COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC TARIFF FILING OF KENTUCKY UTILITIES COMPANY FOR APPROVAL OF AN ECONOMIC DEVELOPMENT RIDER SPECIAL CONTRACT WITH BITIKI-KY, LLC	)))))	CASE NO. 2022-00371

POST-HEARING BRIEF OF BITIKI-KY, LLC

INTRODUCTION AND SUMMARY

On October 7, 2022, Kentucky Utilities Company ("KU") filed with the Kentucky Public Service Commission ("Commission") a proposed Economic Development Rider ("EDR") special contract with Bitiki-KY, LLC ("Bitiki"). Taken together, the EDR special contract and the electric service contract on KU's Retail Transmission Service ("RTS") rate schedule are for 13 Mw with demand charge discounts of 50%, 40%, 30%, 20% and 10% during the first five years of a term of up to ten years. Bitiki committed $25 million into cryptocurrency mining resulting in approximately five new jobs created to date. Bitiki respectfully requests that the Commission approve the EDR special contract.

The demand revenue that will be charged to Bitiki will exceed the marginal cost to serve its load over the ten-year term of the EDR by at least $10.9 to $14.4 million. This was demonstrated through four marginal cost-of-service studies. Each of the four studies concluded that there would be a positive contribution to KU's fixed costs during each of the ten years, even in Year One which includes the highest EDR discount (50%). This significant contribution to

KU's existing fixed costs will lower rates for all consumers. This fixed cost contribution is likely understated.

KU will have more than adequate generating capacity to serve the 13 Mw Bitiki load during the five-year EDR discount period. Additional load would have to exceed 135 Mw before there would be any impact on the KU/LG&E generation resource plan. The generation resource plan was fully considered in each of the four marginal cost-of-service studies.

Because Bitiki located its bitcoin mining operation at a site where all transmission and substation infrastructure already exist, no new investment from KU was required.

Other ratepayers are protected by the very stringent EDR discount claw-back provisions should the full ten-year term not be realized. The EDR claw-back is 90% in years 1-2, 75% in years 3-5, and 50% in years 6-10.

KU would not have offered EDR discounts to incentivize Bitiki to locate in Kentucky if it did not reasonably conclude that an EDR was necessary. This is especially true during a base rate stay-out when shareholders bear the full cost of discounted rates. KU's base rates are frozen through July 1, 2025, and no EDR discount can be reflected in rates at least until then. Nor would the Kentucky Economic Development Finance Authority ("KEDFA") have provided incentives if it did not conclude that they were necessary.

Bitiki relied on a reasonable expectation that this EDR special contract met all legal requirements and would be approved. It is important for future economic development to maintain a regulatory environment that allows businesses to predictably invest in Kentucky.

This EDR contract properly balances the Commonwealth's dual policies of promoting the cryptocurrency industry and providing reasonable electric rates to all consumers.

ARGUMENT

I. The Fixed Cost Contribution From This EDR Special Contract Will Be At Least $10.9 Million To $14.4 Million Over The Ten-Year Term

Stuart Wilson is KU's Director of Energy Planning, Analysis and Forecasting. Mr. Wilson conducted four marginal cost-of-service studies to determine whether serving the Bitiki load at the discounted rates would provide KU with a positive net margin.[1] Mr. Wilson agreed with and incorporated several adjustments recommended by Joint Intervenor witness Ms. Hotaling. He adopted Ms. Hotaling's recommendations to use coincident peak values and transmission-level loss adjustments in each of his studies.[2]

Mr. Wilson's first marginal cost-of-service study utilized data from the National Renewable Energy Laboratory's 2020 Annual Technology Baseline ("2020 NRELATB") for natural gas combined cycle ("NGCC") overnight capital costs and fixed O&M costs, and Ms. Hotaling's firm gas transportation cost. His first study concluded that KU's demand revenue would exceed its marginal demand related costs by $5.0 million over the five-year discount period and $14.4 million over the full ten-year period.[3]

His second study used 2021 NRELATB NGCC overnight capital costs and fixed O&M costs, and Ms. Hotaling's firm gas transportation costs. That study concluded that over the first five years KU's revenues would exceed its costs by $4.4 million and by $13.1 million over ten years.[4]

His third approach revised the marginal cost-of-service study using data from the KU/LG&E December 2022 CPCN application and 2021 IRP proceeding. That study found that

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[1] Wilson Rebuttal at 8-19.

[2] Id. at 8-9.

[3] Id. at 12.

[4] Id. at 13.

KU's revenues exceeded its costs over the first five years by $4.8 million and by $13.8 million over ten years.[5]

His fourth approach revised the marginal cost-of-service study using data from the PJM 2026-2027 CONE Report cited by Ms. Hotaling. That study found that KU's demand revenue exceeded its marginal demand related costs by $3.3 million over five years and $10.9 million over ten years.[6]

Under every study conducted by KU, the Bitiki EDR special contract would make a positive contribution to KU's fixed costs during each year of the ten-year period. This is true even in Year One which has the largest discount (50%).[7] This means that the cost to serve other consumers will be lower during each year because of the Bitiki EDR.

The calculations of demand revenues in excess of marginal costs are likely understated. Because Bitiki's load will have no effect on KU's resource plans during the EDR discount period, its marginal cost of generation is arguably zero over that period.[8] Under this approach, KU's full ten-year demand charge revenue of $28.5 million would be compared to its full five-year EDR discount of $4.3 million. This results in a contribution to fixed costs over ten years of $24.2 million.[9]

Also, none of the four marginal cost-of-service studies include the fixed cost payments for environmental upgrades that Bitiki will make through KU's environmental surcharge. Nor do they include the fixed cost payments that Bitiki will make for the remaining net book value of retired generation through KU's Retired Asset Recovery ("RAR") rider.

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[5] Id. at 15.

[6] Id. at 17.

[7] The Year One fixed cost contribution ranges from a high of $436,924 to a low of $91,709. Wilson Rebuttal at 12-17.

[8] Id. at 19-20.

[9] Bitiki Hearing Exhibit 1.

II. KU Will Have Adequate Generating Capacity to Serve the 13 Mw Bitiki Load During the EDR Discount Period.

EDR discounts can only be offered when the utility has adequate generating capacity. As the Commission stated in Administrative Case No. 327, "*EDRs should only be offered during periods of excess capacity and that each utility should demonstrate, upon submission of each EDR contract, that the load expected to be served during each year of the contract period will not cause the utility to fall below a reserve margin that is considered essential for system reliability.*"[10] KU's EDR tariff contains a similar requirement.[11]

KU and LG&E have more than adequate generating capacity to serve Bitiki's 13 Mw load without accelerating any future capacity additions during the five-year EDR discount period. The total generating capacity of KU/LG&E in the summer of 2023 is 7,653 Mw.[12] Bitiki's relatively small load will have no impact on the KU/LG&E generation resource plan over the five-year EDR discount period. This was demonstrated by KU's rebuttal testimony,[13] its testimony at hearing,[14] and its pre-hearing and post-hearing responses to data requests.[15] Additional load would have to exceed 135 Mw before there would be any impact on the KU/LG&E generation resource plan.[16] This is ten times the Bitiki load.

[10] *An Investigation into the Implementation of Economic Development Rates by Electric and Gas Utilities*, Admin. Case No. 327, Order at 5 (Ky. PSC Sept. 24, 1990).

[11] Kentucky Utilities Company P.S.C. No. 20, Original Sheet No. 71.2. "*Company may offer EDR to qualifying new load only when Company has generating capacity available and the new load will not accelerate Company's plans for additional generating capacity over the life of the EDR contract.*"

[12] Response to Joint Intervenors Question 1.13

[13] Hornung Rebuttal at 6; Wilson Rebuttal at 19-20.

[14] *See, e.g.*, H.V.T. 09:40:00-09:40:15; H.V.T. 09:55:41-09:56:24.

[15] KU Response to JI 1-13(b) and (c); KU Response to PSC PHDR 4.

[16] Wilson Rebuttal at 19.

III. No New Transmission Or Substation Investment Is Required By KU.

The Bitiki cryptocurrency mining facility is located at a site that has existing transmission and substation facilities. Therefore, there are no additional capital expenditures needed by KU to provide service.[17] But for the Bitiki load, the excess capacity of the existing transmission and substation infrastructure would be stranded.

IV. Existing Ratepayers Are Adequately Protected By The EDR Discount Claw-Back Provisions.

The Bitiki EDR special contract includes stringent claw-back provisions allowing KU to recoup significant portions of the EDR discounts if the customer terminates service prior to the end of the ten-year term. If Bitiki terminates the special contract during years 1-2, then 90% of the EDR discount must be repaid to KU. If termination occurs during years 3-5, then the EDR claw-back is 75%. If termination occurs during years 6-10, then the EDR claw-back is 50%.[18] These claw-back provisions provide a very important consumer protection.

As discussed previously, the Bitiki EDR would make a positive contribution to KU's fixed costs during each year of the ten-year term, even in Year One which includes the highest EDR discount (50%). The claw-back adds to this protection. For example, if the contract terminates after one year, then there will be a positive contribution to fixed costs *and* 90% of the EDR discount will be repaid.

V. KU Had No Incentive To Agree To An Unnecessary Discount And Bitiki Invested In KU's Service Territory On The Reasonable Expectation That This Contract Would be Approved.

KU is in a base rate freeze until July 1, 2025.[19] Therefore, any EDR discount offered by KU to Bitiki is at shareholder expense at least until that time. KU would not have offered an

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[17] Hornung Rebuttal at 6 and 9.

[18] Hornung Rebuttal at 15-16.

[19] Case No. 2020-00350, June 30, 2021 Order.

EDR discount unless it reasonably believed that the discount was necessary to secure the new load.[20] KU had absolutely no motive to provide an unnecessary rate discount to an alleged "*free rider*".

The state of Kentucky provided financial incentives for the Bitiki project. KEDFA concluded that such incentives were reasonable and necessary.[21]

The details of KU's actions regarding the Bitiki contract negotiation process over the approximate nine-month period February 23, 2022 through November 4, 2022 are contained in the Bitiki-KY, LLC Fact Sheet.[22] The Fact Sheet shows that at least six KU employees from the Key Accounts and Rates and Regulatory departments were involved. That process was thorough and included Bitiki paying for a $25,000 System Impact Study and posting a $1.275 million surety bond. The $1.275 million surety bond provides additional ratepayer protection.

Bitiki relied on the reasonable expectation that this EDR special contract met all legal requirements and would be approved. Bitiki repeatedly communicated to KU that it began investing on the expectation that the Commission would accept the EDR special contract shortly after filing.[23] That was an entirely reasonable belief because the Commission had approved all other KU EDR special contracts for more than a decade.[24]

Joint Intervenors advance a free rider hypothesis.[25] They would require KU to prove a negative. They would require KU to provide conclusive evidence that but for the EDR discount,

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[20] H.V.T 11:26:07-11:27:22; Bevington Rebuttal at 6-7.

[21] Bevington Rebuttal at 3-4.

[22] Response to Joint Intervenors Question No. 1.4, Attachment 3.

[23] KU Response to JI PHDR 3-1(a), Attachment 1 at 2-3.

[24] KU Response to JI PHDR 3-1(d).

[25] Sherwood Direct at 6-8.

the customer would not have located its facility in KU's service territory.[26] There is no evidence that KU or any other utility could produce to prove that negative.

VI. Denying This EDR Special Contract Could Harm Future Economic Development Activities.

Denying this EDR special contract could harm future economic development in the Commonwealth because prospective EDR customers might choose to avoid the uncertainty and delay associated with litigating EDR contracts in favor of more certain rate discounts elsewhere. When choosing where to invest, businesses value certainty and speed.

VII. It Is The Policy Of The Commonwealth To Promote Cryptocurrency Facilities Through Reasonable Electric Rates

Two years ago, the General Assembly passed and the Governor signed 2021 House Bill 230 (2021 Ky. Acts 122). The Preamble to this Bill has the stated purpose of promoting cryptocurrency mining, in part because of the Commonwealth's abundant supply of electricity.[27] In addition to furthering that purpose, this project will lower costs for all consumers through a substantial contribution to fixed costs.

The policy of promoting cryptocurrency needs to be balanced with the very important policy of maintaining reasonable electric rates and protecting consumers. Because of the significant contribution to fixed costs, KU's more than adequate generation supply, the lack of additional transmission or substation investment needed to serve the load and the EDR claw-back provisions, this EDR achieves that balance.

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[26] Id. at 7.

[27] "*WHEREAS, access to cost-effective energy is critical to the development and growth of blockchain technology, particularly in the commercial mining of cryptocurrency which requires a substantial and constant supply of energy;…WHEREAS, the Commonwealth has an opportunity to become a national leader in the emerging industry of the commercial mining of cryptocurrency given its abundant supply of electricity that can be provided at lower rates than most states…*"

Respectfully submitted,

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