

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC INVESTIGATION OF	)	
INTERCONNECTION AND NET METERING	)	CASE NO. 2020-00302
GUIDELINES	)	

RESPONSE OF
KENTUCKY UTILITIES COMPANY AND LOUISVILLE GAS AND ELECTRIC
COMPANY
TO
THE COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION
DATED JUNE 30, 2026

FILED: JULY 14, 2026

VERIFICATION

COMMONWEALTH OF KENTUCKY)

)

COUNTY OF JEFFERSON)

The undersigned, **Karmen M. Powell**, being duly sworn, deposes and says that she is Sr. Manager Engineering – Investment Strategy and Reliability for LG&E and KU Services Company, that she has personal knowledge of the matters set forth in the responses for which she is identified as the witness, and the answers contained therein are true and correct to the best of her information, knowledge, and belief.

Karmen Powell

Karmen M. Powell

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 6th day of July _____, 2026.

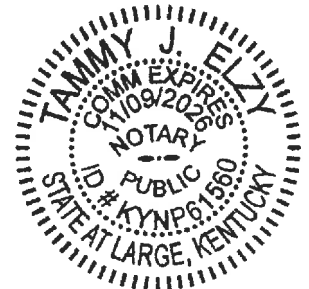
Tammy J. Ely

Notary Public

Notary Public ID No. KYNP61560

My Commission Expires:

November 9, 2026



VERIFICATION

COMMONWEALTH OF KENTUCKY)
)
COUNTY OF JEFFERSON)

The undersigned, **Michael E. Hornung**, being duly sworn, deposes and says that he is Manager of Pricing/Tariffs for LG&E and KU Services Company, that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge, and belief.



Michael E. Hornung

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 6th day of July _____ 2026.

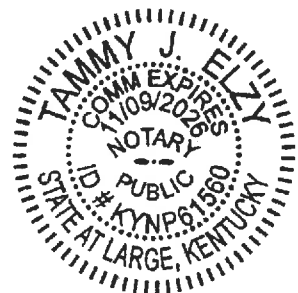


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**KENTUCKY UTILITIES COMPANY AND LOUISVILLE GAS AND ELECTRIC
COMPANY**

Response to Commission Staff's First Request for Information

Dated June 30, 2026

Case No. 2020-00302

Question No. 1

Responding Witness: Michael E. Hornung / Karmen M. Powell

Q-1. Refer to Case No. 2008-00169, Development of Guidelines for Interconnection and Net Metering for Certain Generators with Capacity up to Thirty Kilowatts (Ky. PSC Jan. 8, 2009), Appendix A.

- a. Provide red-lined tariff sheets for any updates or changes made to the utility's tariff regarding the interconnection and net-metering guidelines since the implementation of such guidelines in Case No. 2008-00169.
- b. Provide any safety or engineering requirements currently required or available to net metering and interconnection customers to help ensure safety and reliability that are not required under the Commission's Interconnection and Net Metering Guidelines.
- c. Provide the current percent of cumulative capacity of the utility's single hour peak load during calendar year 2025. Explain how the utility calculated this percentage.
- d. Provide the case number where each change or update was approved.

A-1.

- a. See attached.
- b. See attached. Safety and engineering requirements are specified in Attachment 1 (Tariff Sheet Nos. 110-110.7), which can also be found at the following link: [Rates and tariffs | LG&E and KU](#), as well as Attachment 2 ("LGE/KU Interconnection Requirements for Customer-Sited Distribution Generation"), which can also be at the following links: <https://lge-ku.com/residential/guides> and <https://lge-ku.com/business/guides>. Tariff Sheet Nos. 110-110.7 for KU (attached) are identical to LG&E's.
- c. For calendar year 2025, cumulative installed KU net metering service ("NMS") capacity (AC) was approximately 0.50% of KU's single-hour peak load. For the same period, cumulative installed LG&E NMS capacity (AC) was approximately 0.92% of LG&E's single-hour peak load. These

percentages were calculated by dividing each Company's cumulative installed NMS capacity as of December 2025 (converted from DC nameplate capacity to AC capacity by dividing by 1.2) by the Company's 2025 single-hour peak load and multiplying by 100. The DC-to-AC conversion was performed using the methodology utilized by NREL's PVWatts calculator.

- d. All redlined changes shown in the attachment provided in response to part a above were made and approved in the Companies' most recent rates cases (Case Nos. 2025-00113 and 2025-00114). Prior to that, there were no other substantive changes to the Companies Net Metering Service Interconnection Guidelines tariff sheets, although the Companies did move those Guidelines from being embedded in the Net Metering Service tariff sheets to the Terms and Conditions section at the end of the tariff book. The Commission approved this change in the 2020 rate cases (Case Nos. 2020-00349 and 2020-00350).

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Question No. 2

Responding Witness: Michael E. Hornung

Q-2. Describe how many net-metering and interconnection customers the utility has, including what type of generating facility and energy storage, if applicable, each customer has.

A-2. Kentucky Utilities Company has 2,930 net-metering customers. The generation-type breakdown is:

- Hydro – 1 customer
- Solar – 2,924 customers (228 with energy storage)
- Wind – 5 customers

Louisville Gas and Electric Company has 3,496 net-metering customers. The generation-type breakdown is:

- Solar – 3,491 customers (162 with energy storage)
- Wind – 5 customers

Note: Battery energy storage resources are not eligible for net metering service.

**KENTUCKY UTILITIES COMPANY AND LOUISVILLE GAS AND ELECTRIC
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Question No. 3

Responding Witness: Karmen M. Powell

- Q-3. Provide a breakdown of the approximate costs for the utility associated with interconnection for the past five years. In this response, separate the approximate costs associated with level 1 and level 2 applications.
- A-3. Costs associated with reviewing and approving the applications are primarily labor related. LG&E/KU received 6,668 applications from January 2021 through December 2025. Using 3 hours of administration time and 2 hours of engineering time per application, the total costs associated with the Level 1 and Level 2 applications is \$2,918,250. These costs used a burdened labor rate of \$72.55/hour for administration and \$110/hour for engineering. The overwhelming majority of applications are Level 1. Since Level 2 applications are rare and not tracked separately, the cost included above is assumed to be all Level 1.

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Question No. 4

Responding Witness: Karmen M. Powell

Q-4. Provide an overview of how the interconnection application and agreement process works. In this overview, explain approximately how long each step in the process takes, who is responsible for initiating each step of the process, when progress is communicated to the applicant, and what costs are associated with this process for the utility and applicants. Also explain, if a customer does not qualify or is ineligible during the review process, the protocols and considerations for coming to that determination and communicating that decision to the applicant.

A-4.

- A customer desiring a Level 1 interconnection first submits a "LEVEL 1 - Application for Interconnection and Net Metering" through the Companies' website.
- An automated email response is sent to the customer immediately, acknowledging receipt of the application.
- After the customer's submission of the application, the Companies' engineering department reviews the application.
- The Companies notify the customer via email within 20 business days as to whether the request is approved or, if denied, the reason(s) for denial.
- If during the engineering evaluation, additional information is required from the customer to make this determination, the Companies will communicate with the customer and request the additional information.
- The time period between the Companies' request to the customer for additional information and the customer responding to the Companies with that information is not counted towards the 20 business days, consistent with the language in the Companies' tariff.

This process is the same with respect to Level 2 interconnections. However, the relevant time period within which the Companies provide notification to the customer of approval or denial of the request is extended to 30 days.

These processes are consistent with the requirements set forth in the Companies' tariffs. (Tariff Sheet Nos. 110.1 and 110.2).

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Question No. 5

Responding Witness: Michael E. Hornung

- Q-5. Explain whether the utility recovers in rates any expenses for the interconnection application process. If not, explain why not.
- A-5. The cost of interconnection is currently recovered through the Companies' base rates. If the proposed tariff change is approved to collect application fees for Level 1 installations, the Companies will move these to miscellaneous revenues.

**KENTUCKY UTILITIES COMPANY AND LOUISVILLE GAS AND ELECTRIC
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**Response to Commission Staff's First Request for Information
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Case No. 2020-00302

Question No. 6

Responding Witness: Karmen M. Powell

- Q-6. Explain which IEEE Standard is currently applicable for purposes of interconnection. If IEEE Standard 1547-2018 is not currently applicable, explain the utilities' position for implementing IEEE Standard 1547-2018.
- A-6. LG&E and KU's Net Metering Interconnection Guidelines require compliance with the latest revision of IEEE Standard 1547, which is currently IEEE 1547-2018. Compliance with the latest revision ensures that inverter-based resources maintain the safety and reliability of the grid, interoperability, and allow grid support functions that may be recommended in some instances.

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**Response to Commission Staff's First Request for Information
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Case No. 2020-00302

Question No. 7

Responding Witness: Karmen M. Powell

- Q-7. Explain the interconnection requirements if a customer does not qualify or is ineligible during the review process for a level one application; a level two application; and both levels.
- A-7. If a customer does not qualify or is ineligible, the customer is notified of deficiencies and is given the opportunity to correct and re-submit the application following the Companies' standard interconnection process.

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**Response to Commission Staff's First Request for Information
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Question No. 8

Responding Witness: Michael E. Hornung / Karmen M. Powell

Q-8. Explain how behind the meter battery energy storage resources are considered under the existing tariff for both net-metering and non-net metering customers.

A-8. Battery energy storage resources are not eligible for net metering service. The Companies are evaluating a possible Bring Your Own Battery pilot program as a potential future demand-side management offering, but it is not part of their existing tariffs.

During engineering review of such interconnections, the total nameplate capacity of all DER assets is considered. For example, the sum of all DER inverter capacities (solar + battery) is considered as the total size of the interconnection when reviewing impacts to the electric system and capacities of existing assets such as transformers, fuses, conductor ratings, etc.

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Response to Commission Staff's First Request for Information

Dated June 30, 2026

Case No. 2020-00302

Question No. 9

Responding Witness: Karmen M. Powell

- Q-9. Explain what safety and technical standards are used to safely and reliably integrate behind-the-meter battery energy storage resources. Explain, if applicable, what changes to software, communications, billing, and utility systems would need to change in order to accommodate third party DER-aggregation. If not applicable, explain why not.
- A-9. Compliance with both IEEE 1547 and UL 1741, latest revision, is required for any behind-the-meter battery energy storage resources.

While the Companies have the resources to support aggregation of DER for utility-run demand response programs, accommodation of third party DER aggregation for market-based functions would require incremental capabilities.

Specifically, implementation would require:

DER registration and validation - A system of record would be needed to identify each participating DER, confirm it has an approved interconnection, verify operating limits, and track aggregation membership.

Operational visibility - Depending on the service provided, the utility may need telemetry, status, dispatch notification, and performance data to both the component DER and the DER aggregation or DER aggregator. This is necessary because an aggregation can create feeder level impacts even if it appears acceptable at the bulk system level.

Distribution system planning - The utility would need tools to evaluate locational impacts of an aggregation, including voltage, thermal loading, protection coordination, reverse power flow, and simultaneous charging or discharging across a feeder, substation, or both.

Communications and operation coordination - If aggregated resources are used for grid services, there must be clear operating protocols between the aggregator, utility, and market operator, including notification, execution, and override rules.

Billing and settlement - Billing systems may need to distinguish retail usage, battery charging, exports, program compensation, wholesale settlement, and any restrictions on double compensation.

Tariff and business process updates - Tariffs and operating procedures would need to define eligible resources, telemetry requirements, aggregator obligations, customer consent, performance measurement, and utility authority to protect reliability.