COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC APPLICATION OF KENTUCKY POWER COMPANY FOR APPROVAL OF A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY FOR ENVIRONMENTAL PROJECT CONSTRUCTION AT THE MITCHELL GENERATING STATION, AN AMENDED ENVIRONMENTAL COMPLIANCE PLAN, AND REVISED ENVIRONMENTAL SURCHARGE TARIFF SHEETS	)))))))))	CASE NO. 2021-00004

COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION
TO KENTUCKY POWER COMPANY

Kentucky Power Company (Kentucky Power), pursuant to 807 KAR 5:001, is to file with the Commission an electronic version of the following information. The information requested herein is due on March 26, 2021. The Commission directs Kentucky Power to the Commission's March 16, 2020 and March 24, 2020 Orders in Case No. 2020-00085[1] regarding filings with the Commission. The Commission expects the original documents to be filed with the Commission within 30 days of the lifting of the current state of emergency. All responses in paper medium shall be appropriately bound, tabbed, and indexed. Electronic documents shall be in portable document format (PDF), shall be searchable, and shall be appropriately bookmarked.

Each response shall include the name of the witness responsible for responding to the questions related to the information provided. Each response shall be answered

[1] Case No. 2020-00085, *Electronic Emergency Docket Related to the Novel Coronavirus COVID-19* (Ky. PSC Mar. 16, 2020), Order at 5–6. Case No. 2020-00085, *Electronic Emergency Docket Related to the Novel Coronavirus COVID-19* (Ky. PSC Mar. 24, 2020), Order at 1–3.

under oath or, for representatives of a public or private corporation or a partnership or association or a governmental agency, be accompanied by a signed certification of the preparer or the person supervising the preparation of the response on behalf of the entity that the response is true and accurate to the best of that person's knowledge, information, and belief formed after a reasonable inquiry.

Kentucky Power shall make timely amendment to any prior response if Kentucky Power obtains information that indicates the response was incorrect when made or, though correct when made, is now incorrect in any material respect. For any request to which Kentucky Power fails or refuses to furnish all or part of the requested information, Kentucky Power shall provide a written explanation of the specific grounds for its failure to completely and precisely respond.

Careful attention shall be given to copied material to ensure that it is legible. When the requested information has been previously provided in this proceeding in the requested format, reference may be made to the specific location of that information in responding to this request. When applicable, the requested information shall be separately provided for total company operations and jurisdictional operations. When filing a paper containing personal information, Kentucky Power shall, in accordance with 807 KAR 5:001, Section 4(10), encrypt or redact the paper so that personal information cannot be read.

1. Provide a copy of the current Mitchell Plan Operating Agreement between Kentucky Power and Wheeling Power Company (Wheeling Power).

2. Identify the business entity that owns the Conner Run Fly Ash Impoundment and Dam.

3. Explain how Kentucky Power proposes to reconcile any conflict that might arise if the Kentucky Public Service Commission and the West Virginia Public Service Commission reach conflicting decisions regarding the alternative proposals for environmental compliance projects for the Mitchell Generating Station (Mitchell).

4. Provide a copy of the current power coordination agreement (PCA) among Kentucky Power and sister American Electric Power (AEP) subsidiaries filed with the Federal Energy Regulatory Commission (FERC).

5. Refer to the Application, page 3. Explain whether Kentucky Power's decision not to renew the Rockport Unit Power Agreement (UPA) is final.

6. Refer to the Direct Testimony of Brett Mattison (Mattison Testimony), page 6, lines 9–12. Also, refer to the Direct Testimony of Mark A. Becker (Becker Testimony), in general.

a. Explain whether Kentucky Power expects the Mitchell units to produce less energy in the future, once the Coal Combustion Residual (CCR) and Effluent Limitation Guidelines (ELG) rules investments have been made.

b. Explain and compare the anticipated cost of energy produced at Mitchell with the anticipated energy market clearing prices in PJM Interconnection, LLC (PJM) AEP Zone.

c. Provide a table illustrating the percentage of time per month that each Mitchell unit's bid in energy price has been equal to or below the PJM AEP Zone locational marginal price (LMP) for the previous three years.

7. Refer to the Mattison Testimony, page 8, lines 3–14. Explain when Kentucky Power began evaluating compliance strategies for the ELG and CCR Rule.

8. Refer to Mattison Testimony, page 8, lines 15–17. Confirm that Kentucky Power's capacity requirement of approximately 1,000 MW is its PJM obligation and not its requirement to meet its winter peaks.

9. Refer to Mattison Testimony, page 9, lines 1–5.

a. Confirm that Kentucky Power's customers pay the PJM AEP East Zonal LMP for energy every hour. If not, explain when and under what circumstances its customers pay a different energy price.

b. Explain how the Mitchell generating station serves as a physical energy hedge such that Kentucky Power's customers are shielded from potentially volatile energy costs.

c. Confirm that through the PCA, Kentucky Power purchases energy during the winter heating season when it does not have sufficient capacity to serve its native load and that the prices paid to sister AEP East companies is the PJM AEP East Zonal LMP. If not, explain how Kentucky Power serves its customers during the winter season when it is capacity short and what prices are paid for energy.

10. Refer to the Direct Testimony of Lerah M. Scott, page 13, line 4, and Exhibit LMS-3, page 1. Confirm that construction work in progress (CWIP) is currently included in Kentucky Power's environmental surcharge rate base in Line 1, "Utility Plant at Original Cost." If confirmed, state whether CWIP related to projects other than Project 22 would also be included in the proposed Line 13, "Construction Work in Progress (CWIP)." If this cannot be confirmed, explain whether Kentucky Power includes allowance for funds used during construction in its environmental surcharge rate base.

11. Refer to the Direct Testimony of Gary O. Spitznogle (Spitznogle Testimony), page 6, lines 3–5. Explain and describe what a bioreactor is and how it will treat flue gas desulfurization (FGD) wastewater streams.

12. Refer to Spitznogle Testimony, page 7, lines 1–7. Also, refer to the Becker Testimony, in general. Explain how each of Kentucky Power's sister AEP East operating companies in the PCA are complying with the CCR and ELG rules for each of their affected generating stations. Include in the explanation whether the cost benefit analyses for those affected generation stations were made with the same assumptions used in the Mitchell station analyses. If not, explain why not and provide a comparison of the different assumptions for each station.

13. Refer to Spitznogle Testimony, page 7, lines 1–7. Provide the docket numbers for state commission regulatory proceedings filed by AEP East operating company in the PCA that are making similar CCR and ELG compliance filings in their respective states.

14. Refer to Spitznogle Testimony, page 8, lines 13–16. Explain the "specific limitations" applicable to Kentucky Power on FGD wastewater and bottom ash transport water discharge incurred if Kentucky Power were to utilize the ELG Rule retirement option.

15. Refer to Becker Testimony, page 3, lines 5–13.

a. Explain and compare the assumptions supporting the base and low fundamentals forecast.

b. Explain what price of carbon was used in the analyses and whether the same price has been used on all other AEP East PCA operating companies' CCR or ELG compliance cost benefit analyses. If not, explain the differences.

c. Refer also to the Direct Testimony of Connie S. Trecazzi, page 7, lines 5–17. State whether Kentucky Power has determined the likelihood of an additional cost associated with CO_2 emissions.

16. Refer to Becker Testimony, page 4, lines 1–4, and page 11, lines 1–4. Explain whether modeling CCR or ELG compliance cost benefit analyses on a combined unit basis at the PCA level was conducted, and whether this type of analysis would result in different outcomes as opposed to modeling on an individual generation station basis.

17. Refer to Becker Testimony, page 4, lines 1–4. Explain whether the AEP East companies participating in the PCA possess sufficient generation capacity to cover the retirement of any one fossil unit affected by CCR and ELG compliance.

18. Refer to Becker Testimony, page 5, lines 11–19.

a. Explain whether there are any known or anticipated generation unit retirements within the AEP East Zone or neighboring Zones as a result of CCR and ELG compliance requirements.

b. Explain how the forward energy and capacity prices within the AEP East Zone are being affected by anticipated CCR and ELG compliance actions.

c. Because purchased power is procured on an hourly basis at the AEP East Zone LMP, explain how the energy value of resources were netted out of purchased power costs. Include in the explanation how the energy value of resources and the purchased power costs were determined.

19. Refer to Becker Testimony, page 5, lines 10–23 and page 6, lines 1–17.

a. Explain whether all Mitchell retirement costs were included in the analysis, and if not, explain why not.

b. Provide tables illustrating the capability, load, and reserve (CLR) analyses results annually over the forecast period.

c. Confirm that the peak demand target is the PJM minimum capacity reserve margin requirement and is not based on Kentucky Power's winter peak or historic peak.

d. If not provided elsewhere, explain what wide range of resource options were considered in the analyses.

e. Explain whether transmission upgrades or other transmission related costs were considered in the analyses. If included, provide the transmission related costs included in the analyses. If not included, explain why the transmission related costs were not included in the analyses.

f. Explain the potential or estimated effects that CCR and ELG compliance is having or is expected to have on fuel prices, and whether these effects were included in the analyses.

g. Explain whether the Unity Aluminum (formerly known as Braidy Industries) rolling mill is still forecasted to be completed and whether this will require an increase in Kentucky Power's capacity requirement.

20. Refer to the Becker Testimony, page 8, lines 19–20. Explain the statement, "The cumulative net savings under Case 2 (CCR Only) reaches between $62 million and $139 million by 2050."

21. Refer to Becker Testimony, page 9, lines 2–3. Describe any foreseeable circumstances (if any), barring CCR or ELG compliance, in that the Mitchell plant would retire prior to the 2040 planned date under Case 1.

22. Refer to Becker Testimony, page 11, lines 18–22. Explain what rate was used to produce the levelized values in the Plexos model.

23. Refer to Becker Testimony, page 12, lines 1–8.

a. Explain what different revenue streams and charges are received as a result of the Mitchell units' operation and participation in PJM. Include in the explanation the associated revenue and charge PJM billing line item codes.

b. Explain whether the same potential revenue streams and charges were also attributed to the potential replacement resources in the Plexos modeling, and if not, explain why.

24. Refer to Becker Testimony, page 14, Table 3, and page 15, lines 1–14. Explain whether the small modular nuclear power plant and the ultra-super critical coal unit were the only resource options not included in the analysis.

25. Refer to Becker Testimony, page 15, lines 9–23.

a. Explain how economic market capacity and energy opportunities are being modeled.

b. Explain whether Kentucky Power is aware of any economic market capacity or energy opportunities that may exist either inside or outside the AEP East companies.

c. Because Kentucky Power does not have sufficient capacity to cover all its energy needs during the winter, explain whether the potential capacity and energy available to Kentucky Power through the PCA has been incorporated into the modeling.

d. Because the Rockport UPA was a multiyear purchase power agreement (PPA), explain the rationale for modeling only single year PPAs and as capacity only.

26. Refer to Becker Testimony, page 16, lines 6–23, and page 17, Table 4.

a. Given the uncertainty and risk introduced into the modeling, explain why it is reasonable to include a continuing series of one year capacity only PPAs when the capacity replacement exercise is a long-term capacity problem.

b. Explain how the additional risk and uncertainty introduced into the model solutions compares to model runs without the PPA option, and how Kentucky Power would mitigate the uncertainty and risk.

c. Explain whether the capacity values for solar and wind listed in Table 4 are what would be counted toward Kentucky Power's PJM required minimum reserve margin or are the values nameplate capacity.

d. Since renewable resources are intermittent and the PPA is capacity only, under the Case 1 and Case 2 scenarios in Table 4, explain and show on a monthly basis how each of the six solutions satisfy Kentucky Power's energy needs. Include in the explanation the role that the PCA plays in satisfying energy needs.

e. Explain when the resources listed in Table 4 would come online in each of the six scenarios once Big Sandy Unit 1 and then Mitchell facilities are retired.

27. Refer to Becker Testimony, page 17, Table 4; page 18, lines 19–28; and page 19, lines 8–10.

a. Under the three scenarios included in Case 1 on Table 4, Kentucky Power retires both of its baseload units and replaces that with natural gas peaking units, intermittent renewable generation and a series of one year capacity only PPAs. Explain why and how each of the three scenarios satisfies PJM's minimum capacity reserve margin analysis.

b. Because the Case 1 scenarios would result in a very heavy reliance on the PJM energy market for the energy needed to serve customers and up to roughly one-third of its capacity would be provided through one year capacity-only PPAs, explain whether Kentucky Power is going to alter its participation in PJM from Fixed Resource Requirement (FRR) to Capacity Market (RPM).

28. Refer to the Becker Testimony, page 17, Table 4; page 19, lines 13–15; and page 20, lines 1–23.

a. Explain whether the modelling for CCR and ELG compliance analyses for the Amos Generating Station (Amos) owned by Appalachian Power Company also selected some combination of natural gas peaking units, intermittent renewable resources, and one year capacity-only PPAs as optimal solutions for the potential retirement of the Amos similar to Table 4. If not, provide the table analogous to Table 4 that was filed in the Amos environmental compliance project case pending in the West Virginia Public Service Commission.

b. Explain whether the estimated transmission system upgrade costs from the retirement of Amos and Mitchell are based on the no replacement resources being made or after one of the scenarios in Table 4 plus the addition of any replacement resources for the Amos station.

29. Refer to Becker Testimony, page 21, lines 12–21. Explain how a cost advantage of siting gas assets at the Mitchell and Amos plant locations versus resources located elsewhere was incorporated into the modeling.

30. Explain whether the retirement of Big Sandy Unit 1 has any effect on the integrity of the transmission system.

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