

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

**In the Matter of:**

<b>ELECTRONIC TARIFF FILING OF EAST</b>	)	
<b>KENTUCKY POWER COOPERATIVE, INC. AND</b>	)	
<b>ITS MEMBER DISTRIBUTION COOPERATIVES</b>	)	<b>CASE NO.</b>
<b>FOR APPROVAL OF PROPOSED CHANGES TO</b>	)	<b>2024-00101</b>
<b>THEIR QUALIFIED COGENERATION AND</b>	)	
<b>SMALL POWER PRODUCTION FACILITIES</b>	)	
<b>TARIFFS</b>	)	

**RESPONSES TO COMMISSION STAFF'S SECOND REQUEST FOR INFORMATION**

**TO EAST KENTUCKY POWER COOPERATIVE, INC.**

**DATED JUNE 10, 2024**





EAST KENTUCKY POWER COOPERATIVE, INC.  
CASE NO. 2024-00101  
SECOND REQUEST FOR INFORMATION RESPONSE

COMMISSION'S REQUEST DATED JUNE 10, 2024

REQUEST 1

RESPONSIBLE PARTY: Chris Adams

**Request 1.** Refer to EKPC's response to Staff's First Request for Information (Staff's First Request), Item 3.

**Request 1a.** Provide detailed evidence to support the statement that combustion turbines (CTs) commonly take up to 30 minutes to reach full output.

**Response 1a.** See attached PDF, *R1a - 7f-fact-sheet-product-specifications.pdf*, from GE detailing operating characteristics of a 7F Heavy Duty Gas Turbine. The rapid response/hot start startup time is shown as 25 to 28 minutes. These start times are not representative of normal operation. Assuming the unit was started from cold iron and brought up to speed within the 25 to 28 minutes, then the unit would undergo stresses due to metal fatigue that would accelerate maintenance schedules on the unit, ultimately driving up both fixed and variable operations and maintenance expenses.

**Request 1b.** Provide the length of time each of EKPC's CTs took to reach the

minimum PJM dispatched output level once called upon to run during one week in February 2023. Include in the response the CT dispatched MW versus bid in peak output level and whether each CT was bid into the day ahead market as “economic.”

**Response 1b.** See attached spreadsheet, *REDACTED - DR2 - R1 and 2 - CT-RICE Comparison Table 06172024.xlsx*, which contains an update to the Table provided in Staff’s First Request, Item 3. Backup data supporting the start times is included in the second tab, “R1a - CT Start-Time”. Startup data was gathered from February 3<sup>rd</sup>, 2023, as PJM dispatched the greatest number of EKPC’s CTs that day. EKPC’s current CT fleet demonstrated an average startup time of 27 minutes during the data sample period. J.K. Smith Unit 9 was the only unit shown to have a startup less than 30 minutes in this sample set. This is expected, as J.K. Smith Units 9 and 10 are aero-derivative GE LMS100 CTs, which have the fastest startup and ramp-rate of any CTs in the EKPC fleet.

**Request 1c.** Provide an update to the Table in 3b that includes startup costs, no load costs, fixed cost and O&M costs ( i.e., all cost components that would be utilized by EKPC’s production cost and dispatch models). Include in the response the source(s) of the cost comparison data.

**Response 1c.** See attached spreadsheet, *CONFIDENTIAL - DR2 - R1 and 2 - CT-RICE Comparison Table 06172024.xlsx*, which contains EKPC’s CT fleet costing data, subject to

motion for confidential treatment. Data sources are provided within the footnotes of the revised table.

**Request 1d.**           Aside from specific fuel type and location, explain whether a RICE engine essentially is functionally and operationally the same as the internal combustion engine generators that EKPC operates at landfill sites.

**Response 1d.**           Yes, the RICE engines are functionally very similar to the landfill gas generating units (“landfill units”) that EKPC currently owns and operates. The major differences include fuel type, nameplate capacity, and operation of the facility in the PJM wholesale capacity and energy market (“PJM”). The landfill units are behind the meter resources, which help reduce total demand, but are not offered into PJM. The RICE units would be offered into PJM as a capacity and energy resource and dispatched according to their offer costs by PJM.

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**REQUEST 2**

**RESPONSIBLE PARTY: Chris Adams**

**Request 2.** Refer to EKPC's response to Staff's First Request, Item 3b. Provide an update to the Table in 3b comparing the fixed and variable costs of a group of 10–14 reciprocating internal combustion engines (18-20 MW) facility to the cost of a comparable CT.

**Response 2.** See updated Table provided in Staff's First Request, Item 3, attached for variable cost.

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**REQUEST 3**

**RESPONSIBLE PARTY: Chris Adams**

**Request 3.** Explain how PJM would accredit and call upon a RICE facility containing 10–14 engines.

**Response 3.** EKPC will seek accreditation of the RICE facility as individual 18-20 MW units. By being accredited as separate units, PJM would call upon 1 to 14 of the RICE engines based on system conditions and needs. PJM dispatch will call the MOC Operator and direct how many of the engines are required by the system. The MOC Operator will then call the plant and reiterate the directive of PJM to bring the engines online. Once online, the units will be dispatched individually by PJM to the desired MW setpoint via the Energy Management System.

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**REQUEST 4**

**RESPONSIBLE PARTY: Chris Adams**

**Request 4.** Explain how a RICE facility containing 10-14 engines would be bid into PJM's capacity and energy markets.

**Response 4.** EKPC will seek accreditation of the RICE facility as individual 18-20 MW units, and thus would be offered into the capacity market separately by its performance-adjusted Effective Load Carrying Capability ("ELCC") capacity value. The units may be offered at a price-point between zero dollars per megawatt-year and the maximum seller offer cap as calculated by PJM. Whether committed to the PJM capacity market or not, EKPC will seek to monetize the energy output from the units in either the day-ahead or real-time energy and ancillary markets to hedge EKPC's load exposure. As the units would be offered into the capacity individually, EKPC must also offer the units individually into the energy and ancillary markets and PJM would dispatch them based on reliability constrained economic dispatch.

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**REQUEST 5**

**RESPONSIBLE PARTY: Chris Adams**

**Request 5.** For any EKPC Certificate of Public Convenience and Necessity or Integrated Resource Plan, provide the case number and document citation reference for any EKPC case in which EKPC considered or proposed a RICE facility containing multiple engines as an alternate resource.

**Response 5.** EKPC has not proposed a reciprocating internal combustion engine ("RICE") facility in any EKPC case filed to date. EKPC's Board of Directors, at its June 2024 meeting, approved the preparation and filing of a Certificate of Public Convenience and Necessity ("CPCN") to seek Commission approval of the RICE facility. EKPC anticipates filing the CPCN in the next three to five months, depending on preparation work and project timing.

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**REQUEST 6**

**RESPONSIBLE PARTY: Chris Adams**

**Request 6.** Explain how EKPC treats qualifying facility (QF) capacity with respect to its capacity planning and with respect to how it affects its PJM capacity obligation.

**Response 6.** EKPC plans for capacity by comparing annual forecasted peak load plus reserve margin against total capacity available in that year. Currently, there are no participating QFs that contribute capacity to the EKPC system, so the QF contribution to capacity is zero. With regards to the peak load forecast, EKPC does not directly reduce its peak load to account for any co-located participating QFs, however historical load used to derive the peak load forecast is inclusive of any reduction in demand for which a co-located QF would have contributed.

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**REQUEST 7**

**RESPONSIBLE PARTY: Chris Adams**

**Request 7.** Refer to EKPC's response to Staff's First Request, Item 1. Identify any other utility that EKPC is aware of that separates Cogeneration and Small Power Production Tariffs by co-located qualifying facilities and grid connected qualifying facilities.

**Response 7.** EKPC is not aware of any other utility that separates Cogeneration and Small Power Production Tariffs by co-located qualifying facilities and grid connected qualifying facilities. However, EKPC believes that the revised tariff better aligns with the PURPA regulation as stated in EKPC's response to Staff's First Response, Item 1.

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REQUEST 8

RESPONSIBLE PARTY: Chris Adams

**Request 8.** Refer to EKPC's response to Staff's First Request, Item 1. Provide the estimated savings to EKPC of this tariff revision.

**Response 8.** EKPC's expenses for Cogeneration and Small Power Production Qualifying Facilities ("QFs") are limited to capacity, energy, and market administration fees. There are currently zero participating QFs that choose to receive capacity payments and, therefore, zero savings are realized by EKPC. The energy payments remain unchanged in this tariff revision as participating QFs will continue to receive the PJM real-time locational marginal price. EKPC would have purchased the equivalent energy from PJM at the same prevailing market rate, and therefore, no savings are realized by EKPC for energy payments to participating QFs. Finally, the market administration fee is a cost-recovery mechanism meant to reimburse EKPC for its incurred cost to administer the tariff and, therefore, zero savings are realized by EKPC.

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**REQUEST 9**

**RESPONSIBLE PARTY: Scott Drake**

**Request 9.** Refer to EKPC's response to Staff's First Request, Item 1. Provide the number of QF customers that will receive service under the grid-connection QF tariff and the number of QF customers that will receive service under the co-located QF tariff.

**Response 9.** Across the EKPC system, a total of nine (9) QF agreements have been executed and approved by the Commission plus an additional one (1) QF agreement pending Commission approval. All QFs to date are co-located with load and will be subject to the appropriate "Co-Located" QF tariff based on the size of the QF (over 100kW or 100kW or less). All future QFs will be subject to the appropriate Cogeneration and Small Power Production tariff based on the size of the QF and whether the QF is co-located with load or grid connected.

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**REQUEST 10**

**RESPONSIBLE PARTY: Chris Adams**

**Request 10.** Refer to EKPC's response to Staff's First Request, Item 8a and Item 8d. Provide the list of activities that EKPC referenced in response to Item 8d, referencing Item 8a as well as how EKPC made the 40 percent determination.

**Response 10.** See attached Excel spreadsheet, *DR2 - R10 - ACES Service Percentage Associated with Market Activity.xlsx*, which details the list of activities EKPC contracts for with ACES along with which activities are attributed to the 40 percent determination.