

VERIFICATION

STATE OF OHIO)
) **SS:**
COUNTY OF HAMILTON)

The undersigned, Lisa D. Steinkuhl, Rates & Regulatory Strategy Manager, being duly sworn, deposes and says that she has personal knowledge of the matters set forth in the foregoing data requests, and that the answers contained therein are true and correct to the best of his knowledge, information and belief.

Lisa D Steinkuhl

Lisa D. Steinkuhl, Affiant

Subscribed and sworn to before me by Lisa D. Steinkuhl on this 5th day of November, 2014.

Anita M. Schaffer

NOTARY PUBLIC

My Commission Expires:



ANITA M. SCHAFER
Notary Public, State of Ohio
My Commission Expires
November 4, 2019

VERIFICATION

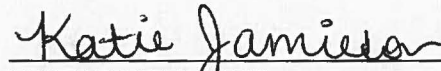
STATE OF NORTH CAROLINA)
)
COUNTY OF MECKLENBURG) **SS:**

The undersigned, John D. Swez, Director of General Dispatch & Operations, Power Trading and Dispatch, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing data requests, and that the answers contained therein are true and correct to the best of his knowledge, information and belief.



John D. Swez, Affiant

Subscribed and sworn to before me by John D. Swez on this 30 day of October, 2014.



NOTARY PUBLIC



My Commission Expires: June 14, 2016

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STAFF-DR-04-001

REQUEST:

Refer to Duke Kentucky's response to Item 2.a.(1) of Commission Staff's Third Request for Information ("Staff's Third Request").

- a. The response states that Duke Kentucky is not aware of a Commission Order limiting recovery of its fuel costs to the highest-cost unit on its system. Refer also to Duke Kentucky's response to Item 2.d. of Commission Staff's Second Information Request. Duke Kentucky was asked whether it was familiar with the language from page 5 of the Commission's May 2, 2002 Order in Case No. 2000-00495-B¹ and May 2, 2002 Order in Case No. 2000-00496-B² which states:

We interpret Administrative Regulation 807 KAR 5:056 as permitting an electric utility to recover through its FAC only the lower of the actual energy cost of the non-economy purchased energy or the fuel cost of its highest cost generating unit available to be dispatched to serve native load during the reporting expense month. Costs for non-economy energy purchases that re not recoverable through an electric utility's FAC are considered "non-FAC expenses" and, if reasonably incurred, are otherwise eligible for recovery through base rates.

Duke Kentucky responded that "Duke Energy Kentucky is familiar with the Commission's interpretation of 807 KAR 5:056." Does Duke Kentucky's response to Item 1.a.(1) that is not aware of a Commission Order limiting recovery of its fuel costs to

¹ Case No. 2000-00495-B, *An Examination by the Public Service Commission of the Fuel Adjustment Clause of American Electric Power Company* from May 1, 2001 to October 31, 2001 (Ky. PSC May 2, 2002).

² Case No. 2000-00496-B, *An Examination by the Public Service Commission of the Fuel Adjustment Clause of East Kentucky Power Corporation, Inc.* from May 1, 2001 to October 31, 2001 (Ky. PSC May 2, 2002).

the highest-cost unit on its system indicate that Duke Kentucky believed that the Commission's interpretation of 807 KAR 5:056 set for in Orders pertaining to East Kentucky Power Cooperative, Inc. and American Electric Power Company did not apply to Duke Kentucky?

- b. The response on page 3 states as follows:

If Duke Energy Kentucky were required to ensure that its cost of purchase power never fluctuated above the price of its highest cost off-line generating unit to fully recover its costs, then Duke Energy Kentucky would need to self-commit its own Woodsdale peaking generating units every time its base load generation was insufficient to satisfy demand (*e.g.*, due to an outage or being fully dispatched), irrespective of market prices and prior to PJM committing the Woodsdale resources through economic dispatch, even if, after the fact, due to volatility of LMP's in the PJM market, the units actually cost more than purchases would have cost from PJM.

Explain why making an accounting adjustment when calculating its fuel adjustment clause would require Duke Kentucky to self-commit its units.

- c. The response on pages 4-5 states as follows:

There are other problems with limiting purchase power recovery within PJM (or any RTO) to the utilities highest cost generating unit. There are factors that may limit a unit dispatch decision by PJM that are beyond the utility's control, but nonetheless provide benefits to customers. For example there are times that PJM will not allow certain units to run, despite appearing to be economic, due to grid reliability reasons (*e.g.* congestion).

Does Duke Kentucky believe that the highest-cost unit must actually be dispatched in order for the limit to apply? If so, explain the basis for this belief.

- d. The response on page 7 states as follows:

Finally, there should be no disallowance of recovery for economic purchased power at times when the Company has insufficient generation to meet load (excluding the capacity that may be offline due to forced outages) as there is no other owned generation 'available' to meet the load

obligation. It is unlikely the Commission intended that utilities incur costs necessary to meet its load obligation without allowing recovery.

Refer to the Commission's language quoted in Item 1.a above which states that "[c]osts for non-economy energy purchases that are not recoverable through an electric utility's FAC are considered 'non-FAC expenses' and, if reasonably incurred, are otherwise eligible for recovery through base rates." Given that language, explain why Duke Kentucky believes that recovery would not be allowed.

RESPONSE:

- a) No. Duke Energy Kentucky does believe that the Orders pertaining to East Kentucky Power Cooperative, Inc. and American Electric Power Company do apply to Duke Energy Kentucky. Further, Duke Energy Kentucky believes that purchased power is economic if (1) it is cheaper than the avoided variable generation cost of the utility's highest cost generating unit available to serve native load during a FAC month and is obtained outside of the PJM market or (2) it is purchased in the PJM Day-Ahead and Real-Time markets under security constrained *economic dispatch*, which is considered to be economic by definition. Subsection (3)(c) of 807 KAR 5:056 states "The net energy cost of energy purchases, exclusive of capacity or demand charges (irrespective of the designation assigned to such transaction) when such energy is purchased on an *economic dispatch basis*" (emphasis added) is includable in the FAC. The next sentence of the recited regulation refers back to the net energy costs of energy purchased on an economic dispatch basis and provides that "included therein may be such costs as the charges for economy energy purchases and the charges as a result of scheduled outage, all such kinds

of energy being purchased by the buyer to substitute for its own higher cost of energy.” Duke Energy Kentucky believes that energy purchases made through PJM security constrained economic dispatch pursuant to PJM’s tariffs meet this definition. By definition, energy purchases made through the PJM markets are designed so as to avoid a higher cost of energy. Furthermore, Duke Energy Kentucky did not purchase any power outside of the PJM market.

- b) If Duke Energy Kentucky were required to make an accounting adjustment reducing purchased power cost recoverable through the FAC whenever power purchased through PJM’s security constrained economic dispatch market happened to exceed the avoided variable generation cost of Duke Energy Kentucky’s highest cost generating unit due to unforeseeable volatility in LMPs then the entire RTO construct would be undermined. If accounting adjustments are made to reduce the purchased power costs based upon the variable generating costs of Woodsdale, ignoring the nature of security constrained economic dispatch of the PJM market, then the Company would be incentivized to minimize its exposure to purchased power costs that would be considered unrecoverable in the FAC by running Woodsdale peaking units in order to reduce the exposure to purchased power MWhs regardless of economics. This would be done regardless of whether the Woodsdale peaking units are determined to be economic per PJM as under the FAC, the Company could recover its costs of fuel burned. There would be no reason to try to reduce fuel costs to customers through economy energy purchases through the PJM market as any attempt to do so could expose the Company to a risk of un-recovered costs after-the-fact. Moreover, such a change in accounting of the FAC that ignores the security constrained economic dispatch inherent in PJM would erode if not eliminate any

benefit customers receive through the off-system sales profit sharing mechanism. Under that scenario, the only way the Company could be sure to recover all of its fuel costs would be to eliminate to the extent possible energy purchases, and instead run its plants and burn fuel.

- c) No. Duke Energy Kentucky does not believe the highest-cost unit must actually be dispatched in order for the limit to apply. Duke Energy does believe that this limit only applies to purchases made outside of PJM's security constrained economic dispatch market.
- d) Duke Energy Kentucky believes that in a case where the Company has insufficient capacity to meet load and the power is purchased under PJM's security constrained economic dispatch market, it is the most economical energy available and therefore an economy purchase recoverable under Subsection (3)(c) of 807 KAR 5:056. Duke Energy Kentucky believes that purchased power expenses not recovered through the FAC but eligible for recovery through base rates is essentially a disallowance unless (1) the Company files for base rate adjustments with a test period that includes such expense; (2) files annual rate cases; or (3) obtains deferral approval to create a regulatory asset and such costs are amortized in the next rate case. Such a process injects volatility in the recovery process where the Company is either over or under earning on incremental purchased power expense not recovered through the FAC between rate cases.

PERSON RESPONSIBLE:
Lisa Steinkuhl/ John Swez

REQUEST:

Refer to Duke Kentucky's response to Item 2.b and 2.c. of Staff's Third Request. In response to Item 2.b., Duke Kentucky provides four assumptions on page 7 used to perform the requested calculation. The response to Item 2.c. states the same assumptions used in Item 2.b. were used in the requested calculation for Item 2.c.

- a. Assumption 3 is stated as "the full load average cost for a Woodsdale unit was used in addition to the aforementioned startup cost." Explain in detail what is meant by "full load average cost".
- b. Depending on the response to part a. above, it appears that Assumptions 3 and 4 include fixed costs of operating a Woodsdale unit. Explain why the calculation would include any costs other than fuel costs.
- c. Provide revised responses to Items 2.b. and 2.c. which calculate the cost of Duke Kentucky's highest-cost unit available based only on fuel costs.

RESPONSE:

- a. "Full load average cost" means the average cost of a generator while operating at full load. This is the most efficient point on a generating unit's average heat rate curve and results in the lowest \$/MWh average cost. The full load average cost included all

variable O&M and fuel costs for dispatching the unit. No fixed costs were included in the analysis.

- b. There were no fixed costs included in the calculations. The Commission states in the Order in Case No. 2000-00496-B that “we view economy energy purchases” that are recoverable through an electric utility’s FAC as purchases that an electric utility makes to serve native load, that displace its higher cost of generation, and that have an energy cost less than the *avoided variable generation cost* (emphasis added) of the utility’s highest cost generating unit available to serve native load during that FAC expense month.” Any calculation of avoided variable generation cost needs to include fuel, variable O&M, variable emission cost and startup cost if it is to be accurate and if it is to serve any meaningful comparison purpose to purchased power since purchased power prices include, at minimum, the aforementioned variable costs. While no fixed costs such as labor were included in the analysis, the assumption regarding labor was merely to state the fact that from an operational constraint, that would have to be ignored. That said, any costs associated with the operational constraint staffing assumption were not included in the analysis.
- c. The response provided in response to 3rd set, 2b and 2c were an attempt to provide the information as initially requested, in Staff’s 2nd set 2f and 2g which essentially asked for a recalculation based upon Duke Energy Kentucky’s highest cost unit available under certain operating assumptions described in the question subparts. Duke Energy Kentucky does not agree that a calculation based solely upon the price of gas at its Woodsdale Station is meaningful as it ignores the other variable costs of operating the Woodsdale station.

Referring to Staffs 3rd data request, question #2b, there were no instances in the period where the purchased power during a planned outage was greater than the avoided variable generation cost of running a Woodsdale unit per the calculation method described. Thus, there were only “economy purchases” and no “non-economy purchases” made during times of a planned outage during this period.

The monthly amount of purchased power that would have been included is shown below. Note that these are the same monthly amounts as shown in the response to Staff-DR-02-002, f and Staff-DR-03-002, 2b. Thus, there were no changes.

	“Economy” Energy Purchases During Scheduled Outages
November-12	\$0
December-12	\$75,062
January-13	\$418,704
February-13	\$0
March-13	\$0
April-13	\$4,763,663
May-13	\$0
June-13	\$570,555
July-13	\$1,732,276
August-13	\$103,561
September-13	\$0
October-13	\$0
November-13	\$0
December-13	\$0
January-14	\$0
February-14	\$0
March-14	\$9,597,837
April-14	\$8,000,046

Referring to Staffs 3rd data request, question #2c, there was a single hour in July of 2013 where PJM dispatched every one of Duke Energy Kentucky’s available generating units, the amount of generation was insufficient to meet load requirements, and the cost of purchased

power exceeded the avoided variable generation cost of a Woodsdale unit per the calculation described. Thus, there was one hour of a "non-economy purchase" during this period. Based on using the cost of fuel only, the cost of purchased power in this hour was \$17,092 greater than the fuel cost would have been if additional Woodsdale units existed and could have been utilized in lieu of purchasing power. The monthly amount of purchased power that would have been included for the month of July would be reduced by \$17,092 if limited to the cost of fuel only at a Woodsdale unit. Other than this change, the monthly amounts are unchanged as shown in the response to Staff-DR-02-002, f and Staff-DR-03-002, c.

PERSON RESPONSIBLE:
Scott Burnside / John Swez