

Kentucky Power Company  
KPSC Case No. 2025-00346  
Commission Staff's First Set of Data Requests  
Dated January 14, 2026  
Page 1 of 2

**DATA REQUEST**

- KPSC 1\_26** Refer to Application, Exhibit 7, Siting Study, pages 8-9, paragraph 3.2, Santos Direct Testimony, pages 5-6, and Wolframm Direct Testimony, page 10, lines 17–21.
- a. Explain in more detail why replacing the 46kV lines within the already existing ROW is not feasible or explain why doing so would be less cost effective than the proposed project.
  - b. Explain in more detail why Kentucky Power could not build new 46kV lines parallel to the already existing 46kV lines within the confines of the existing ROW for the entire length of the project.
  - c. Provide an estimated cost of the project if Kentucky Power were to carry out the proposed Project utilizing only its existing ROW.

**RESPONSE**

- a. The Company's prefers to use existing rights-of-way for transmission line rebuilds when practical. However, Kentucky Power ultimately concluded here that rebuilding on the existing steep side slopes was high-risk and impractical. Current construction methods for today's 69kV standards require large steel structures, mechanical construction equipment, construction pads, and access roads which are not conducive to steep slopes. Existing documented landslides and geological studies indicate that the reuse of the existing ROW poses a risk of landslides both during construction and throughout the life of the transmission lines, which presents obvious safety risks and reliability concerns. Kentucky Power would be pleased to conduct a field review with Commission Staff to review the Project area and demonstrate how the uniqueness of the area renders rebuilding within existing ROW unsafe and impractical.
- b. First, 46 kV is considered an obsolete operating voltage as the replacement parts of 46 kV rated equipment are no longer available. Kentucky Power is actively replacing 46 kV facilities when practical in its footprint in order to move to a more modern and standard voltage at 69 kV, which allows for easier asset replacement in case of failure or performing routine maintenance. Additionally, the existing transmission line is generally centered within the existing ROW. Building a line parallel to the existing would require additional ROW procurement to provide adequate space for the proposed transmission line to function to its design capacity. Widening the ROW parallel to the existing corridor would increase the number of encroaches along the line route.

Kentucky Power Company  
KPSC Case No. 2025-00346  
Commission Staff's First Set of Data Requests  
Dated January 14, 2026  
Page 2 of 2

In addition, offsetting the centerline through steep terrain would result in more challenging structure locations in terms of both access and constructability. The associated risks noted in the response to subpart (a) of this response would still be concerns if a parallel alignment were to be considered.

c. The Company has not prepared an estimate for constructing the Project within ROW. That estimate was not created due to the infeasibility, including safety risks and ultimate reliability concerns, of construction as discussed in parts (a) and (b) of this response. In addition, any estimate would require assumptions to be made that would not accurately reflect the costs, constraints, outages, and risks associated with this option.

Witness: Tanner S. Wolffram

Witness: J. Scott Woody

**March 6, 2026 Supplemental Response**

Kentucky Power provides the following supplemental response after participating in the informal conference with Commission Staff on February 27, 2026, to provide additional clarity and information to aid the Commission in its review of the Company's Application.

Because of the vintage of the existing lines and their location, it is impractical or impossible for the Company to rebuild in the existing ROW. Large portions of this line traverse mountainous terrain along ridgetops and side hills through densely forested areas with limited access roads. As a result, access to portions of the existing line and ROW is limited to drone surveillance and all-terrain vehicles. These lines were originally constructed in the 1940s using completely different methods than could or should be used today. For example, the Company believes this line would have been originally constructed using livestock to transport and set poles up the sides of mountains.

Moreover, there were essentially no safety standards in place when the lines were originally constructed. Necessary safety standards now exist, which prevent the Company from constructing the project in the same ROW. As previously explained, the remote location and steepness of the slopes upon which part of this line is built, which can only be accessed by drone and/or ATV, make it extremely impractical, if not impossible, for the Company to set the large steel structures needed for the project, transport and use the necessary mechanical construction equipment for the project, and construct the access roads needed to accomplish those things. Moreover, even if modern safety standards allowed, and the Company could construct the necessary roads and transport the

necessary equipment, the risk of landslides (which is high in the area around the ROW) could threaten the lives of the construction workers during project construction and, ultimately, continually threaten reliability once in-service. In sum, while the Company is able to maintain the existing 46kV facilities in the existing ROW (although safety concerns still exist when it comes to maintenance of the lines), for the reasons stated in the Company's Application, the lines must be replaced and upgraded. For the reasons stated in this response, the existing facilities cannot be replaced and upgraded within the existing ROW. As such, the Company has proposed the Project as the least cost, reasonable alternative.

Witness: J. Scott Woody

Kentucky Power Company  
KPSC Case No. 2025-00346  
Commission Staff's First Set of Data Requests  
Dated January 14, 2026  
Page 1 of 2

**DATA REQUEST**

**KPSC 1\_30** Refer to the Wolffram Direct Testimony, page 10.

- a. Provide a breakdown of the specific cost components set forth in lines 17–21. Include, at a minimum, in that breakdown: labor, engineering estimates, transmission components by component, land acquisition, remediation.
- b. For the five highest scoring alternatives, provide an identical breakdown for each alternative.
- c. Explain whether these estimates include consideration of the costs associated with identified encroachments.
- d. Identify the contingency amount included for each cost category.

**RESPONSE**

a. Please see KPCO\_R\_KPSC\_1\_30\_Attachment1. Please see the Company's response to KPSC 1-27(b) for a description of the change in the estimates for certain individual Project components contained in Company Witness Wolffram's Direct Testimony and the Application. However, the total cost of the Project has not changed.

b. The Company is not aware of any alternatives discussed in Company Witness Wolffram's Testimony at page 10. The Company assumes that Commission Staff is referencing the project alternatives described in this case, and not the potential route alternatives discussed in Company Witness Santos's Testimony and in the Siting Study. Please see KPCO\_R\_KPSC\_1\_30\_Attachment2 for the cost breakdown for the alternative project. The Company would note that, for purposes of the initial filing, it included only the installation costs of the alternative. To that end, KPCO\_R\_KPSC\_1\_30\_Attachment2 includes the estimated removal costs for the alternative. This estimate does not include additional right-of-way costs that would have been needed to construct that project.

c. The cost estimates provided include risk contingency, generally, which would encompass encroachments.

Kentucky Power Company  
KPSC Case No. 2025-00346  
Commission Staff's First Set of Data Requests  
Dated January 14, 2026  
Page 2 of 2

d. Please refer to the Company's response in part (a).

Witness: Tanner S. Wolfram

**March 6, 2026 Supplemental Response**

Kentucky Power provides the following supplemental response after participating in the informal conference with Commission Staff on February 27, 2026, to provide additional clarity and information to aid the Commission in its review of the Company's Application.

While the Company only presented one Project Alternative (Alternative 1) to the Commission with its Application in this case, that does not mean that the Company did not consider, at least preliminarily, several other potential options to solve identified baseline and supplemental issues. In most instances, the Company considers, but quickly dismisses, some potential solutions (or alternatives) because they either do not fully solve the identified needs or would be impractical or impossible to implement. The Company endeavors to fully develop at least one viable alternative to the project proposed in its application. Potential solutions that are dismissed early on are not developed further and are not included with the Company's CPCN applications because they would never be constructed by the Company for either addressability, constructability, or obvious cost reasons. Below is additional information about the initial phases of the Company's process to develop the electrical solutions for this Project.

The Company engages in a planning process to identify and develop the best project to solve the identified baseline and supplemental issues. When possible, solutions that solve the baseline issues and additional supplemental issues are preferred when the cost would be efficient holistic approaches.

In order to address all of the baseline issues in this pending Application, one of the preliminary solution options was to look at how to introduce a "new source" to the area. A new source would leave the Prestonsburg-Thelma asset as is but eliminate the thermal issue at the Thelma Station and would eliminate the voltage issues all along the 46kV network. Potential sites for a new source would be Stanville, Morgan Fork, Eastern, or by building new 138 kV lines to Allen station. These preliminary options would leave the Prestonsburg – Thelma asset as is, and would not address the asset health concerns, but solely address the baseline concerns. These options, which are described in more detail below, were dismissed early on due to the fact they do not holistically address the needs in the area.

- At Stanville Substation, install 90 MVA 138/46 redundant Transformer along with 138kV circuit switcher and 46kV circuit breaker on Stanville Bus #1. At Allen Substation, add the 6th breaker in the 46kV ring bus and new line exit for new Stanville – Allen circuit. Install new ~4 mi 46kV circuit (rated at 69kV) from the new Stanville redundant transformer to Allen Substation. This work will establish two feeds from Allen to Stanville.
  - An additional limitation for this solution included potential space constraints at Allen station.
- Install new ~4 mi 46kV line from Morgan Fork to McKinney. Expand the 46kV box bay at McKinney Substation to install new 46kV breaker from Morgan Fork Substation. At Morgan Fork Substation, install 138/69/46kV transformer and line exit for the new McKinney line. Install 138kV circuit switcher and 69kV transformer circuit breaker.
- Install new ~4 mi 46kV line from Eastern to McKinney. Expand the 46kV box bay at McKinney Substation to install new 46kV breaker for the new line 46kV line from Eastern Substation. At Eastern Substation, install 138/69/46kV transformer and line exit for the new McKinney line. Install 138kV circuit switcher and 69kV transformer circuit breaker.
  - An additional limitation for this solution included potential space constraints at Eastern Substation.
- Tap the Hays Branch - Morgan Fork 138kV line just North of Salisbury Substation and build a double circuit from the tap point to Allen Substation at roughly 5 miles. Build a new station next to Allen station that can support the 138kV in and out with 2 circuit breakers and a straight bus. Install a 138/46kV transformer and connect the new substation to the existing Allen Substation.
  - An additional limitation for this solution included potential space constraints at Allen Substation.
- Tap the Dewey - Stanville 138kV line just North of Stanville Substation and build a double circuit from the tap point to Allen Substation at roughly 6 miles. Build a new substation next to Allen Substation that can support the 138kV in and out with two circuit breakers and a straight bus. Install a 138/46kV transformer and connect the new station to the existing Allen Substation.
  - An additional limitation for this solution included potential space constraints at Allen Substation.

The next step is to then consider what other needs have been identified in the area. In this instance, the Prestonsburg-Thelma 46 kV line had been presented to PJM and PJM stakeholders as a supplemental asset renewal need. Therefore, if practical, the solution to the baseline issues should also attempt to address the asset renewal needs. Analysis was completed that showed by rebuilding the 46 kV line and replacing the Thelma transformer with a larger unit, the baseline violations are addressed alongside the supplemental asset renewal needs with a single project. The new source idea listed above

would address only the baseline violations, leaving the supplemental need to be addressed with a separate project, which is inefficient.

Another preliminary rebuild option resulted in obviously higher costs that did not warrant conducting further additional consideration or economic analysis:

- Rebuild and convert the subtransmission lines to 138kV line between Thelma and Allen Substations (~19 miles today). Review and convert Betsy Lane – Allen to 138kV (constructed to 138kV standards today). Build a new substation next to Allen Substation that can support the 138kV in and out with two circuit breakers and a straight bus. Install a 138/46kV transformer and connect the new station to the existing Allen Substation. Prestonsburg and Kenwood Substations would also need to be converted to 138kV and Prestonsburg would need a 138/46kV stepdown until other area lines are rebuilt.

This option was dismissed early due to the fact that more miles to rebuild at higher voltage is more costly, and in this case rebuilding at 138kV instead of 69kV. More station work would be needed to evaluate and complete this option, and it may require property expansions or even new station sites. This option would be well above the needs in the area as a 69kV solution addresses the same issues but avoids additional costs to convert everything to 138kV.

- Rebuild the Prestonsburg-Thelma line on centerline. This option was dismissed given the Company would still need to address the Kenwood and Van Lear Switch serving the Kenwood station today and given the significant issues with existing TOW as described in the Company's supplemental response to KPSC 1-26.

A more complete alternative that still addresses both baseline and supplemental needs (Alternative 1) is further described in Company Witness Moore's testimony:

- Install new ~4 mi 46kV line from Morgan Fork to McKinney Substations. Expand the 46kV box bay at McKinney Substation to install new 46kV breaker for the new line 46kV line from Morgan Fork Substation. At Morgan Fork Substation, install 138/69/46kV transformer and line exit for the new McKinney line. Install 138kV circuit switcher and 69kV transformer circuit breaker. Expand the Dewey Substation. Install two new 138kV circuit breakers to allow new 138kV lines towards Kenwood Substation. Convert Kenwood Substation to 138kV. Install new ~5.5 mi 138kV double circuit line between Dewey and Kenwood 138kV substations. Retire Prestonsburg – Thelma 46kV circuit.
  - This is not a preferred solution due to Kenwood Substation (22 MW of load) would likely have to be a greenfield station so that distribution customers can continue to be served while construction is underway. Also, Kenwood would be served from a single source and we would have to operate it non-standard with one side Normally Open to ensure the protection scheme operations appropriately.

Lastly, once approved by PJM as the best solution to address all identified needs, the engineering teams consider whether the line can be rebuilt on centerline or if greenfield paths offer a better solution. In this case, and as further described by Company Witness Woody, constructing the new line off centerline results in a reduction in overall line mileage, and safer and more practical constructability, while still addressing both baseline and supplemental needs in this area. In contrast, building on the existing centerline not only has significant issues with existing ROW, including accessibility and encroachments (as further described in the Company's supplemental response to KPSC 1-26) the Company would still need to address needs on the Kenwood – Van Lear 46kV line, which was installed in 1969 and has asset health concerns and the Van Lear Switch, which is currently inoperable and damaged.

Witness: Jasmine L. Moore



