

**COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION**

**In the Matter of:**

**ELECTRONIC 2024 INTEGRATED RESOURCE  
PLAN OF DUKE ENERGY KENTUCKY, INC** ) **Case No. 2024-00197**

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**SIERRA CLUB’S FIRST SET OF DATA REQUESTS FOR  
DUKE ENERGY KENTUCKY, INC.**

Sierra Club hereby submits this First Set of Data Requests to Duke Energy Kentucky, Inc. (“Duke” or the “Company”). Please provide responses to these data requests below to the undersigned counsel.

**GENERAL INSTRUCTIONS**

- 1) **Definitions:** For the purposes of these data requests, the following definitions shall apply:
  - a) The term “Duke” means and includes Duke Energy Kentucky, Inc, its parent company or companies (e.g., Duke Energy Corp.), and any and all affiliates and/or subsidiaries, successors, predecessors, agents, consultants, and witnesses in this proceeding, and any and all of their affiliates, subsidiaries, or predecessors.
  - b) The term “Company” means and includes Duke Energy Kentucky, Inc., its parent company or companies (e.g., Duke Energy Corp.) and any and all affiliates and/or subsidiaries, successors, predecessors, agents, consultants, and witnesses in this proceeding, and any and all of their affiliates, subsidiaries, or predecessors.
  - c) “Document” means all written, recorded or graphic matters, however produced or reproduced, pertaining in any manner to the subject of this proceeding, whether or not now in existence, without limiting the generality of the foregoing, all originals, copies and drafts of all writings, correspondence, telegrams, notes or sound recordings of any type of personal or telephone communication, or of

meetings or conferences, minutes of directors or committee meetings, memoranda, inter-office communications, studies, analyses, reports, results of investigations, reviews, contracts, agreements, working papers, statistical records, ledgers, books of account, vouchers, bank checks, x-ray prints, photographs, films, videotapes, invoices, receipts, computer printouts or other products of computers, computer files, stenographer's notebooks, desk calendars, appointment books, diaries, or other papers or objects similar to any of the foregoing, however denominated. If a document has been prepared in several copies, or additional copies have been made, and the copies are not identical (or which, by reasons of subsequent modification of a copy by the addition of notations, or other modifications, are no longer identical) each non-identical copy is a separate "document."

- d) "And" or "or" shall be construed conjunctively or disjunctively as necessary to make the requests inclusive rather than exclusive.
- e) The term "you" and "your" refer to "Duke."
- f) The term "person" means any natural person, corporation, corporate division, partnership, limited liability company, other unincorporated association, trust, government agency, or entity.
- g) The term "regarding" means consisting of, containing, mentioning, suggesting, reflecting, concerning, regarding, summarizing, analyzing, discussing, involving, dealing with, emanating from, directed at, pertaining to in any way, or in any way logically or factually connected or associated with the matter discussed.
- h) The singular as used herein shall include the plural and the masculine gender shall include the feminine and the neuter.
- i) "Identify" or "identifying" or "identification" when used in reference to a person that is a natural person means to state: the full name of the person and any names under which he conducts business; the current employer of the person, the person's job title and classification, the present or last known work address of the person; and, the present or last known telephone number of the person.
- j) "Identify" or "identifying" or "identification" when used in reference to a person other than a natural person means to state: the full name of the person and any names under which it conducts business; the present or last known address of the person; and, the present or last known telephone number of the person.
- k) "Identify" or "identifying" or "identification" when used in reference to a document means to provide with respect to each document requested to be identified by these discovery requests a description of the document that is sufficient for purposes of a request to produce or a subpoena duces tecum, including the following:
  - (a) the type of document (e.g., letter, memorandum, etc.);

- (b) the date of the document;
  - (c) the title or label of the document;
  - (d) the Bates stamp number or other identifier used to number the document for use in litigation;
  - (e) the identity of the originator;
  - (f) the identity of each person to whom it was sent;
  - (g) the identity of each person to whom a copy or copies were sent;
  - (h) a summary of the contents of the document;
  - (i) the name and last known address of each person who presently has possession, custody or control of the document; and,
  - (j) if any such document was, but is no longer, in your possession, custody or control or is no longer in existence, state whether it: (1) is missing or lost; (2) has been destroyed; or (3) has been transferred voluntarily or involuntarily, and if so, state the circumstances surrounding the authorization for each such disposition and the date of such disposition.
- l) “Identify” or “identifying” or “identification” when used in reference to communications means to state the date of the communication, whether the communication was written or oral, the identity of all parties and witnesses to the communication, the substance of what was said and/or transpired and, if written, identify the document(s) containing or referring to the communication.
  - m) “Current” when used in reference to time means in the present time of this data request.
  - n) “Customer” means a person who buys retail electricity on a regular and ongoing basis.
  - o) “Workpapers” are defined as original, electronic, machine-readable, unlocked, Excel format (where possible) with formulas in-tact.

### **OTHER INSTRUCTIONS**

- a) Responses are to be provided in electronic format (e.g., text documents should be in the original word processor file format or PDF, data files should be in Excel).
- b) If you contend that any response to any data request may be withheld under the attorney-client privilege, the attorney work product doctrine or any other privilege or basis, please state the following with respect to each such response in order to

explain the basis for the claim of privilege and to permit adjudication of the propriety of that claim:

- 1) The privilege asserted and its basis;
  - 2) The nature of the information withheld; and,
  - 3) The subject matter of the document, except to the extent that you claim it is privileged.
- c) For any document or set of documents Duke objects to providing to Sierra Club on the grounds it is burdensome or voluminous, please identify the specific document (see instruction (k) above).
- d) These data requests are to be answered with reference to all information in your possession, custody or control or reasonably available to you. These data requests are intended to include requests for information, which is physically within your possession, custody or control as well as in the possession, custody or control of your agents, attorneys, or other third parties from which such documents may be obtained.
- e) If any data request cannot be responded to or answered in full, answer to the extent possible and specify the reasons for your inability to answer fully.
- f) These data requests are continuing in nature and require supplemental responses should information unknown to you at the time you serve your responses to these data requests subsequently become known.
- g) For each response, identify all persons (see instruction (j)) that were involved in the preparation of the answers to the interrogatories below and/or are responsible for compiling and providing the information contained in each answer.
- h) Identify which witness(es) at the hearing is competent to adopt and/or discuss the response.
- i) Please produce the requested documents in electronic format to the following individuals:

Kristin Henry  
[kristin.henry@sierraclub.org](mailto:kristin.henry@sierraclub.org)

Joaquin Garcia  
[joaquin.garcia@sierraclub.org](mailto:joaquin.garcia@sierraclub.org)

- j) Wherever the response to an interrogatory or request consists of a statement that the requested information is already available to the Sierra Club, provide a detailed citation to the document that contains the information. This citation shall include the title of the document, relevant page number(s), and to the extent possible paragraph number(s) and/or chart/table/figure number(s).

- k) In the event that any document referred to in response to any request for information has been destroyed, specify the date and the manner of such destruction, the reason for such destruction, the person authorizing the destruction and the custodian of the document at the time of its destruction.
- l) Sierra Club reserves the right to serve supplemental, revised, or additional discovery requests as permitted in this proceeding.

### **DATA REQUESTS**

1. Provide all Duke responses to data requests from all parties in this proceeding. Continue to provide any such documentation, until this docket is closed, on a regular basis.
2. To the extent not already provided, provide all exhibits, testimony and workpapers included in the filing in non-redacted, electronic versions.
3. Please provide supporting workpapers and modeling files, including (not limited to) all input files, output files, and pre- or post-processing of said inputs and outputs for all resource portfolios and for all years modeled, in machine-readable Excel format.
4. Please provide the underlying data for all figures in the IRP.
5. Please provide the annual revenue requirements and present value revenue requirement (PVRR) for all portfolios and scenarios modeled.
6. Was any capacity expansion modeling used to determine coal retirement and/or conversion dates in Duke's portfolios?
  - a. If so, please explain what model was used and how coal retirement and/or conversion dates were determined for Duke's portfolios.
  - b. If not, please explain how the Company selected coal retirement and/or conversion dates for its resource portfolios.
7. Did the capacity expansion modeling allow for economic additions of new resources, i.e. not limited to capacity need additions?
  - a. If not, please explain why not.
8. Did the Company consider retiring its East Bend coal-fired unit by or before 2030?
  - a. If so, please describe the Company's assessment of this retirement date and provide the supporting analyses and documentation for that assessment.
  - b. If not, please explain why the Company chose not to assess early retirement by 2030.

9. Please provide the following for each generating unit (or plant-level if unit-level is unavailable) for all resource portfolios, scenarios, and years modeled, in Excel format with formulas intact:
  - a. NO<sub>x</sub> emissions
  - b. Particulate matter (PM) emissions
  - c. SO<sub>2</sub> emissions
  - d. CO<sub>2</sub> emissions
  - e. Generation
  - f. Nameplate capacity
  - g. PJM accredited capacity
  - h. PJM energy revenue
  - i. Variable O&M
  - j. Fixed O&M
  - k. Fuel cost
  - l. Fuel usage (MMBtu)
  - m. Forced outage rate
  - n. Planned outage rate
  - o. Equivalent availability factor
  - p. Heat rate
  - q. Non-environmental capital spending
  - r. Environmental capital spending, including corresponding regulation
  - s. Capital revenue requirements/costs to customers, including any supporting calculations
  
10. Please provide the following annual historical data for Duke's East Bend coal-fired unit from 2019 through the latest date available, in with formulas intact:
  - a. NO<sub>x</sub> emissions machine-readable Excel format
  - b. Particulate matter (PM) emissions
  - c. SO<sub>2</sub> emissions
  - d. CO<sub>2</sub> emissions
  - e. Generation
  - f. Nameplate capacity
  - g. PJM accredited capacity
  - h. PJM energy revenue
  - i. Variable O&M
  - j. Fixed O&M
  - k. Fuel cost
  - l. Fuel usage (MMBtu)
  - m. Forced outage rate
  - n. Planned outage rate
  - o. Equivalent availability factor
  - p. Heat rate
  - q. Non-environmental capital spending
  - r. Environmental capital spending, including corresponding regulation

11. Please provide the source of the capital costs and operating characteristics for each supply-side resource type modeled by the Company (as noted in Table 4.1 on page 33 of the IRP) in machine-readable Excel format, including supporting analyses and/or documents.
12. Please provide forecasts of Effective Load Carrying Capability (ELCC) values used in modeling in all years, by resource type.
13. Did the Company consider hybrid resources, such as solar PV plus battery storage, as a supply-side resource option within its IRP modeling? If not, please explain why not.
14. Did the Company conduct a sensitivity or scenario analysis using high or low capital cost forecasts of new supply-side resources?
  - a. If so, please describe and provide all underlying data and assumptions in machine-readable Excel format.
  - b. If not, please explain why not.
15. Regarding the Good Neighbor Rule:
  - a. Do all of the Company's portfolios and scenarios meet the requirements of the rule?
    - i. If so, please provide a list of the portfolios that meet the rule's requirements.
    - ii. If so, please explain how compliance is achieved for the East Bend coal-fired unit in each compliant plan.
    - iii. If not, please explain why not.
  - b. Please provide the Company's understanding of the compliance requirements at East Bend unit 2.
  - c. Please provide the most recent capital and O&M cost estimates for Good Neighbor Rule compliance at the Company's East Bend coal-fired unit.
    - i. To the extent these were included in the IRP, please specify in what scenario(s).
  - d. Please provide forecasts of NOx allowances reviewed by the Company in the past two years.
  - e. Please provide the NOx allowance costs for the East Bend coal-fired unit for all portfolios.
16. Has the Company considered retiring its East Bend coal-fired unit earlier than planned to avoid Effluent Limitation Guidelines (ELG), Coal Combustion Residual (CCR), Mercury Air Toxics Standards (MATS) or Regional Haze compliance costs?
  - a. If so, please explain why East Bend has been considered for early retirement for any of these reasons, including specifically what rules led to that decision.
  - b. If not, please explain why not.
  - c. In either case, please provide the costs of compliance with each of these rules that were modeled in the IRP and supporting documentation for those costs.
  - d. In either case, please provide the costs of compliance with each of these rules developed by or for the Company in the past two years.

17. Does the Company assume that hydrogen co-firing with natural gas will be employed to achieve carbon emission reductions in the IRP?
  - a. If so, please provide the associated costs included in the IRP modeling that account for these retrofits, list the scenarios where they are included, and provide the modeling outputs that include these costs.
18. Did the Company develop cost estimates for carbon capture and sequestration (CCS) at East Bend unit 2?
  - a. If so, please provide these cost estimates and provide the modeling outputs that include these costs (if any).
  - b. If not, please explain why not.
19. See IRP page 56, please provide all modeling where the Company tested greenhouse gas limit compliance options for gas resources, including all inputs and outputs, in Excel format.
20. For each portfolio and scenario modeled, please list the means of compliance with the EPA's greenhouse gas limit for every fossil unit, including: timing of compliance, constraints imposed on those units, and costs of compliance (where appropriate).
21. Please identify and provide all communications received from each of the following entities (and Duke's responses thereto) during 2023 and 2024 specifically raising the issue of whether Duke's practices of (i) committing generating units as "Must Run" or "self scheduled" status in PJM energy markets and/or (ii) use of supply offer adjustments complies with PJM's Tariff and/or Business Practice Manuals, or otherwise addressing Duke's unit commitment practices.
  - a. PJM
  - b. PJM's Independent Market Monitor
  - c. FERC Staff
  - d. FERC Office of Enforcement
  - e. Kentucky Public Service Commission
22. Please provide all communications received from the FERC Office of Enforcement (and Duke's responses thereto) during 2023 and 2024 regarding any audit performed or to be performed by the FERC Office of Enforcement's Division of Audits and Accounting. Please provide any completed or draft audit report received from the FERC Office of Enforcement."



Dated: August 14, 2024

Respectfully submitted,

/s/ Joe F. Childers  
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**CERTIFICATE OF SERVICE**

This is to certify that the foregoing copy of Sierra Club’s motion to intervene in this action is being electronically transmitted to the Commission on August 14, 2024, and that there are currently no parties that the Commission has excused from participation by electronic means in this proceeding.

/s/ Joe F. Childers  
JOE F. CHILDERS