COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC TARIFF FILING OF BIG RIVERS ELECTRIC CORPORATION FOR APPROVAL OF PROPOSED CHANGES TO ITS QUALIFIED COGENERATION AND SMALL POWER PRODUCTION FACILITIES TARIFFS	)))))	CASE NO. 2023-00102

<u>O R D E R</u>

On March 31, 2023, the Commission established this proceeding to investigate the reasonableness of Big Rivers Electric Corporation (BREC)'s proposed replacement of its Tariff QFP, Cogeneration/Small Power Production Purchase Tariff – Over 100 KW (Tariff QFP), and Tariff QFS, Cogeneration/Small Power Production Facility Tariff – Over 100 KW (Tariff QFS) with its new Tariff QF, Qualified Cogeneration/Small Power Production Facility Tariff – Over 100 KW (Tariff QF). BREC provided notice to its three member cooperatives, Jackson Purchase Energy Cooperative Corporation (Jackson Purchase Energy), Kenergy Corp. (Kenergy), and Meade County R.E.C.C. (Meade RECC). BREC also provided notice to the two customers that take service under the existing Tariff QFP, Commonwealth of Kentucky Department of Military Affairs Construction and Facilities Management Office (Department of Military Affairs) and Southern Star Central Gas Pipeline, Inc. (Southern Star). BREC proposed an effective date of April 1, 2023. In the March 31, 2023 Order, the Commission suspended the tariff effective date for five months, up to and including August 31, 2023.[1]

[1] Order (Ky. PSC Mar. 31, 2023).

There are no intervenors in this proceeding. BREC responded to five requests for information.[2] This matter now stands submitted for a decision.

LEGAL STANDARD

The Commission's review of tariff rates is set forth in KRS 278.030, which provides that a utility may collect fair, just and reasonable rates, and that the service the utility provides must be adequate, efficient and reasonable. The Commission promulgated regulations that govern small power production and cogeneration tariffs in 807 KAR 5:054 pursuant to Title II of the Public Utility Regulatory Policies Act of 1978 (PURPA). Commission regulation 807 KAR 5:054, Section 7, establishes the basis for compensation paid by an electric utility for the purchase of output from a qualifying facility (QF), defined as either a cogeneration facility or small power production facility.

Standard rates for purchases from a QF with a design capacity of 100 KW or less, established in 807 KAR 5:054, Section 7(2), must be just and reasonable to the electric customers of the utility, in the public interest and nondiscriminatory, and must be based on avoided costs, subdivided into an energy component and a capacity component. Avoided costs are defined in 807 KAR 5:054, Section 1(1) as incremental costs to the utility of "electric energy or capacity or both, which if not for the purchase" from a QF, the utility would generate itself or purchase from another source.[3]

[2] BREC's Response to Commission Staff's First Request for Information (Staff's First Request) (filed Apr. 28, 2023). BREC's Response to Commission Staff's Second Request for Information (Staff's Second Request) (filed May 26, 2023). BREC's Response to Commission Staff's Third Request for Information (Staff's Third Request) (filed Aug. 18, 2023). *See* the Mar. 31, 2023 Order for the first two responses to Commission Staff's Request for Information that occurred before this investigation in Appendix B.

[3] 807 KAR 5:054, Section 1(1).

Standard rates for purchases from a QF with a design capacity of 100 kW or more, established in 807 KAR 5:054, Section 7(4), are based on avoided costs, subdivided into an energy component and a capacity component. The rates are used only as a basis for negotiating a final purchase rate with the QF. Negotiated rates must be just and reasonable to the electric customers of the utility, in the public interest and nondiscriminatory.

Under both 807 KAR 5:054, Section 7(2) and Section 7(4), the basis for rates for power offered on an as available basis are based on the utility's avoided energy costs estimated at time of delivery, and rates for power offered on a legally enforceable basis are based at the option of the QF on either avoided costs at the time of delivery or avoided costs at the time the legally enforceable obligation (LEO) is incurred.

BACKGROUND

BREC's current tariff, on file with the Commission, includes two separate QF tariffs: (1) Tariff QFP – Cogeneration/Small Power Production Purchase Tariff – Over 100 kW; and (2) Tariff QFS – Cogeneration/Small Power Production Sales Tariff – Over 100 kW. Tariff QFP is available to any customer of a BREC Member Cooperative who qualifies as a cogenerator or small power producer pursuant to 807 KAR 5:054 who contracts to sell energy or capacity or both to BREC and whose small power production or cogeneration QF has capacity over 100 kW. For contracts for the purchase of energy only, the term of the contract is one year and is self-renewing unless cancelled with one year's written notice. Contracts for capacity and energy have a term of not less than five years and self-renew on one-year terms unless canceled with one year's written notice.

Tariff QFP sets forth the capacity purchase rates and firm energy purchase rates which BREC will pay a QF for capacity or energy, or both. Tariff QFP states that, as long as BREC has surplus generation, the capacity purchase rate will be zero. When BREC does not have surplus generation, the hourly avoided capacity cost payable to a QF for delivery of capacity will be equal to the effective purchase price for power available to BREC from the Inter-Utility Market, less BREC's actual variable fuel expense.[4]

Tariff QFS is available to any Member Cooperative for service to any member of the Member Cooperative with cogeneration and/or small power production facility with net output of less than 5,000 kW and which meets the criteria for QFs under 807 KAR 5:056, Section 4. Charges for services under Tariff QFS are established by contract. For each QF Member taking service under Tariff QFS, the Member Cooperative is billed monthly for: (1) Supplementary Service (capacity and energy); (2) Unscheduled Back-Up Service, if any (capacity charge only); (3) Maintenance Service (capacity and energy), if any; (4) Excess demand, if any; and (5) Additional charges, if any.[5]

PROPOSED TARIFF QF, QUALIFIED COGENERATION/SMALL POWER PRODUCTION FACILITY TARIFF – OVER 100 KW

BREC proposed to eliminate the Tariff QFP and Tariff QFS tariffs and replace them with Tariff QF. Tariff QF lowers the mandatory purchase obligations under PURPA to qualified cogeneration or small power production facilities with a design capacity over 100 kW and less than or equal to 5 MW, which is consistent with the Federal Energy Regulatory Commission's (FERC) August 13, 2021 decision[6] regarding BREC's

[4] P.S.C. KY. No. 27, Original Sheet Nos. 39–41.

[5] P.S.C. KY. No. 27, Original Sheet Nos. 42–48.

[6] Order (Ky. PSC Mar. 31, 2023), Appendix B at unnumbered 8–10.

application to terminate the requirement to enter into new contracts or obligations to purchase electric energy and capacity from any small power production QF with a net capacity of 5 MW. A QF Member may sell to BREC the output of its QF in excess of its own load requirement. In order to do so, a QF Member must enter into a contract with the Member Cooperative and BREC. The contract must set out the following: (1) an initial contract term for one year that continues year-to-year unless cancelled by a party with not less than one year's written notice; (2) specify whether the QF generation is dispatchable or non-dispatchable; (3) specify whether the QF Member is providing firm or non-firm capacity and energy; and (4) specify any other terms or conditions the Member Cooperative or BREC may require for service.

Tariff QF sets forth the rate that will be used for negotiating a final purchase rate with QF Members pursuant to 807 KAR 5:054, Section 7. QF Members selling capacity to BREC will be credited for the QF's electric capacity accredited by the Midcontinent Independent System Operator, Inc. (MISO) at the MISO Planning Resource Auction (PRA) Auction Clearing Price (ACP) for the BREC zone for the applicable resource auction time period. QF Members with a non-dispatchable QF, or who are proposing to supply non-firm electric power, will not be entitled to a capacity payment. QF Members will be credited monthly for any electric power produced by its QF and sold to BREC at the actual locational marginal price for energy set by MISO at the applicable load node during each hour of the day at the time of delivery. BREC explained further that, because it satisfies its MISO capacity obligations by participating in the MISO Resource Adequacy process, culminating in the PRA ACP, BREC benefits from purchasing QF capacity by being able to reduce the amount of capacity being purchased in the PRA and the avoided capacity cost equals the ACP multiplied by the MISO accredited QF capacity.[7] Additionally, BREC argued that the QF contracts are for a one year initial term that continues until either party provides proper cancellation notice, which according to BREC, means that the contract is an annual contract, not a long term obligation upon which BREC can rely. Thus, it does not replace steel in the ground or a long-term purchase power agreement.[8]

BREC stated that even without additional economic development, it is currently forecasting capacity deficits.[9] In BREC's 2020 Integrated Resource Plan (IRP),[10] BREC's preferred plan included the addition of a natural gas combined cycle (NGCC). BREC stated, in this proceeding, that it is still working to finalize the studies surrounding its 2023 IRP and that the studies are evaluating the addition of a new combined cycle unit as well as evaluating other alternative technologies.[11] BREC also provided updated QF calculations based upon BREC's NGCC unit anticipated in BREC's most recent IRP using the National Renewable Energy Laboratory (NREL) Annual Technology Baseline (ATB).[12]

DISCUSSION AND FINDINGS

[7] BREC's Response to Staff's First Request, Item 7a.

[8] BREC's Response to Staff's First Request, Item 7a.

[9] BREC's Response to Staff's Third Request, Item 1.

[10] Case No. 2020-00299, *Electronic 2020 Integrated Resource Plan of Big Rivers Electric Corporation* (Ky. PSC Sept. 21, 2020), Chapter 9, at 176.

[11] BREC's Response to Staff's Third Request, Item 6c. BREC subsequently filed Case No. 2023-00310, *Electronic 2023 Integrated Resource Plan of Big Rivers Electric Corporation* (filed Sept. 29, 2023). See discussion and Tables 7.2.3(a) and 7.3.1(a) at 140-143. The results of both the Expansion Planning Analysis and the Base and Alternative Portfolio Design analysis show that the Green Station Units 1 and 2 are retired in 2029 and either a 635 MW natural gas combined cycle (NGCC) unit or a 450 MW combustion turbine (CT) is constructed in June 2029.

[12] BREC's Response to Staff's Second Request, Item 10.

Capacity Rates

The Commission notes that BREC stated:

> In the October 26, 2021, Order in Case No. 2021-00198 at 9, the Commission found for EKPC that 'the use of the most recent BRA capacity market clearing price is more appropriate and should be used as the proxy for the avoided capacity cost component of the COGEN/SPP tariffs.' This finding and the corresponding language in the approved EKPC tariff was the basis for BREC's proposal to rely on the MISO Planning Resource Auction (PRA) Auction Clearing Price (ACP) for avoided capacity costs in the QF tariff.[13]

However, the Commission did not allow EKPC to use capacity market rates to determine actual avoided capacity costs. The Commission found that EKPC should use the BRA capacity market-clearing price as an interim approximation of avoided costs and expected EKPC to develop a more robust record in its next filing.[14] The Commission indicated in the same Order that it had an interest in the avoided capacity rate being calculated based on the actual cost of a unit of physical capacity.[15]

The Commission reiterates that it has no interest in allowing Kentucky's regulated, vertically integrated utilities to effectively depend on the market for generation or capacity for any sustained period of time. Thus, should a capacity deficit occur, or is anticipated to occur, it is the replacement capacity cost of the next unit built or the contract cost of firm bilateral capacity, that can provide associated energy, that should form the basis for avoided capacity values and not a market-clearing price. If the Commission does not

[13] BREC's Response to Staff's First Request, Item 7a.

[14] Case No. 2021-00198, *Electronic Tariff Filing of East Kentucky Power Cooperative, Inc. and Its Member Distribution Cooperatives for Approval of Proposed Changes to Their Qualified Cogeneration and Small Power Production Facilities Tariffs* (Ky. PSC Oct. 26, 2021), Order.

[15] Case No. 2021-00198, Oct. 26, 2021 Order at 9.

expect to allow a utility to depend on annual market-purchases for its long-term capacity needs, it follows that those costs are not the capacity costs being avoided, especially when the utility's peaking needs differ from the capacity "product" procured by markets.

BREC has demonstrated that, under MISO's new seasonal capacity construct, it currently has seasonal capacity deficits from 2024 to 2029.[16] In addition, BREC's current IRP indicates that under each of its modeling scenarios the two Green Station units are retiring and either a 635 MW NGCC or a 450 MW CT is being constructed in 2029.[17]

Thus, based upon a review of the case record and being otherwise sufficiently advised, the Commission finds that BREC's proposal to use the MISO PRA ACP is neither an appropriate approximation of BREC's actual avoided capacity costs nor reasonable for the QF capacity purchase rate. The Commission acknowledges that BREC's avoided capacity costs should accurately reflect that of its own generation system and future needs. Based upon BREC's current long-range plan, the Commission finds that the estimated 2029 cost of BREC's NGCC construction should provide the basis of its avoided capacity costs and should be reflected in its tariff capacity purchase rate. The Commission continues to rely on open, transparent, and publicly accessible information sources and will adopt the cost of a NGCC from the NREL ATB as the proxy for estimating avoided generation capacity costs for BREC to meet its identified need. On May 26, 2023, BREC provided its avoided capacity cost based upon a NGCC unit in its 2020

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[16] BREC's Response to Staff's Third Request, Item 1b and Item 6, Attachment. Also see Case No. 2023-00310, *Electronic 2023 Integrated Resource Plan of Big Rivers Electric Corporation* (filed Sept. 29 2023) at 57-58 and 133. In the fall of 2022, MISO began determining resource adequacy on a seasonal basis rather than on an annual basis with the first affected planning year beginning in June 2023. For MISO Local Zone 6, the seasonal Planning Reserve Margin Requirement (PRMR) is Summer 2023 – 7.4%, Fall 2023 - 14.9%, Winter 2023-2024 – 25.5 % and Spring 2024 – 24.5%.

[17] Case No. 2023-00310, Discussion and Table 7.2.3(a) and Table 7.3.1(a) at 140-143.

IRP.[18] Therefore, BREC will adopt the more current NREL ATB estimated cost of an NGCC unit in 2029 dollars discounted back to 2024 as the proxy for BREC's avoided capacity cost.[19]

The Commission finds that BREC's proposal to require MISO accreditation of firm QF capacity in order to receive a capacity payment is reasonable. Further, requiring the QF Member providing firm electric power to be responsible for the cost of all facilities on the QF site to meet and maintain eligibility as a MISO capacity resource and to be subject to all non-performance costs is reasonable.[20] However, exempting MISO accredited non-dispatchable QF capacity from a capacity payment is not reasonable.[21] Within BREC's current IRP, non-dispatchable wind and solar resources were modeled with capacity factors and Effective Load Carrying Capability (ELCC) seasonal accreditations.[22] When these resources are generating energy, it is reasonable to assume that some amount of capacity is necessary for the energy to be generated.

The Commission notes that BREC utilizing MISO guidelines and modeling non-dispatchable resources with a certain amount of capacity credit and not extending the same to current or potential non-dispatchable resources is not reasonable. The Commission finds that if non-dispatchable QF capacity resources want to register with

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[18] BREC's Response to Staff's Second Request, Item 10b.

[19] See Case No. 2023-00310, Table 7.2.4(j) at 124. BREC provided the Overnight Capital Cost, Fixed O&M and Variable O&M for a 635 MW NGCC.

[20] Application, Proposed Tariff Redline, P.S.C. KY No. 27, First Revised Sheet No. 41, Terms and Conditions No. 9.

[21] Application, Proposed Tariff Redline, P.S.C. KY No. 27, First Revised Sheet No. 41, Terms and Conditions No. 8.

[22] See Case No. 2023-00310, Table 7.1.4(g), Table 7.1.4(h) at 121 and Appendix D, Planning Year 2023-2024 Loss of Load Expectation Study Report, MISO – Resource Adequacy at D-12.

and have MISO accreditation and are subject to MISO rules and performance obligations, then the QF members should be eligible for the same seasonal capacity payments commensurate with the MISO accredited capacity factors for the resource. Further, the Commission finds that if the QF member does not want to have its capacity resource registered with and accredited by MISO, then it is appropriate that it not receive a capacity payment.[23]

Energy Rates

The proposed Tariff provides that a QF Member will be credited monthly for any electric power produced by its generation facilities and sold to BREC at the actual locational marginal price (LMP) for energy set by MISO at the applicable load node during each hour of the day at the time of delivery.[24] When asked why the monthly credit for energy would be the LMP at the time of delivery, BREC explained that it participates in the MISO energy market. It sells all its generation into the market and to meet its load obligations, purchases all the energy from the market. The energy purchased from the QF will be purchased at the LMP at the time of delivery because it reduces the amount of energy BREC would otherwise purchase from MISO at the same LMP price, thus creating a net zero cost to BREC and its Members. In addition, BREC argued that the LMP reflects the true value of the QF generator.[25]

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[23] See BREC's Response to Staff's First Request, Item 5b. In order for a QF resource to be counted toward BREC's reserve margin capacity requirement, BREC needs to register those resources with MISO, which includes numerous obligations and the underlying risk of such obligations. QF Members have to make the business decision whether to undertake those obligations and is resulting risk. To the extent a QF Member is willing to undertake these obligations, BREC will then register the resource.

[24] Application, Proposed Tariff Redline, P.S.C. KY No. 27, First Revised Sheet No. 40, Monthly Credits or Payments for Delivery to Big Rivers, No. 2.

[25] BREC's Response to Staff's First Request, Item 4a.

The Commission finds that BREC's use of the actual LMP for energy set by MISO at the applicable node during each hour of the day at the time of delivery is appropriate and should be accepted. This methodology reflects the real-time cost that BREC would otherwise purchase energy for and is a fair, just and reasonable rate.

<u>Contract Length</u>

BREC's argument that the MISO PRA ACP is the appropriate basis for its avoided capacity cost because the QF contracts are annual is not persuasive. The Commission observes that under the proposed Terms and Conditions No. 7, the QF Member shall have an initial contract for one year that continues from year-to-year thereafter unless cancelled by a party with not less than one year's written notice.[26] The Commission notes that, because the QF contracts continue "from year-to-year thereafter" each contract term is tantamount to a long-term contract.

The FERC has not established minimum or maximum terms for QF contracts, instead leaving that decision to the states. As the FERC found:

> We decline to specify a minimum required contract length given that it is up to states to decide appropriate contract lengths in a way that accurately calculates avoided costs so as to meet all statutory requirements."[27]

The Commission notes that in the absence of any mandated length of contract, the Commission may set any length if it determines it is reasonable. The Commission has

[26] Application, Proposed Tariff Redline, P.S.C. KY No. 27, First Revised Sheet No. 41, Terms and Conditions No. 7.

[27] *Qualifying Facility Rates and Requirements Implementation Issues Under the Public Utility Regulatory Policies Act of 1978*, Order No. 872A, 173 FERC ¶ 61,158, 61,955 (2020).

relied upon this in Case Nos. 2020-00174,[28] 2020-00349,[29] and 2020-00350[30] where the Commission has set contract lengths different than those proposed.

Therefore, the Commission does not find it reasonable for BREC to the use the one-year initial term contract tariff provision. Consistent with the Commission's findings discussed above, the tariff QF should include a two-year and a five-year term contract. The Commission notes that 807 KAR 5:054, Section 5(1)(a) requires that electric utilities with annual retail sales greater than 500-million-kilowatt hours file with the Commission data from which avoided costs may be derived every two years which supports a two-year term contract. Additionally, the Commission notes that BREC has indicated that it plans to build additional generation in 2029, which would be approximately five years from the effective date of this Order. Therefore, a five-year term contract option would also be appropriate. The Commission will monitor the pace of development and the accuracy of the utility's avoided cost forecasts and may wish to revisit the contract length in the future, particularly for existing QFs that are renewing their contracts.

IT IS THEREFORE ORDERED that:

1. The Tariff QF rates proposed by BREC's are denied.

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[28] Case No. 2020-00174, *Electronic Application of Kentucky Power Company For (1)a General Adjustment of Its Rates for Electric Service; (2) Approval of Tariffs and Riders; (3) Approval of Accounting Practices to Establish Regulatory Assets and Liabilities; (4) Approval of a Certificate Of Public Convenience and Necessity; and (5) All Other Required Approvals and Relief* (Ky. PSC Jan 13, 2021), Order.

[29] Case No. 2020-00349, *Electronic Application of Kentucky Utilities Company for an Adjustment of Its Electric Rates, a Certificate of Public Convenience and Necessity to Deploy Advanced Metering Infrastructure, Approval of Certain Regulatory and Accounting Treatments, and Establishment of a One-Year Surcredit* (Ky. PSC Sept. 24, 2021), Order.

[30] Case No. 2020-00350, *Electronic Application of Louisville Gas and Electric Company for an Adjustment of Its Electric and Gas Rates, a Certificate of Public Convenience and Necessity to Deploy Advanced Metering Infrastructure, Approval of Certain Regulatory and Accounting Treatments, and Establishment of a One-Year Surcredit* (Ky. PSC Sept. 24, 2021), Order.

2. The rates and charges for BREC's Tariff QF, as set forth in the Appendix to this Order, are fair, just and reasonable rates, and these rates are approved for service rendered on and after the date of service of this Order.

3. The terms, rates, and charges for BREC's Tariff QF, as discussed in this Order, are fair, just and reasonable and are approved for service rendered on and after the date of service of this Order.

4. Within 20 days of the date of service of this Order, BREC shall file with the Commission, using the Commission's electronic Tariff Filing System, new tariff sheets setting forth the terms, rates and charges approved by this Order and reflecting their effective date and that they were authorized by this Order.

5. This case is closed and removed from the Commission's docket.

PUBLIC SERVICE COMMISSION

Chairman

Vice Chairman

Commissioner

ENTERED

DEC 15 2023

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KENTUCKY PUBLIC
SERVICE COMMISSION

ATTEST:

Executive Director

APPENDIX

APPENDIX TO AN ORDER OF THE KENTUCKY PUBLIC SERVICE COMMISSION IN CASE NO. 2023-00102 DATED DEC 15 2023

Qualified Cogeneration/Small Power Production Facility Tariff – Over 100 KW

Capacity – per KW per year

2-year contract	2024	2025			
	$33.87	$34.97			
5-year contract	2024	2025	2026	2027	2028
	$33.87	$34.97	$36.11	$37.28	$38.50

Energy – QF will be credited monthly for the electric power produced by generation facilities at the actual real-time locational marginal price for energy set by MISO at the BREC zonal node during each hour of the day at the time of the delivery.

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