

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC APPLICATION OF LOUISVILLE)	
GAS AND ELECTRIC COMPANY FOR AN)	
ADJUSTMENT OF ITS ELECTRIC AND GAS)	
RATES, A CERTIFICATE OF PUBLIC)	
CONVENIENCE AND NECESSITY TO)	CASE NO.
DEPLOY ADVANCED METERING)	2020-00350
INFRASTRUCTURE, APPROVAL OF)	
CERTAIN REGULATORY AND ACCOUNTING)	
TREATMENTS, AND ESTABLISHMENT OF A)	
ONE-YEAR SURCREDIT)	

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

Louisville Gas and Electric Company (LG&E), pursuant to 807 KAR 5:001, is to file with the Commission an electronic version of the following information. The information requested herein is due on April 20, 2021. The Commission directs LG&E to the Commission's March 16, 2020 and March 24, 2020 Orders in Case No. 2020-00085¹ regarding filings with the Commission. The Commission expects the original documents to be filed with the Commission within 30 days of the lifting of the current state of emergency. All responses in paper medium shall be appropriately bound, tabbed, and indexed. Electronic documents shall be in portable document format (PDF), shall be searchable, and shall be appropriately bookmarked.

¹ Case No. 2020-00085, *Electronic Emergency Docket Related to the Novel Coronavirus COVID-19* (Ky. PSC Mar. 16, 2020), Order at 5–6. Case No. 2020-00085, *Electronic Emergency Docket Related to the Novel Coronavirus COVID-19* (Ky. PSC Mar. 24, 2020), Order at 1–3.

Each response 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 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 shall make timely amendment to any prior response if LG&E obtains information that indicates the response was incorrect when made or, though correct when made, is now incorrect in any material respect. For any request to which LG&E fails or refuses to furnish all or part of the requested information, LG&E shall provide a written explanation of the specific grounds for its failure to completely and precisely respond.

Careful attention shall be given to copied 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 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's response to Commission Staff's Second Request for Information (Staff's Second Request), Item 95. For the past four calendar years, provide

the number of applications made each year that consisted of more than 30 wireless attachments in a 30-day period.

2. Refer to LG&E's response to Staff's Second Request, Item 150. Confirm that LG&E's forfeited discount/late payment charge is not cost supported. If not confirmed, provide cost support for LG&E's forfeited discount/late payment charge.

3. Refer to the Application, Tab 5, P.S.C. Electric No. 12, Original Sheet No. 104–104.3, P.S.C. Gas No. 12, Original Sheet No. 104–104.3, P.S.C. No. 13, Original Sheet No. 104–104.3, and P.S.C. Gas No. 13, Original Sheet No. 104–104.3, LG&E's current and proposed bill formats.

a. Explain why the current and proposed Electric Only and Electric and Gas combined bill formats do not have a section for taxes and fees.

b. Explain why the line item "Current Taxes and Fees" is being removed from the billing summary on Sheet No. 104 of the gas tariff.

c. Explain why the "Taxes & Fees" section is being removed from Sheet No. 104.1 of the gas tariff.

d. Explain whether taxes and fees will be shown separately on future customer bills. If so, explain how they will be shown. If not, explain why not.

4. Refer to the Application, Tab 4, P.S.C. Electric No. 13, Original Sheet No. 57, proposed Net Metering Service-1 Tariff (Tariff NMS-1), and P.S.C. Electric No. 13, Original Sheet Nos. 108–108.5, proposed Net Metering Service Interconnection Guidelines.

a. Explain whether Tariff NMS-1 customers will be subject to the new Net Metering Service Interconnection Guidelines.

b. If so, explain why Tariff NMS-1 customers will not be granted legacy status in regards to the Net Metering Service Interconnection Guidelines and whether LG&E foresees additional costs to Tariff NMS-1 customers to comply with the new Net Metering Service Interconnection Guidelines.

5. Refer to the Direct Testimony of William S. Seelye (Seelye Testimony), Exhibit WSS-19, Cost Support for Miscellaneous Charges. For each charge in Exhibit WSS-19 that includes a burden rate, provide the detailed calculation of the burden rate broken down by each individual component.

6. Provide a copy of all of the responses, in their entirety, to LG&E request for proposals that were submitted on or before March 31, 2021.

7. Provide, in detail, LG&E's plan to utilize distributed energy resources related data and other information and processes to:

a. Improve and lower costs associated with customer distributed energy resource interconnection.

b. Improve distribution system planning.

c. Improve resource procurements at the bulk power level (e.g., IRP).

8. Refer to LG&E's response to Commission Staff's Fifth Request for Information (Staff's Fifth Request), Item 6. Provide the resulting annual avoided cost rate per kilowatt-hour from the Mill Creek Unit 2 environmental compliance costs.

9. Refer to LG&E's response to Staff's Fifth Request, Item 16.

a. Explain how LG&E considers the impacts of distributed energy resources, including distributed generation, electric vehicles, energy efficiency, and distributed storage, within their distribution planning process.

b. Explain whether LG&E considers any benefits from distributed energy resources, including distributed generation, electric vehicles, energy efficiency, and distributed storage, within its distribution planning process. If so, explain how these evaluations are conducted and provide examples that include each of the resources mentioned (separately or in combination).

10. Refer to LG&E's response to Staff's Fifth Request, Item 19. Provide a detailed description and accounting of all costs expended on studying the Distributed Energy Management System (DERMS).

11. For LG&E's cost of service and rate design witnesses, provide all exhibits and workpapers relied upon for rebuttal testimony. Provide the responses in Excel spreadsheet format with all formulas, columns, and rows unprotected and fully accessible.

12. Reference to LG&E's response to Commission Staff's Fourth Request for Information (Staff's Fourth Request), Item 14, which states the following:

Regarding the first type of aggregation, LG&E and LG&E are actively studying applications for optimizing the utilization and management of individual solar and solar-plus-storage installations on their systems. This currently involves studying the possible installation and use of Distributed Energy Resources Management Systems (DERMS). Potential objectives of a DERMS would include voltage support management, optimization of power flows within the grid, possible control of inverters to provide reactive volt-amp (VAR) support for the system, and monitoring the state and operability of distributed generation facilities.

Provide all studies, including drafts and internal memos, and business cases related to LG&E's activities above.

13. Provide average monthly fuel costs for the previous five years for each of LG&E's generating facilities. Explain how LG&E calculates the average fuel costs and

break out each component with a source each input relied upon. Include in the response, but do not limit it to, contracted coal and natural gas prices for each facility and how these price map to the average costs calculated. Provide each fuel (i.e., coal and natural gas) contract. Provide the responses and all associated workpapers in Excel spreadsheet format with all formulas, columns, and rows unprotected and fully accessible.

14. Refer to LG&E's response the Attorney General and Kentucky Industrial Customers, Inc. First Request for Information (AG-KIUC's First Request), Item 172, Attachment 1, and the Excel spreadsheet.

a. For purposes of PROSYM modeling, state whether LG&E allows imports and exports. If yes, provide the resulting imports and exports. If not, provide support for the company's assumption.

b. Provide the how the availability of each generator was coded in PROSYM. Include in this answer, but do not limit it to, an explanation of whether facilities were designated as "MUST RUN" and the impact this designation has on the marginal cost estimate.

c. Explain, in detail, how fuel prices are forecasted. Provide any workpapers relied upon in Excel spreadsheet format with all formulas, columns, and rows unprotected and fully accessible.

d. Explain, in detail, how variable O&M costs are forecasted. Provide any workpapers relied upon in Excel spreadsheet format with all formulas, columns, and rows unprotected and fully accessible.

15. Refer to LG&E's response AG-KIUC First Request, Item 172, Attachment 1, page 2.

- a. Provide LG&E's definition of each input (i.e., 3–11).
- b. LG&E's response on page 2, states that the "most relevant input

data" is provided. Describe each of the inputs that was omitted from the response, include a detailed definition of how each input, and how each omitted input was forecasted and calculated.

16. Refer LG&E's response AG-KIUC First Request, Item 172, Attachment 1, footnote 4.

- a. State whether it is LG&E's position that gas-fired units do not have variable O&M costs. Provide the company's justification for this assumption.

- b. Provide any orders from any state utility regulatory commissions that explicitly approved omitting variable O&M costs from natural gas facilities within either avoided costs rates or integrated resource planning dockets.

- c. State whether LG&E includes variable O&M for natural gas facilities and other generating facilities in its cost of service study. If so, identify where in the cost of service study variable O&M for generating facilities are located and provide a quantification of the amount of variable O&M for natural gas plants that is included in the cost of service study for the requested test year. Provide any workpapers relied upon in Excel spreadsheet format with all formulas, columns, and rows unprotected and fully accessible.

17. Provide the average monthly variable O&M costs for the previous five years for each of LG&E's generating facilities. Explain how LG&E calculates the average O&M costs and break out each component with a source each input relied upon. Provide the

responses and all associated workpapers in Excel spreadsheet format with all formulas, columns, and rows unprotected and fully accessible.

18. Refer to LG&E's response AG-KIUC's First Request, Item 172, Attachment 3. Provide the analysis and justification for LG&E's seasonality, on-peak periods, and off-peak periods. Provide any analysis and workpapers relied upon in Excel spreadsheet format with all formulas, columns, and rows unprotected and fully accessible.

19. Refer to LG&E's response to Commission Staff's Fourth Request, Item 21. Explain whether LG&E has data to support its "expectation that most charging of electric vehicles will be done at home during off-peak hours." If yes, provide the data. If no, explain what is meant by "most charging . . . will be done . . . off-peak" and explain how LG&E supports its expectation.

20. Refer to LG&E's response to the Kentucky Solar Industries' First Request for Information, Item 14a.

a. State whether any of the customers presently taking service under NMS-1 generate electricity from a technology other than solar PV. If yes, specify the rate schedule, number of customers, and total generating capacity of each non-PV generating technology.

b. For each of the past five years, provide the annual kWh generation that has flowed back onto the grid produced by the customers presently taking service under NMS-1, disaggregated by generation technology and customer class, in Excel spreadsheet format with all formulas, columns, and rows unprotected and fully accessible.

21. Refer to Tariff SQF. Identify the cost of the time differentiated recording meter and associated equipment, including installation and programming. Explain

whether this meter is capable of recording both the consumption and production of a customer-generator. If not, identify which of LG&E's meters would be capable of recording both consumption and production of a customer-generator with time-differentiated export rates, and identify the cost of manufacturing, installing, and programming that meter.

22. Refer to LG&E's response to Staff's Fifth Request, Item 19, which states: "The Companies are currently studying whether a Distributed Energy Management System (DERMS) will be needed to address problems created by distributed energy resources (DERs). DERs are more likely than not to create issues on the distribution system which will result in increased costs." Provide a detailed description of the "problems" that DERs are creating, the solutions that LG&E is studying, and provide the studies conducted to date.

23. Refer to the Seelye Testimony.

a. State whether LG&E connects residential customers with one uniform kW service line or whether the company has more than one service line size. If LG&E has more than one size of service line, provide the number of residential customers connected to each size of service line, the unit installed cost of each service line, and the inventory cost of each service line.

b. Provide the number of residential customers taking service by size of final line transformer, in Excel spreadsheet format with all formulas, columns, and rows unprotected and fully accessible.

c. Identify the number of multi-family residential customers that LG&E serves in its service territory.

d. State whether LG&E has segment load research data for multi-versus single-family residential customers. If yes, provide the most recent calendar year of data available, in Excel spreadsheet format with all formulas, columns, and rows unprotected and fully accessible.

e. State whether LG&E has equipment cost data (e.g., for service drops) differentiated by multi- versus single-family residential customers. If yes, provide the data, in Excel spreadsheet format with all formulas, columns, and rows unprotected and fully accessible.

24. Refer to the Seelye Testimony, pages 44–46, and LG&E’s response to AG-KUIC’s First Request, Item 172. Provide any third party (e.g., NYMEX) forwards and futures energy forecasts that LG&E used to compare its PROSYM modeling results and proposed avoided cost of energy. Provide the most recent version of the forecast for a five year period, if available, and shorter, if not.

25. Refer to the Application, Tab 15 - 807 KAR 5:001, Section 16(7)(b), filing requirements. Describe how LG&E forecasts its transmission spending, including explanations for the projected 2020-2023 capital expenditures. Provide all transmission planning documents, both internal and public. Include all associated workpapers in Excel spreadsheet format with all formulas, columns, and rows unprotected and fully accessible.

26. Refer to the Application, Tab 16 – 807 KAR 5:001, Section 16(7)(c), filing requirements. Provide a detailed description of how the PROSYM model performs unit commitment decisions.

27. Refer to proposed tariff Environmental Cost Recovery Surcharge. For the following, provide responses and all associated workpapers in Excel spreadsheet format with all formulas, columns, and rows unprotected and fully accessible.

a. Provide the average \$/kWh value of the ECR surcharge by month over the past three years for the GS and RS customer classes.

b. Provide the average ECR bill surcharge by month over the past three years for the GS and RS schedules.

28. Identify all firm capacity sales that LG&E has made to other load serving entities within the last five years. Also, identify the average price of firm capacity that LG&E charged to these other load serving entities.

29. Refer to Tariff LQF. For the following, provide responses and all associated workpapers in Excel spreadsheet format with all formulas, columns, and rows unprotected and fully accessible.

a. State when the avoided capacity cost calculation methodology for Rider LQF was most recently approved and provide a citation to the Order approving the avoided capacity cost methodology.

b. Provide the testimony explaining and supporting the methodology for calculating the Rider LQF avoided capacity cost.

c. Provide the hourly avoided capacity cost (ACC) in \$/kWh payable to a QF for delivery of capacity over the past three years.

d. If LG&E has conducted any forward-looking estimate of future hourly ACC payments, provide all such values.

e. For each of the past three years, indicate whether the CAP_i was 0 or another value in each hour.

f. For each of the past three years, provide the hourly avoided capacity cost payment [$ACC \times CAP_i$] paid to customers on the LQF tariff.

30. Explain, in detail, how LG&E transmission costs are caused (e.g., planning triggers and/or monthly peaks). Also, explain and justify how LG&E classifies and allocates transmission costs to customer classes, including the number of peaks costs are based on.

31. State whether LG&E conducted a review of best practices for avoided costs methods. If so, provide any and all internal memos, consultant deliverables, and reports related to avoided cost best practices. If comparative quantitative analysis was conducted on various methodological approaches, provide these analyses in Excel spreadsheet format with all formulas, columns, and rows unprotected and fully accessible.

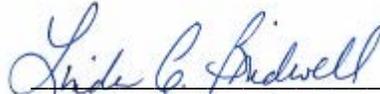
32. Refer to the Direct Testimony of Benjamin D. Inskeep (Inskeep Testimony) filed on behalf of the Kentucky Solar Industries Association, Inc., page 53, Figure 2, and footnote 53.

a. Explain what operational, planning, or other circumstances that makes LG&E distinct from the 15 states studied in the analysis, all of which included avoided generation and transmission capacity in their cost-benefit study of net metering and distributed solar.

b. Explain what operational, planning, or other circumstances that makes LG&E distinct from the ten states studied in the analysis that included avoided distribution capacity in their cost-benefit study of net metering and distributed solar.

33. Refer to the Direct Testimony of Robert M. Conroy, page 53, lines 4–7, which discusses the revisions to the Firm Transportation Service Tariff regarding gas generators whose generation facilities are installed and operating 90 days after the rates approved in this proceeding go into effect. Explain whether, and if so how, this revision could impact the eligibility for gas transportation service for a customer that installs generation facilities more than 90 days after the rates approved in this proceeding go into effect.

34. Refer to Case No. 2020-000174,² final Order at 100, wherein the Commission ordered Kentucky Power Company to use a minimum contract term of five years for cogeneration and small power producers. Explain any changes that would be necessary for LG&E to use a minimum contract term of five years.



Linda C. Bridwell, PE
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Public Service Commission
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DATED APR 14 2021

cc: Parties of Record

² Case No. 2020-00174, *Electronic Application of Kentucky Power Company for (1) A General Adjustment of Its Rates For Electric Service; (2) Approval of Tariffs and Riders; (3) Approval of Accounting Practices to Establish Regulatory Assets and Liabilities; (4) Approval of a Certificate of Public Convenience and Necessity; and (5) All Other Required Approvals and Relief* (Ky. PSC Jan. 13, 2021).

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