COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC 2024 JOINT INTEGRATED RESOURCE PLAN OF LOUISVILLE GAS AND ELECTRIC COMPANY AND KENTUCKY UTILITIES COMPANY	**)** **)** **)** **)**	**CASE NO. 2024-00326**

RESPONSE OF LOUISVILLE GAS AND ELECTRIC COMPANY AND KENTUCKY UTILITIES COMPANY TO THE SIERRA CLUB'S SUPPLEMENTAL REQUESTS FOR INFORMATION DATED JANUARY 22, 2025

FILED: February 11, 2025

VERIFICATION

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 4th day of February 2025.

Notary Public

Notary Public ID No. KYNP63286

My Commission Expires:

January 22, 2027

CAROLINE J. DAVISON
COMM EXPIRES 01/22/2027
NOTARY PUBLIC
ID # KYNP63286
STATE AT LARGE, KENTUCKY

VERIFICATION

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 5 day of February 2025.

Notary Public

Notary Public ID No. KYNP61560

My Commission Expires:

November 9, 2026

TAMMY J. ELZY
COMM EXPIRES
11/09/2026
NOTARY
PUBLIC
ID # KYNP61560
STATE AT LARGE, KENTUCKY

VERIFICATION

COMMONWEALTH OF KENTUCKY)
)
COUNTY OF JEFFERSON)

The undersigned, **Lana Isaacson**, being duly sworn, deposes and says that she is Manager – Energy Efficiency Programs for LG&E and KU Services Company, and that she has personal knowledge of the matters set forth in the responses for which she is identified as the witness, and the answers contained therein are true and correct to the best of her information, knowledge, and belief.

Lana Isaacson

Lana Isaacson

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 4th day of February 2025.

Caroline J. Davison

Notary Public

Notary Public ID No. KYNP63286

My Commission Expires:

January 22 2027

CAROLINE J. DAVISON
NOTARY PUBLIC
STATE AT LARGE, KENTUCKY
ID # KYNP63286
COMM EXPIRES 01/22/2027

VERIFICATION

COMMONWEALTH OF KENTUCKY)
)
COUNTY OF JEFFERSON)

The undersigned, **Tim A. Jones**, being duly sworn, deposes and says that he is Manager – Sales Analysis and Forecast 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 5th day of February 2025.

Notary Public

Notary Public ID No. KYNP63286

My Commission Expires:

January 22, 2027

VERIFICATION

COMMONWEALTH OF KENTUCKY)
)
COUNTY OF JEFFERSON)

The undersigned, **Elizabeth J. McFarland**, being duly sworn, deposes and says that she is Vice President, Transmission for Kentucky Utilities Company and Louisville Gas and Electric Company and an employee of LG&E and KU Services Company, and that she has personal knowledge of the matters set forth in the responses for which she is identified as the witness, and the answers contained therein are true and correct to the best of her information, knowledge, and belief.

Elizabeth J. McFarland 2/7/25

Elizabeth J. McFarland

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 7th day of February 2025.

Caroline J. Davison
Notary Public

Notary Public ID No. KYNP63286

My Commission Expires:

January 22, 2027

CAROLINE J. DAVISON
COMM EXPIRES 01/22/2027
NOTARY PUBLIC
ID # KYNP63286
STATE AT LARGE, KENTUCKY

VERIFICATION

COMMONWEALTH OF KENTUCKY)
)
COUNTY OF JEFFERSON)

The undersigned, **Charles R. Schram**, 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.

Charles R. Schram

Subscribed and sworn to before me, a Notary Public in and before said County and State this 4th day of February 2025.

Notary Public

Notary Public ID No. KYNP63286

My Commission Expires:

January 22, 2027

VERIFICATION

COMMONWEALTH OF KENTUCKY)
)
COUNTY OF JEFFERSON)

The undersigned, **Michael S. Sebourn**, being duly sworn, deposes and says that he is Sr. Manager – Generation Planning 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.

Michael S. Sebourn

Michael S. Sebourn

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 5th day of February 2025.

Caroline J. Davison

Notary Public

Notary Public ID No. KYNP63286

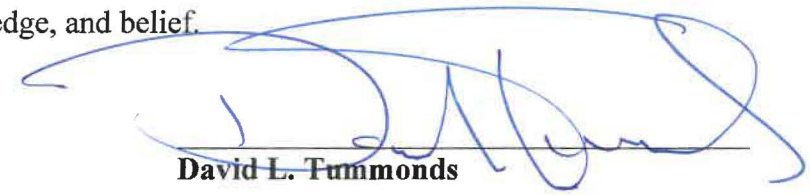
My Commission Expires:

January 22, 2027

VERIFICATION

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 7th day of February 2025.

Notary Public

Notary Public, ID No. KYNP4577

My Commission Expires:

April 1, 2028

VERIFICATION

COMMONWEALTH OF KENTUCKY)
)
COUNTY OF JEFFERSON)

The undersigned, **Stuart A. Wilson**, being duly sworn, deposes and says that he is Director, Energy Planning, Analysis & 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.

Stuart A. Wilson

Subscribed and sworn to before me, a Notary Public in and before said County an State, this 5th day of February 2025.

Notary Public

Notary Public ID No. KYNP63286

My Commission Expires:

January 22, 2027

LOUISVILLE GAS AND ELECTRIC COMPANY
AND
KENTUCKY UTILITIES COMPANY

Response to Sierra Club's Supplemental Requests for Information
Dated January 22, 2025

Case No. 2024-00326

Question No. 2-1

Responding Witness: Michael S. Sebourn

Q-2-1. Please refer to the PLEXOS database and the generators named "NGCC.Expansion" and "SCCT.Expansion". Please explain why these generators do not have a "Forced Outage Rate" property assigned to them.

A-2-1. These units were modeled with dispatch ratings that reflect assumed forced and planned outage rates. See the response to PSC 2-14.

LOUISVILLE GAS AND ELECTRIC COMPANY
AND
KENTUCKY UTILITIES COMPANY

Response to Sierra Club's Supplemental Requests for Information
Dated January 22, 2025

Case No. 2024-00326

Question No. 2-2

Responding Witness: Michael S. Sebourn

Q-2-2. Please refer to the PLEXOS database and the data file named "StayOpenCosts_Expansion". Please provide the supporting workbook, with all formulas and links intact, used to develop the values modeled in this data file.

A-2-2. See KPSC Case No 2024-00326 – LGE-KU 2024 IRP Resource Planning Workpapers—CONFIDENTIAL.zip at filepath "Screening\CONFIDENTIAL_20240901_ResourceScreeningModel_2024IRP_0328.xlsx".

LOUISVILLE GAS AND ELECTRIC COMPANY
AND
KENTUCKY UTILITIES COMPANY

Response to Sierra Club's Supplemental Requests for Information
Dated January 22, 2025

Case No. 2024-00326

Question No. 2-3

Responding Witness: Michael S. Sebourn

Q-2-3. Please refer to the PLEXOS database and the generator named "SCCT.Expansion". Please explain the property named "Max Capacity Factor Year" applied for this generator.

A-2-3. Simple cycle combustion turbines ("SCCTs") are designed to be used as peaking resources rather than as baseload and are typically not granted air permits that allow for year-round baseload operation. The properties and costs assigned to SCCTs in PLEXOS reflect values specific to a peaking unit, so the "Max Capacity Factor Year" property limits the annual capacity factor of these units to 20 percent and thus precludes PLEXOS from operating these units in a manner that is inconsistent with that function.

LOUISVILLE GAS AND ELECTRIC COMPANY
AND
KENTUCKY UTILITIES COMPANY

Response to Sierra Club's Supplemental Requests for Information
Dated January 22, 2025

Case No. 2024-00326

Question No. 2-4

Responding Witness: Lana Isaacson / Michael S. Sebourn

Q-2-4. Please refer to the PLEXOS database and the data file named "CapRatings_DSM".

a. Please explain the declining capacity rating for the "DSM_DLC_AC" generator.

b. Please provide the supporting workbook, with all formulas and links intact, used to develop the capacity rating for each generator.

A-2-4.

a. The DSM_DLC_AC item is not a generator but is a demand side management ("DSM") demand response program focused on direct load control ("DLC") of customer air conditioners ("AC"), and to a lesser extent electric water heaters ("WH") and pool pumps ("PP"). This program's capacity rating is declining because of the failure of existing switches (the installed devices on AC, WH, and PP units) due to age and the obsolescence of the communication technologies (i.e., paging and 3G) used to support the program. For a more detailed explanation of the declining capacity rating, see Exhibit JB-1, Section 4.1.2 to the Direct Testimony of John Bevington in Case No. 2022-00402.[1]

b. To clarify, each of the items in the referenced file is a DSM program, not an actual generator. See the workpaper previously provided at KPSC Case No 2024-00326 -- LGE-KU 2024 IRP Resource Planning Workpapers--PUBLIC.zip at file path \PLEXOS\Support\20240916_2024IRP_DSM.xlsx.

[1] Available at https://psc.ky.gov/pscecf/2022-00402/rick.lovekamp%40lge-ku.com/12152022012325/19-Bevington_Direct_Testimony_2022-00402.pdf

LOUISVILLE GAS AND ELECTRIC COMPANY
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KENTUCKY UTILITIES COMPANY

Response to Sierra Club's Supplemental Requests for Information
Dated January 22, 2025

Case No. 2024-00326

Question No. 2-5

Responding Witness: Michael S. Sebourn

Q-2-5. Please refer to the PLEXOS data file named "Natural_Gas_Transport_Rates_By_Unit". Please explain what the values in this file represent.

A-2-5. The values in this data file represent the cost in $/MMBtu to transport natural gas at a specified service level to each existing or potential future gas-fired generating unit.

LOUISVILLE GAS AND ELECTRIC COMPANY
AND
KENTUCKY UTILITIES COMPANY

Response to Sierra Club's Supplemental Requests for Information
Dated January 22, 2025

Case No. 2024-00326

Question No. 2-6

Responding Witness: Michael S. Sebourn

Q-2-6. Please refer to the PLEXOS database and the data files named "CapMax_DSM" and "FirmCapacity_DSM". Please confirm that the firm capacity for the DSM resources is grossed up for the reserve margin. If not confirmed, please explain.

A-2-6. Not confirmed. The values in the CapMax_DSM file are used as the basis for calculating fixed costs in PLEXOS. It would be inappropriate to gross up these values in any regard as it would result in incorrect total costs. The values in the FirmCapacity_DSM are grossed up for transmission and distribution losses but not for reserve margin. The Companies modeled the DSM programs as resources that contribute to reserve margin, not as load reductions that would reduce the need for reserves. Therefore, it would be inappropriate to gross up their capacity values for reserve margin.

LOUISVILLE GAS AND ELECTRIC COMPANY
AND
KENTUCKY UTILITIES COMPANY

Response to Sierra Club's Supplemental Requests for Information
Dated January 22, 2025

Case No. 2024-00326

Question No. 2-7

Responding Witness: Michael S. Sebourn

Q-2-7. Please refer to the PLEXOS database and the generator named "Ghent.2_Gas100" and the CapRatings setting for the scenario named "GNP". Please explain if Ghent 2 would be limited to operating during the non-ozone seasons if it is converted to operate on 100% gas.

A-2-7. Yes. The Companies assume the Ghent 2 unit, converted to operate on gas but without an SCR, would emit an amount of NO_x in excess of limitations stipulated in the proposed Good Neighbor Plan regulations.

LOUISVILLE GAS AND ELECTRIC COMPANY
AND
KENTUCKY UTILITIES COMPANY

Response to Sierra Club's Supplemental Requests for Information
Dated January 22, 2025

Case No. 2024-00326

Question No. 2-8

Responding Witness: Michael S. Sebourn

Q-2-8. Please refer to the PLEXOS database the data files named "StayOpenCosts_Existing", "StayOpenCosts_ExistingplusELG", "ELG.FOM", and "RetirementSavings". Please provide the supporting workbooks, with all formulas and links intact, used to develop the values in these data files.

A-2-8. See KPSC Case No 2024-00326 – LGE-KU 2024 IRP Resource Planning Workpapers—PUBLIC.zip at filepath "FinancialModel\Support\StayOpenCosts\20240918_ExistingUnit_FOM_RetirementCredit_PLEXOS_0328.xlsx".

LOUISVILLE GAS AND ELECTRIC COMPANY
AND
KENTUCKY UTILITIES COMPANY

Response to Sierra Club's Supplemental Requests for Information
Dated January 22, 2025

Case No. 2024-00326

Question No. 2-9

Responding Witness: Michael S. Sebourn

Q-2-9. Please refer to the SERVM database and the SERVM study named "24IRPBase300DSM".

a. Please confirm if this is the study used to determine the 39% accreditation for dispatchable DSM as discussed on pages 18-19 of the 2024 IRP Resource Adequacy Analysis.

b. Please provide the supporting workbook, with all formulas and links intact, used to determine the 39% accreditation for dispatchable DSM

A-2-9.

a. Not confirmed. The correct SERVM study name is 24IRPBase_300DSM.

b. See KPSC Case No 2024-00326 – LGE-KU 2024 IRP Resource Planning Workpapers-PUBLIC.zip at file paths "SERVM\Outputs_SERVMResults\20240926_SMMA_24IRPBase_CapacityContribution(BS8h,DSM).xlsx" and "SERVM\Outputs_SERVMResults\20240920_SMMA_24IRP_ForCapacityContributions(BS4h, CT).xlsx".

LOUISVILLE GAS AND ELECTRIC COMPANY
AND
KENTUCKY UTILITIES COMPANY

Response to Sierra Club's Supplemental Requests for Information
Dated January 22, 2025

Case No. 2024-00326

Question No. 2-10

Responding Witness: Michael S. Sebourn

Q-2-10. Please refer to the workpaper named "out_stationyr" in the PROSYM subfolder named "05_RefCase". Please confirm that the planning period modeled in PROSYM was 2024 to 2039. If not confirmed, please provide the years modeled in PROSYM.

A-2-10. Confirmed. See the response to KIUC 2-3(c).

LOUISVILLE GAS AND ELECTRIC COMPANY
AND
KENTUCKY UTILITIES COMPANY

Response to Sierra Club's Supplemental Requests for Information
Dated January 22, 2025

Case No. 2024-00326

Question No. 2-11

Responding Witness: Tim A. Jones

Q-2-11. Please refer to page 7-13 of Volume I of the 2024 IRP where there is a reference to 1,050 MW of data center load in the Mid scenario.

a. Please explain if the Companies' load forecast includes the project referenced in the response to Sierra Club 1-12(c)(i).

b. If the project is included, please provide the 8,760 hourly shape included in the load forecast for this project.

A-2-11.

a. See the response to PSC 2-8.

b. See the response to part (a). See the response to KIUC 1-2(g) for the generic data center hourly load shape.

LOUISVILLE GAS AND ELECTRIC COMPANY
AND
KENTUCKY UTILITIES COMPANY

Response to Sierra Club's Supplemental Requests for Information
Dated January 22, 2025

Case No. 2024-00326

Question No. 2-12

Responding Witness: Tim A. Jones

Q-2-12. Please refer to the workpaper named "Energy_Efficiency_scenarios_20240805".

a. Please provide the total cost of the "High" scenario over the planning period.

b. Please confirm that the savings reported in the worksheet named "High" represent incremental savings to the EE included in load forecast.

A-2-12.

a. See the response to SC 1-15. Because of how the Companies model energy efficiency, there are no specific costs of EE considered in the High load forecast or in the Mid or Low load forecasts either.

b. Confirmed. To clarify, these savings represent incremental savings to the EE included in the Mid load forecast.

LOUISVILLE GAS AND ELECTRIC COMPANY
AND
KENTUCKY UTILITIES COMPANY

Response to Sierra Club's Supplemental Requests for Information
Dated January 22, 2025

Case No. 2024-00326

Question No. 2-13

Responding Witness: John Bevington

Q-2-13. Please refer to the Companies' response to Joint Intervenors 1.16(d) where the Companies said they are working with 16 data center projects with a potential load of over 4.2 GW with one being imminent, seven as prospects, one as suspect, and seven as inquiries. Please provide the GW breakdown for each phase reported by the Companies.

A-2-13. As of January 20, 2025, the current data center pipeline includes 18 data center projects, representing approximately 6.2 GW of peak load requests. Of those, projects in the "inquiry" phase represent 2.5 GW; the "suspect" phase is 0.8 GW; "prospect phase is 2.5 GW; and "imminent" is 0.4 GW.

LOUISVILLE GAS AND ELECTRIC COMPANY
AND
KENTUCKY UTILITIES COMPANY

Response to Sierra Club's Supplemental Requests for Information
Dated January 22, 2025

Case No. 2024-00326

Question No. 2-14

Responding Witness: Michael S. Sebourn

Q-2-14. Please refer to the Companies' response to Sierra Club 1-25(b) where there is a reference to PLEXOS constraining the annual generation from the sum of solar and wind resources to approximately 25%. Please provide the name of the constraint that applies this 25% limit in PLEXOS.

A-2-14. The constraint that applies the 25% limit in PLEXOS is Max_Wind.

LOUISVILLE GAS AND ELECTRIC COMPANY
AND
KENTUCKY UTILITIES COMPANY

Response to Sierra Club's Supplemental Requests for Information
Dated January 22, 2025

Case No. 2024-00326

Question No. 2-15

Responding Witness: Tim A. Jones / Michael S. Sebourn

Q-2-15. Please refer to the Companies' response to Sierra Club 1-31(a). Please provide the 8760 hourly profiles modeled for the forecasted economic development load in SERVM across each weather year.

A-2-15. See the response to KIUC 1-2(g).

LOUISVILLE GAS AND ELECTRIC COMPANY
AND
KENTUCKY UTILITIES COMPANY

Response to Sierra Club's Supplemental Requests for Information
Dated January 22, 2025

Case No. 2024-00326

Question No. 2-16

Responding Witness: Tim A. Jones

Q-2-16. Please refer to the workpaper named "Data_Center_1_Phase_2_Included_MA_Shaping", worksheet named "Final_Data_Center_1", column E. Please confirm that the values shown in column E represent the hourly data center load included in the Mid scenario.

A-2-16. Confirmed. These figures represent energy requirements, which in this example are sales plus transmission losses. See also the response to Question No. 2-15.

LOUISVILLE GAS AND ELECTRIC COMPANY
AND
KENTUCKY UTILITIES COMPANY

Response to Sierra Club's Supplemental Requests for Information
Dated January 22, 2025

Case No. 2024-00326

Question No. 2-17

Responding Witness: David L. Tummonds / Stuart A. Wilson

Q-2-17. Please refer to Table 32 on page 55 of the 2024 IRP Resource Assessment. Please explain why the gas conversion capital is more expensive for the Ghent units.

A-2-17. More capital would be required to convert the Ghent units to burn gas because the Ghent site does not currently have natural gas service, and gas conversion would require incremental capital to install that service.

LOUISVILLE GAS AND ELECTRIC COMPANY
AND
KENTUCKY UTILITIES COMPANY

Response to Sierra Club's Supplemental Requests for Information
Dated January 22, 2025

Case No. 2024-00326

Question No. 2-18

Responding Witness: Michael S. Sebourn

Q-2-18. Please refer to the response to Sierra Club Question No. 1-21(c), which states in part, "No firm transmission costs were included for any of the resources in Table 6-4, as the Companies assumed they would be installed in the Companies' territory."

a. Please explain why installation of new resources within the Companies' service territory equates to no firm transmission cost.

b. Please provide any documents that support your response to subpart (a).

A-2-18.

a. Firm transmission is a reference to point-to-point transmission service from a third party. If resources are installed in the Companies' territory, there is no need for firm point-to-point transmission through a third party. On the other hand, if resources are installed outside the Companies' territory, such as in PJM, for example, firm point-to-point transmission through PJM is required to reasonably ensure delivery to the Companies' territory.

b. Not applicable.

LOUISVILLE GAS AND ELECTRIC COMPANY
AND
KENTUCKY UTILITIES COMPANY

Response to Sierra Club's Supplemental Requests for Information
Dated January 22, 2025

Case No. 2024-00326

Question No. 2-19

Responding Witness: Charles R. Schram / Michael S. Sebourn

Q-2-19. Please refer to the response to Sierra Club Question No. 1-21(d). Please provide the basis for your 2024 firm gas transportation costs.

A-2-19. The 2024 firm gas transportation costs are based on the current Tennessee Gas Pipeline FT max tariff rate of $0.25/MMBtu-day, applied to daily usage based on expected heat rates of NGCC and SCCT in peak winter conditions. For NGCC units, this is based on 24 hours at max capacity, while for SCCT units, this is based on 16 hours at max capacity and 8 hours at min capacity. This tariff rate is assumed to be in 2024 dollars and is escalated to 2030 dollars using a 1.0% escalation rate.[2]

[2] The Companies have observed that firm gas transport cost increases have been greater than zero but below the general rate of inflation, which the Companies have assumed to be 2.3% as explained in IRP Vol. II, 2024 IRP Inflation Assumptions. The Companies have used 1% in their models to escalate firm gas transport cost for several years, including in the 2022 CPCN-DSM Case (Case No. 2022-00402).

LOUISVILLE GAS AND ELECTRIC COMPANY
AND
KENTUCKY UTILITIES COMPANY

Response to Sierra Club's Supplemental Requests for Information
Dated January 22, 2025

Case No. 2024-00326

Question No. 2-20

Responding Witness: Tim A. Jones

Q-2-20. Please refer to the response to Sierra Club Question No. 1-44. The response states in part that "Very cold temperatures in the winter combined with a higher incidence of electric space heating in new builds over the last decade are the most significant contributors to this." Do the Companies have any data with respect to the type of electric space heating that is added by new builds? If so, provide any such data.

A-2-20. See the response to SC 1-47. See also 2024 IRP Vol. 1 7.(7).(b), specifically subsection 9, "*Space Heating Electrification*", starting on page 7-31.

LOUISVILLE GAS AND ELECTRIC COMPANY
AND
KENTUCKY UTILITIES COMPANY

Response to Sierra Club's Supplemental Requests for Information
Dated January 22, 2025

Case No. 2024-00326

Question No. 2-21

Responding Witness: Tim A. Jones

Q-2-21. Please refer to the response to Sierra Club Question No. 1-48, Attachment 1. Please detail what plans, if any, the Companies have to address load spikes shown in the KU shape.

A-2-21. The Companies disagree that the load shapes in Attachment 1 show significant load spikes; rather, these represent a typical summer shape. This is evident when comparing the LG&E shapes to the KU shapes. Additionally, this attachment includes estimated DLC reductions to peak summer hours, so this attachment shows an example of a Company-sponsored DSM program targeting peak load reduction.

LOUISVILLE GAS AND ELECTRIC COMPANY
AND
KENTUCKY UTILITIES COMPANY

Response to Sierra Club's Supplemental Requests for Information
Dated January 22, 2025

Case No. 2024-00326

Question No. 2-22

Responding Witness: Robert M. Conroy / Elizabeth J. McFarland

Q-2-22. Please refer to the response to Joint Intervenors Question No. 1.61(c), which states in part "However, it is important to note that the majority of costs associated with a new load interconnecting to the LG&E/KU transmission system are ultimately borne by the Transmission Owner if the new load comes to fruition." With respect to this statement please answer the following:

a. Does this sentence mean that the referred to costs will be recovered through the OATT as described in https://www.oasis.oati.com/woa/docs/LGEE/LGEEdocs/Allocation_of_Costs_for_End-User_Interconnections_-_FINAL_2-1-22.pdf? If not, what does it mean?

b. If the answer to subpart (a) is "yes", why would the Companies recover costs needed to interconnect a new load from all customers who benefit from the transmission system?

c. If the Companies do not intend to have other ratepayers pay the transmission costs of interconnecting new load, what steps do the Companies intend to take in order to ensure that new customers pay their own interconnection costs in full?

A-2-22.

a. The Transmission Owner's costs are recovered partially through the Open Access Transmission Tariff rate, meaning customers paying the OATT rate will bear some cost through their payment for usage of the Transmission System. LG&E/KU retail customers pay for transmission's cost of service in state approved bundled retail rates via future retail rate cases.

b. Facilities on the Transmission System are generally "network" in nature, meaning the facilities enhance the overall reliability of the grid and are an ultimate benefit to all users of the system. The Federal Energy Regulatory Commission has long held that facilities benefiting all users of the

Transmission System should be recovered by all users of the Transmission System.

c. See the response to part (a).

LOUISVILLE GAS AND ELECTRIC COMPANY
AND
KENTUCKY UTILITIES COMPANY

Response to Sierra Club's Supplemental Requests for Information
Dated January 22, 2025

Case No. 2024-00326

Question No. 2-23

Responding Witness: Elizabeth J. McFarland

Q-2-23. Please refer to the response to Sierra Club Question No. 1-40. With respect to this response, please answer the following:

a. The response to subpart (f) states, "If LG&E/KU determine that EMT or transient stability studies are required for a large load, then LG&E/KU will coordinate with the customer to develop a model that sufficiently represents the characteristics of the load under study." Please explain why LG&E/KU would determine that EMT and/or transient stability studies would be required rather than the ITO?

b. Has LG&E/KU ever determined that EMT and/or transient stability studies were necessary for a large load? If so, please describe the facts that led to this determination.

c. Have the Companies published the Transmission Service Request queue anywhere? If so, where? If not, please provide the queue data.

A-2-23.

a. According to LG&E/KU's Transmission Service Request Study Criteria, EMT or transient stability studies are performed as part of a Facilities Study within the Transmission Service Request ("TSR") process. LG&E/KU may also perform such studies outside the TSR process. According to LG&E/KU's OATT, LG&E/KU is responsible for completing Facilities Studies and any studies outside the TSR process.

b. LG&E/KU has performed transient stability studies but no EMT studies for large loads. As part of LG&E/KU's ad hoc evaluation, transient stability studies were performed when it was determined that system reliability may be impacted by either 1) frequency or voltage excursions in the event the load was lost during a fault or 2) large amounts of load switching on and off could impact power quality, such as for an arc furnace.

c. The Companies post a list of available TSR studies to OASIS in accordance with FERC Order 890.[3] As of February 7, 2025, there is not a publicly available queue of TSRs that are awaiting studies or have studies in the process. Below is a TSR queue for all TSRs since 2023. The Companies are working to have such a queue posted publicly to OASIS and anticipate it will be available there soon.

ITO Project Number	Status	Customer	Description	MW Capacity
LGE-TSR-2023-001	Confirmed	KMPA	DNR Increase	30
LGE-TSR-2023-002	Confirmed	LGE/KU	New DNR	138 & 280
LGE-TSR-2023-003	Confirmed	LGE/KU	New DNR	115
LGE-TSR-2023-004	Withdrawn	LGE/KU	New DNR	104
LGE-TSR-2023-005	Confirmed	EKPC	New Load	8
LGE-TSR-2023-006	Confirmed	KYMEA	Load Increase	11
LGE-TSR-2023-007	Confirmed	EKPC	DNR Rollover	192
LGE-TSR-2023-008	Confirmed	LGE/KU	Load Increase	15
LGE-TSR-2023-009	Confirmed	LGE/KU	New Load	18
LGE-TSR-2023-010	Confirmed	LGE/KU	New Load	10
LGE-TSR-2024-001	Confirmed	LGE/KU	New Load	335
LGE-TSR-2024-002	Confirmed	KYMEA	New DNR	35-100
LGE-TSR-2024-003	Withdrawn			
LGE-TSR-2024-004	Confirmed	LGE/KU	New Load	20
LGE-TSR-2024-005	Confirmed	LGE/KU	New Load	19

[3] Available at https://www.oasis.oati.com/woa/docs/LGEE/LGEEdocs/List_of_TSR_Studies_Available_Upon_Request_11-20-2024.pdf.

LGE-TSR-2024-006	Study	LGE/KU	New DNR	760
LGE-TSR-2024-007	Declined by ITO 10/28/2024	KMPA	Load Increase	400
LGE-TSR-2024-008	Confirmed	LGE/KU	New DNR	120
LGE-TSR-2024-009	Confirmed	LGE/KU	New DNR	125
LGE-TSR-2024-010	Study	LGE/KU	New DNR	94
LGE-TSR-2024-011	Study	LGE/KU	Load Increase	67
LGE-TSR-2024-012	Study	LGE/KU	New Load	100
LGE-TSR-2024-013	Study	LGE/KU	New Load	650
LGE-TSR-2024-014	Study	LGE/KU	New Load	100
LGE-TSR-2024-015	Study	LGE/KU	Load Increase	10
LGE-TSR-2024-016	Study	KMPA	Load Increase	80
LGE-TSR-2024-017	Study	EKPC	New Load	1000
LGE-TSR-2024-018	Study	KYMEA	New DNR	75
LGE-TSR-2025-001	Study	LGE/KU	Load Increase	53

LOUISVILLE GAS AND ELECTRIC COMPANY
AND
KENTUCKY UTILITIES COMPANY

Response to Sierra Club's Supplemental Requests for Information
Dated January 22, 2025

Case No. 2024-00326

Question No. 2-24

Responding Witness: Elizabeth J. McFarland

Q-2-24. Have the Companies considered making all or part of the data requirements contained in the Facility Interconnection Modeling Requirements (posted at https://www.oasis.oati.com/woa/docs/LGEE/LGEEdocs/facility-interconnectionmodeling-requirements.pdf) required for new load interconnections? If not, why not? If so, when would those begin to apply?

A-2-24. Yes. All data requirements in the linked document are currently effective and utilized by the Companies. The requirements in Section 3, End-User Facilities, apply to load additions.

LOUISVILLE GAS AND ELECTRIC COMPANY
AND
KENTUCKY UTILITIES COMPANY

Response to Sierra Club's Supplemental Requests for Information
Dated January 22, 2025

Case No. 2024-00326

Question No. 2-25

Responding Witness: John Bevington / Robert M. Conroy

Q-2-25. Please refer to the response to Joint Intervenors Question No. 1.18, which states "KU entered into an economic development rider contract with Phoenix Paper Wickliffe, LLC, which the Commission accepted with an effective date of August 23, 2019. KU also entered into a special contract for new load with Blue Oval SK, LLC, which the Commission approved by Order dated December 18, 2023, in Case No. 2023-00123."

a. Do the Companies intend to continue to add new, large loads through special contracts and/or economic development riders rather than through a standard tariff?

b. What documented principles, criteria, or other guidelines do the Companies have for ratemaking related to new, large loads?

A-2-25.

a. The Companies will place customers on the appropriate standard rate schedules based on their expected load requirements. To the extent that new large customers have unique service characteristics not fully addressed or contemplated by standard rate schedules, the Companies may consider the use of a special contract for service. In addition, if new customers qualify for the Economic Development Rider, the Companies will consider and negotiate such service.

b. Special contracts are only crafted to address unique circumstances that are outside of the written tariffs' terms and conditions. All special contracts are submitted to the Commission for their review and approval.