

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.

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

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.

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.

MAY 28, 2021 SUPPLEMENTAL RESPONSE

g. Kentucky Power determined that the capital costs supplied in KPCO_R_SC_01_16_Attachment1 were outdated capital costs that were not used in connection with the Plexos modeling described in Company Witness Becker's testimony. Please see KPCO_SR_SC_01_16_SupplementalAttachment1 for the capital costs of fossil generation resources that were made available to the Plexos for selection in connection with the modeling described in Company Witness Becker's February 8, 2021 testimony. It should be noted that the capital costs of fossil generation resources made available to the model, and described in Company Witness Becker's February 8, 2021 testimony, escalate at an average annual rate of 2.54% between 2025 and 2050.

Witness: Mark A. Becker



Becker Verification_May 26.docx

DocVerify ID: CA6FA041-56D9-4A15-878E-1C839965253C
 Created: May 26, 2021 09:56:34 -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 Becker (MAB)

May 26, 2021 10:04:32 -8:00 [9D4086BEC7CB] [167.239.2.86]
 mabecker@aep.com (Principal) (Personally Known)

E-Signature Notary: S. Smithhisler (SRS)

May 26, 2021 10:04:32 -8:00 [312E272C57E0] [167.239.2.87]
 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 Becker
Signed on 2021/05/26 10:04:32 -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, on May 26, 2021.



S. Smithhisler
Signed on 2021/05/26 10:04:32 -8:00

Notary Public

Notary ID Number: 2019-RE-775042

CA6FA041-56D9-4A15-878E-1C839965253C --- 2021/05/26 09:56:34 -8:00 --- Remote Notary

