

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC APPLICATION OF DUKE ENERGY)
KENTUCKY, INC. FOR A CERTIFICATE OF)
PUBLIC CONVENIENCE AND NECESSITY TO)
CONVERT ITS WET FLUE GAS)
DESULFURIZATION SYSTEM FROM A)
QUICKLIME REAGENT PROCESS TO A)
LIMESTONE REAGENT HANDLING SYSTEM AT)
ITS EAST BEND GENERATING STATION AND)
FOR APPROVAL TO AMEND ITS)
ENVIRONMENTAL COMPLIANCE PLAN FOR)
RECOVERY BY ENVIRONMENTAL)
SURCHARGE MECHANISM)

CASE NO.
2024-00152

COMMISSION STAFF'S SECOND REQUEST FOR INFORMATION
TO DUKE ENERGY KENTUCKY, INC.

Duke Energy Kentucky, Inc. (Duke Kentucky), pursuant to 807 KAR 5:001, shall file with the Commission an electronic version of the following information. The information requested is due on October 4, 2024. The Commission directs Duke Kentucky to the Commission's July 22, 2021 Order in Case No. 2020-00085¹ regarding filings with the Commission. Electronic documents shall be in portable document format (PDF), shall be searchable, and shall be appropriately bookmarked.

Each response shall include the question to which the response is made and shall include the name of the witness responsible for responding to the questions related to the information provided. Each response shall be answered under oath or, for

¹ Case No. 2020-00085, *Electronic Emergency Docket Related to the Novel Coronavirus COVID-19* (Ky. PSC July 22, 2021), Order (in which the Commission ordered that for case filings made on and after March 16, 2020, filers are NOT required to file the original physical copies of the filings required by 807 KAR 5:001, Section 8).

representatives of a public or private corporation or a partnership or association or a governmental agency, be accompanied by a signed certification of the preparer or the person supervising the preparation of the response on behalf of the entity that the response is true and accurate to the best of that person's knowledge, information, and belief formed after a reasonable inquiry.

Duke Kentucky shall make timely amendment to any prior response if Duke Kentucky obtains information that indicates the response was incorrect or incomplete when made or, though correct or complete when made, is now incorrect or incomplete in any material respect.

For any request to which Duke Kentucky fails or refuses to furnish all or part of the requested information, Duke Kentucky shall provide a written explanation of the specific grounds for its failure to completely and precisely respond.

Careful attention shall be given to copied and scanned material to ensure that it is legible. When the requested information has been previously provided in this proceeding in the requested format, reference may be made to the specific location of that information in responding to this request. When applicable, the requested information shall be separately provided for total company operations and jurisdictional operations. When filing a paper containing personal information, Duke Kentucky shall, in accordance with 807 KAR 5:001, Section 4(10), encrypt or redact the paper so that personal information cannot be read.

1. Refer to Duke Kentucky's response to Commission Staff's First Request for Information (Staff's First Request), Item 2(a).

a. Explain, in detail, the process Duke Kentucky used to calculate the East Bend dispatch cost of a basket of market coals that is optimized to derive a blended product that serves as a least-cost market dispatch coal, inclusive of coal cost, reagent costs, and transportation.

b. Provide the calculation for quicklime that resulted in a blended coal that had a #5.62 SO₂ content and a heat content of 11703 Btu/lb. Include in the response any associated work papers or sources used for the calculation.

c. Provide the derivation of the dispatch cost and the escalation from \$3.83/MMBtu to \$4.19/MMBtu over the model horizon. Include in the response any associated work papers or sources used for the calculation.

d. Provide the calculation for the limestone scenario that resulted in the modeled coal of #6 SO₂ product at 11782 Btu/lb. Include in the response any associated work papers or sources used for the calculation.

e. Provide the derivation of the dispatch cost escalating from \$2.77/MMBtu to \$2.97/MMBtu over the model horizon from the limestone scenario. Include in the response any workpapers or sources used for the calculation.

2. Refer to Duke Kentucky's response to Staff's First Request, Item 23. Confirm Duke Kentucky believes there is no beneficial reuse of the new wet flue gas desulfurization (WFGD) byproduct. If confirmed, explain why. If not confirmed, explain what beneficial uses Duke Kentucky foresees for the WFGD byproduct.

3. Refer to the Direct Testimony of J. Michael Geers (Geers Direct Testimony), page 13, lines 18-19.

a. Provide the latest status of the filed application.

b. Provide a monthly update on the status of this application during the pendency of this case.

4. Refer to Duke Kentucky's response to Staff's First Request, Item 13. This response was unresponsive. Provide clarification of the planned retirement date of the East Bend facility. Include in the clarification a specific year.

5. Refer to Duke Kentucky's response to Staff's First Request, Item 14 and the Engineering, Procurement, and Construction (EPC) contract with AECOM. Provide:

a. All additional cost data, including any additional estimates;

b. The response to the Request for Proposal (RFP) AECOM provided, including projections for expenses associated with the EPC contract such as the cost for front end design and engineering and the development of a construction bid package already provided.

6. Refer to Duke Kentucky's response to Staff's First Request, Item 15. Provide a summary from 2019 through the current year of the forced outages or derates by cause code and description for East Bend Station.

7. Refer to Duke Kentucky's response to Staff's First, Item 20. Provide cost and schedule estimates for each item identified in the response.

8. Refer to Duke Kentucky's response to Staff's First Request, Item 21 and refer to Application at page 6, paragraph 14. Confirm Duke Kentucky did no further analysis to support the impact the higher cost of lime-based reagent has on the unit's capacity factor and dispatch ranking. If not confirmed, provide in the response any work papers or documents supporting the estimates and cost of the lime.

9. Refer to Duke Kentucky's response to Staff's First Request, Item 22 and refer to the Application at page 6, paragraph 15. Provide a more detailed financial and benefit/cost analysis for each of the three alternatives that were considered for the Limestone Conversion Project. Include in the response any estimates of expenses, any cost benefit analysis performed, and any supporting documentation for each of the three alternatives.

10. Refer to Application, Exhibit 3 Duke Kentucky East Bend Station Title V Minor Permit Revision Table on Page 3. Provide the actual application and permit for the "Baseline," "Future W-Limestone," and "Future W/O- Quicklime" operating modes.

11. Refer to Duke Kentucky's response to Staff's First Request, Item 28.

a. Elaborate, in detail, why moving the Duke Kentucky generation fleet from Fixed Resource Requirement (FRR) to a Reliability Pricing Model (RPM) after 14 years will benefit Kentucky customers. Provide any supporting documentation for the explanation including any calculations performed for the benefit analysis.

b. Provide a copy of any internal or other studies or analyses Duke Kentucky relied upon to justify the September 6, 2024, filing it made in Case No. 2024-00285.²

c. Discuss whether the decision for Duke Kentucky to move to RPM has any impact on the rationale provided in this case in support of the approval of the certificate for public convenience and necessity (CPCN) for the East Bend Station rather

² Case No. 2024-00285, *Electronic Application of Duke Energy Kentucky, Inc. to Become a Full Participant in the PJM Interconnection LLC, Base Residual and Incremental Auction Construct for the 2027/2028 Delivery Year and for Necessary Accounting and Tariff Changes* (filed Sept. 6, 2024), Application.

than for Duke Kentucky to rely upon the Pennsylvania New Jersey Maryland Interconnection RPM markets to provide sufficient capacity for customers.



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DATED SEP 20 2024

cc: Parties of Record

Case No. 2024-00152

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