KyPSC Case No. 2025-00281
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VERIFICATION

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

The undersigned, John A. Verderame, Senior Vice President, Fuels & Systems, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing data requests, and that the answers contained therein are true and correct to the best of his knowledge, information, and belief.

John A. Verderame, Affiant

Subscribed and sworn to before me John A. Verderame on this 25th day of November, 2025.

NOTARY PUBLIC

My Commission Expires:

SHAMELL M WILSON
My Comm. Expires
NOTARY PUBLIC
July 06, 2026
MECKLENBURG COUNTY, NC

VERIFICATION

STATE OF OHIO)
) **SS:**
COUNTY OF HAMILTON)

The undersigned, Chad M. Donner, Manager Generation, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing data requests, and that the answers contained therein are true and correct to the best of his knowledge, information, and belief.

Chad M. Donner, Affiant

Subscribed and sworn to before me by Chad M. Donner on this 21st day of November, 2025.

NOTARY PUBLIC

My Commission Expires: July 8, 2027

EMILIE SUNDERMAN
Notary Public
State of Ohio
My Comm. Expires
July 8, 2027

VERIFICATION

STATE OF OHIO)
) **SS:**
COUNTY OF HAMILTON)

The undersigned, Sarah E. Lawler, VP Rates & Regulatory Strategy, being duly sworn, deposes and says that she has personal knowledge of the matters set forth in the foregoing data requests, and that the answers contained therein are true and correct to the best of her knowledge, information and belief.

Sarah E. Lawler, Affiant

Subscribed and sworn to before me by Sarah E. Lawler on this 25th day of November, 2025.

NOTARY PUBLIC

My Commission Expires: July 8, 2027

EMILIE SUNDERMAN
Notary Public
State of Ohio
My Comm. Expires
July 8, 2027

VERIFICATION

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

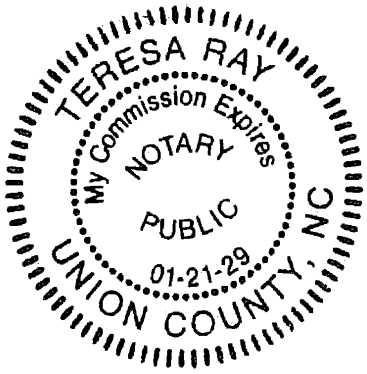
The undersigned, Sharif S. Mitchell, Manager Accounting, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing data requests, and that the information contained therein is true and correct to the best of his knowledge, information, and belief.

Sharif S. Mitchell, Affiant

Subscribed and sworn to before me by Sharif S. Mitchell on this 24th day of November, 2025.

NOTARY PUBLIC

My Commission Expires: 01/21/29



Duke Energy Kentucky
Case No. 2025-00281
STAFF Second Request for Information
Date Received: November 18, 2025

PUBLIC STAFF-DR-02-001

REQUEST:

Refer to Duke Kentucky's Response to Commission Staff's First Request for Information (Staff's First Request), Item 4a and STAFF-DR-01-004(a) CONF Attachment.

a. Refer to the tab labeled "Notes," which references three studies. For each of the three studies, explain the basis for the study and the assumptions, and the scenario in which the study would materialize.

b. Provide a narrative description of each of the analyses performed in the workbook, as well as the results of each analysis.

c. Explain whether the least-cost analysis took into account the approximate $6 million in expenses for the Limestone Conversion Project Certificate of Public Convenience and Necessity (CPCN) Applications. If not, provide the support and/or least-cost analysis performed by Duke Kentucky in determining the longer-term contract and, in turn, withdrawing the CPCN Application was the least-cost option.

RESPONSE:

CONFIDENTIAL PROPRIETARY TRADE SECRET

a. The "Notes" tab references three studies. These studies are the identifiers used to designate each production cost model run completed to evaluate the projected fuel and purchase power cost of each alternative.

- Study 18553 is the MEL Lime product priced at [redacted] escalating at [redacted] annually. This study evaluated the projected fuel and purchase power costs

of the final proposed longer-term contract.

- Study 18552 is the Limestone product priced at [redacted] escalating at [redacted] annually. This study evaluated the projected fuel and purchase power costs of the proposed limestone conversion project and was not inclusive of the $125.8 million in capital costs needed for the actual conversion project.
- Study 18387 is the MEL Lime product priced at [redacted] with greater than [redacted] escalation. This study evaluated the projected fuel and purchase power costs of the existing contract at the time the limestone conversion CPCN Application was submitted.

b. In STAFF-DR-01-004(a) Confidential Attachment, comparisons of production cost modeling of the two scenarios (Study 18553 versus Study 18522) showed on average a potential 17% increase in capacity factor in the limestone scenario for the 2028 through 2029 period, which translated to total average additional generation in the limestone case of ~600 GWh over the two-year period (see Generation & Capacity tab). The cost to serve the Duke Energy Kentucky customer load was reduced by a projected annual average amount of $3.0 million per year in fuel and purchase power, and $8.8 million in reagent costs from 2028 through 2029 (see DEK Cost Break-down tab), with an additional annual average of approximately $400 thousand of non-native off-system sales margin (see Off-System Sales tab) projected in the same period, for a total projected annual savings of $12.2 million per year. The system average fuel rate (exclusive of reagents) in the 2028 through 2029 period was projected to decline $0.72/MWh annually (see Native Fuel Cost Impact tab), primarily due to the projected reduction in PJM purchase volumes.

In STAFF-DR-02-001(b) Confidential Attachment, comparisons of production cost modeling of the two scenarios in the original model runs, Study 18387 versus Study 18386, (Study 18552 in the later run) showed on average a potential 38% increase in capacity factor in the limestone scenario for the 2028 through 2029 period with the relative benefit increasing over time due to escalating quicklime costs (and subsequent reduction in dispatch) in the no action scenario. This translates to total average additional generation in the limestone case of ~1300 GWh over the two-year period (see Generation and Capacity tab). Overall modeled economics are favorable, with the cost to serve the Duke Energy Kentucky customer load projected to decrease by an annual average amount of $6.1 million per year in fuel and purchase power, and $18.4 million in reagent costs from 2028 through 2029 (see DEK Cost Break-down tab) with an additional approximate $3.2 million of annual non-native off-system sales margin in the same period (see Off-System Sales tab), for a total annual savings of $27.7 million per year. The system average fuel rate (exclusive of reagents) in the 2028 through 2029 period was projected to decline $1.28/MWh annually (see Native Fuel Cost Impact tab), primarily due to the projected reduction in PJM purchase volumes.

All of the production cost modeling done by Duke Energy Kentucky was conducted using the PowerSimm stochastic modeling software as this is the same model used by Duke Energy Kentucky to forecast East Bend's position and costs over the mid-term planning horizon i.e., next month through the next five years. Therefore, Duke Energy Kentucky found it to be the most reasonable model to use in evaluating the alternative impacts to the Company's FAC and ESM on a similar five-year time horizon.

c. The approximate $6 million in capital expenses incurred in preparation of filing the Limestone Conversion Project CPCN was included in the total estimated $125.8 million capital costs of the Limestone Conversion Project. As discussed above in Company's response to STAFF-02-001(a) the production cost modeling was to evaluate the projected fuel and purchase power costs of the proposed lime contract (Study 18553), the existing lime contract (Study 18387), and the proposed limestone conversion project (Study 18552) from an economic dispatch perspective. Finally, as discussed in the Company's response to STAFF-01-004 while on average the Limestone Conversion continued to maintain a marginal economic advantage when evaluated solely from an economic dispatch perspective, the more immediate reduction in MEL and quicklime reagent expense in the new longer-term contract positively impacted East Bend's ability to competitively dispatch into the PJM energy market. Therefore, when factoring in maintaining the status quo of a MEL-based reagent system and avoiding the remaining estimated $119.8 million ($125.8 million minus $6 million) in expected capital costs of the full Limestone Conversion project, the new MEL long-term supply contract was the least cost, most reasonable solution for customers.

PERSON RESPONSIBLE: John A. Verderame

CONFIDENTIAL INFORMATION

CONFIDENTIAL ATTACHMENT
STAFF's DR-02-001(b) Attachment

FILED UNDER SEAL

Duke Energy Kentucky
Case No. 2025-00281
STAFF Second Request for Information
Date Received: November 18, 2025

STAFF-DR-02-002

REQUEST:

Quantify the total cost-savings projected to be secured by choosing to move forward with the magnesium enhanced hydrated lime (MEL) Supplier contract rather than the Limestone Conversion Project.

RESPONSE:

In its original cost benefit calculation for the Limestone Conversion Project, Duke Energy Kentucky considered the total estimated Limestone Conversion Project costs of $125.8 million against an estimated $166.1 million in potential penalties, capacity and energy replacement costs and lost margins should East Bend have become unavailable and inoperable due to a lack of the MEL reagent given Duke Energy Kentucky's status as a Fixed Resource Requirement (FRR) participant in the PJM Interconnection LLC (PJM) Reliability Pricing Model (RPM) construct. As an FRR participant through the 2026/2027 Planning Year, if the station were to become unable to comply with environmental regulations, it would have been unable to be operated and therefore unusable as a supply resource for customers, or to satisfy the Company's FRR plan. In such a situation, the Company would face capacity replacement costs and deficiency penalties related to its FRR Plan, until the Company's transition to participation in PJM's Base Residual Auction (BRA) and Incremental Auction constructs (IA) in the 2027/2028 Planning Year. Additionally, customers would be unhedged against the wholesale capacity and energy markets until the necessary investments to reinstate East Bend or construct new base-load

generation could be made. This means there are no sales to offset the costs of participating in the wholesale capacity and energy markets. Additionally, if the unit had been committed as a capacity resource in a planning year and became unavailable due to a lack of MEL reagent, either before or after Duke Energy Kentucky transitions to RPM for the 2027/2028 planning year, customers would be exposed to potential capacity performance assessments.

As stated, in the hypothetical situation that as an FRR participant, East Bend were to become immediately unable to operate due to lack of availability of the MEL product, the Company would have to shut down the unit and attempt to replace it with unit-specific capacity in the Company's PJM delivery zone (with uncertainty regarding availability of such capacity) and would be subject to the FRR plan deficiency penalty until the Company is able to transition to full participation in the RPM's BRA and IA constructs.

Even assuming it would have still be economically possible to bring back East Bend and pursue the Limestone Conversion in the future, such a conversion will still take time to complete, exposing customers to more unmitigated wholesale market costs. It was estimated that for the approximate three-year period necessary to then complete the limestone conversion project, from the start of the CPCN process to project completion, the Company would be deficient by approximately 500 MW a year, equal to the 600 MW East Bend rating multiplied by the unit's 0.83[1] Effective Load Carrying Capability (ELCC) value.

Using this three-year project timeline, the new total capacity and energy impact due to potential unavailability of East Bend over the three-year period is $262.7 million. Of this amount, the capacity-related deficiency penalty (first year impact) and estimated replacement capacity costs (second- and third-year impact) is approximately $215.4

[1] The ELCC Class Rating for a coal unit changed to 83% for the 2027/2028 BRA.

million. Assuming the first PJM Delivery Year that the unit would be unavailable is 2026/2027, and replacement unit-specific capacity could not be found, Duke Energy Kentucky would incur a FRR Deficiency Penalty equal to the shortfall amount multiplied by the greater of either the Gross Cost of New Entry (CONE) or 1.75 multiplied by Net CONE. Using the current Gross CONE of $518.44/MW-Day (UCAP Price) since it is currently the greater, the estimated penalty for the first PJM Delivery Year would be $94.2 million.[2] For the second and third year capacity impacts, since Duke Energy Kentucky would no longer be a FRR capacity participant and would be participating in the RPM auction construct, the estimated impact is $60.6 million[3] per year. Note that for the calculation of the replacement capacity purchase cost, PJM capacity market clearing prices were assumed to clear at the current PJM "cap price" for both years of $333.44/MW-Day. Thus, the three-year capacity impact total was calculated to be $94.2 million plus $60.6 million plus $60.6 million, or $215.4 million.

Through the carefully negotiated and highly favorable contract terms, Duke Energy Kentucky was able to address the Company's supply concerns and reasons for pursuing the Limestone Conversion investment, for at least the foreseeable future. Most importantly with the lower MEL product cost and longer-term contract duration and with the additional supply protection compared to what has been experienced and available over the last several years the risk of East Bend becoming unavailable and inoperable due to a lack of the MEL reagent over the foreseeable future was removed from consideration reducing the estimated $262.7 million in potential penalties, capacity and energy replacement costs and

[2] Penalty = 600 MW x .83 (ELCC Class Rating) x $518.44/MW-Day x 365 days

[3] Replacement Capacity = 600 MW x .83 (ELCC Class Rating) x $333.44/MW-Day x 365 days

lost margins to $0.

Furthermore, as discussed in the Company's response to STAFF-DR-02-001, the Limestone Conversion maintained only a marginal economic advantage when evaluated solely from an economic dispatch perspective, as the more immediate reduction in MEL and quicklime reagent expense in the new longer-term contract positively impacted East Bend's ability to competitively dispatch into the PJM energy market. Therefore, when factoring in maintaining the status quo of a MEL-based reagent system and avoiding the remaining estimated $119.8 million ($125.8 million minus $6 million) in expected capital costs of the full Limestone Conversion project, the new MEL long-term supply contract was the least cost, most reasonable solution for customers.

Based upon the economics of the new and unexpected MEL contract opportunity, the new contract provides a net benefit to customers over the term of the contract versus the remaining estimated $119.8 million Limestone Conversion investment. This contract opportunity fundamentally changed the economics supporting the Limestone Conversion during the new and expanded contract term and was only available if the Company withdrew its Limestone Conversion proposal and did not pursue a similar project to cease using MEL during the new contract term. The fact that the contract conditions the favorable new terms in part on the Company's withdrawal of this Application demonstrates that the Company's filing and pursuit of the Application to this point benefited customers. Given the protections the Company successfully negotiated, the Company believed and continues to believe that this is an acceptable and reasonable resolution of issues that produced the least cost, most reasonable solution to customers over the expanded contract term.

PERSON RESPONSIBLE: John Verderame

Duke Energy Kentucky
Case No. 2025-00281
STAFF Second Request for Information
Date Received: November 18, 2025

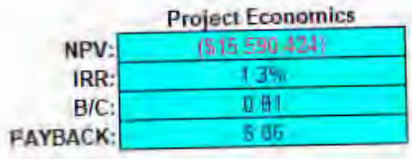
STAFF-DR-02-003

REQUEST:

Provide the present value revenue requirement (PVRR) (on an absolute and relative basis) for the Limestone Conversion Project compared to the option of choosing the MEL Supplier contract.

RESPONSE:

See below for the net present value of the Limestone Conversion Project compared to the final lower cost longer-term MEL Supplier contract. The Limestone conversion would result in an approximate $15.6 million cost to customers.



Project Economics	
NPV:	($15,590,424)
IRR:	1.3%
B/C:	0.81
PAYBACK:	5.05

PERSON RESPONSIBLE: John Verderame
Chad Donner

Duke Energy Kentucky
Case No. 2025-00281
STAFF Second Request for Information
Date Received: November 18, 2025

STAFF-DR-02-004

REQUEST:

Refer to Application, paragraph 21a.

a. Explain how Duke Kentucky would have financed the CPCN if approved, including application expenses.

b. Explain why the planned financing for the CPCN is no longer an option to cover application expenses for Duke Kentucky.

RESPONSE:

a. Per the Direct Testimony of Sarah E. Lawler in Case No. 2025-00002, Duke Energy Kentucky expected to finance the costs of construction through continuing operations and, if necessary, through debt issuances. The mix of debt and equity used to finance the project would have been determined to allow Duke Energy Kentucky to maintain its investment-grade credit rating. Importantly, the Company had requested to recover the costs of constructing the limestone CPCN through an amendment to its environmental compliance plan and incorporation into the Environmental Surcharge Mechanism. The recovery of costs is separate from the financing of the project.

b. The financing plan for the application expenses is the same as stated in Case No. 2025-0002, which is generally the Company's financing strategy for all costs recovered from customers. The Company is requesting regulatory asset treatment for these costs because they were prudently incurred and are reasonable for recovery in order to protect the Company from financial harm by having to write off to its income statement.

The financing plan enables the Company to have the monies to pay for the costs at the time the payments need to be made. This is a separate issue from how costs are recovered from customers and does not mitigate the financial impacts related to the recovery of the costs. The treatment of the costs incurred must still be addressed, which is why the Company has filed this application requesting a regulatory asset. If the conversion project had proceeded as originally intended, the engineering, etc., costs of the CPCN application would be capitalized for recovery through the Rider ESM. Because the CPCN was withdrawn, because it was determined that the revised pricing of maintaining the current lime reagent handling process was a lower cost alternative for customers, the costs that had been incurred for the engineering/design/ etc., for the conversion can no longer be capitalized.

PERSON RESPONSIBLE: Sarah E. Lawler

Duke Energy Kentucky
Case No. 2025-00281
STAFF Second Request for Information
Date Received: November 18, 2025

STAFF-DR-02-005

REQUEST:

Refer to Duke Kentucky's response to Staff's First Request, Item 1.

a. Provide the general ledger for all accounts, which highlights the breakdown of each expense associated with the expenses Duke Kentucky proposed to defer in the Application filed on July 25, 2024. Provide the requested information in Excel spreadsheet format, with all formulas, columns, and rows unprotected and fully accessible.

b. Provide the general ledger, for all accounts, which highlights a breakdown of each expense associated with the expenses Duke Kentucky proposed to defer for the Application filed on January 28, 2025. Provide the requested information in Excel spreadsheet format, with all formulas, columns, and rows unprotected and fully accessible.

RESPONSE:

a. The costs that the company is requesting deferral treatment for in this proceeding were the actual expenses incurred related to the CPCN filings for the Limestone Conversion Project in Case No. 2024-00152, Application filed July 25, 2024 and Case No. 2025-0002, Application filed January 28, 2025. The actual expenses were included in a CWIP and RWIP balance that would have ultimately been included in the final capital project costs of the Limestone Conversion Project if that project had been executed. The CWIP general ledger account is 107000 and the RWIP general ledger account is 108620. Please see STAFF-DR-02-005 Attachment for the general ledger report for this project.

b. Please see response to (a) above.

PERSON RESPONSIBLE: Sharif Mitchell

Account	Charge Type	Amount
0107000 - SCHM Cwip	11000 - Labor	408,933
0107000 - SCHM Cwip	13000 - Exempt Supplemental	4,087
0107000 - SCHM Cwip	18000 - Labor Overhead Allocations	72
0107000 - SCHM Cwip	18001 - Unproductive Labor Allocated	70,283
0107000 - SCHM Cwip	18250 - Allocated Payroll Tax	40,019
0107000 - SCHM Cwip	18350 - Allocated Fringes & Non Union	138,448
0107000 - SCHM Cwip	18400 - Incentives Allocated	60,302
0107000 - SCHM Cwip	19500 - Service Company Overhead	113,518
0107000 - SCHM Cwip	1E002 - Exec Short Term Incent	6,615
0107000 - SCHM Cwip	1E200 - Restricted Stock Units	13,137
0107000 - SCHM Cwip	28002 - Stores Loading	319
0107000 - SCHM Cwip	30000 - Direct Purchases	732
0107000 - SCHM Cwip	31000 - Direct Material Purchases	3,417
0107000 - SCHM Cwip	35000 - Direct Mat/Purchases Accrual	480
0107000 - SCHM Cwip	36001 - IT Software Purchase	3,869
0107000 - SCHM Cwip	40000 - Travel Expenses	11,314
0107000 - SCHM Cwip	40001 - Air Travel Cost	11,822
0107000 - SCHM Cwip	40004 - Per Diem	2,040
0107000 - SCHM Cwip	40007 - PersMobileDevice reimbursement	540
0107000 - SCHM Cwip	41000 - Meals and Entertainment (50%)	1,269
0107000 - SCHM Cwip	42000 - Personal Vehicle Mileage Reimb	6,740
0107000 - SCHM Cwip	44000 - Moving Expense	12,229
0107000 - SCHM Cwip	49002 - Dues - Deductible	184
0107000 - SCHM Cwip	66001 - Telephone/Communications	50
0107000 - SCHM Cwip	69000 - Staff Augmentation	17,262
0107000 - SCHM Cwip	69100 - Baseload Contract Labor	241,746
0107000 - SCHM Cwip	69110 - Security	1,806
0107000 - SCHM Cwip	69400 - Turnkey Service Contract Labor	3,280,560
0107000 - SCHM Cwip	69500 - Other Contracts	47,912
0107000 - SCHM Cwip	78000 - Allocated S&E (Non-Labor)	982,580
0107000 - SCHM Cwip	99970 - AFUDC Debt	60,299
0107000 - SCHM Cwip	99971 - AFUDC Equity	152,814
0108620 - RWIP - Reg Liab	69400 - Turnkey Service Contract Labor	85,853
0108620 - RWIP - Reg Liab	78000 - Allocated S&E (Non-Labor)	180
		5,781,429.14

Duke Energy Kentucky
Case No. 2025-00281
STAFF Second Request for Information
Date Received: November 18, 2025

STAFF-DR-02-006

REQUEST:

Refer to the Application, page 20. Explain how failure to defer these costs would materially impact Duke Kentucky's financial condition.

RESPONSE:

As stated in paragraph 20 of the Application, Duke Energy Kentucky's 2024 and 2023 net income was approximately $101 million and $65 million, respectively. If the Company cannot defer these costs, they will have to incur an expense of approximately $6 million thereby reducing their net income even further than what it otherwise would have been. Based on historical experience, this would be about 6-9% of the Company's entire net income which is extremely material to the Company's financial condition.

PERSON RESPONSIBLE: Sarah E. Lawler

Duke Energy Kentucky
Case No. 2025-00281
STAFF Second Request for Information
Date Received: November 18, 2025

STAFF-DR-02-007

REQUEST:

Provide the amount of regulatory expense embedded in Duke Kentucky's base rates from Case No. 2024-00354[2]. Given that the CPCN Applications were filed during Duke Kentucky's base period in that case, confirm and explain whether the CPCN Application expense was included in Duke Kentucky's forecast for regulatory expense.

RESPONSE:

The costs that the company is requesting deferral treatment for in this proceeding were not included in Duke Energy Kentucky's forecast for regulatory expenses in its most recent electric base rate case (Case No. 2024-00354). For avoidance of doubt, they were not included in any account – income statement or rate base – in the cost of service being requested in that proceeding.

At the time of filing that case and through the pendency of that case, these costs were included in a CWIP balance that would have ultimately been included in the final capital project costs of the Limestone Conversion Project if that project would have been executed. Because the project has been canceled, those costs included in CWIP on the balance sheet will have to now be expensed to the Company's income statement unless deferral authority is granted by the Commission.

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[2] **Case No. 2024-00354,** ***Electronic Application of Duke Energy Kentucky, Inc. For: 1) An Adjustment of the Electric Rates; 2) Approval of New Tariffs; 3) Approval of Accounting Practices to Establish Regulatory Assets and Liabilities; And 4) All Other Required Approvals and Relief*** **(Ky. PSC Oct. 2, 2025), Order.**

PERSON RESPONSIBLE: Sarah E. Lawler