

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

**In the Matter of:**

**ELECTRONIC APPLICATION OF KENTUCKY  
UTILITIES COMPANY AND LOUISVILLE GAS  
AND ELECTRIC COMPANY FOR  
CERTIFICATES OF PUBLIC CONVENIENCE  
AND NECESSITY AND SITE COMPATIBILITY  
CERTIFICATES**

**Case No. 2025-00045**

**SIERRA CLUB’S SECOND REQUEST FOR INFORMATION  
TO LOUISVILLE GAS AND ELECTRIC COMPANY AND  
KENTUCKY UTILITIES COMPANY**

Sierra Club hereby submits this Second 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” and “Company” 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 4 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  
Josh Smith, josh.smith@sierraclub.org  
Tony Mendoza, tony.mendoza@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.

## REQUESTS FOR INFORMATION

- 2-1. Please refer to the Direct Testimony of Witness Wilson at page 7 in Case No. 2022-00402 where there is a reference to the BlueOval load being 260 MW in the summer and 225 MW in the winter, and page 2 of Witness Schram at page 8 where there is a reference to 125 MW of Phase One for the BlueOval SK Battery Park.
- a. Please confirm if the 260 MW summer/225 MW winter load for BlueOval included in Case No. 2022-00402 represents the total load of phase one and phase two.
  - b. Please confirm if the BlueOval's contract for electric service is for the 260 summer and 225 MW winter load.
  - c. Please explain if the phase two load will result from expansion at the facility.
- 2-2. Please refer to the response to Sierra Club 1-7 and column F in the workpaper named "2024IRP\_Mid\_Econ\_Dev\_Requirements".
- a. Please reconcile the values and dates reflected in the workpaper with the response to Sierra Club 1-7 that says the 120 MW for Blue Oval is assumed to start in July 2028.
  - b. Please explain if the workpaper only represents phase one for BlueOval.
- 2-3. Please refer to Exhibit SAW-1, Table 22 at page 45.
- a. Please explain if the Companies evaluated a scenario with 400 MW of BESS at Cane Run and 400 MW of BESS at Ghent.
    - i. If not, please explain why not.
- 2-4. Please refer to Exhibit SAW-1. Please provide the supporting workpaper, with all formulas and links intact, used to develop Figure 2 at page 11.
- 2-5. Please refer to Exhibit SAW-1, Figure 2 at page 11, the hourly load modeled in PLEXOS contained in the file named "Load1750Block", and workpapers named "Data\_Center\_1\_Phase\_2\_Included\_MA\_Shaping", "Data\_Center\_3\_MA\_Shaping", and "Data\_Center\_2\_MA\_Shaping".

- a. Please reconcile the difference in the load ramp rate reflected in the data center workpapers with the load forecast shown in Figure 2 and what is modeled in PLEXOS.
  - b. Please provide the supporting workpaper for the file named “Load1750Block” that shows the hourly load included for data centers for the planning period.
- 2-6. Please refer to Appendix B in Exhibit SAW-1 and the PLEXOS database.
  - a. Please explain if all solar bids reported in Exhibit SAW-1 were modeled in PLEXOS.
    - i. If any bids were excluded from being modeled in PLEXOS, please explain why they were not modeled in PLEXOS.
  - b. Please provide a key that maps the bids reported in Exhibit SAW-1 to the generator names in the PLEXOS database.
- 2-7. Please refer to Exhibit SAW-1 at pages 34-35.
  - a. For the Stage Three evaluation in SERVVM, please explain if the Companies only evaluated a load forecast in SERVVM that assumes the data center load growth in the 2025 CPCN load forecast.
  - b. Please provide supporting workpapers, with all formulas and links intact, used to develop Table 14.
    - i. If there are no workpapers, please provide a reference to the study names in SERVVM that map to the results shown in Table 14.
  - c. Please explain if the results in Table 14 are being developed to maintain a Loss of Load Expectation (“LOLE”) threshold of less than 1 day in 10 years or .1/year (i.e. that the Companies can only add 630 MW of data center load to the system between 2028-2029 with the BESS addition of 400 MW to maintain a .1 LOLE)?
- 2-8. Please refer to the SERVVM database. Please provide a key for the study names performed as part of the SERVVM analysis referenced in Exhibit SAW-1 at pages 33 – 35.
- 2-9. Please refer to the Companies response to AG-KIUC 1-35a and the file named “17-AG-KIUC-DR1\_LGE\_KU\_Attach\_to\_Q35(a)”.

- a. Please explain what the “Low”, “Mid” and “High” probabilities represent in the worksheet named “Project Map”.
  - b. Please explain how each of these probabilities is developed and how the Companies use the probabilities.
- 2-10. Please refer to the Companies’ response to AG KIUC 1-45a.
  - a. Please explain what each status designation means.
  - b. Please explain what happens when the status designation is “Expired”.
- 2-11. Please refer to page 11 of the Direct Testimony of Witness Bellar and the discussion of the reservation agreement with GE for Brown 12.
  - a. Have the Companies evaluated the rate impact of the reservation agreement?
    - i. If yes, please provide all supporting workpapers, with formulas and links intact, used to develop that analysis.
- 2-12. Sierra Club 1-10 (c) requested “For each new customer included in the 8,000 MW of load potential, please provide the peak demand, ramp schedule, annual energy requirements, load factor, hourly shape, anticipated date the customer expects to receive service, the commercial activity of the customer (i.e. data center, cryptocurrency, or EV manufacturing), and whether the customer has entered into any agreements or contracts with the Companies”.

In response, the Companies said, “See the response to AG-KIUC 1-33(a). The Companies do not track some of the requested information, and in many cases the projects do not provide some of the requested information during their decision-making process.” With respect to that response please answer the following:

- a. Of the information listed in the question, the attachment to AG-KIUC 1-33(a) contains only the electric peak and a high level categorization of the customer’s activity, e.g., “Opportunity Name”. Is the Company saying that of the requested information, only these two information types are collected? If not, why were the other categories of information not provided?
- b. If the Companies collect any of the requested information other than electric peak and opportunity name, please provide that information.

- c. If the Companies do not collect any of the requested information other than electric peak and opportunity name, please explain how the Companies could translate these requests into an annual forecast of large loads, load factor, and annual energy shape used in the load forecast.
- d. Do the Companies have any information about the track record of potential large load customers in building other, similar facilities? If so, please provide that information.
- e. Do the Companies have any information about whether potential large load customers are sufficiently capitalized to build their proposed facilities? If so, please provide that information.

2-13. Please refer to the attachment to AG-KIUC 1-33(a).

- a. Please provide the definitions for each possible category in the “Opportunity Name” column.
- b. For each project listed as “imminent”, what information leads the Companies to the conclusion that the project “imminent”?
- c. Do the Companies collect any information about the locations of these loads? If so, please provide that information.

2-14. Please refer to the response to Sierra Club 1-27(a). In that response, the Companies state that the purposes of KRS 154.20-220 to 154.20-229 are to:

- (a) Provide incentives for an approved company with a qualified data center project;
- (b) Encourage the location of data centers within the Commonwealth;
- and
- (c) Advance the public purposes of the:
  - 1. Creation of new jobs that would not exist within the Commonwealth;
  - 2. Creation of new sources of tax revenues for the support of public services provided by the Commonwealth;
  - 3. Improvement in the quality of life for Kentucky citizens through the creation of sustainable jobs with higher salaries; and
  - 4. Provision of an economic stimulus to the Commonwealth.

With respect to this statement, please describe and provide any information that the Companies collect from new, large loads that identify the number of new jobs they create, the amount of tax revenue they would generate, the salaries associated with their jobs,



and/or any other economic stimulus from these customers locating in the Commonwealth. If the Companies do not collect this information, please explain why not and how the new loads comply with KRS 154.20-220 to 154.20-229.

2-15. Please refer to the response to SC 1-28(c), which states, “The Companies disagree with the premise of the question. The Companies do not anticipate that projected data center loads, though large, will be “dynamic”; rather, they anticipate high and steady loads, as reflected in the Companies’ 95% load factor projection. Moreover, the Companies are well versed in and equipped to address rapid and significant demand changes, having served large arc furnace loads for decades.”

With respect to this response, please answer the following:

- a. Are the Companies aware of any NERC documents that would support the presumption that data centers are not dynamic? If so, please provide those documents.
- b. Are the Companies aware of any data centers currently online in the U.S. that have not operated at “steady loads”? If so, please describe the Companies’ knowledge of these data centers.
- c. If the answer to either subpart a or b is “yes”, why would the Companies expect data centers interconnecting to their systems to not be dynamic and operate as “steady loads”? Explain in detail.
- d. Based on the Companies’ experience serving large arc furnace loads, what steps would the Companies take to “address rapid and significant demand changes” associated with data centers, should they occur?
- e. Is it the Companies’ position that it can address any impacts from rapid and significant demand changes after the fact of data centers coming online? Explain your answer in detail.

2-16. Please refer to the responses to PSC 1-18 and to SC 1-35.

- a. The Companies use the terms “active request”, “advanced stages”, “imminent”, “prospect”, “suspect phase”, and “inquiry”. Please explain how these terms relate to each term, e.g., is “prospect” a subset of an “active request”?
- b. For the request that is in an active stage, are the reference “formal studies” to “determine transmission capacity at a project site” the system impact and/or

facilities studies? If not, to what studies does this refer?

c. What do the Companies mean by “incentive negotiation”?

2-17. Please refer to the attachments to SC 1-41(a). For each customer with a completed facilities study, please identify the current status of the customer within the Companies’ pipeline and if the customer has dropped out please explain why.

2-18. For any large load customer in the Companies’ pipeline with a completed system impact study, please provide that study.

2-19. Please refer to the response to AG-KIUC 1-45. Please indicate which of these loads corresponds to each of the facilities study reports given in the attachments to SC 1-41(a). If the MW of load given in the facilities studies do not match with the MW given in AG-KIUC 1-45, please explain why.

2-20. Reference the Companies’ response to JI1-106 b and c. Provide the following for each program:

- a. Projected participation
- b. Assumed savings per participant
- c. Ramp up period for participation
- d. Any pilot results

2-21. Please identify any energy efficiency programs, demand response programs, or interruptible service tariffs that are available to industrial customers.

- a. For each program, please describe the process for marketing, informing, and/or obtaining participation.
- b. For each program, please separately identify the number of industrial customers that have historically participated and the number of industrial customers that currently participate.
- c. For each program, please identify the level of annual and lifetime savings achieved for each of the last five years.

- d. Please identify the types of industries that participate in these programs.
- 2-22. Reference the Companies' response to JI 1-130 b. Please detail whether the Company discusses energy efficiency and interruptible service options with prospective data centers when discussing permanent service or during the engineering phase? If not, please detail when the Company considers it to be appropriate to discuss the efficiency of the facility receiving service.
- 2-23. Reference the Companies' Electrical Customer Guide, page 52. The Installation Costs section indicates that the installation costs "will vary according to KU/ODP ability to access existing utility facilities and/or the need to construct new facilities."
- a. Please define what constitute as new facilities and whether the need for additional capacity would be considered as part of "new facilities."
  - b. Please detail how the Companies determines these costs allocations.
- 2-24. Reference the Companies' response to JI 1-130 (e). Response to JI 2-6 Case No. 2024-00326 is confidential. Please provide the confidential attachment in this proceeding.
- 2-25. Provide the rate impacts by customer class in a scenario where the Companies build the requested capacity but the 1,750 MW of data center capacity do not come to fruition.
- 2-26. Please provide the Companies' most recent cost of service study.
- 2-27. Please provide the current Commission-approved allocation rates by customer class.
- 2-28. Reference Mr. Conroy's direct testimony, page 15, lines 16-20.
- a. Please quantify the estimated rate case cost that would be avoided by having a regulatory asset established for post-in-service costs for each project Brown 12, Mill Creek 6, and Cane Run BESS.
  - b. Please estimate the twelve months of post-in-service costs that would be included in the regulatory asset for each project Brown 12, Mill Creek 6, and Cane Run BESS.

- c. Please identify the significant adverse impacts to the Companies' financial health that are projected by the Companies if they are not granted the regulatory asset.

2-29. Reference LG&E's P.S.C. Electric No. 13, Original Sheet No. 102.1 dated July 20, 2021.

- a. Please confirm that this is the most recent date of issue for this tariff sheet related to Deposits.
- b. Please detail whether the Company's large load tariff that will be filed on May 30, 2025 will include a provision that addresses the deposits for customers that receive "Other Service" as stated on the referenced tariff sheet?
- c. Under Other Service, it states "If Customer fails to maintain a satisfactory payment or credit record, or otherwise becomes a new or greater credit risk, as determined by Company in its sole discretion, Company may require a new or additional deposit from Customer."
  - i. Please confirm whether the Company has utilized this provision previously.
  - ii. Please define what could be considered a greater credit risk.
  - iii. Please detail when or how the Company would determine that a Customer is a "new or greater credit risk."
  - iv. Please detail if there is a usage or demand threshold at which the Company would utilize this clause to require a higher deposit than one equal to 1/12 of the Customer's actual or estimated bill.
  - v. Please detail whether the Company has considered as part of its development of the large load tariff a usage or demand threshold to require a higher deposit and if so, what levels were considered.
  - vi. Please detail how the level of the new or additional deposit will be determined and assessed.
- d. Please verify whether the responses to this question would be considered the same for Kentucky Utilities.

2-30. For a data center project proposed by a tenant-based developer versus a hyperscaler, enterprise, or cloud provider, is there any difference in the Companies' a) view of the risk related to achieving the maximum demand requested by the customer and b) any difference in the interconnection study process?

- 2-31. Please provide all analyses, calculations, data, documents, modeling input and output files, and work papers associated with the installation and operation of pollution controls that may be needed at Ghent 2 to comply with existing or potential environmental regulations, including, but not limited to, the installation of:
- a. flue gas desulfurization technology
  - b. updated particulate matter controls
  - c. carbon capture and sequestration
  - d. cooling water intake retrofits or
  - e. any water pollution equipment.
  - f. If the Companies have not conducted an evaluation of these potential controls, please explain why not for each control requirement.
- 2-32. For Ghent 2, for 2019 through 2024, please provide the unit's average emission rate (in lb/mmbtu) for:
- a. SO<sub>2</sub>
  - b. PM
- 2-33. For Ghent 2, please provide the current Clean Water Act pollution discharge permit.
- a. Provide the application(s) that the Companies (or one of them) submitted for the renewal of the current Clean Water Act pollution discharge permit for Ghent.
  - b. Provide any application(s) for renewal or modification of the current Clean Water Act pollution discharge permit for Ghent submitted after the issuance of the current Clean Water Act pollution discharge permit.
- 2-34. Please refer to the Companies' Response to Sierra Club Request for Information 1-16, which states, "The Companies' previous engineering studies for gas conversion of Trimble County Unit 1, which is a large tangentially-fired coal electric generating unit similar to Ghent 2, indicates NO<sub>x</sub> emissions from a such a converted unit would likely to be in the range of 0.10-0.15 lb/MMBtu."
- a. Please provide all referenced studies for the Trimble County facility
  - b. Please provide all studies evaluating the conversion of Ghent 2

- c. Are the Companies aware of any EGUs that have been converted from coal to gas that have achieved a NOx emission rate lower than 0.10 lb/mmbtu? If so, please identify and provide all supporting documents.

Dated: May 2, 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 Second Request for Information to Louisville Gas and Electric Company and Kentucky Utilities Company in this action is being electronically transmitted to the Commission on May 2, 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