COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In The Matter Of: An Electronic Examination of the Application of the Fuel Adjustment Clause of Kentucky Power Company from May 1, 2021 through October 31, 2021.	:	**Case No 2022-00036**

REPLY BRIEF OF KENTUCKY INDUSTRIAL UTILITY CUSTOMERS, INC.

Kentucky Industrial Utility Customers, Inc. ("KIUC") submits this Reply Brief in response to the Initial Brief of Kentucky Power Company ("Kentucky Power" or "Company") filed September 7, 2022.

Kentucky Power correctly anticipated that KIUC would criticize the Company's application of the peaking unit equivalent ("PUE") methodology on the grounds that assuming the hypothetical peaking unit starts and stops *every hour* of the entire review period at a cost of $30.00/MWh is unrealistic and improper. In response to this criticism, Kentucky Power claims that the PUE methodology is a "*formula-driven approximation*" and that the PUE is not intended to simulate the operation of an actual gas-fired combustion turbine ("CT") peaking unit.[1] Under Kentucky Power's reasoning, because the PUE is not intended to replicate the operation of real world power plant, it was not necessary for the Company to adopt realistic assumptions for purposes of applying the PUE.

If Kentucky Power's reasoning is correct, then there is no rational basis for using the PUE methodology to calculate the Company's FAC rates. A hypothetical calculation that does not attempt to mimic the operations of an actual CT would produce an arbitrary cost cap and cannot result in reasonable rates.

[1] Kentucky Power Initial Brief at 13-15.

Kentucky Power's current position also flatly contradicts the Company's 2017 rationale for adding start-up costs and variable O&M costs into the PUE calculation. In 2017, Kentucky Power witness Mr. Vaughn explicitly testified that startup and variable O&M costs needed to be included in the PUE because those are the types of costs that "*would be incurred to operate an actual natural gas combustion turbine generating unit (CT)*" and that "*the peaking unit equivalent cost calculation seeks to mimic the costs of operating an actual CT…*"[2] The Commission ultimately found that rationale persuasive, approving Kentucky Power's request to include startup and variable O&M costs to the PUE calculation.[3]

As part of its new argument that the PUE does not attempt to mimic the costs of an actual CT, Kentucky Power points to the 75% threshold limitation adopted in the Commission's 2002 Order.[4] The 75% threshold limitation compares the average price of market purchases during the month to 75% of the original 2002 PUE calculation (not the updated 2017 PUE calculation, which includes start-up and variable O&M costs). If the monthly average market purchase price is less than 75% of the original 2002 PUE calculation, then there will be no FAC disallowances even if the PUE cap was exceeded in some specific hours. The rationale presumably being that if market purchases averaged over the entire month were low cost and therefore a benefit to customers, then the Company should not be subject to FAC disallowances if there were some specific hours when the purchases were not economic.

The Company states that the 75% threshold "*renders any effort to characterize the application of the peaking unit equivalent as a simulation of the actual operation of the hypothetical turbine both inapposite and inaccurate. If the PUE calculation was intended to simulate the real-world operation of the hypothetical, simply [sic] cycle unit the PUE*

[2] KIUC Brief at 5, Direct Testimony of Alex E. Vaughn, Case No. 2017-00179 (June 8, 2017) at 34:3-6 (Appendix 3).

[3] Order, Case No. 2017-00179 (January 18, 2018) at 56 (Appendix 3).

[4] Order, Case No. 2000-00495-B (October 3, 2002) (Appendix 3).

calculation would need to be made for each hour of the month because the unit might have run at least once during a month for reasons unrelated to the noneconomic purchase."[5]

The point Kentucky Power attempts to make is not entirely clear, but the PUE calculation is in fact made for each hour of the month (8,760 times per year). Kentucky Power calculates the PUE on an hourly basis by multiplying a heat rate of 10,400 Btu/MWh times the daily gas price and then adds $30.00 per hour for start-up costs and $3.48 per hour for variable O&M costs. From June through August, the hourly calculation is the same except that the heat rate is assumed to be 10,800 Btu/MWh. To the extent that an hourly market purchase assigned to Kentucky Power by AEP exceeds the hourly PUE cap, the excess is disallowed from the FAC as being uneconomic. So Kentucky Power's statement above that "*the PUE calculation would need to be made for each hour of the month"* describes the current practice.

However, the 75% threshold limitation is not the hourly PUE calculation itself. It is the trigger for whether the hourly PUE calculation is even applicable in a given month. For example, in August 2021, the average market purchase price was $51.97/MWh. Kentucky Power calculated the 75% threshold limitation that month using the original 2002 formula to be $28.27/MWh (10,800 heat rate x $3.49 average monthly gas price x 75% = $28.27.) Since the monthly average market purchase price ($51.97/MWh) was greater than the 75% threshold limitation ($28.27/MWh), the hourly PUE calculation was deemed to be applicable in that month.[6] However, if the monthly average purchase price had been less than the 75% threshold limitation of $28.27/MWh, then the hourly PUE calculation would not apply to that month.

The use of the 75% threshold limitation to determine whether the hourly PUE calculation applies in a given month does not change the fact that the updated PUE calculation approved in the 2017 rate case was designed to mimic the results of an actual CT. The 75% threshold

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[5] Kentucky Power Initial Brief at 14.
[6] Company Response to Staff Item No. 1-16.

limitation is merely an added protection for Kentucky Power that serves to shield the Company from potential FAC disallowances.

The 75% limitation is a one-way street that can only benefit the Company by limiting FAC disallowances. It in no way justifies an unreasonable PUE calculation which assumes that a hypothetical CT would start and stop 8,760 times per year.

WHEREFORE, the Commission should adopt KIUC's recommendations in this proceeding.

Respectfully submitted,

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