

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC INVESTIGATION OF)	
LOUISVILLE GAS AND ELECTRIC)	
COMPANY AND KENTUCKY)	CASE NO. 2023-00422
UTILITIES COMPANY SERVICE)	
RELATED TO WINTER STORM)	
ELLIOTT)	

RESPONSE OF
KENTUCKY UTILITIES COMPANY
AND
LOUISVILLE GAS AND ELECTRIC COMPANY
TO
THE KENTUCKY COAL ASSOCIATION, INC.'S FIRST REQUEST FOR
INFORMATION

DATED JANUARY 26, 2024

FILED: February 16, 2024

VERIFICATION

COMMONWEALTH OF KENTUCKY)
)
COUNTY OF JEFFERSON)

The undersigned, **Lonnie E. Bellar**, being duly sworn, deposes and says that he is Chief Operating Officer for Kentucky Utilities Company and Louisville Gas and Electric Company and an employee of LG&E and KU Services Company, 220 West Main Street, Louisville, KY 40202, 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 14th day of February 2024.

Caroline J. Davison

Notary Public

Notary Public ID No. KYNP63286

My Commission Expires:

January 22, 2027



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**Response to Kentucky Coal Association, Inc.'s First Request for Information
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Case No. 2023-00422

Question No. 1-1

Responding Witness: Lonnie E. Bellar

- Q-1-1. Did LG&E/KU management review and implement the NERC and FERC recommendations for Cold Weather Preparations for Extreme Weather Events issued after their joint inquiry into Winter Storm Uri? If so, when?
- A-1-1. It is not clear as to which set of recommendations issued by NERC and/or FERC this question is referring. The Companies' reviewed the FERC and NERC report issued in November 2021 concerning their joint inquiry into Winter Storm Uri, including the recommendations contained therein. Most of the recommendations in that report were not applicable to the Companies as they pertained to changes in reliability standards, ISO/RTO compensation rules, and natural gas production, processing and interstate transport facilities, or were recommending the opening of proceedings at the FERC, state and local levels. In addition, many of the planning recommendations were already being used by the Companies (such as the use of the 90/10 load forecast in planning) or were consistent with cold weather preparedness processes already undertaken in the Companies' generation operations. To the extent that this question is referencing the alert issued by NERC every year since 2021 titled, "Cold Weather Preparations for Extreme Weather Events," the Companies have reviewed and responded to each alert as required by NERC. While these NERC alerts included many practices already in place, the Companies carefully reviewed all recommendations and integrated them into the Companies' practices as appropriate. To the extent any new processes were implemented, they would have been integrated into the transmission planning and winter preparedness practices of the Company in 2021, 2022, and 2023.

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Question No. 1-2

Responding Witness: Lonnie E. Bellar

Q-1-2. Please provide a summary of LG&E/KU's Cold Weather Preparations for Extreme Weather Events prior to Winter Storm Elliott. If preparations were made, were they consistent with the NERC and FERC recommendations?

A-1-2. The Companies performed the following readiness measures prior to Winter Storm Elliott. Many of the different readiness measures performed take into account industry recommendations and best practices for cold weather preparedness, some of which are detailed in the 2019 FERC and NERC Staff Report on The South Central United States Cold Weather Bulk Electric System Event of January 17, 2018 and the NERC Alert issued in 2021 on Cold Weather Preparations for Extreme Weather Events.

- LG&E/KU performs a Winter Assessment Study prior to the start of the winter season to evaluate potential impacts to the transmission system caused by extreme winter weather and develops any necessary plans to address potential issues. This study uses a 90/10 forecast and high load transfers and evaluates potential outages across the peak during the winter season to develop mitigating measures and operating guides.
- LG&E/KU conducts periodic capacity and energy emergency drills so that its system operators remain familiar with procedures and requirements and are prepared to address capacity and energy emergency conditions should they arise. Most recently, the Companies incorporated LG&E/KU capacity and energy emergency procedures into their participation in the MISO system restoration drill conducted in October 2022.
- LG&E/KU performed preventative maintenance on transmission equipment (e.g., blow down breakers to remove moisture/water from tanks, check heaters, top off SF6 as needed) prior to the 2022 winter season to help prevent potential operational issues.
- LG&E/KU issued a "Cold Weather Alert" on December 20, 2022, for the LG&E/KU service territory starting on December 22, 2022.
- LG&E/KU brought all significant BES transmission facilities that had been in planned outages back on-line by December 22, 2022, and re-

scheduled all significant planned BES transmission outages scheduled to start during the expected cold weather event.

- LG&E/KU had additional transmission line and substation crews stationed across the service territory on standby in anticipation of the winter storm.

In addition, with respect to the Companies' generating facilities, preparations for potential extreme cold weather events prior to Winter Storm Elliott were made in accordance to each plant's cold weather plan. The preparations were consistent with the NERC and FERC recommendations. See attachment being provided in a separate file.

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Question No. 1-3

Responding Witness: Lonnie E. Bellar

- Q-1-3. Please provide a table showing the electrical demand and how LG&E/KU serviced the electrical demand and from what generation sources over the December 23 through December 25, 2022 period (“Winter Storm Elliott”).
- A-1-3. See the Attachment to JI 1-164(a) for hourly load data and the Attachment to JI 1-164(b) for the Companies’ generation units’ hourly output in Case No. 2022-00402. See the Attachment in response to PSC 1-36 in the “Purchases” worksheet for OVEC imports and other purchases.

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Question No. 1-4

Responding Witness: Lonnie E. Bellar / David S. Sinclair

- Q-1-4. Please provide a simulation of how the LG&E/KU power supply and its customers would have been impacted during Winter Storm Elliott, assuming the same loss of natural gas supply while operating the fully implemented generation fleet as approved by Case No. 2022-00402.
- a. Please respond assuming no dual fuel capability on new MC5; and
 - b. Please respond assuming dual fuel capability on new MC5.
- A-1-4. The Companies did not lose natural gas supply during Winter Storm Elliott; Texas Gas Transmission had issues that resulted in reduced pressure on the gas transmission pipeline providing service to the impacted generating facilities. The requested analysis does not exist, is not readily feasible, and would require numerous assumptions and substantial original work to complete. The Companies do not have a specific planning tool suitable to create the requested analysis. See the response to PSC 1-58(a) in Case No. 2022-00402.
- a. Not applicable.
 - b. Not applicable.

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Question No. 1-5

Responding Witness: Lonnie E. Bellar

Q-1-5. According to LG&E/KU “during the time of the load shedding event, derates attributable to the inability of Texas Gas to meet contractual delivery obligations ranged from 785MW to 943 MW. Derates unrelated to Texas Gas supply ranged from 45MW to 361MW.”¹ Absent these derates, would LG&E/KU have been required to shed load?

A-1-5. Assuming “these derates” refers to all the derates listed in the request, the answer is no, the Companies would not have had to shed load absent the derates. More precisely, absent the Texas Gas-related derates, the Companies would not have had to shed load.

Note that the derates were adjusted and such adjustments are included in Attachment 1 to the response to AG 1-2, but the adjustments do not change the answer to this question.

¹ Case No. 2022-00402 Attachment 1 to Response to AG-1 Question No. 13(l) Page 2 of 9 Bellar

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Question No. 1-6

Responding Witness: Lonnie E. Bellar

- Q-1-6. During Winter Storm Elliott, please provide on an hourly basis the capacity provided by each electrical generating unit with its corresponding nameplate rated capacity and capacity factor.
- A-1-6. See the response to Question No. 3 for hourly unit output. See attachment being provided in a separate file containing unit ratings. Capacity factor is a calculation generally based on a longer period of time than one hour. On a one-hour basis, the requested calculation would be a unit's output each hour divided by the unit's net winter rating found on the rating sheet.

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Question No. 1-7

Responding Witness: Lonnie E. Bellar

- Q-1-7. Were any load shedding events during Winter Storm Elliott due to the lack of coal supply? If so, please provide in detail when and where this occurred?
- A-1-7. No. Also, as stated in response to Question No. 4, the Companies did not experience any loss in gas supply but did experience a reduction in gas pressure.

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Question No. 1-8

Responding Witness: Charles R. Schram

Q-1-8. How much power did LG&E/KU purchase during Winter Storm Elliott, from whom, and at what cost/price?

A-1-8. See the attachment to the response to PSC 1-36.

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Question No. 1-9

Responding Witness: Lonnie E. Bellar

- Q-1-9. Please provide detailed operating data for each LG&E/KU electrical generation source during Winter Storm Elliott.
- A-1-9. See the responses to Question No. 3 and PSC 1-30.

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Question No. 1-10

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

Q-1-10. Please provide all correspondence between LG&E/KU and its reliability coordinator, TVA, and OVEC during Winter Storm Elliott.

A-1-10. See the response to PSC 1-38 regarding TVA. The Companies receive OVEC unit status information each business day. The status for 12/23/2022 is below. OVEC unit status can change subsequent to the morning information. Ultimately, the power received from OVEC is the amount OVEC tags for each hour; Generation Dispatch does not receive correspondence associated with such changes.

Date: Friday, December 23, 2022

Unit	Net Rating	MW scheduled On line	MW available on standby	Derate	MW not available	Status	Comment - limited to day ahead clearing MWh through 11/30/2022	Estimated end of event
Clifty	1	198	0		198	Planned Outage	PO	
	2	198	198			On Line - Good for Full Capacity		
	3	198	0		198	Unavailable	MJ Header Leak	
	4	198	198			On Line - Good for Full Capacity		
	5	198	88		110	On Line - Derated	Boiler deslag	
	6	198	0			198	Unavailable	Tube leak
Kyger	1	197	167	30	30	On Line - Derated	pulverizer capacity/fuel quality	
	2	195	0		195	Unavailable	ID fan trip	
	3	195	0		195	Unavailable		
	4	195	0		195	Unavailable	drain valve repair	
	5	195	185		10	10	On Line - Derated	fuel quality
Total OVEC		836	0		1329			
LG&E KU %		68	0		108			

Scheduled OVEC Import at Peak Hour

OVEC Not Scheduled or Other

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Question No. 1-11

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

- Q-1-11. Please explain why OVEC and TVA were unable to supply their planned and/or required capacity during Winter Storm Elliott.
- A-1-11. Information about TVA's system issues during Winter Storm Elliott that affected its participation in reserve sharing is contained in the October 2023 *FERC, NERC and Regional Entity Staff Report* and the TVA presentation to the Kentucky Legislative Research Commission on February 2, 2023.²

See the response to AG 1-14 for OVEC information.

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Question No. 1-12

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

Q-1-12. Please provide all changes made to agreements with OVEC, TVA, and PJM or new agreements after Winter Storm Elliott to ensure non-recurrence of load shedding events.

A-1-12. See the response to PSC 1-41 regarding the TVA reserve sharing agreement.

The Companies have no agreement with PJM regarding the purchase of non-firm energy. Non-firm energy purchases from PJM are subject to all of the applicable provisions of PJM's tariffs.

No changes have been made to the OVEC agreement.

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Question No. 1-13

Responding Witness: Lonnie E. Bellar

Q-1-13. Please provide detailed information as to the composition of the customer outages provided in Bellar Testimony in Case No. 2022-00402 shown below for residential, commercial, and industrial customer categories with a list of each specific customer during Winter Storm Elliott that experienced a service interruption with demand service of 5 MW or greater.

Case No. 2022-00402
Attachment 1 to Response to AG-1 Question No. 13(1)
Page 9 of 9
Bellar

**Appendix B:
LG&E/KU Customer Outages
CUSTOMERS IMPACTED BY SERVICE INTERRUPTIONS**



A-1-13. LG&E and KU does not have real-time demand for distribution customers, thus it is unknown if and unlikely that any of the customers listed had 5 MW demand at the time of load shed. At the distribution level, there were approximately 42,880 residential customers, 8703 commercial customers, 137 industrial customers, and 233 customers on other rate categories impacted by load shed on December 23, 2022. The table below shows all distribution level customers that had a max monthly billed usage of 5 MW (or 5000KVA) or greater during 2022.

Customer Name	County	City, State
UNIVERSITY OF KENTUCKY -ROOM 204 SERVICE BLD	FAYETTE	LEXINGTON, KY
INFILTRATER WATER TECHNOLOGIES LLC	CLARK	WINCHESTER, KY
CORNING INC -CORNING SHARED SERV	MERCER	HARRODSBURG, KY
ENERSYS INC	MADISON	RICHMOND, KY
USAARMC AND FORT KNOX	HARDIN	FT KNOX, KY
ENERSYS INC	MADISON	RICHMOND, KY
AKEBONO BRAKE CORPORATION	HARDIN	ELIZABETHTOWN, KY
UNIVERSITY OF KENTUCKY -ROOM 204 SERVICE BLD	FAYETTE	LEXINGTON, KY
FLEX FILMS INC	HARDIN	ELIZABETHTOWN, KY

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Question No. 1-14

Responding Witness: Charles R. Schram

Q-1-14. Please provide the details of all requests for natural gas purchase and delivery during Winter Storm Elliott with explanation of requests under firm delivery contracts.

A-1-14. See attachment being provided in a separate file. All natural gas purchases are firm purchases.

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Question No. 1-15

Responding Witness: Lonnie E. Bellar

Q-1-15. Please provide a listing of all planned and unplanned outages of LG&E/KU generating sources during Winter Storm Elliott including the duration of each outage during Winter Storm Elliott.

A-1-15. See the response to PSC 1-30.

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Question No. 1-16

Responding Witness: Charles R. Schram

- Q-1-16. For Winter Storm Elliott, please provide all liquidated damages claims made by LG&E/KU under contracts which LG&E/KU suppliers and service providers failed to meet their obligations.
- A-1-16. No firm gas supply was curtailed, and there are no liquidated damages associated with low gas pipeline pressure. Texas Gas Transmission voluntarily provided demand charge credits for December 23 through December 25, 2022.

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Case No. 2023-00422

Question No. 1-17

Responding Witness: Counsel

- Q-1-17. For Winter Storm Elliott, please provide all claims for non-performance received by LG&E/KU related to LG&E/KU failing to meet its obligations.
- A-1-17 The Companies do not accept the premise to the data request, i.e., LGE/KU failed to meet its obligations during Winter Storm Elliot. The Companies met their legal obligations during Winter Storm Elliot. The claims for damages allegedly incurred as a result of the outages during Winter Storm Elliot are typical, immaterial in size or total amount and not likely to lead to evidence relevant to the issues in this investigation.

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Question No. 1-18

Responding Witness: Lonnie E. Bellar

- Q-1-18. Which LG&E/KU natural gas generating units impacted by the natural gas pipelines delivery failure have backup fuel oil available?
- A-1-18. None of the Companies' units that were impacted by the gas pressure issue on the Texas Gas Transmission system during Winter Storm Elliott have fuel oil backup.