

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	)	CASE NO.
EXPAND AND UPGRADE PORTIONS OF THE	)	2025-00335
BAKER SUBSTATION IN LAWRENCE COUNTY,	)	
KENTUCKY (BAKER REACTOR BREAKER	)	
PROJECT)	)	

ORDER

On October 29, 2025, Kentucky Power Company (Kentucky Power) filed an application, pursuant to KRS 278.020(1) and 807 KAR 5:001, Section 15, for a Certificate of Public Convenience and Necessity (CPCN) to expand and upgrade portions of its Baker Substation located in Lawrence County, Kentucky. Kentucky Power had originally applied for, and was granted, a declaratory order finding that a CPCN was not necessary for the Baker Substation project in Case No. 2024-00283.<sup>1</sup> However, due to an increase in projected costs, Kentucky Power filed the present application for a CPCN.

By Order issued on November 25, 2025, the Commission established a procedural schedule for the orderly processing of this matter and issued a request for information. On December 9, 2025, Kentucky Power filed responses to Commission Staff's First Request for Information . On January 9, 2026, Kentucky Power filed a motion to submit

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<sup>1</sup> See Case No. 2024-00283, *Electronic Application of Kentucky Power Company for a Declaratory Order that the Proposed Installation of a New Three-Phase Reactor Circuit Breaker and Associated Construction at the Baker Substation in Lawrence County, Kentucky is an Ordinary Extension in the Usual Course of Business and Does Not Require a Certificate of Public Convenience and Necessity* (Ky. PSC Dec. 27, 2024) Order at 10.

this matter for a decision based upon the written record. There are no intervenors in this case, and no public comment has been filed. The record is complete and the matter stands ready for a decision.

### BACKGROUND

Kentucky Power is a corporation organized on July 21, 1919, pursuant to the laws of the Commonwealth of Kentucky.<sup>2</sup> Kentucky Power is engaged in the generation, purchase, transmission, distribution, and sale of electric power.<sup>3</sup> Kentucky Power serves approximately 162,000 customers in the following 20 counties in eastern Kentucky: Boyd, Breathitt, Carter, Clay, Elliott, Floyd, Greenup, Johnson, Knott, Lawrence, Leslie, Letcher, Lewis, Magoffin, Martin, Morgan, Owsley, Perry, Pike, and Rowan.<sup>4</sup>

Kentucky Power's Baker 765/345kV Substation (Baker Substation) is approximately one-half mile north of the Big Sandy Plant in Lawrence County, Kentucky.<sup>5</sup> The Baker Substation is comprised of a two-string breaker and a half configuration 765 kV station with three transmission line exits.<sup>6</sup> The transmission lines connect to Hanging Rock Substation, Broadford Substation, and Culloden Substation.<sup>7</sup> The entire Baker Substation yard is approximately 22 acres, split between a 765 kV section and a 345 kV section.<sup>8</sup> The proposed project (Project) would be built on 15 acres of the total substation

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<sup>2</sup> Application at 2.

<sup>3</sup> Application at 2.

<sup>4</sup> Application at 2.

<sup>5</sup> Application at 2.

<sup>6</sup> Application at 3.

<sup>7</sup> Application at 3.

<sup>8</sup> Application at 3.

yard.<sup>9</sup> The reactors connected to the Baker Substation 765 kV circuit are used to help control the voltage levels and fluctuations during varying system conditions.<sup>10</sup> There are four reactors associated with this line in Baker Substation, each approximately 45 feet tall and weighing roughly 150 tons each.<sup>11</sup>

Kentucky Power previously applied for, and was granted, a declaratory order finding that the Project does not require a CPCN.<sup>12</sup> However, cost estimates for the project have increased from \$23.5 million to \$29.4 million due, in part, to the increased cost of moving a third-party gas line on the property.<sup>13</sup> Though Kentucky Power believed the updated cost of the Project, now amounting to 1.4 percent of its plant in service, was still an extension in the ordinary course of business and would not require a CPCN, it stated that it filed the present application out of an abundance of caution.<sup>14</sup>

### THE PROPOSED PROJECT

Kentucky Power characterized the Project as a baseline PJM Interconnection LLC (PJM) project.<sup>15</sup> The Project is located in Lawrence County, Kentucky, and is entirely

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<sup>9</sup> Application at 3.

<sup>10</sup> Application at 3.

<sup>11</sup> Application at 3.

<sup>12</sup> Case No. 2024-00283, *Electronic Application of Kentucky Power Company for a Declaratory Order that the Proposed Installation of a New Three-Phase Reactor Circuit Breaker and Associated Construction at the Baker Substation in Lawrence County, Kentucky is an Ordinary Extension in the Usual Course of Business and Does Not Require a Certificate of Public Convenience and Necessity* (Ky. PSC Dec. 27, 2024).

<sup>13</sup> Direct Testimony of Tanner Wolfram (Wolfram Direct Testimony) at 9.

<sup>14</sup> Wolfram Direct Testimony at 9.

<sup>15</sup> Application at 4.

within the current Kentucky Power footprint.<sup>16</sup> Kentucky Power, in conjunction with PJM, has proposed to expand and upgrade portions of the Baker Substation. In particular, the Project includes:

- a. Expanding the yard (an approximate 640-foot by 185-foot expansion) at the Baker Substation;
- b. Relocating the existing reactors within the expanded yard at the Baker Substation;
- c. Installing a new three-phase 765 kV 50 kA circuit breaker on the reactors on the Baker-Bradford 765 kV line within the Baker Substation;
- d. Reconnecting the existing Baker-Broadford 765 kV circuit to the relocated reactors; and
- e. Associated distribution work and relocating an existing gas line located within the property.<sup>17</sup>

In addition, Kentucky Power proposes to perform other nominal construction as part of the Project, including relocating an existing gas pipeline, partially modifying an existing access drive, and moving the existing security perimeter fence, all within the property currently owned by Kentucky Power.<sup>18</sup> The Project will be performed on approximately 15 acres of the property, on the northern 765 kV portion of the Baker

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<sup>16</sup> Kentucky Power's Response to Staff's First Request for Information (Staff's First Request) (filed Dec. 9, 2025), Item 5.

<sup>17</sup> Application at 3–4.

<sup>18</sup> Application at 4.

Substation.<sup>19</sup> The Project is a baseline project with no PJM supplemental projects associated with the Project.<sup>20</sup> Baseline projects are transmission expansions or enhancements that are required by PJM to achieve compliance with respect to PJM's system reliability, operational performance, or market efficiency criteria as determined by PJM's Office of the Interconnection, as well as projects that are needed to meet transmission owners' local transmission planning criteria.<sup>21</sup>

Kentucky Power stated that the Project was identified through the PJM Regional Transmission Expansion Plan (RTEP) process at the Baker Substation.<sup>22</sup> Kentucky Power and PJM determined that the 765 kV Baker-Broadford circuit's inability to be switched on and off without shutting down the Baker-Broadford line poses an operational risk during high transfer conditions and adds unnecessary operation cycles to maintain the main line breakers.<sup>23</sup>

Financial Aspects. Kentucky Power estimated the total cost of the project is approximately \$29.4 million.<sup>24</sup> The breakdown of the cost estimate is:

- (1) Approximately \$24.5 million for the Baker Substation expansion and equipment;
- (2) \$1.2 million for removal cost;

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<sup>19</sup> Application at 3.

<sup>20</sup> Application at 4.

<sup>21</sup> 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)* (Ky. PSC Mar. 7, 2025) Order at 4.

<sup>22</sup> Application at 7.

<sup>23</sup> Direct Testimony of Jasmine Moore (Moore Direct Testimony) at 3.

<sup>24</sup> Wolfram Direct Testimony at 6.

- (3) \$140,000 for telecommunications work;
- (4) \$50,000 for associated distribution work; and
- (5) \$3.5 million to relocate the TC Energy gas line.<sup>25</sup>

Kentucky Power anticipates funding the cost of the Project through its operating cash flow and other internally generated funds.<sup>26</sup> The cost of the Project represents approximately 1.4 percent of Kentucky Power's plant in service.<sup>27</sup> Since the Project was deemed a baseline project by PJM, Kentucky Power will only be allocated its zonal portion of the total Project costs.<sup>28</sup> Kentucky Power stated it will be allocated 5.429 percent of the total Project cost, based on Kentucky Power's current 12-CP allocation, resulting in a cost allocation to Kentucky Power of \$1.60 million.<sup>29</sup> Kentucky Power stated that it expects annual operating costs of approximately \$4,400 for general maintenance and inspection in addition to annual ad valorem taxes of approximately \$70,000 resulting from the Project.<sup>30</sup>

Alternative Considered. Kentucky Power stated the only viable project alternative would involve the construction of a new Greenfield 765kV substation.<sup>31</sup> However, Kentucky Power determined that the construction of an entirely new substation would

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<sup>25</sup> Wolfram Direct Testimony at 6.

<sup>26</sup> Wolfram Direct Testimony at 7.

<sup>27</sup> Wolfram Direct Testimony at 7.

<sup>28</sup> Application at 6.

<sup>29</sup> Kentucky Power's Response to Staff's First Request, Item 4.

<sup>30</sup> Application at 6.

<sup>31</sup> Direct Testimony of Tyler Benedum (Benedum Direct Testimony) at 5.

result in unnecessary and imprudent spending.<sup>32</sup> Kentucky Power estimated that the cost of building a new substation would be \$266 million, compared to the estimated cost of the Project of \$29.4 million.<sup>33</sup>

### 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.<sup>34</sup>

"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.<sup>35</sup>

"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."<sup>36</sup> To demonstrate that a proposed facility does not

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<sup>32</sup> Benedum Direct Testimony at 5.

<sup>33</sup> Benedum Direct Testimony at 5.

<sup>34</sup> *Kentucky Utilities Co. v. Pub. Serv. Comm'n*, 252 S.W.2d 885 (Ky. 1952).

<sup>35</sup> *Kentucky Utilities Co.* at 890.

<sup>36</sup> *Kentucky Utilities Co.* at 890.

result in wasteful duplication, the Commission has held that the applicant must demonstrate that a thorough review of all reasonable alternative has been performed.<sup>37</sup>

The fundamental principle of reasonable, least-cost alternative is embedded in such an analysis. Selection of a proposal that ultimately costs more than an alternative does not necessarily result in wasteful duplication.<sup>38</sup> All relevant factors must be balanced.<sup>39</sup>

### DISCUSSION AND FINDINGS

Kentucky Power presented sufficient evidence to demonstrate that the proposed Baker Substation upgrade and expansion is needed to provide adequate, efficient, and reasonable service for the reasons discussed below. Specifically, the evidence indicated that Kentucky Power cannot currently switch reactors in and out of service while the 765kV line is energized because the reactors are not equipped with a circuit breaker. Kentucky Power indicated that this prevents operational flexibility during high power transfer conditions, such as Winter Storm Elliott in December of 2022,<sup>40</sup> and that it adds unnecessary operational cycles to the main line breakers.<sup>41</sup> Kentucky Power has stated that the existing reactors are located in a space-constrained area in the 765 kV yard, requiring the Baker Substation to be expanded northward on Kentucky Power-owned

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<sup>37</sup> 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).

<sup>38</sup> 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)).

<sup>39</sup> Case No. 2005-00089, Aug. 19, 2005 final Order at 6.

<sup>40</sup> Application, Exhibit 10 PJM Slides at 1.

<sup>41</sup> Benedum Direct Testimony at 3.



property and relocating the existing reactors into an expanded portion.<sup>42</sup> Furthermore, the issue was identified by both PJM and Kentucky Power through PJM's RTEP process. The issue, if not addressed, will limit Kentucky Power's ability to respond to high power transfer conditions and add unnecessary operational cycles to the mainline breakers. Thus, having reviewed the record and being otherwise sufficiently advised, the Commission finds that Kentucky Power has demonstrated a need for the Project.

Kentucky Power indicated that there was another project that could address the need. The project alternative would consist of building a new Greenfield 765 kV substation as opposed to the proposed Project which would upgrade the existing Baker Substation facilities.<sup>43</sup> However, Kentucky Power presented evidence that the Project for which it is requesting approval herein is expected to be approximately one tenth of the cost of the alternative.<sup>44</sup> Further, as noted above, the Project was also identified as a baseline through PJM's RTEP process, which is intended to identify transmission system reliability issues and provide cost effective solutions to those issues. While Kentucky Power's participation in the RTEP process is not a substitute for it meeting its burden of proof under the legal standard required by Kentucky law to obtain a CPCN, in this case, Kentucky Power also presented evidence that the Project is the least cost, most reasonable alternative for addressing the identified needs. Thus, having reviewed the record and being otherwise sufficiently advised, the Commission finds the proposed

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<sup>42</sup> Benedum Direct Testimony at 3.

<sup>43</sup> Benedum Direct Testimony at 5.

<sup>44</sup> Benedum Direct Testimony at 5.

Baker Substation project is the least cost, most reasonable alternative and that the Project will not result in wasteful duplication.

For the reasons set forth above, the Commission finds that Kentucky Power's application for CPCN for the Project should be granted. However, in approving the Project, the Commission notes that Kentucky Power averred that the Project would be constructed on current easements and property of the utility. As the Project progresses, if those facts change, Kentucky Power should file a motion to modify this Order with the Commission. Additionally, Kentucky Power should immediately notify the Commission of any material changes to the Project including, but not limited to, expense of engineering changes. Kentucky Power should also make other filings with the Commission as discussed in the ordering paragraphs below.

IT IS THEREFORE ORDERED that:

1. Kentucky Power is granted a CPCN to construct and operate the Baker Substation Project as described in its application, with the conditions expressed in this Order.
2. Kentucky Power shall file finalized construction plans 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 plans of the Project 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 the 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 the Project within 30 days of issuance of the permit.

7. Kentucky Power shall not construct any part of the Project outside of its easements, as proposed in this proceeding, without first seeking Commission approval as discussed in this Order.

8. 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.


9. The Executive Director is delegated authority to grant reasonable extensions of time for filing any documents required by ordering paragraph 2, 3, 4, 5, and 6 upon Kentucky Power's showing of good cause for such extension.

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

PUBLIC SERVICE COMMISSION

  
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Chairman

  
\_\_\_\_\_  
Commissioner

  
\_\_\_\_\_  
Commissioner

ATTEST:

  
\_\_\_\_\_  
Executive Director



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