

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

In the Matter of:

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| ELECTRONIC 2024 JOINT INTEGRATED |) | Case No. 2024-00326 |
| RESOURCE PLAN OF LOUISVILLE GAS AND |) | |
| ELECTRIC COMPANY AND KENTUCKY |) | |
| UTILITIES COMPANY |) | |
| |) | |

**SIERRA CLUB’S SUPPLEMENTAL REQUESTS FOR INFORMATION TO
LOUISVILLE GAS AND ELECTRIC COMPANY AND KENTUCKY UTILITIES
COMPANY**

Sierra Club hereby submits this Supplemental Request for Information to Louisville Gas and Electric Company and Kentucky Utilities Company (collectively referred to as “LG&E/KU” or the “Companies”). 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 “LGE/KU” means and includes Louisville Gas and Electric Company and Kentucky Utilities Company 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 “Companies” means and includes Louisville Gas and Electric Company and Kentucky Utilities Company 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 terms "you" and "your" refer to "LG&E/KU."
- 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 or company (residential, commercial, or industrial) who buys retail electricity on a regular and ongoing basis from LG&E/KU.
 - 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 LG&E/KU 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

Nathaniel Shoaff
nathaniel.shoaff@sierraclub.org

Joaquin Garcia
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.

SUPPLEMENTAL DATA REQUESTS

- 2-1. Please refer to the PLEXOS database and the generators named “NGCC.Expansion” and “SCCT.Expansion”. Please explain why these generators do not have a “Forced Outage Rate” property assigned to them.
- 2-2. Please refer to the PLEXOS database and the data file named “StayOpenCosts_Expansion”. Please provide the supporting workbook, with all formulas and links intact, used to develop the values modeled in this data file.
- 2-3. Please refer to the PLEXOS database and the generator named “SCCT.Expansion”. Please explain the property named “Max Capacity Factor Year” applied for this generator.
- 2-4. Please refer to the PLEXOS database and the data file named “CapRatings_DSM”.
 - a. Please explain the declining capacity rating for the “DSM_DLC_AC” generator.
 - b. Please provide the supporting workbook, with all formulas and links intact, used to develop the capacity rating for each generator.
- 2-5. Please refer to the PLEXOS data file named “Natural_Gas_Transport_Rates_By_Unit”. Please explain what the values in this file represent.

- 2-6. Please refer to the PLEXOS database and the data files named “CapMax_DSM” and “FirmCapacity_DSM”. Please confirm that the firm capacity for the DSM resources is grossed up for the reserve margin. If not confirmed, please explain.
- 2-7. Please refer to the PLEXOS database and the generator named “Ghent.2_Gas100” and the CapRatings setting for the scenario named “GNP”. Please explain if Ghent 2 would be limited to operating during the non-ozone seasons if it is converted to operate on 100% gas.
- 2-8. Please refer to the PLEXOS database the data files named “StayOpenCosts_Existing”, “StayOpenCosts_ExistingplusELG”, “ELG.FOM”, and “RetirementSavings”. Please provide the supporting workbooks, with all formulas and links intact, used to develop the values in these data files.
- 2-9. Please refer to the SERVM database and the SERVM study named “24IRPBase300DSM”.
 - a. Please confirm if this is the study used to determine the 39% accreditation for dispatchable DSM as discussed on pages 18-19 of the 2024 IRP Resource Adequacy Analysis.
 - b. Please provide the supporting workbook, with all formulas and links intact, used to determine the 39% accreditation for dispatchable DSM.
- 2-10. Please refer to the workpaper named “out_stationyr” in the PROSYM subfolder named “05_RefCase”. Please confirm that the planning period modeled in PROSYM was 2024 to 2039. If not confirmed, please provide the years modeled in PROSYM.
- 2-11. Please refer to page 7-13 of Volume I of the 2024 IRP where there is a reference to 1,050 MW of data center load in the Mid scenario.
 - a. Please explain if the Companies’ load forecast includes the project referenced in the response to Sierra Club 1-12(c)(i).
 - b. If the project is included, please provide the 8,760 hourly shape included in the load forecast for this project.
- 2-12. Please refer to the workpaper named “Energy_Efficiency_scenarios_20240805”.

- a. Please provide the total cost of the “High” scenario over the planning period.
 - b. Please confirm that the savings reported in the worksheet named “High” represent incremental savings to the EE included in load forecast.
- 2-13. Please refer to the Companies’ response to Joint Intervenors 1.16(d) where the Companies said they are working with 16 data center projects with a potential load of over 4.2 GW with one being imminent, seven as prospects, one as suspect, and seven as inquiries. Please provide the GW breakdown for each phase reported by the Companies.
- 2-14. Please refer to the Companies’ response to Sierra Club 1-25(b) where there is a reference to PLEXOS constraining the annual generation from the sum of solar and wind resources to approximately 25%. Please provide the name of the constraint that applies this 25% limit in PLEXOS.
- 2-15. Please refer to the Companies’ response to Sierra Club 1-31(a). Please provide the 8760 hourly profiles modeled for the forecasted economic development load in SERVM across each weather year.
- 2-16. Please refer to the workpaper named “Data_Center_1_Phase_2_Included_MA_Shaping”, worksheet named “Final_Data_Center_1”, column E. Please confirm that the values shown in column E represent the hourly data center load included in the Mid scenario.
- 2-17. Please refer to Table 32 on page 55 of the 2024 IRP Resource Assessment. Please explain why the gas conversion capital is more expensive for the Ghent units.
- 2-18. Please refer to the response to Sierra Club Question No. 1-21(c), which states in part, “No firm transmission costs were included for any of the resources in Table 6-4, as the Companies assumed they would be installed in the Companies’ territory.”
- a. Please explain why installation of new resources within the Companies’ service territory equates to no firm transmission cost.
 - b. Please provide any documents that support your response to subpart (a).
- 2-19. Please refer to the response to Sierra Club Question No. 1-21(d). Please provide the basis for your 2024 firm gas transportation costs.

- 2-20. Please refer to the response to Sierra Club Question No. 1-44. The response states in part that “Very cold temperatures in the winter combined with a higher incidence of electric space heating in new builds over the last decade are the most significant contributors to this.” Do the Companies have any data with respect to the type of electric space heating that is added by new builds? If so, provide any such data.
- 2-21. Please refer to the response to Sierra Club Question No. 1-48, Attachment 1. Please detail what plans, if any, the Companies have to address load spikes shown in the KU shape.
- 2-22. Please refer to the response to Joint Intervenors Question No. 1.61(c), which states in part “However, it is important to note that the majority of costs associated with a new load interconnecting to the LG&E/KU transmission system are ultimately borne by the Transmission Owner if the new load comes to fruition.” With respect to this statement please answer the following:
- a. Does this sentence mean that the referred to costs will be recovered through the OATT as described in https://www.oasis.oati.com/woa/docs/LGEE/LGEEdocs/Allocation_of_Costs_for_End-User_Interconnections_-_FINAL_2-1-22.pdf? If not, what does it mean?
 - b. If the answer to subpart (a) is “yes”, why would the Companies recover costs needed to interconnect a new load from all customers who benefit from the transmission system?
 - c. If the Companies do not intend to have other ratepayers pay the transmission costs of interconnecting new load, what steps do the Companies intend to take in order to ensure that new customers pay their own interconnection costs in full?
- 2-23. Please refer to the response to Sierra Club Question No. 1-40. With respect to this response, please answer the following:
- a. The response to subpart (f) states, “If LG&E/KU determine that EMT or transient stability studies are required for a large load, then LG&E/KU will coordinate with the customer to develop a model that sufficiently represents the characteristics of the load under study.” Please explain why LG&E/KU would determine that EMT and/or transient stability studies would be required rather than the ITO?
 - b. Has LG&E/KU ever determined that EMT and/or transient stability studies were necessary for a large load? If so, please describe the facts that led to this determination.
 - c. Have the Companies published the Transmission Service Request queue anywhere? If so, where? If not, please provide the queue data.

- 2-24. Have the Companies considered making all or part of the data requirements contained in the Facility Interconnection Modeling Requirements (posted at <https://www.oasis.oati.com/woa/docs/LGEE/LGEEdocs/facility-interconnection-modeling-requirements.pdf>) required for new load interconnections? If not, why not? If so, when would those begin to apply?
- 2-25. Please refer to the response to Joint Intervenors Question No. 1.18, which states “KU entered into an economic development rider contract with Phoenix Paper Wickliffe, LLC, which the Commission accepted with an effective date of August 23, 2019. KU also entered into a special contract for new load with Blue Oval SK, LLC, which the Commission approved by Order dated December 18, 2023, in Case No. 2023-00123.”
- a. Do the Companies intend to continue to add new, large loads through special contracts and/or economic development riders rather than through a standard tariff?
 - b. What documented principles, criteria, or other guidelines do the Companies have for ratemaking related to new, large loads?

Dated: January 22, 2025

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 Supplemental Requests for Information to Louisville Gas and Electric Company and Kentucky Utilities Company in this action is being electronically transmitted to the Commission on January 22, 2025, 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