

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC JOINT APPLICATION OF)	
KENTUCKY UTILITIES COMPANY AND)	
LOUISVILLE GAS AND ELECTRIC)	CASE NO. 2022-00402
COMPANY FOR CERTIFICATES OF)	
PUBLIC CONVENIENCE AND NECESSITY)	
AND SITE COMPATIBILITY)	
CERTIFICATES AND APPROVAL OF A)	
DEMAND SIDE MANAGEMENT PLAN AND)	
APPROVAL OF FOSSIL FUEL-FIRED)	
GENERATION UNIT RETIREMENTS)	

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

Kentucky Utilities Company (“KU”) and Louisville Gas and Electric Company (“LG&E”) (collectively, “the Companies”) respectfully submit the following data requests to the Metropolitan Housing Coalition (“MCA”), Kentuckians for the Commonwealth (“KFTC”), Kentucky Solar Energy Society (“KSES”), and Mountain Association (“MA”) (collectively, the “Joint Intervenors”) to be answered by the date specified in the procedural schedule established by the Kentucky Public Service Commission (“Commission”) in this matter on May 16, 2023.

Instructions

1. As used herein, “Documents” include all correspondence, memoranda, notes, email, maps, drawings, surveys or other written or recorded materials, whether external or internal, of every kind or description in the possession of, or accessible to, Joint Intervenors, its witnesses, or its counsel.

2. Please identify by name, title, position, and responsibility the person or persons answering each of these data requests.

3. These requests shall be deemed continuing so as to require further and supplemental responses if Joint Intervenors receive or generate additional information within the scope of these requests between the time of the response and the time of any hearing conducted herein.

4. To the extent that the specific document, work paper, or information as requested does not exist, but a similar document, work paper, or information does exist, provide the similar document, work paper, or information.

5. To the extent that any request may be answered by a computer printout, spreadsheet, or other form of electronic media, please identify each variable contained in the document or file that would not be self-evident to a person not familiar with the document or file.

6. If Joint Intervenors object to any request on the ground that the requested information is proprietary in nature, or for any other reason, please notify the undersigned counsel as soon as possible.

7. For any document withheld on the ground of privilege, state the following: date; author; addressee; indicated or blind copies; all persons to whom distributed, shown or explained; and the nature and legal basis for the privilege asserted.

8. In the event any document requested has been destroyed or transferred beyond the control of Joint Intervenors, its counsel, or its witnesses, state: the identity of the person by whom it was destroyed or transferred and the person authorizing the destruction or transfer; the time, place and method of destruction or transfer; and the reason(s) for its destruction or transfer. If such a document was destroyed or transferred by reason of a document retention policy, describe in detail the document retention policy.

9. If a document responsive to a request is a matter of public record, please produce a copy of the document rather than a reference to the record where the document is located.

Data Requests

General: All Witnesses

1. In Excel spreadsheet or other format, with all formulas, columns and rows unprotected and fully accessible, please provide all workpapers and source documents not previously provided.

Witness: Anna Sommer

2. Please provide all of Ms. Sommer's workpapers and relevant modeling files not already produced into the record of this proceeding.
 - a. Please provide the supporting documentation and workpapers for Figure 12 on page 34 of Ms. Sommer's testimony including historical coal generation data by unit if available, documentation of the data source, and the chart in Excel format. If this information has already been provided, please provide direction to where it is located in the record. If it has not yet been provided, please explain why not.
3. Please provide a complete copy of all testimony (including transcripts of live testimony), interviews, articles, publications, or any other public writings or statements of any kind in which Ms. Sommer supported or advocated for any entity's construction or acquisition of any fossil-fuel fired electric generating unit. If a transcript of relevant live testimony, an interview, or other public non-written statement is unavailable, please provide a link to where the video may be found.
4. Please confirm that Ms. Sommer's testimony shows that the portfolio she analyzed that included neither of the Companies' proposed NGCC units (the "Renewables

Plus MC2 Conversion” portfolio) had a higher PVRR than the Companies’ proposed portfolio by over \$1.2 billion in Table 5 and by over \$800 million in Table 6.

- a. Did Ms. Sommer include the cost of an SCR with the cost of converting Mill Creek 2 to gas?
5. Please confirm that the portfolio Ms. Sommer analyzed that included one of the Companies’ proposed NGCC units (the “Renewables Plus One NGCC” portfolio) had a significantly lower PVRR than the Renewables Plus MC2 Conversion portfolio.
 6. Please explain how the lower PVRR of the Renewables Plus One NGCC portfolio compared to the Renewables Plus MC2 Conversion portfolio supports the Joint Intervenors’ recommendation that the Commission deny both of the Companies’ requested NGCC CPCNs.¹
 7. Did Ms. Sommer evaluate other fuel and CO₂ price scenarios besides the mid gas, mid CTG, zero CO₂ scenario?
 - a. If so, please provide the results of those evaluations and all supporting workpapers and modeling files.
 - b. If not, please explain why Ms. Sommer did not evaluate any other scenarios.
 8. Please quantify the impact of each change Ms. Sommer made to the Companies’ modeling of costs and resources that resulted in the Renewables Plus One NGCC portfolio.

¹ McDonald Testimony at 4-5.

9. Please explain if the Renewables Plus One NGCC portfolio would comply with the requirements of Senate Bill 4.
10. How did Ms. Sommer decide on the specific step and chronology settings she used in PLEXOS, e.g., six-year rolling horizon and five blocks per day?
 - a. What other settings did Ms. Sommer test?
11. Does Ms. Sommer agree there are many valid settings for use in PLEXOS, or does she contend that her method is the only valid or best method?
12. Does Ms. Sommer agree it is reasonable for the Commission to assume for the purposes of this proceeding that the Companies must comply with the U.S. EPA's final Good Neighbor Plan?
13. Ms. Sommer's testimony states at page 50, lines 6-9, "[R]egardless of whether the Proposed New GHG Rules or some other form of requirement to reduce CO₂ emissions is adopted in the U.S., the Companies' failure to take that likely future scenario into account in their modeling is a significant weakness in their analysis."
 - a. Does Ms. Sommer acknowledge that the Companies modeled CO₂ pricing of \$15 per ton and \$25 per ton as proxy costs of possible CO₂ regulation?
 - b. Is Ms. Sommer aware that the Commission Staff's Report in the Companies' 2021 IRP proceeding states:

Commission Staff also disagrees, in part, with statements in LG&E/KU's post-hearing comments indicating that recent developments support its assumption that carbon regulation is likely to be achieved through application of the NSPS alone. ... Given the urgency with which many view the need to address carbon emissions, Commission Staff believes such issues and potential delays in other forms of regulation raise the prospect, particularly over a timeline of 15 years or more, that a federal price or tax on CO₂ emissions could be implemented Thus, Commission Staff believes that the

regulatory risk or prospect of a tax on CO₂ emissions should be seriously considered and discussed in detail in LG&E/KU's next IRP²

- c. How does Ms. Sommer reconcile her assertion that the Companies failed to account for “the Proposed New GHG Rules or some other form of requirement to reduce CO₂ emissions is adopted in the U.S.” with her statement seven lines later, “Nevertheless, the Companies ‘stress test’ their portfolio by assuming a 50% capacity factor for the new NGCCs beginning in 2032 and a \$25 per ton carbon price for existing coal in 2030,” which she characterizes as “a good faith attempt to model the EPA rule requirements on an extremely short timeframe”?³

- 14. Ms. Sommer's testimony states at page 49, line 18, through page 50, line 6:

If finalized, the Proposed New GHG Rules would require major, transformative changes in the Companies' supply-side resource portfolio. The Companies' reference to EPA's own modeling to support its contention that the Proposed New GHG Rules “support rather than undermine the Companies' proposals in this proceeding” is extremely speculative, given all of the uncertainties noted with how the Companies would be able to comply with the Proposed New GHG Rules, the macro nature of the modeling conducted by EPA, and the effects that it would have on their remaining supply-side resources.

- a. Please state in detail the extent to which Ms. Sommer had reviewed the U.S. EPA's modeling documentation and data associated with its New Source Performance Standards for Greenhouse Gas Emissions from New, Modified, and Reconstructed Fossil Fuel-Fired Electric Generating Units;

² *Electronic 2021 Joint Integrated Resource Plan of Louisville Gas and Electric Company and Kentucky Utilities Company*, Case No. 2021-00393, Commission Staff's Report at 61-62 (Ky. PSC Sept. 16, 2022).

³ Sommer at 50 lines 16-19.

Emission Guidelines for Greenhouse Gas Emissions from Existing Fossil Fuel-Fired Electric Generating Units; and Repeal of the Affordable Clean Energy Rule Proposal, Docket ID No. EPA-HQ-OAR-2023-0072 (“New GHG Rules”) *prior* to filing her testimony.⁴

- b. Is Ms. Sommer aware that in all of EPA’s updated modeling associated with the New GHG Rules (dated July 7, 2023), both in the baseline (reference) cases and in the cases in which the New GHG Rules are in effect, EPA’s modeling shows between 2,134 MW and 3,207 MW of new NGCC capacity as being economically optimal to install in the SERC Central Kentucky region by 2028?⁵
- c. Does Ms. Sommer have any reason to believe that the same EPA that promulgated the Good Neighbor Plan, proposed the New GHG Rules, and conducted the above-discussed modeling in support of the New GHG Rules has a pro-fossil fuel bias?
- d. Does Ms. Sommer contend that the “macro nature” of EPA’s modeling supporting the New GHG Rules makes the modeling results directionally inaccurate?
- e. Please state which, if any, of the following EPA modeling results for the proposed New GHG Rules for the SERC Central Kentucky region Ms. Sommer believes is directionally inaccurate. If she believes at least one of the following is directionally inaccurate but at least one is directionally

⁴ Available at <https://www.epa.gov/power-sector-modeling/analysis-proposed-greenhouse-gas-standards-and-guidelines> (accessed July 20, 2023).

⁵ See four updated .zip files dated July 7, 2023, available at <https://www.epa.gov/power-sector-modeling/analysis-proposed-greenhouse-gas-standards-and-guidelines> (accessed July 21, 2023).

accurate, please explain in detail what causes EPA’s modeling to result in the perceived directional inconsistency:

- i. Building more than 2,000 MW of NGCC capacity by 2028;
- ii. Adding thousands of MW of solar and wind resources over the modeling period;
- iii. Adding hundreds of MW of battery resources over the modeling period; and
- iv. Retiring all or nearly all coal capacity in the 2040-2050 timeframe.

15. Prior to filing her testimony, was Ms. Sommer aware of the U.S. EPA’s “Integrated Proposal Modeling and Updated Baseline Analysis, Memo to the Docket,” dated July 7, 2023, concerning the New GHG Rules (“New GHG Rules IPM Memo”)?⁶

- a. Please state whether Ms. Sommer is aware that the New GHG Rules IPM Memo states at page 5, “[T]o better capture emission rate requirements as a function of annual capacity factor, model plants were allowed to switch to lower utilization levels in subsequent years and no longer co-fire hydrogen even if they selected hydrogen co-firing in earlier run years.”
- b. Does Ms. Sommer agree that transitioning a new, efficient NGCC unit from baseload to intermediate load operation by 2035 would comply with the proposed New GHG Rules?

16. Please describe Ms. Sommer’s experience conducting RFPs related to EPC contracts.

⁶ Available at <https://www.epa.gov/system/files/documents/2023-07/Integrated%20Proposal%20Modeling%20and%20Updated%20Baseline%20Analysis.pdf> (accessed July 20, 2023).

17. Please describe Ms. Sommer's experience negotiating EPC contracts.
18. Please describe Ms. Sommer's experience designing electric generating units.
19. Please describe Ms. Sommer's experience participating in the construction of electric generating units.
20. See Ms. Sommer's testimony at pages 25-35. For all portfolios Ms. Sommer modeled, please provide the information requested in the following subparts.
 - a. Please identify and explain which of the Companies' existing resources Ms. Sommer permitted PLEXOS to select for retirement, which resources she forced PLEXOS to retire, and which resources she required PLEXOS to retain. Please explain her reasoning for these choices.
 - b. Please identify and explain all constraints Ms. Sommer placed on PLEXOS's ability to choose new resources to install, including without limitation the timing and sizing of new resources. Also, please identify and explain any forced resource additions.
 - c. Please provide a complete list of resources Ms. Sommer either required or gave PLEXOS the option to add, including all relevant parameters for such resources, including without limitation the cost, capacity, time required to install, and relevant performance characteristics of each resource.
21. Ms. Sommer's testimony at pages 26-27 describes certain changes she made to the PLEXOS database, including modeling "additional energy efficiency and demand response (DSM) [collectively, "Additional DSM-EE"] ... supported by Mr. Grevatt's analysis and testimony."

- a. Ms. Sommer's PLEXOS files appear to show that the Additional DSM-EE she modeled resulted in the following reductions to the Companies' projected annual energy requirements:

	EE load reduction
2022	0.00%
2023	0.00%
2024	0.00%
2025	0.15%
2026	0.40%
2027	0.74%
2028	1.03%
2029	1.32%
2030	1.62%
2031	1.49%
2032	1.49%
2033	1.49%
2034	1.49%
2035	1.49%
2036	1.49%
2037	1.42%
2038	1.25%
2039	1.01%
2040	0.74%
2041	0.00%
2042	0.00%
2043	0.00%
2044	0.00%
2045	0.00%
2046	0.00%
2047	0.00%
2048	0.00%
2049	0.00%
2050	0.00%

Please confirm or correct the reductions shown above, and please explain how Ms. Sommer determined which additional savings amounts to model in each year.

- b. Please confirm that the energy savings shown in the table in part a. above were equal in every hour of each year in which Additional DSM-EE energy savings appear. If not confirmed, please explain how the savings were allocated across the hours of each affected year.
- c. Please explain how the energy savings were modeled in both PLEXOS and SERVVM, including (1) whether they were modeled as an adjustment to load or as a resource and (2) for SERVVM specifically, how the hourly energy savings were differentiated from the base load for each weather year's unique load.
- d. Please confirm that Ms. Sommer's financial modeling assumed the cost of achieving the Additional DSM-EE energy savings to be \$30 per MWh nominal through 2040. If not confirmed, please explain and provide the correct modeled cost of the Additional DSM-EE energy savings Ms. Sommer used.
 - i. Why was this cost not assumed to escalate over this time period?
 - ii. How was the cost of Additional DSM-EE energy savings developed?
 - iii. Please provide all supporting evidence and workpapers associated with developing the \$30 per MWh cost of Additional DSM-EE energy savings (or any other cost of Additional DSM-EE energy savings Ms. Sommer used).
- e. Did Ms. Sommer use PLEXOS to model the Additional DSM-EE resources, or did she simply reduce load in each hour with an associated cost?

- f. How did Ms. Sommer reflect the Additional DSM-EE in the load for each weather year modeled in SERVVM?
 - g. Please explain in detail what suite of Additional DSM-EE programs or measures could be added to result in the energy savings shown in Ms. Sommer's modeling at a cost of \$30/MWh nominal through 2040.
- 22. Ms. Sommer's testimony states at page 25, lines 6-8, "After making some changes to the model inputs and settings, we used an iterative process of testing portfolios in SERVVM and in PLEXOS to determine how resources contributed to reliability and to total system cost."
 - a. Provide a detailed explanation of the iterative process Ms. Sommer used to develop the two portfolios discussed and analyzed at pages 28-35, including how many iterations, which constraints Ms. Sommer used in each iteration in PLEXOS, and which forced retirements or resource additions Ms. Sommer used in each iteration in PLEXOS.
- 23. Did the two resource portfolios analyzed in Ms. Sommer's financial models include renewable and battery PPA resources from the Companies' RFP responses in the 2030s and 2040s? If so, please explain why.
- 24. It appears that in the model provided in Ms. Sommer's workpapers the renewables and batteries selected in 2020s are forced in, not selected by PLEXOS, the coal units are forced to be retired, and no additional NGCC or SCCT units are allowed; only non-actionable RFP resources in later years are chosen by PLEXOS.

- a. Please confirm or correct these understandings and explain why Ms. Sommer imposed the resource and retirements requirements and constraints she did in her modeling.
- b. Provide all workpapers and files supporting the iterations that caused Ms. Sommer to place the constraints she did on the portfolios and modeling described in her testimony.

Witness: Jim Grevatt

25. In Excel spreadsheet or other format, with all formulas, columns, and rows unprotected and fully accessible, provide all workpapers and source documents not previously provided.
26. Please provide a complete copy of all testimony (including transcripts of live testimony), interviews, articles, publications, or any other public writings or statements of any kind in which Mr. Grevatt supported or advocated for any entity's construction or acquisition of any fossil-fuel fired electric generating unit. If a transcript of relevant live testimony, an interview, or other public non-written statement is unavailable, please provide a link to where the video may be found.
27. Does the list of the "Selective Projects" in Exhibit JG-1 to Mr. Grevatt's testimony in this case include all testimony Mr. Grevatt has filed before regulatory commissions? Please provide a complete listing of every case before any regulatory commission in which Mr. Grevatt has presented testimony, in either written or oral format not contained in Exhibit JG-1 to Mr. Grevatt's testimony. Please include the case or docket number, the date on which he submitted testimony, and on whose behalf he submitted testimony.

28. Describe Mr. Grevatt's understanding of the cost-effectiveness requirements for Kentucky DSM/EE programs.
29. Confirm that Mr. Grevatt did not calculate the results of the four traditional DSM-EE cost-benefit tests on the additional EE programs he recommends. If not confirmed, please explain and provide the results of such calculations with all supporting evidence and workpapers.
30. Has Mr. Grevatt ever calculated the results of the Participant Test, the Ratepayer Impact Measurement Test, the Total Resource Cost Test, and the Program Administrator Cost Test through original work performed by him or with the assistance of a colleague? If so, provide a list of the case number and regulatory commission of any testimony he has filed before any regulatory Commission regarding these calculations.
31. Did each of the following organizations, or a representative of the organization, participate in the Companies' DSM/EE Advisory Group? If an organization did not participate, state whether the organization was aware of the Companies' DSM/EE Advisory Group.
 - a. Metropolitan Housing Coalition
 - b. Kentuckians for the Commonwealth
 - c. Kentucky Solar Energy Society, and
 - d. Mountain Association
32. Refer to Table 3 of the Grevatt Direct Testimony.
 - a. How did you select the six utility potential studies used for comparison?

- b. Did Mr. Grevatt submit Direct and Surrebuttal Testimony in South Carolina Public Service Commission Docket Nos. 2019-224-E and 2019-225-E? Why did Mr. Grevatt not include the potential studies for Duke Energy filed in that case in Table 6?
- 33. Refer to “rapidly improving technologies” as referenced on Page 30 of the Grevatt Direct Testimony.
 - a. Provide the definition for “rapidly improving technologies.”
 - b. Provide the names and detailed descriptions of rapidly improving technologies you have identified.
- 34. Refer to “emerging technologies” as referenced on Page 30 of the Grevatt Direct Testimony.
 - a. Provide the definition for “emerging technologies.”
 - b. Provide the names and detailed descriptions of emerging technologies you have identified.
- 35. Mr. Grevatt’s testimony states at page 34, lines 1-3: “The problem is that program selection was not informed by a fulsome potential study update, and several potentially high-impact programs were thus omitted from consideration.” Does Mr. Grevatt construe the potential study as directing the selection of programs? Please explain in detail.
- 36. Mr. Grevatt’s testimony at page 34, lines 16-17 states that because the Companies’ process to select DSM/EE programs “was not informed by a meaningful potential study, it was highly subjective rather than evidence-based.” Explain in detail how the Companies’ selection process was subjective.

37. Refer to Mr. Grevatt's testimony at page 35, lines 1-3.
- a. Did Mr. Grevatt review the Companies' responses to PSC 1-20 and PSC 2-38?
 - b. Is Mr. Grevatt aware that the Companies did conduct cost-effectiveness testing for Midstream HVAC Rebates, Downstream Rebates, Home Energy Reports, New Home Construction Rebates, and Strategic Energy Management?
 - c. Does knowing these programs are not cost-effective change Mr. Grevatt's estimation of the additional energy efficiency savings the Companies should achieve?
38. Confirm that Mr. Grevatt is aware that states assess cost-effectiveness differently by using different inputs into cost-effectiveness calculations.
39. Confirm that, all else being equal, lower avoided costs of energy and capacity decrease the cost-effectiveness of DSM/EE programs.
40. Is Mr. Grevatt aware of how often the Companies have filed mid-plan DSM/EE updates? If so, please explain Mr. Grevatt's understanding of when the Companies have filed DSM-EE Program Plans and when the Companies have filed for mid-plan portfolio updates or adjustments.
41. Joint Intervenors witness Anna Sommer states at page 27, lines 9-10 of her testimony, "The additional energy efficiency and demand response (DSM) included is supported by Mr. Grevatt's analysis and testimony." Apparently based on Mr. Grevatt's testimony and analysis, Ms. Sommer appears to have included in her resource modeling energy efficiency savings equivalent to up to 1.6% of the

Companies' projected load around the clock at a cost of \$30/MWh nominal through 2040.

- a. Please identify all energy-efficiency programs and measures identified by Mr. Grevatt that could provide Ms. Sommer's projected levels of around the clock energy savings at a cost of \$30/MWh through 2040.
- b. Please provide all of Mr. Grevatt's analysis of such programs and their cost-effectiveness, as well as all workpapers supporting such analysis.
- c. Please provide any and all information not otherwise provided in response to the subparts above that would support the claim that the Companies could achieve actual energy savings of up to 1.6% of load in all hours for \$30/MWh through 2040.

Witness: John Wilson

42. Mr. Wilson's testimony states at page 2, line 22, through page 3, line 2 that he reviewed certain documents. Please provide a copy of each such document that is not already in the record of this proceeding.
43. Please provide a complete copy of all testimony (including transcripts of live testimony), interviews, articles, publications, or any other public writings or statements of any kind in which Mr. Wilson supported or advocated for any entity's construction or acquisition of any fossil-fuel fired electric generating unit. If a transcript of relevant live testimony, an interview, or other public non-written statement is unavailable, please provide a link to where the video may be found.
44. Mr. Wilson's testimony states at page 5, lines 3-5, "The Companies should plan and contract for renewable energy facilities that include the technical and

contractual opportunity to operate in downward dispatch or full flexibility operating modes and should generally avoid strict must-take contracts.”

- a. Does Mr. Wilson construe net metering to be a “strict must-take contract” arrangement? If not, please explain in detail how net metering in Kentucky can be anything other than “strict must-take,” including what right, if any, the Companies have to operate customers’ net metering facilities “in downward dispatch or full flexibility operating modes.”
- b. Please answer the same questions posed in a. above regarding qualifying facilities (i.e., customers taking service under the Companies’ SQF and LQF tariff provisions).

45. At page 5, line 10, please explain the meaning of “advanced operational practices” and provide examples, and at page 22, footnote 39, please explain the meaning of “grid-enhancing technologies” and provide examples.

46. At page 5, lines 10-11, please identify any instance in which the Companies have not achieved “accuracy in the contribution of new resources.”

47. At page 5, line 11, please explain the meaning of “all-source procurement” and identify any instance in which the Companies have not supported all-source procurement.

Witness: Andy McDonald

48. Please provide a complete copy of all testimony (including transcripts of live testimony), interviews, articles, publications, or any other public writings or statements of any kind in which Mr. McDonald supported or advocated for any entity’s construction or acquisition of any fossil-fuel fired electric generating unit.

If a transcript of relevant live testimony, an interview, or other public non-written statement is unavailable, please provide a link to where the video may be found.

49. Refer to pp. 11-13 of Mr. McDonald's testimony. Identify all information and inputs used to support Scenario D – No Cap, Historic Growth Forecast. If Mr. McDonald has assumed annual future growth will mirror historical growth of solar capacity at net metering rates, state the basis for that assumption.
50. Refer to Figure 2 on p.12 of Mr. McDonald's testimony. Please provide the source dataset that was used to develop this chart.
51. Refer to Table 2 on p.15 on Mr. McDonald's testimony. Describe whether there are weather, environmental, policy, retail electric rate, economic, or regulatory differences between the listed states and Kentucky that influence the rate of adoption of Small-Scale PV capacity. If yes, state whether Mr. McDonald has attempted to quantify the impact of those differences or attempted to control for them in his comparison.
52. Refer to Table 4 on p.35 of Mr. McDonald's testimony. Please identify all information used to support an assumed 50% annual growth rate in residential customer-sited battery systems after 2025.
53. Mr. McDonald's testimony provides a summary of the Joint Intervenors' recommendations at page 4 line 11, through page 5, line 1. This request refers to the resource portfolio resulting from all of the Joint Intervenors' recommendations as the "JI Portfolio."
 - a. Please explain why the Joint Intervenors did not include in their testimony or workpapers any PLEXOS, SERVM, or financial modeling of the JI

Portfolio or any results of such modeling. If the Joint Intervenors have provided such modeling files, databases, workpapers, or results regarding the JI Portfolio, please identify where they are in the record of this proceeding.

- b. Please provide the present value revenue requirement for the JI Portfolio, including all supporting modeling files, databases, and workpapers.
- c. Please provide the same reliability metrics for the JI Portfolio that the Companies provided in response to PSC 5-8(b), i.e., LOLE, LOLH, and EUE, including all supporting modeling files, databases, and workpapers.

Dated: July 28, 2023

Respectfully submitted,



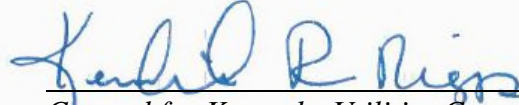
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CERTIFICATE OF SERVICE

In accordance with the Commission's Order of July 22, 2021 in Case No. 2020-00085 (Electronic Emergency Docket Related to the Novel Coronavirus COVID-19), this is to certify that the electronic filing has been transmitted to the Commission on July 28, 2023, and that there are currently no parties in this proceeding that the Commission has excused from participation by electronic means.

A handwritten signature in blue ink, reading "Harold R. Nies", is written over a horizontal line. The signature is cursive and includes a long horizontal stroke at the end.

*Counsel for Kentucky Utilities Company and
Louisville Gas and Electric Company*