

COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC APPLICATION OF KENTUCKY	)	
UTILITIES COMPANY AND LOUISVILLE GAS	)	CASE NO.
AND ELECTRIC COMPANY FOR CERTIFICATES	)	2025-00045
OF PUBLIC CONVENIENCE AND NECESSITY	)	
AND SITE COMPATIBILITY CERTIFICATES	)	

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

Kentucky Utilities Company (KU) and Louisville Gas and Electric Company (LG&E) (jointly, 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 April 17, 2025. 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 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

---

<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).

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 indicate 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 their 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 the Direct Testimony of Tim Jones (Jones Direct Testimony), page 3, lines 15–19. Refer also to Case No. 2024-00326,<sup>2</sup> LG&E/KU's 2024 Joint Integrated Resource Plan, Volume 1, pages 5–1. Refer also to the Direct Testimony of Lonnie Bellar (Bellar Direct Testimony), page 3, lines 11–15.

---

<sup>2</sup> Case No. 2024-00326, *Electronic 2024 Joint Integrated Resource Plan of Louisville Gas and Electric Company and Kentucky Utilities Company* (filed October 18, 2024).

a. Confirm whether LG&E/KU projected possible economic development load growth beyond 2032 in Case No. 2024-00326.

(1) If confirmed, provide a detailed discussion stating why LG&E/KU does not include economic development projections in the load forecast for this case beyond 2032. Include as part of the answer, a discussion regarding the 6,000 MW identified by Mr. Bellar of potential data center load and 2,000 MW of other potential economic development.

(2) If not confirmed, explain why not considering the cost of the request and the useful life of the generation units.

b. Explain, in detail, why LG&E/KU believes that its projections for economic load growth in this case are reasonable given its load forecast in Case No. 2024-00326.

c. Provide a detailed explanation of LG&E/KU's confidence in load forecasts modeling economic development beyond 2032; and give specific attention to the period between 2032 and 2039, the last year modeled in its 2024 IRP.

2. Refer to the Jones Direct Testimony, page 31, line 16. Identify all non-solar distributed resources currently utilized by LG&E/KU customers. As part of the answer, include the number of customers for each non-solar distributed generation resource.

a. Provide the total, in MW, of all non-solar distributed generation currently utilized by LG&E/KU customers.

b. Explain the impact on the load forecast had LG&E/KU included non-solar distributed generation.

3. Refer to the Jones Direct Testimony, page 46, lines 15–18.

a. Not counting the 1,750 MW included in LG&E/KU present case, explain how much of the remaining 4,000 MW of potential data center load is included in the 2025 load forecast.

b. If not included, explain at what stage in the process of locating in the LG&E/KU's service territory would the projected data center load be included on the load forecast.

4. Refer to the Jones Direct Testimony, page 38, lines 4–5. Explain how “continuous netting of usage and generation” is calculated.

5. Refer to the Jones Direct Testimony, page 41, lines 15–17.

a. Explain what incentives LG&E/KU has in place to induce Electric Vehicle (EV) owners to charge their vehicles at night but not during seasonal peak hours and whether the Companies consider the incentives sufficient to shift EV-owner charging behavior.

b. Refer also to the Jones Direct Testimony, page 42. Explain what “EV Managed Charging” means and whether this is a simplifying assumption for forecasting purposes.

6. Refer to the Jones Direct Testimony, page 8, lines 3–16. Refer also to the Direct Testimony of John Bevington (Bevington Direct Testimony), Exhibit JB-2. The exhibit provides information regarding the economic impacts of data centers using the IMPLAN model. For the purposes of this request, exclude the temporary construction jobs represented by the 1,750 MWs from the projected data center projects, the projected permanent jobs and associated indirect or induced jobs that should translate into increases in residential and commercial customer energy and peak demand projections.

Explain whether the effects of the projected permanent job increases are taken into account in the load forecast. If so, explain how.

7. Refer to the Bellar Direct Testimony, page 3, lines 13–15 and the Direct Testimony of Stuart Wilson (Wilson Direct Testimony), Exhibit SAW-1, page 4. Explain whether LG&E/KU has sufficient space at its current generation locations for additional generation facilities if LG&E/KU was required to serve the entire 6,000 MW potential data center load and 2,000 MW potential “other” economic development projects in the Companies’ economic development queue.

8. Refer to the Bellar Direct Testimony, page 7, lines 8–22 and page 8, lines 1–23. Explain whether either U.S. or foreign tariffs or the threat of tariffs has affected the timing and supply chain for components in any of LG&E/KU’s current or planned construction projects.

9. Refer to the Bellar Direct Testimony, page 5, lines 9–13 and page 11, lines 7–11. Explain whether the \$25 million paid to General Electric (GE) for a “manufacturing slot” will be applied toward the final cost due for Brown 12. In the explanation, include what amount, if any, can be refunded if Brown 12 is not approved.

10. Refer to the Bellar Direct Testimony, page 2, lines 12–14. Provide any studies or analyses conducted by LG&E/KU, or third parties which LG&E/KU reviewed or relied upon, that assess the long-term economic impact of the anticipated load growth and associated economic development projects on the Commonwealth of Kentucky.

11. Refer also to the Direct Testimony of Charles Schram (Schram Direct Testimony), page 13, lines 5–13.

a. Explain whether LG&E/KU are in queues for other generation equipment or components including labor and construction contractors who will eventually work on the projects represented by the total forecast load beyond the specific projects identified in this proceeding.

b. Explain the timeline for when LG&E/KU reserves slots in queues for generation component manufacturers, construction and labor contractors in order to complete the construction of the new generation facilities.

12. Refer to the Schram Direct Testimony, page 14, lines 5–9. Without identifying colleagues in other utilities, explain further how the unforeseen challenges including, but not limited to, limits or changes to charging and discharging schedules identified in battery service contracts that could present problems for the plans for the efficient use of battery services.

13. Refer to the Schram Direct Testimony, page 14, lines 13–16, and Table on page 16.

a. Explain whether the pumped storage hydro in the table is the same pumped storage hydro referenced on page 14.

b. Explain whether LG&E/KU would supply the energy necessary for the pumped storage hydro in the table to recharge. If so, explain whether the proposed cost is net of the cost to recharge the facility.

14. Refer to the Schram Direct Testimony, page 19, lines 12–18. Describe LG&E/KU's strategy for ensuring sufficient gas supply and transportation for the proposed natural gas combined cycle (NGCC) units.

15. Refer to the Wilson Direct Testimony, Exhibit SAW-1, page 45. Explain whether the current estimated completion cost for the Cane Run Battery Energy Storage System (BESS) includes investment tax credits (ITC) through the Inflation Reduction Act (IRA). If so, provide the estimated cost of completion excluding ITC.

16. Refer to the Wilson Direct Testimony, Exhibit SAW-1. Provide the 2024-2030 DSM-EE Plan.

17. Refer to the Wilson Direct Testimony, page 4, lines 7–9, and page 5, line 12. Given the anticipated 1,750 MW of data center load, LG&E/KU have identified the 402 MW Camp Ground Road data center only.

a. Identify the individual data center projects comprising the remaining 1,348 MW of data center project load.

b. Explain whether all the projects represented by the 1,750 MW will be located in Jefferson County, Kentucky. If not, explain the tentative location of the projects.

c. Explain whether any of the projects have net-zero emissions or other sustainability goals.

18. Refer to the Bevington Direct Testimony, page 13, lines 6–22 and page 14, lines 1–10.

a. Explain whether any of the companies represented by the remaining 4,000 MW of potential data center load have signed transmission service requests (TSRs) with LG&E/KU and, if so, the number of MW those project TSRs represent.

b. Explain whether any of the companies represented by the remaining 4,000 MW of potential load have authorized an engineering study to determine the upgrades or modifications to the transmission system necessary to accommodate the

TSR and if so, the number of potential MW represented by those project engineering studies.

c. Of the companies represented by the 1,750 MW of data center load in the current proceeding, explain what stage in the process of locating in the Companies service territory each company has completed and what steps are left to be completed. In this explanation, include which have signed TSR and explain which have authorized an engineering study to determine the upgrades or modifications to the transmission system necessary to accommodate the TSR.

19. Refer to the Wilson Direct Testimony, Exhibit SAW-1, page 22. Explain whether LG&E/KU plans to renew or is in discussions regarding the Inter-Company Power Agreement (ICPA) with OVEC.

20. Refer to the Wilson Direct Testimony, Exhibit SAW-1, page 26 and pages 50-51 related to the use of U.S. Energy Information Administration's 2023 Annual Energy Outlook's (AEO2023).

a. Identify other natural gas price forecasting indexes considered by LG&E/KU. Explain why LG&E/KU did not utilize each identified resource.

b. Explain whether, other than adjusting for inflation, LG&E/KU made any changes to the 2023 Annual Energy Outlook (AEO) Reference case when creating its gas price scenarios.

c. Explain why LG&E/KU chose to use the AEO2023 reference case rather than any of the side cases.

d. Explain whether LG&E/KU plans to update its natural gas price forecasts once the AEO is released in Spring 2025.



21. Refer to the Wilson Direct Testimony, Exhibit SAW-1, page 33. Explain why LG&E/KU modeled the addition of one simple cycle combustion turbine (SCCT) in 2040.

22. Refer to the Wilson Direct Testimony, page 13, lines 2–7 and Appendix D to Exhibit SAW-1 generally.

a. Explain the how loss of load expectation (LOLE) and loss of load hours (LOLH) are used to measure reliability.

b. Explain whether LG&E/KU have examined the use of LOLH in its reliability analyses and, if so, how those results compared to the use of LOLE.

23. Refer to the Wilson Direct Testimony, page 14, lines 1–4 and page 15, lines 7–10, and lines 17–18. In generating cost estimates for the other possible sites and configurations for the NGCC, SCCT, and the BESS options, for each of the generic generation technology options, explain the extent to which different site specific costs including transmission costs and or upgrade costs were included in the resource assessment phase of the modeling such that the costs between these potential resources were comparable to the detailed cost estimates for the Mill Creek 6, Brown 12 and Cane Run BESS.

24. Refer to the Wilson Direct Testimony, page 16. Explain whether LG&E/KU will pursue an expansion of the curtailable service rider 2 (CSR-2) program in the future. If not, explain why not.

25. Refer to the Wilson Direct Testimony, pages 22–29 generally.

a. Explain whether the entire useful life of each of the potential resource additions was modeled completely or truncated to match the forecast study period.

b. For both LG&E/KU, explain the remaining useful lives for each of the following: (1) existing generation assets; (2) the useful lives of recently approved assets; and (3) the useful lives of the potential resources modeled in the present case. Include as part of the answer whether, and how, the useful lives of each generation resource is potentially limited by current or proposed environmental regulations.

26. Refer to the Wilson Direct Testimony, page 28, lines 16–22 and page 29, lines 1–10, including Table 3.

a. Explain whether the results listed in Table 3 imply that all other load growth in the load forecast is assumed to be satisfied by the resource additions and that the timing of the load center growth is the factor that determines whether additional resources may be needed.

b. Provide an updated Table 3 showing a breakout by year of each data center project, new or existing industrial expansion project, and other projected load forecasted growth.

c. If the data centers do plan to locate prior to 2030, explain whether LG&E/KU will be able to site and bring online new additional generation as implied on page 29, lines 7–10.

27. Refer to the Wilson Direct Testimony, page 27. Explain whether there were other factors that drove LG&E/KU's decision to not request a Certificate of Public Convenience and Necessity (CPCN) for a 200 MW Ghent BESS facility apart from the ability to meet the LOLE targets.

28. Refer to the Bevington Direct Testimony page 5, lines 16–17 and the Wilson Direct Testimony, page 4, lines 7–9 and page 5, line 12.

a. For each of the projects represented by the 1,750 MW of data center load, explain the nature of each data center project including the types of business and or research functions.

b. Provide any currently drafted or finalized special service contracts or tariffs for each data center project.

c. Since LG&E/KU are proposing to construct expensive long, lived generation assets, explain whether LG&E/KU have considered the impact of technology advancements that could significantly lower the energy necessary to run the data centers in ten years or so resulting in significant excess capacity, the potential for stranded investment, and the resulting ratepayer consequences. If so, explain what efforts, including contractual obligations for data centers, LG&E/KU has taken, or will take, to mitigate these risks. If not, explain why not.

29. Refer to the Bevington Direct Testimony, Exhibit JB-2.

a. Explain whether an IMPLAN study has been conducted for each of the companies comprising the projected 1,750 MW data center load.

b. If not, provide an IMPLAN study for each of the companies associated with the projected 1,750 MW data center load in this proceeding.

30. Refer to the Direct Testimony of Robert Conroy (Conroy Direct Testimony), page 13, lines 16–19. Explain any factors that could influence the ownership percentages of all proposed facilities between KU and LG&E.

31. Refer to the Conroy Direct Testimony, page 15, lines 1–4. Provide the estimated difference between allowance for funds used during construction (AFUDC) using the methodology approved by the Federal Energy Regulatory Commission (FERC)

and LG&E/KU's weighted average cost of capital. Provide any supporting calculations in Excel spreadsheet format, with all formulas, columns, and rows unprotected and fully accessible.

32. Refer to the Direct Testimony of David Tummonds (Tummonds Direct Testimony), page 10, lines 20–22. Provide the anticipated total annual operating costs for the Brown 12 and Mill Creek 6 NGCC units in their respective operational years.

33. Refer to the Tummonds Direct Testimony, page 14, lines 14–15. Provide the total anticipated annual operating costs for the Ghent 2 SCR.

34. Refer to the Bellar Direct Testimony, page 11. Explain what a “manufacturing slot” is with regards to a Unit Reservation Agreement (URA).

a. Provide a detailed explanation of all relevant terms of the URA with GE for Brown 12.

b. State what equipment, broadly, is included in the URA.

c. State what price protections are included in the URA, and under what circumstances LG&E/KU may be subject to increased costs following the execution of the URA with GE for Brown 12.

35. Refer to the Bellar Direct Testimony, page 11.

a. State whether LG&E or KU have entered into a URA with any of GE, Siemens, or Mitsubishi, for Mill Creek 6. If not, state whether LG&E or KU are in the process of negotiating such an agreement.

b. If either LG&E or KU is currently negotiating a URA, provide an explanation of the current status of the negotiation, including an anticipated execution date.

c. If a date of execution for the URA is anticipated, provide an explanation detailing if, and how, the URA agreement will impact the expected in-service date for Mill Creek 6.

d. State whether LG&E/KU have secured firm pipeline capacity sufficient to supply Brown 12 and Mill Creek 6. If so, provide the contract. If not, state when LG&E/KU anticipate securing the necessary pipeline capacity.

e. Identify which natural gas pipelines will serve Brown 12 and Mill Creek 6, including the name of the supplier.

36. Refer to the Joint Application, Exhibits 5–7, Site Assessment Reports (SARs) related to Traffic and Rail Impact Assessment. Provide any communication with the applicable county road departments relating to traffic plans and mitigation measures for each individual facility. If no communication has been initiated, explain when that contact will occur.

37. Refer to the Joint Application, Exhibits 5–7, SARs related to Visual Impact Assessment. Explain whether vegetative clearing will be conducted for the construction or operation of any of the proposed facilities. Provide in the response the number of acres that will be cleared and any permits that will be required.

38. Refer to the Joint Application, Exhibits 5–7, SARs related to Visual Impact Assessment. State whether any vegetative buffers will be required at any of the proposed facilities to ensure appropriate compatibility with scenic surroundings. If yes, provide what species of vegetative buffer will be used.

39. Refer to the Joint Application, Exhibits 5–7, SARs. Describe any steps LG&E/KU has taken or intends to take to ensure that its construction of the proposed facilities will comply with the National Environmental Policy Act (NEPA).

40. Refer to the Joint Application, Exhibits 5–7, SARs. Explain whether LG&E/KU has had any contact with the Environmental Protection Agency (EPA) regarding the proposed facilities. If so, provide any documentation on any communication that has occurred.

41. Refer to the Joint Application, Exhibits 5–7, SARs. Provide any communication with the Federal Aviation Administration (FAA) or the Kentucky Airport Zoning Commission regarding each proposed facility.

42. Refer to the Joint Application, Exhibits 5–7, SARs. Provide a list of permits that will be required from any other local, state, or federal agencies for each facility. Include in the response the status of those permits.

43. Refer to the Joint Application, Exhibits 5–7, SARs. Provide copies of any documents submitted to other federal or state agencies relating to each facility other than those in the application.

44. Refer to the Joint Application, Exhibits 5–6, SARs related to Traffic and Rail Impact Assessment. Provide a Traffic Study for the proposed Mill Creek and Brown NGCC facilities.

45. Refer to the Joint Application, Exhibit 7, Appendix B. Provide any wetland delineation reports completed for the proposed Mill Creek and Brown NGCC facilities.

46. Refer to the Joint Application, Exhibits 5–7, SARs. Provide a Stormwater Pollution Prevention Plan (SWPPP) for the proposed BESS facility and the Mill Creek and Brown NGCC facilities.

47. Refer to the Joint Application, Exhibits 5–7, SARs. Provide any geotechnical reports for the proposed BESS facility and the Mill Creek and Brown NGCC facilities.

48. Refer to the Joint Application, Exhibits 5–7, SARs related to Project Description. Describe the hazard detection systems, such as smoke and heat detectors, as well as gas meters or chromatographs, that will be used within each facility.

49. Refer to the Joint Application, Exhibits 5–7, SARs related to Project Description. Describe hazard or danger alert systems that will be in place at each facility and who will monitor and maintain those systems. Include in the description whether those systems provide remote alert and annunciation to offsite personnel and a fire department.

50. Refer to the Joint Application, Exhibits 5–7, SARs related to Facility Safety and Mitigation. Provide any communication with local emergency services on security and emergency protocols during construction and operation of each facility. If contact has not been made, explain when that contact will occur.

51. Refer to the Joint Application, Exhibits 5–7, SARs related to Project Description. Explain who will be responsible for ensuring all facility components and protection systems are adequate and effective before the start of operations.

52. Refer to the Joint Application, Exhibits 5–7, SARs related to the Location of Facility Buildings, Transmission Lines, and Other Structures. Clarify whether any existing

structures on any of the proposed facility sites will be demolished or removed in order to accommodate the projects.

53. Refer to the Joint Application, Exhibits 5–7, SARs related to Traffic and Rail Impact Assessment. Provide a one-page directional map for each proposed facility showing highlighted anticipated delivery routes for the project. Include the following on the map: access roads, access points, existing roads, bridges, electric generation components, and all structures within two miles of the project.

54. Refer to the Joint Application, Exhibits 5–7, SARs related to Traffic and Rail Impact Assessment. Explain whether any oversize or overweight deliveries will require special permits.

55. Refer to the Joint Application, Exhibits 5–7, SARs related to Traffic and Rail Impact Assessment. Explain the plan for repairing project-related damage to any roadways, railway crossings, or bridges.

56. Refer to the Joint Application, Exhibits 5–7, SARs related to Traffic and Rail Impact Assessment. Explain whether any traffic stoppages will be necessary to accommodate large truck deliveries during constructing. If yes, provide the expected location(s), frequency, and length of those stoppages for each proposed facility.

57. Refer to the Joint Application, Exhibits 5–7, SARs related to Traffic and Rail Impact Assessment. Provide the width and weight limit ratings for all roads and bridges proposed to be utilized during the delivery and construction phase of each proposed facility.



58. Refer to the Joint Application, Exhibits 5–7, SARs related to Traffic and Rail Impact Assessment. Provide the maximum expected truck weights and load weights for each type of delivery for each proposed facility.

59. Refer to the Joint Application, Exhibits 5–7, SARs relating to Project Description. Provide a detailed description of construction activities for each proposed facility, including a construction timeline and schedule by activity, accounting for construction of all Project components.

60. Refer to the Joint Application, Exhibits 5–7, SARs relating to Project Description. Provide a narrative description of the location of each laydown area to be used during construction at each individual facility.

61. Refer to the Joint Application, Exhibits 5–7, SARs relating to Environmental Impacts. Provide a copy of LG&E’s current Spill Prevention Control, and Countermeasure plan (SPCC) at the Cane Run, Brown, Mill Creek, and Ghent Electric Generating Stations.

62. Refer to the Application, Exhibit 7, SAR 2.1.1. Provide the following information related to the BESS facility.

- a. Any safety data sheets;
- b. A statement of any environmental impacts of the facility;
- c. Any surveys related to environmental impacts;
- d. Expected life of the batteries; and
- e. How the battery storage system installation will comply with National

Fire Protection Association Standard 855.

63. Refer to the Joint Application Exhibit 7, SAR 10.5. The SAR states, “The design of the BESS Facility will mitigate the potential impacts of extreme weather events,

natural disasters, and environmental hazards.”. Explain how the BESS facility will be secured and what plans will be in place to prevent or mitigate dangerous situations that could occur from extreme weather events, natural disasters, and environmental hazards.

64. Refer to the Joint Application, Exhibit 7, SAR, 2.1.3 Facility Safety and Hazard Mitigation Features. Describe how the BESS facility will be designed to prevent thermal runaway. Include a list of heating, ventilation and air conditioning (HVAC) systems that will be used.

65. Refer to the Joint Application, Exhibit 7, SAR, 2.1.3 Facility Safety and Hazard Mitigation Features. State whether the BESS facility will include a fail-safe protection system, such as a forced shutdown, should all other countermeasures fail to prevent a thermal runaway.

66. Refer to the Joint Application, Exhibit 7, SAR, 2.1.3 Facility Safety and Hazard Mitigation Features.

a. Describe the fire suppression systems that will be installed at the BESS facility. Provide in the response which standards those systems will have to meet and who will monitor and maintain those systems.

b. Explain considerations and mitigation plans for liquid run-off that may contain toxic chemicals.

67. Refer to the Joint Application, Exhibit 7, SAR, 2.1.3 Facility Safety and Hazard Mitigation Features. Explain how the BESS facility will comply with IEEE 1578 standards in relation to electrolyte spills.

68. Refer to the Joint Application, Exhibit 7, SAR, 2.1.3 Facility Safety and Hazard Mitigation Features. Considering the gas producing nature of batteries, state

what ventilation systems will be in place at the BESS facility to prevent the leaking of hazardous gases.

69. Refer to the Joint Application, Exhibit 7, SAR, 2.1.3 Facility Safety and Hazard Mitigation Features. Explain how the battery area at the BESS facility will be adequately ventilated to remove potentially explosive gases that are generated from charging cycles.

70. Refer to the Joint Application, Exhibit 7, SAR, 2.1.3 Facility Safety and Hazard Mitigation Features. Explain how the BESS facility will monitor extreme weather and natural disasters and what protocols will apply.

71. Refer to the Joint Application, Exhibit 7, SAR, 2.1.3 Facility Safety and Hazard Mitigation Features. Explain what steps LG&E/KU will take in designing the BESS facility to withstand environmental hazards that may arise within the area.

72. Refer to the Joint Application, Exhibit 7, SAR, 2.1.3 Facility Safety and Hazard Mitigation Features. Given that the batteries contain hazardous materials, explain how they will be disposed of during decommissioning and how the project follow U.S. EPA rules.

73. Refer to the Joint Application, Exhibit 7, SAR 4.2.3. Provide any instances of flooding at the Cane Run Generating Station and how similar events could impact the proposed BESS facility.

74. Refer to the Joint Application, Exhibit 6, SAR 4.1 Air Resource Assessment. Provide how many tons of hazardous air pollutants (HAP) are expected to be emitted each year at the proposed Mill Creek NGCC facility.

75. Refer to the Joint Application, Exhibit 6, SAR 4.1 Air Resource Assessment. Explain how Nitrogen Oxide (NOx) emissions will be controlled once the Mill Creek NGCC facility is operational.

76. Refer to the Joint Application, Exhibit 6, SAR 4.1 Air Resource Assessment. Explain how the Mill Creek NGCC facility will be designed to reduce fugitive methane emissions.

77. Refer to the Joint Application, Exhibits 5–7, SARs relating to Waste Management/Mitigations. Describe the containment/reporting procedure should an accidental release of hazardous substances or waste occur at any of the proposed facilities.

78. Refer to the Joint Application, Exhibits 5–7, SARs. Provide a soil and erosion control plan for each proposed facility should any exist.

79. Refer to the Joint Application, Exhibit 6, SAR related to Traffic and Rail Impact Assessment. Explain whether the Applicant has had any conversations with representatives of Paducah and Louisville Railway regarding the Mill Creek NGCC facility. If so, describe the nature of those conversations, any concerns, and resolutions from those interactions.

80. Refer to the Joint Application, Exhibit 6, SAR related to Traffic and Rail Impact Assessment. Explain whether the Applicant has held any conversations with the applicable parties regarding the delivery of the Mill Creek NGCC facility components via barge. If so, describe the nature of those conversations, any concerns, and resolutions from those interactions.

81. Refer to the Joint Application, Exhibit 6, SAR related to Traffic and Rail Impact Assessment. Explain the decision between delivering certain project components via either barge or railway for the Mill Creek NGCC facility.

82. Refer to the Joint Application, Exhibit 6, SAR related to Traffic and Rail Impact Assessment. Detail which facility components KU and LG&E plans to have delivered via railroad and via barge during the construction of the Mill Creek NGCC facility. Include in the response the anticipated number of trips for each component and the expected load weight of each component.

83. Refer to the Joint Application, Exhibit 6, SAR relating to Project Description. Explain whether the Mill Creek NGCC facility include a Selective Catalytic Reduction (SCR).

84. Provide a map showing the anticipated route of the natural gas supply line which will be extended to the proposed Brown NGCC site. Include in the map a notation with the width of the pipe and depth at which it will be buried.

85. Refer to the Joint Application, Exhibit 5, SAR 4.1 Air Resource Assessment. Explain how many tons of HAP are expected to be emitted each year at the proposed Brown NGCC facility.

86. Refer to the Joint Application, Exhibit 5, SAR 4.1 Air Resource Assessment. Explain how NOx emissions will be controlled once the Brown NGCC facility is operational.

87. Refer to the Joint Application, Exhibit 5, SAR 4.1 Air Resource Assessment. Explain how the Brown NGCC facility will be designed to reduce fugitive methane emissions.

88. Refer to the Joint Application, Exhibit 5, SAR related to Traffic and Rail Impact Assessment. Explain whether the Applicant has had any conversations with representatives of Norfolk Southern Railway regarding the Brown NGCC facility. If so, describe the nature of those conversations, any concerns, and resolutions from those interactions.

89. Refer to the Joint Application, Exhibit 5, SAR related to Traffic and Rail Impact Assessment. State whether a plan to coordinate delivery times around the Norfolk Southern Railway schedule has been or will be devised. Provide that plan, if available.

90. Refer to the Joint Application, Exhibit 5, SAR related to Traffic and Rail Impact Assessment. Detail which facility components KU and LG&E plans to have delivered via railroad for the Brown NGCC facility. Include in the response the anticipated number of trips for each component and the expected load weight of each component as well as whether this expense was included in the cost of the project.

91. Refer to the Joint Application, Exhibit 5, SAR relating to Project Description. Provide whether the Brown NGCC facility will include a SCR facility.

92. Refer to the Joint Application, Exhibit 7. Provide an Environmental Impact Assessment for the proposed BESS facility.

93. Refer to the Joint Application, Exhibit 7. Provide a Cumulative Environmental Assessment for the proposed BESS facility.

94. Refer to Imber Direct Testimony, page 14, lines 1–14.

a. Provide a detailed description of how LGE/KU accounts for the EPA Rule that limits new source electric generating units to a maximum 40 percent capacity factor.

b. Determine and explain whether this limitation impacts the LG&E/KU Long-Term Load Forecast.

c. Determine and explain whether this limitation was included in the production cost portfolio modeling and if so, explain how LG&E/KU modeled this impact.

95. Refer to the Imber Direct Testimony, page 14, lines 1–14. Provide a detailed description of how LG&E/KU plans to comply with the May 9, 2024, EPA Green House Gas (GHG) rules under CAA Sections 111(b) and (d) currently in place.

96. Refer to the Conroy Direct Testimony page 3, lines 1–23: Explain whether LG&E/KU intends for the costs associated with providing the 6,000 MW of additional supply side electric generation generally and the 1,750 MW specifically forecasted to serve the new data centers be funded by each data center developer or by the LG&E/KU ratepayers. If they are to be funded by the ratepayers, provide a detailed explanation of rational for this approach.

97. For the past five years (2020–2024), provide a performance profile for each of the Ghent Generating Units outlining the following:

- a. Equivalent availability factor;
- b. Equivalent forced outage rate;
- c. NERC GADS reports;
- d. List of the top ten major availability detractors;
- e. Capacity Factor;
- f. Heat Rate;
- g. Variable production costs \$/mWh;
- h. Rate maximum load capability; and

- i. Rate dependable minimum load capability.

98. For the past five years, provide a summary of any forced outages for each Ghent station generating unit and provide the associated root cause analysis for each event.

99. Provide an analysis of the impact a Ghent Unit 2 forced outage has had on fuel cost and purchased power costs.

100. Provide the status of the Ghent Unit 2 environmental compliance under the following:

- a. The United States Environmental Protection Agency (USEPA) Mercury and Air Toxics Standard (MATS);

- b. The USEPA Cross State Air Pollution Rule (CSAPR);

- c. The USEPA Greenhouse Gas Regulations (GHG);

- d. The USEPA National Ambient Air Quality Standard (NAAQS) for ozone;

- e. USEPA National Ambient Air Quality Standard (NAAQS) for PM2.5;

- f. The USEPA Start-up, Shutdown Malfunction (SSM) Exemptions;

- g. USEPA Coal Combustion Residual (CCR) regulations;

- h. The USEPA Effluent Limitation Guidelines (ELG); and

- i. The USEPA Clean Water Act impacting Cooling Water Intakes under Section 316b of the Clean Water Act;

101. Refer to Imber Direct Testimony.

- a. Provide legal SO<sub>2</sub>, NO<sub>x</sub>, and Hg emission limits for the Ghent Unit 2.



b. Provide actual and planned SO<sub>2</sub>, NO<sub>x</sub>, and Hg emissions for the Audit Period (2020 thru 2024).

c. Provide a comparison of the actual SO<sub>2</sub>, NO<sub>x</sub>, and Hg quantities emitted from each unit with the monthly SO<sub>2</sub> limits for the Brown Unit 2. Provide separately the average emission rate for SO<sub>2</sub> (#/MMBtu), Hg, and NO<sub>x</sub> (#/MMBtu) for the Brown Unit 2 for the same period.

d. Provide the most recent Ghent Unit 2 environmental compliance reports.

102. Refer to Case 2022-00402,<sup>3</sup> the Direct Testimony of David Sinclair (Sinclair Direct Testimony), page 9, line 7 thru 11. LG&E/KU recommended that the Ghent Unit 2 be retired in 2028, which was denied by the Commission in an Order issued November 6, 2023. Since that denial, explain whether the operating capabilities of the Ghent Unit 2 have changed. Include in the response Equivalent Availability Factor, Capacity Factor, Equivalent Forced Outage Rate and any major derates.

103. Refer to Case 2022-00402, Sinclair Direct Testimony, page 9, lines 7–11. LG&E/KU recommended that the Brown Unit 3 be retired in 2028, which was denied by the Commission by Order on November 6, 2023.

a. Since that denial, explain whether the operating capabilities of the Brown Unit 3 changed. Include in the response Equivalent Availability Factor, Capacity Factor, Equivalent Forced Outage Rate, and any major derates.

---

<sup>3</sup> Case No. 2022-00402, *Electronic Joint Application of Kentucky Utilities Company and Louisville Gas and Electric 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 Generating Unit Retirements*, Direct Testimony of David Sinclair (filed Dec. 15, 2022).

b. Describe the LG&E/KU operational plans for Brown Unit 3 including the planned retirement date.

104. Refer to the Conroy Direct Testimony, page 8, lines 2–4, which states that “proceeding with the LGE/KU’s proposed resources will optimally position the LGE/KU to be able to meet existing and new customers’ projected needs safely, reliably and at the lowest reasonable cost.”

a. Explain the projected rate impact on existing customers if the Commission approves the LG&E/KU’s proposed resources as filed.

b. Explain how LG&E/KU would recover any costs incurred for new customer loads that may not develop or that leave the system sooner than expected.

c. Explain whether existing customers would be responsible for the recovery of the stranded costs.

105. Refer to the Wilson Direct Testimony, page 10, lines 6–7, which states that impactful events have occurred since the 2024 IRP analysis. Provide a list of the referenced events and their respective impacts.

106. Refer to the Joint Application, Exhibit 7, the BESS SAR page 36, section 3.5, Emergency Events.

a. Describe how the Cane Run Operators will respond to a thermal-runaway fire at the BESS facility.

b. If a BESS fire cannot be controlled by the facility Operators and the local fire department is contacted, verify that the local fire fighters are trained per NFPA 855 standards to safely contain a BESS fire.

*Linda Bridwell* *PP*

Linda C. Bridwell, PE  
Executive Director  
Public Service Commission  
P.O. Box 615  
Frankfort, KY 40602

DATED MAR 27 2025

cc: Parties of Record

Case No. 2025-00045

\*Angela M Goad  
Assistant Attorney General  
Office of the Attorney General Office of Rate  
700 Capitol Avenue  
Suite 20  
Frankfort, KY 40601-8204

\*Robert Conroy  
Vice President, State Regulation and Rates  
LG&E and KU Energy LLC  
220 West Main Street  
Louisville, KY 40202

\*Honorable Allyson K Sturgeon  
Vice President and Deputy General Counsel-  
LG&E and KU Energy LLC  
220 West Main Street  
Louisville, KY 40202

\*Kentucky Utilities Company  
220 W. Main Street  
P. O. Box 32010  
Louisville, KY 40232-2010

\*Honorable W. Duncan Crosby III  
Attorney at Law  
Stoll Keenon Ogden, PLLC  
2000 PNC Plaza  
500 W Jefferson Street  
Louisville, KY 40202-2828

\*Louisville Gas and Electric Company  
220 W. Main Street  
P. O. Box 32010  
Louisville, KY 40232-2010

\*John Horne  
Office of the Attorney General Office of Rate  
700 Capitol Avenue  
Suite 20  
Frankfort, KY 40601-8204

\*Sara Judd  
Senior Corporate Attorney  
LG&E and KU Energy LLC  
220 West Main Street  
Louisville, KY 40202

\*Larry Cook  
Assistant Attorney General  
Office of the Attorney General Office of Rate  
700 Capitol Avenue  
Suite 20  
Frankfort, KY 40601-8204

\*Tolad Lacy  
Office of the Attorney General  
700 Capital Avenue  
Frankfort, KY 40601

\*Michael West  
Office of the Attorney General Office of Rate  
700 Capitol Avenue  
Suite 20  
Frankfort, KY 40601-8204

\*Rick E Lovekamp  
Manager - Regulatory Affairs  
LG&E and KU Energy LLC  
220 West Main Street  
Louisville, KY 40202