COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC APPLICATION OF KENTUCKY POWER COMPANY FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY TO REBUILD THE WOOTON-STINNETT PORTION OF THE HAZARD-PINEVILLE 161 KV LINE IN LESLIE COUNTY, KENTUCKY	))))))	CASE NO. 2022-00118

O R D E R

On May 27, 2022, Kentucky Power Company (Kentucky Power) filed an application, pursuant to KRS 278.020(2) and 807 KAR 5:001, Section 15, for a Certificate of Public Convenience and Necessity (CPCN) authorizing it to:

1. Rebuild approximately 11 miles of 161 kV transmission line between the Wooton Substation and the Stinnett Substation within or near existing right-of-way in Leslie County, Kentucky;[1]

2. Upgrade the equipment at the Wooton, Leslie, and Stinnett substations located in Leslie County, Kentucky;[2]

3. Reinforce distribution lines between the Leslie and Stinnett substations in order to accommodate future distribution load during construction outages necessary for the completion of the project while limiting direct impacts to the customers served;[3] and

[1] Application at 1, and Direct Testimony of Nicolas Koehler (Koehler Direct Testimony) (filed May 27, 2022) at 13.

[2] Application at 5.

[3] Application at 1.

4. Expand the existing transmission line right-of-way to 120 feet (60 feet on either side of the line) in order to adhere to current standards and specifications for a 161 kV transmission line.[4] Additionally, Kentucky Power requested authority to adopt a right-of-way of up to 400 feet (200 feet on either side of the line) in areas of unusually steep terrain or where doing so would be required to safely and efficiently operate the proposed transmission line.[5]

Kentucky Power also requested authority to relocate the centerline and associated right-of-way up to 200 feet in either direction from the proposed location as shown on the maps filed with its application.[6] Kentucky Power stated it made this request to ensure it has the ability to address potential issues that may emerge in connection with ground surveys, final engineering, and right-of-way negotiations.[7] Kentucky Power stated that although it is requesting this authority for design flexibility, it does not expect the centerline will shift significantly from what is shown on the map of the proposed route submitted as Exhibit 4 to its application.[8]

By Order issued on June 20, 2022, the Commission established a procedural schedule for the orderly processing of this matter and provided a deadline to request intervention. No one requested intervention. Kentucky Power responded to two requests

[4] Application at 1.

[5] Application at 10.

[6] Application at 11, Exhibit 4 contains the maps.

[7] Application at 11.

[8] Direct testimony of Emily Larson (Larson Direct Testimony) (filed May 27, 2022) at 11.

for information from Commission Staff.[9] On August 24, 2022, Kentucky Power filed a motion to submit this matter for a decision based upon the written record. The record is complete and the matter stands ready for a decision.

BACKGROUND

Kentucky Power is a corporation organized on July 21, 1919, pursuant to the laws of the Commonwealth of Kentucky.[10] Kentucky Power is a utility as defined in KRS 278.010.[11] Kentucky Power is engaged in the generation, purchase, transmission, distribution and sale of electric power.[12] Kentucky Power serves approximately 165,000 customers in the following 20 counties in eastern Kentucky: Boyd, Breathitt, Carter, Clay, Elliott, Floyd, Greenup, Johnson, Knott, Lawrence, Leslie, Letcher, Lewis, Magoffin, Martin, Morgan, Owsley, Perry, Pike, and Rowan.[13] Kentucky Power also supplies electric power at wholesale to other utilities and municipalities in Kentucky for resale.[14] Kentucky Power is a wholly owned subsidiary of American Electric Power Company, Inc. (AEP).[15] AEP is a multi-state public utility holding company that includes utilities providing

[9] Kentucky Power's Response to Commission Staff's First Request for Information (filed July 12, 2022) (Response to Staff's First Request); Kentucky Power's Response to Commission Staff's Second Request for Information (filed Aug. 2, 2022) (Response to Staff's Second Request).

[10] Application at 2 and Exhibit 1.

[11] Application at 2.

[12] Application at 2.

[13] Application at 2

[14] Application at 2.

[15] Application at 3.

electric service to customers in parts of eleven states: Arkansas, Indiana, Kentucky, Louisiana, Michigan, Ohio, Oklahoma, Tennessee, Texas, Virginia, and West Virginia.[16]

WOOTON-STINETT 161 kV TRANSMISSION LINE REBUILD PROJECT

The Wooton-Stinnett 161 kV Transmission Line project is an asset renewal project intended to address aging infrastructure concerns with the 11-mile section of the Hazard-Pineville 161 kV Transmission Line. The Hazard-Pineville 161 kV Transmission Line is a 45.2 mile-long 161 kV transmission line running from Hazard, Kentucky to Pineville, Kentucky. The section of the transmission line that Kentucky Power proposed to rebuild in this proceeding lies between the Wooton, Leslie, and Stinnett substations in Leslie County, Kentucky.[17] Kentucky Power received a CPCN to rebuild 6.5 miles of the Hazard-Pineville 161 kV Transmission Line in Case No. 2017-00328.[18] That portion of the line runs from Hazard, in Perry County, Kentucky to the Wooton Substation in Leslie County, Kentucky. Kentucky Power stated in its application that it anticipates filing an application for a CPCN in the future to complete the rebuild of the Hazard-Pineville 161 kV Transmission Line by rebuilding the 29-mile section from Stinnett to Pineville.[19]

The Wooton-Stinnett 161 kV Transmission Line

The Wooton-Stinnett 161 kV Transmission Line largely crosses forested, mountain terrain, mining areas, and scattered residential development located along roadways and

[16] Application at 3.

[17] West Direct Testimony at 4.

[18] Case No. 2017-00328, *Electronic Application of Kentucky Power Company for Certificate of Public Convenience and Necessity to Construct a 161 kV Transmission Line in Perry and Leslie Counties, Kentucky and associated Facilities* (Ky. PSC Mar. 16, 2018).

[19] Koehler Direct Testimony at 11.

in the valley bottoms.[20] Surface mining has occurred and continues to occur throughout the study area and several nearby ridges have been mined and are terraced hillsides.[21] The existing 161 kV transmission line also crosses a small piece of property owned by the Daniel Boone National Forest.[22]

Kentucky Power proposed to rebuild 11 miles of 161 kV transmission line in Leslie County, Kentucky. The section of transmission line that Kentucky Power proposed to rebuild comprises 55 structures, 95 percent of which are wooden poles dating to 1942.[23] The proposed route of the single-circuit transmission line generally follows the existing centerline, beginning at the existing Wooton Substation near the intersection of Kentucky Route 1807 and Cane Branch Road the proposed transmission line travels in a southwesterly direction for approximately 4.5 miles toward the existing Leslie Substation near the intersection of Kentucky Route 80 and Azalea Drive.[24]

Additionally, 0.4 miles of double circuit transmission line (Leslie Extension) will be rebuilt in and out of the Leslie Substation.[25] This section of the line will replace the Leslie Loop tap location.[26] The Leslie Extension must be built in the clear and on new right-of-way because rebuilding on the existing centerline would require an extended outage. For this reason the Leslie Loop will be replaced by the Leslie Extension on new right-of-way

[20] Application at 10.

[21] Application at 10.

[22] Application at 10.

[23] Application at 15.

[24] Application at 4.

[25] Application at 5.

[26] Kentucky Power's Response to Staff's First Request, Item 4b.

for 0.4 mile and directly parallel to the existing transmission line and right-of way.[27] Any existing easements that will no longer be required along this section of the proposed route will be relinquished.[28] In the vicinity of the Leslie Substation, Kentucky Power proposed to relocate approximately 0.3 mile of the 69 kV Leslie-Clover Fork Transmission Line, including one structure, and reconfigure the line to cross underneath the proposed Wooton-Stinnett 161 kV Transmission line.[29]

The proposed Wooton-Stinnett rebuilt 161 kV single-circuit transmission line will continue from the Leslie Extension traveling in a southwesterly direction for 5.8 miles towards existing structure K131-91A, which is approximately 0.35 miles west of the existing Stinnett Substation near the intersection of US Route 421 and Kentucky Route 2009.[30] The project ends where the Hazard-Pineville 161 kV Transmission Line and the existing Stinnett 161 kV Loop intersect at Structure K131-91A.[31]

A deviation from the existing centerline is proposed for the rebuild project. At the point where the transmission line crosses State Route 699, also known as Cutshin Road, the proposed route shifts approximately 85 feet northwest to avoid a residence, which is located within the existing right-of-way.[32] Kentucky Power estimated the residence was built in the right-of-way sometime between 1960 and 1983.[33] Kentucky Power stated that

[27] Kentucky Power's Response to Staff's First Request, Item 4b.

[28] Kentucky Power's Response to Staff's First Request, Item 4c.

[29] Koehler Direct Testimony at 13 and West Direct Testimony at 5. *See* Exhibit 13 at 48.

[30] Application at 5.

[31] Application at 5.

[32] Larson Direct Testimony at 10.

[33] Kentucky Power's Response to Staff's First Request, Item 1d.

it regularly monitors its rights-of-way and takes necessary actions if an encroachment represents an immediate safety risk or violation of the National Electric Safety Code (NESC) or impedes Kentucky Power's access to its facilities for normal operations and maintenance, and that this residence is not an encroachment that meets the NESC criteria.[34] However, Kentucky Power stated it has contacted the owner of the residence and Kentucky Power and the landowner have agreed to shift the proposed route of the rebuilt transmission line 85 feet northwest of the existing line to avoid having the residence in the right-of-way of the rebuilt line.[35]

Kentucky Power stated that two alternatives were considered for the portion of the line that crosses the Daniel Boone National Forest.[36] Following a virtual open house and after coordination with the United States Forestry Service (USFS) in the summer of 2021, Kentucky Power selected "Segment 5," which lies on the existing centerline and requires no structures to be built on USFS land.[37] The crossing of the Daniel Boone National Forest will be aerial only and will occur in the existing right-of-way.[38]

Between the Wooton Substation and the Stinnett Substation the existing structures will generally be replaced with single-circuit steel H-frame structures averaging 85 feet in height.[39] The existing structures for the Leslie Loop are double-circuit lattice structures

[34] Kentucky Power's Response to Staff's First Request, Item 3.

[35] Larson Direct Testimony at 10.

[36] Application at 8.

[37] Application at 8.

[38] Larson Direct Testimony at 10.

[39] Larson Direct Testimony at 13.

averaging 110 feet in height.[40] These will be replaced with two double-circuit lattice tower structures and one double-circuit monopole, approximately 135 in height when the Leslie Extension is built.[41] The proposed single-circuit strictures will support three conductors and two overhead groundwires.[42] The proposed double-circuit structures will support six conductors and two overhead groundwires. The conductors will consist of 795 kcmil ACSR conductors; the overhead groundwires will consist of one Alumoweld wire and one fiber optic overhead groundwire, which will be used for relaying communications between stations.[43]

Upgrades to Existing Wooton, Leslie and Stinnett 161 kV Substations

The existing Wooton-Stinnett transmission grid serves the Wooton, Leslie, and Stinnett substations.[44] The Wooton Substation has only transmission facilities at 161,000 volts and serves no metered customers.[45] The Leslie Substation serves 25 megavolt amperes (MVA) of peak load, encompassing roughly 3,300 customers located in a large section of northern Leslie County, Kentucky.[46] The Stinnett substation provides service to approximately 1,700 customers, and serves 20 MVA of peak load.[47] Customers served out of the Stinnett Substation cannot be served from any other existing Kentucky Power

[40] Larson Direct Testimony at 13.

[41] Larson Direct Testimony 13.

[42] Application at 7.

[43] Application at 7.

[44] Koehler Direct Testimony at 12.

[45] Koehler Direct Testimony at 12.

[46] Koehler Direct Testimony at 12.

[47] Koehler Direct Testimony at 12.

transmission facility because the 161 kV line is the only transmission source to the Stinnett Substation

Kentucky Power proposed to upgrade the relaying equipment at the Wooton and Stinnett substations to accommodate new optical ground wire (OPGW) fiber protection and provide transition, entry, and termination for OPGW connectivity to the Hazard-Pineville fiber route at the Stinnett Substation.[48]

Kentucky Power's proposal also includes upgrading the Leslie Substation by reconductoring the 161 kV bus, relaying upgrades toward Wooton and Pineville, replacing 161 kV MOAB W, replacing the 161 kV XF#1 high-side switch located at the Leslie Substation,[49] and providing transition, entry, and termination for OPGW connectivity at the Leslie Substation.[50]

Kentucky Power stated that the OPGW contains a tubular structure with one or more optical fibers in it, surrounded by layers of steel and aluminum wires.[51] According to Kentucky Power OPGW serves two purposes: (1) grounding lightning strikes over the transmission line; and (2) providing communications via the fiber optics inside the cable.[52] Kentucky Power maintained that the OPGW it plans to install will provide fiber connectivity to the Leslie and Stinnett Substations. [53]

[48] Koehler Direct Testimony at 13.

[49] Kentucky Power's response to Commission Staff's First Request for Information (filed July 12, 2022) (Response to Staff's First Request), Item 11, clarifies the information concerning this found in Koehler Direct Testimony at 13, which erroneously lists two 161 kV MOAB W. There is only one 161 kV MOAB W and it will be replaced.

[50] Koehler Direct Testimony at 13.

[51] Kentucky Power's Response to Staff's First Request, Item 13.

[52] Kentucky Power's Response to Staff's First Request, Item 13.

[53] Kentucky Power's Response to Staff's First Request, Item 13.

Right-of-Way Expansion

Kentucky Power stated that it currently maintains a 100-foot right-of-way along the Wooton-Stinnett 161 kV Transmission Line, but that it proposed to widen the right-of-way to 120 feet to adhere to current standards and specifications for the operation of a 161 kV transmission line.[54] Additionally, Kentucky Power stated that it requested a right-of-way of up to 400 feet in areas where a wider right-of-way is needed to prevent the conductor from coming into contact with trees during high wind conditions and to prevent trees from falling down hill and into structures during tree clearing on the up-hill side of the right-of-way.[55]

Request for Authority to Move Centerline up to 400 feet

Kentucky Power requested authority to shift the centerline up to 200 feet in either direction of the location that appears on the map it submitted with its application. In support of this request Kentucky Power stated that the 400-foot wide area allows for design flexibility should ground surveys, environmental studies, additional landowner input, or final engineering plans indicate that shifting of the centerline is needed.[56] Kentucky Power stated that it is requesting this authority to provide for design flexibility, but that it has no expectation that the centerline will shift significantly from what is shown on the maps in Exhibit 4.[57]

[54] Larson Direct Testimony at 10.

[55] Larson Direct Testimony at 11.

[56] Larson Direct Testimony at 11.

[57] Larson Direct Testimony at 11.

Kentucky Power stated that it mailed a notice of its proposed project to all landowners within the 400-foot wide area of the centerline.[58] Additionally, Kentucky Power mailed notification of the proposed project to all landowners of record of property located within 1,000 feet of the centerline.[59]

Kentucky Power proposed to file a motion into the record of this proceeding to request a move of the centerline greater than 200 feet in either direction from the centerline as it appears on the maps filled with its application.[60] Kentucky Power stated that any such motion would identify the proposed new location of the centerline, the affected landowner(s), and state in detail, and with technical specificity, the need for the proposed modification of the centerline.[61] Kentucky Power proposed to serve its motion for approval to move the centerline on any affected landowner(s), even if not a party to this proceeding.[62] Kentucky Power respectfully requested that the Commission use its best efforts to rule on such motions within 14 days of receipt of adequate information to consider the request.[63]

Reinforcement of Distribution Lines

Kentucky Power proposed to reinforce the distribution lines between the Leslie and Stinnett substations in order to accommodate future distribution load during construction outages necessary for the completion of the project while limiting direct impacts to the

[58] Direct Testimony of Brian K. West (West Direct Testimony) (filed May 27, 2022) at 11-12.

[59] West Direct Testimony at 10.

[60] West Direct Testimony at 8.

[61] West Direct Testimony at 8.

[62] West Direct Testimony at 8.

[63] West Direct Testimony at 8.

customers served.[64] Kentucky Power stated that the distribution conductor installed between the Leslie and Stinnett substations has limited capacity and traverses a long distance. The existing distribution tie is capable of picking up one fourth of the load of the Stinnett Substation during emergencies and construction outages. To improve this, Kentucky Power proposed to build a small section of new distribution line and upgrade to a larger conductor, which will allow a larger portion of the load at the Stinnett Substation to be served under emergencies and construction outages.[65]

Financing

Kentucky Power estimated the total cost of the project is approximately $49 million.[66] The breakdown of the cost estimate is:

1. Transmission line work, including right-of-way acquisition, $41 million;

2. Construction and upgrade of the three existing substations and switch structure, $4.7 million;

3. Removal of the Wooton 161 kV Extension, Wooton-Leslie 161 kV and Leslie-Stinnett portions, and the Leslie Loop, 2.9 million; and

4. Distribution line work, $110,000.[67]

[64] Application at 6.

[65] Response to Staff's First Request, Item 5.

[66] Application at 9.

[67] Application at 9. Kentucky Power stated that the sum costs of the four major components does not tie to the total cost estimate due to rounding.

Kentucky Power estimated the annual operating cost will be $78,000 for general maintenance and inspection, and that the projected annual additional ad valorem taxes are expected to be approximately $645,700.[68]

Kentucky Power stated that it anticipates funding the cost of the project through its operating cash flow and other internally generated funds.[69] Kentucky Power stated that it will own the project in its entirety. Neither AEP Kentucky Transmission Company (AEP Kentucky Transco) nor any successor entity will own or invest in the project.[70] Kentucky Power stated that the cost of the project will not materially affect the financial condition of Kentucky Power.[71] Kentucky Power maintained that as of December 31, 2021, its assets, net of regulatory assets and deferred charges totaled $2,073,925,784, and the cost of this project represents a 2.4 percent increase in those assets.[72] Kentucky Power stated that the proposed project will not require the issuance of debt and will not affect the completion of any other capital project.[73]

Construction Schedule

Kentucky Power stated that it expects to begin construction of the distribution line work between the Leslie and Stinnett substation in the fourth quarter of 2022 or in the first quarter of 2023.[74] It anticipates beginning dry-weather grading of access roads to the

[68] Application at 9.

[69] Application at 9.

[70] Application at 9.

[71] West Direct Testimony at 14.

[72] West Direct Testimony at 13-14.

[73] West Direct Testimony at 14.

[74] West Direct Testimony at 11.

161 kV transmission line and tree clearing for the transmission line in the third quarter of 2023, and will begin construction of the transmission lines and substation upgrades in the fourth quarter of 2023 or first quarter of 2024.[75] Kentucky Power stated that it plans to place the project into service in the fourth quarter of 2024.[76]

Alternative Considered

Due to the age and deteriorated condition of the transmission line, and Kentucky Power's responsibility to provide adequate, efficient and reasonable service pursuant to KRS 278.030(2), Kentucky Power stated it performed a thorough review of alternatives to the proposed plan, but that any alternative to a complete rebuild along existing right-of-way, such as it proposed in its application, would utilize a piecemeal approach, and not address the needs on the entire asset.[77] Kentucky Power stated that a structure-by-structure replacement is not feasible because it would not be possible to put the line back into service until all of the structures were removed, rebuilt, and restrung.[78] Additionally, the replacement for the aging conductor cannot be placed on the existing structures because those structures will not support the added weight of the upgraded conductor.[79] Because load served from the Stinnett Substation cannot be served from another source, and because the Hazard-Pineville 161 kV Transmission Line is a key interconnect with

[75] West Direct Testimony at 11.

[76] West Direct Testimony at 11.

[77] West Direct Testimony at 14, Koehler Direct Testimony at 14, and Response to Staff's First Request, Item 2.

[78] West Direct Testimony at 14.

[79] West Direct Testimony at 14, Koehler Direct Testimony at 15.

the neighboring TVA utility, allowing the Wooton-Stinnett section of the Hazard-Pineville line to continue to deteriorate could jeopardize the delivery of safe and reliable service.[80]

Additionally, Kentucky Power emphasized the Wooton-Stinnett 161 kV Transmission Line Rebuild project is a continuation of an overall plan to rebuild the entire Hazard-Pineville 161 kV Transmission Line, and that the Commission approved the rebuilding of the initial Hazard-Wooton section of the line in Case No. 2017-00328.[81]

As for alternatives to the route of the proposed rebuilding project, Kentucky Power stated that utilizing existing right-of-way as it proposed to do, is generally more cost effective and less impactful overall to the human and natural environments, when compared to finding an alternative route in a different location and requiring new right-of-way, vegetation clearing, and new easements to be acquired.[82] Kentucky Power did consider two possible routes for crossing the Daniel Boone National Forest, and chose a route that utilized the existing centerline and required only aerial crossing of USFS property. The route chosen will not require any structures or access roads to be built on USFS land.[83] The alternative would not have crossed USFS land at all but would have required additional tree clearing on the property of adjacent landowners.[84]

[80] Kentucky Power's Response to Staff's First Request, Item 2.

[81] Case No. 2017-00328, *Electronic Application of Kentucky Power Company for Certificate of Public Convenience and Necessity to Construct a 161 kV Transmission Line in Perry and Leslie Counties, Kentucky and associated Facilities* (Ky. PSC Mar. 16, 2018).

[82] Kentucky Power's Response to Staff's First Request, Item 2.

[83] Larson Direct Testimony at 10.

[84] Larson Direct Testimony at 10.

LEGAL STANDARD

The Commission's standard of review regarding a CPCN is well settled. Under KRS 278.020(1), no utility may construct any facility to be used in providing utility service to the public until it has obtained a CPCN from this Commission. To obtain a CPCN, the utility must demonstrate a need for such facilities and an absence of wasteful duplication.[85]

"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.[86]

"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."[87] 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.[88] The fundamental

[85] *Kentucky Utilities Co. v. Pub. Serv. Comm'n,* 252 S.W.2d 885 (Ky. 1952).

[86] *Kentucky Utilities Co. v. Pub. Serv. Comm'n,* 252 S.W.2d 890.

[87] *Kentucky Utilities Co. v. Pub. Serv. Comm'n,* 252 S.W.2d 890.

[88] Case No. 2005-00142, *Joint Application of Louisville Gas and Electric Company and Kentucky Utilities Company for the Construction of Transmission Facilities in Jefferson, Bullitt, Meade, and Hardin Counties, Kentucky* (Ky. PSC Sept. 8, 2005).

principle of reasonable least-cost alternative is embedded in such an analysis. Selection of a proposal that ultimately costs more than an alternative does not necessarily result in wasteful duplication.[89] All relevant factors must be balanced.[90]

Pursuant to KRS 278.020(1)(a)(2) ordinary extensions of existing systems in the usual course of business do not require a CPCN. However, KRS 278.020(2) specifically provides that construction of electric transmission lines of 138 kV or more and of greater than 5,280 feet (one mile) in length shall not be considered an ordinary extension of an existing system in the usual course of business and shall require a CPCN. Therefore, the 11 mile, 161 kV electric transmission line project proposed by Kentucky Power requires a CPCN.

DISCUSSION AND FINDINGS

Kentucky Power stated that this project is needed to replace aging infrastructure, much of which has exceeded its useful life. Kentucky Power maintained that the Wooton-Pineville line was originally built in 1942. The section of transmission line to be replaced is comprised primarily of wooden poles.[91] The conductor, a 500 kilo circular mils (KCMIL) copper conductor, is also of 1942 vintage.[92] Kentucky Power stated that inspections of the circuit indicate there are 105 open conditions on the section of transmission line to be

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

[90] Case No. 2005-00089, *East Kentucky Power Cooperative, Inc*. (Ky. PSC Aug. 19, 2005), final Order at 6.

[91] Koehler Direct Testimony at 10.

[92] Koehler Direct Testimony at 14; Response to Staff's First Request, Item 6.

replaced.[93] An open condition is an existing and unaddressed physical condition associated with a transmission line component.[94] The 105 open conditions present on the Wooton-Stinnett 161 kV Transmission line at the time Kentucky Power applied for a CPCN for this project included 47 rotted poles, 22 rotted crossarms, 10 damaged poles, 8 insect damaged crossarms, 8 woodpecker damaged poles, 2 bowed poles, 2 bowed crossarms, 2 twisted crossarms, 1 split pole, 1 rotted filler block, 1 loose guy, and 1 broken ground wire lead.[95]

Kentucky Power maintained that the structures along the Wooton-Stinnet section of the Hazard-Pineville 161 kV Transmission line have exceeded their useful life[96] and have reached the point in which it is most appropriate to replace them to avoid any substantial structural failure that could turn into a cascading failure with outage times being delayed due to lack of adequate access roads and the remote location of the almost 80-year-old line.[97]

There are two circuits that comprise the section of transmission line to be replaced, the Leslie-Wooton 161 kV Circuit that is 6.5 miles long, and a 4.5-mile section of the Leslie-Pineville 161 kV Circuit. In the last five years there have been two permanent

[93] Koehler Direct Testimony at 10.

[94] Koehler Direct Testimony at 10.

[95] Koehler Direct Testimony at 10.

[96] Response to Staff's First Request, Item 10, Attachment 1, at 21. According to the Centre for Energy Advancement through Technological *Innovation Report No. T144700-3257: Statistical Data and Methodology for Estimating the Expected Life of Transmission Line Components*, the expected useful life of wooden transmission line structures ranges between 35 and 75 years, and the expected life of a conductor is 40-80 years. Many of the wooden poles to be replaced by the proposed project are 80 years old, as is the conductor to be replaced.

[97] Koehler Direct Testimony at 12.

outages on the Leslie-Wooton 161 kV Circuit, and one momentary outage.[98] The momentary outage, defined as an outage lasting five minutes or less[99] was due to ice and snow.[100] The permanent outages, defined as outages lasting more than five minutes[101] were due to vegetation fall-ins from outside the right-of-way.[102] On the Leslie-Pineville 161 kV Circuit in the past five years there have been 12 momentary outages and 14 permanent outages.[103] Of the momentary outages, nine were due to lightning and three were due to wind.[104] Eight of the permanent outages were due to vegetation fall-ins outside of the right of way, two were due to lightning, two were due to ice and snow, one was due to crossarm failure, and one was due to fire.[105] Three of the permanent outages caused a total of 631,000 minutes of interruption, affecting 4,142 customers served from Stinnett Substation.[106]

Kentucky Power stated that the proposed project installs a new conductor and utilizes more resilient steel structures which have more weight-bearing capacity in conformity with current NESC standards.[107] Kentucky Power maintained that widening the right-of-way as it proposed to do in this project widens the area associated with tree

[98] Koehler Direct Testimony at 10.

[99] Kentucky Power's Response to Staff's First Request, Item 7a.

[100] Koehler Direct Testimony at 10.

[101] Response to Staff's First Request, Item 7a.

[102] Koehler Direct Testimony at 10.

[103] Koehler Direct Testimony at 10.

[104] Koehler Direct Testimony at 10.

[105] Koehler Direct Testimony at 10.

[106] Koehler Direct Testimony at 10.

[107] Kentucky Power's Response to Staff's First Request, Item 9.

trimming and will reduce the risk of trees outside of the right-of-way falling on the line.[108] Since the recorded cause of eight of the permanent outages included vegetation falling in from outside of the right-of-way as well as ice and snow, Kentucky Power stated the project minimizes the risk of future outages under similar conditions.[109]

In addition to being needed to address aging infrastructure, Kentucky Power maintained that it will also result in increased capacity of the 161 kV network in the area of the Wooton, Leslie, and Stinnett substations and improve reliability.[110] Kentucky Power stated that the conductor that will replace the existing conductor is of a larger diameter, and this will increase the carrying capacity of the conductor.[111] Kentucky Power maintained this increased carrying capacity of the conductor, along with the upgrades to the Leslie Substation will result in increased capacity in the area.[112] Further, Kentucky Power stated that the upgrades to the transmission facilities are needed to eliminate smaller-sized equipment on the circuit so that it can operate seamlessly with the facilities already upgraded in the Hazard-Wooton 161 kV Transmission Line in Perry and Leslie counties.[113] Finally, Kentucky Power maintained that the proposed transmission facilities upgrades will result in an increase in transmission capacity on the tie with the Tennessee

[108] Kentucky Power's Response to Staff's First Request, Item 9.

[109] Response to Staff's First Request, Item 9.

[110] Application at 14.

[111] Kentucky Power's Response to Staff's First Request, Item 7a.

[112] Kentucky Power's Response to Staff's First Request, Item 6.

[113] Kentucky Power's Response to Staff's First Request, Item 7b.

Valley Authority (TVA), which will allow for greater power transfer capability between the two areas.[114]

The Commission places great weight on the evidence of record concerning the deteriorated state of the existing Wooton-Stinnett 161 kV Transmission line. Kentucky Power has presented reports of 105 open conditions along the lines and has documentation of numerous momentary and permanent outages affecting the customers served from these facilities. The evidence shows that the majority of the facilities to be replaced have, or soon will, exceed their useful lives. Kentucky Power must provide adequate, efficient and reasonable service.[115] Given the age and condition of the facilities to be replaced, it is reasonably expected that the open condition and outages along this line will continue. Such a continuance of outages and the accumulation of additional open conditions will result in additional significant expense and impact to Kentucky Power's customers. For this reason the Commission finds that Kentucky Power has demonstrated a need for the proposed project.

Additionally, the Commission finds that the project will not result in wasteful duplication. The proposed facilities do not compete with the facilities of other existing public utilities. Kentucky Power has no other facilities with which to serve the customers served from the Stinnett Substation, and limited facilities with which to serve customers currently being served by the Leslie Substation.[116] The proposed project makes use of

[114] Kentucky Power's Response to Staff's First Request, Item 7b.

[115] KRS 278.030(2).

[116] *See* Response to Staff's first Request, Item 1c. Customers served by the Leslie Substation could potentially be served from the Hazard 69 kV line, but there is no other source of transmission to serve customers served from the Stinnett Substation.

the current-right-of way, and in the area of the existing Leslie Loop, where the line will be relocated to a new right-of-way, Kentucky Power will relinquish the existing right-of-way.

Kentucky Power stated that the project does not involve sufficient capital outlay to materially affect its financial condition.[117] The total estimated construction costs for the project is $49 million which is 2.35 percent of Kentucky Power's approximately $2.083 billion net utility plant as of December 31, 2021. [118]

The Commission also finds that Kentucky Power has identified sufficient need for the flexibility to move the centerline and right-of-way up to 200 feet in either direction of the centerline as shown on the maps filed with the application. This request is reasonable in light of the nature of the terrain over which the proposed facilities will traverse, and the need for flexibility in response to landowner concerns. Therefore, the Commission finds that Kentucky Power shall have the authority to shift the location of the centerline and right-of-way up to 200 feet on either side of the centerline as identified in its application so long as any affected landowner received notice of this proceeding.

Because the Commission is interested in understanding the reasons and conditions under which landowners may request the shifting of electric transmission facilities crossing their property, the Commission finds that Kentucky Power shall notify the Commission of any move of the centerline that is made in response to landowner request and is more than 50 feet in either direction of the proposed centerline.[119] Any

[117] West Direct Testimony at 13-14.

[118] *Annual Report of Kentucky Power Company to the Public Service Commission for the Calendar Year Ended December 31, 2021* at 15.

[119] This is the same condition the Commission placed on Kentucky Utilities Company in Case No. 2022-00066, *Electronic Application of Kentucky Utilities Company for a Certificate of Public Convenience*

such notice should be filed into the post-case correspondence file of this proceeding and should identify the landowner's request, the new route, and any other relevant information Kentucky Power seeks to provide to the Commission as part of its notice.

The Commission finds that Kentucky Power shall file a motion in this proceeding to request approval for any change in the location of the line greater than 200 feet in any direction of the centerline as identified in Kentucky Power's application. The motion shall identify the proposed location of the centerline, the affected landowner(s), and state in detail, and with technical specificity, the need for the proposed modification of the centerline. Kentucky Power shall provide documentation to support the need for the proposed modification. Kentucky Power shall serve the motion for approval to move the centerline on any affected landowner(s), even if not a party to this proceeding. Upon receiving adequate information to thoroughly consider the request, the Commission will use its best efforts to rule upon such motions within 14 days.

Because Kentucky Power has shown it has a need for the proposed facilities and provided evidence that construction of the proposed facilities will not result in wasteful duplication, the Commission finds that Kentucky Power shall be granted a CPCN for the project. The Commission expects Kentucky Power to construct, own, and maintain this project for the benefit of Kentucky Power's Customers. Therefore, the Commission finds that Kentucky Power shall not transfer ownership of any portion of this project to AEP Kentucky Transco, or allow AEP Kentucky Transco to own, operate, or control any part of the proposed facilities, without prior Commission approval.

and Necessity for the Construction of Transmission Facilities in Hardin County, Kentucky (Ky. PSC July 28, 2022) at 28 and 29.

IT IS THEREFORE ORDERED that:

1. Kentucky Power is granted a CPCN to construct, own, and operate the Wooton-Stinnett 161 kV Transmission Line Rebuild Project as described in its application, with the conditions expressed in this Order.

2. Kentucky Power shall file a survey of the final location of the transmission facilities after any modifications are finalized as authorized by this Order and before construction begins.

3. Kentucky Power shall notify the Commission upon knowledge of any material changes to the project, including but not limited to, increase in cost, any significant delays in construction, or any changes in the route of the transmission line not expressly authorized by his Order.

4. Kentucky Power shall file as built drawings and maps within 60 days of the completion of the construction authorized by this Order.

5. Kentucky Power shall furnish documentation of the total costs of this project including the cost of construction and all other capitalized costs, including, but not limited to, engineering, legal, and administrative expenses, within 60 days of the date construction is substantially completed. Construction costs shall be classified into appropriate plant accounts in accordance with the Uniform System of Accounts for electric utilities prescribed by the Commission.

6. Kentucky Power shall file with the Commission any permits acquired in connection with this project within 30 days of issuance of the permit.

7. Kentucky Power shall apply for a CPCN for a modified route if another agency requires an alteration of the line that does not meet all of the conditions listed above.

8. Kentucky Power shall take all commercially reasonable measures to prevent erosion and sedimentation damage in connection with this project.

9. Kentucky Power's request for authority to move the centerline and the right-of-way up to 200 feet in any direction of the centerline is granted, so long as the affected property owner received notice of the proposed project.

10. Kentucky Power shall follow the process set forth in this Order if constructability concerns require that the location of the proposed transmission line be moved more than 200 feet in any direction from the location of the centerline as identified in the application, so long as any affected landowners received notice of this proceeding.

11. Kentucky Power shall notify the Commission of any move of the transmission line that is greater than 50 feet and made in response to a landowner request. Kentucky Power will make such notification by filing a notice into the post-case correspondence file of this proceeding.

12. Any documents filed in the future pursuant to ordering paragraphs 2, 3, 4, 5, 6, 10, and 11 shall reference this case number and shall be retained in the post-case correspondence file.

13. Kentucky Power shall not transfer ownership of any portion of this project to AEP Kentucky Transco or allow AEP Kentucky Transco to own, operate, or control any part of the proposed facilities, without prior Commission approval.

14. This case is closed and removed from the Commission's docket.

PUBLIC SERVICE COMMISSION

Chairman

Vice Chairman

Commissioner

ENTERED

SEP 22 2022 rcs

KENTUCKY PUBLIC SERVICE COMMISSION

ATTEST:

Executive Director

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