

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC 2025 INTEGRATED RESOURCE)	CASE NO.
PLAN OF EAST KENTUCKY POWER)	2025-00087
COOPERATIVE, INC.)	

COMMISSION STAFF'S SECOND REQUEST FOR INFORMATION
TO EAST KENTUCKY POWER COOPERATIVE, INC.

East Kentucky Power Cooperative, Inc. (EKPC), pursuant to 807 KAR 5:001, shall file with the Commission an electronic version of the following information. The information requested is due on June 6, 2025. The Commission directs EKPC to the Commission's July 22, 2021 Order in Case No. 2020-00085¹ regarding filings with the Commission. Electronic documents shall be in portable document format (PDF), shall be searchable, and shall be appropriately bookmarked.

Each response shall include the question to which the response is made and shall include the name of the witness responsible for responding to the questions related to the information provided. Each response shall be answered under oath or, for representatives of a public or private corporation or a partnership or association or a governmental agency, be accompanied by a signed certification of the preparer or the person supervising the preparation of the response on behalf of the entity that the

¹ Case No. 2020-00085, *Electronic Emergency Docket Related to the Novel Coronavirus COVID-19* (Ky. PSC July 22, 2021), Order (in which the Commission ordered that for case filings made on and after March 16, 2020, filers are NOT required to file the original physical copies of the filings required by 807 KAR 5:001, Section 8).

response is true and accurate to the best of that person's knowledge, information, and belief formed after a reasonable inquiry.

EKPC shall make timely amendment to any prior response if EKPC obtains information that indicates the response was incorrect or incomplete when made or, though correct or complete when made, is now incorrect or incomplete in any material respect.

For any request to which EKPC fails or refuses to furnish all or part of the requested information, EKPC shall provide a written explanation of the specific grounds for its failure to completely and precisely respond.

Careful attention shall be given to copied and scanned material to ensure that it is legible. When the requested information has been previously provided in this proceeding in the requested format, reference may be made to the specific location of that information in responding to this request. When applicable, the requested information shall be separately provided for total company operations and jurisdictional operations. When filing a paper containing personal information, EKPC shall, in accordance with 807 KAR 5:001, Section 4(10), encrypt or redact the paper so that personal information cannot be read.

1. Refer to EKPC's 2025 Integrated Resource Plan (IRP), pages 3-4, regarding PJM geographical load forecast for transmission purposes.

- a. Verify that EKPC has its own zone for PJM load forecast purposes.
- b. State how EKPC and PJM's load forecasts influence each other.

2. Identify key differences in the EKPC and PJM load forecast methodologies. Refer to IRP, page 9. Explain the difference in methodology between the 2022 load forecast and the 2024 Long Term Load Forecast (LTLF).

3. Refer to IRP, page 11.

a. Explain how EKPC calculated and decided to use a 7 percent winter reserve margin for the 2025 IRP.

b. Calculate the extra generation cost associated with the use of a 7 percent winter reserve margin compared with the prior zero percent winter reserve margin, using the preferred portfolio selected.

c. Explain why a winter reserve margin was not previously used.

4. Refer to IRP, page 12, regarding PJM exclusion of Equivalent Forced Outage Rate Demand (EFORd) from determining reserve margin. State whether and how EFORd is still used in EKPC's generation selection modeling or selection of portfolios.

5. Refer to IRP, page 13.

a. Confirm that the Hydro Purchased Power Agreement (PPA) was not renewed.

b. Explain how EKPC decided to include the 321 MW of planned solar and the Hydro (PPA) as existing generation resources for the IRP.

c. State how EKPC decided to construct the 321 MW of planner solar. Provide any modeling performed.

d. Provide a description of any changes to EKPC's preferred portfolio based on the non-renewal of the Hydro PPA.

e. Refer to IRP, page 14 and Case No. 2024-00129,² Application, Direct Testimony of Julia J. Tucker, Exhibit JJT-1 (filed confidentially), in which EKPC opted to acquire existing, unbuilt solar projects instead of entering into PPAs due to the steep cost increase for PPAs. Describe the current PPA market compared to acquisition of existing facilities, including the cost and availability of both options.

f. Refer to the IRP, page 16. Provide the incentive increases, by dollar amount and percentage, for the 16 owner-members per DSM program. Additionally, provide the incentive increases as a total amount for each 16 owner-member.

6. Refer to the IRP, page 26, Table 1-1. Provide explanation for the 2025 IRP's impact on Energy Requirement for the year 2025 being lower than the same projection in the 2022 IRP.

7. Refer to the IRP, page 27. Refer also to the Technical Appendix Load Forecast, page 28, table titled "EKPC: Own or Lease an EV?". Provide explanation on how electric vehicle charging is expected to contribute 536,000 MWh to total energy requirements when only 12.7 percent of EKPC residential customers are likely to purchase an EV within the next five years.

8. Refer to the IRP, page 35. Provide any available data regarding the AMI usage pilot program, including how long the pilot program was in effect.

² Case No. 2024-00129, *Electronic Application of East Kentucky Power Cooperative, Inc. for Certificates of Public Convenience and Necessity and Site Compatibility Certificates for the Construction of a 96 MW (Nominal) Solar Facility in Marion County, Kentucky and a 40 MW (Nominal) Solar Facility in Fayette County, Kentucky and Approval of Certain Assumptions of Evidences of Indebtedness Related to the Solar Facilities and Other Relief* (filed Apr. 26, 2024), Application.

9. Refer to IRP, page 40, and Case No. 2022-00098,³ (2022 EKPC IRP), page 27-28. Explain why EKPC decided not to use carbon sensitivity scenarios in its 2025 IRP.

10. Refer to IRP, page 41. Explain why economic retirement or conversion of generation was not included in the model.

11. Refer to the IRP, page 50, item 4. Explain in what ways the preliminary forecast is revised. Additionally, provide an outline of the revision process.

12. Refer to IRP, page 51.

a. Explain why EKPC used a 20-year period of weather data.

b. Explain how EKPC's load forecasting would be affected if the National Weather Service were disbanded.

13. Refer to the IRP, page 51, item 5. Provide a table with the residential consumer growth rate and economic growth rate for each region of EKPC's service territory.

14. Refer to IRP, pages 72-73.

a. Explain how EKPC calculated electric vehicle (EV) adoption rates and estimated usage.

b. State whether and to what extent EKPC expects a reduction in expected EV adoption rates or usage due to the potential expiration or termination of federal financial stimulus tied to EV adoption based upon recent actions and statements of federal government officials that can be interpreted as intended to de-incentivize EV adoption.

³ Case No. 2022-00098, *Electronic 2022 Integrated Resource Plan of East Kentucky Power Cooperative, Inc.* (filed Apr. 1, 2022), IRP.

15. Refer to the IRP, pages 117 through 122. Explain how the participant counts for each program were calculated. Additionally, provide the current participation count for active DSM programs, by program and by Owner-Member

16. Refer to the IRP, page 117, table titled "Button-Up Weatherization Program." Explain the reasons behind the rapid growth in the participant count.

17. Refer to the IRP, pages 138-139. Explain whether the co-firing of the Spurlock units was included in EKPC's generation expansion plan.

18. Refer to the IRP, page 137 and 141.

a. Provide the identity and location of the five merchant generation facilities with a total maximum facility output of 320 MW referenced on page 137.

b. Explain whether any of the seven solar projects that have reached the final agreement phase (an executed Generator Interconnection Agreement) are related to the four solar projects totaling 321 MW referenced on page 141.

c. Explain when EKPC anticipates filing Certificate of Public Convenience and Necessity (CPCN) for the four solar projects listed on page 141.

19. Refer to the IRP, Tables 6-2 and 6-3 located on page 152. Also refer to Table 6-5 located on page 153.

a. Explain the differences between 556 ACSR, 795 ACSR, and a transmission conductor that has a carbon fiber core as opposed to a steel core. Include in the response differences in useful life, whether the useful life varies with the voltage of the line, cost, efficiency in carrying electricity, and whether there are any expected operational or Operating & Maintenance (O&M) saving advantages of one over the other.

b. In Table 6-5, for the Rebuild the 556 ACSR Crooksville-West Berea line section project, explain why it is advantageous or necessary to replace 556 ACSR with 795 ACSR.

c. Explain whether a cost benefit study has ever been conducted to evaluate whether any advantages are attributable to carbon fiber cored transmission conductor versus steel-cored conductor over the useful lives of the two types of conductors.

d. If not, explain how EKPC knows that using carbon fiber-cored conductor is the least reasonable cost over the useful life of the steel-cored conductor.

20. Refer to the IRP, Table 7-2 on page 161 and Table 7-3 on page 162.

a. Explain whether most or all the listed projects would be undertaken during a planned maintenance outage.

b. Explain how EKPC disposes the material dredged from the Cooper coal pile pond.

21. Refer to IRP, page 177.

a. Explain the factors used by EKPC to determine reliability of its overall system and to compare individual existing and potential generation resources.

b. Explain how reliability factors into selection of EKPC's preferred portfolio.

22. Refer to the IRP, page 185 and Table 8-4. EKPC indicated that Table 8-4 shows the five lowest cost plans. Provide the costs of the ten lowest cost plans from the 2,500 plans simulated, including the five plans shown in Table 8-5.

23. Refer to the IRP, Table 8-2, page 180, Case No. 2024-00310,⁴ and Case No. 2024-00370,⁵ EKPC's Response to Commission Staff's Fourth Request for Information, Item 4, Attachment JJT-4 Revised. Explain whether the cost information for the Reciprocating Internal Combustion Engines (RICE), combined cycle generation, purchase power agreement (PPA) Winter, and PPA Summer power purchases in Table 8-2 provide the same cost information used in the RTSimm Resource Optimizer and Production Cost modules to derive the resource portfolio in Attachment JJT-4 Revised. If not, explain why consistent costing information was not used for the IRP and EKPC's CPCN filings.

24. Refer to IRP, page 184, Table 8-3. If EKPC is planning for a seven percent winter reserve margin, state why no generation is being added in 2035 to cover the estimated capacity shortfall.

25. Refer to IRP, pages 193-219.

a. State whether the cost of compliance with each regulation referenced in the Environmental Compliance section was included in the original 2025 modeling.

⁴ Case No. 2024-00310, *Electronic Application of East Kentucky Power Cooperative, Inc. for 1) a Certificate of Public Convenience and Necessity to Construct a New Generation Resource, 2) a Site Compatibility Certificate, and 3) Other General Relief* (filed Sept. 20, 2024).

⁵ Case No. 2024-00370, *Electronic Application of East Kentucky Power Cooperative, Inc. for 1) Certificates of Public Convenience and Necessity to Construct a New Generation Resource; 2) For a Site Compatibility Certificate Relating to the Same; 3) Approval of Demand Side Management Tariffs; and 4) Other General Relief* (filed Mar. 18, 2025), Response to Commission Staff's Fourth Request for Information, Item 4, Attachment JJT-4 Revised.

b. State whether the cost of compliance with each regulation referenced in the Environmental Compliance section will be included in modeling performed pursuant to Commission Staff's First Request for Information.

26. Refer to IRP, page 198, which states that EKPC is in compliance with the Mercury and Air Toxics Standards (MATS) rule.

a. Explain whether that means that EKPC is in compliance (with the exception of Spurlock Unit 3) with the 0.030 lb/MMBtu or the 0.010 lb/MMBtu standard.

b. State whether EKPC will discontinue MATS compliance spending on Spurlock Unit 3 based on President Trump's April 8, 2025 Proclamation⁶ providing a MATS exemption.

27. Refer to the IRP, page 13, Table 8-3 on page 184, and Table 8-5 on pages 186-187.

a. Confirm that the Final Plan column in Table 8-5 reflects the capacity additions in Table 8-3 for the years 2025-2029. If not confirmed, explain what the table reflects in that column.

b. The Energy Additions column in Table 8-3 does not appear to reflect the 300 MW hydro energy PPA referenced on page 13. Explain where this is reflected in Table 8-3.

c. Explain where in Table 8-3 the four new solar generation facilities are reflected.

28. Refer to the IRP, Table 8-3 on page 184 and Table 8-6 on page 188.

⁶ Proclamation 10914, 90 FR 16777 (2025).

a. Explain whether the energy purchases column represents winter seasonal energy purchases and not capacity.

b. Refer to Case No. 2024-00370, EKPC's Response to Commission Staff's Fourth Request for Information, Attachment JJT-4 Revised. In that attachment, EKPC adjusted its summer capacity and reserve margin requirements to account for PJM summer obligations. Explain why a similar adjustment was not made in the IRP. Include in the response an explanation of whether Table 8-3 and 8-6 would match the data presented in Attachment JJT-4 Revised.

c. Explain the cause of the different capacity amounts, 745 MW and 725 MW, shown as the intermediate capacity difference in 2031.

d. Explain whether Table 8-3 is EKPC's final preferred resource portfolio from the RTSimm production cost module.

29. Refer to the IRP, Table 8-3 on page 184 and Table 8-6 on page 188. Explain whether the data and modeling results presented in these tables are compatible and represent EKPC's final preferred resource portfolio.

30. Refer to the IRP, Table 8-3 on page 184 and Table 8-4 on page 185.

a. Explain why the Resource Optimizer was run from 2025-2030 only.

b. If the Resource Optimizer was run from 2025 -2030, explain how the model chose to add the RICE units and the combustion turbine in 2029 and 2031 respectively.

c. Refer also to Case No. 2024-00310 and Case No. 2024-00370, EKPC's Response to Commission Staff's Fourth Request for Information, Attachment JJT-4 Revised, which contains 300 MW of hydro capacity that is not included as a

modeled capacity addition. Explain why EKPC included the hydro capacity addition in its CPCN cases, but not the IRP.

31. Refer to Technical Appendix, Vol. I, page 11 and 14. Explain in greater detail how EKPC derives individual owner member service territories from regional models and county level data.

32. Refer to Technical Appendix, Vol. I, pages 18-19. Provide the electric vehicle study performed by GDS Associates (GDS).

33. Refer to the Technical Appendix Vol. I, page 26.

a. Explain whether each owner member offers all cost-effective DSM programs as determined by the DSM potential study. If not, identify and explain any empirical evidence used by the owner members to show that any particular DSM program should not be offered within its service territory.

b. For the DSM forecast, explain the assumed retail customer participation levels across the owner member systems supporting the additional effects of DSM programs on the load forecast.

c. Explain whether EKPC has ever estimated the potential energy and capacity savings if all eligible retail customers participated in the DSM programs proposed by EKPC. Include in the response whether the EKPC and or the EKPC Board has ever entertained the proposition that DSM programs should be offered by EKPC and not the individual owner members.

34. Refer to Technical Appendix, Vol I, pages 27-28. Provide the survey(s) in which the residential appliance saturation data and electric vehicle data were sourced. Also provide the data from the survey(s) and any supporting analysis document.

35. Provide the EV load shape assumptions used in the load forecast, including:
- a. Charging profile by hour (weekday vs. weekend).
 - b. Annual EV energy usage per vehicle type.
 - c. Source(s) of miles driven and energy consumption per mile.
36. Provide a map or GIS shapefile showing transmission constraints, congestion areas, or zones where the Liberty RICE facility or other resources are intended to support reliability.
37. For each owner-member, provide historical and forecasted residential consumers, average electricity use per customer, and total class sales (in MWh) for the years 2014-2039, in Excel format.
38. Explain how EKPC forecast capacity prices.



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DATED **MAY 14 2025**

cc: Parties of Record

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