

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

**In the Matter of:**

<b>ELECTRONIC APPLICATION OF KENTUCKY</b>	)	
<b>POWER COMPANY FOR APPROVAL OF A</b>	)	
<b>CERTIFICATE OF PUBLIC CONVENIENCE</b>	)	
<b>AND NECESSITY FOR ENVIRONMENTAL</b>	)	<b>CASE NO.</b>
<b>PROJECT CONSTRUCTION AT THE</b>	)	<b>2021-00004</b>
<b>MITCHELL GENERATING STATION, AN</b>	)	
<b>AMENDED ENVIRONMENTAL COMPLIANCE</b>	)	
<b>PLAN, AND REVISED ENVIRONMENTAL</b>	)	
<b>SURCHARGE TARIFF SHEETS</b>	)	

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**SIERRA CLUB’S INITIAL REQUESTS FOR INFORMATION TO KENTUCKY  
POWER COMPANY**

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Pursuant to the Commission’s February 12, 2021, Order, Sierra Club hereby propounds the following initial requests for information on Kentucky Power Company (“KPC” or the “Company”) in the above-captioned proceeding.

The Company shall answer these data requests in the manner and timeframe set forth in the aforementioned Order, including by no later than March 26, 2021. Please produce the requested documents in electronic format whenever possible, and to the following recipients:

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Wherever the response to an interrogatory or request consists of a statement that the requested information is already available to Sierra Club, 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(s)/table(s)/figure number(s).

In the event that any document referred to in response to any request has been destroyed, specify the date and the manner of such destruction, the reason for such destruction, the person authorizing the destruction and the custodian of the document at the time of its destruction.

Sierra Club reserves the right to serve supplemental and/or revised discovery requests as permitted in this proceeding.

### **DEFINITIONS**

Unless otherwise specified in each individual interrogatory or request, “you,” “your,” the “Company,” or “KPC,” refers to Kentucky Power Company, and its affiliates, officers, directors, employees, and agents.

“AEPSC” means American Electric Power Service Corporation and its affiliates, officers, directors, employees, and agents.

“And” and “or” shall be construed either conjunctively or disjunctively as required by the context to bring within the scope of these interrogatories and requests for production of documents any information which might be deemed outside their scope by another construction.

“Any” means all or each and every example of the requested information.

“CCR” means coal combustion residuals, or the so-called CCR Rule, the federal regulation/rulemaking that regulates the same.

“Communication” means any transmission or exchange of information between two or more persons, whether orally or in writing, and includes, without limitation, any conversation or discussion by means of letter, telephone, note, memorandum, telegraph, telex, telecopy, cable, email, or any other electronic or other medium.

“Document” refers to written matter of any kind, regardless of its form, and to information recorded on any storage medium, whether in electrical, optical or electromagnetic form, and capable of reduction to writing by the use of computer hardware and software, and includes all copies, drafts, proofs, both originals and copies either (1) in the possession, custody or control of the Company regardless of where located, or (2) produced or generated by, known

to or seen by the Company, but now in their possession, custody or control, regardless of where located whether or still in existence.

- Such “documents” shall include, but are not limited to, applications, permits, monitoring reports, computer printouts, contracts, leases, agreements, papers, photographs, tape recordings, transcripts, letters or other forms of correspondence, folders or similar containers, programs, telex, TWX and other teletype communications, memoranda, reports, studies, summaries, minutes, minute books, circulars, notes (whether typewritten, handwritten or otherwise), agenda, bulletins, notices, announcements, instructions, charts, tables, manuals, brochures, magazines, pamphlets, lists, logs, telegrams, drawings, sketches, plans, specifications, diagrams, drafts, books and records, formal records, notebooks, diaries, registers, analyses, projections, email correspondence or communications and other data compilations from which information can be obtained (including matter used in data processing) or translated, and any other printed, written, recorded, stenographic, computer-generated, computer-stored, or electronically stored matter, however and by whomever produced, prepared, reproduced, disseminated or made.
- Without limitation, the term “control” as used in the preceding paragraphs means that a document is deemed to be in your control if you have the right to secure the document or a copy thereof from another person or public or private entity having actual possession thereof. If a document is responsive to a request, but is not in your possession or custody, identify the person with possession or custody. If any document was in your possession or subject to your control, and is no longer, state what disposition was made of it, by whom, the date on which such disposition was made, and why such disposition was made.
- For purposes of the production of “documents,” the term shall include copies of all documents being produced, to the extent the copies are not identical to the original, thus requiring the production of copies that contain any markings, additions or deletions that make them different in any way from the original.

“ELG” means the federal Effluent Limitations Guidelines regulation.

“ICAP” means installed capacity, or nameplate basis.

“Identify” means:

- (a) With respect to a person, to state the person’s name, address and business relationship (e.g., “employee”) vis-à-vis the Company;
- (b) With respect to a document, to state the nature of the document in sufficient detail for identification in a request for production, its date, its author, and to identify its custodian. If the information or document identified is recorded in electrical, optical or electromagnetic form, identification includes a description of the computer hardware or software required to reduce it to readable form.

“O&M” means operations and maintenance, and includes all items and costs typically associated in the industry under that umbrella.

“Relating to” or “concerning” means and includes pertaining to, referring to, or having as a subject matter, directly or indirectly, expressly or implied, the subject matter of the specific request.

“UCAP” means unforced capacity.

“Workpapers” are defined as original, electronic, machine-readable, unlocked, Excel format (where possible) with formulas intact.

### **PRIVILEGE**

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 interrogatory or request for production, describe the basis for your claim of privilege in sufficient detail so as to permit Sierra Club or the Commission to evaluate the validity of the claim. With respect to documents for which a privilege is claimed, 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 Sierra Club or the Commission to evaluate the validity of such claims.

### **TIME**

Unless otherwise provided, the applicable time period for each of these requests for information is January 1, 2016, to the present.

### **REQUESTS FOR INFORMATION**

1. Refer to the Direct Testimony of Connie Trecuzzi, page 2, lines 12-13.
  - a. Please provide the October 13, 2020 EIA-based Fundamentals Forecast that was provided to Mr. Becker for use in his analysis. (Here and throughout, provide that forecast in machine-readable format, with cells intact and formulae unlocked.)
  - b. Please explain whether AEPSC produced an updated Fundamentals Forecast since October 13, 2020.
    - i. If yes, provide that forecast (in machine-readable format, with cells intact and formulae unlocked).

- ii. If no, please discuss whether and when AEPSC expects to produce its next Fundamentals Forecast.
- 2. Refer to the Direct Testimony of Mark A. Becker, page 2, line 22, and page 3, line 1, *inter alia*.
  - a. Please confirm whether Mitchell's currently planned retirement year of 2040 (also the Case 1 retirement year) is the same as Mitchell's end of useful life date.
    - i. If not, please identify the end of useful life date, and explain the disparity.
  - b. Please confirm whether 2040 is the retirement date of Mitchell for purposes of KPC's most recent depreciation study.
    - i. If not, please identify that retirement date for purposes of Mitchell's depreciation, and explain the disparity.
- 3. Refer to the Direct Testimony of Mark A. Becker, page 4, lines 6-8.
  - a. Provide the cost of compliance for Case 1 and Case 1, as it was provided by Company Witness Brian D. Sherrick.
  - b. Describe any changes made to the compliance costs provided by Mr. Sherrick in order to convert them into values for use in the PLEXOS model.
    - i. Provide the compliance costs for CCR and ELG at Mitchell for both Case 1 and Case 2 as they were input into the PLEXOS model.
    - ii. Provide the workpapers used to convert the compliance costs into PLEXOS format (in machine-readable format, with cells unlocked and formulae intact.)
- 4. Refer to the Direct Testimony of Mark A. Becker, page 5, lines 11-13. In each response to the below, indicate real or nominal dollars; and if real dollars, provide the dollar year.
  - a. Provide the annual forecasted capital expenditures at Mitchell for both Case 1 and Case 2, net of CCR and ELG compliance costs.
  - b. Provide the annual forecasted fixed O&M costs at Mitchell for both Case 1 and Case 2, net of CCR and ELG compliance costs.
  - c. Provide the annual forecasted variable O&M costs at Mitchell for both Case 1 and Case 2, net of CCR and ELG compliance costs.
  - d. Provide the annual CCR and ELG capital expenditures at Mitchell for Case 1.
  - e. Provide the annual CCR expenditures at Mitchell for Case 2.
  - f. Provide the annual forecasted fixed O&M costs associated with CCR and ELG compliance for Case 1.
  - g. Provide the annual forecasted fixed O&M costs associated with CCR compliance for Case 2.

- h. Provide the annual forecasted variable O&M costs associated with CCR and ELG compliance for Case 1.
  - i. Provide the annual forecasted variable O&M costs associated with CCR compliance for Case 1.
  - j. Confirm that the forecasts provided in a) through i) match the values that were input into the PLEXOS model in each case.
    - i. If not confirmed, provide the values as they were input into the PLEXOS model for a) through i), above; and, further, explain why the PLEXOS input values differ from the forecasts provided in a) through i).
- 5. Refer to the Direct Testimony of Mark A. Becker, page 5, lines 17-19.
  - a. Provide the forecasted annual delivered (or burner tip) cost of coal to the Mitchell unit for the duration of the analysis period under each of the three fundamental forecasts (Base with Carbon, Base No Carbon, and Low No Carbon). Indicate real or nominal dollars; and if real, provide the dollar year.
  - b. Provide the monthly price of gas delivered to the PJM-AEP zone under each of the three fundamental forecasts (Base with Carbon, Base No Carbon, and Low No Carbon).
  - c. Provide the hourly power price forecast for the PJM-AEP zone under each of the three fundamental forecasts (Base with Carbon, Base No Carbon, and Low No Carbon) through 2040. If not available hourly, provide on- and off-peak power prices.
  - d. Provide any hourly transmission constraints included in the PLEXOS model that would limit the buying and selling of power from/to the PJM market. If not available on an hourly basis, provide on- and off-peak limits.
- 6. Refer to the Direct Testimony of Mark A. Becker, page 5, line 23, and page 6, lines 1-3. Please describe the changes in assumptions that were required to answer the question at hand in this proceeding.
- 7. Refer to the Direct Testimony of Mark A. Becker, page 6, line 5.
  - a. Provide the monthly peak and monthly energy forecasts, gross and net of energy efficiency, for KPC.
  - b. Provide the hourly KPC load shape used in the PLEXOS model.
- 8. Refer to the Direct Testimony of Mark A. Becker, page 6, line 5. For each of KPC's currently owned or contracted units, please provide:
  - a. Capacity (in MW) on both an ICAP and UCAP basis
  - b. Heat rate

- c. Anticipated retirement date
  - d. Contract expiration date
9. Refer to the Direct Testimony of Mark A. Becker, page 6, line 9. Please provide the PJM minimum capacity reserve margin used in this analysis on both an ICAP and UCAP basis.
  10. Refer to the Direct Testimony of Mark A. Becker, page 6, lines 10-11. Please provide the “forecasts of the incremental future capital requirements and fixed and variable operating costs for Mitchell (with and without compliance costs),” as they were input into the PLEXOS model.
  11. Refer to the Direct Testimony of Mark A. Becker, page 7, Figure 1. Please provide the workpapers used to generate Figure 1, in machine-readable format with cells unlocked and formula intact.
  12. Refer to the Direct Testimony of Mark A. Becker, page 11, lines 14-15. Provide the calculations of recovery of levelized carrying charges on future on-going capital expenditures, including the CCR and ELG capital expenditures. Provide these calculations in machine-readable format, with cells unlocked and formulae intact.
  13. Refer to the Direct Testimony of Mark A. Becker, page 11, lines 18-20. Provide the levelized fixed charge rates, which include a return on capital investment, income and property taxes, and depreciation, that were applied to the CCR and ELG capital and all future capital expenses by the PLEXOS model.
  14. Refer to the Direct Testimony of Mark A. Becker, page 11, lines 18-20. Discuss whether and how running at reduced capacity factors would lead the Mitchell unit to incur additional maintenance costs as a result of increased unit cycling. (If not, explain why not.)
  15. Refer to the Direct Testimony of Mark A. Becker, page 13, lines 3-11.
    - a. For Case 1, provide the annual CCR/ELG compliance capital plus the ongoing capital expense forecasts through 2040.
    - b. For Case 2, provide the annual CCR compliance costs plus ongoing maintenance capital through 2028.

16. Refer to the Direct Testimony of Mark A. Becker, page 14, lines 1-10. For each type of fossil generation resource that was available to the PLEXOS model for selection, provide:

- a. Technology type
- b. Size (MW) on both an ICAP and UCAP basis
- c. Assumed book life
- d. Assumed operating life
- e. Heat rate
- f. Firm capacity value
- g. Capital cost (\$/kW), including annual increases/decreases, if applicable
- h. Annual fixed O&M
- i. Annual variable O&M
- j. Interconnection costs
- k. First year available
- l. Annual minimum number of units
- m. Annual maximum number of units
- n. Cumulative maximum

17. Refer to the Direct Testimony of Mark A. Becker, page 14, lines 1-10. For each type of renewable resource that was available to the PLEXOS model for selection, provide:

- a. Technology type
- b. Size (MW) on both an ICAP and UCAP basis
- c. Assumed book life
- d. Assumed operating life
- e. Firm capacity value
- f. Capital cost (\$/kW), including annual increases/decreases, if applicable
- g. Annual fixed O&M
- h. Annual variable O&M
- i. Interconnection costs
- j. LCOE (\$/MWh)
- k. First year available
- l. Annual minimum number of units
- m. Annual maximum number of units
- n. Cumulative maximum

18. Refer to the Direct Testimony of Mark A. Becker, page 14, lines 1-10. For each type of battery storage resource that was available to the PLEXOS model for selection, provide:

- a. Duration
- b. Size (MW) on both an ICAP and UCAP basis



- c. Assumed book life
  - d. Assumed operating life
  - e. Firm capacity value
  - f. Capital cost (\$/kW), including annual increases/decreases, if applicable
  - g. Annual fixed O&M
  - h. Annual variable O&M
  - i. Interconnection costs
  - j. First year available
  - k. Annual minimum number of units
  - l. Annual maximum number of units
  - m. Cumulative maximum
19. Refer to the Direct Testimony of Mark A. Becker, page 14, lines 10-11.
- a. Provide the list of demand-side load reduction options that were considered along with a levelized cost value of each.
  - b. Please discuss whether any of these resources selected by the PLEXOS model.
    - i. If so, identify which ones, and discuss why they were selected.
    - ii. If no, explain why not.
20. Refer to the Direct Testimony of Mark A. Becker, page 15, lines 1-8. Provide the levelized screening analysis and all underlying workpapers (in machine-readable format, with cells unlocked and formulae intact).
21. Refer to the Direct Testimony of Mark A. Becker, page 15, lines 18-20.
- a. Provide the prices of the capacity-only PPA offered to the PLEXOS model.
  - b. Provide the years in which this capacity-only PPA was made available to the PLEXOS model.
  - c. Provide the MW increments of the capacity-only PPA.
22. Refer to the Direct Testimony of Mark A. Becker, page 16, lines 21-22.
- a. Please confirm whether Big Sandy 1 assumed to retire in 2030 in both Case 1 and Case 2
    - i. If not, identify the assumed retirement date and discuss the reason/basis for that selection.
  - b. Provide the commissioning date of Big Sandy 1.
23. Refer to the Direct Testimony of Mark A. Becker, page 18, lines 16-18.
- a. Please explain where the wind resource offered to the PLEXOS model is assumed to be located.

- b. Provide the production tax credit for wind assumed to be available through 2025.
      - i. Discuss whether that assumption remains, at this time, KPC's ongoing best expectation/prediction.
- 24. Refer to the Direct Testimony of Mark A. Becker, page 21, lines 12-21. Please explain whether and how battery storage resources, sited at or near the Mitchell plant, could eliminate the need for additional transmission investments.
  - a. If yes, explain how many MW of battery storage resources would be needed
  - b. If no, explain why not.
- 25. Refer to the Direct Testimony of Mark A. Becker, page 20, lines 9-14. Please explain whether conversion of either Mitchell or Amos to a synchronous condenser could eliminate the need for additional transmission investment.
  - a. If yes, explain by how much.
  - b. If no, explain why not.
- 26. Refer to the Direct Testimony of Mark A. Becker.
  - a. Provide the weighted average cost of capital used in the analysis.
  - b. Provide the discount rate used in the analysis.
  - c. Provide the assumed rate of return to KPC on new investments included in the analysis.
- 27. Refer to the Direct Testimony of Brian D. Sherrick, page 4, lines 15-16, *inter alia*.
  - a. Given the 50/50 split ownership of Mitchell by KPC and fellow AEP subsidiary Wheeling Power Company, discuss the process and parameters by which the two companies in general make major capital investment and operating decisions.
    - i. Include in your discussion what happens in the event the companies disagree on a particular choice for Mitchell's future disposition (e.g., are they at an impasse until their minds meet, or can one company override the other, or does AEP parent management make a tie-breaking decision, or something else?).
  - b. Please confirm whether KPC is proposing for approval in this case the same compliance path for Mitchell (i.e., CCR and ELG investment and coal-fired operations until a 2040 retirement, versus CCR investment only and 2028 retirement, versus other) that Wheeling Power (jointly with other fellow AEP subsidiary Appalachian Power Company) is proposing for approval by the West Virginia Public Service Commission in Case No. 20-1040-E-CN, *Application for the Issuance of a Certificate of Public Convenience and Necessity for Internal*

*Modifications at Coal Fired Generating Plants Necessary to Comply with Federal Environmental Regulations.*

- i. If not the proposals in the two cases are not identical, please discuss in detail how KPC's proposal differs from Wheeling Power's, and explain why the companies arrived at different conclusions about what to propose in their respective commissions.
    - c. Discuss whether it would be possible for Wheeling Power only to retire its share of the plant, while KPC continued, and what that would look like, if possible. Also discuss the possibility of the inverse scenario, with KPC retiring its share.
      - i. If possible, please explain the implications of one company choosing to retire its share on the ratepayers of the other company.
    - d. Discuss what would happen if the Kentucky PSC and West Virginia PSC were to render conflicting decisions, in this case and Case No. 20-1040-E-CN, respectively, about the companies' respective CPCN requests and the choice between CCR+ELG compliance investment with a 2040 retirement, versus CCR-only compliance and 2028 retirement (or some other option). Without limitation:
      - i. Explain the process of decision-making that would ensue at, and between, KPC, Wheeling Power, and AEPSC.
      - ii. Indicate whether KPC would (or might) proceed to invest in ELG compliance projects to keep Mitchell operating past 2028 if the West Virginia PSC were to deny approval and cost recovery by Wheeling Power for such projects; and if so, explain.
      - iii. Calculate, identify, and explain the cost impact to KPC ratepayers in the event the West Virginia PSC were to reject cost recovery by Wheeling Power of ELG costs, and KPC still moved ahead with ELG investments.
        1. Explain the basis and steps in your calculations, and provide all supporting workpapers.
28. Refer to the Direct Testimony of Brian D. Sherrick, page 12, lines 2-5.
- a. Please confirm when Mr. Becker provided Mr. Becker's economic analysis to Wheeling Power, as referenced in the above-cited testimony.
    - i. In doing so, please specify whether that was before Wheeling Power and Appalachian Power initiated Case No. 20-1040-E-CN at the West Virginia Public Service Commission.
  - b. Explain why Mr. Becker did not also provide economic analysis testimony in that aforementioned West Virginia case, as he did in this case, and why Mr. James Martin instead was chosen to provide testimony on the issue in that parallel case.

29. Refer to the Direct Testimony of Connie Trecuzzi, page 7, line 5, through page 8, line 2; 2-13; the Direct Testimony of Mark A. Becker, page 3, lines 5-13, *inter alia*; and the Direct Testimony of Brett Mattison, page 5, lines 18-21.
- a. Please identify AEP's current carbon reduction pledge(s) and goal(s) for its generation fleet.
  - b. Discuss whether, how, and to what extent KPC takes into consideration AEP's pledges/goals, and considers them to be bind, constrain, motivate, or otherwise shape KPC's resource planning and compliance decisions.
  - c. Confirm whether Mr. Becker's economic analysis for his testimony in this case attempted to incorporate AEP's carbon reduction pledges/goals.
    - i. If so, explain how.
    - ii. If not, explain why not.
  - d. Explain whether, and (if so) specifically how, apart from Mr. Becker's analysis, KPC otherwise took into account AEP's carbon-reduction pledges/goals in identifying, weighing, and deciding between the CCR and ELG compliance options for Mitchell.
  - e. Provide all memoranda, correspondence, analysis, reports, presentations, or other documents, prepared or reviewed by KPC, that assess the risk and potential ratepayer impact of Mitchell becoming a stranded asset in the event that Mitchell invests in ELGs compliance to keep the plant coal-fired past 2028, and then KPC or AEP decide that Mitchell must be retired in order to fulfill AEP's carbon-reduction pledges/goals (whether current or future contemporary ones).
    - i. If KPC is not aware of any such documents, please so state.

Dated: March 12, 2021

Respectfully submitted,



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**CERTIFICATE OF SERVICE**

This is to certify that the foregoing copy of the SIERRA CLUB'S INITIAL REQUESTS FOR INFORMATION TO KENTUCKY POWER COMPANY in this action is being electronically transmitted to the Commission on March 12, 2021; and that there are currently no parties that the Commission has excused from participation by electronic means in this proceeding. Per the Commission's general standing Order issued in Case No. 2020-00085 on March 16, 2020, this filing will not be mailed in paper medium to the Commission.



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JOE F. CHILDERS