

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC APPLICATION OF DUKE ENERGY)
KENTUCKY, INC. FOR A CERTIFICATE OF)
PUBLIC CONVENIENCE AND NECESSITY TO)
CONVERT ITS WET FLUE GAS)
DESULFURIZATION SYSTEM FROM A)
QUICKLIME REAGENT PROCESS TO A)
LIMESTONE REAGENT HANDLING SYSTEM AT)
ITS EAST BEND GENERATING STATION AND)
FOR APPROVAL TO AMEND ITS)
ENVIRONMENTAL COMPLIANCE PLAN FOR)
RECOVERY BY ENVIRONMENTAL SURCHARGE)
MECHANISM)

CASE NO.
2025-00002

PUBLIC REBUTTAL TESTIMONY OF

JOHN A. VERDERAME

ON BEHALF OF

DUKE ENERGY KENTUCKY, INC.

April 30, 2025

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ATTACHMENT:

Attachment JAV-Rebuttal-1 CONFIDENTIAL EAB Limestone Conversion Mean Costs

I. INTRODUCTION AND PURPOSE

1 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 My name is John A. Verderame, and my business address is 525 South Tryon
3 Street, Charlotte, North Carolina 28202.

4 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

5 A. I am employed by Duke Energy Progress, LLC (Duke Energy Progress), as Vice
6 President, Fuels & Systems Optimization for Duke Energy Corporation (Duke
7 Energy). Duke Energy Progress is a public utility that is an affiliate of Duke Energy
8 Ohio, Inc. (Duke Energy Ohio or the Company), both of which are subsidiaries of
9 Duke Energy Corporation (Duke Energy).

10 **Q. ARE YOU THE SAME JOHN A. VERDERAME THAT FILED DIRECT**
11 **TESTIMONY IN THIS PROCEEDING?**

12 A. Yes.

13 **Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY IN THIS**
14 **PROCEEDINGS?**

15 A. The purpose of my rebuttal testimony is to address specific recommendations and
16 claims made by the Sierra Club in the Direct Testimony of its witness, Dr. Ranajit
17 Sahu filed March 28, 2025, and explain why the Company's Limestone Conversion
18 proposal is in the best interests of customers and should be approved. In doing so,
19 I provide an update on the recent additional negotiations that have occurred since
20 the Company filed its Application in this proceeding.

II. DISCUSSION

1 **Q. PLEASE SUMMARIZE DR. SAHU’S MARCH 28, 2025 TESTIMONY AND**
2 **RECOMMENDATIONS.**

3 A. Dr. Sahu continues to recommend that the Commission deny the Company’s
4 application to convert the lime handling system to a lime-stone based handling
5 system. Dr. Sahu continues to claim that East Bend does not need to do anything to
6 comply with the Mercury Air Toxics Standard (MATS) rule update based upon the
7 United States Environmental Protection Agency (USEPA) not including East Bend
8 on the USEPA’s list of generating units it thinks would need to upgrade emission
9 controls. Dr. Sahu also claims that based upon the USEPA’s March 12, 2025,
10 announcement that it would reconsider MATS, that the Company cannot justify
11 MATS compliance as a reason to complete its Limestone Conversion project.
12 Finally, Dr. Sahu cites to the Company’s response to Staff-DR-02-003 where it
13 disclosed that its current magnesium enhanced lime (MEL) supplier has made a
14 subsequent and new offer to provide MEL for a longer term and at a lower price to
15 support his position that the Commission should deny the Company’s Application.

16 Company witness Julie Walters addresses Dr. Sahu’s claims regarding the
17 applicability of environmental regulations and the Company’s ability and need to
18 comply therewith. My testimony focuses on the status of lime supply negotiations.

1 **Q. PLEASE PROVIDE A BRIEF SUMMARY AND STATUS UPDATE OF THE**
2 **COMPANY’S CURRENT LIME REAGENT CONTRACT AND**
3 **POTENTIAL FOR A NEW LIME SUPPLY?**

4 A. As I explained in my Direct Testimony submitted on January 29, 2025, the
5 Company’s current contract was executed through a public request for proposal
6 (RFP) issued in 2023 for the MEL product. As a result of that RFP, in 2023, the
7 Company reached an interim agreement, but at more than double the price of the
8 prior two-year contract. The Company attempted to negotiate a longer-term supply
9 contract at a more reasonable price, but at that time, the supplier was unwilling to
10 do so, citing market prices and demand from other industries, including steel
11 production and lithium battery production, as the primary driver for its cost
12 increases and unwillingness to enter into a longer-term arrangement.

13 Then, in early September 2024, the current MEL supplier became aware of
14 the Company’s CPCN application to convert to a limestone-based reagent handling
15 process and contacted the Company, indicating that it was now willing to consider
16 the possibility of a longer-term MEL supply contract and potentially more
17 competitive pricing options. As a prudent operator, it was in the best interest of
18 customers to reopen discussions. Between mid-September into October, my team
19 met with the supplier to discuss potential commercial terms as both alternatives to,
20 and in conjunction with, a Limestone Conversion if approved by the Commission.

21 These secondary negotiations resulted in an offer from the current MEL
22 supplier that included a [REDACTED]

23 [REDACTED]

1 [REDACTED]
2 [REDACTED]
3 [REDACTED]
4 [REDACTED]
5 [REDACTED]
6 [REDACTED]
7 [REDACTED]
8 [REDACTED]
9 [REDACTED]
10 [REDACTED]
11 [REDACTED]
12 [REDACTED]
13 [REDACTED]
14 [REDACTED]. Based on the Company's economic analysis and
15 considering the risks from the unresolved Contract Terms, pursuing the Limestone
16 Conversion remained the best and least cost option for customers and that contract
17 was not signed. That September 2024 offer has since been withdrawn and replaced
18 with subsequent negotiations that I will explain below.
19 Recently, on March 13, 2025, the current MEL supplier reached out to me
20 and a member of my team with a new offer with a longer term and at an even lower
21 price, in an effort to alter the economics of the Company's Limestone Conversion
22 analysis. The primary commercial terms of their new offer are as follows:
23 [REDACTED]
24 [REDACTED]

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[REDACTED]

One of the Contract Terms includes a provision that [REDACTED]

[REDACTED]

[REDACTED]. The Company

continues to evaluate this new proposal in order to negotiate acceptable Contract Terms that more appropriately and reasonably balance risks between customers and the supplier. Any final contract must appropriately and reasonably balance these risks throughout the contract’s duration. As of the date of the filing of this testimony, the Company and the supplier have not yet executed an agreement.

While the new commercial terms are more favorable compared to the prior offers, cost and duration risks are only two of the reasons the Company sought to convert to a limestone handling system. Although as part of this new offer, the supplier is agreeing [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]. Unless a new MEL source

1 becomes available, the ability to operate the unit in compliance with applicable
2 regulations becomes questionable and the Company would have to meet demand
3 through market purchases until a long-term supply of replacement generation can
4 be procured.

5 **Q. HAS THE COMPANY UPDATED ITS ANALYSIS OF ALTERNATIVE**
6 **COMPLIANCE OPTIONS WITH THIS NEW CONTRACT**
7 **INFORMATION? PLEASE EXPLAIN.**

8 A. Yes, the Company has updated its stochastic production cost model to account for
9 the lower proposed MEL price if the Company and supplier are able to reach
10 agreement on Contract Terms and execute a final agreement. With the lower MEL
11 product cost and longer contract duration, the projected fuel and purchase power
12 cost savings of the proposed Limestone Conversion have declined considerably.
13 While on average the Limestone Conversion continues to maintain a marginal
14 economic advantage when evaluated solely from an economic dispatch perspective,
15 the more immediate reduction in MEL and quicklime reagent expense in the new
16 and most recent offer positively impacts East Bend's ability to competitively
17 dispatch into the PJM energy market. When factoring in maintaining the status quo
18 of a MEL-based reagent system and avoiding the capital costs of the full Limestone
19 Conversion and depreciation costs, on a pure economic basis, the new contract
20 provides a net benefit to customers over the term of the proposed contract. See
21 Confidential Attachment JAV-Rebuttal-1.

1 **Q. DOES THE ANALYSIS INDICATE THAT THE POSSIBILITY OF A**
2 **LOWER COST LONGER-TERM CONTRACT WILL OBVIATE THE**
3 **NEED FOR THIS CPCN?**

4 A. Based solely upon price and duration, and ignoring all other risks and reasons for
5 pursuing the Limestone Conversion, yes. However, pricing and duration alone are
6 insufficient to justify withdrawing the Limestone Conversion proposal. Reasonable
7 Contract Terms are necessary for this to be in customers' best interest. The
8 Company cannot make its decision in a vacuum, ignoring all the impacts and risks
9 of maintaining its MEL handling system.

10 While this newly proposed contract price and duration is more favorable
11 than the previous commercial terms presented by the supplier, without resolving
12 the Contract Terms, the Company cannot say that this new offer is truly the least
13 *cost and most reasonable* option for customers.

14 **Q. DO YOU AGREE WITH DR. SHAU'S POSITION THAT A LONGER-**
15 **TERM CONTRACT NEGATES THE NEED FOR THE LIMESTONE**
16 **CONVERSION¹?**

17 A. No. As I explained above, while the new offer is more favorable in price and
18 duration than the previous terms presented by the supplier, until other risks are
19 properly addressed, the need for the conversion is not negated. [REDACTED]

20 [REDACTED]

21 [REDACTED]. The lack of a functioning
22 competitive market for the MEL [REDACTED]

¹ Direct Testimony of Dr. Ranajit Sahu, at 11.

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[REDACTED]

**Q. DO THE RECENT EXECUTIVE ORDERS REGARDING COAL FIRED
GENERATION AND POTENTIAL REPEAL OF THE CLEAN AIR ACT
(CAA) 111(D) UPDATE AND THE 2024 MATS UPDATE SUPPORT
MAINTAINING THE STATUS QUO AND NOT COMPLETING THE
LIMESTONE CONVERSION?**

A. No. From the outset, the primary reason supporting the Limestone Conversion was the increasing costs of compliance with existing environmental regulations because of rising MEL costs. While the US Environmental Protection Agency (EPA) has indicated that the 111d update and 2024 MATS update are under review, no definitive action has occurred, and those regulations remain the law. Additionally, even if a theoretical rollback of these regulations occurs, the prior regulations under the CAA will remain. This means East Bend will be required to continue operating its scrubber and a cost-effective reagent handling process for the life of the plant will continue to be necessary and in customer best interests. The Company cannot predict what the MEL market could look like beyond the newly proposed contract terms.

1 **Q. CAN THE COMPANY JUST WAIT AND SEE WHAT HAPPENS WITH**
2 **RESPECT TO THE FEDERAL ENVIRONMENTAL POLICY AND THEN**
3 **MAKE ITS DECISION WHETHER TO PURSUE A LIMESTONE**
4 **CONVERSION IN THE FUTURE?**

5 A. Unfortunately, no. First, the most recent offer is [REDACTED]
6 [REDACTED]
7 [REDACTED]
8 [REDACTED]. So, unless the Company agrees to the new offer, the price
9 for the MEL will continue to reflect the current “market” price [REDACTED]. So, the
10 lower price, longer-term offer, is not available unless the Company [REDACTED]
11 [REDACTED]

III. CONCLUSION

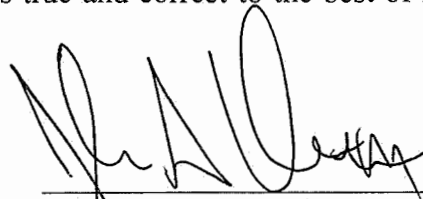
12 **Q. DOES THIS CONCLUDE YOUR PRE-FILED REBUTTAL TESTIMONY?**

13 A. Yes.

VERIFICATION

STATE OF NORTH CAROLINA)
) SS:
COUNTY OF MECKLENBURG)

The undersigned, John Verderame, VP Fuels & Systems Optimization, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing rebuttal testimony and that it is true and correct to the best of his knowledge, information and belief.



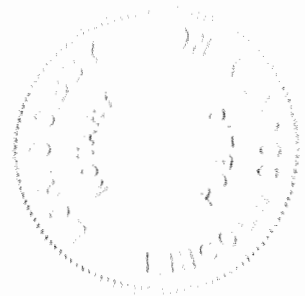
John Verderame, Affiant

Subscribed and sworn to before me by John Verderame on this 28 day of April, 2025.



NOTARY PUBLIC

My Commission Expires: Nov. 16, 2027



**CONFIDENTIAL PROPRIETARY TRADE
SECRET**

**CONFIDENTIAL
ATTACHMENT JAV-Rebuttal-1**

FILED UNDER SEAL