Kentucky Power Company
KPSC Case No. 2021-00370
Commission Staff's Third Set of Data Requests
Dated April 25, 2024

DATA REQUEST

KPSC 3_1 Refer to the Rebuttal Testimony of Alex E. Vaughan (Vaughan Rebuttal Testimony), pages 1-2. Provide how much Kentucky Power has invested in each Mitchell unit and the station generally if not unit specific, annually, with specific regard to maintenance, since the Commission granted Kentucky Power's Certificate of Public Convenience and Necessity in Case No. 2020-00174. Include in the response a breakdown for when investments were made, the amount of investment, and the purpose of the investment. Also, segregate the maintenance expenditures by O&M and capital expenditures and show whether the expenditures were made for planned outages, maintenance outages, forced outages, and derates while the unit is still in operation.

RESPONSE

Please see KPCO_R_KPSC_3_1_Attachment1 for the requested information for the period July 2021 through March 2024.

For the information provided:

- O&M expenses are limited to 51x accounts to show maintenance charges only.
- Deraterelated O&M and capital expenditures are not shown as individual line items in KPCO_R_KPSC_3_1_Attachment1. Expenditures associated with derates typically fall under Base Cost of Operations (BCO), and some may roll up under Forced Outages if the liability requires the unit to be out of service to fully address them. In addition, the Company does not track capital expenditures as associated with forced outages or maintenance outages.

Witness: Timothy C. Kerns

a result of the Commission's July 15, 2021 Order in Case No. 2021-00004, Kentucky Power has not invested in the ELG equipment that would otherwise permit Kentucky Power to use the plant after the December 31, 2028 ELG deadline. It is also consistent with Kentucky Power's previously disclosed approach to investing in the Mitchell Plant, under which it has been ratably investing in only that portion of equipment used for pre-December 31, 2028 operations so as to reduce rate impacts on customers to the extent possible prior to December 31, 2028.

In addition, the July 15, 2021 Order in Case No. 2021-00004 also offers Kentucky Power an ability to reapply to perform ELG work not currently authorized if Kentucky Power provides notice to the Commission and undertakes such construction with the Commission's approval. In April 2024, the EPA issued revised ELG final rules which require installation of zero liquid discharge technology for Flue Gas Desulfurization (FGD) wastewater by December 31, 2029, with certain exceptions if the plant commits to retiring by December 31, 2034. Kentucky Power is currently considering the potential impact of the revised ELG rules on Mitchell and which among the various approaches would be in the best interests of Kentucky customers in forming a future generation portfolio, which will also need to take into account the 2023 RFP results and feedback on the 2022 IRP case currently pending before the Commission.

Regarding a sale of the Company's undivided 50 percent interest in Mitchell, any such sale would require the approval of this Commission. KRS 278.218. In addition, regarding any potential sale of Kentucky Power's interests in Mitchell to Wheeling Power, the Company notes both:

1. The statement in the Commission's May 3, 2022 Order in Case No. 2021-00421 that the Commission expects that if Kentucky Power's Mitchell Plant interest is sold to Wheeling Power when both entities are affiliates, then the sale shall be priced at the greater of net book value or market value, with necessary adjustments, and is subject to Commission approval; and

2. The West Virginia Public Service Commission's July 1, 2022 Order in Case No. 2021-0810-E-PC that Wheeling Power must seek approval from the West Virginia Public Service Commission prior to purchasing Kentucky Power's interest in Mitchell, and that the West Virginia will not authorize an unreasonable purchase price above scrap value, stating any higher amount would reflect value that should be solely reserved for Wheeling Power's customers who paid for the ELG upgrades but for which the Mitchell Plant would have been obligated to retire effective December 31, 2028.

Thus, absent a change in position by either or both commissions, the Company does not currently believe a sale of Kentucky Power's interest in Mitchell to Wheeling Power is feasible. Nor, for similar reasons, does the Company believe a sale of Kentucky Power's interest in Mitchell to an affiliate or a third party is feasible absent Kentucky Power owning ELG and other assets co-equally with Wheeling Power.

c. See the answer to KPSC 3-2b above. In addition, the Company currently understands that based on the Commission's orders reference above and KRS 278.218 more generally, Kentucky Power may not sell or transfer its undivided 50 percent interest in the Mitchell Plant without Commission approval.

Witness: Brian K. West

Prepared by: Counsel (subpart b)

DATA REQUEST

KPSC 3_3 Refer to Vaughan Rebuttal Testimony, page 4. Refer also to Kollen's Direct Testimony, page 15. Provide the number of times that Kentucky Power's units were either in forced outage or planned outage or maintenance outage for December 2021 through March 2023. Include in the response the reasoning why the units were out of service.

RESPONSE

Number of Outages (12/1/2021 – 3/31/2023)

Big Sandy
Planned Outage (PO) = 3
Maintenance Outage (MO) = 13
Forced Outage (FO) = 3

Mitchell Unit 1
Planned Outage (PO) = 2
Maintenance Outage (MO) = 7
Forced Outage (FO) = 14

Mitchell Unit 2
Planned Outage (PO) = 2
Maintenance Outage (MO) = 6
Forced Outage (FO) = 8

Please see KPCO_R_KPSC_3_3_Attachment1 for the requested information regarding the reason(s) for each outage.

All Company Planned and Maintenance Outages are reasonable and prudent for the safe, reliable, economic, and environmentally compliant operations of its generating assets. The Company follows the Electric Power Research Institute's (EPRI) recommended industry best practices for outage planning and management, and complies with PJM's guidance for scheduling Planned and Maintenance Outages. Furthermore, the Company follows Original Equipment Manufacturer (OEM) best practices for major equipment maintenance such as major turbine and generator overhauls. OEM best practices provide guidance for maintenance activities required to maintain major equipment reliability as well as the frequency of such maintenance activities. Because a generating unit must be removed from service in order to perform maintenance activities, Planned and Maintenance Outages

become a necessary and integral part of unit reliability. The Company also follows a robust Engineering Circular Letter Program that follows the OEMs' guidance for maintenance and overhauls of equipment.

In his Direct Testimony, Company Witness Kerns addresses the Company's practices with regard to maintaining its generating assets (7:15 through 11:21). He also defines a Planned Outage and how it is scheduled (16:16 though 17:7). A Maintenance Outage is an outage that is planned ahead of time, but it can be deferred beyond the end of the next weekend, and has a flexible start date that is determined by AEP Service Corporation Commercial Operations and PJM. A Maintenance Outage, which is sometimes referred to as an Opportunity Outage, allows the equipment condition to be repaired to help prevent future deratings and Forced Outages. Whenever a unit enters Reserve Shutdown status, the Company requests a Maintenance Outage to perform hydrostatic testing to check for boiler tube leaks and to repair other equipment to that could prevent the unit from returning to service safely and reliably. Plant equipment conditions drive the need to perform maintenance activities outside of scheduled Planned Outages. This type of outage also allows the Company to help time higher unit availability during peak market conditions.

In addition, Company Witness Kerns in his Direct Testimony describes in detail the scope of the Big Sandy Planned Outage during Winter Storm Elliott (17:18 through 21:4) as listed in KPCO_R_KPSC_3_3_Attachment1. The causes of the opacity-related derates on Mitchell Units 1 and 2 during Winter Storm Elliott (10:15-21) were subsequently addressed during Maintenance Outages that were taken outside of the period in KPCO_R_KPSC_3_3_Attachment1.

Witness: Timothy C. Kerns

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DATA REQUEST

KPSC 3_4 Refer to Vaughan Rebuttal Testimony, pages 7-8. Provide a comparison for the generating prices of the Mitchell units and the market prices for purchased power for December 2022 through March 2023 that supports Kentucky Power's claim that in certain economic scenarios, its more economic to purchase power than to generate. Include in the response a breakdown for how each of the generating prices for the Mitchell units were determined.

RESPONSE

Please see KPCO_R_KPSC_3_4_Attachment1 for the requested information.

The analysis presented in KPCO_R_KPSC_3_4_Attachment1 is not a redispatch analysis, it does not take into account unit operating parameters. It simply compares the daily average Mitchell cost-based offer price to the daily average PJM LMP at which the Company would purchase energy. During the period in question the Mitchell cost-based offer price was lower than the comparable LMP six days.

The cost-based offer figures represent the verifiable marginal out of pocket costs for items such as fuel, fuel handling, scrubber chemicals and emission allowances as applicable per PJM Manual 15.

Witness: Alex E. Vaughan

DATA REQUEST

KPSC 3_5 Refer to Kerns Direct Testimony, page 4. Provide the Equivalent Demand Forced Outage Factor (EFORd) for each of the Mitchell units. Include in the response how the EFORd is calculated and whether and how Kentucky Power's coal conservation strategy affected the EFORd calculations and Kentucky Power's capacity obligations for subsequent PJM planning years.

RESPONSE

The Company interprets this request as referencing Kerns Rebuttal Testimony, page 4. Please see KPCO_R_KPSC_3_5_Attachment1 for the Equivalent Demand Forced Outage Factor (EFORd) for each of the Mitchell Units from 2020 through 2022.

EFORd is calculated using the NERC equation found below:

Unweighted (time-based) – Single Unit

25. Equivalent Forced Outage Rate demand – EFORd (See Notes 1 and 2 at the end of this section.)

$$\mathbf{EFORd} = \frac{\mathbf{FOHd + EFDHd}}{\mathbf{SH + FOHd}} \mathbf{x\ 100\%}$$

Where: FOHd = f x FOH
EFDHd = (EFDH – EFDHRS) if reserve shutdown events reported, or
= (fp x EFDH) if no reserve shutdown events reported – an approximation.
fp = (SH/AH)

NOTE: FOHd is the number of hours a unit was in a U1, U2, U3, or SF AND the unit would have operated had it been available. FOHd can be determined directly if periods of demand are recorded. Demand can be defined as the traditional demand for the generating unit for economic or reliable operation of the system, or it can be any other user-defined condition, such as specific weather condition, load level, or energy price. When FOHd is determined directly from recorded periods of demand, service hours (SH) in the above equation should include only those under the specified demand condition. If periods of demand are not recorded, FOHd may be estimated using the demand factor f. The demand factor is applicable to traditional demand for economic or reliable system operation.

$$f = \left(\frac{1}{r} + \frac{1}{T}\right) / \left(\frac{1}{r} + \frac{1}{T} + \frac{1}{D}\right)$$

r=Average forced outage deration = (FOH) / (# of FO occurrences)
D=Average demand time = (SH) / (# of unit actual starts)
T=Average reserve shutdown time = (RSH) / (# of unit attempted starts)

Where;

FOHd = Forced Outage Hours Demand
EFDHd = Equivalent Forced Derated Hours Demand

SH = Service Hours

Source: NERC 2024 Data Reporting Instructions, Appendix F Page 9

The Company's coal conservation strategy did not adversely affect the EFORd calculations for either Mitchell unit. Thus, the coal conservation strategy did not negatively impact the Company's capacity obligations for subsequent PJM planning years because forced outages did not occur due to insufficient coal. The coal conservation strategy did not change total service hours, but rather changed when those service hours occurred. Additionally, the coal conservation strategy reduced dispatch during lower energy price months and off-peak hours to preserve coal for dispatch during on-peak hours with very high energy prices.

If the Company had not implemented the coal conservation strategy, the Mitchell units would have run out of coal which is considered a forced outage. Forced outages count against the amount of unforced capacity ("UCAP") a unit can provide for capacity requirement purposes. Thus, the Company's offer strategy directly avoided 234 unit[1] forced outage days at the Mitchel plant from November 1, 2020 through October 31, 2022.

Witness: Timothy C. Kerns

Witness: Alex Vaughan

[1] There are 2 units at the Mitchell plant, this represents 117 avoided forced outage days per unit.

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DATA REQUEST

KPSC 3_6 Refer to Kentucky Power's response to Commission Staff's Second Request for Information (Staff's Second Request), Item 7 and Case No. 2017-00179, January 18, 2018 Order at 39.

a. Explain why Kentucky Power characterized the renewal of the Rockport UPA as a possible option if the contract did not provide Kentucky Power with an opportunity to renew.

b. Explain why Kentucky Power did not plan to acquire capacity coincident with the expiration of Rockport UPA.

RESPONSE

a. Kentucky Power respectfully disagrees with this request's characterization of the January 18, 2018 Order in Case No. 2017-00179. In that Order, at 39, the Commission noted that "[t]he recovery period of the proposed Rockport Deferral Mechanism is contingent upon Kentucky Power not renewing the Rockport UPA." The Commission further cited to Kentucky Power hearing testimony that indicated that it was unlikely that the Rockport lease would be renewed. Thus, even in 2017 the Rockport UPA's renewal was not contemplated. Nonetheless, although the UPA did not contain an express provision granting Kentucky Power a right to renew the contract, the contract did not preclude Kentucky Power from requesting an opportunity to seek such renewal.

b. It is incorrect to state that "Kentucky Power did not plan to acquire capacity coincident with the expiration of Rockport UPA". To the contrary, the Company contracted for an additional 152.4 MW of capacity for the period June 2022 through May 2023 and 70.2 MW of capacity for the period June 2023 through May 2024 to ensure it could meet the Company's capacity obligations during those periods. At all times, including the period contemporaneous with the expiration of the Rockport UPA, the Company has continuously had sufficient capacity to serve its customers, as demonstrated by the fact that even during periods of extraordinary circumstances such as those associated with Winter Storm Elliot, the Company has not experienced power supply outages, and has continuously provided service to its customers safely, efficiently, and cost-effectively. Please also refer to Company Witness Vaughan's Direct Testimony beginning on page 21 at line 23 through page 25 at line 13.

Witness: Brian K. West

Witness: Alex E. Vaughan

Kentucky Power Company
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DATA REQUEST

KPSC 3_7 Refer to Kentucky Power's response to Staff's Second Request, Item 11 and Kentucky Power's response to Commission Staff's First Request for Information, Item 1. Provide an update as to the internal evaluation process of selecting vendors including but not limited to any draft contracts or written evaluations.

RESPONSE

Please see KPCO_R_KPSC_3_7_ConfidentialAttachment1-KPCO_R_KPSC_3_7_ConfidentialAttachment5.

Witness: Brian K. West

Witness: Alex E. Vaughan

KPCO_R_KPSC_3_7_PublicAttachment1 has been redacted in its entirety.

KPCO_R_KPSC_3_7_PublicAttachment2 has been redacted in its entirety.

KPCO_R_KPSC_3_7_PublicAttachment3 has been redacted in its entirety.

KPCO_R_KPSC_3_7_PublicAttachment4 has been redacted in its entirety.

KPCO_R_KPSC_3_7_PublicAttachment5 has been redacted in its entirety.

Kentucky Power Company
KPSC Case No. 2021-00370
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DATA REQUEST

KPSC 3_8 Explain why Kentucky Power does not participate in a corporate borrowing program. Include in the explanation the results of the most recent cost evaluation supporting the position that it is more cost effective to for ratepayers to have each regulated subsidiary to borrow money on its own versus American Electric Power Company (AEP) borrowing the money and for a corporate borrowing program. If AEP does not offer such programs, confirm that AEP does not offer those programs for any AEP regulated or unregulated subsidiary. If AEP does offer such programs, provide a list of all participating subsidiaries.

RESPONSE

Kentucky Power does participate in a corporate borrowing program. Specifically, Kentucky Power has access to the AEP Money Pool.

The AEP Utility Money Pool is a short-term funding mechanism for the regulated utilities, including Kentucky Power. It is structured to meet the combined short-term cash management needs of those companies. The Utility Money Pool meets the short-term cash needs of its participants by providing for short-term borrowings from the Utility Money Pool by its participants and short-term investment of surplus funds by its participants. The invested or borrowed position, at any given time, is mainly driven by the cash needs of Kentucky Power and its cash surplus/deficit at that time.

The amount of short-term debt or investment in the AEP Money Pool is determined by many factors including level of capital investment, expenses, revenues, dividends, long term debt issuances and maturities. As short-term debt increases the Company terms out short-term debt by issuing long-term debt.

Witness: Brian K. West

VERIFICATION

The undersigned, Timothy C. Kerns, being duly sworn, deposes and says he is the Senior Vice President of Fossil Hydro Generating Assets for American Electric Power Service Corporation, that he has personal knowledge of the matters set forth in the foregoing responses and the information contained therein is true and correct to the best of his information, knowledge, and belief.

Timothy C. Kerns

Commonwealth of Kentucky)
)
County of Boyd)

Case No. 2021-00370

Subscribed and sworn to before me, a Notary Public in and before said County and State, by Timothy C. Kerns, on May 20, 2024

Marilyn Michelle Caldwell
Notary Public

MARILYN MICHELLE CALDWELL
Notary Public
Commonwealth of Kentucky
Commission Number KYNP71841
My Commission Expires May 5, 2027

My Commission Expires May 5, 2027

Notary ID Number KYNP71841

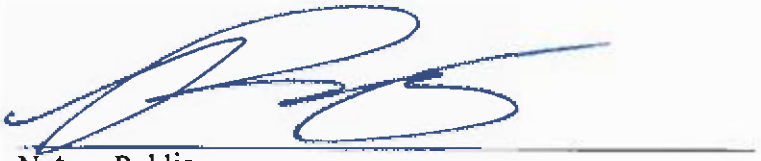
VERIFICATION

The undersigned, Alex E. Vaughan, being duly sworn, deposes and says he is the Managing Director for Renewables and Fuel Strategy for American Electric Power Service Corporation, that he has personal knowledge of the matters set forth in the foregoing responses and the information contained therein is true and correct to the best of his information, knowledge, and belief.

Alex E. Vaughan

State of Ohio)
) Case No. 2021-00370
Franklin County)

Subscribed and sworn to before me, a Notary Public in and before said County and State, by Alex E. Vaughan, on 5/21/24.



Notary Public

Paul D. Flory
Attorney At Law
Notary Public, State of Ohio
My commission has no expiration date
Sec. 147.03 R.C.

My Commission Expires Never

Notary ID Number No ID

VERIFICATION

The undersigned, Brian K. West, being duly sworn, deposes and says he is the Vice President, Regulatory & Finance for Kentucky Power, that he has personal knowledge of the matters set forth in the foregoing responses and the information contained therein is true and correct to the best of his information, knowledge, and belief..

Brian K. West

Commonwealth of Kentucky)
) Case No. 2021-00370
County of Boyd)

Subscribed and sworn to before me, a Notary Public in and before said County and State, by Brian K. West, on May 20, 2024.

Marilyn Michelle Caldwell
Notary Public

MARILYN MICHELLE CALDWELL
Notary Public
Commonwealth of Kentucky
Commission Number KYNP71841
My Commission Expires May 5, 2027

My Commission Expires May 5, 2027

Notary ID Number KYNP71841