

COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION

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AUG 19 2011

PUBLIC SERVICE  
COMMISSION

In the Matter of:

APPLICATION OF KENTUCKY UTILITIES )  
FOR CERTIFICATES OF PUBLIC CONVENIENCE ) CASE NO. 2011-00161  
AND NECESSITY AND APPROVAL OF ITS 2011 )  
COMPLIANCE PLAN FOR RECOVERY )  
BY ENVIRONMENTAL SURCHARGE )

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In the Matter of:

APPLICATION OF LOUISVILLE GAS AND )  
ELECTRIC FOR CERTIFICATES OF )  
PUBLIC CONVENIENCE AND NECESSITY ) CASE NO. 2011-00162  
AND APPROVAL OF ITS 2011 COMPLIANCE )  
PLAN FOR RECOVERY BY ENVIRONMENTAL )  
SURCHARGE )

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JOINT SUPPLEMENTAL REQUESTS FOR INFORMATION TO KENTUCKY  
UTILITIES COMPANY AND LOUISVILLE GAS & ELECTRIC

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Pursuant to the Kentucky Public Service Commission's ("Commission") June 28 and August 5, 2011 Orders in the above-captioned proceedings, Intervenors Natural Resources Defense Council, Sierra Club, Drew Foley, Janet Overman, Gregg Wagner, Rick Clewett, and Raymond Berry propound the following supplemental requests for information on the Kentucky Utilities Company ("KU") and Louisville Gas & Electric ("LG&E") regarding KU and LG&E's applications for certificates of public convenience and necessity and approval of 2011 compliance plan that are the subject of the above-captioned proceedings.

These requests shall be answered in the manner set forth in the June 28 and August 5 Order and by the September 1, 2011 deadline set forth in the Appendix of the August 5 Order. Please produce the requested documents in electronic format at the offices of the Natural Resources Defense Council, 2 N. Riverside Plaza, Suite 2250, Chicago, Illinois 60606 or at such other location as may be mutually agreed upon between counsel of record.

Wherever the response to a request consists of a statement that the requested information is already available to the Intervenors, provide a detailed citation to the document where the information can be found. 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 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.

Unless otherwise noted, provide a response for each of KU and LG&E for each request listed below. If you believe that a particular request does not apply to one of the companies, note as such in your responses.

The 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,” or “company” refers to Kentucky Utilities Company, its affiliates, employees, and authorized agents, and/or to Louisville Gas & Electric, 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.

“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.

“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 not now in their possession, custody or control, regardless of where located whether or not 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.

“Identify” means:

- (a) With respect to a person, to state the person’s name, address and business relationship (e.g., “employee”) to KU or LG&E;
- (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.

“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

## PRIVILEGE

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 Intervenors or the Commission to evaluate the validity of such claims.

## TIME

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

## REQUESTS FOR INFORMATION

1. **File Names:** Refer to Attachment to Response to SC/NRDC Document Request 26, provided by CD on 8-5-11. Please provide original file names for all documents contained in the Question 26 subfolders BreakevenFuel and BreakevenYears.
2. **MTPCapital Costs:** Refer to Attachment to Response to SC/NRDC Document Request 26, provided by CD on 8-5-11, main folder, file 20110517\_LAK\_11IRPRetireStudies\_MC1-2CombFGD.xlsx.
  - a. Please provide a detailed description of MTPCapital tab, and any documentation or workpapers that support the values given in the tab.
3. **Landfill Costs:** Refer to Attachment to Response to SC/NRDC Document Request 26, provided by CD on 8-5-11, main folder, file 20110517\_LAK\_11IRPRetireStudies\_MC1-2CombFGD.xlsx.
  - a. Please provide a detailed description of LandfillCapital tab, and any documentation or workpapers that support the values given in tab.
  - b. Please explain the meaning and derivation of the values given in lines 24-33 of the LandfillCapital tab.
4. **Water Costs:** Refer to Attachment to Response to SC/NRDC Document Request 26, provided by CD on 8-5-11, main folder, file 20110517\_LAK\_11IRPRetireStudies\_MC1-2CombFGD.xlsx.
  - a. Please provide a detailed description of WaterCapital tab, and any documentation or workpapers that support the values given in tab.
  - b. Please explain the meaning and derivation of the values given in lines 25-30 of the WaterCapital tab.

5. **Escalation Rates:** Refer to Attachment to Response to SC/NRDC Document Request 26, provided by CD on 8-5-11, main folder, file 20110517\_LAK\_11IRPRetireStudies\_MC1-2CombFGD.xlsx.
  - a. Please explain the escalation rate of 2.5% used in the MTPCapital tab, and provide all calculations and workpapers used to make that determination.
  - b. Please explain the escalation rate of 2.0% used in the RetirementCost\_Savings and NewControlsFOM tabs, and provide all calculations and workpapers used to make those determinations.
  
6. **Retirement Costs:** Refer to Attachment to Response to SC/NRDC Document Request 26, provided by CD on 8-5-11, main folder, file 20110517\_LAK\_11IRPRetireStudies\_MC1-2CombFGD.xlsx. In the RetirementCost\_Savings tab, a \$2.1 million dollar cost appears in the year 2016 for each and every plant. Please explain, for each plant, what the \$2.1 million cost entails and please provide all calculations and workpapers used to make that determination
  
7. **New Controls Capital Costs:** Refer to Attachment to Response to SC/NRDC Document Request 26, provided by CD on 8-5-11, main folder, file 20110517\_LAK\_11IRPRetireStudies\_MC1-2CombFGD.xlsx.
  - a. In tab RRComparison, the formulas in rows 104 (and following rows) for calculating the avoided capital cost of retiring Tyrone 3 appear to reference capital costs for Green River 3. Please explain why Green River 3 is used for this calculation instead of Tyrone 3.
  - b. In tab NewControlsCapital, please provide the stream of annual capital expenses for new controls for years 2010 - 2059 for Tyrone 3, similar to those shown on the NewControlsCapital tab for the Brown, Ghent, Mill Creek, Trimble County, Cane Run, and Green River plants.
  
8. **New Controls Fixed O&M Costs:** Refer to Attachment to Response to SC/NRDC Document Request 26, provided by CD on 8-5-11, main folder, file 20110517\_LAK\_11IRPRetireStudies\_MC1-2CombFGD.xlsx.
  - a. In tab RRComparison, the formulas in rows 370 (and following rows) for calculating the avoided fixed O&M cost of retiring Tyrone 3 appear to reference FOM costs for Green River 3. Please explain why Green River 3 is used for this calculation instead of Tyrone 3.
  - b. In tab NewControlsFOM, please provide the stream of annual FOM costs for new controls for years 2010 - 2059 for Tyrone 3, similar to those shown on the NewControlsCapital tab for the Brown, Ghent, Mill Creek, Trimble County, Cane Run, and Green River plants.
  
9. Please identify the expected annual capital expenditures other than for the new environmental controls required at each KU or LG&E generating unit, including known or estimated periodic maintenance, life extension projects, or other required capital investments. Provide data in an electronic or standard machine readable format.
  
10. Please identify the expected variable O&M for new environmental controls on a \$/MWh basis.

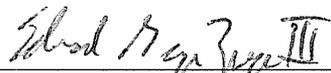
11. Please identify the expected fixed O&M for the new environmental controls on a \$/kW-yr basis.
12. **Brown 1-2:** Please refer to the 2011 Air Compliance Plan, provided as Exhibit CRS-1. Section 4.2.6 is an analysis of the merit of retiring Brown Units 1 and 2.
  - a. Please explain why Brown units 1-2 are considered as a single entity in this analysis.
  - b. Please describe if those units are physically required to run together or if there are engineering constraints which require the operation of both units jointly, or prohibit the retirement of one of the units independently.
13. **Mill Creek 1-2:** Please refer to the 2011 Air Compliance Plan, provided as Exhibit CRS-1. Section 4.2.16 is an analysis of the merit of retiring Mill Creek Units 1 and 2.
  - a. Please explain why Mill Creek Units 1-2 are considered as a single entity in this analysis.
  - b. Please describe if the units are physically required to run together or if there are engineering constraints which require the operation of both units, or prohibit the retirement of one of the units independently.
14. **Evaluation Order:** Please refer to the 2011 Air Compliance Plan, provided as Exhibit CRS-1. In Section 4.2, the exhibit notes that “units were evaluated in the order of decreasing variable production costs.”
  - a. Please state whether you conducted this analysis using any order other than by decreasing variable production cost.
  - b. If so, please provide the results of this analysis, and any supporting workpapers or documents for this analysis, including raw model inputs in a machine-readable format.
15. **Environmental Controls:** Please refer to the Environmental Air Compliance Strategy Summary, provided as Exhibit JNV-2. On page 5, the table of Environmental Air Timeline shows “preliminary optimal technologies” that include SCR at Mill Creek 1 & 2, SCR at Ghent 2, and Brown 1 & 2. These technologies are not considered in the “final scope” as given on Page 9, or within the analyses which support this docket.
  - a. Please state whether the company ran an analysis similar to that given in the 2011 Air Compliance Plan with these SCR included in the analysis.
  - b. If so, please provide the results of this analysis, and any supporting workpapers or documents for this analysis, including raw model inputs in a machine-readable format.
16. **Environmental Controls:** Please refer to the Environmental Air Compliance Strategy Summary, provided as Exhibit JNV-2. On page 8, the document states that “The Companies’ Energy Planning, Analysis and Forecasting department’s first round of modeling indicated that the SCRs, and associated scope with the implementation of SCRs, identified in the Phases I and II studies would not be necessary to meet the CATR NOx emission reductions for the generating fleet.”

- a. Please produce any documents and workpapers associated with the “first round of modeling” referenced in this statement supporting the assertion that “SCRs...would not be necessary to meet the CATR NOx emission reductions.”
17. Please state whether any of the upgrades proposed in the Environmental Air Compliance Strategy Summary are a result of a settlement with either a government agency or the result of a citizen suit. If so, please provide the settlement agreements that affect such units.
18. **Market Prices of Energy and Capacity:** Please refer to the 2011 Air Compliance Plan. Please identify the company’s assumed forward market prices of energy and capacity through the analysis period and any source for those market price assumptions. Please also produce any documentation or workpapers that support these assumptions.
19. **Sales:** Please refer to the 2011 Air Compliance Plan. Please identify the company’s assumed system and off-system sales of energy through the analysis period, and produce any documentation or workpapers that support these assumptions.
20. **Demand:** Please refer to the 2011 Air Compliance Plan. Please identify the company’s assumed demand projections through the analysis period, and produce any documentation or workpapers that support these assumptions.
21. **EE/DSM:** Please refer to the 2011 Air Compliance Plan. Please identify the company’s assumed energy efficiency or other demand side management projections through the analysis period, and produce any documentation and workpapers that support these assumptions.
22. **Renewables:** Please refer to the 2011 Air Compliance Plan. Please identify the companies’ assumed renewable energy purchases or contracts through the analysis period, and produce any documentation or workpapers that support these assumptions.
23. **Expansion Units:** Please refer to the 2011 Air Compliance Plan, Table 94 in Section 6.3. The table lists three types of expansion units (two types of combined cycle turbines, and one simple cycle CT).
  - a. Please state whether the company ran an analysis similar to that given in the 2011 Air Compliance Plan with any other expansion units available to be picked in the model.
  - b. If so, please produce the results of this analysis, and any supporting workpapers or documents for this analysis, including raw model inputs in a machine-readable format.
24. Please refer to the KU response to Staff’s first information request, question 40. The answer to subquestion (a), provided by Witness Revlett, states that “the addition of SCRs on units that do not currently have SCRs will not have an impact on the projects in this compliance plan.”
  - a. Please state whether KU ran an analysis of the economic merit of each unit in this docket similar in structure to the 2011 Air Compliance Plan (as provided in CRS-1) with “the addition of SCRs on units that do not currently have SCRs.”

- b. If yes, please provide any workpaper, source document, and in machine readable format, input and output files, used in or developed as part of the modeling carried out in such an analysis responsive to the above question.
  - c. If no, please provide a justification of the statement by Witness Revlett, and produce any documents or workpapers supporting that statement.
- 25. Please refer to the KU response to Staff's first information request, question 46(b), pages 3-4. The summer maximum capacity of some units decreases in the 2013 to 2016 timeframe. Please state whether these capacity derates are due to the environmental controls expected to be implemented at these units. If not, please explain the cause of these projected capacity derates.
- 26. Please refer to the KU response to Staff's first information request, question 46(b), pages 3-4. The heat rates for each unit given in these tables do not change over the analysis period, save in 2040. Please state whether the analysis in the 2011 Air Compliance Plan assumes any heat rate penalty for fabric filters, FGD, SCR, or SAM modifications? If so, please identify what heat rate penalties are assumed for each such modification. If not, please explain why not.
- 27. Please refer to the KU response to Staff's first information request, question 46(c), pages 1-2. Please provide justification for the NO<sub>x</sub> and SO<sub>2</sub> price trajectory given in this table, and produce any workpaper or source document supporting this justification.
- 28. Please provide all reports, memoranda, presentations, or other documents provided to or considered by the KU, LG&E, or PPL Board of Directors (and any subcommittee of that Board) within the past five years concerning
  - a. the status of the Companies' coal-fired generating stations (the Coal Plants),
  - b. past, present or future environmental compliance of the Coal Plants, litigation or settlements (including NSR settlements with the EPA and/or DOJ) concerning the Coal Plants, to the extent not covered by attorney-client privilege,
  - c. past, present or future need for the Coal Plants, or the need for or plans for capital additions to the Coal Plants, whether for environmental compliance or otherwise, and
  - d. any other matter that could affect the costs or output of the Coal Plants.
- 29. To the extent not already provided in response to request 28 above, please provide any agendas, handouts, minutes, documents or notes prepared for or resulting from each meeting of the Companies' Board of Directors (and any subcommittee of that Board) at which the matters of request 28 were discussed in any way.
- 30. 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 or the like by the Companies' within the past five years concerning
  - a. the status of the Companies' coal-fired generating stations (the Coal Plants),
  - b. past, present or future environmental compliance of the Coal Plants, litigation or settlements (including NSR settlements with the EPA and/or DOJ) concerning the Coal Plants, to the extent not covered by attorney-client privilege,

- c. past, present or future need for the Coal Plants, or the need for or plans for capital additions to the Coal Plants, whether for environmental compliance or otherwise, and
  - d. any other matter that could affect the costs or output of the Coal Plants.
31. To the extent not already provided in response to request 30 above, please provide any agendas, handouts, minutes or notes prepared for or resulting from each meeting of the Companies' representatives with stockholders, investors, banks, investment firms, investment brokers or dealers, investment analysts, bond rating agencies or the like during which the matters listed in request 30 were discussed in any way.
32. Please state whether the company has evaluated, or caused to be evaluated, the external costs or damages, including costs or damages to human health or the environment, of operating the existing coal fleet? If yes, please provide the analysis, as well as any workpaper or source document supporting this analysis.
33. For each of the following tables and exhibits, please state if the dollar values are in real or nominal dollars, and the assumed inflation rate associated with the table.
- a. Attachment to Response to LGE KPSC-1 Question 37 Pages 1-2, 4-5, and 7-8
  - b. Attachment to Response to LGE KPSC-1 Question 45 Page 1
  - c. Attachment to Response to LGE KPSC-1 Question 46(b)Pages 9-10
  - d. Attachment to Response to LGE KPSC-1 Question 46(c)Pages 1-4
  - e. Attachment to Response to SC/NRDC Document Request 16, 2011 Air Compliance Plan Sensitivity Analysis, page 4

Respectfully submitted,



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Dated: August 18, 2011

**CERTIFICATE OF SERVICE**

I certify that I mailed a copy of this SUPPLEMENTAL REQUESTS FOR INFORMATION by first class mail on August 18, 2011 to the following:

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