

Kentucky Power Company
KPSC Case No. 2021-00004
Sierra Club's First Set of Data Requests
Dated March 12, 2021

DATA REQUEST

- SC 1_1** Refer to the Direct Testimony of Connie Trecuzzi, page 2, lines 12-13.
- a. Please provide the October 13, 2020 EIA-based Fundamentals Forecast that was provided to Mr. Becker for use in his analysis. (Here and throughout, provide that forecast in machine-readable format, with cells intact and formulae unlocked.)
 - b. Please explain whether AEPSC produced an updated Fundamentals Forecast since October 13, 2020.
 - i. If yes, provide that forecast (in machine-readable format, with cells intact and formulae unlocked).
 - ii. If no, please discuss whether and when AEPSC expects to produce its next Fundamentals Forecast.

RESPONSE

- a. Please refer to KIUC_AG_1_002.
- b. The Company has not produced a Fundamentals Forecast since October 13, 2020. b.
 - (i.) N/A
 - b.(ii.) AEPSC has no current schedule for the production of a successive Fundamentals Forecast.

Witness: Connie S. Trecuzzi

Kentucky Power Company
KPSC Case No. 2021-00004
Sierra Club's First Set of Data Requests
Dated March 12, 2021

DATA REQUEST

- SC 1_2** Refer to the Direct Testimony of Mark A. Becker, page 2, line 22, and page 3, line 1, inter alia.
- a. Please confirm whether Mitchell's currently planned retirement year of 2040 (also the Case 1 retirement year) is the same as Mitchell's end of useful life date.
 - i. If not, please identify the end of useful life date, and explain the disparity.
 - b. Please confirm whether 2040 is the retirement date of Mitchell for purposes of KPC's most recent depreciation study.
 - i. If not, please identify that retirement date for purposes of Mitchell's depreciation, and explain the disparity.

RESPONSE

a-Confirmed.

b-Confirmed. Please see the testimony of Company Witness Whitney, starting on page 5, line 15.

Witness: Mark A. Becker

Witness: Heather M. Whitney

Kentucky Power Company
KPSC Case No. 2021-00004
Sierra Club's First Set of Data Requests
Dated March 12, 2021

DATA REQUEST

- SC 1_3** Refer to the Direct Testimony of Mark A. Becker, page 4, lines 6-8.
- a. Provide the cost of compliance for Case 1 and Case 1, as it was provided by Company Witness Brian D. Sherrick.
 - b. Describe any changes made to the compliance costs provided by Mr. Sherrick in order to convert them into values for use in the PLEXOS model.
 - i. Provide the compliance costs for CCR and ELG at Mitchell for both Case 1 and Case 2 as they were input into the PLEXOS model.
 - ii. Provide the workpapers used to convert the compliance costs into PLEXOS format (in machine-readable format, with cells unlocked and formulae intact.)

RESPONSE

- a. See the ML CCR Only and ML CCR_ELG worksheets in Attachment 6 to the Company's response to KIUC AG 1-2 for the cost as it was provided by Company Witness Sherrick.
- b. The compliance costs provided by Mr. Sherrick do not impact the dispatch cost of Mitchell, and therefore were not input into PLEXOS. The impact of the compliance cost and all other capital costs at Mitchell was computed by applying levelized carrying charges to the investments in the workpaper file provided in Attachment 6 to the Company's response to KIUC AG 1-2.
 - b. i. N/A.
 - b. ii. N/A.

Witness: Mark A. Becker

Kentucky Power Company
KPSC Case No. 2021-00004
Sierra Club's First Set of Data Requests
Dated March 12, 2021
Page 1 of 2

DATA REQUEST

- SC 1_4** Refer to the Direct Testimony of Mark A. Becker, page 5, lines 11-13. In each response to the below, indicate real or nominal dollars; and if real dollars, provide the dollar year.
- a. Provide the annual forecasted capital expenditures at Mitchell for both Case 1 and Case 2, net of CCR and ELG compliance costs.
 - b. Provide the annual forecasted fixed O&M costs at Mitchell for both Case 1 and Case 2, net of CCR and ELG compliance costs.
 - c. Provide the annual forecasted variable O&M costs at Mitchell for both Case 1 and Case 2, net of CCR and ELG compliance costs.
 - d. Provide the annual CCR and ELG capital expenditures at Mitchell for Case 1.
 - e. Provide the annual CCR expenditures at Mitchell for Case 2.
 - f. Provide the annual forecasted fixed O&M costs associated with CCR and ELG compliance for Case 1.
 - g. Provide the annual forecasted fixed O&M costs associated with CCR compliance for Case 2.
 - h. Provide the annual forecasted variable O&M costs associated with CCR and ELG compliance for Case 1.
 - i. Provide the annual forecasted variable O&M costs associated with CCR compliance for Case 1.
 - j. Confirm that the forecasts provided in a) through i) match the values that were input into the PLEXOS model in each case.
 - i. If not confirmed, provide the values as they were input into the PLEXOS model for a) through i), above; and, further, explain why the PLEXOS input values differ from the forecasts provided in a) through i).

RESPONSE

All of Company Witness Becker's forecasted information uses nominal dollars.

a- The requested information is on the Capital worksheet in the file "KPCO Mitchell FOM +OGC Cost inputs" provided in KIUC_AG_1_2.

b and c. See the Company's response to AG-KIUC 1_29 items b and c for the location of fixed and variable O&M forecasts in Company Witness Becker's workpapers.

d and e- Please see the ML CCR Only and ML CCR_ELG worksheets in Attachment 6 to the Company's response to AG KIUC 1-2.

Kentucky Power Company
KPSC Case No. 2021-00004
Sierra Club's First Set of Data Requests
Dated March 12, 2021
Page 2 of 2

f, g, h i- No incremental O&M associated with the proposed CCR and ELG or CCR only compliance proposals is anticipated. Please see the direct testimony of Company Witness Whitney starting on page 10.

j - Costs borne by customers from capital expenses at Mitchell, namely return on rate base, depreciation, and property taxes, as well as fixed O&M, are not costs that vary with the level of energy production. They are not included in PLEXOS for existing units including Mitchell because they would not influence the dispatch cost or energy production. For Mitchell, PLEXOS is only used to determine the energy revenues and variable dispatch costs. Fixed O&M and ongoing capital costs for Mitchell and the other existing units are more easily and transparently accounted for in the analysis outside of PLEXOS using the process described above in this subpart. Of the Mitchell items listed in this request, only the variable O&M is included in PLEXOS.

Witness: Mark A. Becker

Kentucky Power Company
KPSC Case No. 2021-00004
Sierra Club's First Set of Data Requests
Dated March 12, 2021

DATA REQUEST

- SC 1_5** Refer to the Direct Testimony of Mark A. Becker, page 5, lines 17-19.
- a. Provide the forecasted annual delivered (or burner tip) cost of coal to the Mitchell unit for the duration of the analysis period under each of the three fundamental forecasts (Base with Carbon, Base No Carbon, and Low No Carbon). Indicate real or nominal dollars; and if real, provide the dollar year.
 - b. Provide the monthly price of gas delivered to the PJM-AEP zone under each of the three fundamental forecasts (Base with Carbon, Base No Carbon, and Low No Carbon).
 - c. Provide the hourly power price forecast for the PJM-AEP zone under each of the three fundamental forecasts (Base with Carbon, Base No Carbon, and Low No Carbon) through 2040. If not available hourly, provide on- and off-peak power prices.
 - d. Provide any hourly transmission constraints included in the PLEXOS model that would limit the buying and selling of power from/to the PJM market. If not available on an hourly basis, provide on- and off-peak limits.

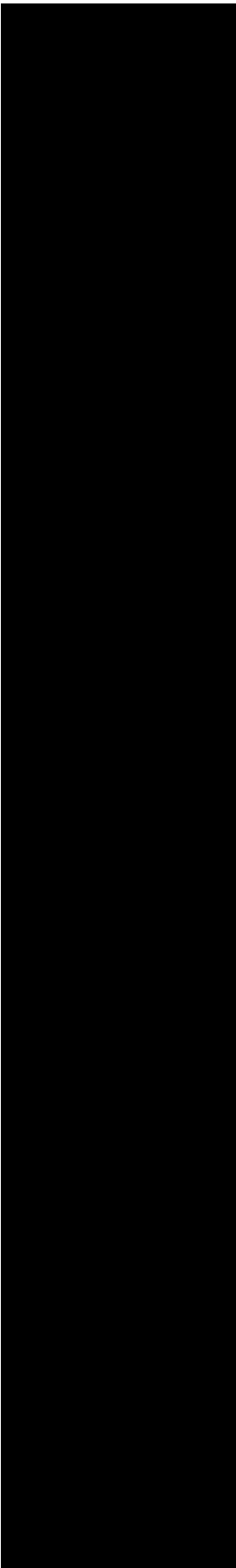
RESPONSE

- a- KPCO_R_SC_1_005_ConfidentialAttachment1 for the forecasted nominal delivered cost of coal for Mitchell on a \$/MMBTU basis.
- b- Please see the Company's response to KPCP_R_KIUC_AG 1-002 for the fundamental files (KPCO_R_KIUC_AG_1_2_Attachment 17 through 20).
- c- Please see the Company's response to KPCP_R_KIUC_AG 1-002 for the fundamental files (KPCO_R_KIUC_AG_1_2_Attachment 17 through 20). The Company's Fundamentals Forecasts include all salient model inputs, outputs and assumptions in both monthly and yearly tables. The data, studies and analyses underlying the Company's EIA-Based Fundamentals Forecasts that are not provided in the Company's EIA-Based Fundamentals Forecasts are not specifically archived, including hourly information. However, the Energy Information Administration's Annual Energy Outlook is available at <https://www.eia.gov/outlooks/aeo/>.
- d. No hourly or other transmission constraints were input into the PLEXOS model.

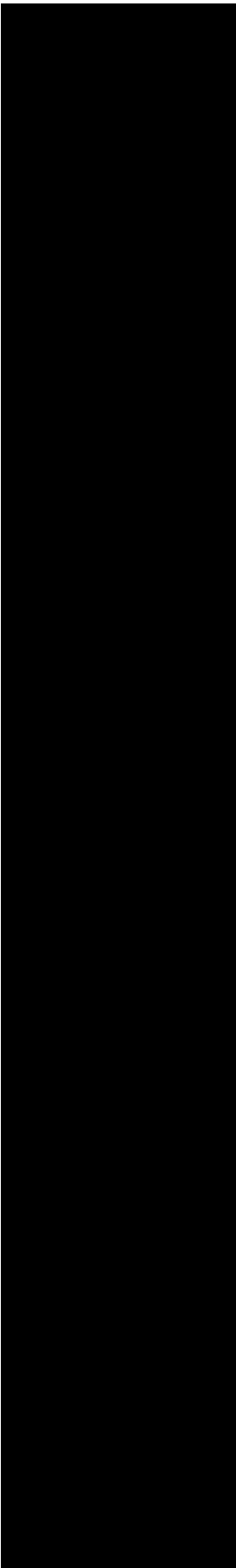
Witness: Mark A. Becker

Year	Month	Day	Period	\$/MMBTU	
				ML1-COAL	ML2-COAL
2020		1	1	1	
2020		2	1	1	
2020		3	1	1	
2020		4	1	1	
2020		5	1	1	
2020		6	1	1	
2020		7	1	1	
2020		8	1	1	
2020		9	1	1	
2020		10	1	1	
2020		11	1	1	
2020		12	1	1	
2021		1	1	1	
2021		2	1	1	
2021		3	1	1	
2021		4	1	1	
2021		5	1	1	
2021		6	1	1	
2021		7	1	1	
2021		8	1	1	
2021		9	1	1	
2021		10	1	1	
2021		11	1	1	
2021		12	1	1	
2022		1	1	1	
2022		2	1	1	
2022		3	1	1	
2022		4	1	1	
2022		5	1	1	
2022		6	1	1	
2022		7	1	1	
2022		8	1	1	
2022		9	1	1	
2022		10	1	1	
2022		11	1	1	
2022		12	1	1	
2023		1	1	1	
2023		2	1	1	
2023		3	1	1	
2023		4	1	1	
2023		5	1	1	
2023		6	1	1	
2023		7	1	1	
2023		8	1	1	
2023		9	1	1	

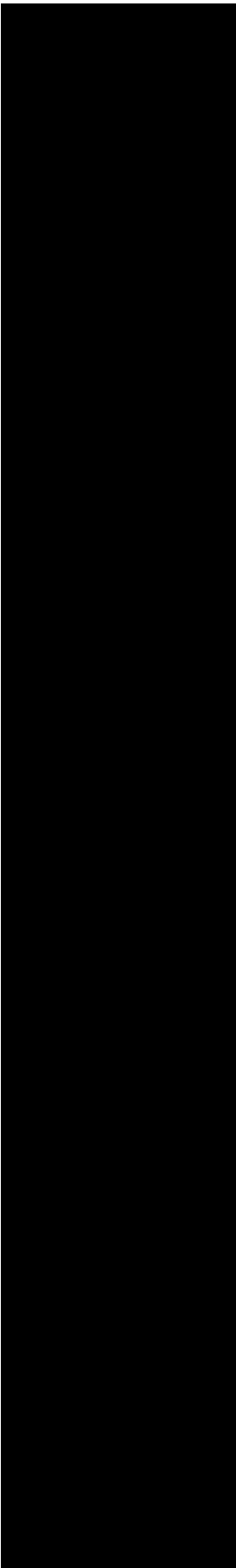
2023	10	1	1
2023	11	1	1
2023	12	1	1
2024	1	1	1
2024	2	1	1
2024	3	1	1
2024	4	1	1
2024	5	1	1
2024	6	1	1
2024	7	1	1
2024	8	1	1
2024	9	1	1
2024	10	1	1
2024	11	1	1
2024	12	1	1
2025	1	1	1
2025	2	1	1
2025	3	1	1
2025	4	1	1
2025	5	1	1
2025	6	1	1
2025	7	1	1
2025	8	1	1
2025	9	1	1
2025	10	1	1
2025	11	1	1
2025	12	1	1
2026	1	1	1
2026	2	1	1
2026	3	1	1
2026	4	1	1
2026	5	1	1
2026	6	1	1
2026	7	1	1
2026	8	1	1
2026	9	1	1
2026	10	1	1
2026	11	1	1
2026	12	1	1
2027	1	1	1
2027	2	1	1
2027	3	1	1
2027	4	1	1
2027	5	1	1
2027	6	1	1
2027	7	1	1
2027	8	1	1



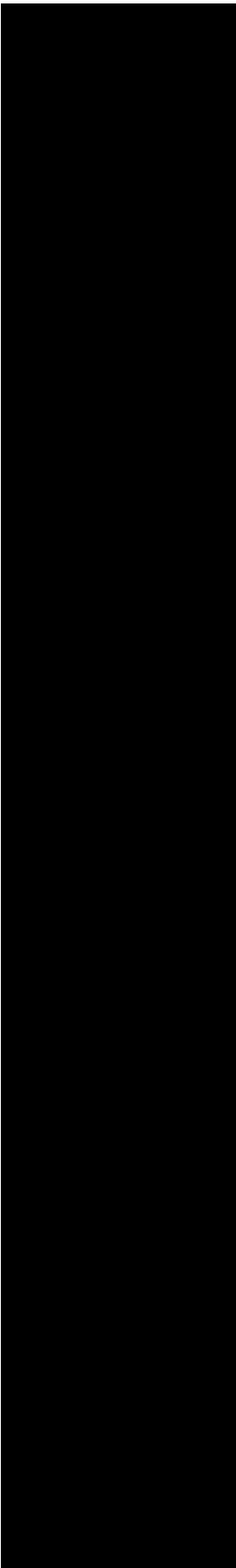
2027	9	1	1
2027	10	1	1
2027	11	1	1
2027	12	1	1
2028	1	1	1
2028	2	1	1
2028	3	1	1
2028	4	1	1
2028	5	1	1
2028	6	1	1
2028	7	1	1
2028	8	1	1
2028	9	1	1
2028	10	1	1
2028	11	1	1
2028	12	1	1
2029	1	1	1
2029	2	1	1
2029	3	1	1
2029	4	1	1
2029	5	1	1
2029	6	1	1
2029	7	1	1
2029	8	1	1
2029	9	1	1
2029	10	1	1
2029	11	1	1
2029	12	1	1
2030	1	1	1
2030	2	1	1
2030	3	1	1
2030	4	1	1
2030	5	1	1
2030	6	1	1
2030	7	1	1
2030	8	1	1
2030	9	1	1
2030	10	1	1
2030	11	1	1
2030	12	1	1
2031	1	1	1
2031	2	1	1
2031	3	1	1
2031	4	1	1
2031	5	1	1
2031	6	1	1
2031	7	1	1



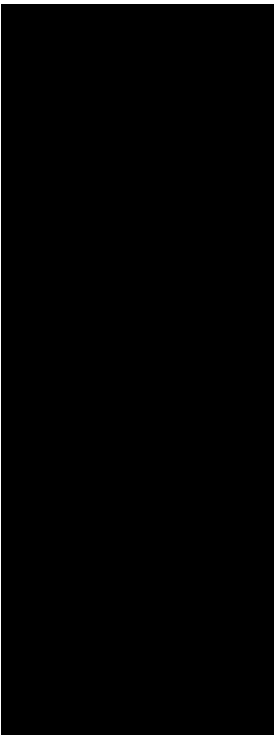
2031	8	1	1
2031	9	1	1
2031	10	1	1
2031	11	1	1
2031	12	1	1
2032	1	1	1
2032	2	1	1
2032	3	1	1
2032	4	1	1
2032	5	1	1
2032	6	1	1
2032	7	1	1
2032	8	1	1
2032	9	1	1
2032	10	1	1
2032	11	1	1
2032	12	1	1
2033	1	1	1
2033	2	1	1
2033	3	1	1
2033	4	1	1
2033	5	1	1
2033	6	1	1
2033	7	1	1
2033	8	1	1
2033	9	1	1
2033	10	1	1
2033	11	1	1
2033	12	1	1
2034	1	1	1
2034	2	1	1
2034	3	1	1
2034	4	1	1
2034	5	1	1
2034	6	1	1
2034	7	1	1
2034	8	1	1
2034	9	1	1
2034	10	1	1
2034	11	1	1
2034	12	1	1
2035	1	1	1
2035	2	1	1
2035	3	1	1
2035	4	1	1
2035	5	1	1
2035	6	1	1



2035	7	1	1
2035	8	1	1
2035	9	1	1
2035	10	1	1
2035	11	1	1
2035	12	1	1
2036	1	1	1
2036	2	1	1
2036	3	1	1
2036	4	1	1
2036	5	1	1
2036	6	1	1
2036	7	1	1
2036	8	1	1
2036	9	1	1
2036	10	1	1
2036	11	1	1
2036	12	1	1
2037	1	1	1
2037	2	1	1
2037	3	1	1
2037	4	1	1
2037	5	1	1
2037	6	1	1
2037	7	1	1
2037	8	1	1
2037	9	1	1
2037	10	1	1
2037	11	1	1
2037	12	1	1
2038	1	1	1
2038	2	1	1
2038	3	1	1
2038	4	1	1
2038	5	1	1
2038	6	1	1
2038	7	1	1
2038	8	1	1
2038	9	1	1
2038	10	1	1
2038	11	1	1
2038	12	1	1
2039	1	1	1
2039	2	1	1
2039	3	1	1
2039	4	1	1
2039	5	1	1



2039	6	1	1
2039	7	1	1
2039	8	1	1
2039	9	1	1
2039	10	1	1
2039	11	1	1
2039	12	1	1
2040	1	1	1
2040	2	1	1
2040	3	1	1
2040	4	1	1
2040	5	1	1
2040	6	1	1
2040	7	1	1
2040	8	1	1
2040	9	1	1
2040	10	1	1
2040	11	1	1
2040	12	1	1



Kentucky Power Company
KPSC Case No. 2021-00004
Sierra Club's First Set of Data Requests
Dated March 12, 2021

DATA REQUEST

SC 1_6 Refer to the Direct Testimony of Mark A. Becker, page 5, line 23, and page 6, lines 1-3. Please describe the changes in assumptions that were required to answer the question at hand in this proceeding

RESPONSE

The changes referred to were (a) forcing Mitchell to retire in 2028 the CCR-Only case; (b) inputting the glide path reductions in the capital forecast at Mitchell in the five years leading up to 2028 in CCR only; and (c) adding the capital costs of CCR and ELG compliance into the analysis.

Witness: Mark A. Becker

Kentucky Power Company
KPSC Case No. 2021-00004
Sierra Club's First Set of Data Requests
Dated March 12, 2021

DATA REQUEST

- SC 1_7** Refer to the Direct Testimony of Mark A. Becker, page 6, line 5.
- a. Provide the monthly peak and monthly energy forecasts, gross and net of energy efficiency, for KPC.
 - b. Provide the hourly KPC load shape used in the PLEXOS model.

RESPONSE

- a- The Company does not have monthly peak and energy forecasts gross and net of EE. Please see the Company's response to KIUC_AG_1-002 (KPCO_R_KIUC_AG_1_2_Confidential Attachment11 and 12) for the annual gross and net peak and energy forecasts.
- b- Please see KPCO_R_SC_1_007_Attachment1.

Witness: Mark A. Becker

Kentucky Power Company
KPSC Case No. 2021-00004
Sierra Club's First Set of Data Requests
Dated March 12, 2021

DATA REQUEST

- SC 1_8** Refer to the Direct Testimony of Mark A. Becker, page 6, line 5. For each of KPC's currently owned or contracted units, please provide:
- a. Capacity (in MW) on both an ICAP and UCAP basis
 - b. Heat rate
 - c. Anticipated retirement date
 - d. Contract expiration date

RESPONSE

- a. Please see KPCO_R_SC_1_008_Attachment1 for the requested information for the last five years.
- b. Please see KPCO_R_SC_1_008_Attachment2 for the requested information for the last five years.
- c. Expected retirement dates for the owned units are 2030 for Big Sandy 1 and 2040 for Mitchell.
- d. The Rockport UPA expires in December 2022.

Witness: Mark A. Becker

Kentucky Power Company
KPSC Case No. 2021-00004
Sierra Club's First Set of Data Requests
Dated March 12, 2021

DATA REQUEST

SC 1_9 Refer to the Direct Testimony of Mark A. Becker, page 6, line 9. Please provide the PJM minimum capacity reserve margin used in this analysis on both an ICAP and UCAP basis.

RESPONSE

The minimum PJM capacity reserve margins were 8.6% on a UCAP basis and 14.9% on an ICAP basis.

Witness: Mark A. Becker

Kentucky Power Company
KPSC Case No. 2021-00004
Sierra Club's First Set of Data Requests
Dated March 12, 2021

DATA REQUEST

SC 1_10 Refer to the Direct Testimony of Mark A. Becker, page 6, lines 10-11.
Please provide the “forecasts of the incremental future capital requirements and fixed and variable operating costs for Mitchell (with and without compliance costs),” as they were input into the PLEXOS model.

RESPONSE

Please see the Company's response to Sierra Club 1-4.

Witness: Mark A. Becker

Kentucky Power Company
KPSC Case No. 2021-00004
Sierra Club's First Set of Data Requests
Dated March 12, 2021

DATA REQUEST

SC 1_11 Refer to the Direct Testimony of Mark A. Becker, page 7, Figure 1. Please provide the workpapers used to generate Figure 1, in machine-readable format with cells unlocked and formula intact.

RESPONSE

Please see KPCO_R_KIUC_AG_1_2_Attachment4.

Witness: Mark A. Becker

Kentucky Power Company
KPSC Case No. 2021-00004
Sierra Club's First Set of Data Requests
Dated March 12, 2021

DATA REQUEST

SC 1_12 Refer to the Direct Testimony of Mark A. Becker, page 11, lines 14-15. Provide the calculations of recovery of levelized carrying charges on future on-going capital expenditures, including the CCR and ELG capital expenditures. Provide these calculations in machine-readable format, with cells unlocked and formulae intact.

RESPONSE

For Mitchell, please see the "Carrying Charge" worksheet in the file "KPCo Mitchell FOM + OGC Cost Inputs" provided in KPCO_R_KIUC_AG_1_2_Attachment6. A 10 year fixed charge rate of 17.20% was used for all capital including CCR capital in the CCR-Only cases. A 20-year rate of 12.55% was used for all capital including CCR and ELG in the CCR and ELG cases.

Witness: Mark A. Becker

Kentucky Power Company
KPSC Case No. 2021-00004
Sierra Club's First Set of Data Requests
Dated March 12, 2021

DATA REQUEST

SC 1_13 Refer to the Direct Testimony of Mark A. Becker, page 11, lines 18-20. Provide the levelized fixed charge rates, which include a return on capital investment, income and property taxes, and depreciation, that were applied to the CCR and ELG capital and all future capital expenses by the PLEXOS model.

RESPONSE

CCR and ELG capital and all future capital expenses do not impact dispatch costs and thus are not included in the PLEXOS model. Please see the Company's response to Sierra Club 1-4(j).

Witness: Mark A. Becker

Kentucky Power Company
KPSC Case No. 2021-00004
Sierra Club's First Set of Data Requests
Dated March 12, 2021

DATA REQUEST

SC 1_14 Refer to the Direct Testimony of Mark A. Becker, page 11, lines 18-20. Discuss whether and how running at reduced capacity factors would lead the Mitchell unit to incur additional maintenance costs as a result of increased unit cycling. (If not, explain why not.)

RESPONSE

O&M was included in the forecast for Mitchell based on inflating the baseload level of O&M forecast for 2030 out through 2040. The Company does not expect O&M to be higher than this amount due to cycling at the reduced capacity factors predicted by PLEXOS in this analysis.

Witness: Mark A. Becker

Kentucky Power Company
KPSC Case No. 2021-00004
Sierra Club's First Set of Data Requests
Dated March 12, 2021

DATA REQUEST

- SC 1_15** Refer to the Direct Testimony of Mark A. Becker, page 13, lines 3-11.
- a. For Case 1, provide the annual CCR/ELG compliance capital plus the ongoing capital expense forecasts through 2040.
 - b. For Case 2, provide the annual CCR compliance costs plus ongoing maintenance capital through 2028.

RESPONSE

- a. Please see KPCO_R_KIUC_AG_1_2_Attachment6. See the ML CCR_ELG tab for the CCR/ELG Capital. See the Capital tab for all other capital expense.
- b. Please see KPCO_R_KIUC_AG_1_2_Attachment6. See the ML CCR Only tab for the CCR Capital. See the Capital tab for all other capital expense.

Witness: Mark A. Becker

Kentucky Power Company
KPSC Case No. 2021-00004
Sierra Club's First Set of Data Requests
Dated March 12, 2021
Page 1 of 2

DATA REQUEST

- SC 1_16** Refer to the Direct Testimony of Mark A. Becker, page 14, lines 1-10. For each type of fossil generation resource that was available to the PLEXOS model for selection, provide:
- a. Technology type
 - b. Size (MW) on both an ICAP and UCAP basis
 - c. Assumed book life
 - d. Assumed operating life
 - e. Heat rate
 - f. Firm capacity value
 - g. Capital cost (\$/kW), including annual increases/decreases, if applicable
 - h. Annual fixed O&M
 - i. Annual variable O&M
 - j. Interconnection costs
 - k. First year available
 - l. Annual minimum number of units
 - m. Annual maximum number of units
 - n. Cumulative maximum

RESPONSE

a and b- Please see the testimony of Company Witness Becker, Table 3 for the gas resource types and nameplate (ICAP). Coal and nuclear were not made available to the PLEXOS model. Please see the Company's response to KUIC-AG 1-29 (KPCO_R_KIUC_AG_1_029_Attachment2). See item f for UCAP.

c & d- 30 years

e-Please see KPCO_R_SC_1_016_Attachment2.

f- The gas options were assumed to receive 99% firm capacity credit for firm capacity (UCAP) purposes.

g-Please see KPCO_R_SC_1_016_Attachment1.

h and i- See the EIA study provided as KPCO_R_KIUC_AG_1_029_Attachment2 for the requested O&M information for the units listed in witness Martin's Table 3.

j- The Company adopted EIA's assumption regarding interconnection costs, which were based on a one mile interconnection, sized to match the size of the resource. This is provided for each resource type in the Company's response to KUIC-AG 1-29 in KPCO_R_KIUC_AG_1_029_Attachment2.

Kentucky Power Company
KPSC Case No. 2021-00004
Sierra Club's First Set of Data Requests
Dated March 12, 2021
Page 2 of 2

k-Gas reciprocating internal combustion engine units (RICE) were available beginning in 2024. Frame CT's and CC's were available beginning in 2025.

l, m and n- No annual or cumulative minimum or maximum limits were placed on the fossil resource options.

Witness: Mark A. Becker

Kentucky Power Company
KPSC Case No. 2021-00004
Sierra Club's First Set of Data Requests
Dated March 12, 2021
Page 1 of 2

DATA REQUEST

- SC 1_17** Refer to the Direct Testimony of Mark A. Becker, page 14, lines 1-10. For each type of renewable resource that was available to the PLEXOS model for selection, provide:
- a. Technology type
 - b. Size (MW) on both an ICAP and UCAP basis
 - c. Assumed book life
 - d. Assumed operating life
 - e. Firm capacity value
 - f. Capital cost (\$/kW), including annual increases/decreases, if applicable
 - g. Annual fixed O&M
 - h. Annual variable O&M
 - i. Interconnection costs
 - j. LCOE (\$/MWh)
 - k. First year available
 - l. Annual minimum number of units
 - m. Annual maximum number of units
 - n. Cumulative maximum

RESPONSE

a & b- Please see the testimony of Company Witness Becker, Table 3 for the ICAP of the wind and solar blocks which were made available. Please see the Company's response to KIUC_AG_1_29 (KPCO_R_KIUC_AG_1_029_Attachment2) for further details about these technology options. See item e for UCAP.

c&d- Wind 30 years. Solar 35 years

e- Firm Capacity (UCAP) for solar was assumed to change over time following PJM's ELCC methodology. The firm capacity for wind was fixed at 12%. The Firm Capacity line items on the "LT Existing Units Info" worksheet in the raw PLEXOS output data files provided in Company witness confidential Becker's workpapers in the response to KUIC-AG 1-2 show how much capacity (UCAP) each new resource was assumed to receive for each year of the analysis.

f- g, h, and j - Please see KPCO_R_SC_1_017_Attachment1.

i-The Company adopted EIA's assumption regarding interconnection costs, which were based on a one mile interconnection, sized to match the size of the resource. This is provided for each resource type in the Company's response to KUIC-AG 1-29 in KPCO_R_KIUC_AG_1_029_Attachment2.

Kentucky Power Company
KPSC Case No. 2021-00004
Sierra Club's First Set of Data Requests
Dated March 12, 2021
Page 2 of 2

k- Wind was available beginning in 2023 and Solar was available beginning 2022.

l- There was no annual minimum number of units.

m and n- The solar was limited to 150 MW in any one year and 450 MW of cumulative additions. Wind was limited to 200 MW in any one year and 400 MW cumulative additions.

Witness: Mark A. Becker

Kentucky Power Company
KPSC Case No. 2021-00004
Sierra Club's First Set of Data Requests
Dated March 12, 2021

DATA REQUEST

- SC 1_18** Refer to the Direct Testimony of Mark A. Becker, page 14, lines 1-10. For each type of battery storage resource that was available to the PLEXOS model for selection, provide:
- a. Duration
 - b. Size (MW) on both an ICAP and UCAP basis
 - c. Assumed book life
 - d. Assumed operating life
 - e. Firm capacity value
 - f. Capital cost (\$/kW), including annual increases/decreases, if applicable
 - g. Annual fixed O&M
 - h. Annual variable O&M
 - i. Interconnection costs
 - j. First year available
 - k. Annual minimum number of units
 - l. Annual maximum number of units
 - m. Cumulative maximum

RESPONSE

a & b: The storage option was a 50 MW ICAP battery with 4 hour duration. See item e. for UCAP

c & d: 20 years

e- The battery option was assumed to receive 80% firm capacity (UCAP) credit, or 40 MW.

f- \$1,442/KW

g and h- Please see KPCO_R_SC_1_018_Attachment1.

i- As described on page 146 of the EIA new technology report provided at KPCO_R_KIUC_AG_1_029_Attachment2, no interconnection costs were assumed for the battery option, given its smaller size and based on an assumption that it can be located in close proximity to existing infrastructure.

j- 2021

k,l,m: There were no minimum or maximum annual or cumulative limits

Witness: Mark A. Becker

Kentucky Power Company
KPSC Case No. 2021-00004
Sierra Club's First Set of Data Requests
Dated March 12, 2021

DATA REQUEST

- SC 1_19** Refer to the Direct Testimony of Mark A. Becker, page 14, lines 10-11.
- a. Provide the list of demand-side load reduction options that were considered along with a levelized cost value of each.
 - b. Please discuss whether any of these resources selected by the PLEXOS model.
 - i. If so, identify which ones, and discuss why they were selected.
 - ii. If no, explain why not.

RESPONSE

- a- Please see KPCO_R_SC_1_019_Attachment1 for the demand side resource options.
- b- The amounts of these items which were added varied by fundamental forecast scenario due to the differences in energy value resulting from the differences in power prices between scenarios. When they were selected it was because they were deemed to be economically beneficial resources based on the costs, the energy value, and the capacity value. When they were not selected it was because they were not economic. The amounts added in each of the six scenarios were provided on the LT New Units Info worksheets of each of the six PLEXOS output files provided in Company witness Becker's workpapers in the Company's response to AG KIUC 1-2. Each of these options is shown in separate columns on those worksheets. See the firm capacity amounts on rows 182-211 of each worksheet.

Witness: Mark A. Becker

Bundle	Installed Cost (\$/kWh)	Yearly Potential Savings (MWh) 2022-2026	Yearly Potential Savings (MWh) 2027-2031	Yearly Potential Savings (MWh) 2032-2036	Yearly Potential Savings (MWh) 2037-2041
Thermal Shell - AP	\$0.20	6,974	3,167	3,587	3,426
Thermal Shell - HAP	\$0.30	21,608	547	0	0
Heating/Cooling - AP	\$0.65	51,971	9,125	0	0
Heating/Cooling - HAP	\$1.06	8,069	0	0	0
Water Heating - AP	\$0.25	34,620	11,674	12,904	6,592
Water Heating - HAP	\$0.35	82,217	10,166	10,413	0
Appliances - AP	\$0.22	32,643	2,825	3,014	2,677
Appliances - HAP	\$0.31	7,280	0	0	0
Lighting - AP	\$0.09	2,314	0	0	0
Lighting - HAP	\$0.13	1,530	0	0	0
Behavioral Programs	\$0.04	23,622	0	0	0

Kentucky Power Company
KPSC Case No. 2021-00004
Sierra Club's First Set of Data Requests
Dated March 12, 2021

DATA REQUEST

SC 1_20 Refer to the Direct Testimony of Mark A. Becker, page 15, lines 1-8.
Provide the leveled screening analysis and all underlying workpapers (in
machine-readable format, with cells unlocked and formulae intact).

RESPONSE

Please see KUPC_R_SC_1_020_Attachment1.

Witness: Mark A. Becker

Kentucky Power Company
KPSC Case No. 2021-00004
Sierra Club's First Set of Data Requests
Dated March 12, 2021

DATA REQUEST

- SC 1_21** Refer to the Direct Testimony of Mark A. Becker, page 15, lines 18-20.
- a. Provide the prices of the capacity-only PPA offered to the PLEXOS model.
 - b. Provide the years in which this capacity-only PPA was made available to the PLEXOS model.
 - c. Provide the MW increments of the capacity-only PPA.

RESPONSE

- a- The Capacity-only PPA option was priced at the forecasted PJM RPM capacity price associated with each fundamental forecast. These prices were provided in Company witness Trecuzzi's fundamental forecast workpapers in the response to KIUC_AG 1_2.
- b- The PPA option was available in all years 2021-2050.
- c- For Kentucky Power, the PPA was available in 50 MW increments with a max annual limit of 400 MW/yr.

Witness: Mark A. Becker

Kentucky Power Company
KPSC Case No. 2021-00004
Sierra Club's First Set of Data Requests
Dated March 12, 2021

DATA REQUEST

- SC 1_22** Refer to the Direct Testimony of Mark A. Becker, page 16, lines 21-22.
- a. Please confirm whether Big Sandy 1 assumed to retire in 2030 in both Case 1 and Case 2
 - i. If not, identify the assumed retirement date and discuss the reason/basis for that selection.
 - b. Provide the commissioning date of Big Sandy 1.

RESPONSE

- a. Confirmed.
- b. Big Sandy 1 was commissioned as a coal fired unit in 1963. It was converted to burn natural gas and returned to service May 31, 2016

Witness: Mark A. Becker

Kentucky Power Company
KPSC Case No. 2021-00004
Sierra Club's First Set of Data Requests
Dated March 12, 2021

DATA REQUEST

- SC 1_23** Refer to the Direct Testimony of Mark A. Becker, page 18, lines 16-18.
- a. Please explain where the wind resource offered to the PLEXOS model is assumed to be located.
 - b. Provide the production tax credit for wind assumed to be available through 2025.
 - i. Discuss whether that assumption remains, at this time, KPC's ongoing best expectation/prediction.

RESPONSE

- a- No specific location was assumed. The only assumption was that it would be located such that it could qualify as capacity under PJM's rules.
- b- For the following wind project in-service dates, the assumed PTC credit percentages used in this analysis were as follows: 12/31/22 - 60% 12/31/23 - 40% 12/31/24 - 60%.
- i- Since the analysis was completed, the 60% production tax credit has been extended by Congress for projects which go in service by the end of 2026. It is unknown whether the PTCs will change in the future.

Witness: Mark A. Becker

Kentucky Power Company
KPSC Case No. 2021-00004
Sierra Club's First Set of Data Requests
Dated March 12, 2021

DATA REQUEST

- SC 1_24** Refer to the Direct Testimony of Mark A. Becker, page 21, lines 12-21. Please explain whether and how battery storage resources, sited at or near the Mitchell plant, could eliminate the need for additional transmission investments.
- a. If yes, explain how many MW of battery storage resources would be needed
 - b. If no, explain why not.

RESPONSE

a and b- In general, thermal and voltage impacts to the AEP transmission grid were analyzed by studying the retirement of generation resources under various NERC transmission system planning performance requirements. PJM RTEP models were utilized to perform this analysis and existing generation was scaled to make up for the retired units in accordance with PJM practices. Events included in the analysis were loss of a generator, transmission circuit, transformer, and other major equipment within a sub-station.

The Company has not prepared any direct analysis on the amount, type, and location of generation resources, including battery storage that would displace, reduce, or diminish the need for transmission upgrades.

Witness: Mark A. Becker

Kentucky Power Company
KPSC Case No. 2021-00004
Sierra Club's First Set of Data Requests
Dated March 12, 2021

DATA REQUEST

- SC 1_25** Refer to the Direct Testimony of Mark A. Becker, page 20, lines 9-14. Please explain whether conversion of either Mitchell or Amos to a synchronous condenser could eliminate the need for additional transmission investment.
- a. If yes, explain by how much.
 - b. If no, explain why not.

RESPONSE

The Company has not studied whether synchronous condenser conversions at either the Mitchell or Amos plants would eliminate the need for transmission investment.

Witness: Mark A. Becker

Kentucky Power Company
KPSC Case No. 2021-00004
Sierra Club's First Set of Data Requests
Dated March 12, 2021

DATA REQUEST

- SC 1_26** Refer to the Direct Testimony of Mark A. Becker.
- a. Provide the weighted average cost of capital used in the analysis.
 - b. Provide the discount rate used in the analysis.
 - c. Provide the assumed rate of return to KPC on new investments included in the analysis.

RESPONSE

a-c- 7.07 percent.

Witness: Mark A. Becker

Kentucky Power Company
KPSC Case No. 2021-00004
Sierra Club's First Set of Data Requests
Dated March 12, 2021
Page 1 of 3

DATA REQUEST

- SC 1_27** Refer to the Direct Testimony of Brian D. Sherrick, page 4, lines 15-16, inter alia.
- a. Given the 50/50 split ownership of Mitchell by KPC and fellow AEP subsidiary Wheeling Power Company, discuss the process and parameters by which the two companies in general make major capital investment and operating decisions.
 - i. Include in your discussion what happens in the event the companies disagree on a particular choice for Mitchell's future disposition (e.g., are they at an impasse until their minds meet, or can one company override the other, or does AEP parent management make a tie-breaking decision, or something else?).
 - b. Please confirm whether KPC is proposing for approval in this case the same compliance path for Mitchell (i.e., CCR and ELG investment and coal-fired operations until a 2040 retirement, versus CCR investment only and 2028 retirement, versus other) that Wheeling Power (jointly with other fellow AEP subsidiary Appalachian Power Company) is proposing for approval by the West Virginia Public Service Commission in Case No. 20-1040-E-CN, Application for the Issuance of a Certificate of Public Convenience and Necessity for Internal Modifications at Coal Fired Generating Plants Necessary to Comply with Federal Environmental Regulations.
 - i. If not the proposals in the two cases are not identical, please discuss in detail how KPC's proposal differs from Wheeling Power's, and explain why the companies arrived at different conclusions about what to propose in their respective commissions.
 - c. Discuss whether it would be possible for Wheeling Power only to retire its share of the plant, while KPC continued, and what that would look like, if possible. Also discuss the possibility of the inverse scenario, with KPC retiring its share.
 - i. If possible, please explain the implications of one company choosing to retire its share on the ratepayers of the other company.
 - d. Discuss what would happen if the Kentucky PSC and West Virginia PSC were to render conflicting decisions, in this case and Case No. 20-1040-E-CN, respectively, about the companies' respective CPCN requests and the choice between CCR+ELG compliance investment with a 2040 retirement, versus CCR- only compliance and 2028 retirement (or some other option). Without limitation:

Kentucky Power Company
KPSC Case No. 2021-00004
Sierra Club's First Set of Data Requests
Dated March 12, 2021
Page 2 of 3

- i. Explain the process of decision-making that would ensue at, and between, KPC, Wheeling Power, and AEPSC.
- ii. Indicate whether KPC would (or might) proceed to invest in ELG compliance projects to keep Mitchell operating past 2028 if the West Virginia PSC were to deny approval and cost recovery by Wheeling Power for such projects; and if so, explain.
- iii. Calculate, identify, and explain the cost impact to KPC ratepayers in the event the West Virginia PSC were to reject cost recovery by Wheeling Power of ELG costs, and KPC still moved ahead with ELG investments.
 1. Explain the basis and steps in your calculations, and provide all supporting workpapers.

RESPONSE

- a. Please see KPCO_R_KPSC_1_1_Attachment1 for the Mitchell Plant Operating Agreement.
- b. The Company objects to this request on the grounds that it seeks information that is publicly and equally available to Sierra Club and therefore is not a proper subject of discovery. It is also vague and ambiguous and seeks a legal conclusion. Subject to and without waiving the foregoing objections, the Company states as follows: Kentucky Power and Wheeling Power Company each presented Mitchell CCR and ELG and CCR-only compliance scenarios in their respective cases. Wheeling Power Company's application in Case No. 20-1040-E-CN speaks for itself.
- c. The Company objects to this request on the grounds that it seeks speculation and a legal conclusion. Subject to and without waiving the foregoing objections, the Company states as follows: The retirement of one operating company's share of the Mitchell Plant would require modification of the Mitchell Plant Operating Agreement. The Company is unable to speculate at this time regarding whether such a modification would be possible, the form such a modification would take, or the retail impacts under such a scenario.
- d. The Company objects to this request on the grounds that it seeks speculation and because it is vague and ambiguous as to the term "conflicting". Subject to and without waiving the foregoing objections, the Company states as follows: Please refer to the Company's response to KPSC 1-3.

Kentucky Power Company
KPSC Case No. 2021-00004
Sierra Club's First Set of Data Requests
Dated March 12, 2021
Page 3 of 3

- i. See the Company's response to subpart (d) above.
- ii. See the Company's response to subpart (d) above.
- iii. The Company has not performed the requested calculation.

Witness: Brian D. Sherrick

Witness: D. Brett Mattison

Kentucky Power Company
KPSC Case No. 2021-00004
Sierra Club's First Set of Data Requests
Dated March 12, 2021

DATA REQUEST

- SC 1_28** Refer to the Direct Testimony of Brian D. Sherrick, page 12, lines 2-5.
- a. Please confirm when Mr. Becker provided Mr. Becker's economic analysis to Wheeling Power, as referenced in the above-cited testimony.
 - i. In doing so, please specify whether that was before Wheeling Power and Appalachian Power initiated Case No. 20-1040-E-CN at the West Virginia Public Service Commission.
 - b. Explain why Mr. Becker did not also provide economic analysis testimony in that aforementioned West Virginia case, as he did in this case, and why Mr. James Martin instead was chosen to provide testimony on the issue in that parallel case.

RESPONSE

The Company objects to this request on the basis that it seeks information regarding litigation strategy that is protected from disclosure and because this request seeks information that is neither relevant nor reasonably calculated to lead to the discovery of admissible evidence. Subject to and without waiving the foregoing objections, the Company states as follows:

a. and b. Mr. Becker and Mr. Martin worked together on the analysis of the CCR/ELG economics at the Mitchell, Amos, and Mountaineer plants. These analyses, including the Mitchell analysis for the joint owners Wheeling Power and Kentucky Power, were prepared in parallel and completed and provided jointly to the management of each company in December of 2020. Company witness Sherrick did not refer to Mr. Martin in his direct testimony because Mr. Martin is not a witness in this Kentucky proceeding. The expected workload of these two individuals, along with Mr. Becker's prior experience testifying about resource planning matters on behalf of Kentucky Power, led to the decisions that were made regarding assigning the witnessing responsibilities in each of the state proceedings.

Witness: Mark A. Becker

Kentucky Power Company
KPSC Case No. 2021-00004
Sierra Club's First Set of Data Requests
Dated March 12, 2021
Page 1 of 2

DATA REQUEST

- SC 1_29** Refer to the Direct Testimony of Connie Trecuzzi, page 7, line 5, through page 8, line 2; 2-13; the Direct Testimony of Mark A. Becker, page 3, lines 5-13, inter alia; and the Direct Testimony of Brett Mattison, page 5, lines 18-21.
- a. Please identify AEP's current carbon reduction pledge(s) and goal(s) for its generation fleet.
 - b. Discuss whether, how, and to what extent KPC takes into consideration AEP's pledges/goals, and considers them to be bind, constrain, motivate, or otherwise shape KPC's resource planning and compliance decisions.
 - c. Confirm whether Mr. Becker's economic analysis for his testimony in this case attempted to incorporate AEP's carbon reduction pledges/goals.
 - i. If so, explain how.
 - ii. If not, explain why not.
 - d. Explain whether, and (if so) specifically how, apart from Mr. Becker's analysis, KPC otherwise took into account AEP's carbon-reduction pledges/goals in identifying, weighing, and deciding between the CCR and ELG compliance options for Mitchell.
 - e. Provide all memoranda, correspondence, analysis, reports, presentations, or other documents, prepared or reviewed by KPC, that assess the risk and potential ratepayer impact of Mitchell becoming a stranded asset in the event that Mitchell invests in ELGs compliance to keep the plant coal-fired past 2028, and then KPC or AEP decide that Mitchell must be retired in order to fulfill AEP's carbon- reduction pledges/goals (whether current or future contemporary ones).
 - i. If KPC is not aware of any such documents, please so state.

RESPONSE

- a. American Electric Power Company, Inc. ("AEP") has announced plans to transform its generation fleet with a goal of adding more than 10,000 megawatts ("MW") of wind and solar generation in its regulated states by 2030. In addition, AEP has established a revised carbon dioxide emissions reduction goal to achieve an 80% reduction in emissions by 2030 from its 2000 baseline and reach net zero emissions by 2050.
- b. AEP's carbon reduction goals are AEP company-wide goals and are not uniformly applicable to each operating company or other generation-owning entity. Kentucky Power will address any required generation additions or replacements based on the then-current needs of the Company and the requirements of Kentucky law.

Kentucky Power Company
KPSC Case No. 2021-00004
Sierra Club's First Set of Data Requests
Dated March 12, 2021
Page 2 of 2

Kentucky Power's 2019 Integrated Resource Plan ("2019 IRP"), which was based on the best information available at the time of its preparation, and is not a commitment to specific resource additions or other courses of action, is consistent with AEP's carbon reduction goals. The preferred plan detailed in the Company's 2019 IRP identifies the addition 101 MW of utility-scale solar in 2023 increasing to 455 MW by 2034, along with the addition of 100 MW of wind resources in 2028 with an additional 100 MW added in 2030. Please also see the response to items c and d of this request.

c. Mr. Becker's analysis did not consider AEP's carbon reduction pledges or goals. It was designed to present least-cost optimal resource plans, for the purpose of providing Kentucky Power information about the economic impacts of potential CCR and ELG investments at the Mitchell plant. The renewable resources selected as part of this analysis were selected because they were deemed to be part of a least-cost plan, and not forced in to the plans to meet a carbon reduction goal.

d. Kentucky Power did not consider AEP's carbon-reduction goals in weighing and deciding between compliance options at Mitchell.

e. Kentucky Power is not aware of any documents responsive to this request.

Witness: Mark A. Becker

Witness: D. Brett Mattison

Witness: Connie S. Trecuzzi



Becker Verification_March 2021.docx

DocVerify ID: 2B540170-FD2E-4CB8-BE63-B0CB16705857
Created: March 23, 2021 17:50:13 -8:00
Pages: 1
Remote Notary: Yes / State: OH

This document is a DocVerify VeriVaulted protected version of the document named above. It was created by a notary or on the behalf of a notary, and it is also a DocVerify E-Sign document, which means this document was created for the purposes of Electronic Signatures and/or Electronic Notary. Tampered or altered documents can be easily verified and validated with the DocVerify veriCheck system. This remote online notarization involved the use of communication technology.

Go to www.docverify.com at any time to verify or validate the authenticity and integrity of this or any other DocVerify VeriVaulted document.

E-Signature Summary

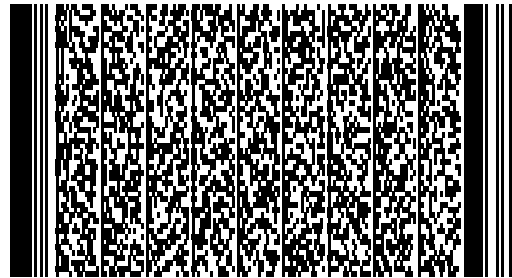
E-Signature 1: Mark A. Becker (MAB)

March 24, 2021 07:11:07 -8:00 [F2E5E3CABDCE] [167.239.221.84]
mabecker@aep.com (Principal) (Personally Known)

E-Signature Notary: S. Smithhisler (SRS)

March 24, 2021 07:11:07 -8:00 [2D07D8BAD4C7] [161.235.221.80]
srsmithhisler@aep.com

I, S. Smithhisler, did witness the participants named above electronically sign this document.



VERIFICATION

The undersigned, Mark A. Becker, being duly sworn, deposes and says he is a Managing Director of Resource Planning for American Electric Power Service Corporation, 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.

Mark A. Becker
Signed on 2021/03/24 07:11:07 -8:00

Mark A. Becker

STATE OF OHIO

)

) Case No. 2021-00004

COUNTY OF FRANKLIN

)

Subscribed and sworn to before me, a Notary Public in and before said County and State, by
Mark A. Becker, this 24th day of March 2021.



S. Smithhisler
Signed on 2021/03/24 07:11:07 -8:00

Notary Public

Notary ID Number: 2019-RE-775042

2B540170-FD2E-4CB8-BE63-B0CB16705857 --- 2021/03/23 17:50:13 -8:00 --- Remote Notary





Mattison Verification_March 2021.docx

DocVerify ID: 897A9C14-484E-4D88-AA72-3099256F73E6
Created: March 24, 2021 10:47:57 -8:00
Pages: 1
Remote Notary: Yes / State: OH

This document is a DocVerify VeriVaulted protected version of the document named above. It was created by a notary or on the behalf of a notary, and it is also a DocVerify E-Sign document, which means this document was created for the purposes of Electronic Signatures and/or Electronic Notary. Tampered or altered documents can be easily verified and validated with the DocVerify veriCheck system. This remote online notarization involved the use of communication technology.

Go to www.docverify.com at any time to verify or validate the authenticity and integrity of this or any other DocVerify VeriVaulted document.

E-Signature Summary

E-Signature 1: Deryle Brett Mattison (DBM)

March 25, 2021 08:04:20 -8:00 [E3738518746C] [167.239.2.88]
bmattison@aep.com (Principal) (Personally Known)

E-Signature Notary: S. Smithhisler (SRS)

March 25, 2021 08:04:20 -8:00 [CA1A8F4713F5] [161.235.221.80]
srsmithhisler@aep.com
I, S. Smithhisler, did witness the participants named above electronically sign this document.



VERIFICATION

The undersigned, Brett Mattison, being duly sworn, deposes and says he is the President and Chief Operating Officer of 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.

Deryle Brett Mattison
Signed on 2021/03/25 08:04:20 -8:00

Brett Mattison

STATE OF OHIO

)

) Case No. 2021-00004

COUNTY OF FRANKLIN

)

Subscribed and sworn to before me, a Notary Public in and before said County and State, by Brett Mattison, this 25th day of March 2021.



S. Smithhisler
Signed on 2021/03/25 08:04:20 -8:00

Notary Public

Notary ID Number: 2019-RE-775042

897A9C14-484E-4D88-AA72-3099256F73E6 --- 2021/03/24 10:47:57 -8:00 --- Remote Notary





Sherrick Verification_March 2021.docx

DocVerify ID: 8FD58910-8D38-48B8-B14E-3B78F7A92246
 Created: March 23, 2021 17:56:12 -8:00
 Pages: 1
 Remote Notary: Yes / State: OH

This document is a DocVerify VeriVaulted protected version of the document named above. It was created by a notary or on the behalf of a notary, and it is also a DocVerify E-Sign document, which means this document was created for the purposes of Electronic Signatures and/or Electronic Notary. Tampered or altered documents can be easily verified and validated with the DocVerify veriCheck system. This remote online notarization involved the use of communication technology.

Go to www.docverify.com at any time to verify or validate the authenticity and integrity of this or any other DocVerify VeriVaulted document.

E-Signature Summary

E-Signature 1: Brian D. Sherrick (BDS)

March 25, 2021 05:03:37 -8:00 [48FCD9623913] [167.239.2.87]
 bdsherrick@aep.com (Principal) (Personally Known)

E-Signature Notary: S. Smithhisler (SRS)

March 25, 2021 05:03:37 -8:00 [8FD32BDADE75] [161.235.221.80]
 srsmithhisler@aep.com

I, S. Smithhisler, did witness the participants named above electronically sign this document.



VERIFICATION

The undersigned, Brian D. Sherrick, being duly sworn, deposes and says he is the Managing Director of Projects for American Electric Power Service Corporation, 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.

Brian D. Sherrick
Signed on 2021/03/25 05:03:37 -8:00

Brian D. Sherrick

STATE OF OHIO

)

) Case No. 2021-00004

COUNTY OF FRANKLIN

)

Subscribed and sworn to before me, a Notary Public in and before said County and State, by
Brian D. Sherrick this 25th day of March 2021.



S. Smithhisler
Signed on 2021/03/25 05:03:37 -8:00

Notary Public

Notary ID Number: 2019-RE-775042

8FD58910-8D38-48B8-B14E-3B78F7A92246 --- 2021/03/23 17:56:12 -8:00 --- Remote Notary





Trecazzi Verification_March 2021.docx

DocVerify ID: E2A95763-737D-42C1-A1E2-3AEDBC483D22
 Created: March 25, 2021 05:36:29 -8:00
 Pages: 1
 Remote Notary: Yes / State: OH

This document is a DocVerify VeriVaulted protected version of the document named above. It was created by a notary or on the behalf of a notary, and it is also a DocVerify E-Sign document, which means this document was created for the purposes of Electronic Signatures and/or Electronic Notary. Tampered or altered documents can be easily verified and validated with the DocVerify veriCheck system. This remote online notarization involved the use of communication technology.

Go to www.docverify.com at any time to verify or validate the authenticity and integrity of this or any other DocVerify VeriVaulted document.

E-Signature Summary

E-Signature 1: Connie Trecazzi (CST)

March 25, 2021 06:33:08 -8:00 [B2D3299CDF5A] [24.192.79.123]
 cstrecazzi@aep.com (Principal) (Personally Known)

E-Signature Notary: S. Smithhisler (SRS)


March 25, 2021 06:33:08 -8:00 [EFA5F7819686] [161.235.221.80]
 srsmithhisler@aep.com

I, S. Smithhisler, did witness the participants named above electronically sign this document.



VERIFICATION

The undersigned, Connie Trecazzi, being duly sworn, deposes and says she is a Staff Economic Forecast Analyst, Fundamentals Analysis for American Electric Power Service Corporation, that she 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 her information, knowledge and belief after reasonable inquiry.


Signed on 2021/03/25 06:33:08 -8:00

Connie Trecazzi

STATE OF OHIO

)

) Case No. 2021-00004

COUNTY OF FRANKLIN

)

Subscribed and sworn to before me, a Notary Public in and before said County and State, by
25th
Connie Trecazzi, this _____ day of March 2021.




Signed on 2021/03/25 06:33:08 -8:00

Notary Public

Notary ID Number: 2019-RE-775042

E2A95763-737D-42C1-A1E2-3AEDBC483D22 --- 2021/03/25 05:36:29 -8:00 --- Remote Notary





Whitney Verification_March 2021.docx

DocVerify ID: 437CBC41-92AC-403C-97F9-8C6F4CCDE173
Created: March 24, 2021 09:52:30 -8:00
Pages: 1
Remote Notary: Yes / State: OH

This document is a DocVerify VeriVaulted protected version of the document named above. It was created by a notary or on the behalf of a notary, and it is also a DocVerify E-Sign document, which means this document was created for the purposes of Electronic Signatures and/or Electronic Notary. Tampered or altered documents can be easily verified and validated with the DocVerify veriCheck system. This remote online notarization involved the use of communication technology.

Go to www.docverify.com at any time to verify or validate the authenticity and integrity of this or any other DocVerify VeriVaulted document.

E-Signature Summary

E-Signature 1: Heather M. Whitney (HMW)

March 24, 2021 11:38:42 -8:00 [EA614CF53D0F] [167.239.221.85]
hmwhitney@aep.com (Principal) (Personally Known)

E-Signature Notary: S. Smithhisler (SRS)

March 24, 2021 11:38:42 -8:00 [5498CA772D27] [161.235.221.80]
srsmithhisler@aep.com
I, S. Smithhisler, did witness the participants named above electronically sign this document.



VERIFICATION

The undersigned, Heather M. Whitney, being duly sworn, deposes and says she is a Director in Regulatory Accounting Services for American Electric Power Service Corporation, that she 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 her information, knowledge and belief after reasonable inquiry.

Heather M. Whitney
Signed on 2021/03/24 11:38:42 -8:00

Heather M. Whitney

STATE OF OHIO

)

) Case No. 2021-00004

COUNTY OF FRANKLIN

)

Subscribed and sworn to before me, a Notary Public in and before said County and State, by
Heather M. Whitney, this 24th day of March 2021.



S. Smithhisler
Signed on 2021/03/24 11:38:42 -8:00

Notary Public

Notary ID Number: 2019-RE-775042

437CBC41-92AC-403C-97F9-8C6F4CCDE173 --- 2021/03/24 09:52:30 -8:00 --- Remote Notary

