

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

**RESPONSES OF JOINT INTERVENORS
KENTUCKIANS FOR THE COMMONWEALTH,
KENTUCKY SOLAR ENERGY SOCIETY,
METROPOLITAN HOUSING ASSOCIATION,
AND MOUNTAIN ASSOCIATION TO COMMISSION STAFF'S
FIRST REQUEST FOR INFORMATION
[DATED JUNE 20, 2025]**

Dated: July 3, 2025

**JOINT INTERVENORS
KENTUCKIANS FOR THE COMMONWEALTH,
KENTUCKY SOLAR ENERGY SOCIETY,
METROPOLITAN HOUSING ASSOCIATION,
AND MOUNTAIN ASSOCIATION**

**RESPONSE TO COMMISSION STAFF’S
FIRST REQUEST FOR INFORMATION**

Dated June 20, 2025

Case No. 2025-00045

Question No. 1.1

Q-1.1 Refer to the Direct Testimony of Sean O’Leary (O’Leary Direct Testimony), page 7. Explain what, if any, impact having a unit reservation agreement would have on the price/kW.

A-1.1 RESPONSE:

Unit reservation agreements are used to secure places in manufacturer production queues and while they do not typically specify the price at which the equipment – turbines in this case – will be sold, the Companies have secured a firm price as part of the URA. However, no mention is made of whether similar price guarantees have been secured for other equipment, such as pumps, tanks, cooling towers, and other items, which typically cost more than \$100 million in 2024¹ and which are also subject to inflationary pressures.

WITNESS: Sean O’Leary

¹ Capital Cost and Performance Characteristics for Utility-Scale Electric Power Generating Technologies, U.S. EIA (Jan. 2024) at 33-35, https://www.eia.gov/analysis/studies/powerplants/capitalcost/pdf/capital_cost_AEO2025.pdf.

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Dated June 20, 2025

Case No. 2025-00045

Question No. 1.2

Q-1.2 Refer to O'Leary Direct Testimony, page 2. Explain whether witness O'Leary has a recommendation on how many MW of data center load growth should be reflected in Louisville Gas & Electric Company and Kentucky Utilities Company's (jointly, LG&E/KU) load forecast.

A-1.2 RESPONSE:

No, Witness O'Leary does not. Instead, Witness O'Leary's testimony highlights the significant levels of uncertainty in load forecasts such as the Companies' that assume a high level of demand growth from data centers, and explains how utility construction or acquisition of expensive resources to meet such data center demand growth runs the risk of saddling residential customers with substantial amounts of stranded asset costs. Witness Stanton's testimony addresses questions regarding how LG&E/KU should evaluate data center inquiries, including whether and/or to what extent such inquiries should be reflected in the Companies' load forecast.

WITNESS: Sean O'Leary

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Case No. 2025-00045

Question No. 1.3

Q-1.3 Refer to the Direct Testimony of John W. Chiles (Chiles Direct Testimony), page 6.

- a. Provide the information relied on when asserting that “a 5 percent value is more typical than the 2 percent assumption” utilized by LG&E/KU. If calculations or formulas, provide the information in Excel format with the formulas and cells intact and unlocked.
- b. State whether, to the best of Witness Chiles’ knowledge and research, LG&E/KU relied on the 2 percent interconnection cost in Case No. 2022- 00402,² or whether LG&E/KU relied on a different interconnection cost assumption.
- c. State whether Witness Chiles is aware of other utilities located in Kentucky practices regarding interconnection cost assumptions. If yes, state the utility, and whether it differed from LG&E/KU’s interconnection cost assumption. Include in the answer the interconnection cost assumption utilized by that utility.

A-1.3 RESPONSE:

- a. The development of interconnection cost estimates is highly variable and depends on several factors, such as (i) brownfield vs greenfield site development, (ii) voltage level of the interconnection, and (iii) size of the interconnection, which influences transformer and equipment sizing, and (iv) technology type/prime mover for the generating facility. The assertions on the use of a 5% value comes from Witness Chiles’ twenty-five years of evaluation of interconnection requests from several regional transmission organizations and non-RTO organizations throughout the US, including MISO, SPP, ERCOT,

² Case No. 2022-00402, *In the Matter of 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 Generating Unit Retirements.*

SERC, PJM and the Western Interconnection.

- b. Based on Witness Chiles knowledge and research in Case No. 2022-00402, it is not clear that LG&E/KU relied on the 2% interconnection estimate or whether LG&E/KU relied on a different interconnection cost assumption.
- c. Witness Chiles is not aware of other utilities located in Kentucky practices' regarding interconnection cost assumptions.

WITNESS: John W. Chiles

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Dated June 20, 2025

Case No. 2025-00045

Question No. 1.4

Q-1.4 Refer to O'Leary's Direct Testimony, pages 5-6. Explain, in further detail, why a tariff would not fully recover the costs caused by a data center. As part of the answer detail the specific types of costs the witness believes will be passed on to residential, commercial, and industrial customers. Include any workpapers in Excel with formulas intact and cells unlocked, reports, or other resources relied on by Witness O'Leary in making the assertion.

A-1.4 RESPONSE:

An inherent tension exists between measures that mitigate data center customers' ability to avoid costs, such as minimum monthly bills, and measures that preserve and enhance the utility's ability to balance and shift load, such as demand response programs. While minimum monthly bills ensure a baseline level of cost recovery, they also reduce the customer's incentive to pursue energy efficiency and, in some cases, participate in demand response programs. As a consequence load is made greater than it would otherwise be and the cost to maintain the capacity to serve that greater load is shared by all customers. On the other hand, if given the opportunity, large-load customers may possess the means and have an incentive to manage load in ways that exploit incentives for efficiency and load shifting.³

WITNESS: Sean O'Leary

³ These include methods of gaming the system, as described in, e.g., A. Gabaldon et al., *Improvement of customer baselines for the evaluation of demand response through the use of physically-based load models*, Utilities Power Vol. 70 (June 2021), <https://www.sciencedirect.com/science/article/pii/S0957178721000473>; Chen & Kleit, *Incentives and Manipulations of CBL In Demand Response In PJM Territory*, International Association of Energy Economics (June 2013), https://www.researchgate.net/publication/290034565_INCENTIVES_AND_MANIPULATIONS_OF_CBL_IN_DEMAND_RESPONSE_IN_PJM_TERRITORY.

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Case No. 2025-00045

Question No. 1.5

Q-1.5 Refer to O'Leary's Direct Testimony, page 8. State whether Witness O'Leary thinks, based on the information relied on by the witness, that prices for natural gas plants will continue to increase in the next decade. If yes, state how much the price is expected to rise. If no, state how much the price is expected to decrease.

A-1.5 RESPONSE:

Whether or not the price of constructing natural gas plants will continue to rise in the next decade is uncertain. While we are now in a moment of perceived need for massive expansions of gas-fired capacity, the moment could continue or it could pass depending on (1) whether load forecasts prove to be accurate or inaccurate, (2) whether manufacturers of turbines and other equipment invest in expanded production capacity or, because they judge the current surge in demand to be temporary, they choose not to invest, and (3) whether the continuing fall in the cost of renewable resources combined with storage tips the scale in favor of alternative generating resources both distributed and utility-scale as well as non-generating resources.

WITNESS: Sean O'Leary

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Question No. 1.6

Q-1.6 Refer to the Direct Testimony of Andy Eiden, page 5. Explain what avoided cost methodology other Kentucky utilities utilize. In this explanation, provide whether this typically includes avoided transmission and distribution costs.

A-1.6 RESPONSE:

While a comprehensive review of avoided cost methodologies for all other Kentucky utilities is beyond the scope of Witness Eiden's testimony and would require additional study, it appears that most Kentucky utilities utilize the Total Resource Cost (TRC) test to evaluate DSM investments, though details differ as to the level of description and the transparency of inputs and assumptions. As such, the calculation of avoided costs to include in a TRC test for the other Kentucky utilities I reviewed seem to conform to the California Standard Practice Manual ("CA SPM") and the National Standard Practice Manual and therefore are in line with Witness Eiden's recommendations for the Companies to modernize their approach.

Below is a description of two utilities and how they incorporate T&D deferral into their avoided costs.

- (1) East Kentucky Power Cooperative (EKPC) assesses DSM cost effectiveness following the CA SPM methodology.⁴ They first screen measures within the potential study for cost-effectiveness, and then again before including in their program goals and budgets following additional screening using the DSMore tool managed by in-house Staff.⁵ EKPC's avoided cost methodology includes the below considerations for transmission and distribution deferral values:
 - (a) Transmission Capacity Cost – applies a different transmission avoided cost for winter versus summer peaking resources, each beginning in 2025 and escalated by the 2.8% from the Producer Price Index (PPI) to reflect inflation.⁶

⁴ Case No. 2024-00370, Exhibit 10, at 6:10-12.

⁵ Case No. 2024-00370, Exhibit 10, at 5:12-6:8.

⁶ Case No. 2024-00370, Exhibit 10, Attachment SD-8.

- (i) \$35.76 per kW-year transmission deferral value for winter peak starting in 2025 based on Open Access Transmission Tariff (OATT) network costs, and
- (ii) \$44.34 per kW-year deferral value for summer peak values, based on point-to-point transmission value under the 12-month coincident peak (12CP) method.
- (b) Distribution Capacity Cost - \$4.93 per kW-year in 2025 based on marginal cost of distribution, applied to winter system peak and escalated at 2.8% inflation.
- (2) Duke Energy Kentucky states that its Avoided T&D methodology for its DSM tariffs develops separate O&M and capital cost estimates for Transmission and Distribution in a \$/kW-year format, escalated by the PPI.⁷ The avoided O&M costs are developed based on average annual T&D O&M costs divided by the average peak kW load, and the avoided Capital costs are based on average annual T&D capital costs, divided by the average peak kW load growth. The result is multiplied by a real levelized fixed charge rate, to annualize the capital costs into \$/kW-year format.⁸

WITNESS: Andy Eiden

⁷ Case No. 2023-00413, Response to Attorney General First Set Data Requests, AG-DR-01-003.

⁸ *Id.*

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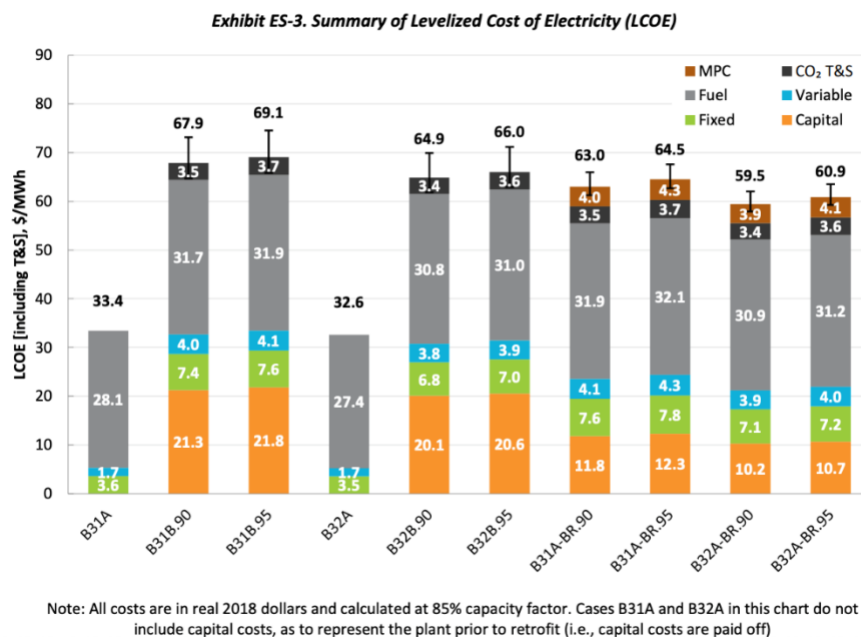
Question No. 1.7

Q-1.7 Refer to O'Leary Direct Testimony, page 4, lines 15-17. Recognizing the recent changes to the Environmental Protection Agency's position associated with the greenhouse gas regulations, explain what, if any, impact this has on witness O'Leary's position on the impact of decarbonization issues.

A-1.7 RESPONSE:

The EPA's current position on greenhouse gas regulation does not in any way alter Witness O'Leary's testimony. As Witness O'Leary's testimony states, the issue is one of vulnerability based on the fact that a change in policy is both possible and quite plausible given that, until quite recently, a policy that would have significantly increased the cost of coal and gas-fired generating units was actually in force. As recently reported by the National Renewable Energy Laboratory (NREL),⁹ retrofitting existing gas-fired power plants for carbon capture would roughly double their cost of producing electricity. If LG&E/KU choose to increase their reliance on natural gas, they proportionately increase the level of risk they incur for their ratepayers in the event of a policy change.

⁹ Tommy Schmitt et al., *Cost and Performance of Retrofitting NGCC Units for Carbon Capture – Revision 3*, Nat'l Energy Tech. (May 31, 2023), <https://www.osti.gov/servlets/purl/1961845>.



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WITNESS: Sean O'Leary

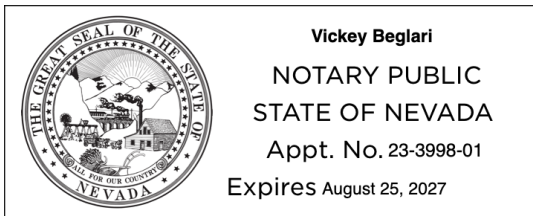
¹⁰ *Id.* at 3.

VERIFICATION

The undersigned, John Chiles being first duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing testimony and that the information contained therein is true and correct to the best of his information, knowledge, and belief, after reasonable inquiry.

John Webster Chiles

Subscribed and sworn to before me by John Webster CHILES this 3rd day of July, 2025.



Vickey Beglari

Notary Public State of Nevada, Clark County

My commission expires: 08/25/2027

Notarized remotely using audio-video communication technology via Proof.

VERIFICATION

The undersigned SEAN O'LEARY, being first duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing testimony and that the information contained therein is true and correct to the best of his information, knowledge, and belief, after reasonable inquiry.

Sean Harold O'Leary

Sean Harold O'Leary

07/03/2025

BA

See attached notary certificate.

DESCRIPTION OF ATTACHED DOCUMENT

Title or Type of Document: Jurat

Document Date: 07/03/2025

Number of Pages (including notarial certificate): 12

State of Florida

County of Orange

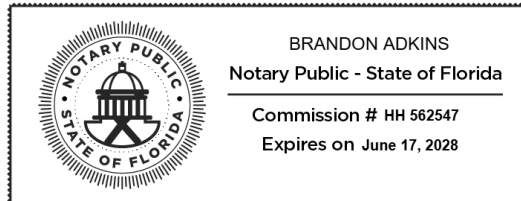
Sworn to (or affirmed) and subscribed before me by means of online notarization,
this 07/03/2025 by Sean Harold O'Leary.

☐ Personally Known OR ☒ Produced Identification

Type of Identification Produced Washington State Enhanced DR. License



Notary Public
Brandon Adkins



Notarized remotely online using communication technology via Proof.

VERIFICATION

The undersigned, Andrew Eiden being first duly sworn, deposes and says that his has personal knowledge of the matters set forth in the foregoing testimony and that the information contained therein is true and correct to the best of his information, knowledge, and belief, after reasonable inquiry.

Andrew Eiden

Subscribed and sworn to before me by Andrew Eiden this 3rd day of July, 2025.

April Ridley-Cutts

Notary Public

My commission expires: 07/31/2029



Notarized remotely online using communication technology via Proof.

VERIFICATION

The undersigned, Elizabeth Anne Stanton being first duly sworn, deposes and says that she has personal knowledge of the matters set forth in the foregoing testimony and that the information contained therein is true and correct to the best of her information, knowledge, and belief, after reasonable inquiry.

Elizabeth Anne Stanton

Subscribed and sworn to before me by Adrian McKoy this 3rd day of July, 2025.

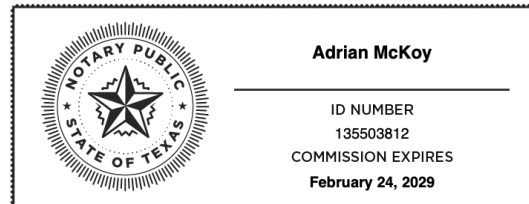
Adrian McKoy

Notary Public

My commission expires: 02/24/2029

State of Texas

County of Tarrant



Electronically signed and notarized online using the Proof platform.