

Kentucky Power Company
KPSC Case No. 2023-00092
Joint Intervenor's Post-Hearing Data Requests
Dated June 14, 2024
Part 1 of 2

DATA REQUEST

- JI PHDR_1** Please refer to Joint Intervenor's cross-examination of Company witness Spitznogle between approximately 10:12 a.m. to 10:15 a.m. on June 12, 2024.
- a. State whether any analysis has been conducted by or for the Company regarding the need to install additional NOX controls at the Big Sandy facility to comply with either the Revised CSAPR Update, or, if reinstated, the Good Neighbor Plan.
 - i. If any analysis has been conducted, please provide such analysis.
 - ii. If not, please explain why not.
 - b. State whether any analysis has been conducted by or for the Company regarding the current or future need to purchase additional NOX allowances to comply with the Revised CSAPR Update, or, if reinstated, the Good Neighbor Plan.
 - i. If any analysis had been conducted, including regarding the monthly number of annual and ozone season NOX allowances needed for purchase for the Big Sandy facility in 2023, please provide such analysis; or
 - ii. If not, please explain why not and explain how the Company complied with the Revised CSAPR Update in 2023 with respect to NOx emissions from Big Sandy.

RESPONSE

- a. An informal review was performed to determine the need for additional NOx controls at the Big Sandy facility to meet the requirements of the Good Neighbor Plan and the CSAPR Update. Both rules were reviewed to understand any new requirements and ensure that normal operation would not be significantly impacted in the near-term. The review determined that a need for additional controls is not a specific requirement of either Rule, however a detailed economic study would be needed to show whether a future installation of advanced NOx controls is economically beneficial. Given the past availability and price volatility of ozone season NOx allowances ("emission allowances") – new NOx controls would be expected to result in more predictable costs of compliance. Under the current CSAPR program applicable in Kentucky, Kentucky Power would have adequate emission allowance allocations for the forecasted emissions.
- b. An informal review was performed of both the CSAPR Update and the Good Neighbor Plan. Due to the regulatory uncertainty surrounding both rules, the future compliance

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obligations remain unclear. Nevertheless, the following key takeaways have been identified;

1. Compliance obligations are managed at the operating company level. Currently, Kentucky Power's emission allowance allocation and emissions include Big Sandy unit 1 and 50% of Mitchell 1&2. The combination currently results in Kentucky Power having adequate quantities of emission allowances to meet projected needs for 2024 and 2025 (the period for which EPA has made public the unit allocations).
2. The Good Neighbor Plan includes a "backstop" provision that requires additional emission allowances to be used if a NOx performance hourly rate limit is exceeded. The backstop provision is only applicable to coal units. Big Sandy 1 is exempt from this provision as it is a gas-fired unit. Mitchell 1&2 have advanced NOx controls that have historically allowed the units to perform at a level below the backstop provision threshold. Therefore, Kentucky Power is not expected to use additional emission allowances due to the backstop provision.
3. In 2029, Kentucky Power is projected to no longer use the Mitchell units to serve customers. This could potentially result in the need for market purchases of emission allowances for Big Sandy's compliance obligations.
4. The cost of the emission allowances required is presently a component of the unit cost bid development process. Since compliance costs are included when a unit is selected for day ahead operation, the current expectation would be that the market revenue would cover the cost of NOx emission allowance purchases, if any are required.

Witness: Gary O. Spitznogle

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DATA REQUEST

JI PHDR_2 Please refer to Joint Intervenors' cross-examination of Company witness Haratym between approximately 6:51 p.m. to 6:54 p.m. on June 12, 2024. Please indicate where in the modeling files, by reference to title of file, worksheet tab, row, column, and/or cell, it is indicated that the model takes into account savings from demand-side energy efficiency bundles that extend beyond the IRP study period. If not previously produced in response to data requests, please produce such data in native format.

RESPONSE

Three of the 2031-2042 bundles available to the model had energy and capacity benefits that were not fully captured in the modeling for economic selection. These included the Residential Low/Med 2031_42, Residential High 2031_42, C&I Low 2031_42. The Modeling analysis was conducted over a 20-year planning horizon. For the specific EE bundles, the associated energy and capacity benefits were recognized only through this time period although the benefits provided by GDS Associates ran out through 2053.

In the Preferred Plan, of the three bundles referenced, only the C&I Low was not included as part of the EE Bundles.

Evidence of the EE Bundles included in the Preferred Plan can be found in KPCO_R_KPSC_1_8_ConfidentialAttachment10 through the review of worksheet PortfolioResourcesYear1, Columns J and K. The table should be filtered to look at a particular Run ID in column A, Portfolio Name in column E and Resource name in Column G. The results can be seen where benefits stop after 2040 for the selected 2026-30 bundles.

Witness: Tomasz J. Haratym

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DATA REQUEST

- JI PHDR_3** Please refer to Joint Intervenors' cross-examination of Company witness Haratym between approximately 6:51 p.m. to 6:54 p.m. on June 12, 2024. Please refer to the workbook "KPCO_R_KPSC_1_8_PublicAttachment7", worksheet "PortfolioResourcesYear1", and the rows with corresponding to the "Resource Name" of "Residential-Low/Medium_23-25" through "IQW_23-25" (Rows 51-72).
- a. The column "Fixed Cost" indicates there is a fixed cost for these bundles. Please explain how AURORA levelizes the cost of these energy efficiency measures over the full service lives of the efficiency measures.
 - b. Please state whether the costs reported in the "Fixed Cost" column were developed based on the savings with or without the application of the Supplemental Energy Efficiency Adjustment.

RESPONSE

- a. Costs provided by GDS Associates were modeled for each of the bundles and were associated with the stream of benefits modeled over the bundle life. For the EE Bundles, Aurora evaluates the stream of annual fixed costs against the stream of annual benefits on a present value basis.
- b. Fixed Costs associated with Energy Efficiency savings developed were based on the gross energy savings for each bundle before SEA was applied.

Witness: Tomasz J. Haratym



Haratym Verification Form.doc

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E-Signature Summary

E-Signature 1: Tomasz Haratym (TH)
 June 20, 2024 11:33:05 -8:00 [A8FBC845CD9F] [38.122.101.202]
 THaratym@cra.com (Principal) (Personally Known)

E-Signature Notary: Marilyn Michelle Caldwell (MMC)
 June 20, 2024 11:33:05 -8:00 [08D0490294AB] [167.239.221.103]
 mmcaldwell@aep.com
 I, Marilyn Michelle Caldwell, did witness the participants named above electronically sign this document.



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VERIFICATION

The undersigned, Tomasz J. Haratym, being duly sworn, deposes and says he is the Associate Principal, for Charles River Associates, 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.

Tomasz Haratym

Tomasz J. Haratym

Commonwealth of Kentucky)
County of Boyd)

Case No. 2023-00092

Subscribed and sworn to before me, a Notary Public in and before said County and State, by Tomasz J. Haratym, on June 20, 2024.

Marilyn Caldwell

Notary Public

MARILYN MICHELLE CALDWELL
ONLINE NOTARY PUBLIC
STATE AT LARGE KENTUCKY
Commission# KYNP71841
My Commission Expires May 05, 2027

My Commission Expires May 5, 2027 Notarial act performed by audio-visual communication

Notary ID Number KYNP71841

89BE57D7-290B-4285-B709-B8EEB381A3A2 ... 2024/06/20 09:20:29 -8:00 ... Remote Notary



VERIFICATION

The undersigned, Gary O. Spitznogle, being duly sworn, deposes and says he is the Vice President of Environmental Services 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.

[Handwritten Signature]
Gary O. Spitznogle

State of Ohio)
)
County of Franklin)

Case No. 2023-00092

Subscribed and sworn to before me, a Notary Public in and before said County and State, by Gary O. Spitznogle, on June 27, 2024.

[Handwritten Signature]
Notary Public



My Commission Expires 11/30/2028

Notary ID Number 2023-RE-871119