

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

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

RESPONSE OF
LOUISVILLE GAS AND ELECTRIC COMPANY
AND
KENTUCKY UTILITIES COMPANY
TO
THE KENTUCKY COAL ASSOCIATION, INC.'S
SUPPLEMENTAL REQUEST FOR INFORMATION
DATED JANUARY 22, 2024

FILED: February 11, 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 5th day of February 2025.

Caroline J. Davison

Notary Public

Notary Public ID No. KYNP63286

My Commission Expires:

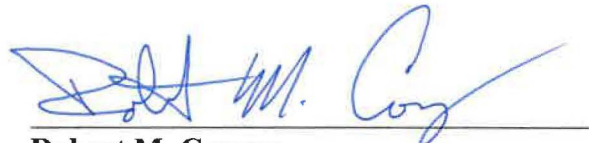
January 22, 2027



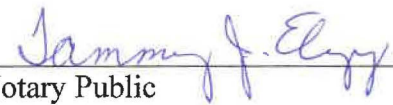
VERIFICATION

COMMONWEALTH OF KENTUCKY)
)
COUNTY OF JEFFERSON)

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


Robert M. Conroy

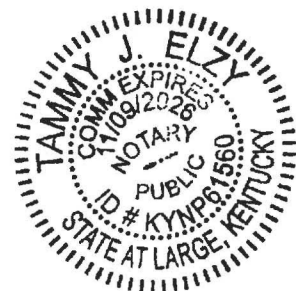
Subscribed and sworn to before me, a Notary Public in and before said County and State, this 5 day of February 2025.


Notary Public

Notary Public ID No. KYNP61560

My Commission Expires:

November 9, 2026



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

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


Notary Public

Notary Public ID No. KYNP63286

My Commission Expires:

January 22, 2027



VERIFICATION

COMMONWEALTH OF KENTUCKY)
)
COUNTY OF JEFFERSON)

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

[Handwritten signature of Tim A. Jones]
Tim A. Jones

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

[Handwritten signature of Caroline J. Davison]
Notary Public

Notary Public ID No. KYNP63286

My Commission Expires:

[Handwritten signature: January 22, 2027]



VERIFICATION

COMMONWEALTH OF KENTUCKY)
)
COUNTY OF JEFFERSON)

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

Elizabeth J. McFarland 2/7/25

Elizabeth J. McFarland

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

Caroline J. Davison

Notary Public

Notary Public ID No. KYNP 63286

My Commission Expires:

January 22, 2027



VERIFICATION

COMMONWEALTH OF KENTUCKY)
)
COUNTY OF JEFFERSON)

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

Charles R. Schram

Charles R. Schram

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

Caroline J. Davison

Notary Public

Notary Public ID No. KYNP63286

My Commission Expires:

January 22, 2027



VERIFICATION

COMMONWEALTH OF KENTUCKY)
)
COUNTY OF JEFFERSON)

The undersigned, **Michael S. Sebourn**, being duly sworn, deposes and says that he is Sr. Manager – Generation Planning for LG&E and KU Services Company, and that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge, and belief.

Michael S. Sebourn

Michael S. Sebourn

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

Caroline J. Davison
Notary Public

Notary Public ID No. KYNP63286

My Commission Expires:

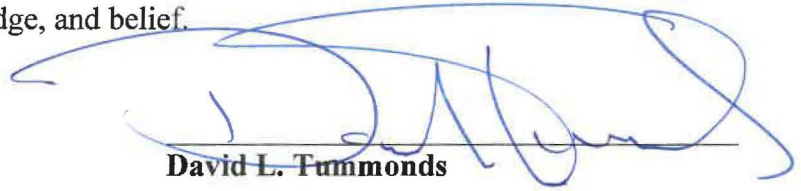
January 22, 2027



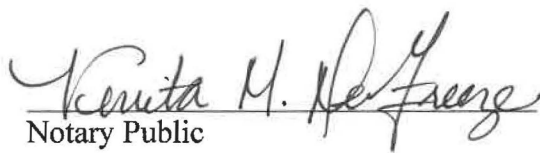
VERIFICATION

COMMONWEALTH OF KENTUCKY)
)
COUNTY OF JEFFERSON)

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


David L. Tummonds

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


Notary Public

Notary Public, ID No. KYNP4577


My Commission Expires:

April 1, 2028

VERIFICATION

COMMONWEALTH OF KENTUCKY)
)
COUNTY OF JEFFERSON)

The undersigned, **Peter W. Waldrab**, being duly sworn, deposes and says that he is Vice President, Electric Distribution, 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.



Peter W. Waldrab

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

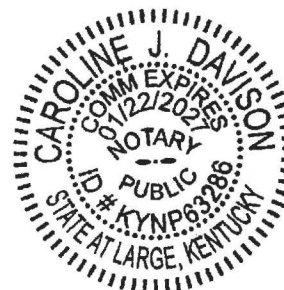


Notary Public

Notary Public ID No. KYNP63286

My Commission Expires:

January 22, 2027



VERIFICATION

COMMONWEALTH OF KENTUCKY)
)
COUNTY OF JEFFERSON)

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

Stuart A. Wilson

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

Notary Public

Notary Public ID No. KYNP63286

My Commission Expires:

January 22, 2027



**LOUISVILLE GAS AND ELECTRIC COMPANY
AND
KENTUCKY UTILITIES COMPANY**

**Response to Kentucky Coal Association, Inc.'s Supplemental Requests for
Information
Dated January 22, 2024**

Case No. 2024-00326

Question No. 2-1

Responding Witness: Lonnie E. Bellar

Q.2-1. On January 20, 2025 the newly inaugurated president declared a national energy emergency that included a number of pro-fossil fuel actions including fast-tracking permits for new fossil fuel infrastructure, over-turning auto emission standards, rolling back restrictions on oil and gas expansion in Alaska, lifting a pause on approvals to export liquefied natural gas, and suspending offshore wind leasing pending further reviews. In addition, President Trump reportedly signed a series of additional executive orders directing government agencies to review and revised environmental policies put into effect during the Biden administration. Do the Companies plan to evaluate the consequences of such actions recognizing potential limitations in making the desired modifications either prior to the IRP being finalized and including in the IRP the limitations related to these potential changes on the analyses including a commitment to reconsider plans prior to making definitive resource decisions?

A.2-1. The Companies' IRP was final when they filed it on October 18, 2024. The Commission's IRP regulation includes review of an IRP (discovery, comments, informal conferences, and Staff reports), but not an evidentiary hearing, Commission Order, or any other means of modifying a filed IRP:

Upon receipt of a utility's integrated resource plan, the commission shall establish a review schedule which may include interrogatories, comments, informal conferences, and staff reports.¹

Section 11. Procedures for Review of the Integrated Resource Plan.

(1) Upon receipt of a utility's integrated resource plan, the commission shall develop a procedural schedule which allows for submission of written interrogatories to the utility by staff and intervenors, written comments by staff and intervenors, and responses to interrogatories and comments by the utility.

¹ 807 KAR 5:058 Sec. 2(3).

- (2) The commission may convene conferences to discuss the filed plan and all other matters relative to review of the plan.
- (3) Based upon its review of a utility's plan and all related information, the commission staff shall issue a report summarizing its review and offering suggestions and recommendations to the utility for subsequent filings.
- (4) A utility shall respond to the staff's comments and recommendations in its next integrated resource plan filing.²

Thus, the regulation does not provide for any modification of a filed IRP. To the contrary, the regulation implicitly recognizes that an IRP is simply a snapshot in time showing how the Companies' resource considerations vary across a range of scenarios. Thus, the IRP contemplates a number of resource considerations over a 15-year planning horizon, but it is not a commitment to any specific action, and no "update" is needed.

Regarding how the new presidential administration's actions might affect resource decisions, the Companies will do what they have always done: gather the best and most current information available at the time resource decisions must be made, evaluate that information, and then pursue resource solutions that will provide safe and reliable service at the lowest reasonable cost.

² 807 KAR 5:058 Sec. 11.

**LOUISVILLE GAS AND ELECTRIC COMPANY
AND
KENTUCKY UTILITIES COMPANY**

**Response to Kentucky Coal Association, Inc.'s Supplemental Requests for
Information**

Dated January 22, 2024

Case No. 2024-00326

Question No. 2-2

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

- Q.2-2. To the best of your knowledge, please summarize how some possible regulatory changes could result in changes in the analytics of the IRP including the elimination of Production Tax Credits, Investment Tax Credits, “repeal” of Clean Air Act Section 111(b) and Section 111(d) changes, elimination of the ban on new LNG export terminals, and repeal of the new CCR, ELG, MATS and the Good Neighbor Rule.
- A.2-2. See the response to KCA 1-4.

**LOUISVILLE GAS AND ELECTRIC COMPANY
AND
KENTUCKY UTILITIES COMPANY**

**Response to Kentucky Coal Association, Inc.'s Supplemental Requests for
Information
Dated January 22, 2024**

Case No. 2024-00326

Question No. 2-3

Responding Witness: Tim A. Jones

- Q.2-3. Please explain how the growth, if any, in Data Centers is expected to affect load growth.
- A.2-3. See the response to PSC 1-21, the IRP Executive Summary,³ IRP Volume I,⁴ and IRP Volume III.⁵

³ See pages 2-4 and 7-9.

⁴ See pages 5-7, 5-10, 5-13 through 5-16, 5-21 through 5-23, 5-25 through 5-26, 5-28, 6-1 through 6-4, 7-9, 7-12 through 7-14, 7-34 through 7-37, and 8-1.

⁵ See IRP Volume III, Resource Adequacy at pages 11, 12, and 20; IRP Volume III, Resource Assessment at pages 2, 4, 6-11, 24, 29, 31, and 49.

**LOUISVILLE GAS AND ELECTRIC COMPANY
AND
KENTUCKY UTILITIES COMPANY**

**Response to Kentucky Coal Association, Inc.'s Supplemental Requests for
Information**

Dated January 22, 2024

Case No. 2024-00326

Question No. 2-4

Responding Witness: Tim A. Jones

- Q.2-4. How do the Companies confirm they are not including Data Centers in their load growth which are also being included by other utilities?
- A.2-4. See the response to KCA 1-15.

**LOUISVILLE GAS AND ELECTRIC COMPANY
AND
KENTUCKY UTILITIES COMPANY**

**Response to Kentucky Coal Association, Inc.’s Supplemental Requests for
Information
Dated January 22, 2024**

Case No. 2024-00326

Question No. 2-5

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

- Q.2-5. How do the Companies plan to protect customers from stranded investments resulting from Data Centers that do not operate as expected and specifically how this concern is addressed in the IRP?
- A.2-5. The Companies object to this request as irrelevant to an IRP review proceeding; the Commission’s IRP regulation neither requires addressing nor mentions cost recovery or ratemaking. Without waiving this objection, although this request is too vague to permit a precise response,⁶ the Companies will continue to strive to serve all customers, existing and new, safely and reliably at the lowest reasonable cost.

⁶ For example, which assets would be “stranded,” when, and why? Also, what does it mean for data centers not to “operate as expected”?

**LOUISVILLE GAS AND ELECTRIC COMPANY
AND
KENTUCKY UTILITIES COMPANY**

**Response to Kentucky Coal Association, Inc.'s Supplemental Requests for
Information
Dated January 22, 2024**

Case No. 2024-00326

Question No. 2-6

Responding Witness: Lonnie E. Bellar

- Q.2-6. Will the Companies commit to seek no new approvals for coal plant closures until there is transparency into the expected regulatory changes?
- A.2-6. The Companies object to this request as not being a *data* request at all; it seeks a commitment, not information. Without waiving that objection, although the phrase “transparency into the expected regulatory changes” is too vague and speculative to allow a meaningful response, the Companies will do what they have always done: gather the best and most current information available at the time resource decisions must be made, evaluate that information, and then pursue resource solutions that will provide safe and reliable service at the lowest reasonable cost.

**LOUISVILLE GAS AND ELECTRIC COMPANY
AND
KENTUCKY UTILITIES COMPANY**

**Response to Kentucky Coal Association, Inc.'s Supplemental Requests for
Information
Dated January 22, 2024**

Case No. 2024-00326

Question No. 2-7

Responding Witness: Lonnie E. Bellar

- Q.2-7. Will the Companies commit to seeking third-party buyers of existing coal plants as part of its resource considerations in a manner that would allow these resources to continue to operate and perhaps provide capacity and energy under PPAs to the Companies?
- A.2-7. The Companies object to this request as not being a *data* request at all; it seeks a commitment, not information. Without waiving that objection, the Companies will do what they have always done: gather the best and most current information available at the time resource decisions must be made, evaluate that information, and then pursue resource solutions that will provide safe and reliable service at the lowest reasonable cost.

**LOUISVILLE GAS AND ELECTRIC COMPANY
AND
KENTUCKY UTILITIES COMPANY**

**Response to Kentucky Coal Association, Inc.'s Supplemental Requests for
Information
Dated January 22, 2024**

Case No. 2024-00326

Question No. 2-8

Responding Witness: Lonnie E. Bellar

- Q.2-8. Please indicate whether PPL Corporation is expected to modify any parts of its net-zero corporate policy as a result of expected regulatory changes.
- a. If not, will PPL Corporation agree to assume any incremental costs associated with complying with its Corporate Policies that are not driven by environmental regulations if the incremental costs are not supported by a lowest cost solution.
- A.2-8. The Companies object to this request as irrelevant to this IRP review proceeding. Without waiving that objection, although the phrase “expected regulatory changes” is too vague and speculative to allow a meaningful response, the Companies are unaware of any plans by PPL Corporation to modify its 2050 net-zero goal.
- a. The Companies object to this request as not being a *data* request at all; it seeks a commitment from a non-party to this proceeding, not information. The Companies further object to this request as irrelevant to an IRP review proceeding; the Commission’s IRP regulation neither requires addressing nor mentions cost recovery or ratemaking. Without waiving these objections, the Companies will do what they have always done: gather the best and most current information available at the time resource decisions must be made, evaluate that information, and then pursue resource solutions that will provide safe and reliable service at the lowest reasonable cost.

**LOUISVILLE GAS AND ELECTRIC COMPANY
AND
KENTUCKY UTILITIES COMPANY**

**Response to Kentucky Coal Association, Inc.'s Supplemental Requests for
Information**

Dated January 22, 2024

Case No. 2024-00326

Question No. 2-9

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

- Q.2-9. Please share all analyses the Companies performed to address how sensitive results are to expected changes in regulations affecting coal-fired power plants.
- A.2-9. See the response to KCA 1-4 and Section 4 of Volume III, Resource Assessment.

**LOUISVILLE GAS AND ELECTRIC COMPANY
AND
KENTUCKY UTILITIES COMPANY**

**Response to Kentucky Coal Association, Inc.'s Supplemental Requests for
Information
Dated January 22, 2024**

Case No. 2024-00326

Question No. 2-10

Responding Witness: Lonnie E. Bellar

- Q.2-10. If no analyses have been performed, will the Companies proceed with such analyses before finalizing the IRP?
- A.2-10. Not applicable. See the response to Question No. 9.

**LOUISVILLE GAS AND ELECTRIC COMPANY
AND
KENTUCKY UTILITIES COMPANY**

**Response to Kentucky Coal Association, Inc.’s Supplemental Requests for
Information
Dated January 22, 2024**

Case No. 2024-00326

Question No. 2-11

Responding Witness: Stuart A. Wilson

- Q.2-11. The Companies have suggested that coal and gas price forecasts should be linked relying on a decision in a prior case by the Commission that the methodology was acceptable in that one instance. However, Fuel prices can and will vary going forward and, KCA requests that the Companies provide **all** documentation including bespoke analyses that confirm this coal price methodology is appropriate for the IRP and any successor analyses.

For the 2024 IRP Resource Assessment, the Companies developed five fuel price scenarios using the methodology that was used to develop fuel price scenarios for their 2022 CPCN Resource Assessment, which the Commission found to be credible and reasonable in its Final Order in that proceeding. In these fuel price scenarios, natural gas prices are the primary price setting factor, with coal prices derived from gas prices beginning in 2025 based on different historical coal-to-gas (“CTG”) price ratios. Sections 4.1.4 and 5.6 in Volume III (2024 IRP Resource Assessment) summarize the Companies’ fuel and emission price scenarios.

- A.2-11. The Commission’s 2022 CPCN Case Final Order—issued just over a year ago—was not merely “a decision in a prior case by the Commission that the methodology was acceptable in that one instance.” In rejecting arguments advanced by KCA witness Emily Medine in that proceeding, the Commission’s Final Order explicitly notes that the evidence not just in the 2022 CPCN Case but also the Companies’ 2021 IRP case supported the relationship between coal and gas prices the Companies advanced:

The Commission finds that LG&E/KU’s evidence regarding the relationship between coal and natural gas prices is credible. The average ratios and a recent spike in coal prices that followed a spike in natural gas prices both indicate a relationship between coal and gas prices. Further, LG&E/KU provided evidence showing a correlation between a reduction in the number of coal mines and its increased reliance on two suppliers who are now

providing 79 percent of LG&E/KU's coal, which supports its assertion of reduced coal on coal competition that, if anything, could tie coal prices more closely to gas prices. Thus, whether projected separately or together, the Commission believes that it is reasonable to assume a relationship between coal prices and natural gas prices.

Further, while Ms. Medine is correct that coal price projections in the 2021 IRP were significantly lower than coal price projections in this case, natural gas price projections in the 2021 IRP were also significantly lower, though the difference is presumably due to the spike in both prices in 2021 to 2022. Further, the coal and natural gas price projections in the 2021 IRP, which Ms. Medine discussed favorably, followed a ratio consistent with the ratios used by LG&E/KU in this case. LG&E/KU also considered a spread of fuel price scenarios and ratios both above and below the historical correlation between coal prices and fuel prices, which permitted stress testing of projected prices. Finally, it is not necessary to capture volatility in long-term forecasts, because it should balance out over time. Thus, the Commission finds that LG&E/KU's fuel price scenarios were reasonable and that they did not affect the reasonableness for LG&E/KU's production cost and financial modeling.⁷

It is noteworthy that the number of producing coal mines in the United States remains at historic lows,⁸ and the Companies continue to rely on two coal suppliers at nearly the same level cited by the Commission as “evidence ... support[ing] ... [the Companies'] assertion of reduced coal on coal competition that, if anything, could tie coal prices more closely to gas prices.”

Regarding the documentation request, all documentation was provided in the Companies' work papers for the IRP. See KPSC Case No 2024-00326 – LGE-KU 2024 IRP Resource Planning Workpapers—CONFIDENTIAL.zip at filepath "2025PlanInputs\CONFIDENTIAL_CommodityPriceForecasts\20240712 2025

⁷ *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 93-94 (Ky. PSC Nov. 6, 2023).

⁸ See U.S. Energy Information Administration, “The number of producing U.S. coal mines fell in 2020” (July 30, 2021) (“By the end of 2020, the number of producing coal mines in the United States fell to 551 mines, the lowest number since U.S. coal production peaked in 2008.”), available at <https://www.eia.gov/todayinenergy/detail.php?id=48936#:~:text=By%20the%20end%20of%202020,the%20U.S.%20electric%20power%20sector>. (accessed Feb. 4, 2025); U.S. Energy Information Administration, “Annual Coal Report 2023” at viii (Oct. 2024) (“In 2023, U.S. coal production decreased 2.7% to 577.9 million short tons (MMst) from 2022, while the number of producing mines increased to 560 mines from 548 mines in 2022”), available at <https://www.eia.gov/coal/annual/pdf/acr.pdf> (accessed Feb. 4, 2025).

BP Coal Price Forecast.xlsx". The coal-to-gas ratio is the ratio of Illinois Basin spot coal prices and Henry Hub natural gas prices. Market prices for these commodities are contained in the MGMR worksheet of the referenced file and demonstrate that the Companies' range of coal-to-gas ratios remains reasonable. In 2025, for example, the coal-to-gas ratio based on market coal and gas prices is 0.56. This indicates a reversion from the much higher market coal-to-gas price ratios experienced in recent years to a price ratio that is more reflective of the long-term average, which the Companies used as the 2024 IRP's Mid coal-to-gas price ratio.

**LOUISVILLE GAS AND ELECTRIC COMPANY
AND
KENTUCKY UTILITIES COMPANY**

**Response to Kentucky Coal Association, Inc.'s Supplemental Requests for
Information
Dated January 22, 2024**

Case No. 2024-00326

Question No. 2-12

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

Q.2-12. Please provide or identify the full work sheets associated with the below footnote including the referenced third party-bids and forecasts from independent third-party consultants (both redacted as necessary).

²⁴ The coal price forecast reflects Illinois Basin coal prices. In the first five years of the forecast, the base market price is a blend of prices based on coal bids received but not under contract and forecasts from independent third-party consultants. Beyond the fifth year, prices are increased at the annual growth rate reflected in the EIA's 2021 AEO High Oil and Gas Supply case for "All Coals, Minemouth" price forecast. The high and low coal price forecasts reflect the historical relationship of changes in natural gas and ILB coal prices.

5-20

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- a. The Confidential Modeling Inputs included coal price sheets for each case which provide monthly coal prices for each scenario. Please provide the data on an annual basis in a usable file format and include the assumptions for each of these prices including the following: Coal quality (MMBtu/lb, % Sulfur, % Ash, % Moisture) and coal pricing (\$/Ton FOB Mine, \$/Ton FOB Plant).
 - b. The Confidential Modeling Inputs also provided monthly natural gas prices assumptions. Please provide these monthly prices in an excel format, the source of these prices, and how the low and high price scenarios were developed.
 - c. Please provide for each power plant assumed to be burning natural gas, the delivery pipeline(s), the basic terms including term, volume, fixed and variable costs, etc. of the delivering contracts, and the associated pricing.

A.2-12. The referenced footnote is not from the Companies' 2024 IRP. However, the Companies located this footnote in their 2021 IRP. Attached as a separate file

are the relevant documents provided in the 2021 IRP. The information requested is confidential and proprietary and is being provided under seal pursuant to a petition for confidential protection.

The Companies assume that parts a – c of this question refer to the 2024 IRP. Therefore, the responses provide where the requested information can be found in the 2024 IRP’s workpapers that were provided with the original filing.

- a. For annual pricing in \$/MMBtu, see KPSC Case No. 2024-00326 -- LGE-KU 2024 IRP Resource Planning Workpapers--CONFIDENTIAL.zip at filepath: “\2025PlanInputs\CONFIDENTIAL_CommodityPriceForecasts\20240712 2025 BP Coal Price Forecast.xlsx” on tabs “LGHR”, “LGMR”, “MGMR”, “HGMR”, and “HGLR”. For annual pricing in \$/ton, see tab “2025 Bids Summary” of the same workpaper, which shows FOB mine pricing through 2029 for bids from the Companies’ spring 2024 solicitation. No other pricing in \$/ton was used in the 2024 IRP.

For annual coal quality metrics through 2029, see the five files located at KPSC Case No. 2024-00326 -- LGE-KU 2024 IRP Resource Planning Workpapers--CONFIDENTIAL.zip at filepath: “\2025PlanInputs\CONFIDENTIAL_Fuel\Coal” on tab “DataFromFuels_5Yr”. The Companies assumed these values to remain at the 2029 levels throughout the study period.

- b. For the gas prices in Excel format, see the five files located at KPSC Case No. 2024-00326 -- LGE-KU 2024 IRP Resource Planning Workpapers--CONFIDENTIAL.zip at filepath: “\2025PlanInputs\CONFIDENTIAL_Fuel\Gas” on tabs “PROSYM Output” and “Monthly Price Summary”.

The gas price forecasts’ sources and development methodology are explained in Volume III, Resource Assessment, Section 5.6.2 Natural Gas Price Forecast Methodology.

- c. Fuel related contracts can be found on the commission website at <https://psc.ky.gov/WebNet/FuelContracts>.

**LOUISVILLE GAS AND ELECTRIC COMPANY
AND
KENTUCKY UTILITIES COMPANY**

**Response to Kentucky Coal Association, Inc.'s Supplemental Requests for
Information**

Dated January 22, 2024

Case No. 2024-00326

Question No. 2-13

Responding Witness: Charles R. Schram

Q.2-13. Please identify all reliability issues related to supply of natural gas of which the Companies are aware in addition to pressurization.

A.2-13. See the response to KCA 1-1(b).

**LOUISVILLE GAS AND ELECTRIC COMPANY
AND
KENTUCKY UTILITIES COMPANY**

**Response to Kentucky Coal Association, Inc.’s Supplemental Requests for
Information
Dated January 22, 2024**

Case No. 2024-00326

Question No. 2-14

**Responding Witness: Lonnie E. Bellar / Elizabeth J. McFarland /
Peter W. Waldrab**

- Q.2-14. How are the Companies preparing for unexpected events, such as what occurred in North Carolina in 2024 and Southern California in 2025? Are these preparations reflected in the IRP?
- A.2-14. The Companies have emergency response procedures for both severe weather and wildfire events that inform how the Companies limit customer impacts and restore any effected service. These response procedures are routinely practiced through periodic emergency preparedness drills.

The Companies also build transmission and distribution infrastructure to leading industry guidelines for resistance to wind, ice, flooding, and wildfire. These include National Electrical Safety Code (“NESC”) and Electric Power Research Institute (“EPRI”) guidelines for wind, ice, and flooding. Industry standards for wildfire are still emerging, and so the Companies have consulted with the Edison Electric Institute (“EEI”), EPRI, and various utilities to develop wildfire construction specifications for areas prone to elevated wildfire risk.

The Companies continue to invest in grid automation and resilience to harden their facilities to these types of weather events. These investments include steel poles, tree-resistant wire, and automated sectionalizing devices.

**LOUISVILLE GAS AND ELECTRIC COMPANY
AND
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**Response to Kentucky Coal Association, Inc.'s Supplemental Requests for
Information
Dated January 22, 2024**

Case No. 2024-00326

Question No. 2-15

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

- Q.2-15. Please confirm that Mill Creek 5 is not permitted to burn oil and the Companies did not consider modifying the permit to allow co-firing. If not the case, please explain.
- A.2-15. In part confirmed. The Companies did consider this option, as is evident in the RFP responses being submitted in response to JI 2-11. Following analysis of the option pricing and industry experience combusting fuel oil in the combustion turbines considered, the Companies decided not to pursue this option or the permitting required for this option.

**LOUISVILLE GAS AND ELECTRIC COMPANY
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Case No. 2024-00326

Question No. 2-16

Responding Witness: Lonnie E. Bellar

- Q.2-16. For each gas-fired plant, please provide the current strategies employed or expected to be employed to improve reliability.
- A.2-16. Industry-accepted reliability measures for natural gas combined cycle (“NGCC”) and simple cycle units focus on equivalent forced outage rate (“EFOR”) and starting reliability respectively. As measured against these metrics, the Companies’ NGCC and simple cycle units continue to achieve reliability results that support the achievement of the Companies’ resource planning objectives. Within that context, plant staff responsible for operation and maintenance of these units continue to assess performance and target improvement opportunities when justified by the expected reliability benefit vs. expected cost of that improvement. The Companies will continue to be diligent with all business planning, operations, and maintenance practices to maintain levels of reliability assumed for all units in the Companies resource planning.

**LOUISVILLE GAS AND ELECTRIC COMPANY
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Case No. 2024-00326

Question No. 2-17

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

Q.2-17. With respect to new CCGT’s and CT’s, please provide all the strategies considered for improving reliability.

A.2-17. The industry generally accepts that natural gas combined cycle (“NGCC”) units provide the most reliable dispatchable asset within the construction timeline required. The Companies have selected an original equipment manufacturer (“OEM”) with appreciable market share and a significant number of identical installations in commercial operation or nearing commercial operation. Additionally, the Companies have selected the engineering, procurement, and construction (“EPC”) contract partner with most experience installing similar generating units with the same OEM partner. The preceding comments on the selected OEM and EPC contractors as well as the Companies’ experience managing this type of installation support the Companies’ expectation that new NGCCs will enter commercial operation with reliability expectation similar to previous NGCC installation.

Once a new NGCC enters commercial operation, the Companies plan to leverage reliability-ensuring measures shared industry-wide as well as those validated through the Companies’ previous NGCC operational experience. These include long-term service agreements on combustion turbines, prudent staffing levels, robust staff training, and aggressive preventative maintenance planning.

Following initial commercial operation of an NGCC, the staff responsible for operation and maintenance of that unit will assess actual performance, once known, and identify reliability improvement opportunities, regardless of measured reliability unless perfect, and develop options to address those opportunities. Finally, these options will be assessed focused on the predicted reliability improvement vs. associated cost necessary to ensure prudence.

Specific strategies cannot be identified until a unit enters commercial operation and establishes a reliability baseline and associated specific reliability improvement opportunities.

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Case No. 2024-00326

Question No. 2-18

Responding Witness: David L. Tummonds

- Q.2-18. Please provide current cost estimates by category for Mill Creek 5 including pipeline costs and estimated completion dates.
- A.2-18. It is unclear what “current cost estimates by category” means. The current total construction cost forecast for Mill Creek 5 is \$913.4 million. This includes estimated pipeline costs of \$22.2 million. Estimated completion date remains consistent with the response to KCA 1-11.

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Case No. 2024-00326

Question No. 2-19

Responding Witness: David L. Tummonds

Q.2-19. Please provide current cost estimates for BESS and estimated completion date.

A.2-19. For the current construction cost estimates for BESS and estimated completion date, see the response to KCA 1-11.

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Case No. 2024-00326

Question No. 2-20

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

- Q.2-20. Please provide updated cost estimates for other technologies since the IRP analysis was performed. Of particular relevance are changes in the costs of renewables.
- A.2-20. The Companies have not received information since the analysis referenced that requires updates to the provided cost estimates. See also the response to SREA 2-2.