



Mr. Jeff DeRouen  
Executive Director  
Kentucky Public Service Commission  
211 Sower Boulevard  
Frankfort, Kentucky 40601

January 23, 2012

**RE: *Joint Application Of Louisville Gas And Electric Company and Kentucky Utilities Company for Certificates of Public Convenience and Necessity for the Construction of a Combined Cycle Combustion Turbine at the Cane Run Generating Station and the Purchase of Existing Simple Cycle Combustion Turbine Facilities from Bluegrass Generation Company, LLC in LaGrange, Kentucky***  
**Case No. 2011-00375**

Dear Mr. DeRouen:

Please find enclosed and accept for filing ten copies of the Sierra Club and NRDC's Response to the Louisville Gas and Electric Company and Kentucky Utilities Company's First Set of Requests in the above-reference docket.

If you have any questions, please do not hesitate to contact me.

Sincerely,

James Giampietro  
Sierra Club  
85 2<sup>nd</sup> Street, Floor 2  
San Francisco, CA 94105  
(415) 977-5638

RECEIVED

JAN 23 2012

PUBLIC SERVICE  
COMMISSION



**COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION**

**In the Matter of:**

**Joint Application Of Louisville Gas And Electric Company     )  
and Kentucky Utilities Company for Certificates of Public     )  
Convenience and Necessity for the Construction of a Combined     )  
Cycle Combustion Turbine at the Cane Run Generating     ) CASE NO. 2011-00375  
Station and the Purchase of Existing Simple Cycle Combustion     )  
Turbine Facilities from Bluegrass Generation Company, LLC     )  
in LaGrange, Kentucky     )**

---

**Responses and Objections from Environmental Intervenors  
to First Information Request of Louisville Gas and Electric Company and Kentucky  
Utilities Company**

---

Intervenors Sierra Club and Natural Resources Defense Council (“Environmental Intervenors”) hereby submit their responses and objections to the First Information Requests of the Louisville Gas & Electric and Kentucky Utilities (collectively, “the Companies”).

Question

1. Please see the table at page 4 of Mr. Sullivan’s testimony regarding Energy Efficiency/ Peak Demand Reduction through 2017.
  - a. Please supply all supporting documentation and calculations used in creating the table.
  - b. Please also state whether the Companies’ forecasted load utilized in this calculation included any industrial loads.

Response: Dylan Sullivan, Staff Scientist, Natural Resources Defense Council

1.
  - a. The calculations are in “Sheet 3” of the accompanying Excel file, “2011 12 09 \_Dylan Sullivan \_ LGE KU working papers,” attached hereto.

- b. The forecasted load utilized in this calculation included the same loads included in the Companies' forecast, which were assumed to include industrial loads.

Question

- 2. Please see Mr. Sullivan's testimony at page 7.
  - a. Please provide any and all research and analysis performed that supports Exhibit DES-2, including, without limitation, the annual energy/demand savings proposed within Exhibit DES-2.
  - b. Please provide any and all market potential, market depth, and market feasibility studies performed for the Commonwealth of Kentucky that support the energy/demand savings proposed within Exhibit DES-2.
  - c. Regarding footnote 16 on page 7, please provide any and all analysis of the Companies' peak load contribution of energy efficiency programs.

Response: Dylan Sullivan, Staff Scientist, Natural Resources Defense Council

- 2.
  - a. The targets under the "robust" goal listed in Column D are the result of Mr. Sullivan's experience in helping Midwestern electric utilities ramp up energy efficiency programs. Mr. Sullivan at 5 and 6 explains how the targets are based on utility regional and national performances in delivering energy efficiency.
  - b. Mr. Sullivan knows of no market potential study performed for the Commonwealth of Kentucky and Mr. Sullivan recommends the Companies perform one in his testimony. Mr. Sullivan at 5 referenced Duke Energy Ohio's energy efficiency potential study, conducted for a service territory contiguous to the Commonwealth.
  - c. Mr. Sullivan's method of analysis is explained in the footnote 16 on page 7. Mr. Sullivan examined the capacity value of the Companies' existing portfolio of energy efficiency programs, excluding demand response programs such as Residential Load Management and Commercial Load Management. Taking the 2017 Cumulative GWh savings of the Companies' energy efficiency programs (excluding load management) given in IRP Table 8.(3)(e)(3) (1,156,100 MWh), dividing it by the Summer Peak demand reduction of the Companies' energy efficiency programs (262.3 MW) yields 4407 hours, the "half of the hours in a year" that Mr. Sullivan mentions. Mr. Sullivan adopts a more conservative assumption of spreading savings over 6570 hours in a year in his analysis of a robust portfolio.

Question

3. Please see pages 8-9 of Mr. Sullivan's testimony.
  - a. Please provide any and all analysis associated with customer adoption rates associated with LED, 2X efficient incandescent, and improved CFLs both nationally and in the Commonwealth of Kentucky.
  - b. Please also provide any and all analysis performed demonstrating the cost effectiveness of LED, 2X efficient incandescent, and improved CFLs.

Response: Dylan Sullivan, Staff Scientist, Natural Resources Defense Council

3.
  - a. Mr. Sullivan's testimony at the referenced question is meant to suggest areas where the Companies might look for more savings, not to provide a quantitative analysis of the potential for these technologies in the Companies' service territory. The potential study Sullivan recommends the Companies conduct would – if conducted properly – examine the technologies Mr. Sullivan mentions. 2X technology will be introduced this year. For an illustration of the impact of better-performing CFLs on energy efficiency portfolios, see Slide 6 of the Regional Conservation Progress Report referenced in footnote 12 to Mr. Sullivan's testimony.
  - b. Mr. Sullivan performed no such analysis in writing his testimony.

Question

4. Provide any analysis and work-papers that show the revenue requirement impact of Mr. Sullivan's proposed demand side management ("DSM") programs on the Companies' recommendation to purchase Bluegrass Generation Company, LLC assets and construct new facilities at Cane Run ("Cane Run 7").

Response: Dylan Sullivan, Staff Scientist, Natural Resources Defense Council

4. Mr. Sullivan performed no such analysis in writing his testimony.

Question

5. Please explain how Mr. Sullivan's proposed incremental DSM programs will offset the 4.5 GWh of annual energy historically provided by Cane Run 4-6, Green River 3-4 and Tyrone in the absence of the construction of Cane Run 7.

Response: Dylan Sullivan, Staff Scientist, Natural Resources Defense Council

5. The expanded DSM portfolio described by Mr. Sullivan will reduce the Companies' claimed capacity shortfall. How this reduction in the claimed capacity shortfall should

impact the Commission's decision is beyond the scope of Sullivan's testimony. Mr. Sullivan merely contends that the Commission should make its decision after considering the impact of a robust portfolio of energy efficiency programs on the Companies' capacity needs.

Question

6. Please provide the annual hourly load shape impact of Mr. Sullivan's proposed DSM programs.

Response: Dylan Sullivan, Staff Scientist, Natural Resources Defense Council

6. Mr. Sullivan performed no such analysis in writing his testimony.

Question

7. Please see page 4, lines 17-24 of Mr. Chernick's testimony.
  - a. Please provide any and all support for the statements that the Companies' RFP analysis did not properly account for the costs of installing new controls to comply with existing and pending EPA regulations.
  - b. Please quantify in dollars the amount of those costs and please state how the alleged failure to account for such costs should impact the Companies' construction and purchase recommendations in this case.

Response: Paul Chernick, President, Resource Insight, Inc.

7.
  - a. Mr. Chernick's testimony does not state "that the Companies' RFP analysis did not properly account for the costs of installing new controls to comply with existing and pending EPA regulations." Pages 6 and 7 of his testimony discuss the extent to which the Companies' treatment of the effects of those regulations is incomplete.
  - b. Mr. Chernick has not estimated any such value and he has not "alleged failure to account for such costs." See part (a).

Question

8. Please see page 5, lines 1-2 of Mr. Chernick's testimony. Describe how the cost of emission allowances impact the evaluation of the RFP responses and the revenue requirements associated with construction of Cane Run 7 and purchase of Bluegrass Generation Company assets.

Response: Paul Chernick, President, Resource Insight, Inc.

8. Including the costs of emission allowances would increase the costs of energy generated from existing coal plants and (to a lesser extent) the new gas plants. Emission allowances would thus increase the value of portfolios with additional renewables, as well as energy efficiency. Inclusion of emission allowance prices would also tend to favor gas combined-cycle over combustion turbines.

Question

9. Please see pages 5-6 of Mr. Chernick's testimony. Please explain how the EPA regulations discussed impact the Companies' decision to (1) construct Cane Run 7 and (2) purchase the Bluegrass Generation Company assets to replace the capacity and energy that will be retired.

Response: Paul Chernick, President, Resource Insight, Inc.

9. The EPA regulations will increase the cost of system energy and hence the benefits of resources that produce energy without requiring emissions (including wind and solar).

Question

10. Please see page 8, lines 17-21 of Mr. Chernick's testimony.
  - a. Please provide the "probability-weighted average" of the potential future carbon-emission costs recommended by Mr. Chernick and all supporting analysis and work-papers.
  - b. How high would CO<sub>2</sub> costs need to be in order for the Companies to conclude that they should neither construct Cane Run 7 nor purchase the Bluegrass Generation Company assets to replace the capacity being retired?

Response: Paul Chernick, President, Resource Insight, Inc.

10.
  - a. Mr. Chernick has not developed those values.
  - b. While Mr. Chernick has not performed this analysis (which would be sensitive to other input values), he does not believe that the purchase the Bluegrass Generation Company assets would be much affected by carbon costs.

Question

11. Please see page 11, lines 5-6 of Mr. Chernick's testimony. Please provide Mr. Chernick's forecast of future natural gas prices.

Response: Paul Chernick, President, Resource Insight, Inc.

11. Mr. Chernick has not produced a forecast of future natural gas prices for this proceeding.

Question

12. Please see page 12, lines 1-4 of Mr. Chernick's testimony.
  - a. Please provide a forecast of natural gas prices that Mr. Chernick believes would have resulted in the wind responses to the RFP being lower cost than the Cane Run 7 and Bluegrass Generation solutions.
  - b. Please provide all documentation and support for this forecast.

Response: Paul Chernick, President, Resource Insight, Inc.

12. Mr. Chernick has not performed this analysis.

Question

13. Please see pages 13-15 of Mr. Chernick's testimony.
  - a. Please provide a copy of all wind contracts Mr. Chernick references.

Response: Paul Chernick, President, Resource Insight, Inc.

13. Mr. Chernick does not have copies of the requested contracts. Many, and perhaps most, power-purchase agreements are confidential.

Question

14. Assuming retirement of Tyrone, Green River 3-4 and Cane Run 4-6, what is Mr. Chernick's precise recommended energy and capacity portfolio for supplying the needs of the Companies' customers? Please provide all work-papers and analysis supporting his recommended portfolio.



Response: Paul Chernick, President, Resource Insight, Inc.

14. Mr. Chernick has not performed this analysis.

Dated: January 23, 2012

Respectfully submitted,

*Edward George Zuger III*

---

Edward George Zuger III, Esq.  
Zuger Law Office PLLC  
Post Office Box 728  
Corbin, Kentucky 40702  
(606) 416-9474

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](mailto:kristin.henry@sierraclub.org)

**CERTIFICATE OF SERVICE**

I certify that I mailed a copy of this Environmental Intervenors' Responses to the Companies' First Request for Information by first class mail on January 23, 2012 to the following:

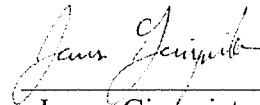
Dennis G. Howard II  
Lawrence W. Cook  
Office of the Attorney General Utility & Rate  
1024 Capital Center Drive  
Suite 200  
Frankfort, KY 40601-8204

Kendrick R. Riggs  
Attorney at Law  
Stoll, Keenon & Odgen, PLLC  
2000 PNC Plaza  
500 West Jefferson Street  
Louisville, KY 40202-2828

Michael L. Kurtz  
Attorney at Law  
Boehm, Kurtz & Lowry  
36 East Seventh Street  
Suite 1510  
Cincinnati, OH 45202

Lindsey W. Ingram, III  
Attorney at Law  
Stoll Keenon Ogden, PLLC  
300 West Vine Street  
Suite 2100  
Lexington, KY 40507-1801

Allyson K. Sturgeon  
Senior Corporate Attorney  
LG&E & KU Energy LLC  
220 West Main Street  
Louisville, KY 40202



---

James Giampietro  
Sierra Club  
85 2<sup>nd</sup> Street, Floor 2  
San Francisco, CA 94105  
(206)679-8836



