

COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC APPLICATION OF DUKE ENERGY )	
KENTUCKY, INC. FOR: 1) AN ADJUSTMENT OF )	
THE ELECTRIC RATES; 2) APPROVAL OF NEW )	
TARIFFS; 3) APPROVAL OF ACCOUNTING )	CASE NO.
PRACTICES TO ESTABLISH REGULATORY )	2024-00354
ASSETS AND LIABILITIES; AND 4) ALL OTHER )	
REQUIRED APPROVALS AND RELIEF )	

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 January 22, 2025. The Commission directs Duke Kentucky to the Commission's July 22, 2021, Order in Case No. 2020-00085<sup>1</sup> 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 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

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<sup>1</sup> 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).

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 Case No. 2022-00372 filing dated November 7, 2024, refund Report.<sup>2</sup>

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<sup>2</sup> Case No. 2022-00372, *Electronic Application of Duke Energy Kentucky, Inc. for (1) An Adjustment of Electric Rates; (2) Approval of New Tariffs; (3) Approval of Accounting Practices to Establish Regulatory Assets and Liabilities; and (4) All Other Required Approvals and Relief* (filed Nov. 7, 2024), Duke Kentucky's Refund Report.

a. Confirm that Duke Kentucky has not completed the refunds as ordered by the Commission in that case. If not confirmed, explain.

b. Identify the document or testimony in this matter that addresses the need to credit Duke Kentucky's remaining money owed to customers.

c. If Duke Kentucky is unable to cite to the information that addresses the need to credit Duke Kentucky's remaining money owed to customers, explain how Duke Kentucky intends to comply with the refund Order.

2. Refer to Application, Volume 11, Schedule B-8 page 1. Explain the approximate 67 percent increase from the base period to the 13-month average forecasted test period in "Construction Work in Progress." Include in the explanation any work papers, estimates, and a list of specific projects that result in the increase.

3. Refer to the Application generally. Explain, with specific examples, the change in circumstances since the last base rate case, Case No. 2022-00372, that would lead Duke Kentucky to be entitled to recover any terminal net salvage value in this matter.

4. Refer to the Application generally. Confirm that the capital projects and expenses related to East Bend Station were excluded from the revenue requirement. Explain why the capital investment and expenses related to East Bend Station are excluded in this case. If not confirmed, explain.

5. Refer to the Direct Testimony of Thomas J. Heath, Jr. (Heath Direct Testimony), page 20, lines 2-4, and Schedules J-2 and J-3.

a. Explain the Bloomberg implied forward curve.

b. If alternative forecasted rates could have been used, explain why they were not utilized.

c. Explain the addition of a 25-basis point credit spread to the interest rate for the forecast period of long term commercial paper. Include in the response why this addition is appropriate.

d. For the expected \$150 million and \$175 million debt issuances, explain the appropriateness of using a weighted average of the 5-year, 10-year, and 15-year U.S. Treasury yield and the respective added basis point credit spreads. Include in the response how each respective adder was derived.

6. Refer to the Direct Testimony of Matthew Kalemba (Kalemba Direct Testimony), page 4, lines 1-6. Provide a table showing Duke Kentucky's internal peak load forecast for system planning purposes, the Duke Kentucky PJM Interconnection, L.L.C. (PJM) load obligations separating out the peak coincidence factors and system reserve requirements for the current and previous three years and any forecasts for which a comparison is possible.

7. Refer to the Kalemba Direct Testimony, page 5, lines 7-14. Refer also to Duke Kentucky's response to Commission Staff's First Request for Information (Staff's First Request), Item 18, in Case No. 2024-00197,<sup>3</sup> which identifies the costs associated with its overall preferred portfolio and a preferred portfolio in the absence of the EPA CAA Section 111 update. For the current proceeding, identify the costs, by account number and filing(s), for the planning for or any preliminary actions or expenses associated with implementing the preferred portfolio.

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<sup>3</sup> See Case No. 2024-00197, *Electronic 2024 Integrated Resource Plan of Duke Energy Kentucky, Inc.* (filed Sept. 4, 2024), Duke Kentucky's Responses to Staff's First Request.

8. Refer to the Kalemba Direct Testimony, page 5, lines 7-14 and page 6, lines 11-21. Refer also to Case No. 2024-00197, Duke Kentucky's response to Staff's First Request, Item 18, Attachment.

a. Provide a copy of Duke Kentucky's response to Item 18, including the attachment, in this case.

b. Confirm that in Tab Figure 6.1, the 111 Scenario with DFO Conversion 2030 (DFO Conversion) does not become cost effective until 2040.

c. In Tab 6.1 for the DFO Conversion and the 111 Scenario East Bend 2 Retires 2032 (Retires in 2032) for the years 2025-2027, even though East Bend is burning 100 percent coal, the Retires in 2032 scenario almost doubles in cost and is more costly than the DFO conversion scenario. Explain what, in the model runs, makes the Retires in 2032 scenario more costly.

d. In Tab 6.1 for the DFO Conversion and the 111 Scenario East Bend 2 Retires 2032 (Retires in 2032) for the years 2028-2031, the cumulative cost differential between the scenarios increases from approximately \$16.8 million to \$131.7 million in 2031. Even though carbon capture and sequestration (CCS) is added to the combined cycle gas turbine (CCGT), explain what in the model runs account for the apparent increasing cost advantage of the Retires in 2032 scenario.

e. All else being equal due to the parasitic load, the addition of CCS to a given generation unit will decrease the amount of energy that can be placed onto the grid. Explain whether the model differentiated between the capacity and energy output of a CCGT with and without CCS. Include in the response whether PJM makes, or is planning to make, any distinction in accredited capacity for units with and without CCS.

9. Refer to the Kalemba Direct Testimony, page 5, lines 7-14 and page 6, lines 11-21. Refer also to Case No. 2024-00197, Duke Kentucky's Response to Staff's First Request, Item 18, Attachment.

a. In Tab Figure 6.3, for each of the years 2025-2029, explain what is happening in the model runs that accounts for both the scenario titled "Optimized DFO Conversion 2030" (Optimized Conversion in 2030) and the scenario titled "Optimized 111 Scenario Natural Gas Conversion by 2030" being less costly than the Optimized East Bend Retirement by 2036 (Optimized Retires in 2036) scenario.

b. If not addressed previously, in Tab Figure 6.3, for each of the years 2025-2029, explain the reasons for the Optimized Retires in 2036 scenario increasing in cost from approximately \$444.4 million to \$1,190 million over the 2025-2029 period.

c. In the Optimized Retires in 2036 scenario, explain the rationale or requirement for including CCS with the addition of a CCGT in 2036.

d. In Tab Figure 6.3, for each of the years 2030-2040, explain whether Duke Kentucky's retail customers would pay more or be subject to higher costs cumulatively, under either the Optimized DFO Conversion in 2030 scenario or the Optimized 111 Scenario Natural Gas Conversion scenario than under the Optimized Retires in 2036 scenario. If not, explain.

10. Refer to the Kalemba Direct Testimony, page 5, lines 7-14 and page 6, lines 11-21. Refer also to Case No. 2024-00197, Duke Kentucky's Response to Staff's First Request, Item 18, Attachment.

a. In Tab Figure 6.2, explain the time required from planning to receiving Commission approval to completing the East Bend dual fuel conversion by

2030, including an approximate time for when a certificate filing would be made at the Commission.

b. In Tab Figure 6.2 for the Preferred East Bend DFO Conversion with CC Replacement by 2039 portfolio, explain why CCS is not or would not be required when either the 2030 DFO conversion or the 2039 CC replacement occurs.

c. In Tab Figure 6.3, for the years 2025-2029 the scenario titled Optimized East Bend retirement by 2036 with a CC with CCS is more costly than the scenario titled Optimized East Bend DFO Conversion by 2030. Explain the reasons in the model runs to account for the cost disparity between the two portfolios.

d. In Tab Figure 6.3, for each year in the 2030-2040 forecast period, the Optimized Retires in 2036 with a CC with CCS and Accelerated Renewables scenario is cumulatively less costly than the Optimized DFO Conversion in 2030 scenario with cost differentials ranging from \$63.6 million in 2030 to \$165 million in 2040. Explain the reasons for the increasing cost disparity between the two scenarios.

e. In Tab Figure 6.3, explain why the Optimized East Bend DFO Conversion by 2030 scenario is not required to install CCS in 2039 along with the CCGT to compare with the Optimized Retires in 2036 with a CC with CCS and Accelerated Renewables scenario.

f. In Tab Figure 6.4, explain the time required from planning to receiving Commission approval to completing the retirement of East Bend Retires by 2036 with Accelerated Renewable scenario including an approximate time for when a certificate filing would be made at the Commission.

11. Refer to the Kalemba Direct Testimony, page 18, lines 9-23 and page 19, lines 1-8. Refer also to Duke Kentucky's Response to Staff's First Request, Item 18, Attachment, in Case No. 2024-00197. Comparing the preferred portfolios in Tab 6.2 and Tab 6.4, the East Bend Retires by 2036 with Accelerated Renewable portfolio is more costly than the Preferred East Bend DFO Conversion with CC Replacement by 2039 portfolio from 2025 – 2029 and then is less costly from 2030 onward culminating in a cost advantage of \$156.9 million in 2040.

- a. Explain what in the model runs account for the cost disparities.
- b. Given the uncertainty in the current political climate and the significant cost disparity between the two preferred portfolios, explain why Duke Kentucky's preferred DFO Conversion portfolio does not pose a significant risk to its ratepayers.

12. Refer to the Kalemba Direct Testimony, page 16, lines 21-26, page 17, lines 3-19 and the filings in Case No. 2024-00197 generally.

- a. When modeling the DFO conversion, or natural gas conversion or the addition of the CCGT, explain whether the restriction of keeping the East Bend or CCGT unit below a 40 percent load factor on average for the year was ever a limiting factor during the modeling forecast period.
- b. Explain whether PJM still credits the unit with its full ELCC capacity value when CCS is applied to a unit.
- c. Explain whether PJM still credits the unit with its full ELCC capacity value in the case of the yearly average 40 percent load factor limitation in the case of either the DFO conversion or full natural gas conversion.



13. Refer to the Kalemba Direct Testimony, page 7, lines 19-23 and page 8, lines 1-3. Refer also to Case No. 2024-00197, Table H.3, page 153.

a. Explain what the forecast pool requirement (FPR) represents for Duke Kentucky in the context of Table H.3.

b. In Summer 2024, the excess capacity of 80 MW equates to approximately a reserve margin of 10 percent of the 808 MW peak load. Explain how the FPR of 0.94 (758 MW) and Duke Kentucky's required reserve margin of -6.13 percent relates to the 10 percent listed in the table.

c. Refer also to Case No. 2024-00285<sup>4</sup> generally. If Duke Kentucky were designated a Reliability Pricing Model (RPM) PJM participant, everything else being equal in the context of Table H.3, explain the number of MWs Duke Energy would be available to sell into the PJM Base Residual Auction (BRA) for the summer and or winter periods. Include in the explanation how the numbers were calculated.

14. Refer to the Kalemba Direct Testimony, page 8, lines 9-13. Refer also to Case No. 2024-00197, Table H.3, page 153. Table H.3 shows Duke Kentucky having excess capacity in both summer and winter periods. Provide the number of short term capacity purchases seasonally for the years 2020-2024 and explain the reasons for the capacity purchases.

15. Refer to the Kalemba Direct Testimony, Table 1, page 11. Refer also to Case No. 2024-00197 Duke Kentucky's response to Staff's First Request, Item 18 Attachment, Tab Figure 6.1. The present value revenue requirement (PVR) values for

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<sup>4</sup> See 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.*

the DFO Conversion in 2030 do not agree between the two tables. Explain which value is correct and provide a corrected table.

16. Refer to the Direct Testimony of Ibrar A. Khera (Khera Direct Testimony), page 7, lines 1-4. Identify this customer and the projected load.

17. Refer to the Khera Direct Testimony, Attachment IAK-2. Provide a comparison of Duke Kentucky's service area energy forecast with the service area energy forecast from Duke Kentucky's last base rate case, Case No. 2022-00372.<sup>5</sup>

18. Refer to the Khera Direct Testimony, Attachment IAK-3. Provide a comparison of Duke Kentucky's system seasonal peak load forecast with the seasonal peak load forecast from Duke Kentucky's last base rate case, Case No. 2022-00372.

19. Refer to the Direct Testimony of Joshua C. Nowak (Nowak Direct Testimony), page 26, Figure 6. Refer also to Attachment JCN-6. The mean of the Beta coefficients for the proxy group companies is 0.95 from Value Line and 0.80 from Bloomberg.

a. Explain why PPL Corporation (PPL), with a Value Line Beta coefficient of 1.15 and Bloomberg Beta coefficient of 0.93, is an appropriate proxy group company.

b. Explain why OGE Energy Corporation (OGE), with a Value Line Beta coefficient of 1.05 and Bloomberg Beta coefficient of 0.89, is an appropriate proxy group company.

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<sup>5</sup> See Case No. 2022-00372, *Electronic Application of Duke Energy Kentucky, Inc. for (1) an Adjustment of Electric Rates; (2) Approval of New Tariffs; (3) Approval of Accounting Practices to Establish Regulatory Assets and Liabilities; And (4) All Other Required Approvals and Relief.*

20. Refer to the Nowak Direct Testimony, page 31, and Attachment JCN-4. Provide an update to the DCF analyses including dividend per share growth rates.

21. Refer to the Nowak Direct Testimony, page 35, lines 9-13. Refer also to Attachment JCN-6.

a. Explain why Yahoo! Finance Beta values, once adjusted, should not be included in the analyses in addition to Value Line and Bloomberg Beta values.

b. Provide an update to the CAPM calculations in Attachment JCN-6 including adjusted Yahoo! Finance Beta Values.

22. Refer to the Nowak Direct Testimony, pages 35-36, and Attachments JCM-5 and JCM-6.

a. Explain why it is not inconsistent to use a Value Line Beta value, which is based on the broader New York Stock Exchange Composite Index, and a market risk premium based on the much narrower S&P 500 Index, in the CAPM analyses.

b. Provide the expected market return using the broader New York Stock Exchange Composite Index as the market proxy and provide an update to the CAPM analyses using this market return.

c. For rate making purposes for state regulated electric utilities, explain why the Federal Energy Regulatory Commission (FERC) methodology of only considering growth rates between 0 percent and 20 percent is reasonable.

23. Refer to the Direct Testimony of Amy B. Spiller (Spiller Direct Testimony), page 11, lines 13-15. Submit a breakdown of charitable donations made since 2016, categorized by receipt organization, purpose, and amount.

24. Refer to Spiller Direct Testimony, page 13, lines 14-18. Provide the total number of residential customers who received benefits under the Share the Light program for the past three years annually, along with the total amount of relief paid out to these customers.

25. Refer to Duke Kentucky's response to Staff's First Request, Item 9, STAFF-DR-01-009\_Attachment.xlsx. Explain why Duke Kentucky is anticipating a 132 percent increase, or \$14.82 million, in Electric Smart Grid capital costs and a 738 percent increase, or \$0.59 million, in Electric Smart Grid O&M costs. Provide any supporting workpapers, documents or contracts.

26. Refer to Duke Kentucky's response to Staff's First Request, Item 25(b), STAFF-DR-01-025(B)\_Attachment.xlsx. Refer also to Duke Kentucky's response to Staff's First Request, Item 25(c), STAFF-DR-01-025(c)\_Attachment.xlsx.

a. Provide more information regarding the anticipated increase in Fossil Steam Plants Construction Costs from \$16.54 million in 2025 to \$88.93 million in 2026. Include in the response any workpapers, project descriptions, anticipated expenditures, or other supporting documents for the response.

b. Provide more information regarding the anticipated increase in Transmission Stations Construction Costs from \$3.13 million in 2025 to \$9.65 million in 2026. Include in the response any workpapers, project descriptions, anticipated expenditures, or other supporting documents for the response.

27. Refer to Duke Kentucky's response to Staff's First Request, Item 26, STAFF-DR-01-026\_Attachment.xlsx. Over 5 percent of the Construction Projects detailed in the schedule are at least 2,000 percent over each Most Recent Budget

Estimate. Provide a discussion, including specific reasons for each project, related to the projects' incurring costs materially above their anticipated budgets.

28. Refer to Duke Kentucky's response to Staff's First Request, Item 53, STAFF-DR-01-053\_Attachment.xlsx. In years 2021 and 2022, the Cost of Electricity Purchased is more than the Cost of Electricity Generated. Provide an explanation for the 60.53 percent decrease in purchased electricity cost in 2023 and explain if this is expected to continue in future periods.

29. Refer to the Direct Testimony of Danielle L. Weatherstone (Weatherstone Direct Testimony), pages 3-5. Explain why Duke Kentucky chose to normalize three years of actuals for forced outage replacement purchased power costs and normalize four years of actual planned outage O&M expense with four years of projected expense.

30. Refer to Weatherstone Direct Testimony, pages 3-5. Provide the expense items with account numbers that would be included in both requested deferrals.

31. Refer to Weatherstone Direct Testimony, pages 3-5. If the Commission were to deny the request for both deferrals, describe the effects on Duke Kentucky's financial statements.

32. If the Commission were to deny the requested deferrals, explain what other options Duke Kentucky would have to recover those expenses.

*Linda Bridwell* RP

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DATED           JAN 8 2025          

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