

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

IN THE MATTER OF: ELECTRONIC JOINT APPLICATION OF KENTUCKY UTILITIES COMPANY AND LOUISVILLE GAS AND ELECTRIC COMPANY FOR CERTIFICATES OF PUBLIC CONVENIENCE AND NECESSITY AND SITE COMPATIBILITY CERTIFICATES AND APPROVAL OF A DEMAND SIDE MANAGEMENT PLAN.	: : : : : : : : : : :	CASE NO. 2022-00402
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**FIRST SET OF DATA REQUESTS OF
KENTUCKY INDUSTRIAL UTILITY CUSTOMERS, INC.
TO KENTUCKY UTILITIES COMPANY AND
LOUISVILLE GAS & ELECTRIC COMPANY**

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**COUNSEL FOR KENTUCKY INDUSTRIAL
UTILITY CUSTOMERS, INC.**

Dated: February 15, 2023

DEFINITIONS

1. “Document” means the original and all copies (regardless of origin and whether or not including additional writing thereon or attached thereto) of memoranda, reports, books, manuals, instructions, directives, records, forms, notes, letters, notices, confirmations, telegrams, pamphlets, notations of any sort concerning conversations, telephone calls, meetings or other communications, bulletins, transcripts, diaries, analyses, summaries, correspondence investigations, questionnaires, surveys, worksheets, and all drafts, preliminary versions, alterations, modifications, revisions, changes, amendments and written comments concerning the foregoing, in whatever form, stored or contained in or on whatever medium, including computerized memory or magnetic media.
2. “Study” means any written, recorded, transcribed, taped, filmed, or graphic matter, however produced or reproduced, either formally or informally, a particular issue or situation, in whatever detail, whether or not the consideration of the issue or situation is in a preliminary stage, and whether or not the consideration was discontinued prior to completion.
3. “Person” means any natural person, corporation, professional corporation, partnership, association, joint venture, proprietorship, firm, or the other business enterprise or legal entity.
4. A request to identify a natural person means to state his or her full name and residence address, his or her present last known position and business affiliation at the time in question.
5. A request to identify a document means to state the date or dates, author or originator, subject matter, all addressees and recipients, type of document (e.g., letter, memorandum, telegram, chart, etc.), number or code number thereof or other means of identifying it, and its present location and custodian. If any such document was, but is no longer in the Company’s possession or subject to its control, state what disposition was made of it.
6. A request to identify a person other than a natural person means to state its full name, the address of its principal office, and the type of entity.
7. “And” and “or” should be considered to be both conjunctive and disjunctive, unless specifically stated otherwise.
8. “Each” and “any” should be considered to be both singular and plural, unless specifically stated otherwise.
9. Words in the past tense should be considered to include the present, and words in the present tense include the past, unless specifically stated otherwise.
10. “You” or “your” means the person whose filed testimony is the subject of these interrogatories and, to the extent relevant and necessary to provide full and complete answers to any request, “you” or “your” may be deemed to include any person with information relevant to any interrogatory who is or was employed by or otherwise associated with the witness or who assisted, in any way, in the preparation of the witness’ testimony.
11. “LG&E/KU” or “Company” means Louisville Gas & Electric Company and Kentucky Utilities Company and/or any of their officers, directors, employees or agents who may

have knowledge of the particular matter addressed, and affiliates including PPL Corporation.

INSTRUCTIONS

1. If any matter is evidenced by, referenced to, reflected by, represented by, or recorded in any document, please identify and produce for discovery and inspection each such document.
2. These interrogatories are continuing in nature, and information which the responding party later becomes aware of, or has access to, and which is responsive to any request is to be made available to Kentucky Industrial Utility Customers. Any studies, documents, or other subject matter not yet completed that will be relied upon during the course of this case should be so identified and provided as soon as they are completed. The Respondent is obliged to change, supplement and correct all answers to interrogatories to conform to available information, including such information as it first becomes available to the Respondent after the answers hereto are served.
3. Unless otherwise expressly provided, each interrogatory should be construed independently and not with reference to any other interrogatory herein for purpose of limitation.
4. The answers provided should first restate the question asked and also identify the person(s) supplying the information.
5. Please answer each designated part of each information request separately. If you do not have complete information with respect to any interrogatory, so state and give as much information as you do have with respect to the matter inquired about, and identify each person whom you believe may have additional information with respect thereto.
6. In the case of multiple witnesses, each interrogatory should be considered to apply to each witness who will testify to the information requested. Where copies of testimony, transcripts or depositions are requested, each witness should respond individually to the information request.
7. The interrogatories are to be answered under oath by the witness(es) responsible for the answer.
8. Responses to requests for revenue, expense and rate base data should provide data on the basis of Total Company as well as Intrastate data, unless otherwise requested.

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- Q.1-1. Has the Company studied the economics of operating Ghent 2 only during the seven non-ozone season months (October – April) beginning in 2026 without the need to install a \$126 million SCR? If yes, please provide a copy of the study.
- Q.1-2. Please refer to Exhibit SAW-1 Table 31 for Ghent 2.
- a. In 2027, what comprises the \$36 million Overhaul Costs (Standard)?
 - b. With respect to the Ongoing Costs for 2023-2032, please identify the component parts that comprise the total. For example, how much of each year’s Ongoing Costs is labor, fixed O&M, routine maintenance, major overhauls, etc.
 - c. If an SCR is needed in 2028 to comply with the Good Neighbor Plan, why are the Environmental Compliance Costs (SCR) incurred 2023-2026?
- Q.1-3. Please confirm that keeping Ghent 2 in operation during the seven non-ozone season months (October – April) would enhance reliability during those months.
- Q.1-4. If Ghent 2 is only operated during the seven non-ozone season months (October – April), could the Company perform all planned maintenance during the five summer months? Would summer planned maintenance provide cost savings since maintenance is normally planned for the spring and fall?

Q.1-5. Please confirm that even if retired in 2026, Ghent 2 would not be demolished at that time because of the three other operating units at Ghent.

Q.1-6. Please refer to SAW-1 page 38. The Company states: *“Adding Brown BESS further enhances reliability, but its primary value is in providing operational experience for integrating future renewable generation But based on its cost, it is not the most cost-effective means of enhancing reliability as modeled.”*

- a. Please identify the most cost-effective means of enhancing reliability instead of the \$270 million Brown BESS.
- b. What is the present value savings of utilizing the most cost-effective means of enhancing reliability instead of the \$270 million Brown BESS?

Q.1-7. Please refer to SAW-1 page 23. The Company states: *“PLEXOS did not select DSM or batteries in any of the fuel price cases. This likely results from the cost of these resources relative to their limited duration, making them uneconomical to achieve minimum reliability and meet the significant need for energy created by coal retirements. Also, batteries do not produce energy, but rather move it in time.”*

- a. For the each of the years of its planned operation, how much energy is the Brown BESS expected to supply?
- b. For the each of the years of its planned operation, what is the all-in cost of energy per MWh expected to be supplied from the Brown BESS? The all-in cost should include capital costs, fixed and variable operating costs and the cost of the energy that charges the battery. Please provide the detail of how this calculation is made.
- c. What is the energy conversion loss factor for the Brown BESS? For example, for every MWh supplied by the battery, how much energy is used to charge it? If there are winter/summer differences due to ambient air temperature differences please explain.
- d. Did the PLEXOS model assume that the battery would only be charged with solar generation, or did it assume any type of charging generation including coal?
- e. Does the Company have an estimate of the CO₂ footprint of the 125 MW BESS before it begins operation? In other words, how much CO₂ was produced by 1) the mining of the minerals that go into the battery; and 2) the manufacturing of the battery? If there is such an estimate, what type of electricity (e.g. coal, natural gas, wind, solar, hydro) was assumed to be used in the manufacturing of the battery?

Q.1-8. With respect to the solar PPA costs proposed to be recovered in the fuel adjustment clause (FAC), please provide the following.

- a. For each of the first ten years of the PPAs, what is the expected cost per MWh for the solar PPAs?
- b. For each of the first ten years of the PPAs, what is the expected MWh to be delivered from the solar PPAs?
- c. If any of the solar PPA costs are not considered to be economy purchases and therefore not recoverable in the FAC, would the Company seek recovery of the remainder in a rate case?
- d. Do the Companies have a position as to how such PPA costs should be recovered from ratepayers? For example, a combination of FAC and base rates, or a new renewable energy recovery rider.

Q.1-9. For the solar generation proposed to be owned by the Companies, please provide the expected production by month for a representative year. Because of the concentrated production during the five ozone season months, would this solar generation improve the economics and reliability of a scenario where Ghent 2 continues to be operated during the seven non-ozone season months beginning in 2026?

Q.1-10. For the solar generation proposed to be owned by the Companies, do the Companies have a position as to how such costs should be recovered from ratepayers? For example, base rates or a new renewable energy recovery rider.

/s/ Michael L. Kurtz
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