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PUBLIC SERVICE
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COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

Application of Kentucky Power Company for Approval of)
its Environmental Compliance Plan, Approval of its Amended) CASE NO. 2011-00401
Environmental Cost Recovery Surcharge Tariffs, and for the)
Grant of Certificates of Public Convenience and Necessity)
for the Construction and Acquisition of Related Facilities)

INTERVENORS TOM VIERHELLER, BEVERLY MAY, AND
SIERRA CLUB SUPPLEMENTAL REQUESTS FOR
INFORMATION TO KENTUCKY POWER COMPANY

Intervenors Tom Vierheller, Beverly May, and Sierra Club (collectively "Movants") pursuant to the Kentucky Public Service Commission's ("Commission") December 28, 2011 Order ("December 28 Order"), propound the following supplemental requests for information on the Kentucky Power Company ("KPC") regarding KPC's application for certificates of public convenience and necessity and approval of its 2011 compliance plan that is the subject of the above captioned proceeding.

KPC shall answer these requests for information in the manner set forth in the December 28 Order and by the February 20, 2012 deadline set forth in the Appendix of the December 28 Order. Please produce the requested documents in electronic format at the offices of Sierra Club, 85 Second Street, 2nd Floor, San Francisco, CA 94105 or at such other location as may be mutually agreed upon between counsel of record.

Wherever the response to an interrogatory or request consists of a statement that the requested information is already available to the Intervenors, provide a detailed citation to the document that contains the information. This citation shall include the title of the document, relevant page number(s), and to the extent possible paragraph number(s) and/or chart/table/figure number(s).

In the event that any document referred to in response to any request for information has been destroyed, specify the date and the manner of such destruction, the reason for such destruction, the person authorizing the destruction and the custodian of the document at the time of its destruction.

DEFINITIONS

Unless otherwise specified in each individual interrogatory or request, “you,” “your,” “KPC,” or “Company” refers to Kentucky Power Company, and its affiliates, employees, and authorized agents.

“AEP” means American Electric Power

“And” and “or” shall be construed either conjunctively or disjunctively as required by the context to bring within the scope of these interrogatories and requests for production of documents any information which might be deemed outside their scope by another construction.

“Any” means all or each and every example of the requested information.

“Communication” means any transmission or exchange of information between two or more persons, whether orally or in writing, and includes, without limitation, any conversation or discussion by means of letter, telephone, note, memorandum, telegraph, telex, telecopy, cable, email, or any other electronic or other medium.

“CPCN” means certificate of public convenience and necessity

“Document” refers to written matter of any kind, regardless of its form, and to information recorded on any storage medium, whether in electrical, optical or electromagnetic form, and capable of reduction to writing by the use of computer hardware and software, and includes all copies, drafts, proofs, both originals and copies either (1) in the possession, custody or control of the Company regardless of where located, or (2) produced or generated by, known to or seen by the Company, but now in their possession, custody or control, regardless of where located whether or still in existence.

Such “documents” shall include, but are not limited to, applications, permits, monitoring reports, computer printouts, contracts, leases, agreements, papers, photographs, tape recordings, transcripts, letters or other forms of correspondence, folders or similar containers, programs, telex, TWX and other teletype communications, memoranda, reports, studies, summaries, minutes, minute books, circulars, notes (whether typewritten, handwritten or otherwise), agenda, bulletins, notices, announcements, instructions, charts, tables, manuals, brochures, magazines, pamphlets, lists, logs, telegrams, drawings, sketches, plans, specifications, diagrams, drafts, books and records, formal records, notebooks, diaries, registers, analyses, projections, email correspondence or communications and other data compilations from which information can be obtained (including matter used in data processing) or translated, and any other printed, written, recorded, stenographic, computer-generated, computer-stored, or electronically stored matter, however and by whomever produced, prepared, reproduced, disseminated or made.

Without limitation, the term “control” as used in the preceding paragraphs means that a document is deemed to be in your control if you have the right to secure the document or a copy thereof from another person or public or private entity having actual possession thereof. If a document is responsive to a request, but is not in your possession or custody, identify the person

with possession or custody. If any document was in your possession or subject to your control, and is no longer, state what disposition was made of it, by whom, the date on which such disposition was made, and why such disposition was made.

In the interest of efficiency during discovery and the hearing process, bates stamp all documents produced in response to these interrogatories and requests for production.

For purposes of the production of “documents,” the term shall include copies of all documents being produced, to the extent the copies are not identical to the original, thus requiring the production of copies that contain any markings, additions or deletions that make them different in any way from the original

“CPW” means Comparative Cumulative Present Worth

“DFGD” or “FGD” means flue gas desulfurization system

“Identify” means:

- (a) With respect to a person, to state the person’s name, address and business relationship (e.g., “employee”) to KPC;
- (b) With respect to a document, to state the nature of the document in sufficient detail for identification in a request for production, its date, its author, and to identify its custodian. If the information or document identified is recorded in electrical, optical or electromagnetic form, identification includes a description of the computer hardware or software required to reduce it to readable form.

“KPC” means Kentucky Power Company

“PJM” means PJM Interconnection LLC

“Relating to” or “concerning” means and includes pertaining to, referring to, or having as a subject matter, directly or indirectly, expressly or implied, the subject matter of the specific request.

“RTO” means Regional Transmission Organization

PRIVILEGE OR CONFIDENTIALITY

If you claim a privilege including, but not limited to, the attorney-client privilege or the work product doctrine, as grounds for not fully and completely responding to any interrogatory or request for production, describe the basis for your claim of privilege in sufficient detail so as to permit the Commission to adjudicate the validity of the claim if called upon to do so. With respect to documents for which a privilege is claimed, produce a “privilege log” that identifies the author, recipient, date and subject matter of the documents or interrogatory answers for which you are asserting a claim of privilege and any other information pertinent to the claim that would enable the Interveners or the Commission to evaluate the validity of such claims.

To the extent that you can legitimately claim that any interrogatory response or responsive document is entitled to confidentiality, the Intervenor has entered into a confidentiality agreement that would protect such response or document from public disclosure.

TIME

Unless otherwise provided, the applicable time period for each of these requests for information is January 1, 2009 to the present.

REQUESTS FOR INFORMATION

1. Please provide the Company's financial assumptions below.
 - a. Assumed inflation rate (or rates if different across different years or commodities)
 - b. Weighted Average Cost of Capital
 - c. Real discount rate
 - d. Nominal discount rate

2. Please provide any analyses prepared by the AEP Fundamentals group on the accuracy of their past projections of coal prices, natural gas prices and power prices.

3. Please identify the underlying assumptions contained in each of the 25 .FSV files for the Strategist model, provided on February 7, 2012. Which files produced the results associated with the four (4) resource alternative options shown on pages 11 and 12 of Weaver's testimony?

4. Please clearly define and reconcile the major groups of capital costs used in the Strategist model with those described in witness testimony, e.g. costs of DFGD, costs of boiler modification, costs of life extensions, etc.

5. Refer to the Comparative Cumulative Present Worth (CPW) of Options at Exhibit SCW-5, Figure 5-1.
 - a. Please confirm that the columns labeled "Delta Retrofit" refer to the difference in CPW, or "comparative" CPW, of the median value of Options 2, 3, and 4b, relative to the median value of Option 1.
 - b. Explain why Option 4a has been excluded from this Monte Carlo analysis.
 - c. Please describe if this analysis used a 15-year, 20-year, or some other length of retrofit recovery period.
 - d. Please confirm that the base case assumptions in the Strategist model, with results

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

- 14. Follow-up to response to Sierra Club initial data request 1-4.
 - a. Please confirm that the Company has performed *no other analyses* examining the need for and cost of necessary or potentially necessary capital additions to the Big Sandy plant beyond the CPCN Application at question here, the Parsons E&C dated December 30, 2004, and the Draft Special Waste Landfill Permit application for a FGD Disposal Facility as attached to Sierra Club initial data request 1-2 or available at Company's council.

- b. Please provide any analyses performed by or for the Company since 2005 examining the need for and cost of the Big Sandy 2 FGD in searchable digital copy. If analyses are in the form of excel workbooks, please provide workbooks with formulae intact.
 - c. Please provide any analyses performed by or for the Company since 2005 examining the need for and cost of mitigating wastewater effluent from the Big Sandy 2 site in searchable digital copy. If analyses are in the form of excel workbooks, please provide workbooks with formulae intact.
 - d. Please provide any analyses performed by or for the Company since 2005 examining the need for and cost of upgrading the boiler at Big Sandy 2 to handle more diverse coal sources in searchable digital copy. If analyses are in the form of excel workbooks, please provide workbooks with formulae intact.
15. Refer to the Company's response to Sierra Club initial data request 1-15, Attachment 2:
- a. Please indicate if dollars are in nominal or real, and dollar year if real.
 - b. Please indicate the expected tonnage to be obtained from each contract in each listed year.
 - c. Please indicate the annual average price of coal, in real \$/MMBtu, delivered to Big Sandy 2, expected by the Company through the CPCN analysis period, or at least 2025, whichever is longer.
16. Refer to the Company's response to Sierra Club initial data request 1-17b and 1-17h. Direct Testimony of Ranie Wohnhas, page 14 line 22 to page 15 line 5 refers to the possibility that future increased EPA standards could "...cause operation of this unit not to be economically feasible in the future". With reference to the possibility of such future increased EPA standards response 1-17b states that the Company "...does not believe it is appropriate to assume an absence of any material risk of future environmental regulations."
- a. Please confirm that these two statements indicate that the Company believes it is appropriate to assume there is a material risk of future environmental regulations that could cause operation of the Big Sandy Unit 2 not to be economically feasible in the future. If the Company cannot confirm this interpretation please explain why not.
 - b. If the Company believes it is appropriate to assume there is a material risk of future environmental regulations that could cause operation of the Big Sandy Unit 2 not to be economically feasible in the future, please explain why the Company did not analyze that risk per response 1-17h.
17. Refer to the Company's response to Sierra Club initial data request 1-17b.
- a. Please provide all analyses prepared by or for the Company to support its position that Big Sandy Unit 2 could have a useful life of 70 years;

- b. Please identify all coal units in the United States of which the Company is aware that are comparable to Big Sandy Unit 2 in terms of design, capacity, and capacity factor whose owner is projecting a useful life of 70 years operating at that capacity factor;
 - c. Produce the most recent condition or performance assessment for Big Sandy Unit 1, Big Sandy Unit 2, or both units combined.

- 18. Refer to the Company's response to Sierra Club initial data request 1-17j. If the Company expects to recover the total amount of all revenue requirements associated with Big Sandy unit from ratepayers, including all stranded investment, why is it concerned about the number of years over which it recovers that amount? (We recognize that the net present value of the total amount the Company would ultimately collect from ratepayers would be less if it collected the revenue requirements and stranded investment over a shorter number of years rather than a longer number of years).

- 19. Refer to the Company's response to Sierra Club initial data request 1-19c, Attachment 1.
 - a. Please define the purpose of the row labeled "#N/A", and detail the values found in this category of costs.
 - b. Please describe, in detail, the purpose or genesis of the \$39.7 million cost in 2003. Is it expected that this cost will be repeated?

- 20. Refer to the Company's response to Sierra Club initial data request 1- 31, Attachment 1.
 - a. Please provide a detailed explanation for the discrepancy between the Phase IIb cost estimates for the AM U1-U3 FGDs and ML U1-U2 FGDs and the actual final cost.
 - b. Please confirm that for the top four most expensive recovered projects listed in this table, the actual cost exceeded the Phase IIb cost by 18%, 20%, 7%, and 30%, respectively.
 - c. See Direct Testimony of Walton page 19, lines 12-14. Please describe how the percentage differences between the Phase IIb estimates and actual costs shown in Sierra Club initial data request 1-31 are consistent with the statement that "our confidence is further bolstered when we look at our past record of accuracy."

- 21. Refer to the Company's response to Sierra Club initial data request 1-32c-d, 8 and 9.
 - a. Please provide the Company's most recent estimate of achievable potential for cost-effective reductions from energy efficiency in its service territory based upon the tests listed in response 32c-d. If the Company has not prepared, or commissioned, such an estimate, please explain why not.
 - b. Is it the Company's position that its current programs are capturing all achievable potential for cost-effective reductions from energy efficiency in its service

territory? If yes, please provide the analyses supporting that position. If no, please explain why the Company is not capturing that full achievable potential.

22. Refer to the Company's response to Sierra Club initial data requests 1-33 and 1-34 and Direct Testimony of Scott Weaver page 7, lines 3 to 21.
 - a. Please reconcile response 33 that the Company would compare its chosen plan to other potential plans with respect to these objectives with response 34 stating the Company did not perform this assessment for the alternatives considered.
 - b. Please provide the most recent analysis in which the Company compared its chosen plan to other potential plans using any or all of those metrics.

23. Refer to the Company's response to Sierra Club initial data request 1-37, and the testimony of Scott Weaver, page 16 and Exhibit SCW-1.
 - a. Please provide the inflation rate the Company assumed in its projections
 - b. Please provide the rationale for the inflation rate the Company assumed in its projections
 - c. Please provide the discount rate the Company used in its analyses
 - d. Please provide the rationale for the discount rate the Company used in its projections

24. Refer to the Company's response to Sierra Club initial data request 1-42, Direct Testimony of Scott Weaver page 20 and Table 1-1 of Exhibit SCW-1, page 4.
 - a. Please provide the price or rate assumptions by major rate class that the Company used as inputs to its load forecast, including the units.
 - b. Please provide the rationale for the price or rate assumptions by major rate class that the Company used as inputs to its load forecast.

25. Refer to the Company's response to Sierra Club initial data request 1-43 and the Direct Testimony of Scott Weaver page 20 and Exhibit SCW-1, pages 4 to 7.
 - a. Is it the Company's position that there is no material probability that the Kentucky General Assembly will pass clean energy legislation, such as the Clean Energy Opportunity Act (HB 167), between 2012 and 2040?
 - b. If yes, please explain the basis for the Company's position.
 - c. If no, please explain why the Company did not include this possibility in its sensitivity analyses?
 - d. Is it the Company's position that there is no material probability that U.S. Congress will pass legislation between 2012 and 2040 requiring specific quantities of retail electric energy requirements to be met from renewable sources

- of energy and/or energy efficiency?
- e. If yes, please explain the basis for the Company's position.
 - f. If no, please explain why the Company did not include this possibility in its sensitivity analyses?
26. Refer to the Company's response to Sierra Club initial data request 1-49, Attachment 1 (entitled "Big Sandy 2 Major Non-Environmental Related Capital Costs") and the Attachment to the Company's response to Sierra Club initial data request 1-19d (entitled "Big Sandy Unit 2 Capital Forecast Post-Allocated, Excludes AFUDC, Non-Environmental Projects.").
- a. Please confirm that the sum of values in Attachment 1 to the Company's response to Sierra Club initial data request 1-49 between the years 2012 and 2019 is approximately \$75 million.
 - b. Please confirm that the sum of values in the Attachment to the Company's response to Sierra Club initial data request 1-19d between the years 2012 and 2019 is approximately \$43 million.
 - c. Please explain the discrepancies between these two tables.
 - d. Please indicate which set of forecast capital expenditures the Company uses for planning purposes. Please indicate which set of forecast capital expenditures the Company has used for this CPCN application.
27. Refer to the Company's response to Sierra Club initial data request 1-49, Attachment 1.
- a. Of the "Big Sandy Unit 2 Major Non-Environmental Related Capital Costs" listed in this attachment that occur prior to or in the year 2015, which costs, if any, does the Company expect are unnecessary should the unit be retired in 2015? Please cite specific project, project cost, and year.
 - b. If the sum of the values in (a) is greater than zero, how were the avoidable capital costs treated in the Strategist model?
28. Refer to the Company's response to Sierra Club initial data request 1-52f and Direct Testimony of Scott Weaver pages 22 to 30.
- a. Is it the Company's position that there is no material probability that PJM RTO will increase the percentage of wind nameplate MW-capacity it recognizes for capacity planning purposes between 2012 and 2040?
 - b. If yes, please explain the basis for the Company's position.
 - c. If no, please explain why the Company did not include this possibility in its sensitivity analyses?
29. Refer to the Company's response to Sierra Club initial data request 1-55, Direct

Testimony of Weaver, pages 31 to 48, and Exhibit SCW-4. Please reconcile response 1-55a with the testimony of Mr. Weaver on page 47, lines 19 to 22.

30. Refer to the Company's response to Sierra Club initial data request 1-57b and the Direct Testimony of Weaver, page 37, lines 4 to 6.
 - a. Did the Company evaluate locking in supplies and prices under long-term purchase power agreements for a portion of its requirements under Option 4? If not please explain why not.
 - b. If yes, please provide that analysis.
 - c. Is it Mr. Weaver's position that the power prices reported in Exhibit SCW-2 page 2 provide a reasonable estimate of the likely range of power prices through 2030? If not, please explain why not.
 - d. If yes, please reconcile that position with the characterization of the wholesale energy market in response 1-57b as "...an unpredictable market"
 - e. Is it Mr. Weaver's position that the projected cost of power under Option 1 is less uncertain, or more predictable, than the projected cost of power under Option 4? If yes, please provide all analyses prepared by or for Mr. Weaver to support that position. If not, please explain why not.

31. Refer to the Company's response to Sierra Club initial data request 1-57b and the Direct Testimony of Weaver, page 37, lines 4 to 6. Please confirm that, under Option 4, the Company would retain the flexibility to change its mix of owned capacity and purchased power in reaction to changes in load, gas prices, environmental regulations, availability and cost of renewable resources and power prices between 2012 and 2040? If not, please explain why not.

32. Refer to the Company's response to Sierra Club initial data request 1-61 and Exhibit SCW-1 Table 1-4 on page 11.
 - a. By "load" and "demand" does the Company mean retail sales and retail demand? If not, please explain these terms.
 - b. Does the positive correlation of 0.75 mean that the Company assumes retail load will increase as wholesale power prices increase, and will decrease as wholesale power prices decrease? If yes, please provide the analyses and rationale supporting that assumption.
 - c. Please reconcile the positive correlation of 0.75 assumed between retail load and wholesale power prices with the price elasticity assumed in the Company's forecast of retail load.

33. Refer to the Company's response to Sierra Club initial data request 1-65. "In addition, the

combustion turbine and turbine hardware have a limited life in that they can only be repaired a finite number of times. Hence, after the maximum number of repairs for a given part is reached, it generally must be replaced at a fairly high cost.”

- a. Please quantify the term “limited life”. How many years or stop-start cycles does the Company assume “cost[ly]” combustion turbine components may be used for?
 - b. Please quantify the term “fairly high cost”.
 - c. Please provide an expected timeline of maintenance costs and replacement costs at existing CC facilities in the PJM region.
 - d. Please provide any utility, industry, or contractor paper, analysis, presentation or other materials to the “emerging concern” referenced in the Direct Testimony of Weaver, p. 41 lines 17-20.
34. Refer to the Company’s response to Sierra Club initial data request 1-68, and the Direct Testimony of Scott Weaver page 47 line 15 through page 48 line 2 and SCW-5.
- a. Please provide all inputs to the Aurora model, in machine readable format.
 - b. Please provide the distribution assumed for each of the six key risk factors considered by the Aurora model, in machine readable format.
 - c. Please provide the rationale supporting each of the distributions assumed for each of the six key risk factors.
35. Refer to the Company’s response to Sierra Club initial data request 1-69 and Exhibit SCW-5 regarding the use of Aurora to test the sensitivity of the Company’s four options.
- a. Please provide all inputs to the Aurora model in operational, electronic format.
 - b. Please provide all outputs from the Aurora model, by year, in operational, electronic format.
 - c. Please provide all inputs used to prepare Exhibit SCW-5, by year, in operational, electronic format.
 - d. Please provide all workpapers used to prepare Exhibit SCW-5 in operational, electronic format.
36. Refer to the Company’s response to Attorney General initial data request 1-12.
- a. Please provide the analyses underlying the Company’s estimate of a gas price elasticity of 1.
 - b. Please reconcile the Company’s correlation between gas prices and electric load in Table 1-4 of Exhibit SCW-1 with a gas price elasticity of 1.
37. Refer to the Company’s response to Staff initial data request 1-3.
- a. When does the Company expect to execute a replacement pool agreement?

- b. Please provide the Company's evaluation of the replacement pool agreement when it has completed that evaluation.

- 38. Refer to the Company's response to Staff initial data request 1-65. Please reconcile the Company's long-term goal of maintaining a generation presence in eastern Kentucky with its response to Sierra Club initial data request 52 regarding the possibility of replacing Big Sandy 2 with capacity from the Mitchell units in West Virginia.

- 39. Refer to the Company's responses to Staff initial data requests 1-68 and 1-71, Sierra Club initial data request 1-47, and Attorney General initial data request 1-13 regarding the use of Aurora to develop projections of wholesale power prices.
 - a. Please provide all inputs to the Aurora model for that simulation in operational, electronic format.
 - b. Please provide all outputs from the Aurora model for that simulation, by year, in operational, electronic format.

- 40. Identify any transmission grid upgrades or additions that would be needed to avoid transmission grid reliability, stability, or voltage support problems that could result from the retirement of Big Sandy Unit 1, Big Sandy Unit 2, or both units. For each such upgrade or addition, identify the cost of such upgrade or addition.

- 41. Produce a copy of any assessment or study prepared or reviewed by or for the Company that examines the impact that retirement of Big Sandy Unit 1, Big Sandy Unit 2, or both units would have on capacity adequacy, transmission grid stability, transmission grid support, voltage support, or transmission system reliability.

- 42. Produce a copy of any assessment or study prepared or reviewed by or for the Company that evaluates what, if any, transmission grid upgrades would be necessary to allow for the retirement of Big Sandy Unit 1, Big Sandy Unit 2, or both units.

- 43. Describe in detail the status of any communications with the PJM RTO with respect to the retirement or potential retirement of Big Sandy Unit 1, Big Sandy Unit 2, or both units. Produce any documents regarding or related to such communications, including any PJM analysis of the reliability impacts of such retirements or potential retirements.

- 44. Refer to Weaver testimony at pp. 11-12. For each of the four options identified therein,

identify the resulting rate base, total revenue, and return on equity for the Company.

45. Refer to Weaver testimony at pp. 11-12. Produce a copy of any assessment or evaluation of the impact of any or all of the options identified therein on KPC's rate base, revenue, or return on equity.
46. Refer to Weaver testimony at pp. 11-12 and Wohnas page 6. For each of the four options identified by Mr. Weaver:
 - a. Indicate the portion of annual revenue requirement that the Company proposes, or would propose, to recover through its environmental surcharge and the portion it proposes, or would propose, to recover through base rates and through its fuel cost rate adjustment respectively
 - b. Provide the rationale for the proposed cost recovery rate mechanisms for each option.
47. Refer to the testimony of Wohnas at pages 14-15 and to the Company's response to Sierra Club initial data request 17. Identify the sources of capacity and energy that the Company would use to replace Big Sandy Unit 2 if that unit were retired in 2030.

Respectfully submitted,



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Dated: February 8, 2012

CERTIFICATE OF SERVICE

I certify that I mailed a copy of Intervenor Tom Vierheller, Beverly May, and Sierra Club Supplemental Requests for Information by first class mail on February 8, 2012 to the following:

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