

Kentucky Power Company
KPSC Case No. 2023-00040
Staff First Set of Data Responses
Dated June 23, 2023
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DATA REQUEST

KPSC 1_10 Refer to Case No. 2022-00236, January 5, 2023 Order. Provide a detailed explanation and analysis of how the 69 kV transmission line and substation upgrades proposed in this application do not result in wasteful duplication. In the response, specifically address how the proposed project would not result in an excess of capacity over need or excessive investment in relation to productivity or efficiency.

RESPONSE

The Proposed Project is neither wasteful or duplicative because it is the most cost effective solution (requiring half as much transmission line length as Alternatives Solutions 1 and 2) for the requirements for the area from a reliability and service perspective.

The Proposed Project provides an effective solution electrically to service requirements in the area. Without the Proposed Project, customers in the area and in other surrounding areas would be exposed to increased risk of failure of electric service, longer and/or more frequent outages, and deteriorated reliability. The components comprising the Proposed Project do not duplicate electrical capabilities currently present in Kentucky Power's service network. The Project will not result in wasteful or excessive investment, as illustrated by the fact that it is a more effective solution electrically and is less costly compared to other alternatives. The Proposed Project does not provide excessive capacity to the area, but rather addresses the needs of the area in a way that is cost effective and will delay the need for future upgrades.

The Company notes that the Proposed Project is comprised of the same key components (i.e., same 69kV transmission line and substation upgrades) in both Case No. 2022-00236 and Case No. 2023-00040. Specifically, these key components include the following: (a) construction of a new 69kV line between New Camp and Stone substation, (b) construction of Orinoco 69kV substation and (c) substation work required at New Camp, Hatfield, and Stone substations to allow for construction of the new 69kV line. The Proposed Project is electrically superior, more reliable, and more cost effective than any viable alternative.

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The proposed 69kV work would not result in an excess of capacity or excessive investment, as it is adequate to accommodate the expected load growth in the area and address identified baseline and supplemental needs, and further allow for load growth in the area with less investment compared to the other alternatives as described in the Application which, as mentioned before, are inferior electrically and more costly. Please also see the Direct Testimony of Company Witnesses Koehler and West for additional details.

September 8, 2023 Supplemental Response

46kV is an obsolete operating voltage for a subtransmission system, and this voltage class is no longer supported as standard by AEP. AEP and the Company are working to eliminate 46 kV where practical in order to move to a more standard voltage across the system, like 69 kV. Standardizing equipment and voltages allows for engineering efficiencies and reduces the amount of spare equipment needed to be acquired and maintained in inventory.

Essentially, instead of maintaining spare equipment at two different voltage levels, only one voltage class of equipment is required. Also, utilizing more modern, standard sized 69kV equipment allows for greater capacity to deliver power at approximately the same cost as 46kV equipment.

In addition, equipment rated at 46 kV is now supported by fewer manufacturers and new spare parts are not as available as they once were. Most spare 46 kV equipment within the AEP system is made up of previously-removed-from-service 46 kV equipment that is cannibalized for spare parts. Since 46 kV designed voltage equipment is less available, the risk of prolonged outages increases as the stock inventory of AEP's 46 kV equipment depletes. AEP is actively replacing these facilities with more standard subtransmission voltage equipment such as 69 kV when possible. This reduces the exposure of the failed like-for-like equipment not being in inventory and thus reduces chances of longer outages. In projects where 69 kV equipment is installed and operated at 46 kV (like the Alternative Solutions contemplate here), finding spare parts is no longer a concern as the replacement equipment will also be 69 kV.

Witness: Nicolas C. Koehler



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E-Signature Summary

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 I, Marilyn Michelle Caldwell, did witness the participants named above electronically sign this document.



