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 161 KV TRANSMISSION LINE IN OHIO COUNTY, KENTUCKY	)))))	CASE NO. 2007-00177

O R D E R

Big Rivers Electric Corporation ("Big Rivers") has applied for a Certificate of Public Convenience and Necessity ("CPCN") to construct 13.2 miles of 161 kV transmission line in Ohio County, Kentucky. Finding that the public convenience and necessity require construction of the proposed transmission line, we hereby issue a CPCN to Big Rivers.

BACKGROUND

Big Rivers, a rural electric cooperative organized pursuant to KRS Chapter 279, owns and operates facilities that transmit electric energy for sale at wholesale to its member distribution cooperatives which jointly own it—Jackson Purchase Energy Corporation, Kenergy Corp. ("Kenergy"), and Meade County Rural Electric Cooperative Corporation. These member cooperatives distribute power to approximately 110,000 retail customers in 22 western Kentucky counties.[1]

[1] Big Rivers' generation is leased to Western Kentucky Energy, Inc., a subsidiary of E.ON.

PROCEDURE

On July 2, 2007, Big Rivers filed its application for a CPCN to construct a 161 kV transmission line in Ohio County. On July 30, 2007, the Commission established a procedural schedule for the case that extended the statutory period in which a decision is required from 90 to 120 days.[2] The Order established August 1, 2007 as the deadline for filing any motions to intervene as well as for any requests to hold a local public hearing in Ohio County, and scheduled a formal hearing before the Commission on September 10, 2007.

August 1, 2007 passed with no requests for a local public hearing being filed and, due to the lack of public interest and the specific facts of the case, the Commission determined not to hold a local public hearing on its own Order.[3] To date, no written comments opposing the transmission line have been filed, and the Commission is unaware of any public objection or opposition to the line.

Alcan Primary Products Corporation ("Alcan") and Century Aluminum of Kentucky, LLC ("Century Aluminum") (collectively, "the smelters") timely requested full intervention jointly, which was granted by the Commission's Order dated August 2, 2007. No other motions for intervention have been filed in this matter. The smelters are retail customers of Kenergy, one of the three member distribution cooperatives of Big Rivers. The smelters' interest in the case arises from their planned future dependence on Big Rivers for electric power to operate their smelting facilities after the expiration of

[2] KRS 278.020(8) provides that "[t]he commission shall issue its decision no later than ninety (90) days after the application is filed, unless the commission extends this period, for good cause, to one hundred twenty (120) days."

[3] *See* Commission's Order dated September 7, 2007.

their current power contracts with the non-regulated subsidiaries of E.ON ("E.ON Parties") in 2010 and 2011. The combined load of the smelters is approximately 850 MW. As the largest customers on Big Rivers' system, the smelters have expressed their support for Big Rivers' transmission line application as "critical to the continued economic viability of [the smelters'] operations."[4]

STATEMENT OF THE CASE

Big Rivers proposes to construct a 161 kV transmission line from its Wilson Power Plant in western Ohio County, extending 13.2 miles to the southeast to an existing Big Rivers 161 kV transmission line, located approximately 3 miles southeast of McHenry in southern Ohio County.[5] The proposed route is the same as the northernmost portion of the Wilson-Aberdeen-Morgantown route selected by East Kentucky Power Cooperative, Inc. ("EKPC") for a transmission line project for which the Commission granted a CPCN in Case No. 2005-00207.[6] The construction cost of the proposed 13.2-mile line is estimated to be $4.7 million.[7]

Big Rivers asserts that the Ohio County line is necessary in order for it to have the ability to export 850 MW of excess generating capacity outside its transmission

[4] Petition to Intervene of Alcan and Century Aluminum.

[5] Application at 2.

[6] Case No. 2005-00207, Application of East Kentucky Power Cooperative, Inc. for a Certificate of Public Convenience and Necessity for the Construction of a 161 kV Electric Transmission Line in Barren, Warren, Butler, and Ohio Counties, Kentucky. EKPC was granted a CPCN for the line based on the need to serve Warren Rural Electric Cooperative ("WRECC"), which had proposed becoming a member co-op in EKPC's system. The CPCN was revoked by Order of the Commission dated May 31, 2007, due to WRECC's December 2006 withdrawal of its proposal to become a member co-op of EKPC.

[7] Big Rivers' Response to Commission Staff's First Data Request, Item 10.

system in the event that the smelters were to terminate their prospective power contracts with Big Rivers. Any such contracts will be contingent upon Commission approval of Big Rivers' proposal to unwind the various agreements between and among Big Rivers and the E.ON Parties,[8] which have been in place since 1998 and which give the E.ON Parties operational control of Big Rivers' owned or operated power plants, and ownership of the electricity generated by them. Big Rivers states that "should the Unwind Transaction not go forward, the proposed project will not be necessary at this time," and, therefore, proposes that approval of its application be "made contingent upon, and effective concurrently with, approval of the Unwind Transaction."[9]

In Exhibit A to its application, "Big Rivers Electric Corporation Bulk Transmission System Assessment," Big Rivers determined that its existing bulk transmission system is primarily a 161 kV system with limited 138 kV and 345 kV facilities.[10] Because of its limited size, the system cannot currently transfer large amounts of power to load outside of Big Rivers' control area.[11] As such, Big Rivers determined that it needs to make enhancements to its transmission system to add additional paths to either existing load centers or the extra high voltage transmission system outside its control area to accommodate large power exports if necessary in the future.[12] The study finds that the

[8] Case No. 2007-00455, Joint Application of Big Rivers, E.ON, LG&E Energy Marketing, Inc., and Western Kentucky Energy Corporation for Approval to Unwind Lease and Power Purchase Transactions, referred to herein as the "Unwind Transaction."

[9] Application at 4.

[10] Application, Exhibit A, at 8.

[11] *Id.*

[12] *Id.*

Ohio County transmission line is the first of six improvements that will be necessary in order to enhance the system.[13] Big Rivers states that it will pursue construction of the first three of these six projects only in conjunction with the construction of the proposed 161 kV line construction, but that the other three projects would likely be done regardless of the proposed line, because they will be needed to meet the normal and contingency flow conditions shown in the study.[14]

ROUTE SELECTION

Big Rivers used the EPRI/GTC[15] Overhead Electric Transmission Line Siting Model in choosing the route for the proposed transmission line.[16] This siting model was adapted for use in Kentucky through a stakeholder process at a workshop conducted on February 28, 2006.[17] The Kentucky Transmission Line Siting Model was also used in the recent EKPC application for a 345 kV line through Clark, Madison and Garrard counties[18] and has been used in other previous transmission line CPCN cases as well. As indicated in Big Rivers' Exhibit B, the details regarding the criteria used by the workshop participants to calibrate the model for use in Kentucky can be found in a

[13] *Id.* at 3.

[14] Big Rivers' Response to Commission Staff's First Data Request, Item 6(d).

[15] Electric Power Research Institute/Georgia Transmission Corporation.

[16] *See* Application, Exhibit B.

[17] *Id.* at 4.

[18] Case No. 2006-00463, Application of East Kentucky Power Cooperative, Inc. for a Certificate of Public Convenience and Necessity for the Construction of a 345 kV Electric Transmission Project in Clark, Madison, and Garrard Counties, Kentucky; and Case No. 2005-00207.

document titled "Kentucky Transmission Line Siting Model - Project Report."[19] An electronic copy of that report was filed in the record of Case No. 2006-00463.[20]

Using the siting model, Big Rivers' siting team first developed "Macro Corridors," which define larger geographic areas in which the line might be sited, but which require more detailed study to determine the actual route.[21] From those Macro Corridors, the siting team then developed "Alternative Corridors" to examine the impact of the line on certain stakeholder-identified criteria.[22] Big Rivers then narrowed its analysis to eight possible routes along the alternative corridors.[23] These alternate routes were compared using the Alternative Route Evaluation Matrix, from which Big Rivers determined that the two best routes were Route "B" and Route "C."[24] Based upon the expert judgment

[19] Application, Exhibit B, p. 4.

[20] *See* Case No. 2006-00463, EKPC's Responses to Commission Staff's First Data Request, at 3, Response to Data Request 2 (CD-ROM containing .pdf electronic copy of the document, "Kentucky Transmission Line Siting Model - Project Report."

[21] Application, Exhibit B, at 4.

[22] *Id.* at 4-14. The Alternative Corridors are modeled using criteria that produce a standardized set of alternatives: the Built Environment Perspective, which minimizes impact to people places and cultural resources; the Co-location/Engineering Perspective, which maximizes co-location and considers physical constraints; the Natural Environment Perspective, which is geared toward protecting water resources, plants and animals; and the Simple Average Perspective, which is a composite of the Built, Natural, and Engineering Perspectives. *See* Kentucky Transmission Line Siting Model - Project Report at 9.

[23] *Id.* at 15.

[24] *Id.* at 23.

of its siting team,[25] Big Rivers then determined that Route C was the best choice among these routes.[26]

In the Alternative Route Selection Matrix analysis, Route C scored better (lower) than the other possible routes in the Engineering and Built Environment matrices, two of the three matrices included in the analysis. In the third matrix, the Natural Environment, Route C ranked sixth.[27] The majority of its higher score with regard to its impact on the Natural Environment is a result of its location over relatively more acres of natural forest[28] than the five lower-scored routes.[29]

According to the analysis, Route C most closely follows the Built Environment Corridor.[30] The Built Environment Corridor parallels a portion of an existing 69 kV transmission line for approximately 3 miles as well as an east/west corridor with two existing 138 kV lines for another 2 miles.[31] The route also avoids more densely populated areas near Centertown and McHenry, which minimizes its effect on

[25] In using the siting model, "the evaluation metrics are normalized and assigned weights to derive a relative score for the alternative routes," after which the siting team applies expert judgment regarding visual concerns, community concerns, schedule delay risk, special permit issues, and construction and maintenance accessibility to rank the top routes—the lowest score of which indicates the preferred route. *See* Kentucky Transmission Line Siting Model - Project Report at 21.

[26] Application, Exhibit B, at 26.

[27] *Id.* at 21 and 24.

[28] Big Rivers notes that some of the forested area crossed by the line is the Peabody Coal Wildlife Management Area. Application, Exhibit B, at 11.

[29] Application, Exhibit B, at 21, Table 5.3.3.

[30] *Id.*

[31] *Id.* at 11.

developed areas along that route.[32] By following a route that parallels existing transmission lines for a significant portion of its length, Route C minimizes the impact of the proposed facilities on property owners more than the other possible routes.

Based upon the expert judgment of its siting team, Big Rivers determined that Route C was the best choice among these routes.[33] It is the shortest route, has the lowest cost, impacts the least parcels of land, and is in close proximity to the lowest number of residents.[34] In addition, Route C scored better (lower) than Route B in the Engineering matrix within the Alternative Route Selection Matrix analysis due to its lower cost.

Big Rivers' use of the Kentucky Transmission Line Siting Model is consistent with the methodology outlined in the Kentucky Transmission Line Siting Model - Project Report, except for one deviation:

> The only deviation from the criteria set by the Kentucky Transmission Line Siting Model was the modeling of noncontiguous sections of transmission line easements. These easements had been purchased for a past transmission line project that didn't come to fruition. The utilized easements where [sic] given the same weight as the opportunity to parallel an [existing] transmission line in the Linear Infrastructure layer in the Engineering model.[35]

The "past transmission line project" referenced by Big Rivers is the EKPC Warren Line (Case No. 2005-00207, Wilson-Aberdeen-Morgantown 161 kV

[32] *Id.*

[33] Application, Exhibit B, at 26.

[34] *Id.* at 25.

[35] *Id.* at 6.

Transmission Line).[36] In that case, EKPC used the EPRI/GTC siting model to determine the appropriate route for the line, the methodology of which is essentially identical to that used in the Kentucky Transmission Line Siting Model in this case.[37] The easements purchased by EKPC for the Warren Line were given the same weight by Big Rivers as if that line had, in fact, been constructed. In choosing to site the Ohio County line along the same route as the prior Warren Line, Big Rivers will be impacting the same landowners who were impacted by the northern portion of the Warren Line. Those landowners were also given notice and had an opportunity to object in this case, and there were no objections. Given the exceptional circumstances in this case: the recent acquisition of the easements by EKPC for the same line route as in this CPCN case; the fact that essentially the same siting methodology was employed in both cases; and the fact that none of the landowners objected in either case; the Commission finds

[36] EKPC was the first utility to use the EPRI/GTC Overhead Electric Transmission Line Siting Model for a transmission line certificate case in Kentucky. After the Commission granted EKPC a CPCN for the Warren Line in October 2005, EKPC held a stakeholders meeting in order to improve the EPRI model by including more Kentucky-specific criteria. The February 2006 meeting resulted in the Kentucky Transmission Line Siting Model - Project Report referenced above.

[37] Some landowners did file an appeal of the final Order in the Warren Line case. However, all of those landowners owned property farther south of the properties over which this line will run. None of the property owners impacted by the line in the current case was a party to the prior appeal, which was dismissed pursuant to an agreed Order following the Commission's revocation of the CPCN in May 2007.

this deviation from the Kentucky Transmission Line Siting Model to be acceptable in this case.[38]

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 their proposed construction will not result in the wasteful duplication of facilities.[39] Big Rivers has presented substantial evidence that the need for the ability to export 850 MW of excess generating capacity, in the event the smelters terminate their prospective service contracts with Big Rivers, requires the construction of the proposed transmission line. Big Rivers has also demonstrated that the route chosen for the line, Route C in its siting model analysis, is the least-cost transmission line route.[40]

The Commission finds this case to be atypical, because an applicant for a CPCN for a transmission line typically expresses the need for such facilities based, primarily, on physical issues, such as the need for greater reliability or the need to serve new or increased load, needs which will be alleviated by constructing the proposed line. This is not the situation in the present case. There is no overriding reliability issue establishing the need for the 161 kV line. Rather, the need for the 161 kV line is primarily based on

[38] The Commission's approval of Big Rivers' modeling deviation in this case is not an endorsement of such deviations in future cases before the Commission. The Commission is cognizant that an applicant could potentially use such deviations from the normal modeling methodology to skew the results in favor of a pre-selected conclusion. The Commission will review each use of the Kentucky Siting Model on a case-by-case basis and will determine whether to approve any deviations from the normal methodology based on the facts of the particular case.

[39] Kentucky Utilities Co. v. Public Service Commission, 252 S.W.2d 885 (Ky. 1952).

[40] *See* Application, Exhibit B, at 16, Table 5.1.

the contingent need to export power, which is directly related to the economic viability of the two largest customers on Big Rivers' system, Alcan and Century Aluminum. While the justification of need in this case is unique, the Commission finds that the circumstances arising from the Unwind Transaction do not lend themselves to replication in future cases.

If, after the closing of the Unwind Transaction, Big Rivers should lose some or all of its sales of power for resale to the smelters, it would have up to 850 MW of excess generating capacity that it would need to sell on the open electricity market in order to remain financially viable. At present, its transmission system would allow it to export only 462 MW of this capacity to the market.[41] The transmission improvements requested by Big Rivers will enable it to sell that 850 MW plus the additional capacity that is available when the balance of its members' loads is at its lowest level.[42]

According to Big Rivers, if it is to finance the Unwind Transaction, it must restructure its long-term secured debt and refinance a portion of that debt. To do that, it must obtain consents and agreements from its existing creditors, participation of new creditors, and receive investment-grade ratings on its debt from Standard & Poor's and Moody's.[43]

Its financial advisor has advised Big Rivers that it must have a plan to mitigate the risk of losing the revenue from the smelters in the event both smelters cease smelting operations. Without such a plan, the rating agencies and Big Rivers' creditors

[41] Big Rivers' Response to Commission Staff's First Data Request, Item 2(b).

[42] *Id.*

[43] *Id.*

are unlikely to provide the necessary ratings or give their approval for the financing transactions related to the Unwind Transaction.[44] Approval of the transmission line is also a condition of the smelters to go forward with the Unwind Transaction.[45] The smelters indicate they will have "substantial" take-or-pay obligations under their new contracts, which are currently being negotiated, and they want to be sure that Big Rivers will have the capability to sell any power that the smelters do not take in order to mitigate their obligations in the event they are unable to take the power.[46]

If the Unwind Transaction does not go forward, there is a substantial risk that the smelters could be forced to shut down production due to the higher cost of power they would have to obtain from the open market.[47] The economic consequences which would follow the closure of the smelters have been documented as potentially devastating to the economy of western Kentucky and the surrounding area.[48]

The Commission's grant of a CPCN in this case is not merely based on the fact that Big Rivers serves two large industrial customers. The evidence in this case shows that the relationship between Big Rivers and the smelters is unique in Kentucky. The

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[44] *Id.*

[45] *Id.* at Response to Item 9(a-b).

[46] *Id.*

[47] *Id.* at Response to Item 2(c).

[48] *See* Commission Exhibit 1, "The Estimated Economic and Fiscal Impacts of a Shut-down of Kentucky's Two Aluminum Smelters," Paul A. Coomes, Ph.D., July 11, 2005. *See also* Big Rivers' Response to Commission Staff's Data Request, Item 2(c) ("A principal reason Big Rivers has pursued the Unwind Transaction is because it provides the only opportunity for Big Rivers to participate meaningfully in the effort to preserve the economic benefits of the smelter operations for the areas served by Big Rivers' members.").

combined 850 MW load of the smelters represents 55 percent of Big Rivers' entire load.[49] No other utility in Kentucky has a comparable percentage of its load devoted entirely to one or two customers.[50] No other electric utility in Kentucky is as dependent on large-volume industrial customers which operate in the same industry for such a significant portion of its revenue. In addition, no other electric utility in Kentucky has taken bankruptcy and been in the financial position Big Rivers faces as it goes to the capital markets for new long-term financing.

Although Big Rivers requested in its application that the Commission's approval of the CPCN be made "contingent upon, and effective concurrently with, approval of the Unwind Transaction,"[51] the Commission declines to include such a contingency in this Order. KRS 278.020(1) provides that the authority conferred by the issuance of a CPCN shall be void if not exercised within one year from the grant thereof. From Big Rivers' description of the detailed contractual arrangements that it expects to file in its Unwind Transaction application, the Commission anticipates that its review of the application will extend over a period of several months from its filing, which is expected in November 2007. If the Commission made the CPCN in this case contingent upon the approval of the Unwind Transaction, the one-year statutory time limit under KRS 278.020(1) would not begin to run until the issuance of the final Order in that case. That would make the effective life of the CPCN much longer than the one-year limitation imposed under the statute.

[49] Big Rivers' Response to Commission Staff's Data Request, Item 3(a).

[50] *Id.* at Item 3(b).

[51] Application at 4.

The one-year statutory limit in KRS 278.020(1) is related to the Legislature's desire to provide companies enough time to commence construction of their certificated projects, balanced with the need to give property owners affected by such construction assurance that the construction will not remain pending for years, which could cause them to delay improvements or transfers of their properties due to, among other things, the uncertainty of the exact final location of the boundaries of the constructed project.[52] The Commission's decision in this matter gives effect to the one-year statutory time limit in KRS 278.020(1). The Commission does not believe that its denial of Big Rivers' contingency request will prevent it from beginning construction prior to that expiration date. However, 807 KAR 5:001, Section 9(4), affords Big Rivers a procedure to apply for a renewal of the CPCN in the event it is unable to commence construction of this line within one year from this date.

COST RESPONSIBILITY

The Commission does not typically address the issue of cost responsibility in CPCN cases, because usually the proposed facilities benefit all customers. However, in this case, the proposed line is needed only in the event the smelters go out of business. So, having the ability to export power protects Big Rivers from the financial consequences of losing the revenue of the two customers who make up more than half of its system load. As such, the approval of the line creates an issue as to the

[52] Due to the need to provide a utility the flexibility to address unanticipated construction issues in this and prior CPCN cases the Commission has allowed the applicant to move the approved centerline so long as: (1) it is no greater than 500 feet in either direction (i.e., within a 1,000-foot corridor) of the existing route; (2) the move does not shift the line or its right-of-way onto the property of a different landowner; and (3) the property owner who is subject to the move agrees in writing to the requested move.

appropriate methodology for paying for the construction. Considering the nature of this application and its relationship to the Unwind Transaction application,[53] the available evidence leaves this issue unresolved for the time being. The Commission reserves judgment regarding the rate treatment for constructing and operating the line pending further analysis in the yet-to-be-filed Unwind Transaction case—or, if necessary, in a subsequent rate case.

CONCLUSION

Having reviewed the evidence of record and being otherwise sufficiently advised, the Commission finds that the proposed 161 kV transmission line is necessary, its construction is reasonable and will not result in the wasteful duplication of facilities, and that approval thereof should be granted.

The Commission also understands the need, in limited circumstances, to permit a utility the flexibility to address unanticipated construction issues. We therefore find that Big Rivers may move the approved centerline so long as: (1) it is no greater than 500 feet in either direction (i.e., within a 1,000-foot corridor) of the existing route; (2) the move does not shift the line or its right-of-way onto the property of a different landowner; and (3) the property owner who is subject to the move agrees in writing to the requested move. Big Rivers should file with the Commission a survey of the final location of the line after all moves are completed and before construction begins.

Any changes greater than this distance or involving landowners not identified in Big Rivers' application will require that Big Rivers file another application with the Commission. Likewise, if another agency requires an alteration of the line that does not

[53] Case No. 2007-00455.

meet all the conditions listed above, Big Rivers must apply for a CPCN for the modified route.

IT IS THEREFORE ORDERED that:

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

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

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

Done at Frankfort, Kentucky, this 30th day of October, 2007.

By the Commission

ATTEST:

Executive Director