COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

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

RESPONSE OF KENTUCKY UTILITIES COMPANY AND LOUISVILLE GAS AND ELECTRIC COMPANY TO THE LOUISVILLE/JEFFERSON COUNTY METRO GOVERNMENT AND LEXINGTON-FAYETTE URBAN COUNTY'S FIRST REQUEST FOR INFORMATION DATED MARCH 28, 2025

FILED: April 17, 2025

COMMONWEALTH OF KENTUCKY)) **COUNTY OF JEFFERSON**)

The undersigned, Lonnie E. Bellar, being duly sworn, deposes and says that he is Senior Vice President Engineering and Construction for PPL Services Corporation and he provides services to Louisville Gas and Electric Company and Kentucky Utilities Company, and that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge and belief.

Lonnie E. Bellar

Subscribed and sworn to before me, a Notary Public in and before said County

and State, this 10th day of _____ 2025.

Notary Public

Notary Public ID No. KYNP 63286

Jamary 22, 2027



COMMONWEALTH OF KENTUCKY)) COUNTY OF JEFFERSON)

The undersigned, **John Bevington**, being duly sworn, deposes and says that he is Senior Director – Business and Economic Development for PPL Services Corporation and he provides services to Louisville Gas and Electric Company and Kentucky Utilities Company, and that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge, and belief.

John Bevington

Subscribed and sworn to before me, a Notary Public in and before said County

and State, this <u>9th</u> day of <u>April</u> 2025.

Notary Public

Notary Public ID No. KYNP63286

My Commission Expires:

January 22, 2027



COMMONWEALTH OF KENTUCKY)) COUNTY OF JEFFERSON)

The undersigned, **Robert M. Conroy**, being duly sworn, deposes and says that he is Vice President, State Regulation and Rates, for Kentucky Utilities Company and Louisville Gas and Electric Company and an employee of LG&E and KU Services Company, and that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge, and belief.

Robert M. Conroy

Subscribed and sworn to before me, a Notary Public in and before said County

and State, this 9th day of April 2025.

Notary Public

Notary Public ID No. KYNP63286

My Commission Expires:

January 22, 2027



COMMONWEALTH OF KENTUCKY)) **COUNTY OF JEFFERSON**)

The undersigned, Philip A. Imber, being duly sworn, deposes and says that he is Director - Environmental Compliance for PPL Services Corporation and he provides services to Louisville Gas and Electric Company and Kentucky Utilities Company, and that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge, and belief.

Philip A. Imber

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 10 day of 2025.

Notary Public

Notary Public ID No. KYNP .32

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COMMONWEALTH OF KENTUCKY)) **COUNTY OF JEFFERSON**)

The undersigned, Tim A. Jones, being duly sworn, deposes and says that he is Senior Manager - Sales Analysis and Forecasting for LG&E and KU Services Company, and that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge, and belief.

Tim A. Jones

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 11th day of aril 2025.

Notary Public

Notary Public ID No. KYNP63286

Junary 22,2027



COMMONWEALTH OF KENTUCKY)) **COUNTY OF JEFFERSON**)

The undersigned, Charles R. Schram, being duly sworn, deposes and says that he is Vice President - Energy Supply and Analysis for Kentucky Utilities Company and Louisville Gas and Electric Company and an employee of LG&E and KU Services Company, and that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge, and belief.

Charles R. Schram

Subscribed and sworn to before me, a Notary Public in and before said County and State this 16th day of 2025.

Javison Notary Public

Notary Public ID No. KWP 63286

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COMMONWEALTH OF KENTUCKY)) COUNTY OF JEFFERSON)

The undersigned, **David L. Tummonds**, being duly sworn, deposes and says that he is Senior Director - Project Engineering for LG&E and KU Services Company, and that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge, and belief.

David L. Tummonds

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 16^{th} day of April 2025.

Notary Public

Notary Public, ID No. KYNP4577

,2028



COMMONWEALTH OF KENTUCKY)) COUNTY OF JEFFERSON)

The undersigned, **Stuart A. Wilson**, being duly sworn, deposes and says that he is Director – Power Supply for LG&E and KU Services Company, and that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge, and belief.

Stuart A. Wilson

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 44^{44} day of ______ 2025.

Notary Public

Notary Public ID No. KINP 63286

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Response to Louisville/Jefferson County Metro Government and Lexington-Fayette Urban County Government's First Request for Information Dated March 28, 2025

Case No. 2025-00045

Question No. 1

Responding Witness: Robert M. Conroy

- Q-1. Describe how current ratepayers are protected if the load forecasted for projected development does not occur.
- A-1. See the response to PSC 1-28.

Response to Louisville/Jefferson County Metro Government and Lexington-Fayette Urban County Government's First Request for Information Dated March 28, 2025

Case No. 2025-00045

Question No. 2

Responding Witness: Lonnie E. Bellar / Robert M. Conroy

- Q-2. Explain whether the economic analyses for new generation facilities consider cost impacts for customers and not just LG&E/KU (the "Companies")? If so, what are these cost impacts for customers?
- A-2. See the response to PSC 1-96.

Response to Louisville/Jefferson County Metro Government and Lexington-Fayette Urban County Government's First Request for Information Dated March 28, 2025

Case No. 2025-00045

Question No. 3

Responding Witness: Lonnie E. Bellar / Robert M. Conroy

- Q-3. Refer to the testimony of Lonnie Bellar at page 2, describing the unprecedented large and rapid load growth projected by the Companies. State whether the Companies have identified any risks associated with the unprecedented scope and nature of the projected load growth and whether the Companies have developed any measures to mitigate against any such risk to protect their ratepayers from projected load growth that either fails to materialize or falls short of the projected levels at any time during the operational lives of the proposed certificate of public convenience and necessity ("CPCN") projects.
- A-3. See the response to PSC 1-28.

Response to Louisville/Jefferson County Metro Government and Lexington-Fayette Urban County Government's First Request for Information Dated March 28, 2025

Case No. 2025-00045

Question No. 4

Responding Witness: Lonnie E. Bellar / David L. Tummonds

- Q-4. Refer to the testimony of Lonnie Bellar at page 7, indicating the current estimated completion cost for Mill Creek 5 NGCC is \$913.4 million, and at page 10, regarding increase in the cost of Mill Creek 5.
 - a) Provide in detail and quantify the factors that drove the increase from the initial cost estimate of \$662 million as provided in Case No. 2022-00402 to the current estimated completion cost of \$913.4 million.
 - b) Provide an estimate of the potential contractual risk related to force majeure and shipment delays.

A-4.

- a) See the response to JI 1.13.
- b) The Companies are not currently aware of any substantive impacts from force majeure or shipment delay claims. As future force majeure or shipment delay events would result from unpredictable events, an estimate of the potential contractual risk posed by such events is similarly unpredictable.

Response to Louisville/Jefferson County Metro Government and Lexington-Fayette Urban County Government's First Request for Information Dated March 28, 2025

Case No. 2025-00045

Question No. 5

Responding Witness: Lonnie E. Bellar

- Q-5. Refer to the testimony of Lonnie Bellar at page 11, regarding the \$25 million Unit Reservation Agreement with GE for the proposed Brown 12 NGCC.
 - a) State whether LG&E can recoup this cost if the company fails to obtain a CPCN for the construction of Brown 12.
 - b) Regarding Mill Creek 6, state when and what factors will be considered by LG&E to enter into a similar Unit Reservation Agreement and will the cost be the same as or similar to the agreement associated with Brown 12.

A-5.

- a) See the response to PSC 1-34.
- b) See the response to PSC 1-34.

Response to Louisville/Jefferson County Metro Government and Lexington-Fayette Urban County Government's First Request for Information Dated March 28, 2025

Case No. 2025-00045

Question No. 6

Responding Witness: David L. Tummonds

- Q-6. Refer to the testimony of David Tummonds at page 4, regarding the work by the Companies to leverage the current construction of Mill Creek 5 into advantages for Mill Creek 6. Explain why the estimated cost for Mill Creek 6 is higher than that of Brown 12 (\$1.415 billion vs. \$1.383 billion) even though Mill Creek 6 would have certain construction advantages that Brown 12 does not have.
- A-6. The Mill Creek construction advantages are offset and overcome by two factors, both focused on scheduling.

First, as discussed in PSC 1-34, the Companies signed a URA for Brown 12 as required by the proposed in-service date and market demand. This URA locked pricing for certain high-cost components as identified in PSC 1-34 which remain exposed to market escalation for Mill Creek 6. Also as discussed in PSC 1-34, due to at-risk cost concern, the Companies plan to execute a URA for Mill Creek 6 once required by market demand.

Second, while the chosen EPC will likely place certain orders for Mill Creek 6 concurrent to similar orders for Brown 12, much of the material and labor associated with Mill Creek 6 will remain exposed to an additional year of material and labor escalation given the real-time nature of construction activity and the year stagger between unit in-service dates. The Companies believe that the EPC bids will reflect some cost efficiency for the former and an escalated difference for the latter.

Response to Louisville/Jefferson County Metro Government and Lexington-Fayette Urban County Government's First Request for Information Dated March 28, 2025

Case No. 2025-00045

Question No. 7

Responding Witness: Stuart A. Wilson

- Q-7. Refer to the testimony of Stuart Wilson at page 18, regarding the 2025 CPCN Assessment constraint of Mill Creek 3 and 4 not operating beyond 2044 due to landfill storage capacity limits. Reconcile this assumed retirement dates for Mill Creek 3 and 4 with the Companies' response to Commission Staff's First Data Request, Item 48.c., in Case No. 2022-00402, and Exhibit SAW-1 2025 Resource Assessment, page 40, in which the end of operating life of Mill Creek 3 and 4 are projected to be 2039 for both units.
- A-7. As noted in the referenced response from Case No. 2022-00402, 2039 was established for a 2020 depreciation study as the assumed retirement date for Mill Creek 3 and 4, and depreciation rates were established based on this assumption. As a result, in Table 17 on page 40 of Exhibit SAW-1, 2039 is listed as the end of Mill Creek 3 and 4's book depreciation life. The book life of a resource impacts the calculation of annual revenue requirements but it does not set an upper limit on how long the unit can operate. In the 2024 IRP and 2025 CPCN resource assessments, the Companies assumed an upper limit for Mill Creek 3 and 4's operating life (2044) based on available landfill capacity, and evaluated resource plans with and without this constraint.

Response to Louisville/Jefferson County Metro Government and Lexington-Fayette Urban County Government's First Request for Information Dated March 28, 2025

Case No. 2025-00045

Question No. 8

Responding Witness: Lonnie E. Bellar

- Q-8. Please refer to the testimony in Case No. 2022-00402 of John Crockett at page 8 in which he refers to a full-scale carbon capture feasibility study at the Cane Run NGCC facility. Please provide a status update to that study. Has it been completed? If so, please describe the results and provide a copy of the report? If not, when is the estimated completion date?
- A-8. The Cane Run full-scale carbon capture Front-End Engineering and Design ("FEED") study, Department of Energy project DE-FE0032223, is progressing though the engineering and design phase of the project. Current engineering and design activities include development of the carbon capture unit, site layout, 3D model development, equipment lists, piping and instrumentation diagrams, and vendor quotes. The public facing National Energy Technology Laboratory project page, including recent project updates, is available here publicly at the following website.

https://www.netl.doe.gov/project-information?p=FE0032223

No, the Cane Run full-scale carbon capture FEED study has not been completed.

The Cane Run full-scale carbon capture FEED study is estimated to be completed by the end of 2025.

Response to Louisville/Jefferson County Metro Government and Lexington-Fayette Urban County Government's First Request for Information Dated March 28, 2025

Case No. 2025-00045

Question No. 9

Responding Witness: Lonnie E. Bellar

- Q-9. What is the estimated life expectancy of the proposed NGCC facilities (Brown 12 and Mill Creek 6)?
- A-9. The Companies assumed a book life of 40 years for NGCC resources.

Response to Louisville/Jefferson County Metro Government and Lexington-Fayette Urban County Government's First Request for Information Dated March 28, 2025

Case No. 2025-00045

Question No. 10

Responding Witness: Lonnie E. Bellar

- Q-10. How much carbon is expected to be generated by the two NGCC units over the period 2030-2055?
- A-10. See the table below. The Companies' production cost modeling for this analysis goes through 2050. The production cost data is based on the modeling run provided in response to JI 1-22.

	YearBrown 12Mill Creek 6			
2030	1,155,838	0		
2031	1,813,900	1,149,006		
2032	1,810,546	1,800,768		
2033	1,807,593	1,799,284		
2034	1,803,899	1,792,842		
2035	1,806,610	1,789,734		
2036	1,818,685	1,798,471		
2037	1,807,344	1,791,994		
2038	1,812,551	1,790,944		
2039	1,811,591	1,790,664		
2040	1,806,500	1,794,104		
2041	1,807,419	1,800,397		
2042	1,802,572	1,795,694		
2043	1,805,784	1,788,369		
2044	1,808,170	1,800,801		
2045	1,795,389	1,791,794		
2046	1,801,352	1,791,357		
2047	1,796,318	1,789,815		
2048	1,802,533	1,801,414		
2049	1,799,988	1,799,021		
2050	1,798,824	1,790,448		

Forecasted CO₂ Emissions (US tons)

Response to Louisville/Jefferson County Metro Government and Lexington-Fayette Urban County Government's First Request for Information Dated March 28, 2025

Case No. 2025-00045

Question No. 11

Responding Witness: Lonnie E. Bellar / Charles R. Schram / David L. Tummonds

- Q-11. Charles Schram testifies about the delivery of gas for the two new NGCC facilities. In addition, Lonnie Bellar testifies at page 10, lines 15-17 about the dramatic increase in the turbine costs, stating the "market has gotten tighter for NGCC turbines since then [the prior CPCN case] due to an increased demand for the NGCC facilities."
 - a) Explain whether the increased demand for gas turbines results in the price for construction of the two proposed facilities to dramatically increase.
 - b) If the CPCNs are approved, how long will construction take to complete the units and will construction contracts provide for a fixed price for the entire construction period?
 - c) Why has the commodity price for gas not increased as much as the cost of construction of the gas turbines? For gas supply contracts, what is the length of time for the longest duration of those contracts that are fixed price?
 - d) How long are typical gas transportation contracts that are expected and why have those prices not increased with the increased demand for the service?
- A-11.
- a) Increased demand for the referenced gas turbines relative to the inelastic supply provided by the three OEM providers of the product worldwide results in sustained upward price pressure. The same demand increase results in similar sustained upward pressure on the EPC price associated with installation of the product.
- b) The Companies plan to finalize EPC and OEM contracts for both Brown 12 and Mill Creek 6 late in the second quarter or early in the third quarter of 2026. This provides the necessary 44 months from contract execution to commercial operation of Brown 12 currently required by market demand. The Companies would sign contracts for Mill Creek 6 concurrently to

Response to Question No. 11 Page 2 of 2 Bellar / Schram / Tummonds

manage cost escalation risk and to potentially capture some cost efficiencies provided to the chosen EPC.

Certain information is confidential and proprietary and is being provided under seal pursuant to a petition for confidential protection.

- c) Natural gas is a commodity that is not a substitute for the currently limited supply of labor and equipment required to construct a gas turbine. Therefore, the price of natural gas would not be expected to directly correlate with the price of gas turbines or related construction labor. Furthermore, while the eventual commercial operation of additional gas turbines will be a source of increased demand for natural gas, U.S. gas supply is robust, as described in the Testimony of Charles R. Schram at page 20. The Companies currently have some fixed price gas purchases in certain months through October 2027.
- d) Gas transportation contract terms may range from a few years to decades. The contracts may have rollover rights that can be exercised by the buyer. In the Companies' experience, the transportation rate may not be guaranteed over the term of a longer-term transportation agreement. Gas transportation tariffs and rates are regulated by FERC, so any changes to the tariffed rates must be approved by FERC.

Response to Louisville/Jefferson County Metro Government and Lexington-Fayette Urban County Government's First Request for Information Dated March 28, 2025

Case No. 2025-00045

Question No. 12

Responding Witness: Charles R. Schram / David L. Tummonds

- Q-12. Regarding the proposed NGCC facilities,
 - a) State whether the Companies plan to have on-site fuel storage for these facilities.
 - b) If the Companies plan to have on-site fuel storage, identity the storage capacity that is planned and the corresponding time the facilities can operate with only the fuel in storage.
 - c) If the Companies do not plan to have on-site fuel storage, confirm that the Companies would rely on the flow of natural gas from the transmission-pipeline owner.
 - d) Refer to the testimony of Charles Schram at pages 21-22, regarding firm gas transportation.
 - i. State whether the firm gas transportation contract for Cane Run 7 NGCC is set to expire in 2027 and will need to be re-extended or renegotiated.
 - ii. Describe the term length that the Companies will seek for the delivery of firm gas to Mill Creek 6 and Brown 12 NGCCs.
 - iii. Confirm that the Companies will seek to include in any firm gas transportation contracts for Mill Creek 6 and Brwon 12 NGCCs provisions for rollover rights to ensure opportunities to extend those contracts as needed.

A-12.

a) The Companies do not plan to have on-site fuel storage for the proposed NGCCs.

- b) Not applicable.
- c) Confirmed.
- d)
- i. The agreement will be extended or renegotiated. The Companies have rollover rights for the services included in the contract.
- ii. The Companies have not had discussions with the pipeline companies regarding the term length of the transportation agreements. See the response to Question No. 11 (d).
- iii. Confirmed.

Response to Louisville/Jefferson County Metro Government and Lexington-Fayette Urban County Government's First Request for Information Dated March 28, 2025

Case No. 2025-00045

Question No. 13

Responding Witness: Lonnie E. Bellar / Philip A. Imber / Stuart A. Wilson

- Q-13. What is the expected retirement date of Ghent 2 without the addition of the SCR technology? If the technology CPCN request is granted, when is the expected retirement date.
- A-13. The Companies do not have an expected retirement date for Ghent 2. The Companies expect to continue operating Ghent 2 for the foreseeable future, and adding the Ghent 2 SCR will help ensure the Companies' ongoing compliance with ozone National Ambient Air Quality Standards ("NAAQS") and the year-round availability of Ghent 2.

Response to Louisville/Jefferson County Metro Government and Lexington-Fayette Urban County Government's First Request for Information Dated March 28, 2025

Case No. 2025-00045

Question No. 14

Responding Witness: Lonnie E. Bellar / Philip A. Imber

- Q-14. Have there been any announcements from the Trump Administration easing environment standards such that the expected Ghent 2 facility may operate beyond its previously expected retirement date, even without adding the SCR? If so, please provide the EPA rule which has been impacted and provide the new retirement date.
- A-14. The Trump Administration has made a number of statements regarding deregulation that would be consistent with continuing to operate Ghent 2 beyond its previously expected retirement date but not without adding the proposed SCR. For example, on March 12, 2025, the EPA announced a plan to reconsider, repeal, or revise 31 environmental rules including the Section 111 Greenhouse Gas Rule, the endangerment finding for greenhouse gases, the Good Neighbor Plan, the Mercury and Air Toxics Standards, the fine particulate matter standard, the Effluent Limitations Guidelines, and the Coal Combustion Residuals Rule. Implementation of the EPA's deregulatory plan will require formal rulemaking proceedings. However, the 2015 70 ppb Ozone National Ambient Air Quality Standard ("NAAQS") has not been included in any statements or announcements regarding deregulation, including President Trump's April 8, 2025 executive orders.¹ Therefore, the Companies continue to have exposure to local nonattainment and significant impact levels on downwind states related to the existing standard, which supports adding the proposed Ghent 2 SCR.

¹ Executive Order 14260, "Protecting American Energy From State Overreach," 90 Fed. Reg. 15513 (Apr. 8, 2025), available at https://www.govinfo.gov/content/pkg/FR-2025-04-14/pdf/2025-06379.pdf; Executive Order 14261, "Reinvigorating America's Beautiful Clean Coal Industry and Amending Executive Order 14241," 90 Fed. Reg. 15517 (Apr. 8, 2025), available at https://www.govinfo.gov/content/pkg/FR-2025-04-14/pdf/2025-06380.pdf; Executive Order 14262, "Strengthening the Reliability and Security of the United States Electric Grid." 90 Fed. Reg. 15521 (Apr. 8. 2025). available at https://www.govinfo.gov/content/pkg/FR-2025-04-14/pdf/2025-06381.pdf.

Response to Louisville/Jefferson County Metro Government and Lexington-Fayette Urban County Government's First Request for Information Dated March 28, 2025

Case No. 2025-00045

Question No. 15

Responding Witness: Lonnie E. Bellar

- Q-15. Does PPL still have a goal of a net-zero greenhouse gas emissions ("GHG") by 2050? Do the Companies have a similar goal? If not, do the Companies have a GHG goal?
- A-15. Yes, PPL still has a net-zero greenhouse gas emissions ("GHG") goal by 2050. The Companies do not have an independent goal. The Companies' actions contribute to and help inform PPL's emissions goals.

Response to Louisville/Jefferson County Metro Government and Lexington-Fayette Urban County Government's First Request for Information Dated March 28, 2025

Case No. 2025-00045

Question No. 16

Responding Witness: Charles R. Schram

- Q-16. Please provide a list of every renewable generation project currently in operation that provides energy to the Companies.
 - a) For each such project, please provide the county in which it is located; the type of generation (e.g. solar, hydro); the nameplate capacity; whether it is company owned, leased or PPA (and if it is a PPA, who is the counterparty?)
 - b) Please provide the same information requested above for which the Companies expect to be in operation in ten years (planned units).

A-16.

a)

Project	Туре	County	Nameplate Capacity (MW)	Ownership
Brown Solar	Solar	Mercer	10	Owned
Brown Wind	Wind	Mercer	0.09	Owned
Simpsonville Solar	Community Solar	Shelby	2.1	Owned
Archdiocese of Louisville Solar	Business Solar	Jefferson	0.03	Owned
Makers Mark Solar	Business Solar	Marion	0.31	Owned
Dix Dam	Hydro	Mercer	33.6	Owned
Ohio River	Hydro	Jefferson	100.6	Owned

Project	Туре	County	Nameplate Capacity (MW)	Ownership
Marion Solar	Solar	Marion	120	Owned
Mercer Solar	Solar	Mercer	120	Owned

Of the six total solar PPAs into which the Companies have entered, three have been canceled. The remaining three PPAs, listed below, face challenges in advancement and appear unlikely to proceed under their approved terms.

Project	Туре	County	Nameplate Capacity (MW)	Ownership / Counterparty
Rhudes Creek	Solar	Hardin	100	PPA / ibV
Nacke Pike	Solar	Hardin	280	PPA / ibV
Gray's Branch	Solar	Hopkins	138	PPA / ibV

b)

Response to Louisville/Jefferson County Metro Government and Lexington-Fayette Urban County Government's First Request for Information Dated March 28, 2025

Case No. 2025-00045

Question No. 17

Responding Witness: John Bevington

- Q-17. Did the Companies engage other major account holders to encourage them to be partners with the Companies in renewable projects? If yes, please describe what the Companies did. If not, please describe why not.
- A-17. It is unclear what the request means by "encourag[ing] them to be partners with the Companies in renewable projects." The Companies have engaged with a number of major account customers concerning the Companies' Green Tariff offerings, as well as the Companies' Solar Share Program and qualifying facility tariff provisions.

Response to Louisville/Jefferson County Metro Government and Lexington-Fayette Urban County Government's First Request for Information Dated March 28, 2025

Case No. 2025-00045

Question No. 18

Responding Witness: Robert M. Conroy / Counsel

- Q-18. Refer to the Companies' Green Tariff, Option #3 Renewable Power Agreement, which requires a threshold of a minimum monthly billing load of 10 MVA or (MW as appropriate). Can customers aggregate accounts from the same customer be eligible? If not, why not? Can different customers aggregate loads together to qualify? If not, why not?
- A-18. The Companies object to this request as irrelevant to the subject matter of this proceeding under KRS 278.020(1) and the Commission's prior orders.² Without waiving that objection, the Companies' Green Tariff provisions explicitly state, "A Customer with multiple accounts may aggregate those accounts for the sole purpose of meeting the 10 MVA requirement."³

² See, e.g., 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 Generation Unit Retirements, Case No. 2022-00402, Order at 10-12 (Ky. PSC Nov. 6, 2023) ("To obtain a CPCN, a utility must demonstrate a need for such facilities and an absence of wasteful duplication. ... 'Need' requires: [A] showing of a substantial inadequacy of existing service, involving a consumer market sufficiently large to make it economically feasible for the new system or facility to be constructed or operated. ... 'Wasteful duplication' is defined as 'an excess of capacity over need' and 'an excessive investment in relation to productivity or efficiency, and an unnecessary multiplicity of physical properties.' ... The fundamental principle of reasonable least-cost alternative is embedded in such an analysis. Selection of a proposal that ultimately costs more than an alternative does not necessarily result in wasteful duplication. All relevant factors must be balanced.") (internal citations omitted).

³ Kentucky Utilities Company, P.S.C. No. 20, First Revision of Original Sheet No. 69; Louisville Gas and Electric Company, P.S.C. Electric No. 13, First Revision of Original Sheet No. 69.

Response to Louisville/Jefferson County Metro Government and Lexington-Fayette Urban County Government's First Request for Information Dated March 28, 2025

Case No. 2025-00045

Question No. 19

Responding Witness: David L. Tummonds

- Q-19. Refer to the testimony of Charles Schram at pages 9-10 and 13, in which he indicates that costs associated with solar PPAs have increased and that the Companies' two owned solar projects are advancing. Explain whether the costs associated with the Companies' two owned solar projects are currently projected to be higher than anticipated as of the date the Companies originally requested Commission approval in Case No. 2022-00402.
- A-19. The Companies' current projected costs for both Mercer County Solar and Marion County Solar are consistent with pages 8 and 9 of Mr. Bellar's testimony in this case.

Response to Louisville/Jefferson County Metro Government and Lexington-Fayette Urban County Government's First Request for Information Dated March 28, 2025

Case No. 2025-00045

Question No. 20

Responding Witness: Stuart A. Wilson

- Q-20. Refer to the testimony of Charles Schram at page 11, regarding the execution risk related to the six solar PPAs and that this risk is a key reason for the companies' proposal to self-build the Cane Run battery energy facility. Explain why the Companies did not consider any self-build solar proposals in this matter.
- A-20. The Companies' 2024 IRP did not indicate that self-build solar would be an economic resource for meeting incremental data center load. Nevertheless, the Companies did include in the Resource Assessment modeling analysis nine responses to the 2024 RFP that proposed solar projects for the Companies to purchase and own.⁴ However, none of these were selected as part of the recommended least-cost resource plan.

⁴ See Response Nos. 1, 16, 17, 20, 22, 29, 33, 34, and 35 in Table 29 in Appendix B of Exhibit SAW-1 Resource Assessment in the testimony of Stuart A. Wilson.

Response to Louisville/Jefferson County Metro Government and Lexington-Fayette Urban County Government's First Request for Information Dated March 28, 2025

Case No. 2025-00045

Question No. 21

Responding Witness: Stuart A. Wilson

- Q-21. Refer to the testimony of Stuart Wilson at page 32, regarding the Companies' ownership shares of the proposed projects.
 - a) The testimony states that the reason the Companies assigned 100 percent ownership of the proposed Brown 12 and Mill Creek 6 projects to LG&E was that the energy requirements of the anticipated 1,400 MW data center load would be assumed to be located in LG&E's service territory would exceed the energy produced by those two projects. However, as noted in the testimony, the 2025 CPCN Load Forecast projects 1,750 MW of data center load. Explain how the Companies intend to provide service to the remaining projected 350 MW data center load and associated energy requirements.
 - b) Further explain the ownership assignment of 68 percent to KU and 32 percent to LG&E of the proposed Cane Run battery storage facility (in contrast to the 100 percent LG&E ownership of the Brown battery storage facility).

A-21.

- a) The Companies' existing resources and Cane Run battery storage facility will serve this portion of the data center load.
- b) See Section 5.2.2 of Exhibit SAW-1. Cane Run's BESS ownership considered seasonal reserve margins to incorporate both winter and summer reserve margin deficits created by incremental data center load. A similar process was used to establish ownership percentages for the Brown battery storage facility.

Response to Louisville/Jefferson County Metro Government and Lexington-Fayette Urban County Government's First Request for Information Dated March 28, 2025

Case No. 2025-00045

Question No. 22

Responding Witness: David L. Tummonds

- Q-22. Is the technology for the Battery Electric Storage System (BESS) proposed to be built at Cane Run the most energy efficient technology available in the market at this time? Please explain your answer.
- A-22. As specific battery technology differs between manufacturers and as all manufacturers' technology evolves rapidly, the Companies have not yet chosen the specific technology for Cane Run BESS as noted in SREA 1-3. However, based on the state of the industry, the Companies expect to choose from manufacturers' most recently proven lithium-ion technology with the ultimate decision based on protection against thermal runaway and total lifetime costs.

Response to Louisville/Jefferson County Metro Government and Lexington-Fayette Urban County Government's First Request for Information Dated March 28, 2025

Case No. 2025-00045

Question No. 23

Responding Witness: David L. Tummonds

- Q-23. With respect to the Brown BESS approved in Case No. 2022-000402, please provide the current status of construction to include:
 - a) The percentage of completion to date,
 - b) Expected completion date,
 - c) The costs expended to date on the project,
 - d) Expected completion date, and
 - e) Expected total costs for the completed project

A-23.

- a) As noted in AG-KIUC 1-30, contracting is not yet complete for this project.
- b) See the response to AG-KIUC 1-30.
- c) The Companies have expended \$27.0 million to date for the Brown BESS.
- d) See the response to part (b).
- e) See the response to AG-KIUC 1-30.

Response to Louisville/Jefferson County Metro Government and Lexington-Fayette Urban County Government's First Request for Information Dated March 28, 2025

Case No. 2025-00045

Question No. 24

Responding Witness: Charles R. Schram

- Q-24. Refer to the testimony of Charles Schram at page 26, regarding "fine- tuning the extensive settings associated with the battery resource to ensure optimal integration with existing resources. This includes matching the battery's response to other ramping resources under some conditions while allow more rapid response under other system conditions." Explain this statement in more detail along with a hypothetical example illustrating this statement.
- A-24. The testimony cited the importance of gaining experience with and fine tuning settings to appropriately govern the battery's ramping response to system conditions. For example, battery resources have the capability to ramp up and down rapidly, so typical changes in system load over a period of seconds should not induce a battery response of "hunting" the correct output level, resulting in potential conflicts with other system resources on Automatic Generation Control ("AGC") attempting to maintain system stability. However, in the event a large generator trips, the battery resource should be allowed to ramp rapidly to provide near-immediate response to the loss of generation.

Response to Louisville/Jefferson County Metro Government and Lexington-Fayette Urban County Government's First Request for Information Dated March 28, 2025

Case No. 2025-00045

Question No. 25

Responding Witness: Stuart A. Wilson

- Q-25. Elaborate on the purposes of the BESS and how it was sized. How does the 400MW, 4-hour system compare to the duration and size of the peak loads forecasted for 2032?
- A-25. Peak events can occur under different weather conditions with some events having longer durations than others. The Companies' resource adequacy modeling considers a wide range of unit availability and load scenarios. 400 MW of BESS was selected because the Companies' loss of load expectation ("LOLE") is approximately one day in ten years with 400 MW of BESS.

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Case No. 2025-00045

Question No. 26

Responding Witness: Tim A. Jones

- Q-26. In the Integrated Resource Plan presented to the Commission in Case No. 2024-00326 a load forecast was included. When was that forecast prepared? When did the Companies prepare the new load forecast submitted in this matter?
- A-26. The forecast for the IRP was prepared in mid-2024. As stated in the Jones testimony at page 8, the 2025 CPCN Load Forecast, which was finalized in February 2025, is the 2024 IRP Mid load forecast extended to 2054 and adjusted only to include the 2024 IRP High load scenario's economic development load.

Response to Louisville/Jefferson County Metro Government and Lexington-Fayette Urban County Government's First Request for Information Dated March 28, 2025

Case No. 2025-00045

Question No. 27

Responding Witness: Tim A. Jones

- Q-27. How is the term "economic load growth," which is used throughout the Application, defined?
- A-27. The term "economic load growth" does not appear in the Companies' application or supporting testimony.

Response to Louisville/Jefferson County Metro Government and Lexington-Fayette Urban County Government's First Request for Information Dated March 28, 2025

Case No. 2025-00045

Question No. 28

- Q-28. Is any of the anticipated economic development load expected to receive federal funds of any type to support the loads? If yes, please state the project, the amount of the load and the source of federal funding.
- A-28. Unknown.

Response to Louisville/Jefferson County Metro Government and Lexington-Fayette Urban County Government's First Request for Information Dated March 28, 2025

Case No. 2025-00045

Question No. 29

Responding Witness: Lonnie E. Bellar

- Q-29. State whether the Companies anticipate receiving federal or state incentives for the facilities on which approval is sought in this matter.
- A-29. As noted in Table 5 on p. 20 of Exhibit SAW-1 Resource Assessment in the testimony of Stuart A. Wilson, Cane Run and Ghent BESS resources were modeled with the assumption that the Companies would receive a 50% investment tax credit.

Response to Louisville/Jefferson County Metro Government and Lexington-Fayette Urban County Government's First Request for Information Dated March 28, 2025

Case No. 2025-00045

Question No. 30

Responding Witness: Lonnie E. Bellar

- Q-30. If projected development does not come to fruition, or does not occur at the level forecasted, will the Companies accelerate plans for retirement of existing, coal generating facilities?
- A-30. The Companies have no existing plans to accelerate the retirement of existing coal-fired generating facilities. The Companies would analyze and make such decisions holistically and in compliance with applicable law (including KRS 278.264).

Response to Louisville/Jefferson County Metro Government and Lexington-Fayette Urban County Government's First Request for Information Dated March 28, 2025

Case No. 2025-00045

Question No. 31

Responding Witness: Lonnie E. Bellar / John Bevington

- Q-31. Regarding the BlueOval SK Battery Park (BOSK),
 - a) Has construction been initiated for Phase 2 of the BOSK?
 - b) When will power be needed for Phase 1 of BOSK so that the batteries can be produced?
 - c) How long after receiving the approval for construction of Phase 2 will it take before Phase 2 can produce batteries?
 - d) From now until Phase 2 of BOSK is complete, will the entire facility need only one-half of the projected 250 MWs? If not, why not?

A-31.

- a) By Phase 2, the Companies assume the question is about the second of two announced buildings that were to be constructed by BOSK. If so, yes, BOSK is in the midst of finalizing construction on the second building which BOSK refers to as KY2.
- b) BOSK is taking electric service in what they refer to as KY1, or the first of two constructed buildings on-site at the battery park.
- c) See the response to part (a). Unknown.
- d) Yes.

Response to Louisville/Jefferson County Metro Government and Lexington-Fayette Urban County Government's First Request for Information Dated March 28, 2025

Case No. 2025-00045

Question No. 32

- Q-32. Does the owner of the proposed 402MW data center to be located in Jefferson County have renewable targets that it must meet at that facility? If so, what are those targets? How much of those targets are expected to be met on-site by selfgeneration behind the meter?
- A-32. The tenant of the proposed 402 MW data center to be located in Jefferson County has not been determined as of the date of this response. Thus, it is unknown what renewable targets the ultimate tenant may have.

Response to Louisville/Jefferson County Metro Government and Lexington-Fayette Urban County Government's First Request for Information Dated March 28, 2025

Case No. 2025-00045

Question No. 33

- Q-33. State whether either of the Companies have executed any contracts with Poe Development and PowerHouse Data Centers—or any other data center—related to electric service or rates. If yes, please provide a copy of the contract(s). If no, please state whether the Companies anticipate executing a contract with data centers related to electric rates and service and when those contracts would be anticipated to be executed.
- A-33. See Case No. 2024-00326, responses to JI 2-16 and 2-25. The Companies have not executed any contracts for electric service with any data centers as of the date of this response. The Companies expect to execute service contracts with the customers prior to electric services being rendered. Their execution will be contingent on the finalization of construction of facilities necessary to serve the customer and timing of the meter installation.

Response to Louisville/Jefferson County Metro Government and Lexington-Fayette Urban County Government's First Request for Information Dated March 28, 2025

Case No. 2025-00045

Question No. 34

Responding Witness: Robert M. Conroy

- Q-34. If a data center were to receive electrical service from LG&E or KU without a special contract, identify the rate classification(s) on which charges to the data center would be based.
- A-34. Under the Companies' current tariffs, customers with service characteristics like those anticipated for new data centers would take service under Retail Transmission Service (Rate RTS).

Response to Louisville/Jefferson County Metro Government and Lexington-Fayette Urban County Government's First Request for Information Dated March 28, 2025

Case No. 2025-00045

Question No. 35

- Q-35. Have the Companies required data centers or other large-load customers to provide a form of security to ensure repayment of costs to the Companies that are incurred to provide service to the data centers or other large-load customers?
- A-35. As described in Mr. Bevington's Direct Testimony, potential customers are required to cover the costs of the studies performed to review the transmission service request, which is approximately \$50,000. The Companies and the potential customer then enter into an engineering, procurement, and construction ("EPC") contract. The EPC contract requires the potential customer to bear costs until the customer begins to take service, which can be tens of millions of dollars.

Response to Louisville/Jefferson County Metro Government and Lexington-Fayette Urban County Government's First Request for Information Dated March 28, 2025

Case No. 2025-00045

Question No. 36

Responding Witness: Robert M. Conroy

- Q-36. Do the Companies anticipate requiring data centers or other large-load customers to provide a form of security to ensure repayment of costs to the Companies that are incurred to provide service to the data centers or other large-load customers?
- A-36. See the response to PSC 1-28(c).

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Case No. 2025-00045

Question No. 37

- Q-37. Many Companies in the data center market have renewable energy requirements. Have the new customers' requests for energy included requirements for renewable power? How will LGE-KU meet these requirements?
- A-37. See the responses to PSC 1-17(a) and Question No. 32.

Response to Louisville/Jefferson County Metro Government and Lexington-Fayette Urban County Government's First Request for Information Dated March 28, 2025

Case No. 2025-00045

Question No. 38

Responding Witness: Robert M. Conroy / Counsel

- Q-38. Do the Companies have minimum monthly billing demand based on a large-load customer's on-peak contract capacity or other factor? If yes, please detail these minimum requirements. If no, state whether the Companies anticipate proposing a minimum requirement in the future.
- A-38. The Companies object to this request as irrelevant to the subject matter of this proceeding under KRS 278.020(1) and the Commission's prior orders.⁵ Without waiving that objection, yes.⁶ The requested information is available in the Companies' Kentucky retail electric service tariffs, which are available on the Commission's website and the Companies' website.⁷

⁷ <u>https://psc.ky.gov/tariffs/Electric/Kentucky%20Utilities%20Company/Tariff.pdf;</u>

https://psc.ky.gov/tariffs/Electric/Louisville%20Gas%20and%20Electric%20Company/Tariff.pdf; https://lge-ku.com/sites/default/files/media/files/downloads/KU-Electric-Rates-01212025.pdf; https://lge-ku.com/sites/default/files/media/files/downloads/LGE-Electric-Rates-03142025.pdf.

⁵ See, e.g., 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 Generation Unit Retirements, Case No. 2022-00402, Order at 10-12 (Ky. PSC Nov. 6, 2023) ("To obtain a CPCN, a utility must demonstrate a need for such facilities and an absence of wasteful duplication. ... 'Need' requires: [A] showing of a substantial inadequacy of existing service, involving a consumer market sufficiently large to make it economically feasible for the new system or facility to be constructed or operated. ... 'Wasteful duplication' is defined as 'an excess of capacity over need' and 'an excessive investment in relation to productivity or efficiency, and an unnecessary multiplicity of physical properties.' ... The fundamental principle of reasonable least-cost alternative is embedded in such an analysis. Selection of a proposal that ultimately costs more than an alternative does not necessarily result in wasteful duplication. All relevant factors must be balanced.") (internal citations omitted).

⁶ Kentucky Utilities Company, P.S.C. No. 20, First Revision of Original Sheet No. 25; Louisville Gas and Electric Company, P.S.C. Electric No. 13, First Revision of Original Sheet No. 25.

Response to Louisville/Jefferson County Metro Government and Lexington-Fayette Urban County Government's First Request for Information Dated March 28, 2025

Case No. 2025-00045

Question No. 39

Responding Witness: John Bevington

- Q-39. Refer to the testimony of John Bevington at pages 5 and 14, in which he indicates there is "more than 6,000 MW of total data center load in the Companies' more than 8,000 MW economic development queue."
 - a) Please describe in detail what comprises the anticipated 6,000 MW total data center load, including number and energy needs of anticipated data centers, timing of energy needs, and projected geographical locations of the data centers.
 - b) Describe how data centers located in Kentucky will impact economic development in Kentucky.
 - c) Describe in detail the additional 2,000 MW load in the economic development queue.

A-39.

- a) See the responses to PSC 1-17(a) and PSC 1-18(c). See also AG-KIUC 1-33(a).
- b) It is unclear what this question is asking. Data centers locating in Kentucky would constitute economic development in Kentucky.
- c) The rest of the economic development queue includes economic development projects that are considering new locations in the Companies' service territories, possible expansion of manufacturing or logistics facilities by existing customers, and commercial and public benefit projects such as hospitals and universities.

Response to Louisville/Jefferson County Metro Government and Lexington-Fayette Urban County Government's First Request for Information Dated March 28, 2025

Case No. 2025-00045

Question No. 40

Responding Witness: John Bevington

- Q-40. Refer to the testimony of John Bevington at page 9, regarding the Meta data center project to be located in Entergy Louisiana's service territory. The testimony indicates that Meta pledges to "invest more than \$200 million in local infrastructure improvements, contribute up to \$1 million annually to Entergy's low- income customer support program, and work with Entergy to bring at least 1,500 MW of new renewable energy to the grid."
 - a) State whether the Companies' discussions with any of the potential data center projects include the types of pledges that are involved in the Meta data center project in Louisiana.
 - b) State whether the Companies anticipate any of the data center projects that the Companies are interacting with would result in similar pledges that were made by the Meta data center project in Louisiana.

A-40.

- a) Unknown.
- b) Unknown.

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Case No. 2025-00045

Question No. 41

- Q-41. Refer to the testimony of John Bevington at page 10, in which he states that data centers can provide significant property tax revenue. Describe and quantify the anticipated tax benefits of data centers planned in the Companies' service territory.
- A-41. The Companies have not attempted to quantify the tax benefits of all potential data centers in the Companies' service territories. Regarding the proposed Campground Road data center in Jefferson County data center, Poe Companies President Hand Hillebrand recently stated, "For new data center projects in our region, expect several billions to be spent on scaling infrastructure, site work, real property improvements, and equipment. This, in turn, will eventually translate to tens of millions of dollars (in tax revenue) for city and state government and even schools."⁸

⁸ Dawn Yankeelov, *Construction: Billions for Bytes*, The Lane Report, Mar. 1, 2025, available at <u>https://www.lanereport.com/179617/2025/03/construction-billions-for-bytes/</u>.

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Case No. 2025-00045

Question No. 42

- Q-42. Describe what infrastructure additions or upgrades the Companies anticipate making in order to serve data centers.
- A-42. The Companies assume this request intends to refer to transmission infrastructure. The infrastructure additions or upgrades vary based on location requested. They required facilities are determined by the Transmission Service Request ("TSR") study process.

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Case No. 2025-00045

Question No. 43

Responding Witness: Stuart A. Wilson

- Q-43. Refer to the testimony of John Bevington at page 9, in which he indicates that data centers have an average load factor of 95 percent. Given data centers' needs for uninterrupted service, state whether adjustments would be appropriate to the Companies' reserve margins if 6,000 MW of total data center load is added to the Companies' system.
- A-43. Yes. Adjustments to Companies' minimum reserve margins would be appropriate if 6,000 MW of data center load is added because the level of reserves needed for reliable service can vary with changes in load and resource mix.

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Case No. 2025-00045

Question No. 44

Responding Witness: John Bevington / Tim A. Jones

- Q-44. Refer to Application ¶ 14, in which the Companies indicate that they anticipate 20 MW from an economic development prospect in the auto industry and 19.4 MW from an existing customer's expansion as economic development load. Please describe in detail these prospects, the location of these potential projects, and the reasons why the Companies believe that it is reasonable to include the projects in their forecasts.
- A-44. The 20 MW economic development prospect is considering Shelbyville, KY. The 19.4 MW from an existing customer's expansion announced in 2023 is associated with North American Steel in Ghent, KY.⁹ The Companies had (and have) high confidence in these projects occurring, so they were included in the load forecast.

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https://psc.ky.gov/tariffs/Electric/Kentucky%20Utilities%20Company/Contracts/Current/North%20Americ an%20Stainless/2025-02-28 Special%20Economic%20Development%20Rider%20Contract.pdf

Response to Louisville/Jefferson County Metro Government and Lexington-Fayette Urban County Government's First Request for Information Dated March 28, 2025

Case No. 2025-00045

Question No. 45

Responding Witness: Robert M. Conroy

- Q-45. Considering the impact to peak load and the concentration of load (e.g. few, large customers), explain whether there is a DSM obligation of the new customers.
- A-45. Participation in the Companies' DSM programs is voluntary. With the exception of certain industrial customers (KRS 278.285(3)), all customers must pay DSM charges; data center customers would have that obligation.