵³

Route B exits the Coleman EHV substation heading in the same northeast direction as Route A for approximately 0.5 miles but makes a slight angle to the north-northeast for approximately 0.4 miles to take advantage of the terrain.⁵⁴ Route B then makes a hard angle to the northwest extending approximately 2.4 miles, paralleling the existing transmission line corridor all the way to the river crossing structure on the northern bank of the Ohio River.⁵⁵

Route C exits the Coleman EHV substation in the same manner as Routes A and B but almost immediately makes a hard angle to the northwest at approximately 0.2 miles.⁵⁶ Route C then continues to travel northwest for approximately 2.1 miles and then runs parallel to the existing transmission line corridor for another 0.6 miles until it reaches the river crossing structure on the northern bank of the Ohio River.⁵⁷

The Alternate Routes were evaluated using the Alternate Route Evaluation Model, which used statistical data divided into three categories similar to the perspectives used to create the four Alternative Corridors.⁵⁸ The statistics were normalized and weights assigned based on Alternate Route Evaluation Model.⁵⁹ The model then compares each

⁵³ *Id.*

⁵⁴ *Id.*

⁵⁵ *Id.*

⁵⁶ *Id.*

⁵⁷ *Id.*

⁵⁸ *Id.* at 88.

⁵⁹ *Id.*

of the three Alternate Routes using a standard set of criteria.⁶⁰ Based on the alternative route modeling and upon the expert judgment of its siting team,⁶¹ BREC determined that Route B was the preferred route for the Kentucky portion of the 2015 MTEP Project.⁶²

DISCUSSION

To establish that the public convenience and necessity require the construction of a new facility, an applicant must demonstrate the need for the proposed facilities and that the proposed construction will not result in the wasteful duplication of facilities.⁶³

“Need” requires:

[A] showing of a substantial inadequacy of existing service, involving a consumer market sufficiently large to make it economically feasible for the new system or facility to be constructed or operated.

[T]he inadequacy must be due either to a substantial deficiency of service facilities, beyond what could be supplied by normal improvements in the ordinary course of business; or to indifference, poor management or disregard of the rights of consumers, persisting over such a period of time as to establish an inability or unwillingness to render adequate service.⁶⁴

⁶⁰ *Id.* at 89–102.

⁶¹ In the expert judgment phase, the BREC siting team considered factors that did not readily lend themselves to quantification but which were nevertheless important in the selection of the preferred routes. Each factor was assigned a percentage weight based on its overall importance. The factors considered were visual, community, project management, special permit, accessibility, reliability, and maintenance cost. *See* Application, Exhibit C at 104–107.

⁶² Application, Exhibit C at 108.

⁶³ *Kentucky Utilities Company v. Public Service Commission*, 252 S.W.2d 885 (Ky. 1952).

⁶⁴ *Id.* at 890.

“Wasteful duplication” is defined as “an excess of capacity over need” and “an excessive investment in relation to productivity or efficiency, and an unnecessary multiplicity of physical properties.”⁶⁵ To demonstrate that a proposed facility does not result in wasteful duplication, we have held that the applicant must demonstrate that a thorough review of all reasonable alternatives has been performed.⁶⁶ Selection of a proposal that ultimately costs more than an alternative does not necessarily result in wasteful duplication.⁶⁷ All relevant factors must be balanced.⁶⁸ The statutory touchstone for ratemaking in Kentucky is the requirement that rates set by the Commission must be fair, just, and reasonable.⁶⁹

Having reviewed the record and being otherwise sufficiently advised, the Commission finds that BREC has established sufficient evidence to demonstrate that the proposed transmission line project is needed to address significant transmission congestion in the MISO area, including that area encompassing part of BREC’s service territory. The Commission further finds that construction of the proposed 161-kV transmission lines is reasonable and will not result in the wasteful duplication of facilities. We note that the cost of the Kentucky portion of the 2015 MTEP Project is approximately

⁶⁵ *Id.*

⁶⁶ Case No. 2005-00142, *Joint Application of Louisville Gas and Electric Company and Kentucky Utilities Company for a Certificate of Public Convenience and Necessity for the Construction of Transmission Facilities in Jefferson, Bullitt, Meade, and Hardin Counties, Kentucky* (Ky. PSC Sept. 8, 2005).

⁶⁷ See *Kentucky Utilities Co. v. Pub. Serv. Comm’n*, 390 S.W.2d 168, 175 (Ky. 1965). See also Case No. 2005-00089, *Application of East Kentucky Power Cooperative, Inc. for a Certificate of Public Convenience and Necessity for the Construction of a 138 kV Electric Transmission Line in Rowan County, Kentucky* (Ky. PSC Aug. 19, 2005), Final Order.

⁶⁸ Case No. 2005-00089, *East Kentucky Power Cooperative, Inc.* (Ky. PSC Aug. 19, 2005), Final Order at 6.

⁶⁹ KRS 278.190(3).

\$6 million, which would not have a material financial impact on BREC or its rates. The evidence also supports BREC's selection of the routes. Route B, involving the proposed transmission line connecting the Coleman EHV substation to the river crossing structure on the northern bank of the Ohio River, is the shortest route, has the lowest estimated total cost, and has fewer contacts with floodplains. While Route C was the shortest route, it had a higher impact on forest areas and stream crossings as well as having the least capability to co-locate with the existing transmission line corridor connecting to the river crossing structure. Although Routes A and B were very similar, the Commission is persuaded by the expert judgment scoring of BREC selecting Route B as the preferred route based largely on the length and cost of Route B being more favorable than Route A.

Although BREC did not request a determination on the issue of whether the Coleman EHV substation upgrades are exempt from the CPCN requirement, we find that those upgrades needed to connect the proposed Kentucky portion of the 2015 MTEP Project to the Coleman EHV substation constitutes an extension in the ordinary course of business and, therefore, do not require prior CPCN approval. We note, however, that such issues should, in the future, be formally presented to the Commission for our consideration and determination.

Lastly, the Commission finds that the APA should be subject to the Commission's jurisdiction. We note that APA is an integral part of the Kentucky portion of the 2015 MTEP Project and that the terms and provisions of the APA sets forth various rights and obligations of BREC associated with the Kentucky portion. Those rights and obligations include, among other things, Republic's role in constructing the transmission line, BREC's

role in acquiring the necessary easements in Kentucky for the route, BREC's ability to participate in planning, scheduling, and supervision of the Kentucky portion of the transmission line, and BREC's eventual ownership of the transmission line. In light of the unique nature of the project, we find that the APA requires our approval. We further find that the terms and provisions of the APA are fair, just, and reasonable and should, therefore, be approved.

IT IS THEREFORE ORDERED that:

1. BREC is granted a CPCN to construct and operate the proposed transmission line as set forth in its application.

2. BREC shall file a survey of the final location of the line after any modifications are finalized as authorized herein and before construction begins.

3. BREC shall file "as-built" drawings or maps within 60 days of the completion of the construction authorized by this Order.

4. BREC request to enter into the APA for the purchase of the Kentucky Portion of the 2015 MTEP Project is granted.

5. BREC shall immediately notify the Commission upon knowledge of any material changes to the scope of the Kentucky portion of the 2015 MTEP Project, including, but not limited to, increase in cost, any significant delays in the construction of the transmission line, or any changes in the route of the transmission line.

6. The Attorney General's request for leave to file a notice regarding the submission of this matter for a decision without the need for a hearing is granted.

7. Any documents filed pursuant to ordering paragraph No. 3 and 5 of this Order shall reference the case number of this matter and shall be retained in the utility's general correspondence files.

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By the Commission

ENTERED
JUL 12 2018
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SERVICE COMMISSION

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