



A Touchstone Energy Cooperative 

July 31, 2023

Ms. Linda Bridwell
Executive Director
Kentucky Public Service Commission
P.O. Box 615
211 Sower Boulevard
Frankfort, KY 40602

RE: *In the Matter of the Application of East Kentucky Power Cooperative, Inc. to Transfer Functional Control of Certain Transmission Facilities to PJM Interconnection, LLC*, P.S.C. Case No. 2012-00169 - Annual Report of East Kentucky Power Cooperative, Inc.

Dear Ms. Bridwell,

In accordance with the December 20, 2012 Order of the Kentucky Public Service Commission (“Commission”) in the above-styled case, and as modified by the May 14, 2015 Order in Case No. 2015-00116, and as modified by the September 30, 2021 and May 25, 2022 Orders in Case No. 2021-00103 (collectively, the “Orders”), please accept this as the Annual Report of East Kentucky Power Cooperative, Inc. (“EKPC”) regarding its participation in the PJM Interconnection, LLC (“PJM”) for the delivery year June 1, 2022 through May 31, 2023 (“delivery year”). In accordance with the Orders, I would request that you place this Annual Report in EKPC’s post-case correspondence file. With regard to the specific topics of interest in the Commission’s December 20, 2012 Order, I can report as follows.

Transmission Rights Awarded and Purchased

EKPC received Auction Revenue Rights (“ARRs”), based on its load requirements, during the annual allocation in April 2021. The ARR’s can either be self-scheduled into FTRs or can be financially settled in the daily market and that revenue is used to purchase additional FTRs or used to off-set congestion costs. Attached are the auction results with the amount of Financial Transmission Rights (“FTRs”) that EKPC had in total during the delivery year. The spreadsheet also shows the costs for the FTRs purchased and the value of the FTRs “self-scheduled”. The values are listed for the 5x16 portion, which includes values applicable Monday through Friday from 7:00 a.m. through 10:00 p.m. The “wrap” is the off peak hours of 11:00 p.m. through 6:00 a.m., Monday through Friday, plus the entire 24 hours on Saturday and Sunday. For the delivery year, EKPC estimates roughly a [REDACTED] benefit to its members of having ARR’s and FTRs. These savings have been included in the Trade Benefits described later in this report.

Description of Hedging Plans and Strategies

Transmission congestion within the EKPC system has been counter intuitive because of a significant amount of negative congestion. In 2018, EKPC hired a consultant, The Brattle Group, to further investigate the underlying reasons for the negative congestion and to develop a comprehensive strategy for managing the congestion cost exposure. Rather than follow a set hedging strategy of [REDACTED] of its FTR needs in the Long Term Auctions (3-year auctions), an additional [REDACTED] in the annual auctions (covering the delivery year), an additional [REDACTED] in the quarterly auctions, and the final [REDACTED] in the monthly auctions, the study proved it would be more beneficial to hold the ARRs and collect those revenues and only purchase FTRs in the monthly auctions when positive congestion is likely either due to binding constraints or planned transmission outages. Each month, planned transmission outages are evaluated using a power flow analysis tool to identify if congestion is likely to be positive or negative and if any of the outages will result in a binding constraint. Based on this analysis, bids are developed for the monthly FTR auctions. EKPC plans to follow this strategy until there is a fundamental change in the PJM system that indicates positive congestion will consistently occur for EKPC. The goal is to match EKPC's expected transmission congestion position as closely to its load serving requirements as possible to minimize its exposure to congestion costs.

Regarding Hedging Plans and Strategy for Market Prices for Capacity and Energy, EKPC's strategy is to fully hedge its capacity price exposure in PJM's Reliability Pricing Model ("RPM") capacity auctions based on its load requirements, and to sell all excess capacity for additional revenues. EKPC must purchase capacity based on its Net System Peak Load ("NSPL"). NSPL is based on EKPC's native load requirements coincident with the PJM summer peak load. EKPC will generally pay the same amount for its NSPL requirements on a \$/MW-Day basis as it sells its capacity. Thus, EKPC's price exposure is hedged in the capacity market as long as its generation available to sell is equal to or greater than its NSPL. EKPC realizes additional value from the capacity auction by having excess capacity to sell.

EKPC's strategy for hedging its energy prices is to actively manage its expected cost to serve and minimize its risk exposure to price spikes. EKPC models and reviews its energy price exposure on a monthly basis, looking forward three years. EKPC utilizes a production cost model (RTSim – the same model used for its Integrated Resource Plan analysis) to estimate its energy price exposure within the PJM market. The model considers the expected fuel and operations costs for the EKPC generation fleet and compares those to expected market prices. This comparison determines if EKPC's generation is economic to operate, provides an estimation of how much the EKPC generation fleet will run, and defines how much EKPC can expect to pay for its load requirements. Based on the model results, EKPC identifies potential forward purchases or sales that could lower its expected risk profile of its energy costs. This data also provides a view for EKPC's fuel procurement process, which then determines how much fuel should be purchased to ensure adequate and cost effective supplies.

Additionally, EKPC’s Market Operations Center follows load and energy market trends daily and identifies opportunities to lower its net operating costs during the Day Ahead and Balancing markets.

Prior Year’s Benefits and Costs of PJM Membership

In the following table, EKPC identifies its costs and benefits from the delivery year. The Administrative Costs and Transmission Costs are based on accounting entries in EKPC’s General Ledger and reflect actual billed PJM expenses. Trade Benefits are based on a detailed modeling effort. EKPC utilized its RTSim model and simulated what its operations as a stand-alone Balancing Authority might have cost, then compared that to the actual costs of operating in PJM. EKPC modeled actual loads, actual prices, actual generating unit availability statistics, and estimated transmission availability from outside resources. This methodology is similar to the methodology utilized in the study completed and entered into EKPC’s request to the Commission to join PJM. Capacity Benefits are based on the actual cleared PJM RPM results and are shown on the monthly PJM invoice. The Avoided Point-to-Point Transmission Charges are based on the contract that EKPC had with PJM to purchase 400 MW of firm transmission and the published tariff rate associated with that purchase, but does not include any additional charges for actual energy transactions on the transmission. The results are included in the following table for the delivery year.

June 1, 2021 through May 31, 2022

Category	Costs (in millions)	Benefits (in millions)
Administrative Costs	█	
Transmission Costs	█	
Trade Benefits		█
Capacity Benefits		█
Avoided PTP Transmission Charges		█
Subtotal	█	█
Net Benefits		█

Concerning the PJM capacity market benefits, in its December 20, 2012 Order in Case No. 2012-00169 (“PJM Order”), the Commission conditioned its approval of the transfer of functional control of EKPC’s transmission facilities to PJM upon EKPC agreeing to file by November 30, 2015 a rate mechanism to flow back to End-Use Retail Members (“retail members”) the PJM capacity market benefits. EKPC agreed to this requirement and filed Case No. 2015-00358 on October 30, 2015. As a result of discussions with the parties to that case, on August 8, 2016 EKPC filed a unanimous Stipulation and Recommendation (“Stipulation”) that included a resolution of how to handle the PJM capacity market benefits. Under the terms of the Stipulation, EKPC would continue to record the capacity market benefits actually realized during the accounting periods as revenues. EKPC would also record as expenses during the appropriate accounting periods its PJM capacity market costs.

Projection of Future Benefits and Costs of PJM Membership

The Order dated September 30, 2021 in Case No. 2021-00103 directed EKPC to eliminate this section of the report.

Benefits and Costs for EKPC to Leave PJM

The Order dated September 30, 2021 in Case No. 2021-00103 directed EKPC to consider the benefits and costs for EKPC to leave PJM. Those benefits and costs would mirror the previous table shown under Prior Year's Benefits and Costs of PJM Membership and show a cost of [REDACTED] at a minimum. EKPC is currently able to cover its winter peak load plus a minimal reserve margin because the PJM RTO has more than 20% capacity reserves during the winter peak period. As a stand alone entity, EKPC previously planned to maintain a minimum of 12% capacity reserve margin in the winter. EKPC would have to purchase and/or construct additional capacity to maintain an acceptable winter peak operating reserve level. In addition, there would be costs to join a regional reliability group to maintain NERC operational requirements. EKPC would also lose the ability to optimize its dispatch within the PJM market, which means it would lose the trade benefits that were identified. There could be additional costs that have not been explored in detail.

EKPC continues to believe that participation in PJM will allow it to realize long-term value for its owner-members. On behalf of EKPC, I am available to address any further questions that the Commission might have with regard the data provided in this report. Please feel free to contact me if you need any additional information.

Sincerely,



Chris Adams
Director, Regulatory & Compliance Services

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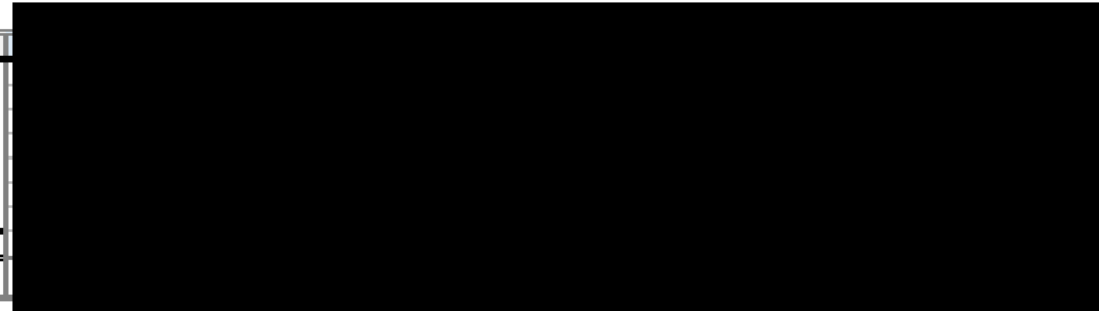
EKPC FTR Positions: [REDACTED]

Source	Sink
Spurlock 1-4	EKPC
Cooper 1-2	EKPC
Smith 4-7	EKPC
Smith 9-10	EKPC
Laurel Dam	EKPC
BLUEGRPW69KVBLUE	EKPC
AD hub	EKPC
Spurlock 1-4	EKPC-DEOK LOAD
Total	



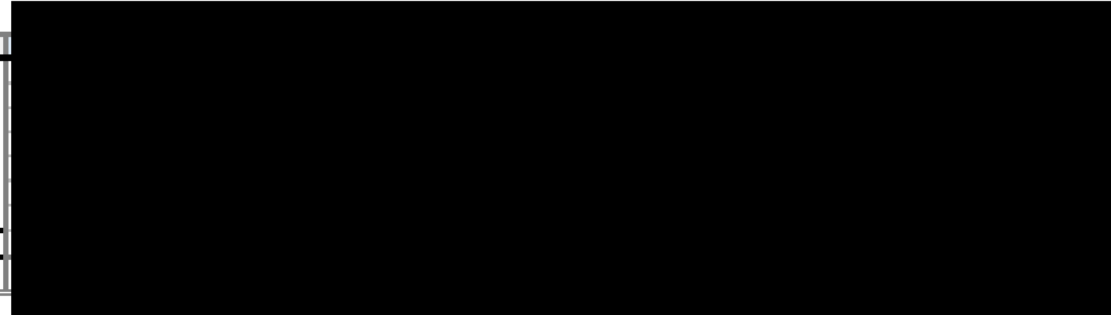
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