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 CERTIFICATES OF PUBLIC CONVENIENCE AND NECESSITY AND SITE COMPATIBILITY CERTIFICATES	)	**CASE NO. 2025-00045**

RESPONSE OF
KENTUCKY UTILITIES COMPANY
AND
LOUISVILLE GAS AND ELECTRIC COMPANY
TO
THE ATTORNEY GENERAL AND KENTUCKY INDUSTRIAL UTILITY CUSTOMERS' INITIAL DATA REQUEST
DATED MARCH 28, 2025

FILED: April 17, 2025

VERIFICATION

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

Lonnie E. Bellar

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 10th day of April 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
ID # KYNP63286

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 9th day of April 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
ID # KYNP63286

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 9th day of April 2025.

Caroline J. Davison

Notary Public

Notary Public ID No. KYNP63286

My Commission Expires:

January 22, 2027

CAROLINE J. DAVISON
01/22/2027
ID # KYNP63286

VERIFICATION

COMMONWEALTH OF KENTUCKY)
)
COUNTY OF JEFFERSON)

The undersigned, **Christopher M. Garrett**, being duly sworn, deposes and says that he is Vice President – Financial Strategy & Chief Risk Officer for PPL Services Corporation and he provides services to Kentucky Utilities Company and Louisville Gas and Electric 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.

Christopher M. Garrett

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 14th day of April 2025.

Tammy J. Elzy
Notary Public

Notary Public ID No. KYNP61560

My Commission Expires:

November 9, 2026

TAMMY J. ELZY
COMM EXPIRES 11/09/2026
ID # KYNP61560

VERIFICATION

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

Philip A. Imber

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 10th day of April 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
ID # KYNP63286

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 9th day of April 2025.

Caroline J. Davison
Notary Public

Notary Public ID No. KYNP63286

My Commission Expires:

January 22, 2027

CAROLINE J. DAVISON
01/22/2027
ID # KYNP63286

VERIFICATION

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 April 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
ID # KYNP63286

VERIFICATION

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
Charles R. Schram

Subscribed and sworn to before me, a Notary Public in and before said County and State this 16th day of April 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
ID # KYNP63286

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 16th day of April 2025.

Venita M. DeFreeze
Notary Public

Notary Public, ID No. KYNP4577

My Commission Expires:

April 1, 2028

VENITA M. DeFREEZE
KYNP4577
04 01 2028

VERIFICATION

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 14th day of April 2025.

Caroline J. Davison
Notary Public

Notary Public ID No. KYNP63286

My Commission Expires:

January 22, 2027

CAROLINE J. DAVISON
01/22/2027
ID # KYNP63286

KENTUCKY UTILITIES COMPANY
AND
LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Attorney General and Kentucky Industrial Utility Customers' Initial Data Request
Dated March 28, 2025

Case No. 2025-00045

Question No. 1

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

Q-1. Refer to the Application generally.

a. Provide a detailed explanation of safety measures that will be taken to prevent fires at the Cane Run BESS facility.

b. Please provide the expected distance from the Cane Run BESS facility to the nearest residential zone in Jefferson County.

c. Please provide the expected distance from the Cane Run BESS facility to the nearest commercial zone in Jefferson County.

d. Confirm that the Companies are aware of the fire hazards and safety risks posed by lithium battery facilities.

e. Confirm that the Companies are aware of the recent Vistra Moss Landing battery fire in California and other incidents involving lithium-ion battery storage systems.

A-1.

a. See the responses to PSC 1-63, 1-64, 1-65, 1-66, 1-67, 1-68, 1-69, 1-70, 1-71, and 1-106 for detail on how the Companies plan to prevent fires and mitigate impact of potential fire.

b. Final site layout is not complete.

c. Final site layout is not complete.

d. Confirmed.

e. The Companies are aware of the Moss Landing fire specifically and maintain general awareness of incidents elsewhere in the industry.

KENTUCKY UTILITIES COMPANY
AND
LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Attorney General and Kentucky Industrial Utility Customers' Initial Data Request
Dated March 28, 2025

Case No. 2025-00045

Question No. 2

Responding Witness: Lonnie E. Bellar / Charles R. Schram

Q-2. Refer to the Application generally.

a. Please advise if the potential closure of the Ohio Valley Electric Corporation's coal plants will significantly impact the Companies' future supply portfolio.

b. Please advise if the potential closure of the of the Ohio Valley Electric Corporation's coal plants will impact the proposed constructions.

A-2.

a. It is unclear what "significantly" means in this context, but retiring the OVEC units would affect the Companies' resource portfolio and future resource planning. The Companies' OVEC share is 174 MW, or about 2.3 percent of the Companies' total summer net generation capacity. If OVEC plans to retire, the Companies will consider replacing the capacity during resource planning activities along with other system capacity and energy needs that exist at that time. See the response to PSC 1-21.

b. It will not.

KENTUCKY UTILITIES COMPANY
AND
LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Attorney General and Kentucky Industrial Utility Customers' Initial Data Request
Dated March 28, 2025

Case No. 2025-00045

Question No. 3

Responding Witness: Lonnie E. Bellar

Q-3. In Case No. 2022-00402, the retirement of the Ghent facility was proposed, though it was denied by the PSC. Are there plans to request the retirement of the Ghent 2 facility in the future?

A-3. No, the Companies currently have no plans to request the retirement of Ghent 2.

KENTUCKY UTILITIES COMPANY
AND
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Response to Attorney General and Kentucky Industrial Utility Customers' Initial Data Request
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Case No. 2025-00045

Question No. 4

Responding Witness: Robert M. Conroy

Q-4. Provide an analysis of the expected rate impacts for residential rate of average usage for:

a. The construction and utilization of the proposed 645 MW NGCC unit at the Brown Generation Station

b. The construction and utilization of the proposed 645 MW NGCC unit at the Mill Creek Generation Station.

c. The construction and utilization of the proposed 400 BESS facility at the Cane Run Station.

d. The construction and utilization of the proposed SCR facility at the Ghent Generation Station

A-4. a-d. See the response to PSC 1-104(a).

KENTUCKY UTILITIES COMPANY
AND
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Response to Attorney General and Kentucky Industrial Utility Customers' Initial Data Request
Dated March 28, 2025

Case No. 2025-00045

Question No. 5

Responding Witness: Robert M. Conroy / David L. Tummonds / Counsel

Q-5. Discuss the extent of the construction necessary to facilitate the projects proposed here. Please provide an analysis of the impact to the residential ratepayer of the average usage driven by that investment.

A-5. Regarding the first sentence of this request, see generally the Direct Testimony of David L. Tummonds.

Regarding the second sentence of this request, 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.[1] Without waiving that objection, see the responses to Question No. 4 and PSC 1-104(a).

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[1] *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).

KENTUCKY UTILITIES COMPANY
AND
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Response to Attorney General and Kentucky Industrial Utility Customers' Initial Data Request
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Case No. 2025-00045

Question No. 6

Responding Witness: Stuart A. Wilson

Q-6. Provide an analysis of the Company's forecasted capacity and energy position over the next decade, including generation and load.

A-6. The summary tables below contain resource-constrained peak demand forecasts, which are lower than the 2025 CPCN Load Forecast in 2028 through 2030 and reflect the level of new economic development load that can be served reliably with the proposed resource additions. As the Companies transition from lower economic minimum reserve margins to higher minimum reserve margins developed to reduce the loss of load expectation to one day in ten years, they will not meet the new minimum reserve margins until Mill Creek Unit 5 is online in 2027. See also the response to Question No. 15(a).

Regarding energy, the forecasted generation output in GWh for each unit is available in column C ('Energy') of the file "CONFIDENTIAL_out_unityr.csv" attached to the Companies' response to JI 1-22. The results in this file reflect the same resource-constrained load forecast.

Winter Peak Demand and Resource Summary (MW)

	2025	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**
Peak Load	**6,146**	**6,150**	**6,227**	**6,481**	**6,851**	**6,846**	**7,388**	**7,930**	**7,929**	**7,929**
Fully Dispatchable Generation Resources										
Existing Resources	7,909	7,909	7,977	7,977	7,977	7,977	7,977	7,977	7,977	7,977
Retirements/Additions										
Coal[2]	-300	-300	-300	-597	-601	-601	-601	-601	-601	-601
Small-Frame SCCTs[3]	0	-55	-55	-55	-55	-55	-55	-55	-55	-55
NGCC[4]	0	0	0	660	660	660	1,320	1,980	1,980	1,980
Total	7,609	7,554	7,622	7,985	7,981	7,981	8,641	9,301	9,301	9,301
Reserve Margin	23.8%	22.8%	22.4%	23.2%	16.5%	16.6%	17.0%	17.3%	17.3%	17.3%
Renewable/Limited-Duration Resources										
Existing Resources	72	72	72	72	72	72	72	72	72	72
Existing CSR	111	111	111	111	111	111	111	111	111	111
Existing Disp. DSM[5]	24	60	82	110	124	125	135	145	156	157
Retirements/Additions										
Solar[6]	0	0	0	0	0	0	0	0	0	0
BESS[7]	0	0	125	125	465	465	465	465	465	465
Dispatchable DSM[5]	0	0	0	1	1	1	2	2	3	4
Total	206	242	389	418	772	774	783	794	806	807
Total Supply	**7,815**	**7,796**	**8,011**	**8,403**	**8,753**	**8,755**	**9,424**	**10,095**	**10,107**	**10,108**
Total Reserve Margin	**27.2%**	**26.8%**	**28.7%**	**29.7%**	**27.8%**	**27.9%**	**27.6%**	**27.3%**	**27.5%**	**27.5%**

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[2] Mill Creek 1 was retired at the end of 2024. Mill Creek 2 will be retired after Mill Creek 5 is commissioned in 2027. The SCR on Ghent 2 is assumed to be in-service with additional auxiliary load of 4 MW in March 2028.

[3] Due to their age and relative inefficiency, the Companies do not perform major maintenance on their small-frame SCCTs, Paddy's Run Unit 12 and Haefling Units 1-2, but continue to operate them until they are uneconomic to repair. This analysis assumes that they will be retired in 2026 for planning purposes.

[4] Mill Creek 5, Brown 12, and Mill Creek 6 are assumed to be in-service in June of 2027, 2030, and 2031, respectively.

[5] Dispatchable DSM reflects expected load reductions under normal peak weather conditions. New dispatchable DSM reflects 39% capacity contribution.

[6] This analysis assumes 120 MW of company-owned solar capacity is added in 2026, and an additional 120 MW of company-owned solar capacity is added in 2027. Capacity values reflect 0% expected contribution to winter peak capacity.

[7] Brown BESS is assumed in-service in January 2027. Cane Run BESS is assumed in-service in March 2028 and reflects 85% capacity contribution.

Summer Peak Demand and Resource Summary (MW)

	2025	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**
Peak Load	**6,230**	**6,242**	**6,434**	**6,795**	**6,951**	**7,469**	**8,040**	**8,034**	**8,029**	**8,023**
Fully Dispatchable Generation Resources										
Existing Resources	7,612	7,618	7,618	7,618	7,618	7,618	7,618	7,618	7,618	7,618
Retirements/Additions										
Coal[8]	-300	-300	-597	-601	-601	-601	-601	-601	-601	-601
Small-Frame SCCTs[9]	0	-47	-47	-47	-47	-47	-47	-47	-47	-47
NGCC[10]	0	0	645	645	645	1,290	1,935	1,935	1,935	1,935
Total	7,312	7,271	7,619	7,615	7,615	8,260	8,905	8,905	8,905	8,905
Reserve Margin	17.4%	16.5%	18.4%	12.1%	9.5%	10.6%	10.8%	10.8%	10.9%	11.0%
Renewable/Limited-Duration Resources										
Existing Resources	106	107	107	107	107	107	107	107	107	107
Existing CSR	107	107	107	107	107	107	107	107	107	107
Existing Disp. DSM[11]	69	97	119	150	166	170	179	190	202	205
Retirements/Additions										
Solar[12]	0	0	201	201	201	201	201	201	201	201
BESS[13]	0	0	125	465	465	465	465	465	465	465
Dispatchable DSM[5]	0	0	0	1	1	1	2	2	3	4
Total	282	310	659	1,030	1,046	1,051	1,060	1,072	1,085	1,088
Total Supply	**7,594**	**7,581**	**8,278**	**8,645**	**8,661**	**9,311**	**9,965**	**9,977**	**9,990**	**9,993**
Total Reserve Margin	**21.9%**	**21.5%**	**28.7%**	**27.2%**	**24.6%**	**24.7%**	**23.9%**	**24.2%**	**24.4%**	**24.6%**

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[8] Mill Creek 1 was retired at the end of 2024. Mill Creek 2 will be retired after Mill Creek 5 is commissioned in 2027. The SCR on Ghent 2 is assumed to be in-service with additional auxiliary load of 4 MW in March 2028.

[9] Due to their age and relative inefficiency, the Companies do not perform major maintenance on their small-frame SCCTs, Paddy's Run Unit 12 and Haefling Units 1-2, but continue to operate them until they are uneconomic to repair. This analysis assumes that they will be retired in 2026 for planning purposes.

[10] Mill Creek 5, Brown 12, and Mill Creek 6 are assumed to be in-service in June of 2027, 2030, and 2031, respectively.

[11] Dispatchable DSM reflects expected load reductions under normal peak weather conditions. New dispatchable DSM reflects 39% capacity contribution.

[12] This analysis assumes 120 MW of company-owned solar capacity is added in 2026, and an additional 120 MW of company-owned solar capacity is added in 2027. Capacity values reflect 83.7% expected contribution to summer peak capacity.

[13] Brown BESS is assumed in-service in January 2027. Cane Run BESS is assumed in-service in March 2028 and reflects 85% capacity contribution.

KENTUCKY UTILITIES COMPANY
AND
LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Attorney General and Kentucky Industrial Utility Customers' Initial Data Request Dated March 28, 2025

Case No. 2025-00045

Question No. 7

Responding Witness: Lonnie E. Bellar / Charles R. Schram

Q-7. Discuss whether KU/LG&E forecasts a changing regulatory environment related due to the recent election results and whether this affects the CPCN proposal here in any way.

A-7. The Companies' CPCN filing took place in February 2025, over three months after the November 2024 elections. The Companies have no additional election effects to include in the filing.

KENTUCKY UTILITIES COMPANY
AND
LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Attorney General and Kentucky Industrial Utility Customers' Initial Data Request Dated March 28, 2025

Case No. 2025-00045

Question No. 8

Responding Witness: John Bevington

Q-8. Discuss any major new customers KU/LG&E anticipated to potentially serving, including but not limited to data centers.

A-8. See the response to PSC 1-18(c) for an explanation of the Companies' five economic development project stages: Inquiry, Suspect, Prospect, Imminent, and Announced. The Companies are currently working on 59 total economic development projects, including data centers, that are in the Prospect, Imminent or Announced stages. Those projects represent a total potential load of almost 2.8 GW. Looking at projects that are either Imminent or Announced, there are 30 projects representing over 535 MW.

KENTUCKY UTILITIES COMPANY
AND
LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Attorney General and Kentucky Industrial Utility Customers' Initial Data Request
Dated March 28, 2025

Case No. 2025-00045

Question No. 9

Responding Witness: Christopher M. Garrett

Q-9. Refer to the Direct Testimony of Robert Conroy at 14-15 wherein he states: "The Companies further propose to record a regulatory asset during the construction period for the difference between AFUDC accrued at the Companies' weighted average cost of capital and AFUDC accrued using the methodology approved by the FERC so that the Companies can recover their actual cost of capital, no more and no less."

a. Define the Companies' "weighted average cost of capital," the proposed source(s) and/or calculation of the weighted average cost of capital, and/or a template for how the weighted average cost of capital will be calculated for this purpose.

b. Provide a history of the average daily short-term debt outstanding on a monthly basis by type and/or source of short-term debt from January 2022 through the most recent month for which actual information is available.

c. Provide a forecast of the average short-term debt outstanding on a monthly basis from the month after the most recent month for which actual information is available through the end of the construction period for each of the CPCN resources/assets.

d. Provide a comparison of the rates used by each Company to accrue AFUDC "using the methodology approved by the FERC" and the rate used to accrue AFUDC at the "Companies' weighted average cost of capital" from January 2022 through the most recent month for which actual information is available. Also provide the calculations of the monthly rates for each Company using the two methodologies for this purpose.

A-9.

a. The Companies' weighted average cost of capital represents the cost of capital from sources including short-term debt, long-term debt, and common equity. The calculation will be performed consistent with the methodology utilized in Schedule J-1 of the Companies’ last base rate cases. The associated cost of common equity utilized in the calculation will be based on the Companies’ authorized return on equity from their most recent base rate cases.

b. See attachment being provided in a separate file.

c. See attachment being provided in a separate file. The Companies have provided the forecasted average monthly balances through 2029, which is the last year of the most recent business plan.

d. See attachments being provided in separate files.

KENTUCKY UTILITIES COMPANY
AND
LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Attorney General and Kentucky Industrial Utility Customers' Initial Data Request
Dated March 28, 2025

Case No. 2025-00045

Question No. 10

Responding Witness: Christopher M. Garrett

Q-10. Refer to the Direct Testimony of Robert Conroy at 15 wherein he states: "The Companies request that post-in-service carrying costs be accrued using the Companies' weighted average cost of capital." Define the Companies' "weighted average cost of capital," the proposed source(s) and/or calculation of the weighted average cost of capital, and/or a template for how the weighted average cost of capital will be calculated for this purpose.

A-10. See the response to Question No. 9(a).

KENTUCKY UTILITIES COMPANY
AND
LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Attorney General and Kentucky Industrial Utility Customers' Initial Data Request Dated March 28, 2025

Case No. 2025-00045

Question No. 11

Responding Witness: Christopher M. Garrett

Q-11. Refer to the Direct Testimony of Robert Conroy at 15 wherein he states: "In addition, for Brown 12, Mill Creek 6, and the Cane Run BESS, the Companies are requesting that the Commission approve regulatory asset treatment for post-in-service carrying costs, operating and maintenance expense, property taxes, investment tax credit amortization, and depreciation expense until such costs are fully reflected in the Companies' retail base rates or an applicable cost recovery mechanism."

a. Describe the source(s), calculations, and resulting depreciation rates the Companies propose to use for depreciation expense for this purpose. Provide all assumptions/parameters and the sources of those assumptions/parameters that will be used for this purpose.

b. Describe the source(s), calculations, and timing (assuming a January 1 valuation date) that will be used to calculate property tax expense tax expense for this purpose.

c. Describe the eligibility of each resource/asset for investment tax credit ("ITC") and the credit percentage that will be applicable to that resource/asset.

d. Describe how the Companies proposes to calculate rate base for each resource/asset for this purpose, including the subtraction of ADIT due to tax depreciation in excess of book depreciation, and deferred ITC.

e. Confirm that under the Inflation Reduction Act for new battery resources/assets, the Companies may elect to subtract deferred ITC from rate base and amortize ITC for ratemaking purposes, a change from prior tax law, which allowed either the subtraction of deferred ITC from rate base or the amortization of ITC, but not both. Also confirm the Companies plan to make and will commit to making this election. If not, then explain why not.

A-11.

a. Depreciation eligible for deferral treatment will be calculated using depreciation rates approved by the Commission. The Companies plan to propose new depreciation rates for Brown 12, Mill Creek 6 and Cane Run BESS in future rate filings.

b. Property taxes eligible for deferral treatment will be calculated using a January 1 valuation date. Additionally, the calculation will assume the investments are deemed manufacturing machinery subject to a state-only property tax rate of 15 cents per $100.

c. The Cane Run BESS is expected to be eligible for a Section 48E investment tax credit (“ITC”). The base ITC credit is 6% and increases to 30% to the extent prevailing wage and apprenticeship requirements are satisfied. It is assumed that the project will qualify for an additional 10% bonus credit associated with placement of the asset within an eligible energy community. Additionally, the project may qualify for another 10% bonus credit if it is able to meet domestic content requirements.

d. Rate base will comprise total Property Plant & Equipment (including AFUDC) less accumulated depreciation, accumulated deferred income taxes, and accumulated deferred ITC.[14]

e. Confirmed. The Companies will consider making this election as long as the costs associated with the underlying investments are recovered from customers on a timely basis.

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[14] See the response to part (e).

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Question No. 12

Responding Witness: Robert M. Conroy

Q-12. See Mr. Conroy's testimony at p. 15, l. 12. Mr. Conroy requests that regulatory asset treatment be utilized for post-in-service carrying costs, operating and maintenance expense, property taxes, investment tax credit amortization, and depreciation expense until such costs are fully reflected in the Companies' retail base rates or an applicable cost recovery mechanism. Please state KU/LG&E's expectation for a range of time that might occur between when the Companies' request would presumably be approved in this proceeding and when costs would go into retail base rates or an applicable cost recovery mechanism.

A-12. Regarding the Companies' expected in-service dates for the relevant facilities, see the Direct Testimony of David L. Tummonds. Regarding the circumstances under which the Companies plan to seek cost recovery for those facilities, see the response to JI 1-27.

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Question No. 13

Responding Witness: Stuart A. Wilson

Q-13. See Mr. Wilson's testimony at pp. 6-7.

a. Please provide actual hourly loads for all of 2024 and 2025 up to the most recent hour load data is available, consistent with the statement that the peak hourly demand was 6,814 MW on January 22, 2025.

b. Explain the difference between the peak hourly demand of 6,814 MW and 7,000 MW.

c. Describe the analysis performed to derive the values for the Likelihood of Energy Emergency Alert 1 and 3 shown in Table 1.

d. Provide hourly load forecasts for each load forecast the Companies modeled through the study period.

A-13.

a. See the attachment being provided in a separate file.

b. As stated in the testimony of Charles R. Schram at pg. 6, lines 1-3, the peak hourly demand (average load across the hour) was 6,814 MW; the intra-hourly load (at a granularity of 4 second intervals) reached 7,000 MW. The Companies generally quote hourly values for planning and reporting purposes but must also serve instantaneous demands.

c. To estimate the likelihood of an Energy Emergency Alert 1 ("EEA1"), the Companies simulated the availability of their resources over 10,000 iterations based on their assumed equivalent forced outage rates ("EFORs"). The likelihood of an EEA1 is the percentage of iterations where total available resources is less than the sum of peak hourly demand and operating reserve requirements. The likelihood of an Energy Emergency Alert 3 ("EEA3") is the percentage of iterations where total available resources is less than peak hourly demand. See Exhibit SAW-2 at file path

"Tables\20250129_WinterStormEnzo.xlsx." In the file, the likelihood of EEA1 and EEA3 is shown in Cell M58 and Cell N58 in Summary tab, respectively. Currently, Cell M58 shows 10% and Cell N58 shows 4%, which represents the likelihood of EEA1 and EEA3 during Winter Storm Enzo in 2025, respectively. To consider more extreme weather, one needs to increase peak load by 350 MW. To estimate the likelihood of EEA1 and EEA3 for the 2028 portfolio with load growth, both demand and resources need to be adjusted. For demand, 125 MW additional BOSK, 402 MW Campground, and 19.4 MW customer expansion are added. For resources, retiring units (Mill Creek 2, Haefling 1&2, and Paddy's Run 12) are removed and new units (Cane Run 7 upgrade, Mill Creek 5, Brown BESS, and additional dispatchable DSM) are added.

d. For the hourly forecast for this case, see Exhibit TAJ-2 at "Load_Forecasting\CPCN\Hourly_Forecast\GenPlanning_Data_Smoothed_D02.csv."

For the scenarios described in the Wilson Direct Testimony at page 18, see Exhibit TAJ-2 at "Load_Forecasting\CPCN\Hourly_Forecast\Scenarios."

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Question No. 14

Responding Witness: Robert M. Conroy / Stuart A. Wilson

Q-14. Refer to Exhibit SAW-1 at page 36 par 5.3 Anticipated Ownership Allocations.

a. Mr. Wilson uses the term "anticipated ownership allocations" at p. 36 of Exhibit SAW-1. Also, the Joint Application at p. 12, par. 21, entitled "Ownership," implies the ultimate ownership percentages could be different. Is it the Companies intention that the allocation percentages will be as the Companies identified in the filling unless changed by the Commission, or are the Companies implying they, on their own accord, would want to change the allocation percentages. If the latter is the case, under what circumstances might the Companies want to change the allocation percentages, and do the Companies believe they would not need to seek Commission approval to make a change to the allocation percentages. Please explain.

b. Are the Companies considering a different ownership allocation if the new data center load materializes, but less is sited in the LG&E territory and more is sited in the KU territory than assumed by the Companies. Please explain.

c. Regarding the two NGCC units, provide any analysis performed to determine that the "….optimal ownership allocation is 100% LG&E." If no analysis was performed please provide the Companies' support for that statement.

d. Provide any analysis performed to determine that the allocation of the Cane Run BESS should be 62% to LG&E and 32% to KU. If no analysis was performed, provide the Companies' support for those allocations.

e. Confirm the two new NGCCs will not be used exclusively to supply the new data center load and that the load, if it materializes, will be supplied by all resources on a system-wide basis.

f. Confirm the costs of the two new NGCCs will not be directly assigned to the new data center load/customers.

g. Confirm that the fuel costs of the two new NGCCs will be charged to all LG&E and KU load/customers.

h. Explain what will happen to the NGCC costs that the Companies are proposing to allocate to LG&E's load/customers if some or all of the new data center load does not materialize. Are the Companies proposing any protection for those customers?

A-14.

a. The Companies expect that any changes to ownership would be subject to Commission approval. See the response to PSC 1-30.

b. Yes. See the response to PSC 1-30.

c. See the workpaper at Exhibit SAW-2 at UnitOwnership/20250206 2025CPCN NGCC Ownership 0336.xlsx.

d. See the workpaper at Exhibit SAW-2 at UnitOwnership/20250206 2025CPCN BESS Ownership_0336.xlsx.

e. Confirmed.

f. Confirmed.

g. Confirmed.

h. See the response to PSC 1-28(c).

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Question No. 15

Responding Witness: Stuart A. Wilson

Q-15. See the file 20250129 Resource Assessment RM Need Tables_0336_D02.xlsx containing the Companies' load and resource balance table.

a. For any year during the period of 2025 to 2033 that the Companies' reserve margin is less than 23% in the Summer and 29% in the Winter, explain why the Companies did not present a plan that will meet its reserve margin targets. Is it because the Companies conducted SERVM analysis that showed the LOLE target would be met even though the RM targets would not be? Does this mean the 23% and 29% reserve margin targets overstate the Companies' reliability targets?

b. Do the Companies consider reliability strictly on a combined LG&E/KU basis, or do they evaluate needs to meet specific reserve margin targets on an individual Company basis?

c. Refer to Exhibit SAW-1, Table 15. Please provide the workpapers that derived the Reserve Margin with Proposed Allocations for KU and LG&E separately by year.

d. Regarding the Reserve Margin with Proposed Allocations please provide a narrative explaining the purpose of that information and how it was used in this proceeding.

e. Please provide any analysis performed to determine the capacity value (ELCC) of BESS and solar resources used in the load and resource balance table. Provide all workpapers that derived the ELCC values.

A-15.

a. As the Companies transition from lower economic minimum reserve margins to higher minimum reserve margins developed to reduce the loss of load expectation to one day in ten years, they will not meet the new minimum reserve margins until Mill Creek Unit 5 is online in 2027. The

Companies cannot add resources quickly enough to accommodate this transition any sooner.

Minimum reserve margins are specific to the underlying resource portfolio and the nature of the load being served. In their 2024 IRP, the Companies developed minimum reserve margin constraints for resource planning of 29% in the winter and 23% in the summer based on a load forecast with less economic development load than current expectations. As demonstrated in this CPCN proceeding, with the addition of non-weather sensitive economic development loads, the level of generation reserves required to ensure reliable service, which is computed as a percent of peak demand under normal peak weather conditions, is slightly lower. See Sections 4.5 and 4.6 of Exhibit SAW-1 as well as the response to PSC 1-26.

b. The Companies plan reliability on a combined-Companies basis.

c. See the file provided in Exhibit SAW-2 at "UnitOwnership\20250206_2025CPCN BESS Ownership_0336.xlsx."

d. The Companies provided the data in Table 15 only for informational purposes; it was not considered in the selection of the proposed resources.

e. The Companies have not performed ELCC analyses. PJM uses ELCC to support its capacity accreditation process for specific generation technologies. ELCC is not applicable to the Companies because they are not PJM members.

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Question No. 16

Responding Witness: Stuart A. Wilson

Q-16. Mr. Wilson's testimony at p. 15, l. 17 discusses a generic 243 MW SCCT option. Please provide all workpapers showing the development of that cost estimate and the operating unit characteristics. Also, show how the cost assumptions were prepared for input into PLEXOS.

A-16. The cost estimate for the generic 243 MW SCCT option was based on discussions with Engineering, Procurement, and Construction contractors contemporaneous to development of bids for the NGCCs. The Companies do not have any workpapers associated with this cost estimate. The operating characteristics of the "LKE SCCT" option were developed for the Companies' 2022 RFP analysis. See Exhibit SAW-2 at "PROSYM\ModelInputs\Support\ CONFIDENTIAL_20240820_NGCC_SCCT_Specs_0336.xlsx." Assumptions for the "LKE SCCT" option are listed in column F labeled, "F-class 1x0 CT (7FA.05)," of the "UnitCosts_Specs_Summary" worksheet.

Cost assumptions were prepared for input into PLEXOS in Exhibit SAW-2 at "Screening\ CONFIDENTIAL_20250201_ResourceScreeningModel_2025CPCN_0336.xlsx." Costs and operating characteristics for the "LKE SCCT" option are shown in row 40 of the "Resources" worksheet. Resulting PLEXOS fixed cost inputs, including capital, fixed O&M, and firm gas transportation costs, are calculated and shown starting in cell E196 of the "Model" worksheet.

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Question No. 17

Responding Witness: Robert M. Conroy / Lana Isaacson / Stuart A. Wilson

Q-17. See Mr. Wilson's testimony at p. 16, regarding DSM resources and the discussion, "As such, the Companies modeled these measures as having no incremental fixed costs. The Companies also modeled a 100 MW expansion of their CSR-2 program. Notably, the Companies' ability to require CSR-2 customers to curtail their usage without a buy through option is limited to 100 hours annually when all available units are dispatched or being dispatched."

a. Were the three new dispatchable DSM program measures modeled as selectable resources in PLEXOS resources or were they modeled with predefined MWs and MWhs. Please explain.

b. Regarding the CSR-2 program, how did the Companies determine the size of that expansion, and was it treated as a selectable resource in PLEXOS. Please explain.

c. What current program caps or limitations are in place for customer participation? Please explain.

d. Provide all analyses and studies conducted evaluating market potential for expanding existing curtailable service offerings and demand response programs.

e. Explain how the incremental 100 MW related to CSR-2 was determined, and provide all workpapers that were used to derive the 100 MW assumption. Also, provide workpapers developed for any other alternative cases that were considered.

A-17.

a. The new dispatchable DSM program measures are an expansion of existing programs and therefore would not result in incremental fixed costs. Because PLEXOS would always select these measures if they were modeled as a selectable resource, to minimize model run times, the Companies assumed the programs to be in service with predefined dispatchable capacities and program dispatch constraints and did not model them as selectable resources.

b. The Companies modeled CSR expansion at 100 MW and as a selectable expansion resource to be comparable to the collective size of the existing CSR-2 customers. See also the response to PSC 1-24.

c. As stated within the "Availability" section of Commission approved Tariff Sheet Nos. 50 and 51 for both Companies, the Curtailable Service Riders have been closed to customers who were not enrolled prior to July 1, 2017. No additional customers have been added since this date. See also the response to PSC 1-24.

d. For the evaluation of demand response market potential, the Companies, in 2021, initially completed a Demand Response Potential Study. This was provided in Case No. 2022-00402 as Exhibit LI-2 and supported the proposed expanded DSM Demand Response Portfolio of Programs. Additionally, as part of Case No. 2024-00326, the Companies examined three new potential DSM offerings related to demand response. The analysis and workpapers supporting this can be found in the response to JI 1-52(c) in Case No. 2024-00326.

   Regarding expanding existing curtailable service offerings, the CPCN and IRP analyses demonstrated that expanding CSR-2 program is not least-cost as modeled.

e. See the response to part (b). There are no such workpapers.

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Question No. 18

Responding Witness: Stuart A. Wilson

Q-18. See Mr. Wilson's testimony at p. 18, l. 13 regarding key uncertainties. Why didn't the Companies consider capital cost uncertainty in light of the fact that new capital assets are being proposed in this proceeding?

A-18. The Companies' cost estimates for Cane Run BESS, Brown 12, and Mill Creek 6 include a 10% contingency. See the response to Question No. 41(b). The impact of capital cost increases or decreases on the Companies' analysis is likely small because any factors that could impact resource costs would likely have a proportional impact on all resources (either higher or lower). While this is a reasonable assumption, the Companies evaluated a case where only the capital cost of NGCC and SCCT is 10% higher than currently assumed (i.e., this case essentially increases the NGCC and SCCT contingency from 10% to 20%). The results are shown in the table below. Relative to the results in Table 1 from Exhibit SAW-1, the only changes are to the 1,890 MW load scenario (where the optimal portfolio contains 800 MW of battery storage and 265 MW of solar in lieu of a third NGCC, 100 MW of battery storage, and an SCR for Ghent 2) and the 2,030 MW load scenario (where the optimal portfolio contains 265 MW of solar in lieu of a Ghent 2 SCR).[15] These results demonstrate that the least-cost resource plan is not materially affected if NGCC costs are 20% higher than currently estimated. Workpapers associated with this analysis are provided in the attached file. Certain information is confidential and proprietary and is being provided under seal pursuant to a petition for confidential protection.

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[15] As stated on page 7 of Exhibit SAW-1, relying on solar PPAs to minimally comply with summer reserve margin needs in lieu of adding an SCR to Ghent 2 may not be an actionable alternative given challenges the Companies have faced executing solar PPAs.

Stage One Results (Least-Cost Portfolios w/ Additional 10% NGCC/SCCT Capital Cost)

Data Center Load in Load Scenario	Brown 12 NGCC	Mill Creek 6 NGCC	Generic NGCC	Cane Run BESS	Ghent BESS	Solar PPA	Add. DSM (Y/N)	GH2 SCR (Y/N)
2,030 MW	645	645	645	300	-	265	Y	N
1,890 MW	645	645	-	400	400	-	Y	Y
1,750 MW (CPCN)	645	645	-	400	200	-	Y	Y
1,610 MW	645	645	-	400	-	-	Y	Y
1,470 MW	645	645	-	200	-	-	Y	Y

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Question No. 19

Responding Witness: Stuart A. Wilson

Q-19. See Mr. Wilson's testimony at p. 29, l. 7. Mr. Wilson discusses the possibility that data center load could come on faster than new resources could be added. If that were the case, Mr. Wilson explains the Companies would need to consider additional means of meeting customer's needs such as adding additional resources. What additional resources could be built by the 2029/2030 timeframe if data center load materializes faster than expected? Would the Companies consider rejecting or delaying the data center load to protect existing customers?

A-19. Additional battery storage is the only new resource that can potentially be built prior to 2030. The Companies will not commit to serving data center load if they cannot do so reliably.

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Question No. 20

Responding Witness: Stuart A. Wilson

Q-20. See Mr. Wilson's testimony at p. 30. Mr. Wilson describes that natural gas accounts for more than 40% of installed utility-scale generation capacity in the US. Certainly, the EPA 111 rule could be overturned, but if it does not go away and new NGCC resources have to meet 40% capacity factor limits, what would the Companies' plan be to meet the system's energy requirements once the NGCC units are constructed?

A-20. See the response to PSC 1-95.

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Question No. 21

Responding Witness: Stuart A. Wilson

Q-21. See page. 8 of the 2025 CPCN Resource Assessment (Ex SAW-1) (the "Assessment"). In the paragraph below Table 2, the Assessment states that reserve margins are lower because of the economic development loads.

a. Please explain how economic development loads cause reserve margins to be lower.

b. Provide all SERVM study analyses workpapers comparing the difference in Target Reserve Margin without Data Center loads to those with Data Center Loads.

c. Please quantify what exactly is meant by "slightly lower"? Provide the % winter reserve margin before and after the data center load?

d. What % of the total system load would be attributed to high-load factor load that is insensitive to weather?

A-21.

a. The Companies carry generation reserves to account for two risks: load changes (driven primarily by weather changes) and unit availability risks. Therefore, adding large amounts of non-weather sensitive economic development load reduces the level of required generation reserves expressed as a percentage of forecast peak demand under normal weather conditions.

b. For SERVM analysis that was used to determine the slightly lower reserve margin, see Exhibit SAW-2 at file path "SERVM/ Outputs_SERVMResults/ 28Portfolio_CPCNLoad_2CC_Solar_300B_400B.xlsx." In the file, the "400B" case was used to determine the slightly lower reserve margin. There are no SERVM comparison workpapers.

c. With the addition of non-weather sensitive economic development load, the minimum winter reserve margin decreases slightly from 29% to 28%.

d. The Companies have not estimated this percentage for all high load factor load that is insensitive to weather. In 2032, the total amount of data center load in the 2025 CPCN Load forecast (1,750 MW) is 22% of the forecast system peak demand (7,930 MW), but this percentage excludes other high load factor loads.

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Question No. 22

Responding Witness: Robert M. Conroy / Stuart A. Wilson / Counsel

Q-22. See Mr. Wilson's testimony generally, in which he describes the allocation of ownership percentages for the various resources identified for construction.

a. Refer to page 36 of SAW-1, which states, "Of the 1,750 MW of data center load in the 2025 CPCN Load Forecast, 1,400 MW are assumed to locate in the LG&E service territory." Have the Companies performed any analysis assessing the cost impacts and rate impacts of the various allocations and various load growth differences between KU and LG&E service territories? If so, please provide all the analyses. If not, explain why not.

b. Please provide a comparison of the load allocation and revenue requirements allocation between LG&E and KU for the forecast periods.

c. Have the Companies assessed the possible rate impacts to existing customers especially if the load does not materialize or materializes slower than when new resources are added? Please explain any analysis that has been conducted.

d. Would the Companies agree that the incremental generation is more expensive than embedded generation and there could be an increase in the average cost to customers, all else being equal? If the Companies cannot agree, please provide a comparison of the existing average cost to the projected average cost.

A-22.

a. 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.[16] Without waiving that objection, no.

b. The allocation of total load used in the Companies' ownership analysis is 51% KU and 49% LG&E. See Exhibit SAW-2 at "UnitOwnership\20250206 2025CPCN NGCC Ownership 0336.xlsx."

c. 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.[17] Without waiving that objection, no.

d. 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.[18] Without waiving that objection, yes, but that does not mean the resources are uneconomical. To the Companies' knowledge, the same has been true of every new generating resource the Commission has given them authority to acquire or build, certainly in the last 20 years. See also the response to PSC 1-96.

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[16] *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).

[17] *Id.*

[18] *Id.*

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Question No. 23

Responding Witness: Stuart A. Wilson

Q-23. Please Refer to SAW Confidential Workpaper "CONFIDENTIAL_20250226_FinancialModel_01_Stage1Step2_0336.xlsx".

a. Please provide an index description of the various portfolios and loads modeled as described on the "Pivot Results" tab.

b. Please describe if any model functions or features have been added, modified, or removed to the Financial Model since the 2024 IRP.

A-23.

a. See Exhibit SAW-2 at "PROSYM\01_Stage1Step2\PROSYMFileNomenclature.docx."

b. No model functions or features have been added. The Companies modified inputs to the Financial Model to accommodate the setup of the CPCN analysis.

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Question No. 24

Responding Witness: Stuart A. Wilson

Q-24. Refer to Exhibit SAW-1, Section 4.1.2 and Table 1 describing the various load forecast sensitivities.

a. Did the Companies evaluate data center sensitivities below 1,470 MW? Please explain.

b. How were each of the sensitivity levels determined? Please provide a narrative description of the assumptions and process utilized as well as any accompanying workpapers that were used to derive the load forecasts for each sensitivity.

c. It appears that the difference between the 1,470 MW and 1,610 MW Stage One results are minimal. Please explain why the load increase did not lead to changes to the resource plan.

A-24.

a. No, the Companies did not evaluate data center load below 1,470 MW. The Companies evaluated a scenario with 1,050 MW of data center load in their 2024 IRP.

b. As explained in the response to PSC 1-21 in Case No. 2024-00326 PSC 1-21, data center load is assumed to be added in 70 MW blocks. Thus, the 140 MW difference between scenarios simply comprises two 70 MW blocks. The decision to evaluate two higher and two lower load scenarios (and not more) was based on the significant amount of time required to evaluate each load scenario. See the response to Question No. 13(d).

c. There are effectively three available resource options for capacity to serve load for this analysis: NGCC, SCCT, and battery storage. Battery storage has a comparatively low construction cost due to the ITC, and lower operating costs than NGCC and SCCT, so battery storage is a logical addition for incremental capacity if existing resources have sufficient capability to provide energy for charging the batteries. Thus, it is not surprising that PLEXOS chose to add 200 MW of battery storage (which contributes 170 MW toward the Companies' reserve margin need) to serve the incremental load of 140 MW between these load scenarios across all fuel price scenarios.

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Question No. 25

Responding Witness: Charles R. Schram

Q-25. See Mr. Schram's testimony, p. 7, l. 18 regarding the Companies' operating reserve requirements.

a. Explain how the Companies' spinning reserve requirement is determined, and provide the calculation of 230 MW.

b. Provide a copy of the Companies' reserve sharing agreement with the TVA. documentation discussing the Companies' contingency reserve obligation.

c. Please describe any and all changes to the reserve sharing agreements and impacts of winter storm planning (e.g. changes made as a result of Winter Storm Elliot).

d. Describe how any reserve sharing opportunities are incorporated in the SERVM modeling.

e. Please describe what would have happened under an "energy emergency status" situation in accordance with the reserve sharing agreement.

A-25.

a. The contingency reserve calculation specified in the Contingency Reserve Sharing Group agreement's Operating Protocols is updated annually to reflect the updated load ratio share of each participant. See the Revision History on page 6 and the updated calculation on page 21 of the attachment being provided in a separate file.

b. See the response to part (a).

c. The Contingency Reserve Sharing Group functioned consistent with the agreement's provisions during Winter Storm Elliott, and hence there was no need for amendments. The only updates to the agreement were related to the annual update of the Operating Protocols' contingency reserves noted in the response to part (a).

d. Reserve sharing opportunities are implicitly incorporated as available transmission capacity ("ATC") in SERVM. ATC determines the amount of power that can be imported from neighboring regions to serve the Companies' load and is a function of the import capability of the Companies' transmission system and the export capability of the system from which the power is purchased.

e. The party in the EEA status would pull their reserves in accordance with the provisions of the agreement. The Contingency Reserve Sharing Group is intended to temporarily assist participants in recovering their Area Control Error ("ACE") in accordance with NERC Reliability Standards (BAL-001, BAL-002, and BAL-003), typically in situations when a large generating unit unexpectedly trips offline. The reserve sharing group is not intended to be a replacement source of power over longer periods of time when a participant experiences a capacity shortfall.

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Question No. 26

Responding Witness: Tim A. Jones

Q-26. See Mr. Schram's testimony, p. 8 regarding new load additions.

a. Please provide the year, month and MWs when the Camp Ground data center, the Blue Oval SK Battery Park Phase 1, and the 19.4 MW existing customer expansion will be added to the system.

b. Please provide all other expected load additions specifically accounted for in the load forecast including the year, month, and MWs. For example, this would include Blue Oval SK Battery Park Phase 2 and others that have been included in the Companies' load and capacity table, and production cost modeling analyses. The goal is to get a specific accounting for what makes up the 1,750 MWs of data center load the Company has identified.

A-26.

a. Blue Oval SK Battery Park Phase 1 has already been added to the system. The Camp Ground Road data center has stated it will have an initial demand of 130 MW in October 2026.[19] For the 19.4 MW load, see the special contract on file with the Commission.[20]

b. For information on the 1,750 MW of data center load, see response to PSC 1-17(a). To be clear, the 1,750 MW of data center load does not include the 120 MW assumed in BlueOval SK Battery Park Phase 2. For BlueOval SK Battery Park Phase 2 assumptions, see the response to SC 1-7.

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[19] *See, e.g.*, https://www.poecompanies.com/poe-properties/camp-ground-industrial/.

[20] https://psc.ky.gov/tariffs/Electric/Kentucky%20Utilities%20Company/Contracts/Current/North%20American%20Stainless/2025-02-28_Special%20Economic%20Development%20Rider%20Contract.pdf

KENTUCKY UTILITIES COMPANY
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Response to Attorney General and Kentucky Industrial Utility Customers'

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Dated March 28, 2025

Case No. 2025-00045

Question No. 27

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

Q-27. See Mr. Bellar's testimony at p. 6, l. 8, which explains the process the Companies used to determine the resources they propose adding. The Companies did not conduct an RFP process for either the CC or BESS resources. Please explain why not, and explain why an RFP process was used for the recent May 2024 Renewable solicitation. Explain the Companies' position on this separately for the CC resources and the BESS resource.

A-27. The Commission stated in its November 6, 2023 Order in Case No. 2022-00402 that its decision to deny a CPCN for Brown 12 "is wholly based on the Commission's finding that the construction of Brown 12 should be deferred with the construction beginning on a date that provides for an in-service date in 2030."[21] Based on that finding, the lack of any third-party NGCC responses to the 2022 RFP, and the Companies' understanding of current market conditions, the Companies did not issue a new RFP for fossil-fuel generation resources. Factors affecting that decision included the Companies' ability to use their existing sites to reduce development time, costs, and risks, their knowledge of market conditions, their ongoing discussions with OEMs, and the viability of third-parties to meet the schedule and economic parameters that underpin the "need" for new generation assets. See also the response to PSC 1-34.

For BESS resources, the Companies discussed in their previous CPCN filing (Case No. 2022-00402) that the industry's understanding of BESS as a means of improving reliability continues to develop. The Companies believe that operational experience with BESS is a prerequisite to negotiating a favorable battery offtake agreement that minimizes risks, including the risk of potential operational limitations.

The Companies used the results of the May 2024 RFP seeking renewable energy as an input to the Companies 2024 IRP and to further test the solar market given the price increases experienced over the last several years.

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[21] Case No. 2022-00402, Order at 137 (Ky. PSC Nov. 6, 2023).

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Question No. 28

Responding Witness: David L. Tummonds

Q-28. See Mr. Bellar's testimony at pp. 7 – 10 regarding construction costs for the NGCC units. Also, referenced in Mr. Tummonds' testimony at p. 10., l. 17.

a. Provide a detailed construction timeline, and schedule of costs broken down by cost category for the Mill Creek 5 (913.4 million), Mill Creek 6 ($1.415 billion), Brown 12 ($1.383 billion), and the site specific cost for KU's Green River Generating Station (Wilson Direct p. 13, l. 22) NGCC units, so that schedules and costs by category can be compared to each other.

b. For the already approved resources, with regard to schedule, if the schedule being provided reflects any delays and/or cost overruns from the original schedule, please provide a detailed explanation and identify the original costs and schedule.

c. Provide support for the derivation of the annual $5.1 and $4.7 million in 2030 dollars fixed cost estimates for Brown 12 and Mill Creek 6, respectively, and provide support for why Brown 12 is higher than Mill Creek 6. Also, what are the assumed escalation rates for those costs. Besides these fixed costs, are the Companies assuming there will be any maintenance capital expenditures for these units. If those costs were included in modeling, please state what they are for the two units and if not, please explain why not. Also provide the escalation rates for those costs.

d. Provide support for the derivation of the annual $1.8/MWh and $1.86/MWH in 2030 dollars variable cost estimates for Brown 12 and Mill Creek 6, respectively, and provide support for why Mill Creek 6 is higher than Brown 12. Also, what are the assumed escalation rates for those costs.

A-28.

a.

Regarding schedules for each, see attachments provided as separate files. Certain information requested is confidential and proprietary and is being provided under seal pursuant to a petition for confidential protection. The following table provides the requested comparison:

Project Component	Mill Creek 5	Brown 12	Mill Creek 6	Green River 5
EPC	[redacted]	[redacted]	[redacted]	[redacted]
OEM	[redacted]	[redacted]	[redacted]	[redacted]
Owner's Direct	67.3	110.4	78.3	220.0
TOTAL	913.4	1,383.3	1,414.7	1,556.4

b. Regarding current costs for Mill Creek 5, see the response to JI 1-13. Mill Creek 5 has not experienced schedule overrun to date.

c. See the attachment provided in response to PSC 1-32. Fixed operating expenses consist of ongoing labor/O&M and the fixed Long-Term Service Agreement ("LTSA") payment that goes toward maintenance capital expenditures. For Brown 12, these are the sum of rows 5 and 6, and for Mill Creek 6, these are the sum of rows 14 and 15. Mill Creek 6 costs in Mr. Tummonds's testimony were listed in 2031 dollars consistent with its expected commissioning year. Aside from cost year differences, Brown 12 is slightly more expensive due to higher labor and O&M costs. The assumed escalation rates for these components are available on the Inputs tab.

d. See the response to part (c). Variable costs consist of a variable LTSA payment (assessed in $ per operating hour) that goes toward maintenance capital expenditures, variable O&M for parts/maintenance (assessed in $ per MWh), and variable O&M for aqueous ammonia associated with the SCRs (assessed in $ per MWh). For Brown 12, these are the sum of rows 7, 8, and 9, and for Mill Creek 6, these are the sum of rows 16, 17, and 18. Mill Creek 6 costs in Mr. Tummonds's testimony were listed in 2031 dollars consistent with its expected commissioning year. To provide more representative expected costs, the attachment provided in response to PSC 1-32 uses the production cost run described in JI 1-22. Aside from cost year differences, there are no expected differences between variable costs of Brown 12 and Mill Creek 6. The assumed escalation rates for these components are available on the Inputs tab.

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Question No. 29

Responding Witness: David L. Tummonds

Q-29. See Mr. Bellar's testimony at p. 7, l. 18, regarding the BESS units.

a. Provide a detailed construction timeline, and schedule of costs broken down by cost category for the Brown BESS (latest estimate), the Cane Run BESS ($775 million) and the Ghent (Wilson Direct, p. 13, l. 24) units, so that schedules and costs by category can be compared to each other.

b. For the already approved resources, with regard to schedule, if the schedule being provided reflects any delays and/or cost overruns from the original schedule, please provide a detailed explanation and identify the original costs and schedule.

c. Provide support for the derivation of the annual $25.11/kW-yr in 2028 dollars fixed operating and maintenance costs for the Cane Run BESS resource discussed in Mr. Tummonds' testimony.

A-29.

a. See attachment being provided in a separate file. Detailed cost information for Cane Run BESS was provided in Exhibit SAW-2 at "Screening\Support\CONFIDENTIAL_CR 2028 BESS - DRAFT Cost Estimate (Buyers Market Adjustment) R1.xlsx."

The cost estimate for Ghent BESS was developed based on the cost estimate for Cane Run BESS and adjusted for topography and distance from the substation.

b. See the response to Question No. 30.

c. The fixed O&M cost assumptions for Cane Run BESS are based on the fixed O&M cost assumptions for Brown BESS submitted as part of Case No. 2022-00402. The Companies escalated the fixed O&M assumption for Brown BESS by 0.43% based on cost escalation for BESS resources in NREL's 2024 ATB.

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Question No. 30

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

Q-30. See Mr. Bellar's testimony at page 7 regarding the Brown BESS project.

a. Explain why the Companies are unable to pin down the schedule for the project any better than a 9 month window between July 2026 and March 2027, in light of the fact that BESS resources are supposed to have relatively short construction periods. Please explain all of the factors leading to this uncertainty.

b. Explain what was meant by final determination of critical equipment availability and appropriate contracting. Have the Companies encountered any issues with those factors since the CPCN was approved? Please explain.

c. Explain why there will be a substantive update to the cost of the Brown BESS resource.

d. Please provide the Companies' current best estimate of what the updated cost will be broken down by cost category, and compare those costs to the same components but based on the 270 million estimate from Case No. 2022-00402. Note, this information will be important for evaluating the Cane Run BESS project.

e. Mr. Bellar stated at line 21, "….execution of the material procurement and engineering procurement and construction ("EPC") installation contracts (received in January 2025 and expected in May 2025, respectively)." Does this mean the contracts were first received in January 2025 and expect to be signed in May 2025. Please clarify. Also, provide copies of the contracts.

f. Mr. Bellar noted at p. 8, l. 4 that the Companies currently estimate that project costs may decrease from the noted estimate. Please clarify what this means as Mr. Bellar also stated that there would be a substantial increase in the $270 million dollar cost. What estimate may be reduced, and provide an estimate of the reduction?

g. Explain why the new BESS at Cane Run is so much more expensive than the BESS project at Brown.

h. Mr. Wilson noted at p. 15, l. 11 that the cost estimates for the BESS options at Cane Run and Ghent were developed from the most recent estimate for the Brown BESS resource. Please provide the workpapers, electronically with all formulas intact, showing the development of the Cane Run and Ghent BESS options from the Brown estimate.

A-30.

a. The primary factor associated with the noted uncertainty is contract execution for both the battery supply and the EPC contract. In addition to the industry-wide high demand for battery installations, the recent promulgation of inverter-based resource ("IBR") compliance requirements has created tension between equipment provider, EPC contractor, and buyer, with all parties seeking to minimize risk at the expense of others.[22] The Companies' contracting efforts have focused on protecting customers through an extended negotiation intended to minimize risk assumption. Since the submission of the referenced testimony, battery supply negotiations have successfully concluded, and the Companies have started EPC negotiations, which the Companies expect to conclude late in the third quarter or early in the fourth quarter of 2025, at which time the chosen EPC contractor will have finalized the site design. Along the noted timeline, the Companies expect to make the facility operational in January 2027.

b. See the response to part (a).

c. See the response to parts (e) and (f).

d. The following table notes the final submitted costs in Case No. 2022-00402. The current estimate for the EPC component includes contracted value for the OEM equipment supply (inclusive of battery costs) and estimated costs for the EPC contract and Other Owner's Costs. These estimated costs depend heavily on the final EPC contract and final determined transmission costs, respectively. Certain information requested is confidential and proprietary and is being provided under seal pursuant to a petition for confidential protection.

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[22] *See* NERC PRC-024-4, "Frequency and Voltage Protection Settings for Synchronous Generators, Type 1 and Type 2 Wind Resources, and Synchronous Condensers," available at https://www.nerc.com/pa/Stand/Reliability%20Standards/PRC-024-4.pdf; NERC PRC-029-1, "Frequency and Voltage Ride-through Requirements for Inverter-based Resources," available at https://www.nerc.com/pa/Stand/Reliability%20Standards/PRC-029-1.pdf.

Project Component	CPCN Final Submission ($ millions)	Current Estimate ($ millions)
EPC	[redacted]	[redacted]
OEM (Equipment Supply)	[redacted]	[redacted]
Other Owner's Costs	[redacted]	[redacted]
TOTAL	[redacted]	[redacted]

e. No. The testimony references the "material procurement" contract and the "engineering, procurement, and construction" ("EPC") contract. The Companies have entered into the material procurement contract by executing a limited notice to proceed ("LNTP") contract with Burns & McDonnell ("B&McD") authorizing B&McD to conduct a competitive bid process and negotiate with battery suppliers and other material suppliers to secure the best technical solution at the most favorable pricing given B&McD's industry experience and collective bargaining leverage. B&McD completed these tasks with oversite and appreciable input from the Companies. The LNTP is provided as a separate file. Certain information requested is confidential and proprietary and is being provided under seal pursuant to a petition for confidential information.

Pursuant to the LNTP, B&McD then, with oversight from the Companies, completed negotiation and execution of a System Sale and Purchase Agreement ("SPA") with the chosen battery provider (Tesla).

When the referenced testimony was submitted, the Companies expected finalization of the SPA in January 2025 whereas final execution was delayed until late March 2025 for reasons discussed in part (a).

Similarly, the Companies originally expected to enter into an EPC agreement by May 2025. As noted in part (a), this will not happen until much later in 2025.

f. The Brown BESS update on pages 7 and 8 of Mr. Bellar's testimony notes that (i) the estimate remains at $270.0 million currently, (ii) the Companies may have a substantive update when contracting is complete, and (iii) that the Companies continue to track volatility associated with this project. All are true. Mr. Bellar's testimony does not state that he expects a "substantial increase." As the response to part (d) notes, both EPC costs and Other Owner's costs are currently estimates pending final EPC contract negotiation and final determination of transmission costs.

g. The proposed Brown BESS is a 125MW, 4-hour battery, whereas the Cane Run BESS is a 400MW, 4-hour battery. Because the installation costs required are primarily proportional to the power output, the estimated cost for Cane Run BESS (290% of the Brown BESS) is primarily driven by the higher capacity (320% of Brown BESS).

h. See attachments being provided in separate files. The information requested is confidential and proprietary and is being provided under seal pursuant to a petition for confidential protection.

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Question No. 31

Responding Witness: Tim A. Jones

Q-31. Refer to Jones Direct Testimony. Please provide the source data for Figures 1, 2, and 3 to include a side-by-side comparison of the 2025 CPCN Load Forecast, the 2024 IRP Mid Load Forecast, and the 2024 IRP High Load Forecast on a Winter Peak (MW), Summer Peak (MW), and Annual Energy Requirements (GWh) basis for each year of the 30 year study horizon. Also, provide the History and Weather Normalized History for the 10 year look back period.

A-31. See Exhibit TAJ-2 at "Load_Forecasting\CPCN\Work\AWJ_JDL_Charts.xlsx."

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Question No. 32

Responding Witness: Tim A. Jones / Stuart A. Wilson

Q-32. Refer to Jones Direct Testimony, page 21 starting at line 15 noting "the Companies' 2025 CPCN Load Forecast of non-economic-development load is materially unchanged from the Companies' 2021 IRP load Forecast and the 2022 CPCN-DSM load Forecast…"

a. Please provide the load forecast documentation from the 2021 IRP and the 2022 CPCN-DSM studies.

b. Please explain if any load forecast methodologies or load research has changed or updated comparing the 2021 IRP, 2022 CPCN-DSM, 2024 IRP, and 2025 CPCN methodologies.

c. Refer to Jones testimony at page 22 which describes the high load factor shape of the prospective economic development load. Has the Companies performed any analysis assessing the impact of new load to the average cost of energy? If so, please provide the analysis, analysis document, and analysis workpapers. If not, please explain why not.

A-32.

a. It is unclear to which "load forecast documentation" the request intends to refer. The Electric Sales & Demand Forecast Process document for the 2021 IRP is available on the Commission's website in 2021 IRP Vol II of Case No. 2021-00393.[23]

For the 2022 CPCN, see Exhibit TAJ-2 of Jones Direct Testimony in Case No. 2022-00402.

b. As noted in the Jones Direct Testimony pg. 21-22, the Companies used the same processes and methodologies as prior filings. While individual models

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[23] https://psc.ky.gov/pscecf/2021-00393/rick.lovekamp%40lge-ku.com/10192021013101/4-LGE_KU_2021_IRP_Volume_II.pdf

are re-evaluated with each new forecast, the types of data considered, modeling frameworks, and fundamental assumptions are mostly unchanged. While not mentioned in the filing, the same general methodologies were used in the 2021 IRP. Over the referenced time period, the most significant changes related to the load forecast have been the Inflation Reduction Act ("IRA") and economic development growth, particularly related to the BlueOval SK Battery Park and data centers.

The IRA has impacted end-use appliance energy efficiency assumptions in the load forecast and assumptions related to incentives for customers interested in adopting distributed generation or electric vehicles. As discussed in Case No. 2022-00402, the Companies accelerated energy efficiency assumptions in that load forecast to account for energy efficiency impacts related to the IRA.

Regarding economic development growth, conversations with prospective economic development customers and existing major account customers have long been part of the load forecasting process. However, the large size of recent prospective customers has been more significant than in the past, and the high load factors of some of these customers (e.g., data centers and BOSK) have necessitated layering in the load shapes of those particular customers into hourly load forecasts.

c. The Companies have not analyzed the impact of new load to the average cost of energy because such an analysis is unnecessary to evaluate which resources will result in safe, reliable, and lowest reasonable cost service.

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Question No. 33

Responding Witness: John Bevington / Tim A. Jones

Q-33. Refer to page 16 of Jones Direct Testimony which describes, "the Companies have over 8,000 MW of total economic development load potential based upon the current list of prospective customers, over 6,000 MW of which is related to data centers"

a. Provide a breakdown of the 8,000 MW economic development queue describing customer, winter peak MW, summer peak MW, annual energy requirements, site location (if known), site control status, contract for service with KU/LG&E. Describe any ramping assumptions or requests and provide year-by-year detail by customer on the likelihood of materialization.

b. Provide a breakdown of the 6,000 MW economic development queue related to data centers describing customer, winter peak MW, summer peak MW, annual energy requirements, site location (if known), site control status, contract for service with KU/LG&E. Describe any ramping assumptions or requests and provide year-by-year detail by customer on the likelihood of materialization.

A-33.

a. The Companies do not have or track all the requested information. The Companies are providing as an attachment in a separate file a list of projects and responsive data the Companies track, which includes the anticipated annual peak demand for each project. Refer to PSC 1-18 for an explanation of the designations in the "Sales Phase" column. Regarding ramping assumptions for data center load, see the response to Question No. 35(a) and (b).

b. See response to part (a).

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Question No. 34

Responding Witness: John Bevington / Tim A. Jones

Q-34. Refer to page 13 of Mr. Jones' Direct Testimony at line 11.

a. Please explain how the Companies determined the 95% load factor was a reasonable assumption for data centers. If the Companies based this data on historical data center load usage on the System, please provide that historical data center load evidence, or provide whatever the Company used to support the 95% assumption.

b. Did the Companies model all data centers identically? Provide the load shape assumed with monthly energy and peak demand assumptions.

c. Do the Companies expect the annual peak to occur in the summer? Please explain if the Companies have studied data center load sensitivity to weather and provide all notes, memos, calculations, or load study documents relating to data center load shapes.

A-34.

a. Refer to the Bevington Direct Testimony at page 14, lines 17-19. TSR applications that have been submitted confirm industry reports and show an average load factor in the 95% range.

b. See the response to PSC 1-17(a). Except for using different loss factors, data center load in each service territory was modeled identically. For the 70 MW shape for LG&E, see Exhibit TAJ-2 at "Load_Forecasting\Electric_Load_Forecast\Electric\Forecasts\CONFIDENTIAL_Major_Accounts\Analysis\70MW_Data_Center_8760.xlsx." For the 70 MW shape for KU, see Exhibit TAJ-2 at "Load_Forecasting\Electric_Load_Forecast\Electric\Forecasts\CONFIDENTIAL_Major_Accounts\Analysis\70MW_KU_Data_Center_8760.xlsx."

c. Yes, the Companies forecast their combined-system annual peak will occur in the summer assuming normal peak conditions (see Figure 5 on page 13 of Mr. Jones's testimony). The Companies have not studied data center load sensitivity to weather per se. The hourly load profile assumes data center load peaks slightly higher in the summer as a result of cooling load. With a 95% load factor, data center load is mostly insensitive to weather. See also the response to JI 1-129.

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Question No. 35

Responding Witness: John Bevington / Tim A. Jones

Q-35. Refer to page 17, line 2 of Mr. Jones' Direct Testimony and the Companies' projected 1,750 MW of economic development load.

a. Please provide any load materialization workpapers, calculations, probability models, analysis associated with the economic development queue and development of the 1,750 MW forecast.

b. Please provide a narrative description of the load materialization analysis and documents provided in response to part a.

c. Do the Companies have firm long-term contracts for each customer included in the 1,750MW forecast? Please explain.

d. Please provide any signed or offered contracts and summary of major terms of contract, such as contract term (years), minimum demand, ramping allowance, contract capacity, and tariff.

e. Please explain if the Companies have offered contracts that have not been signed to date. Please indicate the process for removing a customer from the economic development queue.

f. Have the Companies assumed a ramp up for specific customers or a ramp up that applied to the entirety of the 1,750 MW of economic development customer load? Please describe the methodology utilized, source of assumptions, and evidence such assumption aligns to any requests made by potential data center customers. Provide all workpapers deriving the ramp assumptions.

A-35.

a. See the four files listed below at Exhibit TAJ-2 at "Load_Forecasting\Electric_Load_Forecast\Electric\Forecasts \CONFIDENTIAL_Major_Accounts\Analysis\IRP_Scenario_Files"

- Data_Center_1_Phase_2_Included_MA_Shaping.xlsx
- Data_Center_2_MA_Shaping.xlsx
- Data_Center_3_MA_Shaping.xlsx
- Data_Center_LF_Adjust.xlsx

See also the attachment being provided in Excel format.

b. The file "Data_Center_LF_Adjust.xlsx" uses the shape of a summer peaking high load factor customer and scales it up to 95% load factor. Then the two files, "Data_Center_1_Phase_2_Included_MA_Shaping.xlsx" and "Data_Center_2_MA_Shaping.xlsx" use that shape as an input to create the LG&E portion of the data center hourly forecast. Finally, the file "Data_Center_3_MA_Shaping.xlsx" creates the KU portion of the data center hourly forecast.

The separate attachment provided in response to part (a) shows the Companies' analysis of data centers in the economic development pipeline and BOSK Phase 2 as of early January 2025. (Generally speaking, the file is most easily understood by beginning at the right-most tab and proceeding leftward through the tabs.) The projects were given probability ranges based upon the classification Mr. Bevington's team assigned to them, which classifications are described in the response to PSC 1-18(c). The projects were also denoted as having filed a TSR or not. Using projected ramp schedules the Companies obtained from prospective customers and estimating those the Companies did not have, the Companies calculated a probability-weighted monthly load ramp for the data centers in the economic development pipeline.

c. See the response to PSC 1-17(a). It is unclear what is meant by long-term contracts, but as of the date of this response, the Companies do not have an executed contract for electric service. The Companies have executed an EPC contract with the proposed and announced data center at Camp Ground Road in Jefferson County, which was provided confidentially as an attachment to SC 1-12(c)(i) in Case No. 2024-00326.

d. See the response to part (c).

e. The Companies have not offered any contracts to date that have not been signed. The Companies track projects on an ongoing basis but generally take them out of the queue if they are no longer actively investigating the Companies' service territories. "Announced" projects stay in the queue until they have a contract for electric service and begin taking service.

f. See the response to parts (a) and (b). See also the response to Question No. 34(b).

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Question No. 36

Responding Witness: John Bevington

Q-36. Refer to page 46 of Direct Testimony of Jones at line 15 which states, "The Companies' forecast of economic development load is also reasonable, and perhaps conservative, projecting that a fraction of the more than 6,000 MW of such load currently in the Companies' economic development queue will ultimately locate in the Companies' service territories."

a. Provide a description of the "win rate" on historical economic development prospects and contracted economic development load.

b. Do the Companies track land-control and any site development work in determining the likelihood a customer will ultimately locate in the Companies' territories? Please explain.

c. For each potential customer in the economic development queue, please describe

   i. The initial contact date of customer request and start of discussion.

   ii. The initial requested capacity and estimated energy and start of service estimate.

   iii. Any interim change(s) in status or requested capacity or energy estimates and revised start of service, reason for acceleration, delay, or change in need date or capacity

   iv. Current status or contract type, and summary of final contracted capacity, forecasted energy usage and service start estimate.

   v. If any of the prospective customer has communicated an intention not to take service, please provide all data collected regarding the reason for such a decision.

  vi. The current associated land-control status for each request in the pipeline, for example, does the customer own or lease a physical site, and has the customer broken ground?

A-36.

a. The Companies do not calculate or track a historical "win rate," but they do track and monitor the current pipeline of activity according to the probability of success based on the amount of activity with a client, and the presence of contracts, public announcements, etc.

b. The Companies project the likelihood that a project will locate in the service territories based on conversations, meetings, research on their history (if the actual company is known), and most often work alongside the state and local communities as a project continues to evaluate the client as interactions intensify. It is common for economic development projects to locate in existing industrial parks which are properly zoned and controlled. In the case of data centers, which are primarily looking for electric capacity rather than typical attributes of an industrial site or park, the Companies do ask questions about site control and zoning, which provides evidence by which the team labels the project's sales phase or stage that is explained in PSC 1-17(c).

c. See the response to Question No. 33.

  i. See the response to Question No. 33.

  ii. See the response to Question No. 33.

  iii. The Companies do not track this information beyond providing updates on a monthly basis.

  iv. See the response to Question No. 33.

  v. The queue represents active projects. As such, none of the projects in the queue has communicated an intention not to take service.

  vi. See the response to JI 1-5(a).

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Question No. 37

Responding Witness: Philip A. Imber / Stuart A. Wilson

Q-37. Refer to page 13 of Mr. Imber's Direct Testimony that states, "As I previously discussed, without an SCR, Ghent 2 is a natural target for NOx reductions because it will be the only unit within Group 2E, as well as the Companies' own coal-fired generation fleet, that is anticipated to operate beyond 2030 without post-combustion NOx controls. In short, constructing the Ghent 2 SCR now is necessary to ensure the Companies' compliance with Ozone NAAQS and Ghent 2's ongoing year-round availability, which, as Mr. Wilson explains, is a component of the Companies' resource plan for serving customers safely, reliably, and at the lowest reasonable cost.

a. Please provide a comparison of the operational limits and Ghent 2's availability expected by month with and without the SCR for Compliance.

b. Describe any energy or capacity factor limitations imposed by existing or possible NAAQS compliance related to NOx controls.

A-37.

a. Because of ozone NAAQS, the Companies assume Ghent 2 would be inoperable during the ozone season (May through September) without Reasonably Achievable Control Technology (SCR) and fully available to serve load with an SCR. From a modeling perspective, Ghent 2's net capacity with an SCR is 481 MW (including a 4 MW derate from the SCR) during the ozone season and zero MW without an SCR. There are no assumed impacts during non-ozone season.

b. See the response to part (a).

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Question No. 38

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

Q-38. Refer to the Direct Testimony of Mr. Tummonds at page 10, which describes the minimal natural gas transmission work required for firm transportation to the NGCCs.

a. Provide all documents and agreements made with Tennessee Gas and Texas Eastern for FT related to the NGCCs.

b. What costs are associated with the new gas compression investment?

A-38.

a. See response to PSC 1-14.

b. The current estimate for Brown 12 includes $29.1 million for all gas compression costs, $9.1 million of which provides for the envisioned incremental compression.

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LOUISVILLE GAS AND ELECTRIC COMPANY

Response to Attorney General and Kentucky Industrial Utility Customers' Initial Data Request
Dated March 28, 2025

Case No. 2025-00045

Question No. 39

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

Q-39. Refer to Direct Testimony of Mr. Tummonds pages 12-13 and the anticipated construction of 400MW of 4 hour BESS at Cane Run.

a. Please explain if the Companies have evaluated possible fire risk and the anticipated liability or insurance costs of new BESS capacity. Provide all quotes, calculations, estimates, or memos regarding fire risk mitigation and liability insurance premiums.

b. Explain how the Companies has accounted for risk of the IRA ITC/PTC legislation being eliminated by the current federal authorities.

c. How have the Companies anticipated using the BESS resources? Do the Companies expect to maximize economic value through energy arbitrage or utilize the BESS for reliability? Please explain what was modeled in the evaluation and what procedures are expected in actual future operations.

d. Provide a summary of the modeled charge and discharge energy profile and costs under each fuel scenario. How have the Companies considered BESS degradation and recurring capital/ capital additions over the life of the unit? Please explain.

e. Do the Companies anticipate any supply chain constraints? If so, please discuss the constraints, and explain the impacts that could arise, and what contingencies have been included to address the risks.

A-39.

a. The Companies generally evaluate fire risks with input from our Owner's Engineer and the chosen EPC contractor and OEM provider. Specifically, the Companies will evaluate this risk in more detail when potential OEM providers provide design specifics along with their proposals for this project. All parties noted work to design and provide a layout that reasonably minimizes fire risk and damage balanced with projects costs.

Upon entering into an EPC agreement, the EPC contractor and OEM provider will be responsible for fire risk and damage as part of the build process, thus, they will be responsible for maintaining insurance to cover any replacement of property caused by fire as part of the EPC agreement. When the Companies assume care, custody and control of the project, they will assume responsibility for fire risk and damage which will be mitigated via proper insurance. The costs of such insurance under the EPC agreement will be part of the total contract price. The Companies do not historically obtain estimates or quotes for this insurance at this stage of execution. However, the Companies facilitate awareness of our insurer during the construction process so that the insurer has the necessary information to insure the asset at the time the Companies take care, custody, and control with premiums typically remaining unaffected until the annual renewal in early April of each year.

b. The Companies' analysis assumes the ITC will remain in place. As always, the Companies will reevaluate the optimal resource plan if circumstances change. See also the Companies' response to PSC 1-6 in Case No. 2024-00326 (2024 IRP).

c. The Companies expect to use the BESS like their other generation assets, i.e., to provide their customers with safe, reliable power at the least reasonable cost. The BESS can store lower cost energy available during off-peak periods to offset potential higher cost energy by discharging during peak periods, which the Companies modeled in the analysis. As with existing generation, it is also possible that energy could be sold as off-system sales ("OSS") when market opportunities exist. In those cases, customers would receive 75 percent of the OSS margin in accordance with the existing mechanism. However, OSS is not the modeled or forecasted use of the BESS assets.

d. See the table below, which shows equivalent full cycles ("EFCs") by month from 2028 (commissioning) to 2032 (full data center load). The production cost data is based on the modeling run provided in response to JI 1-22. Total annual utilization ranges between 106 and 138 EFCs per year. The highest forecasted utilization is in the summer months of June through August, which ranges between 14 and 23 EFCs per month. Forecasted EFCs during the transitional months of May and September range between 8 and 15 EFCs per month. Forecasted EFCs during shoulder months where most unit maintenance typically occurs (March, April, October, and November) ranges between 3 and 12 EFCs per month. Forecasted EFCs during winter months of December through February range between 3 and 18 EFCs per month. The underlying load forecast is based on normal weather, so the Companies might expect higher EFCs during weather extremes but would expect the EFCs to remain well below those that might lead to premature degradation of the battery.[24]

Forecasted EFCs of Cane Run BESS

Month	2028	2029	2030	2031	2032	2028-2032 Average
January	N/A	8.0	17.6	12.0	9.3	11.7
February	N/A	5.5	9.4	6.8	4.6	6.6
March	5.4	3.9	4.3	5.6	8.7	5.6
April	3.9	2.5	4.3	5.2	6.4	4.5
May	11.9	8.2	12.1	7.9	11.2	10.3
June	16.9	14.5	17.8	16.1	16.8	16.4
July	16.1	17.4	17.7	18.8	18.4	17.7
August	21.8	19.8	22.6	19.7	22.2	21.2
September	11.6	8.1	13.5	13.3	14.6	12.2
October	12.3	6.6	7.4	9.6	9.6	9.1
November	7.8	6.6	6.2	7.1	9.9	7.5
December	3.3	4.6	3.8	6.0	5.9	4.7
Total Annual	111.0	105.9	136.6	128.2	137.7	123.9

Regarding recurring capital investments, project designs and cost estimates for Cane Run BESS include an overbuild of initial capacity designed to maintain its nameplate rating (400 MW / 1,600 MWh) for ten years, or 2038 assuming a 2028 commercial operation date. The modeling includes costs necessary to augment Cane Run BESS (through adding new modules) and maintain its nameplate rating for the remainder of the life of the facility, so the Companies did not include degradation in the CPCN analysis. However, the Companies intend to defer the decision of whether to augment or to allow degradation until such time that a decision would need to be made, as the energy storage market is rapidly changing and energy storage technology will likely have evolved over that time.

e. Beyond the market-based price fluctuation to which any purchase is exposed, the Companies remain aware of timing sensitivities throughout the supply chain and work with our Owner's Engineer and chosen OEM and EPC contractors to ensure contract timing and associated decision making properly accounts for such sensitivities. Within that context, the Companies are not aware of any specific constraints or associated impacts.

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[24] The RFP responses received by the Companies for battery storage typically contained restrictions on daily or annual EFCs that effectively limited utilization to around 365 EFCs per year.

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Question No. 40

Responding Witness: David L. Tummonds

Q-40. Refer to page 12, lines 9-11 of Mr. Tummonds Direct Testimony that states, "The Companies plan to use lithium-ion battery technology similar to what will be used for Brown BESS absent a shift in technology in the battery industry."

a. When do the Companies anticipate finalizing designs and getting contracts for construction?

b. Will a firm price be negotiated? Please explain.

A-40.

a. See the response to Question No. 30(a).

b. The Companies have secured firm pricing for the battery supply and plan to secure firm pricing for the EPC contract (subject to ordinary force majeure and other similar provisions).

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Question No. 41

Responding Witness: David L. Tummonds

Q-41. Refer to Mr. Tummonds Direct Testimony starting at page 7, line 2 which states, "The Companies plan to construct the NGCCs so that Brown 12 will be operational in 2030 and Mill Creek 6 will be operational in 2031. To achieve the most favorable and predictable pricing, the Companies plan to secure contracts for both units at approximately the same time in June 2026. The time between contracting and in-service operation will allow for reasonable construction and commissioning contingencies such as weather issues, supply chain issues, and force majeure type events.

a. Please compare and contrast the benefits of the Brown and Mill Creek locations and site readiness.

b. The Companies mention risks such as weather, supply chain, and force majeure. What contingency has been built into the schedule and costs? How did the Companies compare the contingencies to standards in the industry?

c. Please provide all industry research and documentation related to supply chain and turbine manufacturing risk.

d. The Companies appear to indicate that contracting both CCs would result in favorable and predictable pricing. What preliminary engineering and quotes have been conducted to date? Have the Companies evaluated the cost of the Brown and Mill Creek projects separately and together to determine a savings could be had? Provide all evidence that there is a benefit to contracting at the same time.

A-41.

a. Beyond the Mill Creek site benefits noted on page 4, lines 3-9 and the ongoing demolition work at Brown noted on page 6, lines 12-21 of the submitted testimony, there are no noteworthy site readiness differences between the two locations.

b. The Companies developed the construction schedule in consultation with EPC contractors familiar with our sites and current industry lead times. The Companies believe this schedule allows for reasonably predictable time delays. As noted in the response to SC 1-4, delays driven by force majeure and similarly unpredictable events are unpredictable. Developing a schedule, and by extension, cost estimate, for these outlier events would likely incur substantial unnecessary costs. By working with EPC contractors with substantial ongoing installation work, the Companies believe this schedule contingency is consistent throughout the industry.

Regarding cost contingency, the current estimates include a 10% contingency to address final pricing risk due to escalation, as well as the risks noted in the question. Input from our Owner's Engineer and discussion with other power providers indicate this is a prudent contingency at this stage of project development assuming minimal delay to contract execution.

c. See the response to PSC 1-34.

d. Certain information requested is confidential and proprietary and is being provided under seal pursuant to a petition for confidential protection. [redacted]

[redacted] The Companies have not requested, and the market would not support, preparation of multiple bids for the same work due to demand and the time required to prepare such optionality as would be required to quantitatively compare two independent projects executed without any economies of scale. As noted in the response to LMG-LFCUG 1-6, contracting multiple units concurrently provides the EPC bidders some cost saving opportunities. While the Companies cannot ensure the bidders pass on any realized efficiencies, the nature of a competitive bid process yields a reasonable expectation that they would.

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Question No. 42

Responding Witness: Lonnie E. Bellar / John Bevington / Stuart A. Wilson

Q-42. Regarding Construction Risk of Brown and Mill Creek NGCCs:

a. Do KU/LG&E or any affiliates conduct business as wholesale generation merchant? Please explain.

b. Please explain if the Companies have considered contracting for new CC capacity through alternative structures, such as a PPA or BTA? If not, why not?

c. If the Companies request to build additional capacity is approved, but the projected load does not materialize, how would the Companies manage such an excess capacity position? Please explain.

d. If the Companies request to build additional capacity is approved, but the projected load does not materialize, how would the Companies manage such an excess capacity position? Please explain.

A-42.

a. No.

b. See the response to SREA 1-4.

c. It is unclear to which projected load the request intends to refer or how much of such load hypothetically would not materialize. The Companies' current economic development queue contains over 8,000 MW of projects, more than 2,000 MW of which does not relate to data centers. Moreover, in an analysis released this month, the International Energy Agency projects U.S. data center energy consumption will more than double (increase by 130%)

from 2024 levels by 2030.[25] That energy will need to come from somewhere.

Moreover, as shown in the 2025 CPCN Resource Assessment: (1) adding Brown 12 and Mill Creek 6 is optimal across all gas cost and CTG ratios even with data center load decreases of 140 MW and 280 MW; (2) across all gas cost and CTG ratios, adding 400 MW of Cane Run BESS is optimal even with 140 MW less data center demand, and adding 200 MW of Cane Run BESS is optimal with 280 MW less data center demand; and (3) the cost-effectiveness of Ghent 2 SCR is unaffected by data center load decreases of 140 MW and 280 MW in scenarios without landfill constraints and becomes *more* cost effective in the mid-gas, mid-CTG scenario with landfill constraints with data center load decreases of 140 MW and 280 MW.[26]

Also, the Companies' 2024 IRP Resource Assessment demonstrates the Companies' proposed resources are robust across a wide variety of load, fuel price, and environmental regulatory scenarios.[27]

That aside, if the Companies were in an over-capacity situation, they would expect to find counterparties interested in purchasing capacity and energy given the anticipated capacity shortages in multiple surrounding systems and the projected national doubling of data center demand and other anticipated load growth. See also the responses to PSC 1-28(c) and KCA 1-5.

d. See the response to (c).

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[25] International Energy Agency, "Energy and AI" at 64 (Apr. 2025), available at https://iea.blob.core.windows.net/assets/b8a83930-5c77-4da7-b795-270ab6a6c272/EnergyandAI.pdf (accessed Apr. 10, 2025).

[26] Direct Testimony of Stuart A. Wilson, Exh SAW-1, 2025 Resource Assessment at 31-32, Mid Gas, Mid CTG Ratio.

[27] Case No. 2024-00326, IRP Vol. III, 2024 IRP Resource Assessment at 45-48.

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Question No. 43

Responding Witness: John Bevington

Q-43. Refer to Bevington Direct Testimony at page 4, starting at line 17 which describes, "three most important factors impacting industrial projects: (1) utility and infrastructure availability, (2) workforce and labor availability, and (3) availability of development-ready sites."

a. Have the Companies evaluated whether prospective customers would site in KU or LG&E territory based on the 3 factors identified? If so, please provide all analysis and evaluation comparing the likely growth of industrial or data center load between the two jurisdictions and a description of the impacts. If not, explain why not.

b. Please provide a comparison of the utility and infrastructure availability between KU and LG&E service territories. Provide any specific city specific initiatives and/or considerations that are relevant to a Companies' site selection (e.g. Jefferson County)

c. Please provide a comparison of the workforce and labor availability between KU and LG&E service territories. Provide any specific city specific initiatives and/or considerations that are relevant to a Companies' site selection (e.g. Jefferson County)

d. Please provide a comparison of the development-ready sites between KU and LG&E service territories. Provide any specific city specific initiatives and/or considerations that are relevant to a Companies' site selection (e.g. Jefferson County)

A-43.

a. The Companies have not performed an analysis of these factors comparing KU to LG&E. Nonetheless, prospective customers have been locating in the Companies' service territories consistently year after year, and in some cases prospective customer announcements have been historic during the last four years.[28] Historic announcements by prospective and existing customers demonstrate the three identified factors have been sufficiently attractive to site selectors and current and prospective customers.

One key element of prospective data center growth in the service territories is the existence of a data center sales tax exemption that applied only to the Jefferson County portion of the LG&E service territory until the passage of 2025 House Bill 775, which expanded the exemption to the entirety of the state.[29]

b. The Companies have not performed an analysis of these factors comparing KU to LG&E.

c. The Companies have not performed an analysis of these factors comparing KU to LG&E. LG&E and KU use an online site selection tool to produce site, workforce and demographic data that is specific to a project request. Information can be found on our website available to the public: https://www.opportunityky.com/.

Regarding initiatives for workforce development, the initiatives are robust at the state level and customizable based on a project's needs. Kentucky Community and Technical College System's (KCTCS) Workforce Solutions program provides workforce assistance for business needs including customized training, and apprenticeships and KCTCS in partnership with the Kentucky Higher Education Assistance Authority provides job seekers with financial assistance for in-demand fields through the Work Ready Scholarship. The Kentucky Workforce Innovation Board also administers programs and advises the Governor on workforce training and development issues and administers programs to assist with workforce needs. Communities throughout the Companies' service territories are intertwined into these initiatives and programs if they are not specifically implementing programs of their own.

Specific community initiatives for workforce and talent attraction include the Live in Lou campaign, which is a multi-year initiative that works to communicate job opportunities and Louisville's livability to job seekers from within the community and more broadly to individuals that might not be familiar with the city. Finally, Commerce Lexington initiated a Regional Competitiveness plan in 2022 to bring together the nine-county region around Fayette County and initiate a limited number of efforts that would

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[28] *See* Bevington Direct at 2-4.

[29] Section 34 of 2025 H.B. 775 amended KRS 154.20-220(17), which defines "qualified data center project," to remove part (c), which effectively limited the scope of the definition to data centers in Jefferson County. Available at https://apps.legislature.ky.gov/recorddocuments/bill/25RS/hb775/bill.pdf. (2025 Ky. Acts 98.)

be impactful for economic growth. Included within the plan is a strategy to increase the regional labor force by 1,500 per year from 2022-2027.

d. See the response to (c). That notwithstanding, communities in the Companies' service territories have been investing in new economic development sites and buildings at a historic rate since the inception of the Kentucky Product Development Initiative began in pilot form in 2019, and more broadly after the passage of House Bill 745, which codified the pilot program into law during the 2022 General Assembly. Since 2019, communities in the Companies' service territories have been awarded a collective $41,000,000 from the state for site and building development through the end of 2023. Awards for applications submitted in 2024 have not been announced at this point in time, but it is anticipated that several millions of dollars will be added to this total.

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Question No. 44

Responding Witness: John Bevington

Q-44. Refer to Bevington Direct testimony at pages 6-7.

a. Have the Companies evaluated the jobs expected with the 1,750 MW of data center load modeled, and if so, identify how many jobs are expected to be created with the 1,750 MW data center forecast?

b. Please provide all assumptions and analysis for any estimates of job and/or economic impacts associated with the 1,750 MW.

c. Specifically regarding the Poe/PowerHouse data center to be located in Jefferson County. Indicate if the data center has any actual data center users signed up for this location, and if the Companies are aware, identify the users signed up.

d. Identify how many permanent jobs are expected at the Poe/PowerHouse data center facility, the type of jobs, and the wages and total compensation.

e. Identify if any governmental authority has granted any property tax abatements or reductions for the Poe/PowerHouse data center facility.

f. If the Companies have not evaluated these types of job impacts, please explain why not.

g. If the Companies have not evaluated economic or tax revenue impacts, please explain why not.

A-44.

a. No, but according to recent reporting, the recently announced 600 MW, $6 billion Project Lincoln: OC Data Center in Oldham County, Kentucky, which is also in LG&E's service territory, will have "an expected $4 billion economic impact" and "creat[e] upwards of 150 on-site jobs — with an average salary over $80,000 — and over 400 indirect jobs throughout the broader community. The data center, once fully operational, is said to also generate tens of millions of dollars in annual Oldham County taxes which will continue to grow each year."[30]

b. See the response to part (a). The Companies have not analyzed the job estimates or economic impacts associated with the 1,750 MW of projected data center load.

c. The Poe/PowerHouse data center does not yet have a committed tenant. The Companies currently anticipate a tenant will be announced during the pendency of this proceeding.

d. The Companies do not have the requested information. See the response to part (a).

e. No.

f. See the response to part (a).

g. See the response to part (a) and the response to LMG-LFUCG 1-41.

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[30] Gerstner, Grant, "$6 billion OC Data Center planned on Highway 53," *The Oldham Era* (Mar. 28, 2025), available at https://www.pmg-ky1.com/oldham_era/news/6-billion-oc-data-center-planned-on-highway-53/article_af7b318a-fb9e-58fb-9b6f-c86c63b14f4d.html (accessed Apr. 1, 2025). *See also* Wood, Josh, "$6 billion data center planned for Oldham County in investment that could rival BlueOval," Louisville Courier-Journal (Mar. 29, 2025), available at https://www.courier-journal.com/story/news/local/2025/03/29/6-billion-project-lincoln-oc-data-center-planned-for-oldham-county-kentucky/82718839007/ (accessed Apr. 3, 2025).

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Question No. 45

Responding Witness: John Bevington / Counsel

Q-45. Refer to Bevington Direct Testimony page 13, starting at line 6 describing the process for large load customer to locate in the Companies' service territory.

a. Provide a customer and peak MW breakdown of all transmission service requests submitted related to the economic development pipeline. (page 13, line 9)

b. Provide a customer and peak MW breakdown of the EPC contracts related to the economic development pipeline (page 14, line 1).

c. At what point would the Companies consider that they have a material commitment that the customer will take electric service for at least one year? Please explain.

d. At what point would the Companies consider that they have a material commitment that the customer will take electric service for more than 1 year? Please explain.

A-45.

a. As shown in the table below, submitted TSRs that are currently in the economic development pipeline have a total peak MW capacity of 1,272 as of the date of this response:

Project	Date Submitted	Requested Load (MW)	Energize Date	Status
Camp Ground 1	3/7/2024	335	2026	Accepted
Camp Ground 2	7/8/2024	67	2028	Accepted
Meridian 1	9/6/2024	100	2028	Expired
Meridian 2	9/6/2024	650	2030	Complete
Maverick	10/25/2024	100	2031	Pending
Shelby	6/1/2024	20	2025	Accepted

b. See the response to JI 1-5(b). The capacity requirement for the Camp Ground and Shelby projects as of the date of this response is 402 MW and 20 MW, respectively.

c. The Companies object to this request as seeking a legal conclusion. Without waiving that objection, it is unclear what the request intends by the term "material commitment." As Mr. Bevington explained in his testimony, the customer covers the cost of the studies performed to review the TSR, which is approximately $50,000. The project then progress with the Companies and potential customer entering into an EPC contract. Such a project requires the potential customer to bear costs until the customer begins to take service, which can be tens of millions of dollars. Because the potential customer has invested significant resources, it is reasonable to expect that a project that has invested significant capital through the EPC contract process will take electric service for more than one year.

d. See response to part (c).

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Question No. 46

Responding Witness: Robert M. Conroy / Stuart A. Wilson / Counsel

Q-46. Refer to the Companies' response to KIUC 1-2(j) in the IRP Docket # 2024-00326 which states, "The Companies are considering a number of possible tariff and contract options regarding potential large, high-load factor customers. Under the Companies' current tariffs, customers with large loads greater than 250 kVA and that take service at transmission voltage are currently served under Retail Transmission Service (Rate RTS), which contains minimum demand charge, contract term, and termination notice provisions"

a. Have the Companies further considered tariff modification to ensure load materialization commitments for prospective customers since the response provided November 22, 2024? Please explain.

b. Please provide all marginal cost studies which demonstrate that the marginal revenue from serving the projected data center load will exceed the marginal cost of building new generation and transmission to serve them.

c. Are the Companies offering any economic development discount rates to attract the new data center load? If yes, please explain.

d. Provide all studies performed by Companies in evaluating whether projected data center load will increase or decrease average rates for existing customers.

e. Have the Companies evaluated the incremental impact of additional data center load on average or marginal energy costs? If yes, please provide those studies.

A-46.

a. Yes. The content of the Companies' deliberations is subject to attorney-client privilege and work product doctrine. See also the responses to PSC 1-28(b) and (c).

b. No responsive documents exist. See also the response to PSC 1-96.

c. No.

d. See the response to PSC 1-104. See also the response to PSC 1-96.

e. No.