

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC 2022 INTEGRATED RESOURCE PLAN) CASE NO. 2022-00098
OF EAST KENTUCKY POWER COOPERATIVE, INC.)

**ATTORNEY GENERAL'S FIRST REQUEST FOR INFORMATION TO
EAST KENTUCKY POWER COOPERATIVE, INC.**

Comes now the intervenor, the Attorney General of the Commonwealth of Kentucky, through his Office of Rate Intervention (“Attorney General”), and submits his First Request for Information to East Kentucky Power Cooperative, Inc. (hereinafter “EKPC” or the “Company”) to be answered by July 21, 2022, and in accord with the following:

- (1) In each case where a request seeks data provided in response to a staff request, reference to the appropriate requested item will be deemed a satisfactory response.
- (2) Identify the witness who will be prepared to answer questions concerning each request.
- (3) Repeat the question to which each response is intended to refer.
- (4) These requests shall be deemed continuing so as to require further and supplemental responses if the company receives or generates additional information within the scope of these requests between the time of the response and the time of any hearing conducted hereon.
- (5) Each response shall be answered under oath or, for representatives of a public or private corporation or a partnership or association, be accompanied by a signed certification of the preparer or person supervising the preparation of the response on behalf of the entity that the response is true and accurate to the best of that person’s knowledge, information, and

belief formed after a reasonable inquiry.

(6) If you believe any request appears confusing, please request clarification directly from undersigned Counsel for the Office of Attorney General.

(7) To the extent that the specific document, workpaper or information as requested does not exist, but a similar document, workpaper or information does exist, provide the similar document, workpaper, or information.

(8) To the extent that any request may be answered by way of a computer printout, please identify each variable contained in the printout, which would not be self-evident to a person not familiar with the printout.

(9) If the company has objections to any request on the grounds that the requested information is proprietary in nature, or for any other reason, notify the Office of the Attorney General as soon as possible, and in accordance with Commission direction.

(10) As used herein, the words “document” or “documents” are to be construed broadly and shall mean the original of the same (and all non-identical copies or drafts thereof) and if the original is not available, the best copy available. These terms shall include all information recorded in any written, graphic or other tangible form and shall include, without limiting the generality of the foregoing, all reports; memoranda; books or notebooks; written or recorded statements, interviews, affidavits and depositions; all letters or correspondence; telegrams, cables and telex messages; contracts, leases, insurance policies or other agreements; warnings and caution/hazard notices or labels; mechanical and electronic recordings and all information so stored, or transcripts of such recordings; calendars, appointment books, schedules, agendas and diary entries; notes or memoranda of conversations (telephonic or otherwise), meetings or conferences; legal pleadings and

transcripts of legal proceedings; maps, models, charts, diagrams, graphs and other demonstrative materials; financial statements, annual reports, balance sheets and other accounting records; quotations or offers; bulletins, newsletters, pamphlets, brochures and all other similar publications; summaries or compilations of data; deeds, titles, or other instruments of ownership; blueprints and specifications; manuals, guidelines, regulations, procedures, policies and instructional materials of any type; photographs or pictures, film, microfilm and microfiche; videotapes; articles; announcements and notices of any type; surveys, studies, evaluations, tests and all research and development (R&D) materials; newspaper clippings and press releases; time cards, employee schedules or rosters, and other payroll records; cancelled checks, invoices, bills and receipts; and writings of any kind and all other tangible things upon which any handwriting, typing, printing, drawings, representations, graphic matter, magnetic or electrical impulses, or other forms of communication are recorded or produced, including audio and video recordings, computer stored information (whether or not in printout form), computer-readable media or other electronically maintained or transmitted information regardless of the media or format in which they are stored, and all other rough drafts, revised drafts (including all handwritten notes or other marks on the same) and copies of documents as hereinbefore defined by whatever means made.

(11) For any document withheld on the basis of privilege, state the following: date; author; addressee; indicated or blind copies; all persons to whom distributed, shown, or explained; and, the nature and legal basis for the privilege asserted.

(12) In the event any document called for has been destroyed or transferred beyond the control of the company, please state: the identity of the person by whom it was destroyed

or transferred, and the person authorizing the destruction or transfer; the time, place, and method of destruction or transfer; and, the reason(s) for its destruction or transfer. If destroyed or disposed of by operation of a retention policy, state the retention policy.

(13) Provide written responses, together with any and all exhibits pertaining thereto, in one or more bound volumes, separately indexed and tabbed by each response, in compliance with Kentucky Public Service Commission Regulations.

(14) “And” and “or” should be considered to be both conjunctive and disjunctive, unless specifically stated otherwise.

(15) “Each” and “any” should be considered to be both singular and plural, unless specifically stated otherwise.

Respectfully submitted,

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Certificate of Service and Filing

Pursuant to the Commission's Orders and in accord with all other applicable law, Counsel certifies that the foregoing electronic filing was transmitted to the Commission on June 29, 2022, and there are currently no parties that the Commission has excused from participation by electronic means in this proceeding.

This 29th day of June, 2022.

Angela M. Aoad

Assistant Attorney General

1. Refer to Section 1.0, Executive Summary, 2022 Integrated Resource Plan, page 2.
EKPC states that it is “concerned about future reliability of the interconnected electric system and believes that conventional generation resources will continue to be required to facilitate the transition to renewable and low/no carbon emitting resources. Conventional generation resources will be required to maintain reliability as the transition occurs.”
 - a. Expound on this statement by identifying and discussing the concerns that EKPC has for future reliability of the electric grid.
 - b. Given the growing number of retirements of coal and gas-fired generation units within the PJM footprint, explain whether EKPC’s concerns regarding the future reliability of the interconnected electric system also include the PJM footprint.
 - c. Specifically identify the conventional resources that EKPC believes will continue to be required to facilitate the transition to renewable and low/no carbon emitting resources.
 - c. Explain why conventional generation resources are needed to maintain reliability as the transition occurs.
2. Refer to Section 1.0, Executive Summary, 2022 Integrated Resource Plan, page 2.
EKPC states that it intends to actively manage its current and future asset portfolio to maintain high reliability of electric service to its owner-members. EKPC further asserts that it intends to economically diversify its energy resources, including market purchases, fossil fuels, renewables, storage, demand management and energy efficiency programs, and partnering opportunities.

- a. Discuss in detail how EKPC intends to maintain high reliability of electric service to its owner-members.
 - b. Explain in detail how EKPC intends to economically diversify the following:
 - i. Market Purchases,
 - ii. Fossil Fuels,
 - iii. Renewables,
 - iv. Storage,
 - v. Demand Management,
 - vi. Energy Efficiency Programs, and
 - vii. Partnering Opportunities.
3. Refer to Section 1.0, Executive Summary, 2022 Integrated Resource Plan, pages 2 – 3. EKPC states that a strategic objective is to continue to ensure reliability and affordability of electric service while supporting beneficial electrifications and thoughtfully responding to growing pressures to decarbonize.
 - a. Explain in detail how EKPC plans to ensure reliability and affordability of electric service while supporting electrifications and decarbonizing.
 - b. Explain in detail what EKPC means by beneficial electrifications.
 - c. Explain how EKPC intends to thoughtfully respond to pressures to decarbonize.
 - d. Provide a list of the specific entities pressuring EKPC to decarbonize.
4. Refer to Section 1.0, Executive Summary, 2022 Integrated Resource Plan, pages 2 – 3. EKPC states that it will continue to manage reliability and minimize negative

financial impacts to end consumers while supporting beneficial electrification that could generate exponential load growth, particularly through continuing penetration of electric vehicles, electrification of industrial processes, and electrification of residential and commercial heating applications.

- a. Explain in detail how EKPC plans to manage reliability and minimize negative financial impacts to end customers while supporting electrification and decarbonization.
 - b. Explain what electrification of industrial processes EKPC envisions.
 - c. Explain whether the increased load growth from the electrification of residential and commercial heating applications would stem from less natural gas availability in new homes and buildings. If not, provide a detailed response.
5. Refer to Section 1.0, Executive Summary, 2022 Integrated Resource Plan, page 3. EKPC asserts that it will work with state, federal, regional, and PJM stakeholders to respond to the legal, regulatory, and industry pressures to decarbonize the fleet through solutions based on science and engineering that ensure electric service continues to be highly reliable and available at an acceptable cost to the public.
- a. Explain in detail the solutions based on science and engineering that EKPC will utilize concerning decarbonization of its fleet.
 - b. Explain in detail how EKPC will continue to have highly reliable electric service while decarbonizing its fleet.
 - c. Explain in detail what EKPC believes is an acceptable cost to the public to decarbonize.

6. Refer to Section 1.0, Executive Summary, 2022 Integrated Resource Plan, page 3.
 - a. Discuss the various factors that cause the forecasted total energy requirements to increase an average of 1.1% per year.
 - b. Provide a detailed breakdown of the \$3 million energy efficiency budget from the GDS Associates, Inc. (“GDS”) study.
7. Refer to Section 1.0, Executive Summary, 2022 Integrated Resource Plan, pages 4 – 5. EKPC contends that its “PJM membership continues to drive significant beneficial operation changes and significant cost savings for the EKPC’s owner-members.” EKPC further asserts that substantial net savings realized through May 31, 2021, was identified in its annual report.
 - a. Provide a copy of the above-referenced annual report.
 - b. Provide the net savings that EKPC realized from its PJM membership through May 31, 2021, and explain how the net savings was calculated.
 - c. Explain in detail what significant beneficial operation changes have occurred due to EKPC’s membership in PJM.
 - d. Explain in detail the significant cost savings that PJM membership provides to EKPC’s owner-members.
 - e. Provide all costs from EKPC’s membership in PJM that are borne by the owner-members.
8. Reference the May 17, 2022 PJM report, “Energy Transition in PJM: Emerging Characteristics of a Decarbonizing Grid,” accessible at the link in the footnote below, at page 5.¹ Explain whether EKPC agrees that PJM is facing a shift in its

¹ <https://www.pjm.com/-/media/library/reports-notice/special-reports/2022/20220517-energy-transition-in-pjm-emerging-characteristics-of-a-decarbonizing-grid-white-paper-final.ashx>.

- resource adequacy risk from summer to winter, and if so, explain the implications for EKPC.
9. Refer to Section 1.0, Executive Summary, 2022 Integrated Resource Plan, page 5. Explain how EKPC takes measures to hedge its energy price exposure throughout the entire year.
 10. Refer to Section 1.0, Executive Summary, 2022 Integrated Resource Plan, page 8. EKPC states that it has sufficient capacity resources to meet its forecasted summer load peaks, but expects to utilize Power Purchase Agreements (“PPAs”) to cover the future winter period needs for a hedge against energy price exposure, and solar PPAs to meet its sustainability goals on an economic basis.
 - a. Explain why EKPC has sufficient capacity resources to meet its forecasted summer load, but not its winter load.
 - b. Explain in full detail EKPC’s sustainability goals.
 - c. Explain in full detail how EKPC plans to meet its sustainability goals on an economic basis.
 11. Refer to Section 1.0, Executive Summary, 2022 Integrated Resource Plan, page 11.
 - a. Identify the requests received from the large consumers to provide green energy options for the power supply.
 - b. Explain how EKPC plans to “seek to secure the requested power supply alternatives.”
 - c. Explain whether the large consumers requesting green energy options will pay for 100% of the green energy costs.

12. Refer to Section 1.0, Executive Summary, 2022 Integrated Resource Plan, pages 24 – 25.

- a. Explain in detail how EKPC determined to set a 10% sustainability goal of new renewable energy by 2030.
- b. Explain in detail how EKPC determined to set a 15% sustainability goal of new renewable energy by 2035.
- c. EKPC asserts that in order to meet the 10% sustainability goal by 2030, it is adding solar PPAs.
 - i. Explain whether the solar PPAs will include battery storage, and if so, provide all cost estimates and studies regarding whether the addition of batteries will affect the project’s cost-effectiveness. If battery storage is not included, explain why not.
 - ii. Explain the pros and cons of entering into a solar PPA instead of EKPC building a solar array.
- d. Explain in detail what EKPC needs to do in order to meet its 15% sustainability goal of new renewable energy by 2035.
- e. EKPC asserts that in order to meet the 15% sustainability goal by 2035, it will need additional renewable energy, but the goal will be met in an economical manner. Explain how EKPC plans to ensure the additional renewable energy will be met in an economical manner.
- f. Explain in detail whether EKPC is adding new renewable energy solely to meet EKPC’s 10% and 15% sustainability goals, or whether the new energy is actually needed to serve its customers.

13. Refer to Section 1.0, Executive Summary, 2022 Integrated Resource Plan, page 25.

Table 1-4, EKPC Projected Major Capacity Additions, indicates a 225 MW Simple Cycle Combustion Turbine (“SCCT”) will be needed by 2032 for peaking/intermediate capacity.

- a. Provide the anticipated date that EKPC would need to begin construction on the SCCT for it to be operational by 2032.
- b. Explain why the SCCT is projected to be necessary by 2032.
- c. Indicate whether EKPC plans to file a certificate of public convenience and necessity (“CPCN”) before building the above-referenced SCCT. If not, explain why not.
- d. Provide the total estimated cost of the SCCT.

14. Refer to Section 2.0, Commission Report on the 2019 IRP Recommendations, page 31.

- a. Explain why approximately 20% of EKPC’s region has not been state-certified as either Work Ready or as a Work Ready in Progress Community.
- b. Explain how EKPC encourages and assists its service regions in obtaining this important certification that demonstrates the communities are committed to providing a highly skilled workforce.
- c. EKPC asserts that a key driver for EKPC’s sustainability energy goals is due to the majority of large clients seeking options for renewable energy access.
 - i. Identify the specific types of renewable energy that are being requested.

- ii. Explain in detail whether the larger customers are paying for the expense of the renewable energy access. If not, explain why not.

15. Refer to Section 2.0, Commission Report on the 2019 IRP Recommendations, page 31.

- a. Explain in full detail whether the costs associated with Cooperative Solar One are passed through in the rates of EKPC and its sixteen owner-members, or whether the customers have to opt-in to pay for the solar energy.
- b. EKPC states that the 60-acre Cooperative Solar One farm features 32,300 solar panels producing enough electricity for 1,000 Kentucky homes.
 - i. Explain whether EKPC has battery storage for the solar farm.
 - ii. Explain whether the solar farm is providing electricity to customers when the sun is not shining. If not, explain which resources will provide electricity during that time.
 - iii. Provide the solar farm's capacity factor.
 - iv. Explain whether the solar farm provides reliable and continuous electricity to customers.
 - v. Discuss how often solar panels need to be replaced, and the costs associated with each replacement.
 - vi. Explain in detail whether EKPC's solar farm has had any unexpected inverter tripping, which can happen during normal grid disturbances, and causes the solar energy capacity to unexpectedly go offline.

- iii. For the hydropower produced provide the cost per MW.
 - e. Provide a list of all of EKPC's supply-side resources, including PPAs and the above-referenced sources of renewable energy generation, and specify the amount of energy that each such source contributes to EKPC's total energy production.
- 16. Refer to Section 2.0, Commission Report on the 2019 IRP Recommendations, pages 34 – 35. Explain whether EKPC has received any monies associated with the Infrastructure Investment and Jobs Act, and if so, identify the amount of money received and what EKPC intends to do with the funds.
- 17. Refer to Section 2.0, Commission Report on the 2019 IRP Recommendations, page 43. Explain the pros and cons of EKPC participating in the Fixed Resource Requirement vs. the Reliability Pricing Model capacity market in PJM.
- 18. Refer to Section 2.0, Commission Report on the 2019 IRP Recommendations, page 45. EKPC asserts that it submitted comments to FERC expressing concern that the pace of change in the generation resource mix is likely to surpass the current market structures such that PJM may not have the resources available to produce energy, or reduce load, in real time with the operating characteristics that it needs to maintain reliability 24 hours a day, 7 days a week, 365 days a year. EKPC further cautioned that generators with those necessary characteristics could prematurely retire if the market undervalues their contribution.
 - a. Provide a copy of the above-referenced comments filed with FERC.
 - b. Provide a copy of any and all response(s) from FERC concerning EKPC's above-referenced comments. Please consider this an ongoing request.

- c. Identify the supply-side resources that produce energy in real time that maintains reliability 24 hours a day, 7 days a week, 365 days a year.
- 19. Refer to Section 3.0, Load Forecast, page 81. EKPC states that based on previous research studies and benchmarking, the elasticity assumptions for the residential class are between -.20 and -.30 and for commercial and industrial -.05 to -.15. Expound on these elasticity assumptions further, and if possible provide the dollar amount that is associated with the elasticity assumption results for the residential class and the commercial and industrial classes.
- 20. Refer to Section 3.0, Load Forecast, page 95.
 - a. Provide all updates for the future locations of EV public charging stations in Kentucky. Please consider this an ongoing request.
 - b. Explain whether federal and state monies would provide the necessary funds to build future EV public charging stations in Kentucky, or if EKPC intends for its member-owners' customers to pay for EV public charging stations through the electric rates.
 - c. Does EKPC intend on filing a CPCN before building EV public charging stations?
 - d. Given the current high cost of EVs, does EKPC believe EVs will have a significant market penetration in eastern Kentucky anytime soon? If the Company has conducted any studies in this regard, provide a copy of the same.
- 21. Refer to Section 4.0, Existing and Committed Capacity Resources Summary, page 97, concerning the coal fired generating units.

- a. Explain in detail whether EKPC plans to retire the Cooper Station I coal fired generating unit. If so, provide the retirement date.
- b. Provide the estimated remaining life of Cooper Station 1.
- c. Provide a general overview of all projects/upgrades that need to be completed on Cooper Station 1 in the next ten years.
- d. Explain in detail whether EKPC plans to retire the Cooper Station II coal fired generating unit. If so, provide the retirement date.
- e. Provide the estimated remaining life of Cooper Station II.
- f. EKPC states that a duct reroute project, which routes the flue gas from unit one into the unit two pollution control system, was completed on Cooper Station II in 2016. Provide a general overview of all other projects/upgrades that need to be completed on Cooper Station II in the next ten years.
- g. Explain in detail whether EKPC plans to retire Spurlock Station Unit 1 coal fired generating unit. If so, provide the retirement date.
- h. Provide the estimate remaining life of Spurlock Station Unit I.
- i. Provide a general overview of all projects/upgrades that need to be completed on Spurlock Station Unit 1 in the next ten years.
- j. Explain in detail whether EKPC has any plans to retire the Spurlock Station Unit 2 coal fired generating unit. If so, provide the retirement date.
- k. Provide the estimated remaining life of Spurlock Station Unit 2.
- l. Provide a general overview of all projects/upgrades that need to be completed on Spurlock Station Unit 2 in the next ten years.

- m. Explain in detail whether EKPC plans to retire the Spurlock Station Unit 3 coal fired generating unit. If so, provide the retirement date.
- n. Provide the estimated remaining life of Spurlock Station Unit 3.
- o. Provide a general overview of all projects/upgrades that need to be completed on Spurlock Station Unit 3 the next ten years.
- p. Explain in detail whether EKPC has any plans to retire the Spurlock Station Unit 4 coal fired generating unit. If so, provide the retirement date.
- q. Provide the estimated remaining life of Spurlock Station Unit 4.
- r. Provide a general overview of all projects/upgrades that need to be completed on Spurlock Station Unit 4 in the next ten years.
- s. Explain whether EKPC has had, or foresees, any difficulties in obtaining coal for its coal generating units.

22. Refer to Section 4.0, Existing and Committed Capacity Resources Summary, page 98, concerning the natural gas/fuel oil generating units.

- a. Explain in detail whether EKPC plans to retire any of its natural gas/fuel oil generating units at either the J.K. Smith Station or the Bluegrass Generation Station. If so, provide the retirement date for each unit.
- b. Provide the estimated remaining life for all of the natural gas/fuel oil generating units.
- c. Provide a general overview of all projects/upgrades that need to be completed on any of the natural gas/fuel oil generating units in the next ten years.

23. Refer to Section 4.0, Existing and Committed Capacity Resources Summary, page 98, concerning the Southeastern Power Administration (“SEPA”) agreement. EKPC’s 100 MW allotment of hydropower from SEPA’s Cumberland River system could be affected by the Nashville Office of the U.S. Army Corps of Engineers’ (“USACE”) Capital Improvement Program on the Cumberland River system, which is expected to last approximately 20 years. During this time, EKPC asserts that the system capacity could be less than the marketed capacity, and any reductions to capacity will be reconciled through the SEPA invoicing process by providing capacity credits.

- a. Provide further details of the USACE Capital Improvement Plan.
- b. Expound on the invoicing process with SEPA, in which reductions to capacity will provide capacity credits.
- c. If the SEPA contract will potentially provide less than the 170 MW of hydropower, will EKPC pay a reduced contract rate? If not, explain why not.
- d. Based upon the potential reduction of hydropower, explain whether EKPC will need to find an alternative source of power.

24. Refer to Section 4.0, Existing and Committed Capacity Resources Summary, page 99, concerning the renewable sources. EKPC asserts that the Cooperative Solar Farm One was placed into operation on November 12, 2017, and has 32,300 solar panels capable of producing up to 8.5 MW. EKPC further states that as of year-end 2021 there were 242 subscribers with 1,492 panels.

- a. Explain what EKPC is doing with the power generated by the additional 30,808 solar panels that the customers are not subscribing to at this time.
 - b. Explain whether EKPC intends to build any more solar farms in the near future.
 - c. Explain the process to become a subscriber to the solar farm.
 - d. Provide the current number of subscribers to the solar farm.
25. Refer to Section 5.0, Demand Side Management (“DSM”), page 113. Provide a general description for each of the eight existing DSM programs.
26. Refer to Section 5.0, DSM, page 120. Explain why the \$19,387,092 of DSM rebates paid out are not included in the Total Resource Cost (“TRC”) test.
27. Refer to Section 5.0, DSM, pages 120 – 121. Explain why the cost values are using a 5% discount rate.
28. Refer to Section 5.0, DSM, page 121. EKPC asserts that the TRC for the entire DSM portfolio yields a benefit-cost ratio of 1.70. Provide the parameters for the TRC test score, which indicates whether a program and/or portfolio is cost beneficial.
29. Refer to Section 6.0, Transmission and Distribution Planning, page 124. EKPC asserts that because the Company is a PJM member, PJM closely coordinates transmission planning activities for the EKPC system. Explain whether being a member of PJM causes its transmission costs to be higher than if it were not a member of PJM.
30. Refer to Section 6.0, Transmission and Distribution Planning, page 131. EKPC asserts that as of January 1, 2022, there were a total of 103 active merchant-

generation facilities in the PJM queue that had requested interconnection to the EKPC transmission system, and all of the projects are either stand-alone solar generation facilities or hybrid solar/battery storage facilities. EKPC further asserted that it will need to perform necessary upgrades on certain transmission facilities to accommodate the projects that have reached final agreements with PJM. Explain whether the upgrades will be paid for by the merchant-generation facilities or EKPC's member-owners.

31. Refer to Section 7.0, Plans for Existing Generating Units, pages 144 – 156. Provide the total dollar amount of the proposed projects for each generating unit. Provide also the projected capacity factor for each unit once all of the identified projects are completed.
32. Refer to Section 8.0, Integrated Resource Planning, page 163. EKPC states that it has participated in evaluating out-of-state wind projects but has not found any that fit its generation expansion needs. Explain why none of the wind projects fit EKPC's generation expansion needs.
33. Refer to Section 8.0, Integrated Resource Planning, page 164. Provide details concerning EKPC's purchase of 1,357 MWh from its one contracted cogeneration facility.
34. Refer to Section 8.0, Integrated Resource Planning, page 171. Explain in detail whether EKPC will need to build new generation and/or contract for energy within the next five years.

35. Refer to the Integrated Resource Plan, Technical Appendix, Volume 2, DSM, page DSM-4. Explain why the residential energy audit is included in EKPC's DSM if its TRC test is 0.45.