

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

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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)

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

Proposed Intervenor 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 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 January 27, 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 Proposed Intervenor, 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.

The Proposed Intervenor reserves the right to serve supplemental, revised, or additional discovery requests as permitted in this proceeding.

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.

“CAPP” means Central Appalachian Coal

“CSAPR” means the Cross-State Air Pollution Rule.

“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.

“CO₂” means carbon dioxide.

“CONE” means net cost of new entry

“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 Companies regardless of where located, or (2) produced or generated by, known to or seen by the Companies, 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

“DOJ” means the United States Department of Justice

“DSM” means demand-side management programs including demand-response, interruptible load, and efficiency programs.

“EPA” or “US EPA” means the United States Environmental Protection Agency

“GHG” means greenhouse gas

“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.

“ILB” means Illinois Basin Coal

“IRP” means Integrated Resource Plan

“Kentucky DEP” means the Kentucky Department of Environmental Protection

“KPC” means Kentucky Power Company

“kWh” means kilowatt-hours.

“MW” means megawatt.

“MWh” means megawatt-hours.

“NAPP” means Northern Appalachian coal

“NOx” means nitrogen oxides

“NSR” means New Source Review

“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.

“RPM” means reliability pricing model

“RRaR” means Revenue Requirement at Risk profile

“RTO” means Regional Transmission Organization

“SOx” means sulfur oxides

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 Proposed Intervenors 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 Proposed Intervenors are willing to enter 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 all reports, memoranda, presentations, or other documents provided to stockholders, investors, banks, investment firms, investment brokers or dealers, investment analysts, bond rating agencies from either KPC or AEP or the like between 2005 and 2012 (inclusive) including:
 - a. the environmental compliance status of either unit of the Big Sandy plant,
 - b. past, present or future environmental compliance of the Big Sandy plant,
 - c. litigation or settlements concerning the Big Sandy plant, to the extent not covered by attorney-client privilege,
 - d. past, present or future need for the Big Sandy plant, or the need for or plans for capital additions to the Coal Plants, whether for environmental compliance or otherwise, and
 - e. any other matter that could affect the costs or output of the Big Sandy plant.
 - f. To the extent not already provided in response to the above request, please provide any agendas, handouts, minutes, documents prepared for or resulting from each meeting of KPC or AEP with stockholders, investors, banks, investment firms, investment brokers or dealers, investment analysts, bond rating agencies or the like at which the matters listed above were discussed in any way.
 - g. Please continue to provide any such documentation as listed in (a)-(f) above as generated in 2012 on a regular basis.
2. To the extent not already provided in response to this request or another, please provide any analyses, performed by or for KPC or AEP during the past seven years, of the need for the Big Sandy plant, the need for and cost of necessary or potentially necessary capital additions to the Big Sandy plant, or the environmental effects of and risks from continued operation of the Big Sandy plant. If already provided in response to another request, please identify the request and the relevant document provided.
3. Please provide a non-redacted, full color or original digital copy of any Integrated Resource Plans constructed and/or filed by either KPC or AEP between 2005 and 2012.
4. Please provide any strategic documents generated between 2005 and 2012 (inclusive) by company or other parties working for the company regarding mechanisms by which the company could or should comply with environmental regulations, including air quality compliance planning, water quality planning, and solid waste compliance planning.
5. Please provide any technical documents generated between 2005 and 2012 (inclusive) by company or other parties working for the company regarding mechanisms by which the company could or should comply with environmental regulations, including air quality compliance planning, water quality planning, and solid waste compliance planning.
6. To the extent that such documents are not already in the public record, and not covered by attorney-client privilege, please provide copies of email and hard-copy correspondence, presentations, and other data shared with the US EPA, DOJ, and the Kentucky DEP regarding the Company's environmental retrofits and environmental

planning for air, water, and solid waste environmental compliance. Provide documentation from 2007 through 2012, inclusive.

7. Please provide a record of all correspondence covered by attorney-client privilege with the agencies listed in the above request, including correspondent, subject, date, and medium of correspondence.
8. Please describe current demand-side management (DSM) programs offered by AEP and KPC, including demand-response, interruptible load, and efficiency programs. Please note the cost, MW or MWh reductions, expected life, and penetration of these programs.
9. Please describe proposed DSM programs to be offered by AEP and KPC, including demand-response, interruptible load, and efficiency programs. Please note the cost, MW or MWh reductions, expected life, and penetration of these programs. Please describe if or how these programs are incorporated into the current case, and provide workpapers showing such, if applicable.
10. Please provide any DSM potential studies performed by or for AEP and/or KPC in the last five years, including attendant workbooks or calculations. Please describe if or how these studies are incorporated into the current case. If they are not, why not?

Witness Wohnhas

11. Direct Testimony of Ranie Wohnhas, page 8, lines 13 to 17.
 - a. Please provide all assumptions and workpapers underlying the estimate of lost jobs and compensation presented on lines 13 and 14.
 - b. Is the estimate of existing jobs lost due to retiring Big Sandy Unit 2 net of new jobs that would be created by the operation of a replacement gas unit? If no, why not? If yes, please demonstrate how those new jobs were estimated and considered.
 - c. Please provide all assumptions and workpapers underlying the estimate of reduced payroll and property taxes presented on line 17.
12. Direct Testimony of Ranie Wohnhas, page 8, lines 17 to 21.
 - a. Please provide all assumptions and workpapers underlying the estimate of the direct and indirect economic impact of sales of Kentucky coal to the Big Sandy plant presented on lines 19 to 21. Please disaggregate these estimates between coal sales to Unit 1 and coal sales to Unit 2.
 - b. Please provide the quantity of Kentucky coal the Company has purchased for Big Sandy Unit 1 and Unit 2 respectively in the most recent five calendar years for which statistics are available.
 - c. Is it Mr. Wohnhas' position that replacement of generation from Big Sandy Unit 2 with generation from a new gas unit would eliminate 100 percent of the direct and indirect economic impact of sales of Kentucky coal to the Big Sandy plant presented on lines 19 to 21. If no, what is Mr. Wohnhas position?
 - d. Does Mr. Wohnhas agree that Kentucky coal mining companies could sell the

annual quantity of coal they have historically sold to Big Sandy Unit 2 to customers in other states if Big Sandy Unit 2 is retired? If Mr. Wohnhas does not agree please provide all analyses upon which Mr. Wohnhas bases his answer.

13. Direct Testimony of Ranie Wohnhas, page 9, lines 3 to 13.
 - a. Please provide the preliminary analysis noted on line 8, with all supporting assumptions and calculations.
 - b. Please reconcile the testimony of Mr. Wohnhas regarding socio-economic benefits of continuing to operate Big Sandy Unit 2, rather than replace it with a gas unit, with the Company's June 9, 2011 announced intention to replace the Big Sandy units with a gas unit.
14. Direct Testimony of Ranie Wohnhas, page 9, says that the Company is planning to make boiler modifications to allow the burning of coal with a sulfur content of 4.5 lbs/mmBtu. Has the cost of these boiler modifications been factored into KPC's analysis?
15. Direct Testimony of Ranie Wohnhas, page 10, lines 2 to 22
 - a. Please describe, in detail, the "current environmental permits" applied to the boiler that "limit the Plant's possible fuel options", and how a new boiler would mitigate those concerns.
 - b. Please describe, in detail, the "physical limitations of the boiler" that "limit the Plant's possible fuel options."
 - c. Please provide any analyses performed by or for the Company on the expected life of the existing boiler.
 - d. Are there other end-of-life or maintenance issues that prevent the current boiler from being utilized in future years up to the expected life of the plant?
 - e. Please provide the annual price of coal delivered to Big Sandy from 2000 through 2012, inclusive, and the average sulfur content of that coal.
 - f. Please list KPC's long-term coal contracts, and details of the contracts, including the length of contract, source of coal, heat and sulfur content of the coal, and the expected annual cost (in \$/ton, nominal or real [specify]) of the coal over the term of the contract.
16. Direct Testimony of Ranie Wohnhas, page 10, lines 18 to 22.
 - a. Please confirm that if the Company used a 50/50 blend of either NAPP or ILB coals with CAPP coals at Big Sandy Unit 2 the Company would reduce the quantity of Kentucky coal it would purchase for Big Sandy Unit 2 by 50 percent. If Mr. Wohnhas cannot confirm this, please explain why not.
 - b. Is it the Company's position that if the Company reduces the quantity of Kentucky coal it purchase for Big Sandy Unit 2 by 50 percent it would reduce the direct and indirect economic impact of sales of Kentucky coal to the Big Sandy plant presented by Mr. Wohnhas on page 8, lines 19 to 21, by 50 percent. If no, please explain why not.
17. Direct Testimony of Ranie Wohnhas, pages 14 and 15.

- a. Please identify the generally accepted accounting principles that apply to the determination of the time period over which the Company depreciates major capital investments, such as the capital cost of a FGD.
 - b. Please identify the time period over which the Company would propose to depreciate the cost of the FGD unit according to those generally accepted accounting principles and in the absence of any material risk of future environmental regulations.
 - c. Please identify cases in which the Public Service Commission of Kentucky has approved a 15 year time period for depreciation of a FGD.
 - d. Please identify cases in which the Public Service Commission of Kentucky has approved a time period for depreciation shorter than the one consistent with generally accepted accounting principles in order to reduce the risk of stranded investment.
 - e. Please identify cases in which the regulatory commissions in other states in which American Electric Power operates have approved a 15 year time period for depreciation of a FGD.
 - f. Please identify cases in which the which the regulatory commissions in other states in which AEP operates have approved a time period for depreciation shorter than the one consistent with generally accepted accounting principles in order to reduce the risk of stranded investment.
 - g. Please list the “increased EPA standards” that could cause operation of this unit not to be economically feasible in the future.
 - h. Please describe how the Company analyzed the risk associated with those “increased EPA standards” in its economic evaluation of resource alternatives.
 - i. Please explain how the Company would bear a portion of the risk of stranded investment if the Commission approves recovery through the environmental cost recovery surcharge, and describe the percent of the risk the Company would bear.
 - j. Please explain, with supporting illustrative calculations, how a 15 year depreciation period would reduce the risk of stranded investment that ratepayers will bear if the Commission approves recovery through the environmental cost recovery surcharge.
18. Direct Testimony of Ranie Wohnhas, pages 14 and 15.
- a. Does the Company expect to recover the net plant balance of Big Sandy Unit 2 from ratepayers at whichever point in time Unit 2 is retired? If yes, what is the basis for the Company position?
 - b. What is the projected net plant balance of Big Sandy Unit 2 as of January 1, 2015?
 - c. What is the expected salvage value of Big Sandy Unit 2 as of January 1, 2015 and what is the basis for that estimate?

Witness Munsey

19. Direct Testimony of Lila Munsey, page 10, lines 5-15.

- a. What is the undepreciated plant balance for Big Sandy Unit 1? Please provide the depreciation schedule for all capital investments not fully depreciated for this unit.
 - b. What is the undepreciated plant balance for Big Sandy Unit 2? Please provide the depreciation schedule for all capital investments not fully depreciated for this unit.
 - c. Please list the non-environmental capital expenditures incurred by KPC at the Big Sandy 2 unit from 2000-2012, inclusive and provide a description of major capital expenses (projects over \$5 million).
 - d. Please list all non-environmental capital expenditures KPC expects to incur for Big Sandy Unit 2 from 2012 through 2040, the time period for each project's depreciation, and the revenue requirements for each of the capital expenditures.
20. Direct Testimony of Lila Munsey page 12 and Exhibit LPM-2.
- a. Please provide all assumptions and workbooks, in electronic format with all calculations operational, used to prepare Exhibit LPM-2.
 - b. Please re-run the calculations underlying Exhibit LPM-2 using a depreciation rate of 3.52%
 - c. Please identify the generally accepted accounting principles that were applied to establish a depreciation rate of 3.52% for the other environmental projects in this filing.
21. Direct Testimony of Lila Munsey pages 23 and 24 and Exhibit LPM-14.
- a. Please provide all assumptions and workbooks, in electronic format with all calculations operational, used to prepare Exhibit LPM-14.
 - b. Please provide a projection of the effect on residential customers for every year of the 15 year depreciation period. Please provide all supporting assumptions and workbooks, in electronic format with all calculations operational.
 - c. Please provide a corresponding set of calculations to show the percent increase in annual billed revenues for each tariff to which the Environmental Surcharge is applicable. Please provide all supporting assumptions and workbooks, in electronic format with all calculations operational.
 - d. Please provide a projection of the effect on residential customers for every year of the 15 year depreciation period. Please provide all supporting assumptions and workbooks, in electronic format with all calculations operational.

Witness McManus

22. Direct Testimony of McManus, page 8. Please provide a fully copy of the NSR Consent Decree pertaining to the Big Sandy Unit.
23. Direct Testimony of McManus, pages. 11-12, notes that the operation of Big Sandy Units 1 and 2 will need to be constrained in order to comply with the 2012 CSAPR requirements. Did KPC or AEP consider the option of retiring Big Sandy 1 in 2012 rather than waiting until 2015 in order to help satisfy the 2012 CSAPR requirements? Did KPC or AEP evaluate? Should they have?

24. Direct Testimony of McManus, bullet point 3 on page 16 regarding GHG Legislation.
 - a. Does the Company anticipate that the Big Sandy 2 unit would be subject to the EPA's GHG Tailoring Rule?
 - b. If so, when? What impact does the Company anticipate the Tailoring Rule having on either the costs or operations of the Big Sandy 2 unit?
 - c. If not, why not?

25. Direct Testimony of McManus page 22 lines 8-10 regarding "FGD (Hg) Waste Water Treatment system installation" at the Amos Plant and Exhibit JMM-1 with description of Applicable Environmental Program with CWA NPDES.
 - a. Please provide the current NPDES permit for Big Sandy 2.
 - b. If applicable, please provide any of the Company's recent applications for changes or modifications to the NPDES permit for Big Sandy 2.
 - c. Does the Company anticipate that the pending Effluent Limitation guidelines rule could impact Big Sandy 2?
 - d. If so, what would be the expected cost of this rulemaking. If not, why?
 - e. Has a cost for the pending Effluent Limitation guidelines been taken into account modeling the cost efficacy of Big Sandy 2? If not, how would such a cost impact this analysis?

26. Direct Testimony of McManus, Exhibit JMM-1. Tanners Creek Units 1-3. Please describe the SNCR project at TC1-3 and describe in detail why the installation of the SNCR is responsive to CAIR, rather than current regulations.

Witness Walton

27. Direct Testimony of Walton page 22 at 4-12.
 - a. Please provide the "preliminary Phase I feasibility analysis" from Q3 2004
 - b. Please provide the reason that "Phase I activities ceased in second quarter 2006" and produce any Company memoranda or documents explaining the outcome of the feasibility analysis
 - c. Please provide the "refined assessment" indicated on p12, including any bids, estimates, or engineering estimates that substantiate the assertion in lines 11-12 that the "costs to retrofit Big Sandy Unit 2 had increased substantially."

28. Direct Testimony of Walton page 18, lines 14-17.
 - a. Please provide the engineering and design analyses, summaries and workpapers used to develop the cost estimates for the dry FGD at Big Sandy 2. If multiple estimates were procured by the Company, please provide all estimates.
 - b. Please provide the engineering and design analyses, summaries and workpapers used to develop comparative cost estimates for a wet FGD at Big Sandy 2. If multiple estimates were procured by the Company, please provide all estimates.
 - c. Please provide the engineering and design analyses, summaries and workpapers used to develop comparative cost estimates for landfill development work at Big

Sandy 2. If multiple estimates were procured by the Company, please provide all estimates.

- d. Please provide the engineering and design analyses, summaries and workpapers used to develop comparative cost estimates for boiler upgrades at Big Sandy 2. If multiple estimates were procured by the Company, please provide all estimates.
29. Direct Testimony of Walton page 18, lines 20-22
- a. Please provide the engineering and design estimate and final cost accounting, broken down by component, for the “most recent WFGD installation project” and the “two other recent WFGD projects” referenced here.
 - b. AEP has had some problems with recent scrubber installations at Cardinal, Conesville, Mountaineer, and Mitchell. Are those problems being addressed, and is any cost of avoiding those problems here factored in?
30. Direct Testimony of Robert L. Walton, page 18 line 20 through page 19 line 2.
- a. Please list the modifications to “reflect a DFGD installation on Big Sandy 2.” Provide reference case costs and dollar value changes for each specific component changed or modified, removed, or added.
 - b. Please list all DFGD installations used to compare the cost of installation.
 - c. Please identify other plants in the US that have fully installed and operational DFGD and the capacity of those plants.
 - d. Please identify other plants in the US that are installing or have proposed installing DFGD and the capacity of those plants.
31. Direct Testimony of Walton page 19, lines 9-12
- a. For all environmental and non-environmental capital expenditures in the AEP system exceeding \$50 million in the last seven years, please provide the initial engineering and design cost estimate, the Company’s “Phase IIb” estimate, the final selected bid price, the cost presented for recovery to Commissions in CPCN, predeterminations or rate cases, and the actual incurred cost to AEP.

Witness Weaver

32. Direct Testimony of Scott Weaver page 7, lines 3 to 21.
- a. Please describe the initiatives KPC has underway to encourage the wise and efficient use of energy.
 - b. Please describe additional initiatives KPC has under consideration to encourage the wise and efficient use of energy over the 30 year period used for its economic evaluation (2011 through 2040).
 - c. Please describe the metric that KPC uses to measure “wise” use of energy and the rationale for choosing that metric.
 - d. Please describe the metric that KPC uses to measure “efficient” use of energy and the rationale for choosing that metric.
33. Direct Testimony of Scott Weaver page 7, lines 3 to 21.

- a. Please describe the metric that KPC uses to measure “planning flexibility” and the rationale for choosing that metric.
 - b. Please describe the metric that KPC uses to measure “optimum asset mix” and the rationale for choosing that metric.
 - c. Please describe the metric that KPC uses to measure “adaptability to risk” and the rationale for choosing that metric.
 - d. Please describe the metric that KPC uses to measure “affordability” and the rationale for choosing that metric.
34. Direct Testimony of Scott Weaver page 7, lines 3 to 21 and pages 30 to 54.
- a. Please provide the Company’s assessment of the “planning flexibility” of each of the four alternative options it evaluated.
 - b. Please provide the Company’s assessment of the “optimum asset mix” of each of the four alternative options it evaluated.
 - c. Please provide the Company’s assessment of the “adaptability to risk” of each of the four alternative options it evaluated.
 - d. Please provide the Company’s assessment of the “affordability” of each of the four alternative options it evaluated.
35. Direct Testimony of Weaver, page 9 at 27-30.
- a. Please describe the elements of the “CCR-related costs” totaling \$48 million.
 - b. Are these total capital expenditures, O&M expenses, or a combination of both?
 - c. To what extent are these costs avoidable by the retirement of the Big Sandy 2 unit?
 - d. Please describe and detail the full expected costs of complying with the expected CCR rule (Subtitle D) at the Big Sandy 2 unit.
 - e. How would these costs change if the EPA were to regulate CCR under a Subtitle C designation?
 - f. Please explicitly break down forward-going incremental costs and remediation costs that are unavoidable even if Big Sandy 2 is retired.
36. Direct Testimony of Scott Weaver pages 11 and 12, Table 1
- a. Please list the hours of peak demand in which Big Sandy Unit 1 has been dispatched in the most recent five calendar years for which statistics are available, the MW dispatched and the MWH generated in each of those hours.
 - b. Please list the hours of peak demand in which Big Sandy Unit 2 has been dispatched in the most recent five calendar years for which statistics are available, the MW dispatched and the MWH generated in each of those hours.
 - c. Please provide all analyses underlying the Company’s decisions in option 2 and option 3 to assume a natural gas combined cycle (CC) plant with duct-firing for peaking purposes, rather than a CC to serve base and intermediate load and a combustion turbine unit to serve peak load.
 - d. Please provide the heat rate(s) the Company assumed for the natural gas CC

- plants with duct-firing in option 2 and option 3 respectively, and the rationale supporting those assumptions.
- e. Please list each natural gas CC unit that AEP currently owns or operates, and indicate which of those units has duct-firing.
37. Direct Testimony of Scott Weaver, page 16. Please provide the STRATEGIST input and output files, in machine readable format, for each alternative option the Company evaluated.
38. Direct Testimony of Scott Weaver page 16 and Exhibit SCW-1, pages 6 and 7.
- a. Please explain how the Company modeled energy efficiency in Strategist. If the Company did not model energy efficiency, please explain why not?
- b. Please explain how the Company modeled active demand response in Strategist.
- c. Please explain how the Company modeled passive demand response in Strategist.
39. Did the Company include an end effects period in the STRATEGIST modeling? If so, please describe that period and the basis for it?
40. Direct Testimony of Scott Weaver, page 17, lines 11-23, re proxy for long-term “g(eneration)” revenue requirement. Please confirm that STRATEGIST calculates this amount as opposed to the Company calculating it based upon model outputs. If the Company cannot confirm please explain why not.
41. Direct Testimony of Scott Weaver, page 18, lines 9-10, re the STRATEGIST model “locking-in” the timing and selection of various resources.
- a. Did the Company perform any model runs in which it made these resource options available to STRATEGIST and allowed the model to select the optimal resource portfolio?
- b. If yes, please describe the outcomes of these model runs and provide the relevant input and output files in machine readable format
- c. If not, please explain why not.
42. Direct Testimony of Scott Weaver page 20 and Table 1-1 of Exhibit SCW-1, page 4.
- a. Please provide the Company’s projection of peak demand and internal load from 2031 through 2040, and the basis for that projection.
- b. Please describe the factors driving the Company’s projection that the KPC compound rate of growth from 2021 to 2030 will be higher than from 2011 to 2020.
- c. Please provide KPC’s weather-normalized peak demand and internal load by year for 2001 through 2010, and the corresponding compound annual rate of growth for each.
- d. Please provide KPC’s actual, weather-normalized internal load by major retail rate class for 2001 through 2010,
- e. Please provide KPC’s projection of internal load by major retail rate class by year through 2030.

- f. Does the AEP Economic Forecasting projection algorithm have a price elasticity component by major retail rate class? If not, why not.
 - g. Does the forecast in Table 1-1 reflect the price elasticity impact by rate class of the increase in rates that will result from alternative option 1? If so, please explain the feedback process used in the analysis to accomplish that.
 - h. Please provide a forecast of aggregate peak demand and annual energy that reflects the price elasticity impacts by rate class of the environmental surcharge by year under the Company's proposed 15 year depreciation. Please provide all supporting assumptions and workbooks, in electronic format with operational calculations.
43. Direct Testimony of Scott Weaver page 20 and Exhibit SCW-1, pages 4 to 7.
- a. Did KPC test the sensitivity of its options to the possibility of the Kentucky General assembly passing clean energy legislation, such as the Clean Energy Opportunity Act (HB 167), which would require utilities such as KPC to achieve specified reductions from energy efficiency and to acquire specific quantities of generation from new renewable resources?
 - b. If yes, please explain how the Company evaluated this possibility.
 - c. If no, please explain why not.
44. Direct Testimony of Scott Weaver page 20 and Exhibit SCW-2, page 2. Emission allowance prices under CSAPR.
- a. Please provide the projection of allowance prices for emissions of SOx and NOx respectively the Company used as inputs to Strategist.
 - b. Please provide all analyses and research reviewed and/or prepared by the Company underlying its projection of allowance prices for emissions of SOx and NOx respectively.
45. Direct Testimony of Scott Weaver page 20 and Exhibit SCW-2, page 2. CO2 prices.
- a. Please provide all analyses and research reviewed and/or prepared by the Company underlying its "base" fleet assumption for CO2 prices from 2022 through 2040.
 - b. Please provide all analyses and research reviewed and/or prepared by the Company underlying its "FT-CSAPR: Higher Band" assumption for CO2 prices from 2022 through 2040.
46. Direct Testimony of Scott Weaver page 20 and Exhibit SCW-2, page 2. Coal prices.
- a. Please provide all analyses and research reviewed and/or prepared by the Company underlying its "base" fleet assumption for NAPP and CAPP coal prices respectively.
 - b. Please provide the estimate of transport costs and other incurred costs between mine mouth prices for NAPP and CAPP coal, and Big Sandy 2. Provide analysis and research reviewed and/or prepared by the Company supporting such estimates.

47. Direct Testimony of Scott Weaver page 20 and Exhibit SCW-2, page 2. PJM on-peak and off-peak energy prices.
- a. Please provide all analyses and research reviewed and/or prepared by the Company underlying its “base” fleet assumption for on-peak energy (PJM-AEP Gen hub) from 2015 through 2040.
 - b. Please provide all analyses and research reviewed and/or prepared by the Company underlying its “FT-CSAPR: Upper Band” and “FT-CSAPR: Lower Band” assumptions for on-peak energy (PJM-AEP Gen hub) from 2015 through 2040.
 - c. Please provide all analyses and research reviewed and/or prepared by the Company underlying its “base” fleet assumption for off-peak energy (PJM-AEP Gen hub) from 2015 through 2040.
 - d. Please provide all analyses and research reviewed and/or prepared by the Company underlying its “FT-CSAPR: Upper Band” and “FT-CSAPR: Lower Band” assumptions for off-peak energy (PJM-AEP Gen hub) from 2015 through 2040.
48. Direct Testimony of Scott Weaver page 20 and Exhibit SCW-2, page 2. PJM RPM capacity prices.
- a. Please provide all analyses and research reviewed and/or prepared by the Company underlying its “base” fleet assumption for capacity value (PJM-RTO RPM) from 2015 through 2040.
 - b. Please provide all analyses and research reviewed and/or prepared by the Company underlying its “FT-CSAPR: Lower Band” assumption for capacity value (PJM-RTO RPM) from 2015 through 2040.
49. Direct Testimony of Scott Weaver page 21.
- a. For Option 1, please provide the assumptions used as inputs to Strategist for the major non-environmental related capital costs KPC expects to incur in order to keep Big Sandy Unit 2 running through 2040, e.g. boiler rebuilds, superheaters, reheaters, or waterwall tubes, etc.
 - b. If KPC did not assume any future non-environmental capital costs for Option 1 please explain why not.
 - c. Please provide all major non-environmental related capital costs KPC incurred by year from 2002 through 2011.
50. Direct Testimony of Weaver, Exhibit SCW-1.
- a. Did the Company include plant retirement/decommissioning costs?
 - b. If yes, please provide the assumed costs and explain how the Company modeled them in Strategist.
 - c. If no, why not?
51. Direct Testimony of Scott Weaver, Table 1 and pages 23 to 30
- a. Please provide all analyses underlying the Company’s decision to assume the four

alternative options summarized in Table 1, as opposed to other possible alternative options.

- b. Please explain why the Company did not choose to evaluate an alternative option in which it would retire Big Sandy units 1 and 2 and replace them with a mix of “steel in the ground” gas CC units and purchases, but starting with a lower initial quantity of new gas CC capacity coming into service January 2016, for example 350 MW, followed by a second addition on new gas CC capacity coming into service five years later?
- c. Has the Company had any discussions with LG&E and KU regarding joint development of a gas CC unit to come into service in 2016 and an additional unit to come into service a few years later? If so, please document those discussions. If not, why not.

52. Direct Testimony of Weaver, Table 1 and pages 23 to 30. Has the Company considered any other alternatives aside from Options 1-4?

- a. If so, please provide detailed descriptions of all other alternatives considered, the level to which they were considered (i.e. discussion only, analysis, modeling, etc...), and any analytical work, such that it exists, that examined the cost efficacy of these other alternatives.
- b. If so, please provide any analytical work that supports the non-consideration of those alternatives in the final four options presented here.
- c. If not, why not?
- d. Has the Company considered the cost effectiveness of replacing Big Sandy with capacity-only replacement, such as combustion turbine without combined cycle capacity?
- e. Has the Company considered the cost effectiveness of replacing Big Sandy with a mixture of capacity and energy resources, such as a mix of combustion turbines and combined cycle capacity?
- f. Has the Company considered the cost effectiveness of replacing Big Sandy with any combination of fossil resources and renewable energy purchases in either the short or long-term (i.e. immediately, up to 5 years as in Option 4A, or up to 10 years as in Option 4B)?
- g. Has the Company considered the cost effectiveness of replacing Big Sandy with any combination of fossil resources and energy efficiency, demand response, or other demand-side management acquisitions or programs?
- h. If the answer to any of (d)-(e) is yes, and as not otherwise provided in answer to (a) or (b), please provide any workpapers showing the scenario considered, the expected costs of the scenario, and any model results from comparing the scenario against other alternatives.

53. Direct Testimony of Weaver, page 11 and 12, page 53 and Exhibit SCW-1 pages 3 to 6.

- a. Please indicate the annual capacity and annual generation the Company has obtained by source in each of the most recent 5 calendar years.
- b. Please indicate the capacity and annual generation the Company projects it would

obtain from Big Sandy Unit 1 in each year, 2011 through 2030, if it were not to retire the unit; if this answer differs for different scenarios, please provide the answer for each scenario.

- c. Please provide the Company's projected mix of capacity and generation by source through 2030 under alternative option 1, e.g. capacity and generation from owned units, capacity and generation from the AEP fleet, purchases of firm capacity and of generation.
 - d. Please provide the Company's projected mix of capacity and generation by source through 2030 under alternative option 2, e.g. capacity and generation from owned units, capacity and generation from the AEP fleet, purchases of firm capacity and of generation.
 - e. Please provide the Company's projected mix of capacity and generation by source through 2030 under alternative option 3, e.g. capacity and generation from owned units, capacity and generation from the AEP fleet, purchases of firm capacity and of generation.
 - f. Please provide the Company's projected energy and peak load requirement, broken down by sector, through 2030.
 - g. At what date in the future does KPC expect to require additional capacity should Big Sandy 2 not be retired?
 - h. At what date in the future does KPC expect to require additional capacity should Big Sandy 2 be retired?
 - i. At what date in the future does KPC expect to require additional energy should Big Sandy 2 not be retired?
 - j. At what date in the future does KPC expect to require additional energy should Big Sandy 2 be retired?
54. Direct Testimony of Direct Testimony of Weaver, pages 31 to 48, and Exhibit SCW-4.
- a. Please list each combination of commodity pricing scenarios the Company used to test the sensitivity of its "base" evaluation, e.g. "lower band" natural gas plus "early carbon", or "higher band" natural gas plus "no carbon"
 - b. Please provide the results of each combination of commodity pricing scenarios the Company used to test the sensitivity of its base evaluation.
55. Direct Testimony of Direct Testimony of Weaver, pages 31 to 48, and Exhibit SCW-4.
- a. At what cumulative present worth ("CPW") would the Company consider the retrofit of Big Sandy 2 statistically indifferent to any of the other Options?
 - b. What is the basis for choosing that level of difference?
56. Direct Testimony of Direct Testimony of Weaver, page 35, lines 1 to 17.
- a. Please provide all assumptions and calculations, including the source workbooks in operational format, supporting the calculation of \$4.49 per month.
 - b. Please provide the absolute levelized G-rate impact a residential customer using 1,000 kWh per month would experience under alternative option 1. Please include all assumptions and calculations, including the source workbooks in operational

- format, supporting the calculation
- c. Please provide the absolute levelized bill of a residential customer using 1,000 kWh per month for all revenue requirements excluding alternative option 1. Please include all assumptions and calculations, including the source workbooks in operational format, supporting the calculation
57. Direct Testimony of Direct Testimony of Weaver, page 37, lines 4 to 6.
 - a. Does Mr. Weaver agree that alternative Options 1, 2 and 3 each commit the Company to a major, front-end capital investment by 2016? If not, why not.
 - b. Does Mr. Weaver agree that under either of alternative Options 1, 2 and 3 the Company has little or no flexibility to respond to uncertainties in load, fuel prices, emission prices, reductions in generating technology costs or future environmental regulations from 2017 through 2040. If not, why not.
 58. Direct Testimony of Direct Testimony of Weaver, page 39 and 40. Please explain why Mr. Weaver does not believe the Company's banding and sensitivity analyses fully address the risks he lists on page 39 line 12 through page 40 line 3.
 59. Direct Testimony of Direct Testimony of Weaver, page 37, lines 4 to 6.
 - a. Does Mr. Weaver consider uncertainty in peak demand and/or annual internal retail load to be a source of economic risk through 2040? If not, why not.
 - b. Does Mr. Weaver consider the possibility of a major reduction in the cost of electricity from sources other than coal and natural gas to be a source of economic risk through 2040? If not, why not.
 60. Direct Testimony of Direct Testimony of Weaver page 51, lines 15-17
 - a. Please explain under what circumstances an SCR unit would be required to meet the "proposed EGU MACT rulemaking"
 - b. Does this answer change in light of the final MATS rulemaking?
 61. Direct Testimony of Scott Weaver page 6, lines 12 to 20 and Exhibit SCW-1.
 - a. Please provide all assumptions and workpapers underlying the assumed variable correlations found in Table 1-4 on page 11 of SCW-1.
 - b. Please explain why natural gas prices are assumed to have a negative correlation with a CO₂ Emission Price/Tax, whereas coal prices have a positive correlation with a CO₂ Emission Price/Tax.
 - c. Please explain why power prices are assumed to have a negative correlation with a CO₂ Emission Price/Tax.
 62. Direct Testimony of Scott Weaver pages 11 and 12, Table 1.
 - a. Did KPC pursue fractional ownership of any new fossil fuel generation units proposed or discussed by other nearby utilities as referenced in those companies' IRP, CPCN, or other planning documents?
 - b. Did KPC make any attempt to secure partners in the construction and operation of new fossil fuel generation units?

- c. Should KPC pursue Option #4A or Option #4B, would KPC preserve the possibility of installing environmental upgrades on Big Sandy Unit 1 or Big Sandy Unit 2 at some future date (e.g. 2020, 2025, or some other date) if the assumptions related to coal prices, natural gas prices, installation costs of new generators or environmental controls, energy or peak load forecasts, the price of procurement of electricity on the PJM market, carbon prices, future environmental regulations, or any other model input or inputs proved inaccurate whereby a similar analysis performed then in fact did demonstrate that installing environmental controls was at that future date more economical than constructing new natural gas generation and/or acquiring replacement market capacity and energy from the PJM markets?
63. Direct Testimony of Scott Weaver page 31, lines 10 to 22.
- a. Has KPC commissioned any independent analysis of the potential for future “operational issues” at Big Sandy Unit 2? If so, please provide those reports.
 - b. For how many years was Big Sandy Unit 2 designed to operate? For how many more years does KPC expect to operate Big Sandy Unit 2 if retrofitted? If so, please provide those reports.
 - c. Has KPC commissioned any independent studies to determine expected future capital and operational non-fuel expenses with or without the environmental retrofits? If so, please provide those reports.
 - d. Has KPC commissioned any independent studies to determine the heat rates of Big Sandy Unit 1 and Big Sandy Unit 2 as they age, with or without the environmental retrofits? If so, please provide those reports.
 - e. Has KPC commissioned any independent studies to determine the probability of a future catastrophic failure of a component or components of Big Sandy Unit 2, resulting in a necessity to shutter the plant for an extended time period while major repairs are undergone? If so, please provide those reports.
 - f. Has KPC commissioned any independent studies to determine the probability of a future catastrophic failure of a component or components of Big Sandy Unit 2 which are so severe that repairing the plant would be uneconomic? If so, please provide those reports.
64. Direct Testimony of Scott Weaver pages 39 and 40.
- a. Please provide an example of the price of capacity exceeding CONE “in a consistent basis” within PJM or any other electricity capacity market within the United States.
 - b. With respect to Options #4A and #4B, has KPC actually pursued short or long term bilateral agreements to procure capacity or energy in an effort to mitigate the “pricing uncertainty and economic risks” associated with an increase (or decrease) in the price of energy or capacity in the PJM market in future years?
65. Direct Testimony of Scott Weaver pages 41 at 17-20.
- a. Please show analyses performed by or for KPC or AEP, or used by the Companies, that indicate that “there is an emerging concern that these [CC]

facilities will soon be facing significant, time-based turbine inspections and expensive re-builds..." etc.

66. Direct Testimony of Weaver, pages 43-45
 - a. Please confirm that "break-even" is considered "zero dollars" as stipulated on p43 line 11.
 - b. Is there another dollar amount (positive or negative) that the Company would consider effectively "break-even" that is not exactly "zero"? If so, what value would that be? Provide justification, if applicable.

67. Direct Testimony of Scott Weaver pages 47 and 48.
 - a. Does the Monte Carlo simulation and RRaR profile formulated by KPC reflect an opportunity for the company to effectively switch from Option #4A or #4B to Option #1 at any future date within the simulation should the already incurred and future "G"-cost shift considerably in Option 1's favor at any point in the model's simulated time within the given model run?

68. Direct Testimony of Scott Weaver page 47 line 15 through page 48 line 2
 - a. Please explain, in detail, why the relative economic merit of each scenario in the "discrete risk modeling results... from the Strategist-based modeling" differ so significantly from the Aurora results presented in Exhibit SCW-5.

69. Direct Testimony of Scott Weaver, Exhibits 1-4
 - a. Please provide all assumptions and workbooks, in electronic format with all calculations operational and formulae intact, used to prepare Exhibits SCW-1 through SCW-4, including output files from the Aurora model.

Respectfully submitted,



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Dated: January 13, 2012

CERTIFICATE OF SERVICE

I certify that I mailed a copy of Proposed Intervenors Tom Vierheller, Beverly May, and Sierra Club Initial Requests for Information by first class mail on January 13, 2012 to the following:

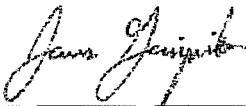
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