

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

In the Matter of:

ELECTRONIC APPLICATION OF EAST	)	
KENTUCKY POWER COOPERATIVE, INC.	)	
FOR 1) CERTIFICATES OF PUBLIC	)	
CONVENIENCE AND NECESSITY TO	)	
CONSTRUCT A NEW GENERATION	)	
RESOURCES; 2) FOR A SITE	)	CASE NO. 2024-00370
COMPATIBILITY CERTIFICATE RELATING TO	)	
THE SAME; 3) APPROVAL OF DEMAND SIDE	)	
MANAGEMENT TARIFFS; AND 4) OTHER	)	
GENERAL RELIEF	)	

**TENDERED INITIAL REQUESTS FOR INFORMATION OF  
APPALACHIAN CITIZENS LAW CENTER, KENTUCKIANS FOR THE  
COMMONWEALTH, KENTUCKY SOLAR ENERGY SOCIETY,, AND  
MOUNTAIN ASSOCIATION TO EAST KENTUCKY POWER  
COOPERATIVE, INC..**

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Commonwealth, Kentucky Solar Energy  
Society, Metropolitan Housing Coalition,  
and Mountain Association\*

Dated: December 20, 2024

## DEFINITIONS

1. "Document" means the original and all copies (regardless of origin and whether or not including additional writing thereon or attached thereto) of any memoranda, reports, books, manuals, instructions, directives, records, forms, notes, letters, or notices, in whatever form, stored or contained in or on whatever medium, including digital media.
2. "Study" means any written, recorded, transcribed, taped, filmed, or graphic matter, however produced or reproduced, either formally or informally, a particular issue or situation, in whatever detail, whether or not the consideration of the issue or situation is in a preliminary stage, and whether or not the consideration was discontinued prior to completion.
3. "Person" means any natural person, corporation, professional corporation, partnership, association, joint venture, proprietorship, firm, or the other business enterprise or legal entity.
4. A request to identify a natural person means to state his or her full name and business address, and last known position and business affiliation at the time in question.
5. A request to identify a document means to state the date or dates, author or originator, subject matter, all addressees and recipients, type of document (e.g., letter, memorandum, telegram, chart, etc.), identifying number, and its present location and custodian. If any such document was but is no longer in the Company's possession or subject to its control, state what disposition was made of it and why it was so disposed.
6. A request to identify a person other than a natural person means to state its full name, the address of its principal office, and the type of entity.
7. "And" and "or" should be considered to be both conjunctive and disjunctive, unless specifically stated otherwise.
8. "Each" and "any" should be considered to be both singular and plural, unless specifically stated otherwise.
9. Words in the past tense should be considered to include the present, and words in the present tense include the past, unless specifically stated otherwise.
10. "You" or "your" means the person whose filed testimony is the subject of these data requests and, to the extent relevant and necessary to provide full and complete answers to any request, "you" or "your" may be deemed to include any other person with information relevant to any interrogatory who is or was

employed by or otherwise associated with the witness or who assisted, in any way, in the preparation of the witness' testimony.

11. "Company", "East Kentuck Power Cooperative", or "EKPC", means East Kentuck Power Cooperative, Inc., its parents or subsidiaries, and/or any of its officers, directors, employees or agents who may have knowledge of the particular matter addressed, and affiliated companies including member cooperatives.
12. "Joint Intervenors," or "Joint Movants" means Appalachian Citizens Law Center, Kentuckians for the Commonwealth, Kentucky Solar Energy Society, Metropolitan Housing Coalition, and Mountain Association who have moved for the status of full intervention as joint intervenors in this matter.
13. Unless otherwise specified in each individual request the term "tariff" means the tariff as filed in this matter by EKPC.
14. "IRP" means integrated resource plan.

## INSTRUCTIONS

1. If any matter is evidenced by, referenced to, reflected by, represented by, or recorded in any document, please identify and produce for discovery and inspection each such document.
2. These requests for information are continuing in nature, and information which the responding party later becomes aware of, or has access to, and which is responsive to any request is to be made available to Joint Intervenors. Any studies, documents, or other subject matter not yet completed that will be relied upon during the course of this case should be so identified and provided as soon as they are completed. The Respondent is obliged to change, supplement and correct all answers to interrogatories to conform to available information, including such information as it first becomes available to the Respondent after the answers hereto are served.
3. Unless otherwise expressly provided, each data request should be construed independently and not with reference to any other interrogatory herein for purpose of limitation.
4. The answers provided should first restate the question asked and also identify the person(s) supplying the information.
5. Please answer each designated part of each information request separately. If you do not have complete information with respect to any interrogatory, so state and give as much information as you do have with respect to the matter inquired about and identify each person whom you believe may have additional information with respect thereto.
6. In the case of multiple witnesses, each interrogatory should be considered to apply to each witness who will testify to the information requested. Where copies of testimony, transcripts, or depositions are requested, each witness should respond individually to the information request.
7. Wherever the response to a request consists of a statement that the requested information is already available to Joint Intervenors, please provide a detailed citation to the document that contains the information. This citation shall include the title of the document, relevant page number(s), and, to the extent possible, paragraph number(s) and/or chart/table/figure number(s).
8. If you claim a privilege including, but not limited to, the attorney-client privilege or the work product doctrine, as grounds for not fully and completely responding to any discovery request, please describe the basis for your claim of privilege in sufficient detail so as to permit Joint Intervenors or the Commission to evaluate

the validity of the claim. With respect to documents for which a privilege is claimed, please produce a "privilege log" that identifies the author, recipient, date, and subject matter of the documents or interrogatory answers for which you are asserting a claim of privilege and any other information pertinent to the claim that would enable Joint Intervenors or the Commission to evaluate the validity of such claims.

9. Whenever the documents responsive to a discovery request consist of modeling files (including inputs or output) and/or workpapers, the files and workpapers should be provided in machine-readable electronic format (e.g., Microsoft Excel), with all formulas and cell references intact.
10. The interrogatories are to be answered under oath by the witness(es) responsible for the answer.

**INITIAL DATA REQUESTS PROPOUNDED TO EAST  
KENTUCKY POWER COOPERATIVE, INC. BY JOINT  
MOVANTS FOR JOINT INTERVENTION**

Joint Movants for Joint Intervention hereby tender the following requests for information to the Company:

- 1.1. Provide all EKPC responses to data requests from all parties in this proceeding, including confidential responses. Continue to provide any such documentation, until this docket is closed, on a regular basis.
- 1.2. With regards to each modeling run carried out as part of this CPCN, including Attachments and Appendices:
  - a. Produce all modeling input and output files (in electronic machine readable, unprotected format with original formulas intact) for each run.
  - b. Produce any workbooks or workpapers, in electronic, machine readable, unprotected format with original formulas intact, used to develop or process inputs to the model.
  - c. Produce any workbooks or workpapers, in electronic, machine readable, unprotected format with original formulas intact, used to review or process outputs of each model run.
- 1.3. For each of the Cooper generating units (or for the entire Cooper plant if EKPC does not maintain relevant unit-level data):
  - a. Produce any profit and loss statement, revenue projection, net present value ("NPV") revenue requirement, or other economic analysis of the unit or plant completed since 2018, including any modeling input and output files, workpapers, or other documents used in carrying out such analysis.
  - b. Produce the most recent condition assessment for each unit.
  - c. Produce any analysis or assessment of the impact that retirement of each unit would have on resource adequacy, transmission grid stability, transmission grid support, voltage support, or transmission system reliability.
  - d. Identify any transmission grid upgrades or changes that would be needed to allow for the retirement of any of the units.
- 1.4. For each of the Cooper generating units, provide the following projected annual data by unit, or, if EKPC does not maintain unit-level data, by plant, for the years 2025 through 2039:
  - a. Fixed O&M cost in dollars
  - b. Non-fuel variable O&M cost in dollars
  - c. Fuel costs in dollars
  - d. Capital costs in dollars
  - e. Heat rate

- f. Generation
  - g. Capacity rating
  - h. Capacity factor
  - i. Forced outage rate
  - j. Planned outage rate
  - k. Energy revenues in dollars
  - l. Capacity revenues in dollars
  - m. Ancillary services revenues in dollars
  - n. Unforced capacity (“UCAP”)
- 1.5. For each of the Cooper generating units, provide the following annual data by unit, or, if EKPC does not maintain unit-level data, by plant, for the years 2019 through 2024:
- a. Fixed O&M cost in dollars
  - b. Non-fuel variable O&M cost in dollars
  - c. Fuel costs in dollars
  - d. Capital costs in dollars
  - e. Heat rate
  - f. Generation
  - g. Capacity rating
  - h. Capacity factor
  - i. Forced outage rate
  - j. Planned outage rate
  - k. Energy revenues in dollars
  - l. Capacity revenues in dollars
  - m. Ancillary services revenues in dollars
  - n. Unforced capacity (“UCAP”)
- 1.6. Has EKPC sought any financing for potential wind, solar, distributed energy, energy storage, or transmission projects from the U.S. Department of Energy’s Energy Infrastructure Reinvestment (EIR) program<sup>1</sup>?
- a. If so, identify the potential projects for which financing has been sought, and produce any Letter of Interest, application, or other documentation of such proposal.
  - b. If not, explain why not.
- 1.7. Has EKPC sought any financing or funding for potential wind, solar, geothermal, or energy efficiency projects from the U.S. Department of Agriculture’s Rural Energy for America Program?<sup>2</sup>

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<sup>1</sup> DOE, *ENERGY INFRASTRUCTURE REINVESTMENT*, <https://www.energy.gov/lpo/energy-infrastructure-reinvestment> (last visited December 12, 2024).

<sup>2</sup> USDA Rural Development, Rural Energy for America Program, <https://www.rd.usda.gov/programs-services/energy-programs/rural-energy-america-program-renewable-energy-systems-energy-efficiency-improvement-guaranteed-loans> (last visited December 12, 2024)

- a. If so, identify the potential projects for which financing has been sought, and produce any Letter of Interest, application, or other documentation of such proposal.
  - b. If not, explain why not.
- 1.8. In selecting the proposed Cooper CCGT project, did EKPC carry out any capacity expansion modeling or production cost modeling?
  - a. If so:
    - i. identify what sort of modeling EKPC carried out and what model(s) you used.
    - ii. produce all modeling input and output files, workpapers, workbooks, and other documents used in such modeling.
    - iii. detail the results of such modeling.
  - b. If not, explain why not.
- 1.9. Identify each generation resource, demand side resource, and/or market purchase that you evaluated, either individually or in combination, as an alternative to all or some of the proposed Cooper CCGT capacity. For each alternative(s) evaluated,
  - a. Describe what evaluation you undertook
  - b. Explain why you rejected the alternative(s)
  - c. Produce any documentation, workpapers, workbooks, or modeling input and output files regarding such evaluation.
- 1.10. Identify the Net Present Value Revenue Requirement (“NPVRR”) for each of the Cooper CCGT, Cooper Co-Fire, and Spurlock Co-Fire Projects. Produce any modeling input and output files, workpapers, workbooks, and other documents used in determining the NPVRR for each project.
- 1.11. Identify the impact of each of the Cooper CCGT, Cooper Co-Fire, and Spurlock Co-Fire Projects on rates and average monthly bills for residential customers of EKPC’s member-owners for each of the years 2025 through 2039.
- 1.12. Refer to the Direct Testimony of Don Mosier, p. 5 lines 14-19.
  - a. Identify EKPC’s peak demand during each hour of Winter Storm Gerri.
  - b. Identify EKPC’s peak demand during each hour of Winter Storm Elliott.
  - c. Identify EKPC’s installed peak winter generation capacity in each of the years 2022, 2023, and 2024.



- d. Identify the total number of hours in each of the years 2022, 2023, and 2024 during which EKPC's peak demand exceeded its installed peak winter generation capacity.
  - e. For each of the years 2025 through 2034, identify the total number of hours in which you forecast that EKPC's peak demand will exceed its current installed peak winter generation capacity.
- 1.13. Refer to the Direct Testimony of Don Mosier, p. 7 lines 16-18. With regards to the statement that "EKPC also anticipates seeking a CPCN for additional renewable energy as soon as next year due in part to the investment tax credits and New ERA funds available to cooperatives.
- a. Identify by resource type and approximate size in MWs the "additional renewable energy" referred to in the quoted testimony
  - b. State whether the referenced "additional renewable energy" is reflected in the EKPC Expansion Plan – Q4 2024 set forth in Attachment JJT-4.
    - i. If so, identify the amount (in MWs) of Winter and Summer capacity from such "additional renewable energy" is reflected therein and in what year such capacity is first reflected.
    - ii. If not, explain why not.
- 1.14. Refer to the Direct Testimony of Don Mosier, p. 13 lines 8-12.
- a. Identify and produce the source or basis for the \$450,000/MWh cost for utility scale Battery Energy Storage Systems ("BESS") referenced therein.
  - b. State whether the referenced \$450,000/MWh cost figure is inclusive of the Investment Tax Credit ("ITC") for energy storage provided under the federal Inflation Reduction Act.
    - i. If so, identify what level of ITC is included in that cost figure.
    - ii. If not, explain why not.
- 1.15. Refer to the Direct Testimony of Don Mosier, p. 13 lines 12-16.
- a. Explain the basis for the claim that "BESS was excluded from the USDA's New ERA program," and identify and produce any documentation supporting that claim.
  - b. Identify and produce any communications with the USDA or the Rural Utilities Service regarding whether BESS projects could be eligible for New ERA financial support, either as a standalone project or in combination with other eligible clean energy projects.
- 1.16. Refer to the Direct Testimony of Don Mosier, p. 15 line 22 to p. 16 line 2. State whether there is a word or words missing from, or other typo in, the statement "But even if the GHG Rule with the new administration . . .". If so, please correct.

- 1.17. Refer to the Direct Testimony of Don Mosier, p. 18 lines 4-7. With regards to the sentence “It will also minimize stranded investments, which benefits consumers”:
  - a. Does the “It” refer to the proposed Cooper Combined Cycle Gas Turbine (“CCGT”)?
    - i. If so, explain how the proposed CCGT would minimize stranded investments.
    - ii. If not, explain what the “It” refers to, and how that would minimize stranded investments.
- 1.18. Refer to the Direct Testimony of Don Mosier, p. 19 lines 6-8.
  - a. State whether EKPC believes that the Cooper Unit 2 gas co-firing project should still proceed “even if the GHG Rule goes away.” Explain why or why not.
  - b. State whether EKPC believes that the Spurlock Units 1-4 gas co-firing project should still proceed “even if the GHG Rule goes away.” Explain why or why not.
- 1.19. Refer to the Direct Testimony of Julia Tucker, p. 5 lines 11-19. Produce the EKPC Strategic Plan that is currently in place.
- 1.20. Refer to the Direct Testimony of Julia Tucker, p. 9 lines 3-5. Has EKPC created any projection or estimate of the amount of megaload capacity and/or energy demand that may come onto the EKPC system over any of the years 2025 through 2040? If so, produce such projection or estimate. If not, explain why not.
- 1.21. Refer to the Direct Testimony of Julia Tucker, p. 13 lines 8 to p. 15 line 2.
  - a. Explain how the 7% Capacity Planning Reserve Margin assumed by EKPC differs from PJM’s seasonal planning reserve margin.
  - b. Explain why EKPC does not consider the PJM seasonal planning reserve margin sufficient to account for “unknown risks in weather and generation availability.”
  - c. Explain why EKPC does not consider PJM’s ELCC capacity accreditation methodology sufficient to account for “unknown risks in weather and generation availability.”
  - d. Produce any modeling input and output files, workpapers, or other documents used in creating EKPC’s 7% Capacity Planning Reserve Margin.
  - e. Identify how much of the 12% higher than forecasted peak load experienced during Winter Storms Elliott and Gerri has been included in the revised 2024 LTLF.
  - f. Identify and produce any analysis that EKPC has carried out or reviewed of the impact to its rates of using a 7% Capacity Planning Reserve Margin for each of the winter and summer seasons.

- 1.22. Refer to the Direct Testimony of Julia Tucker, p. 15 lines 7-19. Identify for each of EKPC's generating units how the capacity accreditation changed in MW for the 2025/26 BRA as a result of PJM's shift from EFORD to ELCC as the capacity accreditation methodology.
- 1.23. Refer to the Direct Testimony of Julia Tucker, p. 26 lines 11-15.
  - a. Explain in what ways the transmission system in the Cooper area came "perilously close" to not being able to serve load in the region during Winter Storm Elliott.
  - b. Identify and produce any analysis of how the transmission system in the Cooper area performed during Winter Storm Elliott, and/or why the system came perilously close to not being able to serve load.
  - c. Identify and produce any analysis of transmission upgrades or expansions that could help ensure reliability and transmission support in the Cooper area during severe weather events like Winter Storm Elliott.
- 1.24. Refer to Attachment JJT-5. With regards to the 2029 through 2039 Thermal Unit Net Cost Benefit values for the Cooper CCGT set forth in line 8:
  - a. Explain how you determined the referenced Net Cost Benefit values, including identification of any modeling program used in determining such values.
  - b. Produce any modeling input and output files, workpapers, workbooks, or other documents used in determining the referenced Net Cost Benefit values
  - c. Identify the "expected market price" that you used in determining the referenced Net Cost Benefit values at whatever level of granularity (i.e. hourly, daily, weekly, etc.) was used.
  - d. With regards to the "cost to run the unit" used in determining the referenced Net Cost Benefit values, identify the costs used for:
    - i. Natural gas
    - ii. Variable O&M
    - iii. Any other cost to run the unit
  - e. Explain why the annual Net Cost Benefit value for the Cooper CCGT is the same for each of the years 2030 through 2033.
  - f. Identify the projected annual fixed O&M costs and capital cost of the Cooper CCGT for each of the years 2030 through 2039.
  - g. Refer to the Direct Testimony of Craig Johnson, p. 6 lines 7-11. State whether the Thermal Unit Net Cost Benefit values for the Cooper CCGT set forth in Attachment JJT-5 assume that the facility will be limited to a maximum 40% capacity factor under the GHG Rule. If not, identify the projected Thermal Unit Net Cost Benefit values if the Cooper CCGT were limited to a maximum 40% capacity factor.

- 1.25. Refer to Attachment JJT-5. With regards to the 2029 through 2039 Thermal Unit Generation values for the Cooper CCGT set forth in line 20:
  - a. Explain how you determined the referenced Thermal Unit Generation values, including identification of any modeling program used in determining such values.
  - b. Produce any modeling input and output files, workpapers, workbooks, or other documents used in determining the referenced Thermal Unit Generation values
  - c. State whether your analysis used to determine the referenced Thermal Unit Generation values assumed the operation of the Liberty RICE units proposed in Case No. 2024-00310. If not, explain why not.
  - d. State whether your analysis used to determine the referenced Thermal Unit Generation values assumed that the Cooper Unit 2 gas co-firing and Spurlock Units 1-4 gas co-firing projects would also be operating. If not, explain why not.
  - e. Explain why the annual Thermal Unit Generation values for the Cooper CCGT is the same for each of the years 2030 through 2033.
  - f. Refer to the Direct Testimony of Craig Johnson, p. 6 lines 7-11. State whether the Thermal Unit Generation values for the Cooper CCGT set forth in Attachment JJT-5 assume that the facility will be limited to a maximum 40% capacity factor under the GHG Rule. If not, identify the projected Thermal Unit Generation values if the Cooper CCGT were limited to a maximum 40% capacity factor.
- 1.26. Refer to the Direct Testimony of Julia Tucker, p. 26 line 23 through p. 27 line 2.
  - a. Identify the BRA capacity market clearing prices you assumed in determining that the Cooper CCGT is “anticipated to provide between \$5.8 million and \$56.4 million in annual capacity market benefits.”
  - b. Identify each specific “recent BRA clearing prices” that are referenced therein.
- 1.27. Refer to the Direct Testimony of Julia Tucker, p. 29 lines 7-16 and Attachment JJT-5. With regards to the projected “over \$117 million in net energy cost benefits over the 10-year period” for the Cooper Co-Fire Project:
  - a. Explain how you determined the Thermal Unit Net Cost Benefit values for the Cooper 2 Co-Fire 100% NG set forth on line 3 of Attachment JJT-5, including identification of any modeling program used in determining such values.
  - b. Produce any modeling input and output files, workpapers, workbooks, or other documents used in determining the referenced Net Cost Benefit values.
  - c. Identify the “expected market price” that you used in determining the Net Cost Benefit values at whatever level of granularity (i.e. hourly, daily, weekly, etc.) was used.
  - d. With regards to the “cost to run the unit” used in determining the referenced Net Cost Benefit values, identify the costs used for:

- i. Natural Gas
    - ii. Variable O&M
    - iii. Any other cost to run the unit
  - e. For each of the years 2030 through 2039, identify in \$ per MWh the extent to which you expect the Cooper Co-Fire Project would reduce the variable energy cost of the unit as compared to continuing to operate the Cooper Unit 2 on coal.
  - f. State whether you compared the projected Thermal Unit Net Cost Benefit value of the Cooper Co-Fire Project to the value of continuing to operate Cooper Unit 2 on coal for the years 2030 through 2039. If so, produce the results of that comparison. If not, explain why not.
  - g. Identify the projected annual fixed O&M cost and capital cost for Cooper Unit 2 with 100% gas co-firing for each of the years 2030 through 2039.
- 1.28. Refer to Attachment JJT-5. With regards to the 2029 through 2039 Thermal Unit Generation values for the Cooper 2 Co-Fire 100% NG set forth in line 15:
- a. Explain how you determined the referenced Thermal Unit Generation values, including identification of any modeling program used in determining such values.
  - b. Produce any modeling input and output files, workpapers, workbooks, or other documents used in determining the referenced Thermal Unit Generation values
  - c. State whether your analysis used to determine the referenced Thermal Unit Generation values assumed the operation of the Liberty RICE units proposed in Case No. 2024-00310. If not, explain why not.
  - d. State whether the analysis used to determine the referenced Thermal Unit Generation values assumed that the Cooper CCGT and Spurlock Units 1-4 gas co-firing projects would also be operating. If not, explain why not.
- 1.29. Refer to Attachment JJT-2, the EKPC 2025-2039 Load Forecast. Produce all supporting modeling input and output files, workbooks, workpapers, and documents, used to develop the 2024 Long Term Load forecast (“LTLF”).
- 1.30. Refer to Attachment JJT-2, the EKPC 2025-2039 Load Forecast, p. 1. Produce the EKPC Load Forecast Work Plan referenced therein.
- 1.31. Refer to Attachment JJT-2, the EKPC 2025-2039 Load Forecast, p. 16. With regards to the large commercial sales projections referenced therein:
- a. Identify in years the “short term” period in which your projections rely on the input of the owner-members.
  - b. Produce any written documentation of the input that each of the owner-members provided regarding projected large commercial sales.

- c. For each owner-member, identify the projection of each of the following that was input into the large commercial sales projections:
    - i. Usage for large existing loads;
    - ii. Number and projected load and energy use of new large commercial customers; and
    - iii. Number, load, and energy use of existing large commercial customers leaving the system.
  - d. Explain and produce any documentation of any “additional input” into the large commercial sales projection that was provided by EKPC’s Economic Development staff.
- 1.32. Refer to Attachment JJT-2, the EKPC 2025-2039 Load Forecast, p. 17.
- a. Produce the EKPC wholesale power cost projection used in the 2024 Load Forecast.
  - b. Identify for each owner-member the projected distribution adder for the retail rate assumption.
- 1.33. Refer to Attachment JJT-2, the EKPC 2025-2039 Load Forecast, p. 26. Identify the amount of energy (in MWh), winter peak (in MW), and summer peak (in MW) savings due to energy efficiency measures installed prior to 2025 assumed to be “embedded” in the load data for 2024.
- 1.34. Refer to Attachment JJT-2, the EKPC 2025-2039 Load Forecast, p. 27. Please state the percentage of residential customers that rely on wood for their primary heating source.
- 1.35. Refer to Attachment JJT-2, the EKPC 2025-2039 Load Forecast, p. 39. With regards to the Large Commercial Class Consumers and Sales:
- a. Identify how many Large Commercial Class consumers are in the EKPC system as of the end of 2024.
  - b. Identify how many of the Large Commercial Class consumers projected to come online in each of 2025, 2026, and 2027 have commenced construction activities.
    - i. Identify the total projected peak demand and annual energy requirements for the consumers who have commenced construction activities.
  - c. Identify how many of the Large Commercial Class consumers projected to come online in each of 2025, 2026, and 2027 have entered into any contracts with EKPC or any of its member-owners.
    - i. Identify the total projected peak demand and annual energy requirements for the Large Commercial Class consumers who have entered into contracts with EKPC or any of its member-owners.

- d. Identify the total peak demand for Large Commercial Class consumers in 2023.
  - e. Identify the projected total peak demand for Large Commercial Class consumers in each of the years 2024 through 2039.
  - f. Identify and explain each reason why you project that annual average energy use per Large Commercial Class consumer will increase by more than 17% from 2023 to 2026 (from 21,774 MWh to 25,628 MWh).
- 1.36. Refer to Attachment JJT-3.
- a. Confirm that your 2022 Load Forecast projected for 2023 over 2.2 million MWhs more energy sales than your actual 2023 energy sales. If not confirmed, explain why not.
  - b. Identify and explain any steps you have taken in your 2024 Load Forecast to minimize similar over-projections of future energy sales.
  - c. Identify in MWhs your actual 2024 energy sales to date.
- 1.37. Refer to the Direct Testimony of Craig Johnson, p. 10 lines 1-2.
- a. Identify and produce any forecast of natural gas prices for any or all of the years 2025 through 2039 that EKPC relied on for this CPCN application.
  - b. Identify and produce any forecast of coal prices for any or all of the years 2025 through 2039 that EKPC relied on for this CPCN application.
- 1.38. Refer to the Direct Testimony of Craig Johnson, p. 10 lines 14-17.
- a. Explain how you calculated the \$2.5 million annual non-fuel O&M savings referenced therein.
  - b. Explain how you calculated the estimated 49% reduction in operating variable costs from burning a blend of 50% natural gas.
  - c. Explain how you calculated the estimated 7% reduction in maintenance costs from burning a blend of 50% natural gas.
  - d. Identify what level of estimated reductions in operating variable and maintenance costs would result from burning 100% natural gas at Cooper Unit 2 after the Cooper Co-Fire Project.
- 1.39. Refer to the Direct Testimony of Craig Johnson, p. 13 lines 12-14. With regards to the ongoing Operation and Maintenance costs of the proposed Spurlock Co-Fire Project:
- a. Explain in sufficient detail to allow independent verification how you calculated the \$13.7 million annual non-fuel O&M savings referenced therein.
  - b. Explain in sufficient detail to allow independent verification how you calculated the estimated 46% reduction in operating variable costs from burning a blend of 50% natural gas.

- c. Explain in sufficient detail to allow independent verification how you calculated the estimated 4% reduction in maintenance costs from burning a blend of 50% natural gas.
  - d. State whether burning a higher blend of natural gas than 50% would lead to additional reductions in variable operating and maintenance costs. If not, explain why not. If so:
    - i. Identify for each of the Spurlock units what level of estimated reductions in operating variable and maintenance costs would result from burning 100% natural gas.
    - ii. Explain why you are not proposing higher than 50% natural gas co-firing at each of the Spurlock units.
- 1.40. Refer to the Direct Testimony of Darrin Adams, p. 6 line 3 to p. 7 line 2. State whether EKPC analyzed grid-enhancing technologies (GETs) or other alternatives in its power-flow study that could meet the same transmission upgrade requirements at lower cost. If so, explain how GETs and other alternatives were considered. If not, explain why not.
- 1.41. Refer to the Direct Testimony of Darrin Adams, p. 14 lines 1-20. With regards to the “reliability concerns” that have been a “known problem for several years” referenced therein:
- a. State what steps EKPC has taken to address this “known problem” since it was identified in Case No. 2007-00168.
  - b. State whether EKPC has evaluated upgrades or additions to the transmission system that could address this “known problem” without needing to rely on additional new generation capacity in the area.
    - i. If so:
      - 1. Explain what evaluations have occurred and their results; and
      - 2. Produce any power flow analysis, report, or other documentation of such evaluation.
    - ii. If not, explain why not.
  - c. State whether both existing Cooper units, the proposed Liberty RICE units, and the proposed Cooper CCGT are all necessary to address the “known problem.” If so, explain why and provide any analysis supporting that response.
- 1.42. Refer to the Direct Testimony of Jerry Purvis, p. 11 line 21 to p. 12 line 2. State whether EKPC has submitted the referenced air permit application to the Kentucky Division of Air Quality. If so, produce that application, including any exhibits or attachments. If not, identify by when EKPC plans to submit the application, and produce it upon submittal.
- 1.43. Refer to the Direct Testimony of Jerry Purvis, p. 14 line 20 to p. 15 line 3.



- a. Explain how EKPC’s proposal to co-fire with natural gas Spurlock units 3 and 4 to support compliance with EPA’s GHG Rule is consistent with EKPC’s comments to EPA on the draft GHG Rule stating that “CFBs cannot co-fire natural gas because they depend upon coal ash contacting the steam generating tubes inside the furnace. Much research would need to be conducted to see if a viable alternative would be possible and economic.”<sup>3</sup>
  - b. Has EKPC now concluded that the Spurlock 3 and 4 CFB units are able to co-fire natural gas?
    - i. If so, explain what research was carried out to determine that co-firing natural gas at Spurlock 3 and 4 is feasible, and produce any reports, analyses, or other documents supporting such determination.
    - ii. If not, explain why EKPC is seeking a CPCN for a natural gas co-firing project at Spurlock 3 and 4.
- 1.44. Refer to the Direct Testimony of Mark Horn, p. 4 lines 1-14. With regards to securing a natural gas supply for the Spurlock Co-Fire Project:
- a. Identify the estimated capital cost of the natural gas lateral and other infrastructure investments needed to secure such natural gas supply.
    - i. If the estimated capital cost is anything other than the “estimated investment cost of \$400 to \$450 million” EKPC cited in its Comments on the Draft 111 GHG Rule,<sup>4</sup> explain why.
  - b. State whether such capital costs are factored into the Thermal Unit Net Cost Benefit values for the Spurlock Co-Fire Project set forth in Attachment JJT-5.
    - i. If so, explain how.
    - ii. If not, explain why not.
- 1.45. Refer to the Direct Testimony of Mark Horn, p. 4 lines 1-14. With regards to securing a natural gas supply for the Cooper site:
- a. Identify the estimated capital cost of the natural gas lateral and other infrastructure investments needed to secure the referenced natural gas supply.
    - i. If the estimated capital cost is anything other than the “estimated investment cost of \$400 to \$450 million” EKPC cited in its Comments on the Draft 111 GHG Rule,<sup>5</sup> explain why.

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<sup>3</sup> East Kentucky Power Cooperative, Inc., Comments on New Source Performance Standards for Greenhouse Gas Emissions from New, Modified, and Reconstructed Fossil Fuel-Fired Electric Generating Units; Emission Guidelines for Greenhouse Gas Emissions from Existing Fossil Fuel-Fired Electric Generating Units; and Repeal of the Affordable Clean Energy Rule; Proposed Rule Docket ID No. EPA-HQ-OAR-2023-0072, at p. 29, *available at*

[https://downloads.regulations.gov/EPA-HQ-OAR-2023-0072-0542/attachment\\_1.pdf](https://downloads.regulations.gov/EPA-HQ-OAR-2023-0072-0542/attachment_1.pdf) (visited Dec. 16, 2024) (hereinafter “EKPC Comments on Draft 111 GHG Rule”).

<sup>4</sup> See [https://downloads.regulations.gov/EPA-HQ-OAR-2023-0072-0542/attachment\\_1.pdf](https://downloads.regulations.gov/EPA-HQ-OAR-2023-0072-0542/attachment_1.pdf), at p. 30.

<sup>5</sup> See [https://downloads.regulations.gov/EPA-HQ-OAR-2023-0072-0542/attachment\\_1.pdf](https://downloads.regulations.gov/EPA-HQ-OAR-2023-0072-0542/attachment_1.pdf), at p. 30.

- b. State whether such capital costs are factored into the Thermal Unit Net Cost Benefit values for the Cooper Co-Fire Project and/or Cooper CCGT set forth in Attachment JJT-5.
    - i. If so, explain how.
    - ii. If not, explain why not
- 1.46. Refer to the Direct Testimony of Mark Horn, p. 8 lines 18-21.
- a. State whether each of the two Precedent Agreements (“PAs”) have been fully executed. If so, when were they fully executed. If not, explain why not and state when you expect the PAs to be fully executed.
  - b. State whether the pipeline company has requested and received approval from its internal Capital Allocation Committee. If so, when was such approval requested and received. If not, explain why not and state when you expect such approval to be requested and received.
- 1.47. Refer to Attachment MH-3. Explain why the referenced document identifies a “Commercial Operation” date of 02/2033 for the Cooper 2x1 CC unit, rather than the “expectation” stated in the Direct Testimony of Don Mosier, p. 19 lines 3-4, that the proposed CCGT would be “completed and operational” by December 31, 2030.
- 1.48. Refer to the Direct Testimony of Scott Drake, p. 10 lines 13-16. Identify the time period for which EKPC is seeking Commission approval of the proposed DSM-EE programs and changes.
- 1.49. Refer to the Direct Testimony of Scott Drake, p. 18 line 14 to p. 19 line 2. Of the impacts on energy requirements, winter peak, and summer peak set forth therein, identify what portion of such impacts are from new DSM-EE programs being proposed, and what portion is from existing programs for which EKPC is proposing higher incentives.
- 1.50. Refer to the Direct Testimony of Scott Drake, p. 21 lines 16-19.
- a. Identify the cost to install Reciprocating Internal Combustion Engines that you used as the new avoided capacity cost value for evaluating DSM-EE programs.
  - b. Produce the forward cost curve of PJM’s BRA mentioned in the referenced text.
- 1.51. Refer to the Direct Testimony of Scott Drake, p. 5 lines 13-23.
- a. Please provide the avoided cost values for capacity and generation used in the DSM Technical Potential studies for each of the last three IRP filings.
  - b. To the extent that the values provided in response to subpart a changed from one DSM Technical Potential Study to the next, please explain the basis for each such change and provide supporting calculations, if any.

- 1.52. Refer to the Direct Testimony of Scott Drake, p. 12 lines 3-7.
  - a. Please state whether a customer that relies on liquefied petroleum gas, bottled gas, propane, wood, coal, fuel oil, or kerosene for their primary heating source would be eligible to receive an incentive for a heat pump through the High Efficiency Heat Pump program.
    - i. If not, please explain why not for each ineligible primary heating source listed above.
  - b. Please explain the difference(s) between the “High Efficiency Heat Pump program” and the existing “Heat Pump Retrofit program,” including but not limited to differences in customer eligibility requirements, incentive-eligible equipment standards, and incentive amounts available for customers.
- 1.53. Refer to the Direct Testimony of Scott Drake, p. 16 lines 3-4, and p. 17 lines 4-6.
  - a. Please reconcile the statements in the referenced testimony.
  - b. Please explain the analysis used by EKPC and its owner-member cooperatives to evaluate the impact of a program on rates, given that the RIM cost-effectiveness test “does not provide the magnitude of the change in rates; just the direction of that change.”
  - c. Please explain the range of rate impacts from a DSM program that EKPC or its owner-members would consider to be reasonable. To the extent that EKPC or its owner-members determine the reasonableness of such a rate impact based on a quantitative analysis, please provide workpapers reflecting that analysis.
  - d. Please explain the range of rate impacts from supply-side generation investments that EKPC or its owner-members would consider to be reasonable. To the extent that EKPC or its owner-members determine the reasonableness of such a rate impact based on a quantitative analysis, please provide workpapers reflecting that analysis.
- 1.54. Refer to the Direct Testimony of Scott Drake, p. 20 lines 3-4. State whether there is a word or words missing from, or other typo in, the statement that “DSM-EE programs selected were determined to not be top priority programs by the group.”
- 1.55. Refer to the Direct Testimony of Scott Drake, p. 20 lines 6-16. Will all EKPC owner-member cooperatives support customer participation in the proposed DSM plan? If not, please explain which programs each EKPC owner-member cooperative will implement.
- 1.56. Refer to Attachment SD-7, the 2024 Potential Study, pp. 6-7 Table 2-1. Explain why the 15-Year Sales Forecast shows the same amount of Commercial sector sales in each of the years 2024 through 2038.
- 1.57. For each of the energy efficiency and demand response programs evaluated in Attachment SD-7, the 2024 Potential Study, answer the following requests:

- a. Explain in detail how avoided costs were determined for each cost benefit test used (e.g., Total Resource Cost, Utility Cost, Participant Cost, Rate Impact Measure).
  - b. Provide the values used for each element of the avoided cost categories listed below, identify the source of the values used, and state whether the values are in nominal dollars or in real, inflation-adjusted dollars.
    - i. Energy cost
    - ii. Capacity cost
    - iii. Capacity reserves (if not included in capacity costs)
    - iv. Natural gas price
    - v. Environmental externalities, including avoided methane loss from gas transmission, distribution, and storage infrastructure
    - vi. Line losses, for energy and peak (please specify if the estimate is based on average or marginal line loss rates)
  - c. State whether any of the following avoided cost categories listed below are included in the avoided cost calculation and if so, please provide the value, source of the value, and state whether the value is in nominal dollars or in real, inflation-adjusted dollars. If any of the avoided cost categories are not included, explain why not.
    - i. Ancillary services
    - ii. Transmission and distribution
    - iii. Non-energy benefits (“NEBs”) (please specify which NEBs are included, if any)
    - iv. Increased reliability
    - v. Reduced risk (e.g., reduced exposure to future fuel price volatility, future environmental regulation compliance costs, uncertainties of demand forecasts and related capital investments, etc.)
    - vi. Any other avoided cost values incorporated into cost-effectiveness analysis.
- 1.58. Refer to Attachment SD-7, the 2024 Potential Study, p. 14. With regards to the incentive levels assumed in estimating Realistic Achievable Potential (“RAP”):
- a. Explain why the assumed incentive levels were “closely calibrated to historical levels.”
  - b. State whether you evaluated the impact to RAP of incentive levels that were higher (as a percentage of incremental measure costs) than historical levels. If so, explain the results of such evaluation. If not, explain why not.
- 1.59. Refer to Attachment SD-7, the 2024 Potential Study, pp. 26-27. Please reconcile the statement that: “In the MAP scenario the NPV benefits are more than \$640 million over the study timeframe with a TRC ratio of 2.76. In the RAP scenario, the NPV benefits are more than \$450 million over the study timeframe with a TRA ratio of 2.61”; with the TRC ratios reported in Table 5-4 of 4.10 and 4.31 for the MAP and RAP scenarios, respectively.

- 1.60. Refer to Attachment SD-7, the 2024 Potential Study, p. 39. For each of the Base, Low, and High program scenarios:
  - a. Explain how the three different spending scenarios referenced therein were determined, including why a higher spending scenario was not included.
  - b. Identify the annual spending for each of the years 2025 through 2028 needed to achieve the energy and demand savings identified in Table 7-1
  - c. Identify the Total Resource Cost (“TRC”) benefit-cost ratio for each program scenario.
- 1.61. Refer to Attachment SD-7, the 2024 Potential Study, pp. 20-21 and 25-26. Given the positive TRC ratios and NPV benefits for Residential and Commercial/Industrial DSM-EE found in the 2024 Potential Study, explain in detail why EKPC is not proposing a DSM-EE Program Plan to achieve all, or even most, of the Realistic Achievable Potential for the Residential and Commercial/Industrial sectors.
- 1.62. Refer to Attachment SD-7, the 2024 Potential Study, pp. 36-38. Given the positive TRC ratios and NPV benefits for demand response programs found in the 2024 Potential Study, explain in detail why EKPC is not proposing demand response programs to achieve all, or even most, of the demand response Realistic Achievable Potential.
- 1.63. State whether EKPC anticipates seeking Commission approval for any additional DSM-EE or demand response programs in the next three years. If not, explain why not.
- 1.64. Refer to your response to the Mountain Association and Kentuckians for the Commonwealth data request 1-15(c) in Case No. 2024-00310. Identify what amount of solar generation EKPC would consider enough to “justify energy storage to compliment [sic] that resource.”
- 1.65. Refer to your response to the Attorney General’s data request 2-1(b) in Case No. 2024-00310.
  - a. Identify each of the “pending CPCN applications” that are part of the “well-designed, comprehensive resource plan” referenced therein.
  - b. Identify the total estimated capital cost for the referenced “well-designed comprehensive resource plan.”
  - c. Identify the net present value revenue requirement for the referenced “well-designed comprehensive resource plan”.
  - d. Identify the estimated impact of the referenced “well-designed, comprehensive resource plan” on rates and average monthly bills for residential customers of EKPC’s member-owners for each of the years 2025 through 2039.
  - e. Explain how the Commission should “look at the plan in total” given that EKPC divided the plan over multiple CPCN applications with different schedules and decision deadlines.

- f. Identify and produce the modeling input and output files, workbooks, and workpapers, for any capacity expansion or production cost modeling carried out in assembling the referenced “well-designed, comprehensive resource plan.”

Respectfully Submitted,

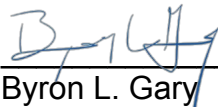


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and Mountain Association*

### **CERTIFICATE OF SERVICE**

In accordance with the Commission’s July 22, 2021 Order in Case No. 2020-00085, *Electronic Emergency Docket Related to the Novel Coronavirus COVID-19*, this is to certify that the electronic filing was submitted to the Commission on December 20, 2024; that the documents in this electronic filing are a true representation of the materials prepared for the filing; and that the Commission has not excused any party from electronic filing procedures for this case at this time.



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Byron L. Gary