

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	)	CASE NO.
CONVENIENCE AND NECESSITY AND SITE	)	2022-00402
COMPATIBILITY CERTIFICATES AND	)	
APPROVAL OF A DEMAND SIDE MANAGEMENT	)	
PLAN AND APPROVAL OF FOSSIL FUEL-FIRED	)	
GENERATING UNIT RETIREMENTS	)	

COMMISSION STAFF'S SIXTH REQUEST FOR INFORMATION  
TO KENTUCKY UTILITIES COMPANY AND  
LOUISVILLE GAS AND ELECTRIC COMPANY

Kentucky Utilities Company and Louisville Gas and Electric Company (LG&E/KU), pursuant to 807 KAR 5:001, shall file with the Commission an electronic version of the following information. The information requested is due on August 4, 2023. The Commission directs LG&E/KU to the Commission's July 22, 2021 Order in Case No. 2020-00085<sup>1</sup> regarding filings with the Commission. Electronic documents shall be in portable document format (PDF), shall be searchable, and shall be appropriately bookmarked.

Each response shall include the question to which the response is made and shall include the name of the witness responsible for responding to the questions related to the information provided. Each response shall be answered under oath or, for

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<sup>1</sup> Case No. 2020-00085, *Electronic Emergency Docket Related to the Novel Coronavirus COVID-19* (Ky. PSC July 22, 2021), Order (in which the Commission ordered that for case filings made on and after March 16, 2020, filers are NOT required to file the original physical copies of the filings required by 807 KAR 5:001, Section 8).

representatives of a public or private corporation or a partnership or association or a governmental agency, be accompanied by a signed certification of the preparer or the person supervising the preparation of the response on behalf of the entity that the response is true and accurate to the best of that person's knowledge, information, and belief formed after a reasonable inquiry.

LG&E/KU shall make timely amendment to any prior response if LG&E/KU obtain information that indicates the response was incorrect or incomplete when made or, though correct or complete when made, is now incorrect or incomplete in any material respect.

For any request to which LG&E/KU fail or refuse to furnish all or part of the requested information, LG&E/KU shall provide a written explanation of the specific grounds for its failure to completely and precisely respond.

Careful attention shall be given to copied and scanned material to ensure that it is legible. When the requested information has been previously provided in this proceeding in the requested format, reference may be made to the specific location of that information in responding to this request. When applicable, the requested information shall be separately provided for total company operations and jurisdictional operations. When filing a paper containing personal information, LG&E/KU shall, in accordance with 807 KAR 5:001, Section 4(10), encrypt or redact the paper so that personal information cannot be read.

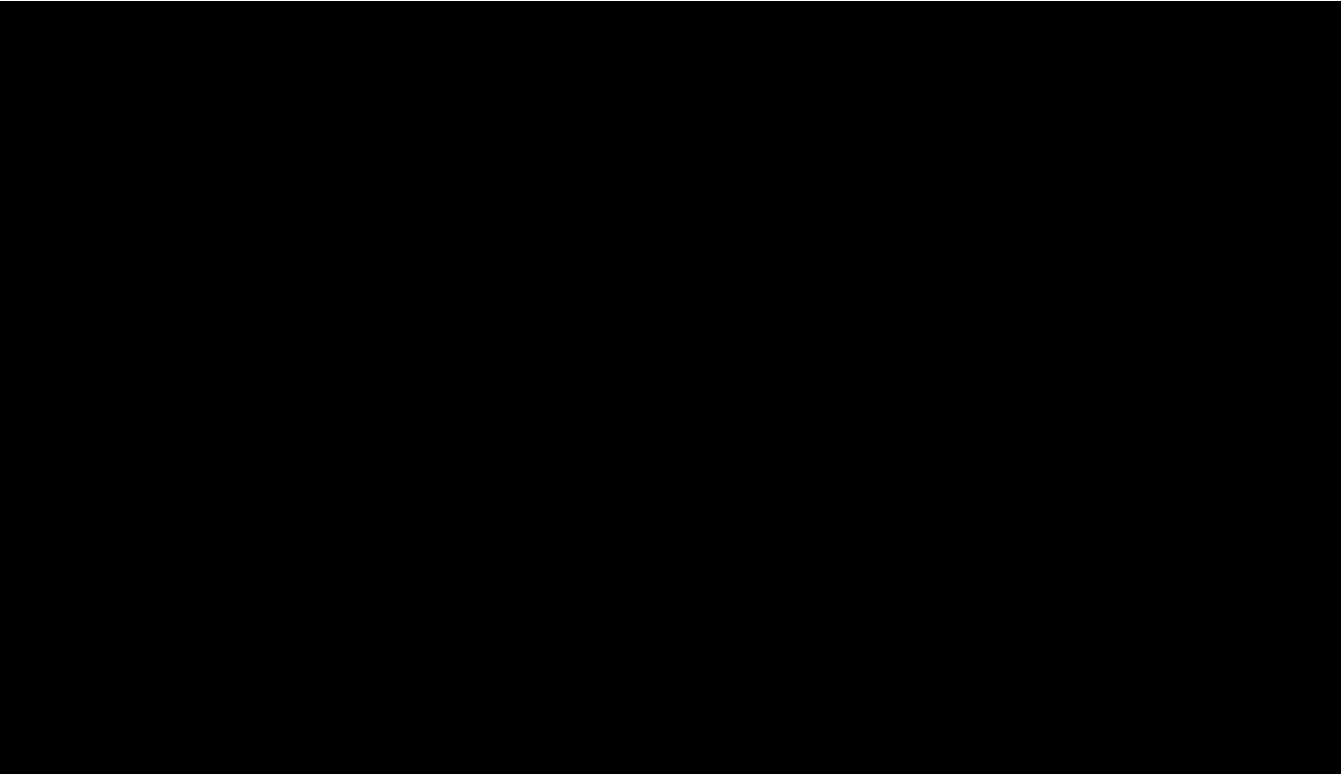
1. Refer to LG&E/KU's response to Commission Staff's Fifth Request for Information (Staff's Fifth Request), Item 2, in which LG&E/KU performed analysis to assess the impact of the proposed EPA carbon regulations on the cost-effectiveness of

the preferred portfolio. Also, for the following questions, refer to 04-PSC\_DR5\_LGE\_KU\_Attach\_to\_Q02\_-\_PUBLIC\_WORKPAPERS, CONFIDENTIAL\_WORKPAPERS, CONFIDENTIAL\_PROSYM, out\_unityr.csv:

a. In LG&E/KU's response to Staff's Fifth Request, Item 2, LG&E/KU stated that "any analysis of the proposed regulations should include the impact on the Companies' entire generation fleet." Explain why the 50 percent capacity factor limit for natural gas combustion turbines after 2031 was applied to the new NGCC and SCCT units only (CC621 01, 02; SCCT 01, 02, 03, 04), but some existing natural gas units exceeded percent after 2031 (Cane Run 7 2x1; Trimble County 1, 2). If an alternative compliance method, such as CCS or conversion to hydrogen co-firing, was assumed for these units, describe how this was incorporated into the model.

b. Explain why some existing coal units exceeded the 20 percent capacity factor limit after 2031 in some scenarios (Ghent 1, 3, 4; Mill Creek 3, 4). If an alternative compliance method, such as CCS or conversion to natural gas co-firing, was assumed for these units, describe how this was incorporated into the model.

c. On average across all "CaseName" scenarios, the following fossil fuel resources had capacity factors in 2032 exceeding the proposed EPA carbon regulations, 50 percent for natural gas, 20 percent for coal. Identify which resources would provide replacement energy if all of the following units reduced their generation to comply with the regulations, as shown in the below table.



2. Refer to LG&E/KU's response to Staff's Fifth Request, Item 2, in which LG&E/KU performed analysis to assess the impact of the proposed EPA carbon regulations on the cost-effectiveness of the preferred portfolio.

a. Explain why the final preferred portfolio, including utility-owned solar and storage, was not included in this analysis.

b. Considering the significant energy replacement required to fully comply with the regulations as discussed in Question 1c, re-run the capacity expansion model with the EPA regulations applied to all existing and candidate resources. Using the optimal portfolio from the capacity expansion, provide the Selected Portfolio, Incremental PVRR, LOLE, Reserve Margin, Net Summer/Winter Capacity, and Dispatchable Summer/Winter Range.



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DATED JUL 24 2023

cc: Parties of Record

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