

COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC 2021 JOINT INTEGRATED )  
RESOURCE PLAN OF LOUISVILLE GAS AND )  
ELECTRIC COMPANY AND KENTUCKY ) CASE NO. 2021-00393  
UTILITIES COMPANY )

**POST HEARING DATA REQUESTS OF JOINT INTERVENORS METROPOLITAN  
HOUSING COALITION, KENTUCKIANS FOR THE COMMONWEALTH,  
KENTUCKY SOLAR ENERGY SOCIETY AND MOUNTAIN ASSOCIATION  
PROPOUNDED TO LOUISVILLE GAS AND ELECTRIC COMPANY  
AND KENTUCKY UTILITIES COMPANY**

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Kentucky Solar Energy Society and  
Mountain Association*

Dated: July 18, 2022

## DEFINITIONS

1. "Document" means the original and all copies (regardless of origin and whether or not including additional writing thereon or attached thereto) of any memoranda, reports, books, manuals, instructions, directives, records, forms, notes, letters, or notices, in whatever form, stored or contained in or on whatever medium, including digital 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 business address, and 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.), identifying number, 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 and why it was so disposed.
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. Unless otherwise specified in each individual interrogatory or request, the terms "you," "your," "LG&E," "KU," "LG&E/KU," or "Companies" refer collectively to Louisville Gas & Electric Company and Kentucky Utilities Company, including any affiliated companies, predecessors-in-interest, employees, authorized agents, outside consultants or contractors, or other representatives.

11. "LG&E" means Louisville Gas & Electric Company and/or any of their officers, directors, employees or agents who may have knowledge of the particular matter addressed, and affiliated companies.

12. "KU" means Kentucky Utilities Company and/or any of their officers, directors, employees or agents who may have knowledge of the particular matter addressed, and affiliated companies including Pennsylvania Power and Light.

13. "The Companies" means LG&E and KU.

14. "Joint Intervenors" means the Metropolitan Housing Coalition, Mountain Association, Kentuckians For The Commonwealth, and Kentucky Solar Energy Society.

15. "Commission" or "PSC" means the Kentucky Public Service Commission, including its Commissioners, personnel, and offices.

16. "DSM-EE" means Demand Side Management-Energy Efficiency.

17. "RFP" means Request for Proposal.

18. "RTO" means Regional Transmission Organization.

## **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 requests for information 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 Joint Intervenors. 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 data requests 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 data request should be construed independently and not with reference to any other interrogatory herein for purpose of limitation.
4. Whenever the documents responsive to a discovery request consist of modeling files (including inputs or output) and/or workpapers, the files and workpapers should be provided in machine-readable electronic format (e.g., Microsoft Excel), with all formulas and cell references intact.
5. The answers provided should first restate the question asked and also identify the person(s) supplying the information.
6. 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.
7. Wherever the response to a request consists of a statement that the requested information is already available to Joint Intervenors, please 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).
8. If you claim a privilege including, but not limited to, the attorney-client privilege or the work product doctrine, as grounds for not fully and completely responding to any discovery request, please describe the basis for your claim of privilege in sufficient detail so as to permit Joint Intervenors or the Commission to evaluate the validity of the claim. With respect to documents for which a privilege is claimed, please produce a "privilege log" that identifies the author, recipient, date, and subject matter of the documents or interrogatory answers for which you are asserting a claim of privilege and any other information pertinent to the claim that would enable Joint Intervenors or the Commission to evaluate the validity of such claims.
9. 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.

10. The interrogatories are to be answered under oath by the witness(es) responsible for the answer.

**POST HEARING DATA REQUESTS PROPOUNDED TO LOUISVILLE GAS  
AND ELECTRIC COMPANY AND KENTUCKY UTILITIES COMPANY  
BY JOINT INTERVENORS**

**JI PH DR 1.** Following up on the issuance of the Request for Proposals on June 22, 2022 and the application for interconnections in Mercer and Jefferson Counties for gas-fired capacity,

- a. Have the Companies (LG&E and/or KU) begun the internal process for development of an application to the Public Service Commission (PSC or Commission) for a Certificate of Public Convenience and Necessity (CPCN) for new gas-fired generation resources? If so, please state when that internal process began.
- b. If the self-build proposal for one or two 660 MW gas-fired units is selected in response to the RFP, when do the Companies (or either of them) anticipate filing the CPCN application with the Commission?
- c. Based on past experience, what is the lag time between filing a CPCN to add a gas-fired generating unit and the construction of such a unit after approval of the CPCN?
- d. Have the Companies begun the process of identifying the equipment manufacturer for the combined cycle units? If so, how far along in that process are the Companies?
- e. Which entity will provide engineer, procure, construct ("EPC") services for the proposed units? If no entity has yet been identified do the Companies intend to contract for this service or perform it using an in-house team?
- f. If any contract has been signed for equipment or EPC services for either or both of the two proposed 660 MW gas-fired units please identify and provide a copy of the contract(s).

**JI PH DR 2.** On page 47 of the Companies' response to comments, the Companies note that they "are well aware of these incentives and have traditionally had the most expansive and robust DSM-EE program portfolio in Kentucky."

- a. As a percentage of annual total sales, how much savings overall and by rate class do the Companies achieve through their offered DSM programs?
- b. As a percentage of annual total sales, how much savings overall and by rate class do the Companies achieve through their offered EE programs?
- c. As a percentage of annual total sales, how much savings do the Companies estimate that ratepayers, by class, achieve through their own efforts (i.e., independent from the Companies DSM-EE programs)?
- d. Please provide the evidence to support the claim that the Companies "have traditionally had the most expansive and robust DSM-EE program portfolio in Kentucky."

**JI PH DR 3.** Please confirm that if the Companies were members in an RTO, that there would be cost savings for solar or wind purchases from inside the RTO that would not exist for non-RTO members.

**JI PH DR 4.** Regarding the Companies' 2021 RFP for power:

- a. Did the Companies receive proposals for renewable power from resources located in an RTO territory?
- b. Did any of the responding bids include all costs of getting the power to KU-LGE? Please explain in full.
- c. Would those costs have been any different if KU-LGE had been members of the RTO where the resources were located, and if so, how would they have been different? Please explain in full.
- d. Have the Companies performed analysis of the total costs of securing renewable power from resources located within RTO territories, and evaluated scenarios in which the Companies ARE and ARE NOT members of the RTO? Please explain.

**JI PH D 5.** Using documented costs associated with the most recent CTs and CCGTs constructed by the Companies (or either of them) corrected for inflation, and assuming a decision to construct either of both types of units at 660 MW of nameplate capacity so that the unit would be available in 2028, please calculate the NPV of the cost of design and construction of such capacity in 2022, 2023, 2024, 2025, 2026 and 2027.

**JI PH DR 6.** The IRP assumes 6% savings based on DSM and customer energy efficiency measures.

- a. Please explain the derivation of the 6% figure and provide all spreadsheets with all formulas and links intact used to derive it.

- b. Is the 6% a constant or by a certain year?
- c. Is it anticipated to grow or shrink as a percentage over time?
- d. Does the 6% figure assume any utility-sponsored DSM or EE measures in place, or to be developed and implemented? Please explain in full.
- e. Does the 6% figure assume only naturally occurring DSM or EE measures in place, or to be developed and implemented? Please explain in full.
- f. Refer to tables 8-12 and 8-13 in Volume I of the IRP. Please confirm that these tables reflect how “[l]oad changes for the DSM programs are embedded in the load forecast for energy and demand presented throughout” the IRP, as stated on Vol. I page 8-20. If anything but confirmed, please explain your response in full.
- g. Please provide the spreadsheet(s) with all formulas and links intact showing how the 6% savings were factored into the load forecast.

**JI PH DR 7.** Is it the Companies' interpretation of the net metering statute that the 1% cap on aggregate net metering capacity prohibits the Companies from choosing to continue to offer net metering to customers after that 1% cap is reached?

**JI PH DR 8.** Did the Companies model the impact of increased utility investment in customer energy efficiency, and/or DSM, on moderating or deferring the need for new generation resources? If so, please provide those modeling inputs and the outputs in electronic format with all formulas and links intact.

**JI PH DR 9.** To confirm, the interconnection requests dated June 21, 2022 that are posted in the Trans Serv Transmission Management Services Interconnection Queue Report and identified as 2022-003 and 2022-004 represent potential self-build combined-cycle gas plants of 660 MW that might be located and constructed at Mill Creek or Brown or both? If selected as a result of the now-open RFP, when would the Companies anticipate filing CPCN(s) for such unit(s)? When would the Companies anticipate the unit(s) would be on-line?

**JI PH DR 10.** To confirm, no modeling, analysis, or assessment of the impact of the various portfolios and scenarios was conducted that specifically focused on the impact of the portfolios or scenarios on low- and fixed-income residential ratepayers, correct? If incorrect, provide such analysis.

**JI PH DR 11.** Refer to the 2021 IRP Reserve Margin Analysis, particularly Section 4.7, titled “Cost of Unserved Energy (Value of Lost Load)”, and Section 4.10, titled, “Scarcity Pricing.”

- a. Section 4.10, page 22 states, "At reserve capacities less than 4.0% of the hourly load, the scarcity price is equal to the Companies' value of unserved energy (\$19,800/MWh; see Section 4.7). Please confirm that the "cost of unserved energy" determines the scarcity price. If anything but confirmed, please explain in full.
- b. Section 4.7 at 21 states, "For this study, unserved energy costs were derived based on information from four publicly available studies," with citations to those four studies.
  - (i) Please confirm that LG&E and KU were not included among the 22 utilities studied in the cited June 2009 publication titled "Estimated Value of Service Reliability for Electric Utility Customers in the United States." If anything but confirmed, please explain in full.
  - (ii) Please confirm that LG&E and KU were not included among the utilities studied in the August 2005 publication titled "Assessment of Other Factors: Benefit-Cost Analysis of Transmission Expansion Plans." If anything but confirmed, please explain in full.
  - (iii) Please confirm that LG&E and KU were not included among the 8 utilities examined in support of the 2003 study titled "A Framework and Review of Customer Outage Costs." If anything but confirmed, please explain in full.
  - (iv) Please confirm that company-specific data from LG&E and KU was not included in the 2000 study titled "Value of Lost Load". If anything but confirmed, please explain in full.
  - (v) Please confirm that the spreadsheet entitled "20210929\_CHW\_CostofUnservedEnergy\_2025Escalation" shows how these studies were aggregated to develop the Companies' scarcity pricing. If anything but confirmed, please explain in full.
- c. Please confirm that "scarcity pricing" was used in the SERVM modeling as an adder to power purchased during any hour in which reserve capacity was 16% or less in excess of load. If anything but confirmed, please explain in full.
- d. Please confirm that, in the SERVM modeling and as reflected by the scarcity price curve shown in Figure 9, when generation exceeds load by 11.5% or more, a \$264 / MWh fee was assessed on any power transfers. If anything but confirmed, please explain in full.
- e. Please confirm that, in the SERVM modeling and as reflected by the scarcity price curve shown in Figure 9, when reserve capacity is 4.0% in excess of hourly load, an approximately \$19,800 per MWh fee was assessed on any power transfers. If anything but confirmed, please explain your response in full.

**JI PH DR 12.** The June 22, 2022, RFP indicates that the Companies will



consider proposals that are “reliable, feasible, and represent the least-cost means of supplying our customers with capacity and energy.”

- a. Please confirm whether proposals that include, in whole or in part, energy-efficiency and DSM measures could provide reliable, feasible, and least-cost means of meeting customers energy needs while deferring or eliminating the need for new capacity?
- b. If DSM and EE proposals were not considered within the scope of the RFP, explain why such strategies for addressing energy needs of customers were excluded?
- c. Have the Companies conducted any evaluation of whether the one or two 660 MW natural gas combined cycle plants could be avoided in whole or in part through more robust deployment of DSM and EE measures? If so, please provide that evaluation. If not, will such an evaluation be undertaken prior to a decision on one or more of the currently contemplated 660 MW units?

**JI PH DR 13.** Refer to the Companies' response to Joint Intervenors' information request 1-37(b), particularly footnote 9 at page 10 of the attached document, which reads: “LG&E and KU provided Cadmus with a draft document with estimated avoided capacity costs based on the year of capacity need and the year a newly dispatchable program is available.” Please provide the referenced document.

Respectfully submitted,



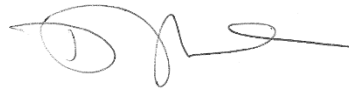
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CERTIFICATE OF SERVICE

In accordance with the Commission's July 22, 2021 Order in Case No. 2020-00085, *Electronic Emergency Docket Related to the Novel Coronavirus COVID-19*, this is to certify that the electronic filing of *Post Hearing Data Requests of Joint Intervenors Metropolitan Housing Coalition, Kentuckians for the Commonwealth, Kentucky Solar Energy Society, and Mountain Association Propounded To Louisville Gas and Electric Company and Kentucky Utilities Company* was submitted to the Commission on July 18, 2022; that the documents in this electronic filing are a true representations of the materials prepared for the filing; and that the Commission has not excused any party from electronic filing procedures for this case at this time.



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Tom FitzGerald