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 CONSTRUCT 46KV TRANSMISSION LINE IN FLOYD AND JOHNSON COUNTIES, KENTUCKY	)))))	CASE NO. 2025-00346

O R D E R

On December 5, 2025, Kentucky Power Company (Kentucky Power) filed an application, pursuant to KRS 278.020(1), 807 KAR 5:001, Section 14, and 807 KAR 5:001, Section 15, requesting a Certificate of Public Convenience and Necessity (CPCN) authorizing it to:

1. Replace Thelma Transformer #1 with a 138/69/46kV 130/90 MVA transformer and replace 46kV risers and relay towards Kenwood Substation. The existing Transformer #1 is to be used as a spare transformer;[1]

2. Rebuild approximately 13 miles of the Prestonsburg-Thelma 46kV circuit. The proposed line will be designed to 69kV standards and operated at 46kV;[2]

3. Retire the Van Lear Switch, Jenny Wiley Switch, and Van Lear to Kenwood transmission line;[3]

[1] Application (filed Dec. 5, 2025) at 3 and Direct Testimony of Tanner S. Wolffram (Wolffram Direct Testimony) at 4.

[2] Application at 3 and Wolffram Direct Testimony at 4.

[3] Application at 3 and Wolffram Direct Testimony at 4.

4. Install motor-operated air-breaker (MOAB) switches at Kentucky Power's existing Kenwood Substation;[4] and

5. Relocate the existing 46kV capacitor bank within the station and install a high side circuit switcher on the distribution bank at the Prestonsburg Station.[5]

The project area is located in Floyd and Johnson counties, Kentucky.[6] Kentucky Power stated it will construct and own all of the components of the proposed project (Prestonsburg-Thelma Project or Project).[7]

Kentucky Power proposed to maintain the proposed 46kV Transmission Line right-of-way (ROW) at 100 feet wide, or 50 feet on either side of the line, except where a wider ROW is required to address constructability and operations requirements.[8] However, Kentucky Power requested authority to relocate the centerline and associated right-of-way up to 100 feet in any direction, or 200 feet total, from the location as shown on the maps filed with its application if required to address constructability issues, access requirements, and conditions that are not evident until final engineering, or that arise as a result of landowner negotiations.[9] Kentucky Power also requested authority to relocate the centerline and associated facilities beyond the 100-foot-wide area for certain discreet

[4] Application at 3 and Wolffram Direct Testimony at 4.

[5] Application at 3 and Wolffram Direct Testimony at 4.

[6] Application at 1.

[7] Application at 4.

[8] Application at 11 and Direct Testimony of Anastacia Santos (Santos Direct Testimony) at 9.

[9] Application at 11-13.

spans Kentucky Power has been able to identify and which are listed in Exhibit 4 of the Application.[10]

By Order issued on December 19, 2025, the Commission continued this case to 120 days, up to and including April 3, 2026, and established a procedural schedule for the orderly processing of this matter and to provide a deadline to request intervention.[11] Kentucky Power responded to two requests for information from Commission Staff.[12] An informal conference was held on February 27, 2026, after which Kentucky Power filed supplemental responses to Staff's First Request.[13] There are no intervenors. There have been public comments submitted by people asserting that they own property within the proposed transmission line route; none of which wished their property to be included in the project.[14]

On March 6, 2026, Kentucky Power filed a motion to submit this matter for a decision based upon the written record.[15] The record is complete, and the matter is ready for a decision.

[10] Application at 12-13.

[11] Order (Ky. PSC Dec. 19, 2025) at 2, ordering paragraphs 1 and 2.

[12] Kentucky Power's Response to Commission Staff's First Request for Information (Staff's First Request) (filed Jan. 30, 2026) and Kentucky Power's Response to Commission Staff's Second Request for Information (Staff's Second Request) (filed Feb. 27, 2026).

[13] Kentucky Power's Supplemental Responses to Staff's First Request (filed Mar. 6, 2026).

[14] View Public Comments for: 2025-00346

[15] Kentucky Power's Request to Submit Matter for Decision on the Record (filed Mar. 6, 2026).

BACKGROUND

Kentucky Power is a corporation, organized on July 21, 1919, pursuant to the laws of the Commonwealth of Kentucky.[16] Kentucky Power is a utility as defined in KRS 278.010.[17] Kentucky Power is engaged in the generation, purchase, transmission, distribution, and sale of electric power.[18] Kentucky Power generates and purchases electricity that it distributes and sells at retail to approximately 162,000 customers located in all, or portions of, Boyd, Breathitt, Carter, Clay, Elliott, Floyd, Greenup, Johnson, Knott, Lawrence, Leslie, Letcher, Lewis, Magoffin, Martin, Morgan, Owsley, Perry, Pike, and Rowan counties, Kentucky.[19]

Kentucky Power's existing Prestonsburg–Thelma 46kV circuit transmission lines were originally installed in the 1960s.[20] The current transmission line is approximately 16 miles in length comprised of 5.8 miles between Thelma Substation and Van Lear Switch, 1.8 miles between Van Lear Switch and Kenwood Substation, and 8.5 miles between Van Lear Switch on the Prestonsburg–Thelma 46kV line to the Prestonsburg Substation.[21] The existing structure types are comprised of single and double-circuit wood poles and

[16] Application at 2.

[17] Application at 2.

[18] Application at 2.

[19] Application at 2.

[20] Application at 2.

[21] Application at 2.

weathering steel poles.[22] Currently, the Prestonsburg–Thelma 46kV circuit serves the Kenwood Substation, and provides approximately 17.2 MVA of load to 2,438 customers.[23]

THE PROPOSED PROJECT

To address baseline violations, outage issues, and open structural conditions identified as part of the PJM Regional Transmission Expansion Plan (RTEP) process, Kentucky Power proposed to retire the entire 16 miles of the 46kV Prestonsburg-Thelma circuit and build approximately 13 miles of new 46kV Prestonsburg-Thelma Circuit utilizing a new, shorter, right-of-way, that is to be rated at 69kV but operated at 46kV, to replace the 138/69/46kV transformer at its Thelma Substation, and to perform related work at the Kenwood Substation.[24]

In particular, the Project would replace Thelma Transformer #1 with a 138/69/46 kV 130/130/90 MVA transformer and replace 46kV risers and relaying towards Kenwood Substation with the existing Transformer #1 to be used as a spare.[25] The Project would retire the Van Lear Switch, Jenny Wiley Switch, and Van Lear to Kenwood transmission line.[26] Lastly, the Project would replace the motor-operated air-breaker (MOAB) switches at Kenwood Stations and relocate the existing 46kV capacitor bank within the station and install a high side circuit switcher on the distribution bank.[27]

[22] Application at 2.

[23] Application at 3.

[24] Application at 3.

[25] Application at 3.

[26] Application at 3.

[27] Application at 3.

Siting Study

Kentucky Power retained POWER Engineers, Inc. (POWER), to identify and evaluate transmission line routes for the Project, and to prepare the Siting Study for the Project.[28] According to Kentucky Power, the primary purpose of the Siting Study was to identify routes for the proposed transmission line that would enable Kentucky Power to acquire the necessary ROW, and to engineer, construct, operate, and maintain the line, while minimizing environmental and land-use impacts.[29] The Siting Study defined the Project's study area between substation endpoints, evaluated existing ROW conditions, analyzed environmental and land-use constraints and opportunity features identified within the study area, documented the siting methodology and guidelines, documented public involvement, compared alternative routes, and supported selection of the proposed route.[30]

Kentucky Power stated that the proposed route was selected through a systematic evaluation of study segments and alternative routes conducted by the Siting Team as part of the Siting Study.[31] The Siting Team determined that the proposed route would minimize land-use impacts and engineering risks by being located further away from congested development and residences, impacting fewer landowners, crossing more favorable terrain, avoiding landslide-prone areas with unstable geology, and reducing visual impacts to the surrounding community.[32] Additionally, Kentucky Power averred the

[28] Application at 7.

[29] Application at 7.

[30] Application at 7.

[31] Application at 9.

[32] Application at 9.

proposed route would further minimize impacts by shifting the route away from residences, utilizing existing roads, reducing the line length, and reducing tree clearing required within the right of way (ROW).[33]

Proposed Route

The proposed transmission line route begins at the existing Prestonsburg Substation, travels west to cross the existing centerline, then turns north to cross KY-1428.[34] Then, the transmission line continues north and northeast through undeveloped forested terrain before crossing KY-3 and proceeds northwest and northeast to cross Fords Gap Road, Ward Avenue, the Levisa Fork, and KY-321.[35] From there, the transmission line turns north and west to cross Johns Creek Road, the Levisa Fork, and KY-321 again before entering the existing Kenwood Substation.[36] Exiting Kenwood, the route heads west across forested land, then turns north to cross the Levisa Fork and KY-321.[37] It continues north through undeveloped terrain, turns northeast to cross KY-302, then angles northwest and northeast to cross KY-40.[38] Finally, the route parallels an existing East Kentucky Power Cooperative (EKPC) transmission line through forested land, turns northwest and north to cross Main Street, and terminates at the existing Thelma Substation.[39]

[33] Application at 9.

[34] Santos Direct Testimony at 20.

[35] Santos Direct Testimony at 20.

[36] Santos Direct Testimony at 20.

[37] Santos Direct Testimony at 20.

[38] Santos Direct Testimony at 20-21.

[39] Santos Direct Testimony at 21.

Permitting and Environmental Studies

Kentucky Power anticipated that the following environmental studies, permits, or approvals might be required for the construction of the Project: (1) a wetland delineation and stream identification study; (2) a Section 10 Permit from the United States Army Corps of Engineers which will be required for four transmission line crossings over the Levisa Fork; (3) a Construction Permit from the Kentucky Division of Water Stream for construction activities that take pace in, along, or over a wetland or stream (if the watershed is one square mile or more in size) or within a floodplain; (4) a Construction Stormwater General Permit from the Kentucky Energy and Environment and Cabinet, Division of Water; and a Kentucky Pollutant Discharge Elimination System (KPDES) Stormwater Pollution Prevention Plan (SWPPP) will be developed for the Project.[40] Kentucky Power stated it would coordinate with the U.S. Fish and Wildlife Service (USFWS) regarding the potential for impacts to sensitive species.[41]

In addition to environmental permits, engineering-related permits would be obtained once transmission line design is finalized, which may include aerial road crossing permits from the Kentucky Transportation Cabinet (KYTC), Federal Highway Administration (FHWA), or county engineering offices, as well as construction entrance permits for state or county roads.[42] Kentucky Power also noted it would coordinate with the Federal Aviation Administration (FAA) and KYTC[43] for any required aviation-related

[40] Application at 14-15.

[41] Application at 15.

[42] Application at 15.

[43] Although Kentucky Power cited to the KYTC for aviation related approvals, the Kentucky Airport Zoning Commission is the agency that regulates aviation related approvals.

approvals.[44] Kentucky Power stated it would obtain all required environmental compliance permits and complete the required studies prior to beginning Project construction.[45]

Real Property and Right-Of-Way (ROW)

Kentucky Power would need to acquire new property in connection with the work to be performed to complete the Project.[46] However, Kentucky Power confirmed that it would not be relinquishing its rights to the current ROW at this time.[47] Kentucky Power would build approximately 13 miles of new 46kV Prestonsburg– Thelma circuit on mostly new right-of-way and approximately 0.5 miles of the proposed 46kV transmission line would be constructed within or near existing ROW.[48]

Kentucky Power suggested maintaining the proposed 46kV Transmission Line ROW at 100 feet wide, or 50 feet on either side of the center line, except where a wider ROW is required to address constructability and operational requirements.[49]

Kentucky Power requested authority from the Commission to relocate the centerline and associated ROW up to 100 feet in any direction, or 200 feet total, from the locations shown on maps filed with its application, if required to address constructability

[44] Application at 15.

[45] Application at 15.

[46] Application at 11.

[47] Kentucky Power's Response to Staff's Second Request, Item 6(a)-(d).

[48] Application at 11.

[49] Application at 11.

issues, access requirements, and conditions that are not evident until final engineering, or that arise as a result of landowner negotiations.[50]

Kentucky Power proposed to file a motion in the instant matter to request approval, if needed, to move the centerline more than 100 feet in any direction from the centerline, or more than the additional clearances requested for the specific spans identified above, as it appears on the maps filed into the record in this proceeding.[51] The 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.[52] Kentucky Power would serve the motion for approval to move the centerline on any affected landowner(s), even if not a party to this proceeding.[53]

Additionally, Kentucky Power requested authority as part of its application to relocate the centerline and associated facilities beyond the 100-footwide area requested above for at least 27 discreet spans Kentucky Power has so far been able to identify.[54]

Kentucky Power stated that upon completion of the Project, it would file an as-built plan showing the final location of the transmission line and structures with the Commission.[55]

[50] Application at 11-12.

[51] Application at 12.

[52] Application at 12.

[53] Application at 12.

[54] Application at 12-13 and Direct Testimony of J. Scott Woody (Woody Direct Testimony) at 8-9.

[55] Application at 13.

PJM Review

The Project was reviewed at the PJM Sub-Regional RTEP-Western meetings held on November 29, 2018, and April 20, 2020.[56] The baseline portion of the Project was reviewed on October 15, 2021, at the PJM Sub-Regional RTEP-Western meeting.[57] The baseline and supplemental portions of the Project were respectively assigned identification B3360 and B3361.[58] On May 16, 2025, the baseline solution B3361 was re-presented by PJM with revised costs and a new transmission line route.[59]

Financial Aspects

Kentucky Power estimated the entire project total to cost approximately $71.2 million.[60] The total Project cost would be comprised of: (a) approximately $61.6 million for transmission line work including ROW acquisition; (b) approximately $7.8 million for construction and upgrade of the substations and switch structure; (c) approximately $0.5 million for station removals; and (d) approximately $1.3 million for transmission line removals.[61]

The costs of the Project would be allocated to the American Electric Power (AEP) East PJM zone.[62] Based on its current 12 CP allocation, Kentucky Power's share of the total Project cost would be 5.429 percent, making Kentucky Power's share approximately

[56] Application at 6.

[57] Application at 6.

[58] Application at 6.

[59] Application at 6.

[60] Application at 6.

[61] Application at 6.

[62] Application at 7.

$3,865,448.[63] The remainder of the costs would be recovered from other load serving entities within the AEP East PJM zone.[64]

Kentucky Power anticipated funding the cost of the Project through its operating cash flow and other internally generated funds.[65] Furthermore, Kentucky Power stated the proposed Project would not materially affect its financial condition because Kentucky Power's assets, net of regulatory assets and deferred charges as of June of 2025, totaled $2.1 billion.[66] The total cost of the Project would represent an increase of approximately 3.3 percent in those assets.[67] Thus, the Project would not require Kentucky Power to issue debt and the Project would not affect the completion of any other of Kentucky Power's capital projects.[68]

Lastly, Kentucky Power estimated the annual operating cost of the Project to be approximately $20,500 annually for general maintenance and inspection.[69] Kentucky Power further projected additional annual *ad valorem* taxes resulting from the Project to total approximately $953,000.[70]

[63] Application at 7.

[64] Application at 7.

[65] Application at 7.

[66] Application at 7.

[67] Wolffram Direct Testimony at 11.

[68] Wolffram Direct Testimony at 11.

[69] Wolffram Direct Testimony at 12.

[70] Wolffram Direct Testimony at 12.

Construction Schedule

Kentucky Power anticipated beginning construction on the proposed Project during the second quarter of 2026.[71] The Project would be placed in-service during the second quarter of 2028 and construction would be completed during the fourth quarter of 2028.[72]

Alternatives Considered

Kentucky Power, during the planning process, developed a holistic electrical alternative to the proposed Project that would provide similar benefits that it described as "Alternative 1".[73] Alternative 1 would require installing a new 4-mile 46kV line from Morgan Fork Substation to Mckinney Substation; installing a new 138/69/46kV transformer with circuit breaker protection at Morgan Fork Substation; installing a new 5.5 mile long double-circuit 138kV line from Dewey Substation to Kenwood Substation; converting Kenwood Substation to 138kV and installing a new distribution bank; expanding Dewey Station and installing 2 new 138kV circuit breakers; and retiring the existing Prestonsburg–Thelma 46kV circuit.[74]

However, under Alternative 1, Kenwood Substation would be served from a single source, with the circuits on shared towers, which Kentucky Power stated was less reliable than two independent feeds.[75] Kentucky Power noted the configuration would also require non-standard protection schemes to protect the 17.2 MVA of load due to the single

[71] Wolffram Direct Testimony at 9.

[72] Wolffram Direct Testimony at 9-10.

[73] Application at 9.

[74] Application at 9.

[75] Application at 10.

source from Dewey Substation.[76] Lastly, Kentucky Power stated Alternative 1 would require expanding the existing Dewey Substation, which may not be feasible given the terrain surrounding the substation.[77] The total estimated cost for Alternative 1 is approximately $77 million, which is higher than the estimated expense of the proposed Project.[78]

Kentucky Power further stated that it considered several other options, at least preliminarily, to address identified baseline and supplemental issues.[79] To address baseline issues in the Prestonsburg-Thelma area, Kentucky Power considered introducing a new source to the area, such as by connecting to other Kentucky Power substations relatively close to the Prestonsburg-Thelma circuit via new transmission lines, which would eliminate the thermal issue at Thelma Station and eliminate the voltage issues along the 46kV network.[80] Kentucky Power considered several potential sites for connecting a new source including Stanville Substation, Morgan Fork Substation, Eastern Substation, or by building new 138 kV lines to Allen Station.[81] However, these options were dismissed because they would only address baseline concerns and not address the aging asset concerns or holistically address the needs of the Prestonsburg-Thelma circuit.[82]

[76] Application at 10.

[77] Application at 10.

[78] Application at 10.

[79] Kentucky Power's Supplemental Responses to Staff's First Request (filed Mar. 6, 2026), Item 30.

[80] Kentucky Power's Supplemental Responses to Staff's First Request, Item 30.

[81] Kentucky Power's Supplemental Responses to Staff's First Request, Item 30.

[82] Kentucky Power's Supplemental Responses to Staff's First Request, Item 30.

Another preliminary rebuild option Kentucky Power considered, but ultimately dismissed, included: rebuilding and converting the sub-transmission lines to 138kV between Thelma and Allen Substations; converting Betsy Lane – Allen to 138kV; building a new substation next to Allen Substation that can support 138kV in and out with two circuit breakers and a straight bus; and installing a 138/46kV transformer and connecting the new station to the existing Allen Substation.[83] However, this option would require more transmission line miles to be rebuilt at a higher voltage and would be well above the needs to address Kentucky Power's issues, which it stated would also result in much higher costs.[84]

Lastly, Kentucky Power considered rebuilding the Prestonsburg-Thelma line on centerline.[85] However, this option was dismissed because Kentucky Power would still need to address the Kenwood and Van Lear Switch.[86] Additionally, Kentucky Power's existing ROW is located on steep side slopes.[87] Therefore, Kentucky Power argued that rebuilding on the existing ROW was high-risk and impractical because current construction methods for 69kV require large steel structures, mechanical construction equipment, construction pads, and access roads.[88]

[83] Kentucky Power's Supplemental Responses to Staff's First Request, Item 30.

[84] Kentucky Power's Supplemental Responses to Staff's First Request, Item 30.

[85] Kentucky Power's Supplemental Responses to Staff's First Request, Item 30.

[86] Kentucky Power's Supplemental Responses to Staff's First Request, Item 30.

[87] Kentucky Power's Supplemental Responses to Staff's First Request, Item 30.

[88] Kentucky Power's Supplemental Responses to Staff's First Request, Item 30.

LEGAL STANDARD

The Commission's standard of review regarding a CPCN is well settled. Under KRS 278.020(1), no utility may construct or acquire 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.[89]

"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.[90]

"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."[91] To demonstrate that a proposed facility does not result in wasteful duplication, the Commission has held that the applicant must demonstrate that a thorough review of all reasonable alternatives has been performed.[92] The fundamental principle of reasonable, least-cost alternative is embedded in such an analysis. Selection of a

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

[90] *Kentucky Utilities Co*. at 890.

[91] *Kentucky Utilities Co*. at 890

[92] 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).

proposal that ultimately costs more than an alternative does not necessarily result in wasteful duplication.[93] All relevant factors must be balanced.[94]

DISCUSSION AND FINDINGS

Need

Kentucky Power asserted that the proposed Project is needed to provide adequate, reliable, and safe service to its customers and to address baseline violations identified as part of the PJM RTEP process near its Prestonsburg 46kV substation.[95]

Having reviewed the record and being otherwise sufficiently advised, the Commission finds that Kentucky Power has established sufficient evidence to demonstrate that the proposed transmission project is needed to provide adequate, efficient, and reasonable service for the reasons discussed below.

In support of its application, Kentucky Power stated that in the 2021 PJM window on 2026 RTEP case, voltage magnitude and voltage drop violations were identified at Mckinney, Salsbury, Allen, East Prestonsburg, Prestonsburg, Middle Creek, and Kenwood Substations in the event of multiple different N-1-1 contingency pairs.[96] Furthermore, in the same PJM window, thermal violations were identified at Thelma Substation.[97] Kentucky Power also stated that prior to the baseline violations being

[93] 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).

[94] Case No. 2005-00089, Aug. 19, 2005 final Order at 6.

[95] Application at 4.

[96] Application at 4-5.

[97] Application at 5.

identified, aging asset concerns had previously been raised for the Prestonsburg–Thelma 46kV line and the Van Lear Switch, which serves Kenwood.[98]

The 16-mile Prestonsburg–Thelma circuit, installed in the 1960s, includes the radial Van Lear–Kenwood line and has shown signs of aging and poor performance.[99] From 2013 through 2018, the Prestonsburg–Thelma 46kV circuit experienced 22 momentary and permanent outages.[100] The circuit had 34 category A open conditions associated with structures that make up the line.[101] The conditions included damaged and rotted poles, damaged guy wires, and damaged cross arms.[102] Most of the circuit utilizes 1960s wood structures and 336.4 ACSR conductor.[103] Moreover, between July 2019 and June 2024, the Prestonsburg–Thelma 46kV circuit experienced 13 momentary and two permanent outages, causing over 716,000 customer minutes of interruption at Kenwood.[104]

According to Kentucky Power, as of September 2024, 84 percent of the current line's structures have at least one open structural issue.[105] The switches at Van Lear have been tagged as inoperable and unsafe to operate, with damaged components and

[98] Application at 5.

[99] Application at 5.

[100] Application at 5.

[101] Application at 5.

[102] Application at 5.

[103] Application at 5.

[104] Application at 5.

[105] Application at 5.

mechanisms that no longer function properly.[106] The old hydraulic-type mechanism on these switches do not operate properly, arcing horns are burnt off, and operating rods supports are damaged.[107] On the Kenwood–Van Lear 46kV circuit line, three of the 11 structures have conditions that comprise 27 percent of the current line section and open conditions include rot and woodpecker damage.[108]

Kentucky Power's proposed Project would replace the existing transmission transformer at Thelma Substation with a larger unit to solve the thermal violations identified by PJM.[109] Furthermore, the proposed Project would rebuild the existing Prestonsburg–Thelma line with new structures and conductor.[110] The construction of the new line, which will have lower impedance than the existing line, would address the voltage violations in the area. Rebuilding the Prestonsburg–Thelma line would also address the identified equipment condition, performance, and risk needs that were identified by PJM.[111]

The Commission places considerable weight on the evidence of record concerning the deteriorated state of the existing transmission line and associated structures and facilities. The Commission has noted in several prior CPCN requests that Kentucky Power has infrastructure in service that has passed its useful lives and this project

[106] Application at 5.

[107] Application at 5.

[108] Application at 5.

[109] Application at 5.

[110] Application at 5-6.

[111] Application at 6.

continues the efforts to address the aging infrastructure.[112] Kentucky Power has presented evidence of 34 category A open conditions associated with structures that make up the line on the Prestonsburg-Thelma circuit.[113] Kentucky Power has also provided photographic evidence demonstrating the current physical deterioration and damage that exists on the Prestonsburg-Thelma 46kV circuit.[114]

Kentucky Power has a duty to provide adequate, efficient and reasonable service.[115] In order to do so, Kentucky Power must maintain a reliable transmission system with sufficient capacity to meet current needs as well as provide for foreseeable load growth. Given the age and condition of the facilities to be replaced, it is reasonably expected that the open conditions and outages along this line will continue.

The Commission has expressed its concern in the past regarding the number of service outages experienced by Kentucky Power customers.[116] The voltage criteria

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[112] *See* Case No. 2024-00343 *Electronic Application of Kentucky Power Company for a Certificate of Public Convenience And Necessity to Replace And Upgrade Portions of the Bellefonte Station In Boyd County, Kentucky (Bellefonte Station Upgrade Project)*; See Case No. 2022-00118, *Electronic Application of Kentucky Power 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* (Ky. PSC Sep. 22, 2022); 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); Case No. 2021-00346, *Electronic Application of Kentucky Power Company for a Certificate of Public Convenience and Necessity to Construct a 138 kV Transmission Line and Associated Facilities in Breathitt, Floyd and Knott Counties, Kentucky* (Ky. PSC Apr. 13, 2022); and Case No. 2019-00154, *Electronic Application of Kentucky Power Company for a Certificate of Public Convenience and Necessity to Perform Upgrade, Replacement, and Installation Work at its Existing Substation Facilities in Perry and Leslie Counties, Kentucky* (Ky. PSC June 4, 2020); Case No. 2023-00040 *Electronic Application of Kentucky Power Company for a Certificate of Public Convenience and Necessity to Construct 69 KV Transmission Lines and Associated Facilities in Pike County, Kentucky* (Ky. PSC Oct. 6, 2023).

[113] Application at 5.

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

[115] KRS 278.030(2).

[116] See Case No. 2021-00481, *Electronic Joint Application of American Electric Power Company, Inc., Kentucky Power Company and Liberty Utilities Co. for Approval of the Transfer of Ownership and Control of Kentucky Power Company* (Ky. PSC Jan. 13, 2021), Order at 48–53.

violations, if not addressed, will result in more outages because customer outages are how electric utilities achieve load dropping. For these reasons, the Commission finds that Kentucky Power has demonstrated a need for the proposed project.

Absence of Wasteful Duplication

The Commission further finds that there is sufficient evidence in the record that the proposed project does not create wasteful duplication. Kentucky Power's proposed Project would retire approximately 16 miles of transmission lines and build approximately 13 miles of new 46kV transmission lines that would be built to 69kV standards.[117] The proposed Project would also upgrade and utilize currently existing transmission assets.[118] Thus, Kentucky Power's proposed Project would not be an excessive option to address its needs, nor would it needlessly duplicate already existing facilities.

Kentucky Power noted that when practical, it prefers to utilize existing ROW for transmission line rebuilds.[119] However, Kentucky Power concluded that rebuilding on its 13 miles of existing ROW would be high-risk and impractical because the current ROW is located on steep side slopes.[120] Kentucky Power stated that the 13 miles of existing ROW in the Thelma-Prestonsburg section was installed in the 1940s likely utilizing livestock to transport and set up the poles up the sides of mountains.[121] Large portions of this line traverse mountainous terrain along ridgetops and side hills through densely

[117] Wolffram Direct Testimony at 4.

[118] Application at 10.

[119] Kentucky Power's Response to Staff's First Request, Item 26(a).

[120] Kentucky Power's Response to Staff's First Request, Item 26(a).

[121] Kentucky Power's Supplemental Responses to Staff's First Request, Item 26.

forested areas with limited access roads.[122] As a result, access to portions of the existing line and ROW is limited to drone surveillance and all-terrain vehicles.[123] Additionally, Kentucky Power no longer designs to 46kV standards as 46kV is considered an obsolete operating voltage because the replacement parts of 46kV rated equipment are no longer available.[124] Accordingly, Kentucky Power designed its proposed Project to 69kV standards that can be operated at 46kV, but which can later be modernized and standardized to 69kV transmission lines.[125]

However, Kentucky Power noted current construction methods for 69kV standards require large steel structures, mechanical construction equipment, construction pads, and access roads which are not conducive with steep slopes.[126] Kentucky Power stated that existing documented landslides and geological studies indicate that reuse of its existing ROW poses a risk of landslides during construction which could affect the reliability of the constructed transmission lines and create safety risks for personnel.[127] After weighing these risks, Kentucky Power reasonably determined that constructing 69kV standard transmission lines on mostly new, greenfield land would be the most practical and efficient route for its new transmission lines.

[122] Kentucky Power's Supplemental Responses to Staff's First Request, Item 26.

[123] Kentucky Power's Supplemental Responses to Staff's First Request, Item 26.

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

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

[126] Kentucky Power's Response to Staff's First Request, Item 26(a).

[127] Kentucky Power's Response to Staff's First Request, Item 26(a).

The Commission notes that Kentucky Power considered reasonable alternatives to address its current transmission needs. Early in its planning process, Kentucky Power looked at addressing its baseline issue by introducing a new source to the Prestonsburg-Thelma area.[128] Potential sites for locating a new source included Stanville, Morgan Fork, Eastern, or by building new 138kV lines to Allen Station.[129] However, Kentucky Power argued that introducing a new source as a solution would only address the baseline problems by eliminating thermal and voltage issues, but it would not address the asset health concerns identified along the Prestonsburg-Thelma circuit, which were assets identified as needing replacement or renewal.[130] Kentucky Power stated that analysis was completed showing that rebuilding the 46kV line and replacing the Thelma transformer with a larger unit would address both the baseline violations and the need for the assets to be renewed and updated.[131]

Correspondingly, Kentucky Power developed both the proposed Project and Alternative 1 as options to address both baseline issues and supplemental issues such as asset health. However, after consideration, Alternative 1 was deemed less optimal because it would have required that Kenwood Substation be served from a single source, which is less reliable than two independent feeds, it would have required non-standard protection schemes to protect the 17.2 MVA of load due to the single source from Dewey Station, and would have required expanding the existing Dewey Substation, which may

[128] Kentucky Power's Supplemental Responses to Staff's First Request, Item 30.

[129] Kentucky Power's Supplemental Responses to Staff's First Request, Item 30.

[130] Kentucky Power's Supplemental Responses to Staff's First Request, Item 30.

[131] Kentucky Power's Supplemental Responses to Staff's First Request, Item 30.

not have been feasible given the terrain surrounding the substation.[132] Furthermore, the proposed Project is estimated to cost approximately $5.8 million less to construct and implement than Alternative 1.[133]

In an effort to explore multiple routes for the proposed transmission line Project and to determine which route would be optimal, Kentucky Power hired POWER to conduct a Siting Study to develop, analyze, and consider various routes for the proposed transmission line Project.[134] The primary purpose of the study was to identify routes that would enable Kentucky Power to acquire the necessary ROW, and to engineer, construct, operate, and maintain the line while minimizing environmental and land-use impacts.[135] After an initial route was proposed, four other routes were evaluated and considered.[136] Kentucky Power received feedback directly from landowners, through public engagement efforts such as virtual open houses, and from conducting environmental surveys which identified local cultural resources.[137] Based upon this feedback, the proposed route was modified several additional times.[138] Kentucky Power stated that eventually, the proposed route was chosen because it minimized land use impacts since it was located further away from residences and developments, affected fewer landowners, crossed

[132] Application at 10.

[133] Application, Exhibit 13.

[134] Application at 7.

[135] Application at 7.

[136] Santos Direct Testimony at 17.

[137] Santos Direct Testimony at 14.

[138] Santos Direct Testimony at 14.

more favorable and accessible terrain, avoided landslide-prone areas, and minimized visual impacts to the surrounding community.[139]

Accordingly, the Commission finds there is sufficient evidence to indicate that Kentucky Power meaningfully explored reasonable alternatives to address its baseline and supplemental issues that are required to meet its obligation to provide adequate, efficient, and reasonable service to its customers. As noted above, the Commission notes Kentucky Power's proposed Project was the least cost option considered by Kentucky Power as the Project is estimated to be approximately $5.8 million less than Alternative 1. Kentucky Power took meaningful steps to explore various routes for its proposed transmission lines that would minimize impacts on local stakeholders.

Request to Move Centerline

As discussed above, Kentucky Power made several requests related to the ROW and ability to move the transmission line route, if necessary.

The Commission understands that some degree of flexibility is needed when engineering and constructing a transmission line project and therefore, finds that Kentucky Power should have the authority to move the proposed transmission line up to 100 feet in either direction from the centerline, as it appears on the maps that accompanied Kentucky Power's application, for any appropriate reason so long as it does not affect a new property owner. The Commission further finds that, if Kentucky Power discovers a constructability need to move the location of the transmission line more than 100 feet from the centerline, or discovers that additional property owners are affected by the move, then Kentucky Power should file a motion in this proceeding to request approval

[139] Application at 9.

of such a move. Lastly, for the 27 discreet spans that Kentucky Power's witness F. Scott Woody identified on pages 8 and 9 of his Direct Testimony, the Commission grants Kentucky Power authority to relocate the centerline and associated facilities beyond the 100-foot-wide area up to the required feet for each span described in the testimony. However, if Kentucky Power discovers that any of these 27 discreet spans require a move from the centerline in excess of the footage listed in the Direct Testimony of F. Scott Woody, Kentucky Power should file a motion in this proceeding to request approval of such a move.

In any of the aforementioned circumstances requiring Kentucky Power to file a motion in this case due to relocating the centerline and associated facilities beyond the authorized area, the motion should 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 and any estimated changes in the cost of the project related to the relocation. Kentucky Power should serve the motion for approval to move the centerline on any affected landowner(s), even if not a party to this proceeding, and file proof of such service in the record. Upon receiving adequate information to thoroughly consider the request, the Commission will use its best efforts to promptly rule upon such motions.

For the reasons set forth above, the Commission finds that Kentucky Power has presented sufficient evidence on the record establishing that the Prestonsburg-Thelma Transmission Line Project is the least cost, most reasonable alternative to address the identified need for improved transmission facilities in the area. The Commission finds that the requested right-of-way is appropriate and the process for a deviation is also appropriate.

IT IS THEREFORE ORDERED that:

1. Kentucky Power is granted a CPCN to construct and operate the Prestonsburg-Thelma 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 this 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. Unless specifically authorized by this, or a subsequent Order issued by the Commission, Kentucky Power shall not move the centerline of the Prestonsburg-Thelma 46 kV Transmission Line more than 100 feet in any direction from the location as shown on the maps filed in this proceeding, or impact previously unimpacted property owners, without first seeking Commission approval by motion.

9. For the 27 discrete spans discussed above, Kentucky Power is granted authority to relocate the centerline and associated facilities beyond the 100-foot-wide area as identified as identified in Exhibit 4 to Kentucky Power's application, however Kentucky Power shall seek Commission approval before relocating any centerline and associated facilities in excess of the amount of feet listed for relocation in Exhibit 4.

10. For any motion filed seeking to relocate the right of way centerline or associated facilities beyond the authorized area, the motion shall identify the proposed location of the centerline or equipment; identify all affected landowner(s); provide evidence detailing, with technical specificity, the need for the proposed modification; and provide any estimated changes in the cost of the project related to the relocation. Kentucky Power shall serve the motion on any affected landowner(s), even if not a party to this proceeding, and file proof of such service in the record.

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

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

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Entered on this 3rd day of April, 2026.

PUBLIC SERVICE COMMISSION

Angie Hatton
Chairman

Mary Pat Regan
Commissioner

Andrew W. Wood
Commissioner

ATTEST:

Linda C. Bridwell, PE
Executive Director

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