DATA REQUEST

AG_KIUC_2_025 Please provide a copy of the Fifth Modification to the December 2007 Consent Decree with EPA, Sierra Club, et. al. regarding the Rockport Plant approved by the Federal District Court for the Southern District of Ohio on July 18, 2019. With respect to the Fifth Modification please provide the following:
a. Confirm that AEP (I&M and AEP Generating Company) will install enhanced dry sorbent injection (DSI) technology on both Rockport Units that will reduce SO2 emissions by at least 58%.

b. Confirm the both Rockport Units will have a combined SO2 emissions cap starting in 2021 of 10,000 tons.

c. Provide all studies, memos or other documents that estimate the cost impact of the Fifth Modification on Kentucky Power.
d. Confirm that over the three year period 2017-2019, the Rockport Units emitted an average of 37,577,284 tons of SO2 per year.

e. Provide the estimated capital cost of the DSI system.

f. Provide the period of time over which the DSI system is proposed to be depreciated for ratemaking purposes in Kentucky.

g. Provide the estimated variable cost per MWh of the DSI system.

h. For the estimated variable cost per MWh, break out this cost into variable O&M costs for reagent, variable O&M costs for waste disposal and variable O&M costs for auxiliary power.

i. With the new DSI system in operation, what is the expected energy cost for Rockport generation (by unit) in 2021 and 2022?

j. If Kentucky Power can purchase energy from the PJM market cheaper than from Rockport Unit 1 or 2, confirm that Kentucky Power has the ability to back down Rockport Unit 1 or 2 generation to purchase from PJM.

k. Will the economic dispatch protocol for Rockport change as a result of the DSI investment?

RESPONSE

25. Please see KPCO_R_KIUC_AG_2_025_Attachment1.

a. Confirmed. The 58% reduction is the expected reduction in SO_2 rate (lbs./mmbtu) comparing the existing DSI system to the Enhanced DSI system. Actual emissions are a function of unit utilization and vary year to year. The Enhanced DSI system will have a 12-month rolling limit of 0.15 lbs./mmbtu.

b. Confirmed. The Rockport plant-wide SO_2 cap for calendar years 2021- 2028 will be 10,000 tons SO_2. In 2029 and each calendar year after, the plant-wide SO_2 cap is 5,000 tons SO_2.

c. Kentucky Power has not prepared any studies, memos, or other documents that estimate the cost impact of the Fifth Modification on Kentucky Power. In IURC Cause No. 45235, Kentucky Power affiliate Indiana Michigan Power Company ("I&M") filed a workpaper, which sets forth the cost impact of the Enhanced DSI on I&M. The remaining 30% of the AEG Purchase Power Bill is allocated to Kentucky Power. Please see KPCO_R_KIUC_AG_2_025_Attachment2 for Workpaper WP-AJW-5.

d. This number is not accurate. For calendar years 2017 thru 2019, Rockport units emitted an average of 18,788 tons of SO2 per year. This information is publicly available from the EPA's Air Market Program Data website.

e. As set forth in KPCO_R_KIUC_AG_2_025_Attachment2, the estimated capital cost of the Enhanced DSI is approximately $13.315M for I&M 50% portion of the project.

f. Unit 1 assets are being depreciated through 2028 and Unit 2 assets are being depreciated through 2022. Because the Company does not intend to extend the Rockport Unit Power Agreement beyond December 7, 2022, Kentucky Power will cease to incur costs related to the Enhanced DSI project after December 7, 2022.

g. Kentucky Power had not performed the requested analysis prior to this discovery request. Kentucky Power is relying on Workpaper WP-AJW-5 provided by I&M in IURC Cause No. 45235. On a nominal basis, the Enhanced DSI system will increase the consumable expense by $7,955,332 and O&M expense by $125,000 per year for I&M 50% portion of the project.

h. Kentucky Power has not performed the requested analysis.

i. Kentucky Power disagrees with the characterization that the Enhanced DSI project is a new DSI system. It is an enhancement of the existing Rockport DSI equipment by injecting sodium bicarbonate into the flue gas stream upstream of its current location, allowing the Rockport Plant to remove additional SO2. Previously, sodium bicarbonate was injected after the air pre-heater and before the electrostatic precipitators. The Enhanced DSI will relocate the sodium bicarbonate injection points upstream of the SCR. This relocation of the DSI system coupled with an increase in the sodium bicarbonate injection rate will enable the Rockport Plant to remove additional SO2. Kentucky Power has not performed the requested analysis.

j. AEPSC Commercial Operations follows the PJM economic dispatch based off of real time price signals. While the Company's generation bids its available generation into and buys its load from the Day Ahead market, sales and purchases are made in real time and any deviations are settled in the Real Time market.

k. The economics of the Rockport units will reflect the additional incremental costs associated with the operation of DSI when those assets are placed into service.

October 9, 2020 Amended Response

The Company is amending its response to the subpart (a) to revise the reference in the last sentence from " The Enhanced DSI system will have a 12-month rolling limit of 0.15 lbs./mmbtu." to " The Enhanced DSI system will have a 30-day rolling limit of 0.15 lbs./mmbtu." to correct a typographical error.

25. Please see KPCO_R_KIUC_AG_2_025_Attachment1.

a. Confirmed. The 58% reduction is the expected reduction in SO2 rate (lbs./mmbtu) comparing the existing DSI system to the Enhanced DSI system. Actual emissions are a function of unit utilization and vary year to year. The Enhanced DSI system will have a 30-day rolling limit of 0.15 lbs./mmbtu.

b. Confirmed. The Rockport plant-wide SO2 cap for calendar years 2021- 2028 will be 10,000 tons SO2. In 2029 and each calendar year after, the plant-wide SO2 cap is 5,000 tons SO2.

c. Kentucky Power has not prepared any studies, memos, or other documents that estimate the cost impact of the Fifth Modification on Kentucky Power. In IURC Cause No. 45235, Kentucky Power affiliate Indiana Michigan Power Company (“I&M”) filed a

workpaper, which sets forth the cost impact of the Enhanced DSI on I&M. The remaining 30% of the AEG Purchase Power Bill is allocated to Kentucky Power. Please see KPCO_R_KIUC_AG_2_025_Attachment2 for Workpaper WP-AJW-5.

d. This number is not accurate. For calendar years 2017 thru 2019, Rockport units emitted an average of 18,788 tons of SO2 per year. This information is publicly available from the EPA's Air Market Program Data website.

e. As set forth in KPCO_R_KIUC_AG_2_025_Attachment2, the estimated capital cost of the Enhanced DSI is approximately $13.315M for I&M 50% portion of the project.

f. Unit 1 assets are being depreciated through 2028 and Unit 2 assets are being depreciated through 2022. Because the Company does not intend to extend the Rockport Unit Power Agreement beyond December 7, 2022, Kentucky Power will cease to incur costs related to the Enhanced DSI project after December 7, 2022.

g. Kentucky Power had not performed the requested analysis prior to this discovery request. Kentucky Power is relying on Workpaper WP-AJW-5 provided by I&M in IURC Cause No. 45235. On a nominal basis, the Enhanced DSI system will increase the consumable expense by $7,955,332 and O&M expense by $125,000 per year for I&M 50% portion of the project.

h. Kentucky Power has not performed the requested analysis.

i. Kentucky Power disagrees with the characterization that the Enhanced DSI project is a new DSI system. It is an enhancement of the existing Rockport DSI equipment by injecting sodium bicarbonate into the flue gas stream upstream of its current location, allowing the Rockport Plant to remove additional SO2. Previously, sodium bicarbonate was injected after the air pre-heater and before the electrostatic precipitators. The Enhanced DSI will relocate the sodium bicarbonate injection points upstream of the SCR. This relocation of the DSI system coupled with an increase in the sodium bicarbonate injection rate will enable the Rockport Plant to remove additional SO2. Kentucky Power has not performed the requested analysis.

j. AEPSC Commercial Operations follows the PJM economic dispatch based off of real time price signals. While the Company's generation bids its available generation into and

buys its load from the Day Ahead market, sales and purchases are made in real time and any deviations are settled in the Real Time market.

k. The economics of the Rockport units will reflect the additional incremental costs associated with the operation of DSI when those assets are placed into service.

Witness: Timothy C. Kerns

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KY Discovery Verification - Kerns.docx

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E-Signature Summary

E-Signature 1: Timothy C Kerns (TCK)
October 07, 2020 12:20:26 -8:00 [21B340B464A8] [96.31.207.237]
tckerns@aep.com (Principal) (Personally Known)

E-Signature Notary: Brenda Williamson (BW)
October 07, 2020 12:20:26 -8:00 [CB0D0D7EB2CF] [167.239.221.82]
bgwilliamson@aep.com
I, Brenda Williamson, did witness the participants named above electronically sign this document.

VERIFICATION

The undersigned, Tim Kerns, being duly sworn, deposes and says he is Vice President of Generating Assets for Kentucky Power Company that he has personal knowledge of the matters set forth in the forgoing responses and the information contained therein is true and correct to the best of his information, knowledge and belief after reasonable inquiry.

Signed on 2020/10/07 12:20:26 -8:00

Tim Kerns

STATE OF OHIO)
) Case No. 2020-00174
COUNTY OF FRANKLIN)

10/07/2020 Subscribed and sworn to before me, a Notary Public in and before said County and State, by _____, this ____ day of August 2020.

Signed on 2020/10/07 12:20:26 -8:00

Notary Public

NOTARY PUBLIC STATE OF OHIO

Brenda G. Williamson
Commission # 2016-RE-579446
Electronic Notary Public
State of Ohio
My Comm Exp. Apr 25, 2021

Notary Stamp 2020/10/07 12:20:26 PST C80D0D7EB2CF