

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

RECEIVED

MAY 21 2012

PUBLIC SERVICE
COMMISSION

In the Matter of:

Application of Big Rivers Electric Cooperative for Approval of)
its 2012 Environmental Compliance Plan, Approval of its) CASE NO. 2012-00063
Amended Environmental Cost Recovery Surcharge Tariffs,)
and for the Certificates of Public Convenience and Necessity,)
and the Authority to Establish a Regulatory Account)

**BEN TAYLOR AND SIERRA CLUB'S INITIAL REQUESTS FOR
INFORMATION TO BIG RIVERS ELECTRIC COOPERATIVE**

Proposed Intervenors Ben Taylor and Sierra Club (collectively "Movants") pursuant to the Kentucky Public Service Commission's ("Commission") April 30, 2012 Order ("April 12 Order"), propound the following requests for information on the Big Rivers Electric Cooperative's ("Big Rivers") regarding Big Rivers' application for certificates of public convenience and necessity and approval of its 2012 compliance plan that is the subject of the above captioned proceeding.

Big Rivers shall answer these requests for information in the manner set forth in the April 30 Order and by no later than the June 1, 2012 deadline set forth in the Appendix of the April 30 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 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.

The Proposed Intervenors reserve 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,” “Big Rivers,” “Cooperative” or “Company” refers to Big Rivers Electric Cooperative, and its affiliates, employees, and authorized agents.

“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.

“CFC” means National Rural Utilities Cooperative Finance Corporation

“CO₂” means carbon dioxide

“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

“CSAPR” means the Cross-State Air Pollution Rule

“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.

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

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

“ESP” means electrostatic precipitator

“FGD” means flue gas desulfurization

“HCl” means hydrogen chloride

“HMP&L” means Henderson Municipal Power & Light

“Identify” means:

- (a) With respect to a person, to state the person’s name, address and business relationship (e.g., “employee”) to Big Rivers;
- (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.

“IRP” means Integrated Resource Plan

“MATS” means Mercury Air Toxics Standard Rule

“MWh” means megawatt-hours

“NOx” means nitrogen oxides

“NPV” means net present value

“NPVRR” means net present value of revenue requirements

“O&M” means operation and maintenance

“PRB” means the Powder River Basin

“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.

“RUS” means Rural Utilities Service

“SCR” means selective catalytic reduction technology

“SO₂” means sulfur dioxide

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. For each of the Wilson, Green, Coleman, Reid, or HMP&L generating units:
 - a. Identify the expected retirement date
 - b. Produce the most recent depreciation study
 - c. Produce the most recent condition or performance assessment
 - d. Produce the most recent retirement, continued unit operation, or life extension study or analysis
 - e. Produce any analysis or assessment of the economics of continued operation of such unit
 - f. Produce any analysis or assessment of the impact that retirement of each unit would have on capacity adequacy, transmission grid stability, transmission grid support, voltage support, or transmission system reliability
 - g. Identify any transmission grid upgrades or changes that would be needed to permit the retirement of any of the units
 - h. Produce any analysis or assessment of the need for the continued operation of each unit.

2. For each of the Wilson, Green, Coleman, Reid, or HMP&L generating units, identify and produce any analysis of the net present value revenue requirement, cost, or feasibility of retiring the unit and replacing the energy or capacity produced by that unit with any of the following resources:
 - a. Energy efficiency
 - b. Demand side management
 - c. Demand response
 - d. Combined heat and power
 - e. Wind energy
 - f. Solar
 - g. Hydroelectric
 - h. Construction of a new natural gas combined cycle facility
 - i. Purchase of power from an existing natural gas combined cycle facility

- j. Purchase of an existing natural gas combined cycle facility
 - k. Natural gas combustion turbines
 - l. Power purchase agreements
 - m. A combination of any or all of the resources identified in subsections a through l above
3. For each of the Wilson, Green, Coleman, Reid, or HMP&L generating units, identify:
 - a. The annual non-environmental capital expenditures expected or projected to be made for each year from 2012 through 2031.
 - b. The annual fixed O&M costs for each year from 2012 through 2031.
 - c. The annual variable O&M costs for each year from 2012 through 2031.
4. Produce a non-redacted, full color or original digital copy of any Integrated Resource Plans (“IRPs”) created and/or filed by Big Rivers or its agents since 2004.
5. Produce any strategic or technical documents generated since 2004 by Big Rivers or its agents 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. Identify any CO₂ prices assumed in Big River’s Environmental Compliance Plan by either Big Rivers or its Agents for each year of 2012 through 2035, and explain how any such CO₂ prices were factored into Big River’s Environmental Compliance Plan Analysis.
7. Produce a copy of any forecast or projection of future CO₂ costs, taxes, or emissions allowances prices that has been prepared by or for Big Rivers.
8. Produce a copy of any plan for reducing CO₂ emissions that has been prepared by or for Big Rivers.
9. With respect to EPA’s GHG Tailoring Rule:
 - a. Does the Company anticipate that any of its units would be subject to EPA’s GHG Tailoring Rule? If so, when? If not, why not?
 - b. What impact does the Company anticipate the Tailoring Rule having on either the costs of operations of any of its units?
 - c. Please provide any work papers or modeling analysis that considers the cost

impacts associated with the Tailoring Rule.

10. EPA recently issued a proposed New Source Performance Standard that would regulate greenhouse gas emissions from electric generating units. In this proposed rule, EPA stated that it soon plans to issue regulations for existing electric generating units. With respect to EPA's forthcoming rule regulating greenhouse gas emissions for existing electric generating units ("EGUs"):
 - a. Does the Company anticipate that the forthcoming existing EGU greenhouse gas rule could impact any of its units? If so, what would be the expected cost of this rulemaking? If not, why not?
 - b. Has a cost for the he forthcoming existing EGU greenhouse gas rule been taken into account in the modeling done by the Company in support of its application for CPCN? If not, how would such a cost impact its analysis?
 - c. Please provide any work papers or modeling analysis that considers the cost impacts associated with the forthcoming existing EGU greenhouse gas rule.

11. With respect to new pollution control installations and CWA NPDES permits:
 - a. Does the Company expect that new pollution control installations would have any effect on current CWA NPDES permits at any of its units?
 - b. If applicable, please provide any of the Company's recent applications for changes or modifications to any of its NPDES permits.
 - c. Does the Company anticipate that the pending Effluent Limitation guidelines rule could impact any of its units? If so, what would be the expected cost of this rulemaking? If not, why not?
 - d. Has a cost for the pending Effluent Limitation guidelines been taken into account in the modeling done by the Company in support of its application for CPCN? If not, how would such a cost impact its analysis?

12. Produce a copy of any assessment of future natural gas prices and supplies that has been prepared by or for Big Rivers.

13. Produce a copy of any assessments of future coal prices and supplies that has been prepared by or for Big Rivers.

14. Refer to p. 6, lines 10-11 of the Application:
 - a. Identify the status of the engineering and design for each of the projects for which Big Rivers is seeking a CPCN
 - b. State when the engineering and design for each project is expected to be completed

- c. State how much money has been spent to date on engineering and design
 - d. Identify the estimated total cost for engineering and design for each project.
15. Refer to p. 13, lines 17-20 of the testimony of Robert Berry. For each of Big Rivers' customer classes, identify the date and size in percent of each rate increase that Big Rivers has implemented since 2003.
16. Refer to p. 16, lines 6-9 of the testimony of Robert Berry.
- a. Identify the capacity factor at which the Big Rivers fleet could operate to comply with CSAPR without "significant capital investments in additional emissions reduction equipment"
 - b. Identify the capacity factor at which the Big Rivers fleet could operate to comply with MATS without "significant capital investments in additional emissions reduction equipment"
17. Refer to p. 18 of the testimony of Robert Berry and p. 3-4 of Ex. 2 to the testimony of William DePriest (the Sargent & Lundy Environmental Compliance Study). With regards to the new flue gas desulfurization system ("FGD") for Wilson Unit 1 referenced therein:
- a. Identify the type of FGD that would be installed
 - b. Identify the basis for contending that the new FGD would achieve 99% removal of sulfur dioxide emissions from Wilson Unit 1
 - c. Produce any documents supporting the contention that the new FGD would achieve 99% removal of sulfur dioxide emissions from Wilson Unit 1.
18. Refer to p. 25, lines 8-13 of the testimony of Robert Berry. State whether the parasitic load related to each of the projects for which a CPCN is being sought in this filing would impact the cost of producing energy from any of the Big Rivers units. If so, identify the approximate impact. If not, explain why not.
19. Refer to p. 27 line 18 to p. 28 line 3 of the testimony of Robert Berry and p. 20, lines 9-16 of the testimony of William DePriest. With regards to the advanced low NOx burner systems for the Coleman Units:
- a. Identify the capital cost of such system for each unit
 - b. Identify the O&M cost of such system for each unit
 - c. Identify the amount change to the NPVRR of the Build Case for the Coleman Units if the advanced low NOx burner systems were included
 - d. Produce any evaluation of the economics of installing advanced low NOx burner systems on the Coleman Units

20. Refer to p. 27 line 18 to p. 28 line 3 of the testimony of Robert Berry. With regards to the SCR for Green Unit 1:
 - a. Identify the capital cost of the SCR
 - b. Identify the annual O&M cost of the SCR
 - c. Identify the amount change to the NPVRR of the Build Case for Green Unit 1 if the SCR were included
 - d. Produce any evaluation of the economics of installing an SCR on Green Unit 1

21. Refer to page 27, lines 18-22 and page 28, lines 1-3 of the testimony of Robert Berry. Has Big Rivers done any analysis of the potential effects of the NAAQS reductions for any of its units? Please provide the work papers showing the results of this analysis.

22. Refer to p. 28, lines 16-18 of the testimony of Robert Berry. State whether the “additional precipitator testing” referenced therein has occurred. If so, describe and produce the results of such testing. If not, explain why not.

23. Refer to p. 29, lines 13-17 of the testimony of Robert Berry.
 - a. Identify the “magnitude of potential savings from DSM and energy efficiency” referenced therein.
 - b. Identify and produce any evaluation of the ability of Big Rivers to achieve energy savings through the use of DSM
 - c. Identify the magnitude of savings from DSM and energy efficiency would be needed to “materially assist Big Rivers in complying with CSAPR and MATS.”
 - d. Identify and produce any evaluation of the role that DSM could play in replacing the need for any of the projects for which a CPCN is sought in this proceeding
 - e. Describe the DSM and energy efficiency programs currently offered by Big Rivers, including demand-response, interruptible load, and efficiency programs.
 - f. Identify any additional DSM and energy efficiency programs Big Rivers intends to offer in the future.
 - g. For the DSM and energy efficiency programs currently offered by Big Rivers, identify the:
 - i. Cost
 - ii. Annual MW or MWh reductions achieved through such programs since their inception,
 - iii. Annual MW or MWh reductions projected to be achieved through such programs for each year through 2026,
 - iv. Expected life of the programs
 - v. Penetration of these programs.
 - h. Produce any DSM potential studies performed by or for Big Rivers in the last five

years, including attendant workbooks or calculations. Describe if or how the results of such studies are incorporated into the current case. If they are not, explain why not.

24. Refer to Exhibit 4 of the testimony of Robert Berry. With regards to the capital cost estimates for the proposed WFGD for the Wilson plant:
 - a. Identify what “SESS” stands for
 - b. Produce the “SESS budget proposal number 4296”
 - c. Describe how the WFGD capital cost estimate was derived from the SESS budget proposal number 4296
 - d. Produce any document supporting or regarding the WFGD capital cost estimate that was derived from or included in the SESS budget proposal number 4296

25. Refer to p. 8, lines 20-23 of the testimony of William DePriest.
 - a. Identify any “engineering services” that Sargent & Lundy is contracted to perform “to help implement” the projects for which Big Rivers is seeking CPCNs in this proceeding.
 - b. If Big Rivers has not presently contracted with Sargent & Lundy for any such engineering services, state whether Big Rivers is considering having Sargent & perform such engineering services for any of the projects.

26. Refer to p. 13, lines 15-24 of the testimony of William DePriest.
 - a. Please identify which financial model Big Rivers used, who is the vendor of the model, and whether the model is a proprietary model that requires a license in order to gain access to the files.
 - b. Produce, in machine-readable format, all of the models (including input and output files) and worksheets used to generate the capital costs, O&M costs, and NPV for each of the technologies evaluated as part of the compliance study.
 - c. Please identify any changes to the input files that may be required to reproduce the modeling.
 - d. If changes are required, please specify why such changes were done.
 - e. Please identify the assumptions, including any supporting documentation, Big Rivers or its agents used in each base case and sensitivity scenario that you modeled
 - f. If a license is required to obtain access to any information in this request, please explain who Sierra Club should contact to either obtain that license or present information that Sierra Club or its experts already have a license for that model.

27. According to page 20, lines 11-16 of the testimony of William DePriest, Big Rivers plans

to meet CSAPR regulations in part with the purchase of NOx allowances.

- a. Has Big Rivers done any analysis of the future market for NOx allowances in Kentucky? If so, please provide any work papers associated with that analysis.
- b. Is the Company certain that enough allowances will be available for purchase such that the Company can meet its allowance obligation?

28. According to page 20, lines 19-24 of the testimony of William DePriest, the potential impacts of the proposed EPA rule for Section 316(b) of the Clean Water Act were considered by S&L.

- a. Does the Company anticipate that this pending regulation would impact any of its units? If so, what would be the expected cost of this rulemaking? If not, why not?
- b. Has a cost for the pending 316(b) rule been taken into account in the modeling done by the Company in support of its application for CPCN? If not, how would such a cost impact its analysis?
- c. Please provide any work papers or modeling analysis that considers the cost impacts associated with the 316(b) rule.

29. According to page 20, lines 19-24 of the testimony of William DePriest, the potential impacts of the proposed EPA rule for Coal Combustion Residuals (CCR) were considered by S&L.

- a. Does the Company anticipate that this pending regulation would impact any of its units? If so, what would be the expected cost of this rulemaking? If not, why not?
- b. Has a cost for the pending Coal Combustion Residuals rule been taken into account in the modeling done by the Company in support of its application for CPCN? If not, how would such a cost impact its analysis?
- c. Please provide any work papers or modeling analysis that considers the cost impacts associated with the CCR rule.

30. Refer to p. ES-9 of Exhibit 2 to the testimony of William DePriest.

- a. Explain why no technology was selected for compliance with potential Coal Combustion Residue regulations for the Wilson and Reid plants.
- b. Identify the amount change to the NPVRR of the Build Case for the Coleman, Green, and HMP&L units if Coal Combustion Residue compliance were included

31. Refer to p. 1-3 of Exhibit 2 to the testimony of William DePriest (the Sargent & Lundy Environmental Compliance Study).

- a. For each cost identified in Table 1-1, identify for what year the value that is listed is for
- b. For each cost identified in Table 1-1, identify what the value was assumed to be in each year through 2033 for purposes of the environmental compliance study

- c. For each of the following costs, identify the basis for the value used in the environmental compliance study, and produce any documents supporting such values
 - i. Coal
 - ii. Natural gas
 - iii. SO₂ allowances
 - iv. NO_x allowances
 - v. Sorbent – Hydrated Lime
 - vi. Activated Carbon

32. Identify Big Rivers' actual electric energy sales in MWh and actual peak loads in MW for each year since 2004.

33. Identify Big Rivers' projected electric energy sales in MWh and projected peak demand in MW for each year of 2012 through 2033.

34. Identify Big Rivers' projected electric energy sales in MWh and projected peak demand in MW for each year of 2012 through 2033 if:
 - a. the Century Aluminum of Kentucky General Partnership aluminum smelter stops purchasing power from Big Rivers
 - b. the Alcan Primary Products Corporation aluminum smelter stops purchasing power from Big Rivers
 - c. if both the Century and Alcan aluminum smelters stop purchasing power from Big Rivers.

35. Refer to p. 1-8 of Ex. 2 to the testimony of William DePriest (the Sargent & Lundy Environmental Compliance Study). With regards to the low-NO_x burner upgrades at Wilson and HMP&L units 1 and 2 identified therein:
 - a. Explain what is meant that Big Rivers has "committed" to such upgrades
 - b. Identify the status of those upgrades and, if they have not yet commenced, when Big Rivers expects to commence them
 - c. Identify the capital cost of such upgrade for each unit
 - d. Identify by how much per year such upgrades are estimated to reduce O&M costs for each unit

36. Refer to p. 2-4 of Ex. 2 to the testimony of William DePriest (the Sargent & Lundy Environmental Compliance Study). With regards to the baseline mercury, HCl, and SO₂ emissions for each unit identified in Tables 2-3 and 2-4 therein:

- a. Identify and produce each stack test upon which the baseline emissions figures are based
 - b. State whether such stack tests are reflective of the emissions that would be measured through the use of a continuous emission monitor including during times of startup and shutdown. If so, how? If not, why not?
 - c. State whether the environmental compliance cost would increase if the reductions in mercury, HCl, or SO₂ needed to bring the Big Rivers units into compliance with the MATS rule were higher than the “required reduction” identified in Tables 2-3 and 2-4.
 - d. State whether the control technologies selected would change if the reductions in mercury, HCl, or SO₂ needed to bring the Big Rivers units into compliance with the MATS rule were higher than the “required reduction” identified in Tables 2-3 and 2-4.
37. Refer to p. 2-4 of Ex. 2 to the testimony of William DePriest (the Sargent & Lundy Environmental Compliance Study). State whether the “additional stack test data . . . needed to more accurately predict HCl emissions from each unit” has been collected. If not, why not? If so, produce such data.
38. Refer to p. 3-4 of Ex. 2 to the testimony of William DePriest (the Sargent & Lundy Environmental Compliance Study). Identify the number of excess SO₂ credits per year that are estimated to result if the FGD proposed for the Wilson plant removes 99% of SO₂ emissions. State whether such excess credits are assumed to be sold or used at other Big Rivers units.
39. Refer to p. 3-5 of Ex. 2 to the testimony of William DePriest (the Sargent & Lundy Environmental Compliance Study). Identify which “currently available FGD technology has been proven to achieve removal efficiency of > 99%” for SO₂ emissions, and whether such greater than 99% removal efficiency is on a continuous basis.
40. Refer to p. 3-6 of Ex. 2 to the testimony of William DePriest (the Sargent & Lundy Environmental Compliance Study). With regards to the statement that “the effect of sorbent injection on ESP performance should be tested before implementation”:
- a. State whether such testing has occurred.
 - i. If not, why not?
 - ii. If so, produce the results of such testing.
 - b. Produce any evaluation of the adequacy of the existing ESPs at the Wilson, Green, and Coleman units to ensure compliance with applicable particulate matter emission limits after the addition of dry sorbent injection and activated carbon injection.

- c. If the existing ESPs are inadequate to ensure compliance at any of the Wilson, Green, or Coleman units:
 - i. Identify the capital and annual O&M costs for each unit for upgrading the ESP
 - ii. Identify the capital and annual O&M costs for each unit for installing a polishing baghouse
 - iii. Identify the capital and annual O&M costs for each unit for installing a full baghouse

- 41. Refer to p. 5-2 of Ex. 2 to the testimony of William DePriest (the Sargent & Lundy Environmental Compliance Study). With regards to the conversion of Green Units 1 and 2 referenced in Table 5-1, identify the cost of natural gas for each year that was used in estimating the \$47.2 million O&M cost.

- 42. Refer to p. 5-11 of Ex. 2 to the testimony of William DePriest (the Sargent & Lundy Environmental Compliance Study). Identify the basis for the conclusion that the “break even” gas pricing for converting Green Units 1 and 2 to natural gas is \$2.23/mmBtu. Produce any modeling and worksheets, in machine-readable format, upon which that conclusion is based.

- 43. Refer to p. 1 of Ex. 3 to the testimony of William DePriest. Identify and produce the stack test results upon which the data in Table 1 on that page is based.

- 44. Refer to p. 2 of Ex. 3 to the testimony of William DePriest. State whether Big Rivers has had Sargent & Lundy develop the computer-based model of ESPs described therein. If so, produce the results of such modeling. If not, explain why not.

- 45. Refer to Ex. 4 to the testimony of William DePriest:
 - a. Identify the average and maximum sulfur content, in lbs/mmBtu, of the coal burned in each of the Big Rivers generating units for each of the past five years
 - b. Identify the assumed sulfur content, in lbs/mmBtu, of the PRB coal evaluated in the fuel switching analysis set forth in Ex. 4.
 - c. State whether you analyzed using other types of coal, such as lower-sulfur bituminous coal, to achieve compliance with CSAPR. If so, produce any documents regarding such analysis. If not, explain why not.
 - d. Identify the sulfur content, in lbs/mmBtu, that would need to be burned in the Big Rivers generating units to achieve compliance with CSAPR.

46. Refer to p. 5 of Ex. 4 to the testimony of William DePriest.
 - a. Identify the basis for the assumption that Big Rivers' bituminous coal costs \$2.00/mmBtu.
 - b. Identify the basis for the assumption that "PRB fuels are likely to cost closer to \$3.00/mmBtu"
 - c. Produce any documents supporting the assumed bituminous and PRB coal costs.

47. Refer to p. 5 of Ex. 4 to the testimony of William DePriest.
 - a. State whether capital changes would be needed to any of the HMP&L, Wilson, or Green units in order for such unit to be able to burn bituminous coal with a lower sulfur content than the coal currently burned in those units.
 - b. If the answer to subsection (a) is yes, identify the estimated cost of such changes for each unit.

48. Refer to p. 60 of the Environmental Regulatory Review prepared by Sergeant & Lundy, which is attached to William DePriest's Testimony as App. 4. Did Big Rivers or its agents ever consider the material probability that the Kentucky General Assembly will pass clean energy legislation, such as the Clean Energy Opportunity Act (HB 167), between 2012 and 2035?
 - a. If yes, please explain the basis for Big River's position.
 - b. If no, please explain why the Big Rivers or its Agents did not include this possibility in its sensitivity analyses?
 - c. Is it Big Rivers' position that there is no material probability that U.S. Congress or the state of Kentucky will pass legislation between 2012 and 2035 requiring specific quantities of retail electric energy requirements to be met from renewable sources of energy and/or energy efficiency?
 - d. If yes, please explain the basis for Big Rivers' position.
 - e. If no, please explain why Big Rivers did not include this possibility in its sensitivity analyses?

49. Refer to p. 6 of the testimony of Mark Hite, lines 13-17. For the "Buy Case," did Big Rivers evaluate locking in supplies and prices under long-term purchase power agreements for a portion of its requirements under the Buy Case?
 - a. If not please explain why not.
 - b. If yes, please provide that analysis.

50. Refer to Mark Hite's testimony, lines 1-17, regarding the discussion of alternatives

considered

- a. Explain whether a RFQ solicitation for capacity and energy was issued as an additional alternative to reliance on the market capacity and energy and pricing.
- b. Explain the rationale for only considering market participation as an alternative.
- c. If a RFQ solicitation was issued, provide the analysis of the bids, including the terms of the bids and why each bid received was not acceptable.
- d. If a RFQ solicitation was not issued seeking capacity and energy, explain the rationale for not seeking such a solicitation.

51. Refer to p. 6 of the testimony of Mark Hite, lines 1-17. Please confirm that Big Rivers or its agents did not model a natural gas alternative in the cost-effectiveness modeling.

52. Refer to p. 6 line 19 through p. 7 line 17 of the testimony of Mark Hite.

- a. Please identify which financial model Big Rivers used, who is the vendor of the model, and whether the model is a proprietary model that requires a license in order to gain access to the files.
- b. Please produce, in machine readable format, all of the financial modeling (including input and output files) and workpapers used to determine the NPVRR for each scenario evaluated by Big Rivers or its agents.
- c. Please identify any changes to the input files that may be required to reproduce the modeling.
- d. If changes were made, please explain why such changes were made.
- e. Please identify the assumptions, including any supporting documentation, Big Rivers or its agents used in each base case and sensitivity scenario that you modeled
- f. If a license is required to obtain access to any information in this request, please explain who Sierra Club should contact to either obtain that license or present information that Sierra Club or its experts already have a license for that model.

53. Refer to p. 7 line 20 to p. 8 line 5 of the testimony of Mark Hite. Identify and produce:

- a. All forward pricing data received from PACE Global for the production cost modeling.
- b. All Big Rivers plant specific data that was supplied to ACES Power Marketing.
- c. Please identify which financial model ACES Power Marketing used, who is the vendor of the model, and whether the model is a proprietary model that requires a license in order to gain access to the files.
- d. Please produce, in machine readable format, all of the production cost modeling

(including input and output files) and workpapers used to determine the NPVRR for each scenario generated by ACES Power Marketing

- e. Please identify any changes to the input files that may be required to reproduce the modeling.
 - f. If changes are required, please explain why such changes were made.
 - g. Please identify the assumptions, including any supporting documentation, Big Rivers or its agents used in each base case and sensitivity scenario that you modeled
 - h. If a license is required to obtain access to any information in this request, please explain how Sierra Club could obtain that license or, if they already have a license, who they should provide information to regarding the license to obtain the files.
54. Refer to p. 10, lines 10-12 of the testimony of Mark Hite. State whether any other sensitivity analyses, besides the No Smelter Case, were performed by Big Rivers or its agents. If so, produce the results of all such analyses, including any supporting modeling and workpapers in machine readable format. If not, explain why not.
55. Refer to p.4 of the testimony of Mark Hite. State whether Big Rivers or its agents performed any analyses comparing the NPVRR of the Build Case for any of the Wilson, Green, Coleman, Reid, or HMP&L generating units to the NPVRR of retiring and replacing the energy or capacity produced by each such unit. If so, produce any documents regarding those analyses, including any modeling (including input and output files) and workpapers in machine readable format.
56. Refer to p. 15 of the testimony of Mark Hite.
- a. Produce all reports, memoranda, presentations, or other documents provided to the Rural Utilities Service (“RUS”), CoBank, or the National Rural Utilities Cooperative Finance Corporation (“CFC”) by either Big Rivers or Touchstone Energy since 2004 regarding:
 - i. the environmental compliance status of the Wilson, Green, Coleman, Reid, or HMP&L generating units,
 - ii. past, present or future environmental compliance of the Wilson, Green, Coleman, Reid, or HMP&L generating units,
 - b. Please provide any application(s) for a loan or loan guarantee submitted to the RUS, CoBank, or CFC, including any supporting documentation for the loan or loan guarantee request, for the retrofits requested in these CPCNs for the Wilson, Green, Coleman, Reid, or HMP&L generating units;
 - c. Please provide any response from RUS, Co-Bank, or CFC regarding a request for a loan or loan guarantee for retrofits proposed in this application of the Wilson,

Green, Coleman, Reid, or HMP&L generating units.

- d. If RUS, CoBank, or CFC has agreed to provide a loan or loan guarantee, please provide any loan or loan guarantee paperwork between RUS/CoBank/CFC and Big Rivers regarding the retrofit of the Wilson, Green, Coleman, Reid, or HMP&L generating units.
- e. Please provide any environmental assessment or environmental impact statement, including any drafts, prepared to support a loan or loan guarantee from RUS, CoBank, or CFC for the retrofits of the Wilson, Green, Coleman, Reid, or HMP&L generating units.
- f. If no environmental assessment or environmental impact statement was prepared for the retrofits proposed in this application because one or more of these projects fall under a categorical exclusion, please provide any correspondence or documents from RUS that discuss application of the categorical exclusion.
- g. Please continue to provide any such documentation as listed in (a)-(f) above as generated on a regular basis.

57. Refer to p. 15 of Mark A. Hite's Testimony, produce all reports, memoranda, presentations, or other documents provided to stockholders, investors, banks, investment firms, investment brokers or dealers, investment analysts, bond rating agencies, by either Big Rivers or Touchstone Energy since 2004 regarding:

- a. the environmental compliance status of the Wilson, Green, Coleman, Reid, or HMP&L generating units,
- b. past, present or future environmental compliance of the Wilson, Green, Coleman, Reid, or HMP&L generating units,
- c. litigation or settlements concerning environmental matters at the Wilson, Green, Coleman, Reid, or HMP&L generating units the Big Sandy plant, to the extent not covered by attorney-client privilege,
- d. past, present or future need for the Wilson, Green, Coleman, Reid, or HMP&L generating units, or the need for or plans for capital additions to any of those units, whether for environmental compliance or otherwise,
- e. any other matter that could affect the costs or output of the Wilson, Green, Coleman, Reid, or HMP&L generating units.
- f. To the extent not already provided in response to subsections a-e above, please provide any agendas, handouts, minutes, documents prepared for or resulting from each meeting of Big Rivers and/or Touchstone Energy 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 on a regular basis.

Respectfully submitted,



Joe Childers, Esq.
Joe F. Childers & Associates
300 Lexington Building
201 West Short Street
Lexington, Kentucky 40507
859-253-9824
859-258-9288 (facsimile)

Of counsel:

Kristin Henry
Staff Attorney
Sierra Club
85 Second Street
San Francisco, CA 94105
Phone: (415)977-5716
Fax: (415) 977-5793
kristin.henry@sierraclub.org

Dated: May 21, 2012

CERTIFICATE OF SERVICE

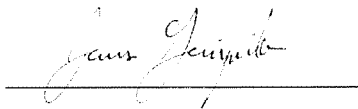
I certify that I mailed a copy of Ben Taylor and Sierra Club's First Request for Information from Big Rivers Electric Cooperative by first class mail on May 21, 2012 to the following:

James M. Miller, Esq.
Tyson Kamuf
Sullivan, Mountjoy, Stainback & Miller, PSC
100 Saint Ann Street
P.O. Box 727
Owensboro, KY 42302-0727

Jennifer B. Hans
Assistant Attorney General's Office
1024 Capital Center Drive, Suite 200
Frankfort, KY 40601-8204

Michael L. Kurtz
Kurt J. Boehm
Boehm, Kurtz & Lowry
36 East Seventh Street, Suite 1510
Cincinnati, OH 45202

David C. Brown, Esq.
Stites & Harbison
1800 Aegon Center, 400 West Market Street
Louisville, KY 40202



James Giampietro