

**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) Case No. 2024-00152
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)

**SIERRA CLUB’S RESPONSES TO DUKE ENERGY KENTUCKY’S FIRST REQUEST
FOR INFORMATION PROPOUNDED UPON THE SIERRA CLUB**

Comes now Sierra Club, responding to Duke Energy Kentucky’s first request for information propounded upon Sierra Club.

1. Other than Ms. Chelsea Hotaling and Ranajit Sahu, please identify any persons, including experts, whom Sierra Club has consulted or retained with regard to evaluating Duke Energy Kentucky’s Application in this proceeding.

Response

Sierra Club objects to this request because it seeks information within the attorney-client and work product privileges.

2. For each person identified in response to Interrogatory No. 1 above, please state:
- a. the subject matter of the discussions/consultations/evaluations.
 - b. the written opinions of such persons regarding Duke Energy Kentucky’s Application.
 - c. the facts to which each person relied upon; and
 - d. a summary of the person’s qualifications to render such discussions/consultations/evaluations.

Response

Sierra Club objects to this request because it seeks information within the attorney-client and work product privileges.

3. For each person identified in response to Interrogatory No. 1 above, please identify all proceedings in all jurisdictions in which the witness/person has offered evidence, including but not limited to, pre-filed testimony, sworn statements, and live testimony or analysis. For each response, please provide the following:

- a. the jurisdiction in which the testimony, statement, or analysis was prefiled, offered, given, or admitted into the record.
- b. the administrative agency and/or court in which the testimony, statement, or analysis was pre-filed, offered, admitted, or given.
- c. the date(s) the testimony, statement, or analysis was pre-filed, offered, admitted, or given.
- d. the identifying number for the case or proceeding in which the testimony, statement, or analysis was pre-filed, offered, admitted, or given; and
- e. whether the person was cross-examined.

Response

Sierra Club objects to this request because it seeks information within the attorney-client and work product privileges.

4. Identify and provide all documents or other evidence that Sierra Club may seek to introduce as exhibits or for purposes of witness examination in the above-captioned matter.

Response

Sierra Club objects to the extent that the request seeks documents that constitute attorney work product, or which are protected by attorney/client privilege, and to the extent they seek the disclosure of Sierra Club's mental impressions, conclusions, opinions or legal theories of its attorneys concerning this proceeding and Sierra Club's cross-examination strategy. Sierra Club objects to this request as premature and improperly requiring a responding party to marshal all its available evidence or proof in advance of an evidentiary hearing. Discovery, pre-filed rebuttal testimony, and trial preparation have not been completed..

Subject to and without waiving objections, Sierra Club offers that it may seek to introduce relevant and admissible evidence, including but not limited to records already on file in this proceeding, as exhibits or for purposes of witness examination.

5. Please identify all proceedings in all jurisdictions in the last three years in which Ms. Chelsea Hotaling has offered evidence, including but not limited to, pre-filed testimony, sworn statements, and live testimony or analysis. For each response, please provide the following:

- a. the jurisdiction in which the testimony, statement, or analysis was prefiled, offered, given, or admitted into the record.
- b. the administrative agency and/or court in which the testimony, statement, or analysis was pre-filed, offered, admitted, or given.
- c. the date(s) the testimony, statement, or analysis was pre-filed, offered, admitted, or given.
- d. the identifying number for the case or proceeding in which the testimony, statement, or analysis was pre-filed, offered, admitted, or given.
- e. whether the witness was cross-examined.
- f. the custodian of the transcripts and pre-filed testimony, statements, or analysis for each proceeding; and
- g. copies of all such testimony, statements, or analysis.

Response

Sierra Club objects to this request as unduly burdensome insofar as it seeks public information that is known to and accessible by the Company. Sierra Club objects to this request as overly broad, unduly burdensome, oppressive, and calculated to take Sierra Club, its staff, and its experts away from normal work activities, and require them to expend significant resources to provide complete and accurate answers to Duke’s request, which is only of marginal value to Duke. Sierra Club objects to this request as irrelevant and not reasonably calculated to lead to the discovery of admissible evidence, because other utilities’ decisions and practices are not at issue in this proceeding. Sierra Club also objects to this request as overbroad and unduly burdensome to the extent it requests documents, including but not limited to work for prior employers, that are not in the possession or control of Sierra Club or Ms. Hotaling, and information already available to Duke, as Ms. Hotaling has already provided her CV. Subject to and without waiving objection, Sierra Club responds as follows.

Response to subparts a, b, d, e, f

Please refer to Exhibit CH-1, Ms. Hotaling’s Resume, and the following table.

Case	Jurisdiction/ Custodian	Case/Docket Number	Cross-Examination
AEP (APCo and WPCo) ENEC	West Virginia Public Service Commission	24-0413-E-ENEC	Testimony Filed Cross Examined

Georgia Power IRP	Georgia Public Service Commission	55378	Testimony Filed Cross Examined
MonPower ENEC	West Virginia Public Service Commission	23-0735-E-ENEC	Testimony Filed No Cross Examination
Santee Cooper IRP	South Carolina Utilities Commission	2023-154-E	Testimony Filed Cross Examined
DESC IRP	South Carolina Utilities Commission	2023-9-E	Testimony Filed Cross Examined
DTE IRP	Michigan Public Service Commission	U-21193	Testimony Filed No Cross Examination
Ebon Contract	Kentucky Public Service Commission	2022-00387	Testimony Filed No Cross Examination
Bitiki Contract	Kentucky Public Service Commission	2022-00371	Testimony Filed No Cross Examination
MidAmerican IRP	Iowa Utilities Commission	RPU-2022-0001	Testimony Filed Cross Examined
I&M IRP	Michigan Public Service Commission	U-21189	Testimony Filed No Cross Examination
Consumers IRP	Michigan Public Service Commission	U-21090	Testimony Filed No Cross Examination
PSCo ERP	Colorado Public Utilities Commission	21A-0141E	Testimony Filed No Cross Examination

Response to subpart c and g

Please see links below for copies of the public versions of Ms. Hotaling’s filed testimony in each jurisdiction outlined in the table above.

[DEK-DR-02-5G Attachment 1A Hotaling Testimony AEP](#) (July 22, 2024)

[DEK-DR-02-5G Attachment 1B Hotaling Rebuttal Testimony AEP](#) (Aug. 5, 2024)

[DEK-DR-02-5G Attachment 2 Hotaling Testimony GA Power](#) (Feb. 15, 2024)
[DEK-DR-02-5G Attachment 3 Hotaling Testimony MonPower](#) (Nov. 13, 2023)
[DEK-DR-02-5G Attachment 4A Hotaling Direct Testimony Santee Cooper](#) (Sept. 22, 2023)
[DEK-DR--02-5G Attachment 4B Hotaling Surrebuttal Testimony Santee Cooper](#) (Nov. 17, 2023)
[DEK-DR-02-5G Attachment 5 Hotaling Surrebuttal Testimony DESC](#) (Aug. 15, 2023)
[DEK-DR-02-5G Attachment 6 Hotaling Testimony DTE](#) (Mar. 9, 2023)
[DEK-DR-02-5G Attachment 7 Hotaling Testimony Ebon](#) (Feb. 8, 2023)
[DEK-DR-02-5G Attachment 8 Hotaling Testimony Bitiki](#) (Jan. 17, 2023)
[DEK-DR-02-5G Attachment 9 Hotaling Testimony MidAmerican](#) (Nov. 21, 2022)
[DEK-DR-02-5G Attachment 10 Hotaling Testimony I&M Michigan](#) (July 6, 2022)
[DEK-DR-02-5G Attachment 11 Hotaling Testimony Consumers Energy](#) (Oct. 28, 2021)
[DEK-DR-02-5G Attachment 12 Hotaling Answer Testimony PSCo ERP](#) (Nov. 19, 2020)

6. Please provide copies of any and all documents, analysis, summaries, white papers, work papers, spreadsheets (electronic versions with cells intact), including drafts thereof, as well as any underlying supporting materials created by Ms. Hotaling as part of her evaluation of Duke Energy Kentucky's Application or used in the creation of Ms. Hotaling's testimony.

Response

Sierra Club objects to the extent that the request seeks documents that constitute attorney work product, or which are protected by attorney/client privilege, and to the extent they seek the disclosure of Sierra Club's mental impressions, conclusions, opinions or legal theories of its attorneys concerning this proceeding. Subject to and without waiving objection, please see Confidential Attachment 1.

7. Please provide copies of any and all documents not created by Ms. Hotaling, including but not limited to, analysis, articles, books, summaries, cases, reports, and evaluations, that Ms. Hotaling relied upon, referred to, or used in the development of her testimony.

Response

Sierra Club objects as Ms. Hotaling's Testimony speaks for itself. Subject to and without waiving said objection, Ms. Hotaling referred to testimony, filings, and discovery responses submitted within this proceeding and Case No. 2024-00197.

8. Please provide any and all studies, analysis, and presentations that Ms. Hotaling has created or publicly made within the last three years that involve any of the following: utility regulation, ratemaking, depreciation, fossil-fueled electric generation retirements, environmental compliance for coal-fired generating units, or lime-based reagent processes, conversion of coal units to natural gas, and impacts of the updated Clean Air Act Section 111 rules.

Response

Sierra Club objects to this request as unduly burdensome insofar as it seeks public information that is known to and accessible by the Company. Sierra Club objects to this request as overly broad, unduly burdensome, oppressive, and calculated to take Sierra Club, its staff, and its experts away from normal work activities, and require them to expend significant resources to provide complete and accurate answers to Duke's request, which is only of marginal value to Duke. Sierra Club objects to this request as irrelevant and not reasonably calculated to lead to the discovery of admissible evidence, because other utilities' decisions and practices are not at issue in this proceeding. Sierra Club also objects to this request as overbroad and unduly burdensome to the extent it requests documents, including but not limited to work for prior employers, that are not in the possession or control of Sierra Club or Ms. Hotaling, and information already available to Duke, as Ms. Hotaling has already provided her CV. Subject to and without waiving objection, Sierra Club responds as follows.

Please see Exhibit CH-1 and the above-response to question 5. The table below provides an overview of the IRP comments and studies or analysis that Ms. Hotaling has been involved with over the last three years. Please note that IRPs filed in Indiana are not docketed proceedings and the IRPs with docket/case numbers are formal proceedings with formal comments, but not testimony. The links to public versions of the studies/comments are provided following the table.

Project/Analysis	Docket/Case (If Applicable)	Jurisdiction	Ms. Hotaling's Role
Gridlab Moonshot Study	-	New Mexico	Performed the EnCompass capacity expansion and production cost modeling
KU/LG&E IRP	2021-00393	Kentucky	Co-author of comments
KU/LG&E CPCN	2022-00402	Kentucky	Performed the PLEXOS and SERVVM modeling in support of Anna Sommer's testimony
Big Rivers IRP	2023-00310	Kentucky	Co-author of comments
Kentucky Power IRP	2023-00092	Kentucky	Co-author of comments
EKPC IRP	2022-00098	Kentucky	Co-author of comments

Duke Energy Indiana IRP	-	Indiana	Co-author of comments and performed EnCompass capacity expansion and production cost modeling
CenterPoint IRP	-	Indiana	Co-author of comments
AES Indiana IRP	-	Indiana	Co-author of comments
NIPSCO IRP	-	Indiana	Co-author of comments
I&M IRP	-	Indiana	Co-author of comments
Ameren IRP	EO-2024-0020	Missouri	Co-author of comments
Evergy IRP Kansas	19-KCPE-096-CPL 24-EKCE-387-CPL	Kansas	Co-author of comments and performed the EnCompass capacity expansion and production cost modeling in support of the 2021 IRP comments
Evergy IRP Missouri	EO-2021-0036 EO-2023-0212 EO-2023-0213 EO-2024-0153	Missouri	Co-author of comments and performed the EnCompass capacity expansion and production cost modeling in support of the 2021 IRP comments
Otter Tail Power IRP	E017-RP-21-339	Minnesota	Co-author of comments and performed the EnCompass capacity expansion and production cost modeling
Xcel IRP	E002/RP-24-67 E002/RP-19-368	Minnesota	Co-author of comments and performed the EnCompass capacity expansion and production cost modeling
Minnesota Power IRP	E015/RP-21-33	Minnesota	Co-author of comments and performed the EnCompass capacity expansion and production cost modeling

Links to reports/comments:

- Gridlab Moonshot Study
 - <https://gridlab.org/moonshot-study/>

- Big Rivers IRP
 - <https://psc.ky.gov/pscecf/2023-00310/byron%40kyrc.org/03082024101247/2024-03-08-2023-00310-JI-comments-combined-PUBLIC.pdf>
- Kentucky Power IRP
 - https://psc.ky.gov/pscecf/2023-00092/fitzkrc%40aol.com/10062023080937/JI_comments_Ex_1_EFG_Rep
- EKPC IRP
 - https://psc.ky.gov/pscecf/2022-00098/ashley%40kyrc.org/10112022102431/2022-00098_EKPC_2022_IRP_EFG_Report_Public_Redacted_%28me
- KU/LG&E IRP
 - https://psc.ky.gov/pscecf/2021-00393/fitzkrc%40aol.com/04222022103406/Comments_Of_Joint_Intervenors_2021-00393-merged.pdf
- Duke Energy Indiana IRP
 - <https://www.in.gov/iurc/files/PUBLIC-Report-of-CAC-Earthjustice-VoteSolar-on-DEI-2021-IRP-5-16-22FINAL.pdf>
- CenterPoint Indiana IRP
 - <https://www.in.gov/iurc/files/SUN-VS-and-CAC-Comments-to-2023-Centerpoint-IRP.pdf>
- AES Indiana IRP
 - <https://www.in.gov/iurc/files/SUN-VS-CAC-Comments-to-2022-AES-Indiana-IRP.pdf>
- NIPSCO IRP
 - <https://www.in.gov/iurc/files/NIPSCO-2021-IRP-CAC-EJ-VS-Comments-3-24-2022FINALv2.pdf>
- I&M IRP
 - https://www.in.gov/iurc/files/IM-IN-2021-IRP-CAC-Earthjustice-VS-Comments-8-8-2022_Redacted.pdf
- Ameren IRP
 - <https://efis.psc.mo.gov/Document/Display/772368>
- Evergy Kansas/Missouri IRPs
 - Kansas
 - <https://estar.kcc.ks.gov/estar/ViewFile.aspx/S202111021551202890.pdf?Id=fe59a88a-f547-49d5-82dc-3582efa6cedc>
 - <https://estar.kcc.ks.gov/estar/ViewFile.aspx/S202208291607347529.pdf?Id=f93f0179-7f0b-4d14-95b2-535d228b4448>
 - <https://estar.kcc.ks.gov/estar/ViewFile.aspx/S202308311652526559.pdf?Id=5a56e99d-dc2a-44aa-9923-022be281bd77>
 - <https://estar.kcc.ks.gov/estar/ViewFile.aspx/S202410141627251022.pdf?Id=fa3d2c32-2a9b-4141-bf0c-dc9422a425b8>

- Missouri
 - <https://efis.psc.mo.gov/Document/Display/36025>
 - <https://www.efis.psc.mo.gov/Document/Display/217795>
 - <https://efis.psc.mo.gov/Document/Display/12685>
 - <https://efis.psc.mo.gov/Document/Display/796902>
- Otter Tail Power IRP
 - <https://www.edockets.state.mn.us/edockets/searchDocuments.do?method=showPoup&documentId={406BE18A-0000-CE5A-A1A4-DF2A2F578E0F}&documentTitle=20239-199254-03>
 - <https://www.edockets.state.mn.us/edockets/searchDocuments.do?method=showPoup&documentId={80D5A58E-0000-C839-BD0B-0A79CB65CDFE}&documentTitle=20244-205000-0>
- Minnesota Power IRP
 - <https://www.edockets.state.mn.us/edockets/searchDocuments.do?method=showPoup&documentId={70C77680-0000-CB27-874E-28D1CE711075}&documentTitle=20224-185372-06>
 - <https://www.edockets.state.mn.us/edockets/searchDocuments.do?method=showPoup&documentId={B05F4A82-0000-C737-91E5-CC13C9CE0230}&documentTitle=20227-187928-02>
- Xcel Minnesota IRPs
 - <https://www.edockets.state.mn.us/edockets/searchDocuments.do?method=showPoup&documentId={F0244691-0000-C741-9CA0-02C084E0DFAD}&documentTitle=20248-209392-04>
 - <https://www.edockets.state.mn.us/edockets/searchDocuments.do?method=showPoup&documentId={D0609377-0000-C49F-8DE4-F9CEA5162F84}&documentTitle=20212-170901-05>
 - <https://www.edockets.state.mn.us/edockets/searchDocuments.do?method=showPoup&documentId={50D3447A-0000-C95C-9889-2C20217C061A}&documentTitle=20216-175412-04>

9. Please provide all work papers, models, spreadsheets with cells and formulas intact, and supporting calculations used to develop Table 2 on page 6 in Ms. Hotaling's Testimony.

Response

Please see the response to question 6.

10. Refer to Ms. Hotaling's Testimony page 7, Lines 14 through 16, where she states there was not a modeling run that looked at optimizing around an economic retirement date for East bend like there was in the 2021, IRP. Please answer the following:

- a. Is Ms. Hotaling aware of KRS 278.264 and the requirement for a utility to obtain Commission approval prior to retiring a fossil generating unit?
- b. If the response is in the affirmative, has Ms. Hotaling performed any analysis to determine whether an economic retirement of East Bend would meet the retirement threshold of KRS 278.264? If yes, please provide such analysis.

Response

Sierra Club objects to this request insofar as it seeks a legal opinion or conclusion. Sierra Club further objects that the request is vague and ambiguous with respect to the undefined term “retirement threshold.” Subject to and without waiving objection, Sierra Club responds as follows.

- a. Ms. Hotaling is not an attorney or legal expert. Her testimony speaks for itself and only offers her non-legal opinion. Ms. Hotaling is aware of KRS 278.264, however, Ms. Hotaling is not aware of a provision that prevents a utility from evaluating retirements as part of its IRP.
- b. Ms. Hotaling is not an attorney or legal expert. Her testimony speaks for itself and only offers her non-legal opinion. Ms. Hotaling has not performed such an analysis and based on the record in this proceeding so far and the 2024 IRP, neither has the Company.

11. Referring generally to Ms. Hotaling’s testimony, please provide all analysis, including memorandum, summaries, and work papers, that Ms. Hotaling has created, reviewed, or performed regarding Duke Energy Kentucky’s 2024 IRP filed in Case No. 2024-00197.

Response

Sierra Club objects as Ms. Hotaling’s Testimony speaks for itself. Ms. Hotaling is not working on behalf of an intervening party regarding Duke Energy Kentucky’s 2024 IRP filed in Case No. 2024-00197. In this proceeding, the Commission issued an Order on October 10, 2024, incorporating the record from Case No. 2024-00197 into this proceeding. Ms. Hotaling reviewed the public and confidential IRP and discovery responses filed by Duke Energy Kentucky in Case No. 2024-00197.

12. Please identify all proceedings in all jurisdictions in the last three years in which Dr. Sahu has offered evidence, including but not limited to, pre-filed testimony, sworn statements, and live testimony or analysis. For each response, please provide the following:
- a. the jurisdiction in which the testimony, statement, or analysis was prefiled, offered, given, or admitted into the record.
 - b. the administrative agency and/or court in which the testimony, statement, or analysis was pre-filed, offered, admitted, or given.

- c. the date(s) the testimony, statement, or analysis was pre-filed, offered, admitted, or given.
- d. the identifying number for the case or proceeding in which the testimony, statement, or analysis was pre-filed, offered, admitted, or given.
- e. whether the witness was cross-examined.
- f. the custodian of the transcripts and pre-filed testimony, statements, or analysis for each proceeding; and
- g. copies of all such testimony, statements, or analysis.

Response

Sierra Club objects to this request as unduly burdensome insofar as it seeks public information that is known to and accessible by the Company. Sierra Club objects to this request as overly broad, unduly burdensome, oppressive, and calculated to take Sierra Club, its staff, and its experts away from normal work activities, and require them to expend significant resources to provide complete and accurate answers to Duke's request, which is only of marginal value to Duke. Sierra Club objects to this request as irrelevant and not reasonably calculated to lead to the discovery of admissible evidence, because other utilities' decisions and practices are not at issue in this proceeding. Sierra Club also objects to this request as overbroad and unduly burdensome to the extent it requests documents, including but not limited to work for prior employers, that are not in the possession or control of Sierra Club or Mr. Sahu, and information already available to Duke, as Dr. Sahu has already provided his CV. Subject to and without waiving objection, please refer to Exhibit RS-1, Dr. Sahu's resume.

13. Please provide copies of any and all documents, analysis, summaries, white papers, work papers, spreadsheets (electronic versions with cells intact), including drafts thereof, as well as any underlying supporting materials created by Dr. Sahu as part of his evaluation of Duke Energy Kentucky's Application or used in the creation of Dr. Sahu's testimony.

Response

Sierra Club objects to the extent that the request seeks documents that constitute attorney work product, or which are protected by attorney/client privilege, and to the extent they seek the disclosure of Sierra Club's mental impressions, conclusions, opinions or legal theories of its attorneys concerning this proceeding. Subject to and without waiving objection, Dr. Sahu created no such documents.

14. Please provide copies of any and all documents not created by Dr. Sahu including but not limited to, analysis, articles, books, summaries, cases, reports, and evaluations, that Dr. Sahu relied upon, referred to, or used in the development of his testimony.

Response

Sierra Club objects as Ms. Hotaling's Testimony speaks for itself. Subject to and without waiving said objection, Dr. Sahu referred to testimony, filings, and discovery responses submitted within this proceeding and Case No. 2024-00197.

15. Please provide any and all studies, analysis, and presentations that Dr. Sahu has created or publicly made within the last three years that involve any of the following: utility regulation, ratemaking, depreciation, fossil-fueled electric generation retirements, environmental compliance for coal-fired generating units, or lime-based reagent processes, conversion of coal units to natural gas, and impacts of the updated Clean Air Act Section 111 rules.

Response

Sierra Club objects to this request as unduly burdensome insofar as it seeks public information that is known to and accessible by the Company. Sierra Club objects to this request as irrelevant and not reasonably calculated to lead to the discovery of admissible evidence, because other utilities' decisions and practices are not at issue in this proceeding. Subject to and without waiving objection, Dr. Sahu created no such studies, analysis, or presentations.

16. Is Dr. Sahu aware of any coal-fired generating units located in the United States, other than East Bend, that currently use a magnesium enhanced lime (MEL) as a reagent? If yes, please identify the station, the operator, and whether it is a regulated utility.

Response

Sierra Club objects to this request as irrelevant and not reasonably calculated to lead to the discovery of admissible evidence, because other utilities' decisions and practices are not at issue in this proceeding. Subject to and without waiving objection, no.

17. To the extent the response to the previous data request was in the affirmative, is Dr. Sahu aware of the supplier of the magnesium enhanced lime product used by that generating unit? If yes, please identify the supplier.

Response

Not applicable.

18. Referencing Dr. Sahu's testimony on page 5 where he states he has performed projects in all 50 states, please identify all such projects located in the Commonwealth of Kentucky, by location, type of project, and on whose behalf the project was performed.

Response

Sierra Club objects to this request as unduly burdensome insofar as it seeks public information that is known to and accessible by the Company. Sierra Club objects to this request as overly broad, unduly burdensome, oppressive, and calculated to take Sierra Club, its staff, and its experts away from normal work activities, and require them to expend significant resources to provide complete and accurate answers to Duke's request, which is only of marginal value to Duke. Sierra Club objects to this request as irrelevant and not reasonably calculated to lead to the discovery of admissible evidence, because other utilities' decisions and practices are not at issue in this proceeding. Sierra Club also objects to this request as overbroad and unduly burdensome to the extent it requests documents, including but not limited to work for prior employers, that are not in the possession or control of Sierra Club or Mr. Sahu, and information already available to Duke, as Mr. Sahu has already provided his CV. Subject to and without waiving objection, please refer to Dr. Sahu's resume, Exhibit RS-1:

- Expert Report and Deposition (10/31/2005 and 11/1/2005) on behalf of the United States in connection with the East Kentucky Power Cooperative NSR Case. *United States v. East Kentucky Power Cooperative, Inc.*, 5:04-cv-00034-KSF (Eastern District of Kentucky).
- Expert Report and Deposition (August 2010) as well as Affidavit (September 2010) on behalf of Kentucky Waterways Alliance, Sierra Club, and Valley Watch in the matter of challenges to the NPDES permit issued for the Trimble County power plant by the Kentucky Energy and Environment Cabinet to Louisville Gas and Electric, File No. DOW-41106-047.
- Expert Report (April 2021), Sur-Rebuttal Report (June 2021), Deposition (June 2021, virtual), and trial (August 2022) on behalf of the Plaintiffs in the matter of *Modern Holdings, LLC, et al. (Plaintiffs) v. Corning Inc., et al. (Defendants)*, Civil Action No. 5:13-cv-00405-GFVT, (US District Court for the Eastern District of Kentucky, Central Division at Lexington).
- Consulting Expert, Kentucky Resource Council, comments on a proposed construction permit for LG&E's Mill Creek Generating Station (natural gas combined cycle) (2023-2024).

- Consulting Expert, Kentucky Resource Council, Sierra Club, Environmental Integrity Project, Comments on Pre-Hearing Attainment Demonstration for the Partial Counties of Henderson and Webster Located within the Kentucky 2010 1-Hour Sulfur Dioxide Nonattainment Area (2024).

19. Prior to this case, has Dr. Sahu ever prepared, consulted, or performed any engineering analysis on a project to convert a magnesium enhanced lime reagent handling process to a limestone-based handling process? If the response is in the affirmative, please provide the following information:

- a. The date of the project.
- b. A description of the project.
- c. The location of the project.
- d. On whose behalf the project was performed.
- e. Whether the project to convert to a limestone-based reagent handling system was completed, and when.

Response

Sierra Club objects to this request as irrelevant and not reasonably calculated to lead to the discovery of admissible evidence, because other utilities’ decisions and practices are not at issue in this proceeding. Sierra Club also objects to this request as overbroad and unduly burdensome to the extent it requests documents, including but not limited to work for prior employers, that are not in the possession or control of Sierra Club or Mr. Sahu. Subject to and without waiving objection, no.

20. Referring to Dr. Sahu’s testimony on page 8, line 22 through 24, does Dr. Sahu dispute Duke Energy Kentucky’s statement that without quicklime reagent, it cannot operate East Bend in compliance with its Clean Air Act permits and would need to take the plant offline?

Response

Sierra Club objects to this request as vague and ambiguous with respect to the meaning of the phrase “take the plant offline.” Subject to and without waiving objection, Sierra Club responds as follows:

There are alternative options for East Bend Unit 2, including conversion to gas, or retirement and replacement with a combined cycle gas plant, that would allow long-term operation of the plant in compliance with Clean Air Act limits on NOx emissions and other legal requirements.

21. Refer to Dr. Sahu's testimony, page 9, has Dr. Sahu performed any analysis to support his statement that a four- or five-year contract could have allowed Duke Energy Kentucky to convert East Bend to operate on gas or construct and permit a new combined cycle plant? If the response is in the affirmative, please provide such analysis.

Response

Dr. Sahu's opinion is based on his experience reviewing timelines for construction of combined cycle gas plants and conversion of existing coal plants to operate on gas.

22. Is it Dr. Sahu's opinion that East Bend should be retired as a coal unit by 2030? If the response is in the affirmative, please provide all data and analysis that supports such a retirement.

Response

Dr. Sahu offers no opinion on whether East Bend should be retired as a coal unit by 2030.

23. Is Dr Sahu aware of KRS 278.264 and the requirement for a utility to obtain Commission approval prior to retiring a fossil generating unit.

Response

Sierra Club objects to this request insofar as it seeks a legal opinion or conclusion. Subject to and without waiving objection, Sierra Club responds as follows.

Mr. Sahu is not an attorney or legal expert. His testimony speaks for itself and only offers his non-legal opinion. Mr. Sahu is aware of KRS 278.264 but offers no opinion about what the law requires.

a. If the response is in the affirmative, does Dr. Sahu agree that converting East Bend to run fully on natural gas would require retirement of coal facilities and the Company would be required to obtain retirement approval from the Kentucky Public Service Commission in accordance with KRS 278.264? If not, please explain why.

Response

Sierra Club objects to this request insofar as it seeks a legal opinion or conclusion. Sierra Club further objects that the request is vague and ambiguous with respect to the meaning of the phrase "retirement of coal facilities." Subject to and without waiving objection, Sierra Club responds as follows.

Mr. Sahu is not an attorney or legal expert. His testimony speaks for itself and only offers his non-legal opinion. Mr. Sahu offers no opinion about what approvals may or may not be required under the law.

24. Is Dr. Sahu aware of KRS 164.2807 which requires a utility to submit notice of a proposed retirement of fossil generation to the Energy Planning Inventory Commission at least 180 days prior to submitting an application to the PSC to retire the plant or unit?

Response

Sierra Club objects to this request insofar as it seeks a legal opinion or conclusion. Subject to and without waiving objection, Sierra Club responds as follows.

Mr. Sahu is not an attorney or legal expert. His testimony speaks for itself and only offers his non-legal opinion. Mr. Sahu is aware of KRS 278.264 but offers no opinion about what the law requires

25. Refer to Dr. Sahu's testimony, page 9, Line 12 through 15.

- a. Does Dr. Sahu believe that Duke Energy Kentucky did not attempt to enter into a longer-term lime supply contract as part of its negotiations with the current supplier?
- b. Did Dr. Sahu review the Direct Testimony of Duke Energy Kentucky Witness John A. Verderame prior to drafting Dr. Sahu's testimony?

Response

- a. Sierra Club objects to this request as vague and ambiguous with respect to the undefined term "longer-term lime supply contract." Subject to and without waiving objection, Sierra Club responds as follows:

Dr. Sahu's testimony and the Duke discovery responses speak for themselves. Dr. Sahu offers no opinion of the Company's intentions with respect to its negotiations with its current lime reagent supplier.

- b. Yes.

26. Please state whether Dr. Sahu has ever conducted requests for proposals for fuel or reagents for electric generating facilities?

- a. If the response is in the affirmative, please identify when, what generating units.
- b. Does Dr. Sahu believe that the Company should enter into contracts with minimum volumes for reagents and fuel?

c. Does Dr. Sahu know whether East Bend has any storage on site for reagents if it has a contract with minimum delivery requirements?

Response

Sierra Club objects to this request as overly broad, unduly burdensome, oppressive, and calculated to take Sierra Club, its staff, and its experts away from normal work activities, and require them to expend significant resources to provide complete and accurate answers to Duke's request, which is only of marginal value to Duke. Sierra Club objects to this request as irrelevant and not reasonably calculated to lead to the discovery of admissible evidence, because other utilities' decisions and practices are not at issue in this proceeding. Sierra Club also objects to this request as overbroad and unduly burdensome to the extent it requests documents, including but not limited to work for prior employers, that are not in the possession or control of Sierra Club or Dr. Sahu, and information already available to Duke, as Mr. Sahu has already provided his CV. Subject to and without waiving objection, yes, Dr. Sahu has conducted requests for proposals for fuel or reagents for electric generating facilities.

- a. Dr. Sahu did so approximately 25 years ago during his work at Parsons, an engineering firm.
- b. Duke Energy is a sophisticated company. Dr. Sahu offers the Company no opinion on whether it should or should not enter into contracts with suppliers that contain clauses specifying minimum volumes for reagents and fuel.
- c. No.

27. Refer to Dr. Sahu's testimony on page 12, lines 2-4, please explain what other possible alternatives could have their feasibility impacted by a new, long-term quicklime offer." [sic]

Response

Dr. Sahu's testimony speaks for itself. In his Testimony, Dr. Sahu identified two such potential alternatives that may entail lower costs than the proposed limestone conversion project: conversion of the entire plant to gas, and retirement of the East Bend plant and replacement with a new combined cycle plant. There may be others that the Company could explore.

28. Refer to Dr. Sahu's testimony on page 12, Lines 19 through page 13 lines 3. Please answer the following questions:

- a. Does Dr. Sahu believe a carbon capture sequestration system could be installed at East Bend by 2030? If yes, please provide all analysis and data supporting this conclusion.
- b. Has Dr. Sahu evaluated the geology at the East Bend station to determine whether carbon capture and sequestration is feasible at the East Bend site? If yes, please provide all analysis and data supporting this conclusion.

c. Has Dr. Sahu evaluated whether a carbon dioxide pipeline could be constructed at the East Bend site to transport the emissions to a sequestration site by 2030? If yes, please provide all analysis and data supporting this conclusion.

Response

- a. As indicated in Dr. Sahu's testimony cited in the question, under section 111(d) of the Clean Air Act, existing coal-fired power plants that plan to operate until 2039 or later must install a carbon capture sequestration system that captures 90% of carbon emissions by 2032. While the relevance of the Company's stated 2030 timeline is not clear, EPA determined units generally need until 2032 to get their systems ready for CCS, and, absent site-specific information from the Company to the contrary, it is unrealistic that this plant could install an effective and verifiable carbon capture system more than two years ahead of EPA's timeline.
- b. No.
- c. No.

**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) Case No. 2024-00152
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)

**AFFIDAVIT OF CHELSEA HOTALING
IN SUPPORT OF SIERRA CLUB’S RESPONSES TO DUKE ENERGY KENTUCKY’S
FIRST REQUEST FOR INFORMATION PROPOUNDED UPON THE SIERRA CLUB**

COMMONWEALTH OF KENTUCKY)

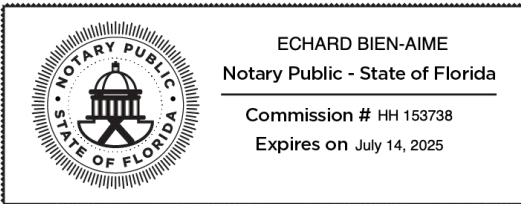
Chelsea Marie Hotaling

Chelsea Hotaling

SUBSCRIBED, ACKNOWLEDGED, AND SWORN to before me by Chelsea Hotaling this
13th day of November, 2024.

Notarized remotely online using communication technology via Proof.

Echard bien - aime



Notary Public

Notary ID no.: HH 153738

My Commission expires: 07/14/2025

**COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION**

In the Matter of:

ELECTRONIC APPLICATION OF DUKE ENERGY)
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FOR APPROVAL TO AMEND ITS)
ENVIRONMENTAL COMPLIANCE PLAN FOR)
RECOVERY BY ENVIRONMENTAL SURCHARGE)
MECHANISM)

Case No. 2024-00152

**AFFIDAVIT OF RANAJIT SAHU
IN SUPPORT OF SIERRA CLUB'S RESPONSES TO DUKE ENERGY KENTUCKY'S
FIRST REQUEST FOR INFORMATION PROPOUNDED UPON THE SIERRA CLUB**

COMMONWEALTH OF KENTUCKY)



Ranajit Sahu

SUBSCRIBED, ACKNOWLEDGED, AND SWORN to before me by Ranajit Sahu this
13th day of November, 2024.



Notary Public

Notary ID no:

Commonwealth of Pennsylvania - Notary Seal LISA R. MEGLINO, Notary Public Philadelphia County My Commission Expires November 6, 2025 Commission Number 1130799
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My Commission expires: