

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 A 138 kV)	
Transmission Line And Associated Facilities)	Case No. 2021-00346
In Breathitt, Floyd, And Knott Counties, Kentucky)	
(Garrett Area Improvements 138 kV Transmission)	
Project))	

Application

Kentucky Power Company (“Kentucky Power” or the “Company”) moves the Public Service Commission of Kentucky (the “Commission”) pursuant to KRS 278.020(2) and 807 KAR 5:001, Section 15 for a Certificate of Public Convenience and Necessity authorizing Kentucky Power to:

- (a) construct approximately 15 miles of new 138 kV transmission line from the Hays Branch 138 kV Substation in Floyd County, Kentucky to the Soft Shell 138 kV Substation in Knott County, Kentucky (“Garrett Area 138 kV Transmission Line”). Approximately 1.4 miles of the new 138 kV transmission line will be a double circuit line from the new Eastern 138 kV Substation to a new tap structure in the vicinity of existing structure K137-4 on the Hays Branch – Morgan Fork 138 kV transmission line;
- (b) construct the new Eastern 138 kV Substation south of the existing 138 kV Hays Branch Substation in Floyd County, Kentucky;
- (c) expand and convert the existing Garrett 46 kV Substation located in Floyd County, Kentucky to a 138 kV Substation;
- (d) upgrade three existing Kentucky Power substations:
 - (i) the Hays Branch 138 kV Substation in Floyd County, Kentucky;
 - (ii) the McKinney 46 kV Substation in Floyd County, Kentucky; and
 - (iii) the Soft Shell 138 kV Substation in Knott County, Kentucky;

(e) perform removal work at the Beaver Creek 138/69/46 kV Substation and associated 38 kV transmission line;

(f) perform work at Kentucky Power’s delivery point (the Snag Fork Switching Structure) at the East Kentucky Power Cooperative, Inc. (“EKPC”) Salt Lick 138 kV Substation in Floyd County, Kentucky; and

(g) retire approximately 25 miles of the 46 kV Beaver Creek – McKinney #1 46 KV circuit, along with the retirement of the Spring Fork Tap, and related work, and the Shepherd and Lackey Switching Stations.

(Collectively, the “Garrett Area Improvements 138 kV Transmission Project” or the “Project”).

A map illustrating the location of the Project components is attached as **EXHIBIT 2**.

The Project is required to address asset renewal concerns, to upgrade the existing 46 kV system, and to connect two previously approved and constructed 138 kV projects. The Project will yield a stronger and more reliable 46 kV grid currently served by the Garrett 46 kV and Spring Fork 46 kV substations as well as the Salt Lick delivery point to EKPC.

Kentucky Power states in support of its application:

Applicant

1. Kentucky Power is a corporation organized on July 21, 1919 under the laws of the Commonwealth of Kentucky. The Company currently is in good standing in Kentucky.¹

2. The post office address of Kentucky Power is 1645 Winchester Avenue, Ashland, Kentucky 41101. The Company’s electronic mail address is kentucky_regulatory_services@aep.com.

3. Kentucky Power is engaged in the generation, purchase, transmission, distribution and sale of electric power. Kentucky Power serves approximately 165,000 customers in the

¹ A certified copy of the Company’s Articles of Incorporation and all amendments thereto was attached to the Joint Application in *In the Matter Of: The Joint Application Of Kentucky Power Company, American Electric Power Company, Inc. And Central And South West Corporation Regarding A Proposed Merger*, P.S.C. Case No. 99-149. The Company’s October 20, 2021 Certificate of Existence is filed as **EXHIBIT 1** of this Application.

following 20 counties of eastern Kentucky: Boyd, Breathitt, Carter, Clay, Elliott, Floyd, Greenup, Johnson, Knott, Lawrence, Leslie, Letcher, Lewis, Magoffin, Martin, Morgan, Owsley, Perry, Pike, and Rowan. Kentucky Power also supplies electric power at wholesale to other utilities and municipalities in Kentucky for resale. Kentucky Power is a utility as that term is defined in KRS 278.010.

4. Kentucky Power is a wholly owned subsidiary of American Electric Power Company, Inc. (“AEP”). AEP is a multi-state public utility holding company that includes utilities providing electric service to customers in parts of eleven states: Arkansas, Indiana, Kentucky, Louisiana, Michigan, Ohio, Oklahoma, Tennessee, Texas, Virginia, and West Virginia.

Background

5. The Project area is located in Breathitt, Floyd, and Knott counties, Kentucky. It includes the Garrett, Hueysville, Lackey, and Wayland communities in Floyd County, Kentucky. The Project area is served by the following substations located in Floyd County, Kentucky: the Garrett 46 kV Substation; the McKinney 46 kV Substation; the Beaver Creek 138/69/46 kV Substation; and the Hays Branch 138 kV Substation. The Project area is served the Spring Fork 46 kV Substation located in Breathitt County. The Project area also is served by the Salt Lick delivery point that serves the EKPC Salt Lick 46 kV Substation located in Floyd County, Kentucky.² The Garrett and Spring Fork substations, along with the Salt Lick delivery point, provide service to approximately 11 MVA of load and approximately 1,375 Kentucky Power residential and commercial customers. A map illustrating the Project area is attached as **EXHIBIT 2**.

² The EKPC Salt Lick 46 kV Substation will be upgraded to a 146 kV substation

6. The existing Soft Shell 138 kV Substation is located in eastern Knott County, Kentucky, approximately 4,500 feet northeast of the intersection of SR 80 and County Road 1087. The Soft Shell 138 kV Substation is a 30 MVA, 138-34.5 kV distribution substation. The Commission authorized the construction of the Soft Shell 138 kV Substation by its January 7, 2008 Order in Case No. 2007-00430.³

7. The existing Hays Branch 138 kV Substation is located off State Route 2554 in Floyd County, Kentucky. The Commission authorized the construction of the Hays Branch 138 kV Substation by its January 7, 2008 Order in Case No. 2007-00155.⁴

8. The existing Beaver Creek 138/69/46 kV Substation is located near the intersection of State Route 979 and State Route 122 in Floyd County, Kentucky.

9. The Garrett 46 kV Substation is located in west central Floyd County, Kentucky near the intersection of State Route 80 and State Route 7.

10. The McKinney 46 kV Substation is located in near the community of Drift, off State Route 122 on County Route 1233 in Floyd County, Kentucky.

11. The existing Beaver Creek – McKinney #1 46 kV transmission circuit is located in Floyd and Knott counties. It is approximately 24.6 miles in length and runs between the Beaver Creek 138/69/46 kV Substation and the McKinney 46 kV Substation. The existing Beaver Creek – McKinney #1 46 kV transmission circuit consists of 152 structures. The majority of the structures are wooden and were erected between 1929 and 1949.

³ *In the Matter of: Application Of Kentucky Power Company For A Certificate Of Public Convenience And Necessity To Construct A 138 kV Transmission Line And Associated Facilities In Knott County, Kentucky (Soft Shell)*, Case No. 2007-00430 (Ky. P.S.C. January 7, 2008).

⁴ *In the Matter of: Application Of Kentucky Power Company For A Certificate Of Public Convenience And Necessity To Construct A 138 kV Transmission Line And Associated Facilities In Floyd County, Kentucky*, Case No. 2007-00155 (Ky. P.S.C. August 3, 2007).

12. The Spring Fork 46 kV Substation is located in Breathitt County near the Breathitt-Knott County line. It serves approximately 20 residential customers and approximately 0.3 MVA of load in the vicinity of Mine Shaft Road.

13. **EXHIBIT 14** details the present system and Project components. The Project will be owned solely by the Company. AEP Kentucky Transmission Company, Inc. will have no ownership of, or investment in, the Project.

14. The Project was posted to the local plan on April 10, 2020 and subsequently assigned Supplemental ID s2188.1 through s2188.11. It was reviewed with stakeholders at the June 17, 2019 and February 21, 2020 Sub-Regional RTEP-Western meetings hosted by PJM. The local plan slides were updated on November 4, 2021 to clarify the scope associated with Eastern, Hays Branch, and Garrett substations, and to update, after the siting process was completed, the total line mileage to be constructed.

The Proposed Project

A. The Proposed Garrett Area 138 kV Transmission Line

15. The Garrett Area Transmission Line Project will be constructed using single and double-circuit configuration structures traversing Floyd and Knott Counties, Kentucky.

(a) Beginning at the existing Softshell Substation near Highway 80 off of Raymond Smith Drive with a proposed single-circuit Transmission Line proceeding northeasterly direction for approximately 6.1 miles to exiting interconnection point with EKPC near the intersection of Salt Lick and Lick Fork Roads.

(b) The proposed single-circuit transmission line will continue in the westward direction for approximately 4.2 miles towards the existing Garrett Substation near the intersection of State Route 80 and State Route 7. Approximately 1.75 miles of this 4.2 mile segment of the proposed single-circuit transmission line will parallel the existing Spring Fork Tap 46 kV Transmission Line right-of-way.

(c) Continuing from the existing Garrett Substation, the proposed single-circuit Transmission Line will proceed in a more northerly direction for approximately 3.0 miles towards to the proposed Eastern 138 kV Substation.

(d) Diverging from the single-circuit transmission line, the proposed double-circuit transmission line will then exit the proposed Eastern 138 kV Substation in the northeasterly direction for approximately 1.4 miles towards a proposed tap structure on the existing Hays Branch - Morgan Fork 138 kV Transmission Line.

16. The Garrett Area 138 kV Transmission Line is approximately 15 miles in length. Approximately 13.6 miles of the line will be single circuit 138 kV transmission line. Approximately 1.4 miles of the new 138 kV transmission line will be a double circuit line.

17. The Project will permit the retirement of the existing approximately 25-mile Beaver Creek - McKinney No. 1 46 kV Circuit carried on the existing Beaver Creek - Garrett, McKinney - Garrett and Spring Fork Tap Transmission Lines constructed in the 1940's. No existing transmission line infrastructure will be rebuilt.

B. The Proposed Eastern 138 kV Substation

18. Ten alternative sites were identified for the Eastern 138 kV Substation. Alternative C was selected based on its accessibility, topography, and central location. The Eastern 138 kV Substation will be located in Floyd County, Kentucky approximately 0.50 miles south of the existing Hays Branch 138 kV Substation and north of the existing Garrett 46 kV Substation.

19. The Eastern 138 kV Substation will be located on a 4.373 acre site. It is designed to be a 138 kV ring bus station with three line exits. Initially, it will contain three 138 kV (3000 A 40 kA) circuit breakers and a 16' x 27' Drop In Control Module ("DICM"). The circuit breakers will be located on exits toward the Morgan Fork 138 kV Substation and the upgraded Garrett 138 kV Substation. The layout drawing and location map for the Eastern 138 kV Substation is attached as **EXHIBIT 5**.

C. The Proposed Garrett 46 kV Substation Upgrade.

20. Kentucky Power proposes to upgrade the existing Garrett 46 kV Substation to a 138 kV Substation. The substation upgrades will include a modified vertical 138 kV ring bus; two 138 kV circuit breakers on the line exits; one 138/12 kV 30 MVA transformer; and one 138 kV circuit switcher. Kentucky Power also proposes to install a new 16' x 27' DICM.

21. The layout diagram and location map of the upgraded Garrett 138 kV Substation is attached as **EXHIBIT 6.**

22. Kentucky Power proposes to expand the footprint of the Garrett 46 kV Substation through the acquisition of a 4.131 acre tract in connection with its upgrade of the existing station to a 138 kV Substation.

D. The Proposed Snag Fork Switching Structure.

23. The proposed Snag Fork Switching Structure will be located near the existing EKPC Salt Lick 138 kV Substation⁵ in Floyd County Kentucky. The Snag Fork Switching Structure will consist of a three-way automated (phase-over-phase) switching structure and will serve as a delivery point to the Salt Lick 138 kV Substation. A diagram of the Snag Fork Switching Structure is attached as **EXHIBIT 10.**

E. Other Station Work.

24. Kentucky Power proposes to install a 138 kV (3000 A 40 kA) circuit breaker in the Soft Shell 138 kV Substation with an exit (via Snag Fork) towards the proposed Garrett 138 kV Substation. The Soft Shell 138 kV Substation layout and location map is attached as **EXHIBIT 7.**

⁵ The EKPC Salt Lick Substation currently is a 46 kV substation. It will be upgraded by EKPC to a 138 kV substation.

25. Kentucky Power proposes to relocate and reuse the existing 69 kV Circuit Breaker B located in the McKinney 46 kV Substation to the Beaver Creek – McKinney #2 circuit exit at the McKinney 46 kV Substation. The McKinney 46 kV Substation layout and location map is attached as **EXHIBIT 8**.

26. Kentucky Power proposes to remove the existing 46 kV Circuit Breaker A at the Beaver Creek 138/69/46 kV Substation along with associated equipment. The removal is in connection with the retirement of the Beaver Creek – McKinney #1 Circuit. The Beaver Creek 138/69/46 kV Substation layout and location map is attached as **EXHIBIT 9**.

27. Kentucky Power proposes to perform remote end relaying work at the Morgan Fork 138 kV Substation and the Hays Branch 138 kV Substation. The remote end relays will be installed in existing cabinets in the substations. The work will permit the two substations to communicate with the proposed Eastern 138 kV Substation and upgraded Garrett 138 kV Substation. The installation of the relays at the two substations is part of the ordinary course of operating and maintaining the Company's transmission facilities and will improve the reliability and efficiency of the proposed Garrett Area 138 kV Transmission Line.

F. **The Retirement Of The Beaver Creek – McKinney #1 Circuit.**

28. Kentucky Power proposes to retire the Beaver Creek – McKinney #1 Circuit by removing the poles and conductors. The McKinney-Garrett section and the Beaver Creek – Garrett 46 kV section comprise the Beaver Creek – McKinney #1 Circuit. The location of the Beaver Creek – McKinney #1 Circuit is illustrated on **EXHIBIT 14**.

G. **The Structures, Conductors, And Groundwires**

29. Final structure types will be determined during detailed engineering in connection with a ground survey and geotechnical studies.

(a) Based on preliminary engineering, Kentucky Power plans to use single-circuit galvanized steel monopoles, guyed three-pole structures, and two-pole H-Frames, for the Salt Lick-Softshell, Garrett-Salt Lick, and Eastern-Garrett sections of the Garrett Area 138 kV Transmission Line. Single-circuit galvanized lattice steel towers may be used in areas of constraints.

(b) Based on preliminary engineering for the Eastern-Hays Branch portion of the proposed line, the Company anticipates using double-circuit galvanized lattice steel towers and double-circuit monopole structures with davit arms. In addition, an additional structure will be constructed as part of the Hays Branch-Morgan Fork 138 kV Transmission Line tap point.

30. Preliminary engineering indicates the average above ground level height of the proposed single-circuit structures will be approximately 85 feet; double-circuit structures will be approximately 120 feet above ground level. The structure types selected for this Project are the best fit with the landscape (terrain and land use) and are the most economical solution.

31. The H-Frame and lattice tower structures are efficient, cost-effective, simple form, and proven structures that have functioned well over the years on transmission lines of all voltages. Additionally, these structures enable long spans, which makes them well-suited for mountainous terrain and rural landscapes.

32. Details of typical structure types are provided in **EXHIBIT 11**.

33. The proposed single-circuit structures will support three conductors and two overhead groundwires. The proposed double-circuit structures will support six conductors and two overhead groundwires. The conductors will consist of 1033.5 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.

H. Distribution Line Work.

34. Kentucky Power will extend its existing distribution system in the usual course of business to serve the Spring Fork area of Breathitt, County of Kentucky, including approximately 20 existing customers in a small area along Mine Shaft Road. The work is required to accommodate the retirement of the Spring Fork 46 kV Substation and relocate the load to the Haddix 69 kV Substation. The Spring Fork area is located in the Company's certified territory.

I. Siting Study.

35. GAI Consultants, Inc. ("GAI") was engaged to assist Kentucky Power in preparing a siting study to identify the most suitable route for the Garrett Area 138 kV Transmission Line and the proposed site of the Eastern 138 kV Substation. The Siting Study is attached as **EXHIBIT 20** to this Application.

36. The GAI Siting Study divided the Garrett Area 138 kV Transmission Line was divided into four Focus Areas (Hays-Branch-Eastern; Eastern-Garrett; Garrett-Salt Lick; and Salt Lick-Soft Shell). A total of ten alternative routes were identified for the transmission line. *See **EXHIBIT 4*** to this Application for illustrations of the proposed and alternative routes. No single alternative route traversed the entire length of the Garrett Area 138 kV Transmission Line. A least two alternatives were proposed for each Focus Area. Company Witness Reese provides details of the GAI Siting Study methodology, describes the results and conclusions of the siting study, and details the proposed Garrett Area 138 kV Transmission Line route.

Financial Aspects Of The Project

37. AEP Kentucky Transmission Company will not own nor invest in the Project. Kentucky Power will own the project in its entirety.

38. The total functional estimate of the Project cost is \$87.2 million. The project cost comprises approximately: (a) \$49.1 million for transmission line work including right-of-way acquisition; (b) 18.3 million for the construction and upgrade of the substations and switch structure; (c) \$17.3 for the retirement of the Beaver Creek – McKinney #1 Circuit; and approximately \$2.4 million for distribution line work to allow retirement of the 46 kV lines and the Spring Fork 46 kV Substation.⁶

39. The Project does not involve sufficient capital outlay to materially affect the existing financial condition of Kentucky Power. Kentucky Power anticipates funding the cost of the Project through its operating cash flow and other internally generated funds.

40. Kentucky Power projects the Company's share of the annual operating cost will be approximately \$96,400 for general maintenance and inspection. The projected annual additional ad valorem taxes resulting from the Company's share of the Project are expected to total approximately \$803,200.

Property Acquisition

41. The Eastern 138 kV Substation will be constructed on a 4.373-acre tract to be purchased by Kentucky Power. The tract will enable the Company to locate the new substation so that it may provide adequate safety clearances, provide the required ingress and egress, permit grading and cut-fill work, accommodate storm water controls, accommodate the transmission line entrance, accommodate the distribution lines to be served by the substation, and lastly, provide for future expansion of the substation, if necessary.

42. Kentucky Power also will acquire a 4.131 acre tract at the Garrett 46 kV Substation to permit the expansion of the substation.

⁶ The sum of the costs of the four major components does not tie to the total cost because of rounding.

43. The Garrett Area Improvements 138 kV Transmission Line will be constructed within a new 100 foot right-of-way (fifty feet on each side of the centerline) except where a wider right-of-way is required to address constructability and operational requirements.

44. A widened right-of-way may be required for certain longer spans and in steep terrain to permit the safe and efficient operation of the transmission line. The widened right-of-way also would facilitate additional tree clearing to prevent the conductors from coming in contact with trees during high wind conditions and tree clearing on the up-hill side in order to prevent trees from falling down hill and into the conductors and structures. These areas of wider right-of-way will be identified during detailed engineering design and will be included during the right-of-way negotiations with landowners.

45. The Garrett Area 138 kV Transmission Line principally crosses undeveloped forest.

46. To ensure the ability to address potential issues that may emerge in connection with ground surveys, final engineering, and right-of-way negotiations, Kentucky Power requests authority to move the illustrated centerline and right-of-way and to expand the right-of-way, within the Filing Corridor illustrated on **EXHIBIT 3**. The Filing Corridor is a uniform 1,000 feet in width.

47. Kentucky Power's request to move the centerline and right-of-way, or to expand the right-of-way, within the Filing Corridor is made expressly contingent upon Kentucky Power having notified the property owner onto whose property the line would be moved of this proceeding in accordance with 807 KAR 5:120, Section 2(3). After construction is completed, Kentucky Power will file with the Commission a revised plan showing the final location of the

transmission line and structures. Company Witnesses West provides descriptions of the proposed Filing Corridor and the manner in which Kentucky Power proposes to use it.

48. The Filing Corridor and right-of-way include 189 parcels. Eighty-six of the parcels are crossed by the right-of-way. A list of parcels and associated landowners within the right-of-way and the Filing Corridor is provided as **EXHIBIT 15**. Kentucky Power worked with property owners affected by the right-of-way, and where possible, made reasonable adjustments to the Proposed Route as part of its route development process.

49. Kentucky Power plans to begin to acquire rights-of-way in the summer of 2022. Kentucky Power will provide monthly property acquisition status updates beginning June 2022.

Notices

50. Kentucky Power filed its Notice of Intent in conformity with 807 KAR 5:120, Section 1 on September 1, 2021. This proceeding was assigned Case No. 2021-00346. Kentucky Power on October 8, 2021 filed its tendered amended Noticed of Intent along with a motion to amend and a request for deviation. The Company's motions are pending.

51. The amended notice of intent updated the project description, and added Breathitt County, Kentucky to the enumeration of counties where some portion of the project would be undertaken. The proposed Garrett Area 138 kV Transmission Line will not be constructed in Breathitt County.

52. Kentucky Power by a mailing made October 25, 2021 provided the notice required by 807 KAR 5:120, Section 2(3) to all property owners, as indicated by the records of the property valuation administrators of Floyd and Knott counties,⁷ whose land is included

⁷The Company is updating through the property valuation administrators of Floyd and Knott counties the previously-obtained property valuation administrator data. The Company will supplement **EXHIBIT 15** as necessary. Certain of the addresses obtained from the records of the pertinent property valuation administrator were determined through

within the right-of-way and the Filing Corridor (“Affected Landowners”) of the route of the Garrett Area 138 kV Transmission Line and the proposed station work.

53. The October 25, 2021 Notice included the following information:

- a. notice of the proposed construction;
- b. the docket number (P.S.C. Case No. 2021-000346) under which the Application will be processed;
- c. the address and telephone number of the Commission’s Executive Director;
- d. a description of the property owners’ rights to request a public hearing and the right to request intervention; and
- e. a description of proposed Garrett Area 138 kV Transmission Line and proposed station work and corresponding maps indicating their locations.

54. A sample copy of the October 25, 2021 Notice, including all enclosures, and the verification by Ryan M. Howell of the mailing of the letters are attached as part of **EXHIBIT 13**.

The list of the Affected Landowners to whom the Notice was mailed, including their addresses as indicated by the records of the property valuation administrators of Knott and Floyd Counties, are attached as **EXHIBIT 15**.⁸

55. The notice required by 807 KAR 5:120, Section 2(5) first was published on September 22, 2021 in the *Floyd County Times* and September 23, 2021 in the *Troublesome Creek Times*. The published notices included the following information:

- a. a description of the Proposed Route;
- b. the docket number (P.S.C. Case No. 2021-00346) under which the Application will be processed;
- c. the address and telephone number of the Commission’s Executive Director;
- d. a description of the property owners’ rights to request a public hearing and the right to request intervention; and

earlier mailings or other landowner contact efforts to be incorrect or otherwise undeliverable. Where the Company was able to determine the correct mailing addresses through landowner communication or other research, Kentucky Power used the updated addresses to ensure the landowners received the required notice.

⁸ The designation Unknown (“UNK”) reflects the entry for the parcel in the records of the relevant property valuation administrator.

- e. a map illustrating the proposed route of the Garrett Area 138 kV Transmission Line and substation locations.

The notices published in the *Floyd County Times* and the *Troublesome Creek Times* and Affidavit of Publication are attached as **EXHIBIT 17-A**.

56. A second notice containing the information required by required by 807 KAR 5:120, Section 2(5) was published on October 20, 2021 in the *Floyd County Times*; October 21, 2021 in the *Troublesome Creek Times*; and October 20, 2021 in the *Jackson Breathitt County Times Voice*. The second notice updated the project description, and added Breathitt County, Kentucky to the enumeration of counties where some portion of the project would be undertaken. The notices published in the *Jackson Breathitt County Times Voice*, the *Floyd County Times*, and the *Troublesome Creek Times* and Affidavit of Publication are attached as **EXHIBIT 17-B**.

Franchises And Permits

57. Kentucky Power is not required to obtain a franchise from any public authority. 807 KAR 5:001, Section 15(2)(b).

58. Kentucky Power will obtain all required environmental compliance permits and complete the required studies prior to beginning Project construction. An initial preliminary environmental survey was conducted spring 2021. The Company will continue to perform and update surveys as necessary to obtain the appropriate environmental permits and approvals before the anticipated start of construction in the third quarter of 2022. A summary of the environmental surveys and permitting completed or anticipated to be required is provided in Section VII of Company Witness Reese's testimony.

59. Following receipt of the requested authority, and completion of final design and right-of-way acquisition, but prior to the beginning of construction, Kentucky Power will update

or supplement the listing in Company Witness Reese’s testimony of required environmental surveys or permitting.

60. The Company also will timely submit the final line design to the Federal Aviation Administration and the Kentucky Transportation Cabinet to secure a “Determination of No Hazard to Air Navigation.” Other permits that will be obtained include road and railroad crossing permits. These will be submitted to the Commission once final engineering has been completed.

**The Proposed Construction Is Required By
The Public Convenience And Necessity**

61. The Project is required by the public convenience and necessity.

62. The project will not produce wasteful duplication. It will not result in an excess of capacity over need, and does not represent an excess of investment in relation to the productivity and efficiencies to be gained. It will not result in an unnecessary duplication of physical properties.

63. The retirement of the nearly 25 mile Beaver Creek – McKinney #1 46 kV Circuit and the construction of the approximately 15 mile Garrett Area 138 kV Transmission Line reduces the Company’s physical facilities and their impact on their environs.

64. **EXHIBIT 16** details the major components of the proposed substation work and their purpose, along with the need for each component and the benefits provided by each major component.

65. The Project addresses substantial deficiencies in existing facilities beyond what could be provided through normal improvements in the ordinary course of business.

66. The Project also will improve the reliability and capacity of the Company’s 46 kV network in the area of the Hays, Branch, Garrett, and Spring Fork substations, along with the Salt

Lick delivery point to EKPC. The project also will allow Kentucky Power to address multiple equipment condition and performance risks on the Company's existing 46 kV network in Floyd and eastern Breathitt County.

67. The Beaver Creek – McKinney #1 46 kV Circuit, which is to be retired, is obsolete. Equipment for replacement and repair increasingly is becoming difficult to secure. In addition, the O&M costs associated with the Beaver Creek – McKinney #1 46 kV Circuit are higher than with a comparable 138 kV transmission line because of the required greater frequency of inspection.

68. The Beaver Creek – McKinney #1 46 kV Circuit comprises 152 structures; the structures principally are wooden poles that date from 1929 (14 percent) and 1949 (40 percent). There are 142 open conditions, including damaged poles, damaged cross-arms, damaged conductor and shield wires, and damaged guy anchor, knee, and v-braces. Photographs illustrating representative examples of the damaged poles and appurtenances are attached as **EXHIBIT 12.**

69. There were multiple momentary and permanent outages on the Beaver Creek – McKinney #1 46 kV Circuit in the past five years. Temporary measures are inadequate to repair or improve the existing structures

70. The Spring Fork 46 kV Substation, the EKPC Salt Lick 138 kV Substation, and the 32 MW MarkWest Hydrocarbon gas compressing operation currently are radially fed. In addition, an inactive coal mining operation also is radially fed. Removing the load from 46 kV network and moving it to the 138 kV system mitigates the need to address the needs identified on the 46 kV network and will loop the existing radial loads in the area by means of the 138 kV system.

71. The Project connects two previously approved projects: the Soft Shell 138 kV Transmission Line and the Hays Branch-Morgan Fork 138 kV Transmission line.

72. The work to be performed was identified through use of the “AEP Guidelines for Transmission Owner Identified Needs” (“AEP Guidelines”). A copy of the AEP Guidelines is attached as **EXHIBIT 21**.

73. The need for and benefits of the Project are further detailed in the testimony of Company Witness Koehler, **EXHIBIT 22** (the Local Plan) and **EXHIBIT 23** (PJM RTEP Solution Slides).

74. Kentucky Power considered one alternative to the Project. The alternative reviewed was to rebuild the approximately 25 mile Beaver Creek – McKinney #1 46 kV Circuit, to construct an approximately 6.5 mile 138 kV transmission line from the Stanville 138 kV Substation, and to convert approximately 3.5 miles of an existing 138 kV single-circuit transmission line to a 138 kV double-circuit transmission line. See **EXHIBIT 23** and the testimony of Company Witness Koehler for additional information on the rebuild alternative.

75. Kentucky Power rejected the rebuild alternative as unreasonable because of its \$105 million cost (approximately 20 percent greater than the cost of the Project), the requirement that the Company rebuild and operate an obsolete 46 kV system, and the fact that customers served by the Spring Fork 46 kV Substation and the Salt Lick delivery point would continue to be radially fed.

76. Kentucky Power has an obligation under KRS 278.030(2) to provide adequate, efficient, and reasonable service to its customers. The Project is necessary to permit the Company to meet its statutory obligation.

77. The Project is located entirely within Kentucky Power’s certified territory and will not compete with any public utilities, corporations or persons.

Reviews And Stakeholder Input

78. Kentucky Power and GAI conducted extensive stakeholder outreach, including publishing news releases to announce the Project and the Proposed Route, as well as establishing a public website to provide information and solicit comments. The news releases are attached as **EXHIBIT 18**. The public website may be viewed at

<https://www.aeptransmission.com/kentucky/Garrett/> .

79. A virtual meeting was held with the Knott County Judge Executive; an in-person meeting was conducted with the Floyd County Judge Executive. The Company discussed the Project with the Breathitt County Judge Executive on October 14, 2021.

80. A virtual Open House with a 30-day public comment period was conducted in March and April 2021. The Company also held a live virtual “Town Hall” meeting at noon and 5:00 p.m. on April 1, 2021.

81. The virtual Open House remains available for landowners and stakeholders to visit. (<https://www.aeptransmission.com/kentucky/Garrett/open-house/index.html>). The virtual open house allows affected landowners, interested persons, and other stakeholders to receive information regarding the Project. Among the topics addressed in the virtual open house are the need for the Project, the Project timeline, right-of-way activities, the routing process, typical structures, and the construction process. The virtual open house also permitted stakeholder to submit questions and receive answers regarding the Project.

Commencement Of Work And Anticipated In-Service Date

82. Kentucky Power anticipates commencing work, subject to the grant of the requested authority, in the third quarter of 2022. The expected in-service date is the fourth quarter of 2024.

Exhibits And Testimony

83. The exhibits and testimony listed in the Appendix to this Application are attached to and made a part of this Application.

Communications

84. The Applicant respectfully requests that communications in this matter be addressed to the e-mail addresses identified on Kentucky Power's August 31, 2021 Notice of Election of Use of Electronic Filing Procedures.

Filing Requirements

85. Kentucky Power's compliance with the requirements of 807 KAR 5:001, Section 14, 807 KAR 5:001, Section 15, and 807 KAR 5:120 is detailed in **EXHIBIT 19** to the Application.

WHEREFORE, Kentucky Power Company requests that the Commission issue an Order:

(1) Granting Kentucky Power a Certificate of Public Convenience and Necessity for the Project authorizing:

(a) construct approximately 15 miles of new 138 kV transmission line from the Hays Branch 138 kV Substation in Floyd County, Kentucky to the Soft Shell 138 kV Substation in Knott County, Kentucky ("Garrett Area 138 kV Transmission Line"). Approximately 1.4 miles of the new 138 kV transmission line will be a double circuit line from the new Eastern 138 kV Substation to a new tap structure in the vicinity of existing structure K137-4 on the Hays Branch – Morgan Fork 138 kV transmission line;

(b) construct the new Eastern 138 kV Substation south of the existing 138 kV Hays Branch Substation in Floyd County, Kentucky;

(c) expand and convert the existing Garrett 46 kV Substation located in Floyd County, Kentucky to a 138 kV Substation;

(d) upgrade three existing Kentucky Power substations:

(i) the Hays Branch 138 kV Substation in Floyd County, Kentucky;

(ii) the McKinney 46 kV Substation in Floyd County, Kentucky;

(iii) the Soft Shell 138 kV Substation in Knott County, Kentucky.

(e) perform removal work at the Beaver Creek 138/69/46 kV Substation and associated 38 kV transmission line;

(f) perform work at Kentucky Power’s delivery point (the Snag Fork Switching Structure) at the East Kentucky Power Cooperative, Inc. (“EKPC”) Salt Lick 138 kV Substation in Floyd County, Kentucky; and

(g) retire approximately 25 miles of the 46 kV Beaver Creek – McKinney #1 46 KV circuit, along with the retirement of the Spring Fork Tap, and related work, and the Shepherd and Lackey Switching Stations.

(2) Granting Kentucky Power such other relief as may be appropriate.

Respectfully submitted,



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EXHIBIT LIST

Exhibit No.	Exhibit Name
1	Kentucky Power Company Certificate of Existence
2	Project Location Map
3A	Proposed Route Map 1A
3B	Proposed Route Map 1B
4A	Alternative Routes Map 2A
4B	Alternative Routes Map 2B
5	Proposed Eastern Substation 138kV Substation Location and Layout
6	Garrett 138kV Substation Location and Layout
7	Soft Shell 138kV Substation Location and Layout
8	McKinney 46kV Substation Location and Layout
9	Beaver Creek 138kV Substation Location and Layout
10	Snag Fork Switching Structure Location and Layout
11A	Monopole Dead End Single Circuit Illustration
11B	Proposed 138 H Frame Single Circuit Illustration
11C	Three Pole Single Circuit Illustration
11D	Self Supporting Lattice Single Circuit Illustration
11E	Dead End Lattice Double Circuit Illustration
11F	Monopole Dead End Double Circuit Illustration
12	Photographs Illustrating Asset Renewal Needs
12A	Beaver Creek-Garrett 1

Exhibit No.	Exhibit Name
12B	Beaver Creek-Garrett 2
12C	Beaver Creek-Garrett 3
12D	McKinney-Garrett 1
12E	McKinney-Garrett 2
12F	McKinney-Garrett 3
12G	McKinney-Garrett 4
12H	Spring Fork Tap 1
12I	Spring Fork Tap 2
12J	Spring Fork Tap 3
13	Copy of Notice Mailed to Landowners and Verification of Mailing
14	Map Illustrating Present System and Project Components
15	List of Landowners Within The ROW and 1,000 Foot Corridor
16	Description Of Major Components Of The Proposed Work, The Need For Each, And Their Purpose
17A	Published Notice and Affidavit 1
17B	Published Notice and Affidavit 2
18	Public News Release
19	Filing Requirements
20	Siting Study
21	AEP's Guidelines For Transmission Owner Identified Needs
22	PJM Local Plan

Exhibit No.	Exhibit Name
23	PJM Solution with Alternative