

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

**In the Matter of:**

**ELECTRONIC APPLICATION OF EAST )  
KENTUCKY POWER COOPERATIVE, INC. FOR )  
A CERTIFICATES OF PUBLIC CONVENIENCE )  
AND NECESSITY AND SITE COMPATIBILITY )  
CERTIFICATES FOR THE CONSTRUCTION OF )  
A 96MW (NOMINAL) SOLAR FACILITY IN )  
MARION COUNTY, KENTUCKY AND A 40MW )  
(NOMINAL) SOLAR FACILITY IN FAYETTE )  
COUNTY, KENTUCKY AND APPROVAL OF )  
CERTAIN ASSUMPTIONS OF EVIDENCE OF )  
INDEBTEDNESS RELATED TO THE SOLAR )  
FACILITIES AND OTHER RELIEF )**

**CASE NO.  
2024-00129**

**RESPONSES TO COMMISSION STAFF’S THIRD INFORMATION REQUEST TO  
EAST KENTUCKY POWER COOPERATIVE, INC.**

**DATED JULY 31, 2024**

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

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CASE NO.
2024-00129

CERTIFICATE

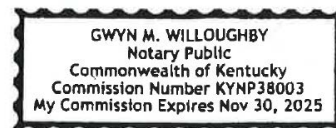
STATE OF KENTUCKY )
)
COUNTY OF CLARK )

Patrick Bischoff, being duly sworn, states that he has supervised the preparation of the responses of East Kentucky Power Cooperative, Inc. to the Commission Staff's Third Request for Information in the above-referenced case dated July 31, 2024, and that the matters and things set forth therein are true and accurate to the best of his knowledge, information and belief, formed after reasonable inquiry.

Patrick Bischoff

Subscribed and sworn before me on this 13th day of August 2024.

Gwyn M. Willoughby
Notary Public



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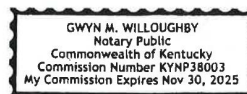
STATE OF KENTUCKY )
)
COUNTY OF CLARK )

Julia J. Tucker, being duly sworn, states that she has supervised the preparation of the responses of East Kentucky Power Cooperative, Inc. to the Commission Staff's Third Request for Information in the above-referenced case dated July 31, 2024, and that the matters and things set forth therein are true and accurate to the best of her knowledge, information and belief, formed after reasonable inquiry.

Julia J. Tucker

Subscribed and sworn before me on this 13th day of August 2024.

Gwyn M. Willoughby
Notary Public



EAST KENTUCKY POWER COOPERATIVE, INC.  
CASE NO. 2024-00129  
SECOND REQUEST FOR INFORMATION RESPONSE

COMMISSION STAFF'S REQUEST DATED JULY 31, 2024

REQUEST 1

RESPONSIBLE PARTY: Julia J. Tucker

**Request 1.** Refer to EKPC's response to Commission Staff's Second Request for Information (Staff's Second Request), Item 1.

- a. Confirm that the tables and the capacity additions attributable to Fayette and Marion County solar facilities are presented on a nameplate basis.
- b. Provide an update to the tables accounting for the PJM effective load carrying capability (ELCC) class ratings.

**Response 1.** a. Confirmed, the second table provided in EKPC's response to Staff's Second Request for Information, Item 1, included the nameplate rating for the Fayette and Marion County solar facilities.

b. An updated table is provided below which shows a revised capacity contribution from the Fayette and Marion County Solar facilities based on PJM's published ELCC class ratings. It should be noted that ELCC is an annual accreditation. Solar predominantly provides capacity contribution to demand peaks in the summer months, but does not provide capacity contribution to demand peaks during winter months. Applying the PJM ELCC class rating to both summer

and winter does not provide a realistic expectation of performance from these resources during peak periods. A more realistic expectation is for these facilities to provide capacity contribution to demand peaks in the summer months with zero capacity contribution to demand peaks in winter month. This is represented in the revised table, below.

YEAR	Projected Peaks Long Term LF 2022		Planning Reserves		Capacity Required		Existing Capacity		Reserve Margin	
	WIN	SUM	WIN	SUM	WIN	SUM	WIN	SUM	WIN	SUM
2024	3,349	2,558	0	77	3,349	2,635	3,434	3,132	85	497
2025	3,370	2,590	0	78	3,370	2,668	3,434	3,132	64	464
2026	3,400	2,603	0	78	3,400	2,681	3,434	3,132	34	451
2027	3,419	2,619	0	79	3,419	2,698	3,434	3,143	15	446
2028	3,452	2,640	0	79	3,452	2,719	3,434	3,142	-18	422
2029	3,467	2,656	0	80	3,467	2,736	3,434	3,142	-33	406
2030	3,484	2,669	0	80	3,484	2,749	3,434	3,140	-50	391
2031	3,504	2,686	0	81	3,504	2,767	3,434	3,139	-70	372
2032	3,535	2,708	0	81	3,535	2,789	3,434	3,139	-101	350
2033	3,551	2,727	0	82	3,551	2,809	3,434	3,139	-117	330
2034	3,578	2,748	0	82	3,578	2,830	3,434	3,138	-144	307
2035	3,607	2,771	0	83	3,607	2,854	3,434	3,138	-173	284
2036	3,651	2,804	0	84	3,651	2,888	3,434	3,138	-217	250
2037	3,673	2,828	0	85	3,673	2,913	3,434	3,138	-239	225
2038	3,704	2,854	0	86	3,704	2,940	3,434	3,138	-270	198

EAST KENTUCKY POWER COOPERATIVE, INC.  
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COMMISSION STAFF'S REQUEST DATED JULY 31, 2024

REQUEST 2

RESPONSIBLE PARTY: Patrick Bischoff

**Request 2.** Refer to the Direct Testimony of Patrick Bischoff (Bischoff Testimony), page 9, lines 18-23 and page 14, lines 22-23, EKPC's response to Staff's Second Request, Item 5 and the Application Exhibit PB-1 Table 5-2, page 69, and EKPC's response to Lexington Fayette Urban County Government's Second Request for Information, Item 3.

- a. Explain whether the Annual Operating & Maintenance (O&M) costs in Table 5-2 are premised on the 2022 O&M cost of \$15.97 per kW-yr.
- b. If so, provide an update to the table using the 2023 annual O&M cost of \$17.16 per kW-yr and the 2024 annual O&M cost of \$20.23 per kW-yr.
- c. Explain whether the 2023 and 2024 data were available to EKPC when the self-build proposal cost estimates were assembled.
- d. Explain whether using the updated annual O&M data alters either the cost effectiveness of EKPC's self-build proposal or once completed, the cost effectiveness of the solar facilities.

**Response 2.** a. Yes, the 2022 O&M cost of 15.97 per kW-yr was included in the annualized O&M figures provided in Table 5.2.

- b. Please see the revised Table 5.2 shown below to reflect the request of showing the annualized O&M costs considering the recommended fixed O&M cost outlined in The Cost and Performance Characteristics of New Generating Technologies 2023, and the fixed O&M cost identified in the US EIA document titled Capital Cost and Performance Characteristics for Utility-Scale Electric Power Generating Technologies, dated January 2024.

	Capital Costs	IRA Credit	Eff. Capital Costs	Annual O&M (2022)	Annual O&M (2023)	Annual O&M (2024)
Bluegrass Plains	\$89,095,122	0.4	\$53,457,073	\$640,000	\$686,400	\$809,200
Northern Bobwhite	\$212,400,000	0.3	\$148,680,000	\$2,631,000 <sup>1</sup>	\$2,742,360	\$3,037,080

- c. The 2023 value contained in the US EIA Cost and Performance Characteristics of New Generating Technologies was published in March 2023. EKPC submitted the initial proposal to NRCO in November 2022. A revised proposal was requested and EKPC submitted in May 2023 but did not modify the O&M value. The 2024 fixed O&M value was not available to EKPC at the time of either proposal submittal.
- d. If the 2024 fixed O&M cost is applied to both projects, there is not a substantive impact to the cost effectiveness of the self-build approach taken by EKPC for these solar facilities.

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COMMISSION STAFF'S REQUEST DATED JULY 31, 2024

REQUEST 3

RESPONSIBLE PARTY: Julia J. Tucker

**Request 3.** Provide the estimated annual energy savings that the proposed solar project is expected to provide once in service, including calculations and documents used to determine these savings.

**Response 3.** Each project has a projected energy output based on the historic irradiance data for the specific site. The expected energy output for each project is listed in the Application Attachment PB-1, NRCO 2021 – Solar Proposal.

Both projects are estimated to produce energy 24 to 25% of the time. Bluegrass Plains has an expected nameplate capacity of 40 MW. The amount of annual energy for the project in Fayette County is 84,701 MWh / year. This is equivalent to an annual capacity factor of 24.2% (84,701 MWh per year / (40 MW x 8,760 hours per year)). The Northern Bobwhite project has a nameplate capacity of 96 MW and an annual energy projection of 216,229 MWh / year. This is equivalent to an annual capacity factor of 25.7%. (216,229 MWh per year / (96 MW x 8,760 hours per year))



The proposed projects economically offset market exposure for load purchases from the PJM energy market. The two projects collectively are expected to generate approximately 300,930 MWh per year at zero cost for energy since all of the costs are considered to be fixed. Energy prices in the time frame when these projects are expected to become operational are projected to be roughly \$55/MWh. So more than \$16.5 million per year will be avoided in fuel / energy costs to EKPC owner members, with no air emissions impacts. (300,930 MWh per year x \$55 per MWh)

**EAST KENTUCKY POWER COOPERATIVE, INC.**  
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**COMMISSION STAFF'S REQUEST DATED JULY 31, 2024**

**REQUEST 4**

**RESPONSIBLE PARTY: Patrick Bischoff**

**Request 4.** Refer to the Application, page 7, paragraph 22. For each project, state any facts or arguments in support of the requested deviation from KRS 278.708(3)(a)(7) regarding the setback requirements contained in KRS 278.704(2).

**Response 4.** For the Northern Bobwhite project, the requested deviation is consistent with the Motion for Deviation from Setback Requirements that was entered as part of Case 2020-00208 for the same general project. Bluegrass Plains requests the same deviation. There are no schools, hospitals, or nursing homes within 2,000 feet of the Project. There is one adjoining residential property and two areas that are considered residential neighborhoods near the south and southwest property of boundary, with 51 and 47 homes respectively. Generation facilities, as shown in Exhibit 3, Attachment PB-3, page 16 of 193, are planned to be located approximately 280 feet from the adjoining residence, and at the closest distance to either neighborhood, 390 feet.

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**REQUEST 5**

**RESPONSIBLE PARTY: Patrick Bischoff**

**Request 5.** Refer to the Application, Exhibit PB-3, page 9 of 193, which states “Large portions of the site are not visible from surrounding roads or residential properties.” State what approximate percentage is visible from roads and from residential properties.

**Response 5.** The statement on Exhibit PB-3, page 9 of 193 regarding visibility is a general qualitative statement for current conditions based on existing vegetative cover and topography. The percentage of the site that is visible from roads or from residential properties is variable depending upon viewing location, the rolling terrain of the project area, and the extent/type of vegetative cover at the viewing location. An analysis of the zones of theoretical visibility or viewshed has not been conducted.

As stated on Exhibit PB-3, Page 13 of 193 – Mitigation Measures During Design, “Wherever possible, the Project will retain tree cover to maintain compatibility with scenic surroundings, particularly at the site boundaries to mitigate viewership impacts. A 15-ft vegetative buffer will be installed at property lines where existing tree or shrub cover is scant to provide screening of the

project from nearby residential structures. A detailed Landscaping Plan will be developed as Project design progresses”.

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**REQUEST 6**

**RESPONSIBLE PARTY:            Julia J. Tucker**

**Request 6.**            Refer to Direct Testimony of Julia J. Tucker, page 14. Identify and explain the reference to “repeated setbacks in concluding a contractually binding signed PPA.”

**Response 6.**            In January 2021, EKPC shortlisted the preferred bidders from its solar RFP. Based on that shortlist, EKPC chose its preferred offer and started negotiations on terms and conditions to reach a mutually agreeable contract. Many months later, EKPC believed that both parties had essentially agreed on contract terms and sought approval from its Board of Directors to move forward with finalizing a Power Purchase Agreement (“PPA”) contract for the solar development. After the EKPC Board gave its approval, the solar developer started wanting to materially change terms and conditions, including the pricing. The request left the pricing subject to many conditions and changing parameters, which could not be considered fixed. EKPC could not agree to the changes. Negotiations eventually ended. EKPC issued another RFP for solar in an attempt to find another project that could provide a PPA that could be completed. Once again, a developer was chosen as the preferred counterparty and contract negotiations were initiated. General terms and conditions were agreed upon, but the developer decided they needed to open

the pricing back up after finding geological conditions that varied from their initial review of the site. Again, the developer wanted to place all risk of cost overruns on EKPC and asked for unacceptable conditions, which basically left the price floating. EKPC declined the offer and went back out yet again for another RFP. It had become apparent that bidders offered the most optimistic view of its project in the RFP to gain footing as the preferred supplier, then began changing conditions as more site details were uncovered.

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**REQUEST 7**

**RESPONSIBLE PARTY: Patrick Bischoff**

**Request 7.** Refer to Bischoff Testimony, pages 4-5.

- a. Explain why EKPC only considered self-build projects that held positions within PJM's generation interconnection queue.
- b. Provide estimated costs and an estimated design, construction, and interconnection timeline for a hypothetical self-build option if EKPC were to select a location and file its own PJM interconnection application.

**Response 7.** a. EKPC prioritized projects that held positions within PJM's generation interconnection queue to take advantage of the credits made available through the Inflation Reduction Act (IRA). If EKPC were to enter a new project into the PJM generation interconnection queue there would be significant schedule impacts and, given the status of the queue in 2022, a strong possibility of not being able to take advantage of the IRA credits.

b. Consistent with Response 4b in Staff's second data request for schedule and timeline associated with a hypothetical self build option in which EKPC selects a location and files its own interconnection application, an estimated cost would be speculative at best due to the unknowns related to land costs, system upgrades, interconnection costs, inflation, and material availability. Please refer to Response 4b for a hypothetical schedule.

With acknowledgement of such speculative nature of an estimate, the following assumptions were made to provide an estimate associated with a hypothetical 40 MW solar project sited in Fayette County, three miles from the Avon Substation. All construction equipment, materials, labor, Owner's Engineer's costs, and Owner's costs, are escalated from 2024 to 2028. A three-mile tap line will be required from the hypothetical location to the Avon Substation, and will require a 100-ft right-of-way.

- Major Equipment and Materials - \$53,483,491
- Construction Labor - \$41,911,346
- Owner's Engineer - \$688,611
- Owner's Costs - \$2,468,925
- Site Acquisition - \$14,000,000
- Tap Line (including right-of-way) - \$3,434,000
- PJM Interconnection Study Costs - \$300,000
- Total Project Costs - \$116,286,372

In addition to the costs provided above, EKPC would be exposed to potential system upgrades with the delay in obtaining the Generation Interconnection Agreement with PJM. Furthermore, EKPC would not be able to obtain benefits associated with the Rural Utilities Service, New ERA program since this hypothetical project was not in EKPC's New ERA application.