

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

In the Matter of:

ELECTRONIC TARIFF FILING OF)	
KENTUCKY POWER COMPANY FOR)	CASE NO. 2022-00387
APPROVAL OF A SPECIAL)	
CONTRACT WITH EBON)	
INTERNATIONAL, LLC)	

**TENDERED INITIAL DATA REQUESTS OF JOINT INTERVENORS
MOUNTAIN ASSOCIATION, KENTUCKIANS FOR THE COMMONWEALTH,
APPALACHIAN CITIZENS' LAW CENTER, SIERRA CLUB, AND KENTUCKY
RESOURCES COUNCIL**

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as Joint Intervenors Mountain Association,
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Appalachian Citizens' Law Center, Sierra
Club, and Kentucky Resources Council*

Dated: December 9, 2022

DEFINITIONS

1. “Document” means the original and all copies (regardless of origin and whether or not including additional writing thereon or attached thereto) of any memoranda, reports, books, manuals, instructions, directives, records, forms, notes, letters, or notices, in whatever form, stored or contained in or on whatever medium, including digital media.

2. “Study” means any written, recorded, transcribed, taped, filmed, or graphic matter, however produced or reproduced, either formally or informally, a particular issue or situation, in whatever detail, whether or not the consideration of the issue or situation is in a preliminary stage, and whether or not the consideration was discontinued prior to completion.

3. “Person” means any natural person, corporation, professional corporation, partnership, association, joint venture, proprietorship, firm, or the other business enterprise or legal entity.

4. A request to identify a natural person means to state his or her full name and business address, and last known position and business affiliation at the time in question.

5. A request to identify a document means to state the date or dates, author or originator, subject matter, all addressees and recipients, type of document (e.g., letter, memorandum, telegram, chart, etc.), identifying number, and its present location and custodian. If any such document was but is no longer in the Company’s possession or subject to its control, state what disposition was made of it and why it was so disposed.

6. A request to identify a person other than a natural person means to state its full name, the address of its principal office, and the type of entity.

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

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

9. Words in the past tense should be considered to include the present, and words in the present tense include the past, unless specifically stated otherwise.

10. “You” or “your” means the person whose filed testimony is the subject of these data requests and, to the extent relevant and necessary to provide full and complete answers to any request, “you” or “your” may be deemed to include any other person with information relevant to any interrogatory who is or was employed by or otherwise

associated with the witness or who assisted, in any way, in the preparation of the witness' testimony.

11. "KPCO" or "the Company" means Kentucky Power Company and/or any of its officers, directors, employees or agents who may have knowledge of the particular matter addressed, and affiliated companies.

12. "Proposed Joint Intervenors" means the Mountain Association, Kentuckians For The Commonwealth, Appalachian Citizens' Law Center, Sierra Club, and Kentucky Resources Council, who have moved the Commission for the status of full joint intervention in this matter.

13. "Proposed Special Contract" means the proposed special contract between KPCO and Ebon that is at issue in this proceeding.

14. "Proposed Facility" means the facility to be constructed by Ebon in Lawrence, Kentucky that is the subject of the Proposed Special Contract.

15. "Ebon" means Ebon International, LLC and/or any of its officers, directors, employees or agents who may have knowledge of the particular matter addressed, as well as any parent companies or affiliated companies.

INSTRUCTIONS

1. If any matter is evidenced by, referenced to, reflected by, represented by, or recorded in any document, please identify and produce for discovery and inspection each such document.

2. These requests for information are continuing in nature, and information which the responding party later becomes aware of, or has access to, and which is responsive to any request is to be made available to Joint Intervenors. Any studies, documents, or other subject matter not yet completed that will be relied upon during the course of this case should be so identified and provided as soon as they are completed. The Respondent is obliged to change, supplement and correct all answers to interrogatories to conform to available information, including such information as it first becomes available to the Respondent after the answers hereto are served.

3. Unless otherwise expressly provided, each data request should be construed independently and not with reference to any other interrogatory herein for purpose of limitation.

4. The answers provided should first restate the question asked and also identify the person(s) supplying the information.

5. Please answer each designated part of each information request separately. If you do not have complete information with respect to any interrogatory, so state and give as much information as you do have with respect to the matter inquired about, and identify each person whom you believe may have additional information with respect thereto.

6. In the case of multiple witnesses, each interrogatory should be considered to apply to each witness who will testify to the information requested. Where copies of testimony, transcripts or depositions are requested, each witness should respond individually to the information request.

7. The interrogatories are to be answered under oath by the witness(es) responsible for the answer.

**INITIAL DATA REQUESTS PROPOUNDED TO KENTUCKY POWER COMPANY BY
PROPOSED JOINT INTERVENORS**

- 1.1. Please produce copies of any documents or information that the Company used to determine the pricing included in the Proposed Special Contract, as well as an unredacted version of the Proposed Special Contract itself and the testimony of Brian K. West that the Company submitted in support of the Proposed Special Contract.
 - a. Please provide any documents and calculations regarding the “complex billing structure” referenced on page 9 of Mr. West’s testimony.

- 1.2. Did the Company review any documents or other information from Ebon substantiating the “approximately 50-100 new jobs” that would be created by Proposed Facility, as referenced in the Proposed Special Contract? Please produce copies of any such documents or, in the case of any information that is not in the form of a document, please describe what information was reviewed. If the Company did not review any such documents or information, please explain why not.

- 1.3. Please refer to the Testimony of Brian K. West, page 10, lines 3-4, which indicates that there will be approximately 100 positions for the “highly technical nature of Ebon’s operations.” Please provide details on the following:
 - a. Indicate how many positions are estimated to be remote versus onsite.
 - b. Indicate how many positions will be full time.
 - c. Indicate how many positions are permanent versus temporary.
 - d. Indicate the level of educational and experience required by position type.
 - e. Will the positions be recruited locally?
 - i. If so, indicate how Ebon has determined that there is a pool of qualified local candidates.
 - ii. If so, indicate how many candidates are expected to come from the local community.
 - f. In five years, how many positions are expected to be retained locally at the Proposed Facility.

- 1.4. Did the Company review any documents or other information from Ebon substantiating the \$250 million in anticipated investment in the Proposed Facility that is referenced in the Proposed Special Contract and the testimony of Brian K. West submitted in support of the Proposed Special Contract? Please produce copies of any such documents or, in the case of any information that is not in the form of a document, please describe what information was reviewed. If the Company did not review any such documents or information, please explain why not.

- 1.5. Please produce copies of any documents in the Company’s possession concerning the size, location, and/or the design of the Proposed Facility, including which cryptocurrencies will be mined and which other services will be provided by the Proposed Facility.

- 1.6. Please produce copies of any documents in the Company's possession, other than those produced in response to previous data requests, concerning the potential economic development benefits of the Proposed Facility.
 - a. Please also provide a breakout of the level of economic development anticipated from Phase I and Phase II, independently.
 - b. Please detail the level of investment for the Ebon Project, including a breakdown of the investment by construction materials and buildings fixture versus equipment.
- 1.7. Please produce copies of any documents in the Company's possession concerning applications for permits to construct the Proposed Facility, or permits issued, including but not limited to any permit applications to or permits issued by the Kentucky Energy & Environment Cabinet or any of its departments or divisions.
- 1.8. Please produce copies of any documents in the Company's possession concerning the 55-acre land lease between Ebon and the Company for the Proposed Facility and any accompanying facilities, including any documents concerning potential government tax revenue estimates and estimated property tax increases or decreases. Include any discounts that Ebon or KPCO is projected to receive related to taxes and other grants because of locating the Proposed Facility in KPCO's service territory.
 - a. Please describe in detail the terms under which Ebon will compensate the Company for leasing 55 acres of land and produce any documents in the Company's possession reflecting those terms.
 - b. Provide a good faith tax estimate to be recognized by the local government because of the Proposed Facility. Please explain in detail how building improvements on KPCO's land will impact local tax revenues and clarify if there is an increased tax payment whether it will be paid for by KPCO or from Ebon.
 - c. Please describe in detail how any compensation received by the Company for leasing land to Ebon will be accounted for by the Company, including whether that compensation will be put toward reducing the costs for the Company's other customers. Please produce copies of any documents in the Company's possession concerning this issue.
- 1.9. Please identify any transmission, grid, or infrastructure investments that the Company would incur to provide service to the Proposed Facility. For any such investment identified, please (a) explain in detail the nature of the investment; (b) identify the anticipated capital expenditure required with a breakdown between the investment in construction materials and building versus equipment; (c) identify the timing of the investment; and (d) identify whether the Company anticipates that it will seek to recover the investment from customers, and if so, by what mechanism. If there are no such investments identified, please explain why not.
- 1.10. Please identify any fixed costs other than those provided in response to DR 1.9 that the Company would incur to provide service to the Proposed Facility. For any such fixed cost identified, please (a) explain in detail the nature of the fixed cost; (b) identify the anticipated expenditure(s) required; (c) identify the timing of the expenditure(s); and (d)

identify whether the Company anticipates that it will seek to recover the expenditure(s) from customers, and if so, by what mechanism. If there are no such fixed costs identified, please explain why not.

- 1.11. Please identify any transmission, grid, or infrastructure investments that the Company anticipates Ebon will incur in order to take service from the Company. For any such investment identified, please (a) explain in detail the nature of the investment; (b) identify the anticipated capital expenditure required; and (c) identify the anticipated timing of the investment.
- 1.12. Please identify whether the Company anticipates that the Proposed Facility will participate in any demand response programs, either through the Company or PJM. If yes, please identify the program and explain in detail the terms under which the Company anticipates that the Proposed Facility will participate. If no, please explain why not.
- 1.13. Did the Company have any discussions with Ebon about whether it would construct the Proposed Facility if it did not receive the rates in the Proposed Special Contract? If yes, please describe those discussions and produce copies of any documents reflecting those discussions. If no, please explain why not.
- 1.14. Did the Company consider any documents or information concerning the financial health or track record of Ebon, or the potential effects of changing cryptocurrency markets or regulation of cryptocurrencies, when evaluating whether to offer the Proposed Special Contract to Ebon? If yes, please produce copies of any documents in the Company's possession reflecting any documents or information considered. If no, please explain why not.
- 1.15. Please refer to Finding 12 on pages 26-27 of the Commission's September 24, 1990 order in Administrative Case No. 327.
 - a. Please identify and explain the "minimum usage level" that is assumed for the Proposed Facility in the Proposed Special Contract.
 - b. Please explain how the applicable level of demand for the discount was calculated. If it was not calculated, please explain why not.
- 1.16. Please identify any provisions in the Proposed Special Contract that protect the Company's existing customers from the risk that Ebon will default or otherwise not complete the initial term of the contract. For any such provisions identified, please explain how they protect the Company's existing customers from risk, particularly in the event of a default, bankruptcy, or disappearance by the customer.
- 1.17. Has the Company had any communications with Ebon concerning the possibility of it providing some form of security or collateral to protect against risk, or any guarantees concerning the Proposed Facility's minimum level of load or completion of the 10-year contract term? If yes, please describe those communications and produce copies of any documents reflecting those communications. If no, please explain why not.

- 1.18. Does the Company have internal criteria or an internal process for determining which new or existing customers are eligible to receive special contracts under its Economic Development Rider?
- a. If yes, please produce copies of any documents reflecting such internal criteria or process, and please describe how such internal criteria or process were applied to Ebon.
 - b. If no, please explain why not.
 - c. Please provide any information regarding the Company's reasons for filing the Proposed Contract outside of its existing Economic Development Rider Tariff.
- 1.19. Has the Company attempted to quantify any projected benefits to existing customers from the Proposed Special Contract, in the form of reductions in fixed costs or otherwise? If yes, please provide that quantification and produce copies of any workpapers, with all formulas and links intact, supporting that quantification. If no, please explain why not.
- 1.20. Please refer to Testimony of Brian K. West at page 7, lines 13 – 22, for the discussion of the Power Coordination Bridge Agreement.
- a. Please confirm whether the Power Coordination Bridge Agreement between Kentucky Power and the AEP Operating Companies is for capacity only or for capacity and energy.
 - b. Please provide the date that the Power Coordination Bridge Agreement ends.
 - c. Please confirm if the Power Coordination Bridge Agreement will remain in effect under Liberty Utility's purchase of Kentucky Power.
 - d. Please provide information regarding any generation assets from Liberty Utilities that could be utilized to meet Kentucky Power's stated capacity need.
- 1.21. Please refer to Testimony of Brian K. West at page 7, lines 13-14. Please provide the following:
- a. The supporting calculations for KPCO's capacity need of 152.4 MW for the 2022/2023 PJM Planning Year and 70.2 MW for the 2023/2024 PJM Planning Year.
 - b. KPCO's projected peak demand for the next ten PJM Planning Years that will occur during the special contract.
 - c. KPCO's projected capacity need for the next ten PJM Planning Years that will occur during the special contract.
 - d. KPCO's forecasted sales for the next ten PJM Planning Years that will occur during the special contract.
 - e. The names of all resources retiring within the next ten PJM Planning Years that will occur during the special contract.
 - f. The name, nameplate MW size, and capacity accreditation for all of KPCO's existing supply side resources.
 - g. Information regarding how KPCO accounts for demand side resources in determining the Company's capacity need.
- 1.22. Please refer to Testimony of Brian K. West at page 8, lines 8 – 12, where it states, "Ebon has designated 10 percent of its Total Capacity Reservation as Firm Capacity beginning

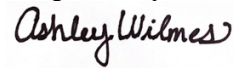
in year one of the Special Contract, while the remaining 90 percent of its load remains interruptible under Rider D.R.S. (Demand Response Service).” Please provide:

- a. The designation that Ebon has made for the Total Capacity Reservation as Firm Capacity for each of the ten years of the Special Contract.
 - b. All records of the day, time, and duration of the event in which KPCO has called an event under Rider D.R.S.
- 1.23. Please refer to Testimony of Brian K. West at page 8, lines 10-12. Please provide KPCO’s reserve margin requirement.
- 1.24. Please refer to Testimony of Brian K. West at page 8, lines 20-22. Please provide the additional incremental costs to purchase capacity after May 31, 2024.
- 1.25. Please refer to Testimony of Brian K. West at page 9, lines 20-22. Please provide Ebon’s anticipated coincident peak with KPCO.
- 1.26. Please refer to Testimony of Brian K. West at page 10, lines 17-18.
- a. Please explain what is meant by a “discretionary interruption event.”
 - b. Please explain if there are restrictions on how many times Ebon can have its load interrupted in a year.
- 1.27. Please refer to BKW Exhibit 2. Please provide the supporting workbooks, with all formulas and links intact, used to develop the marginal cost analysis presented.
- 1.28. Please refer to BKM Exhibit 2.
- a. Please confirm whether the analysis presented in BKM Exhibit 2 includes information for Phase One or Phase Two of the contract.
 - b. Did KPCO perform a cost analysis for the entire ten years of the Special Contract? If yes, please provide the supporting workbooks, with all formulas and links intact, used to develop that analysis. If this analysis was not performed, please explain why.
- 1.29. Please refer to BKW Exhibit 2, line 1, which reports the “Annual kWh” calculated for the Marginal energy costs.
- a. Please explain if the Annual kWh reported in line 1 is for Phase One or Phase Two of the contract.
 - b. Please provide Ebon’s annual energy forecast over the ten years of the contract period.
 - c. Please explain if KPCO plans to meet Ebon’s energy requirements through self-generation or market purchases.
 - i. If any analysis was performed by KPCO in support of evaluating how KPCO can meet the energy requirements from Ebon, please provide the supporting workpapers for that analysis.
- 1.30. Please refer to BKW Exhibit 2, line 2, which reports the “DA LMP \$/kWh” calculated for the Marginal energy costs.

- a. Please provide the source of the DA LMP \$/kWh assumption used to calculate the marginal energy costs.
 - i. If a market price forecast was used, please provide the market price forecast, at the granularity available, i. e., hourly or monthly, used to develop the number reported in line 2.
 - ii. If a market price forecast was not used, please provide the supporting calculations for the DA LMP \$/kWh reported in line 2.
- 1.31. Please refer to BKW Exhibit 2, line 9, which reports the “PJM LSE Transmission.”
- a. Please explain if these costs are related to transmission upgrades to provide interconnection for the Ebon facility. If not, explain what costs are included in “PJM LSE Transmission.”
- 1.32. Please provide details on when KPCO and Ebon began discussions to locate its facilities within KPCO’s service territory.
- 1.33. Please refer to the Testimony of Brian K. West at page 11, lines 13-14. Detail whether the complex billing calculation referenced here would require KPCO to update its billing system. If the system requires updating, detail
- a. the estimated cost,
 - b. who will be paying for the system updates
 - c. timing of the updates
 - d. benefits to other ratepayers
- 1.34. Please refer to the Testimony of Brian K. West at page 7, lines 5-8. Please detail the projected level of avoided fixed cost by customer class as a result of Ebon becoming a customer.
- 1.35. Please refer to the Testimony of Brian K. West at page 13, lines 3-5 regarding remedies under Kentucky law. If Ebon were to shut down or move its Proposed Facility prior to the conclusion of the contract, please
- a. Indicate which Kentucky laws the Company is referencing to protect ratepayers.
 - b. Indicate which Kentucky laws the Company is referencing to protect itself.
 - c. Detail the action that the Company would take as a result to recoup the discounts provided to Ebon.
- 1.36. Given the change for Ethereum from proof-of-work to proof-of-stake adopted in September 2022, does Ebon expect its level of capacity and energy usage to decline from those provided in its application for a special contract? Please explain why or why not.
- 1.37. Please identify whether Ebon would be able to participate in PJM capacity markets and explain why or why not.
- 1.38. Please quantify the specific benefits that would accrue to KPCO’s other customers because of the Proposed Special Contract.

- 1.39. Please answer the following related to the level of service that the Company would provide to the Proposed Facility.
- a. The level of service (secondary, primary, transmission)
 - b. The phase of the power system (single or 3-phase)
 - c. Contracted capacity in kVa, broken down by Phase 1 and Phase 2 of the proposed project
 - d. The estimated load factor, broken down by Phase 1 and Phase 2 of the proposed project
 - e. Detail the minimum monthly billing, broken down by Phase 1 and Phase 2 of the proposed project.

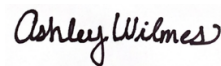
Respectfully submitted,



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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, on December 9, 2022, an electronic copy of the foregoing was served via the Commission's electronic filing system. This 8th day of December, 2022.



Ashley Wilmes