

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

THE APPLICATION OF LOUISVILLE GAS AND)	
ELECTRIC COMPANY FOR APPROVAL OF ITS)	CASE NO.
2006 COMPLIANCE PLAN FOR RECOVERY BY)	2006-00208
ENVIRONMENTAL SURCHARGE)	

FIRST DATA REQUEST OF COMMISSION STAFF TO
LOUISVILLE GAS AND ELECTRIC COMPANY

Louisville Gas and Electric Company ("LG&E"), pursuant to 807 KAR 5:001, is requested to file with the Commission the original and 5 copies of the following information, with a copy to all parties of record. The information requested herein is due on or before August 7, 2006. Each copy of the data requested should be placed in a bound volume with each item tabbed. When a number of sheets are required for an item, each sheet should be appropriately indexed, for example, Item 1(a), Sheet 2 of 6. Include with each response the name of the witness who will be responsible for responding to questions relating to the information provided. Careful attention should be given to copied material to ensure that it is legible. Where information requested herein has been provided, in the format requested herein, reference may be made to the specific location of said information in responding to this information request.

1. Refer to the Direct Testimony of Sharon L. Dodson ("Dodson Testimony"), pages 5 through 8. Provide a schedule showing for each of LG&E's generating units the following emissions data for sulfur dioxide ("SO₂"), nitrogen oxide ("NO_x"), and mercury, if available:

- a. The level of emissions for calendar year 2005.
- b. The expected level of emissions for calendar year 2006.
- c. The expected level of emissions permitted under the first phase of the Clean Air Interstate Rule ("CAIR") or the Clean Air Mercury Rule ("CAMR").
- d. The expected level of emissions permitted under the second phase of the CAIR or CAMR.

2. Refer to the Dodson Testimony, page 9.

- a. Are there currently federal, state, or local emission limits established for sulfur trioxide ("SO₃")?
- b. If yes to part (a), provide the current emission limits.
- c. For calendar year 2005, what were the actual SO₃ emissions for Trimble County Unit 1, Mill Creek Unit 3, and Mill Creek Unit 4?
- d. If there are no established emission limits for SO₃, how can LG&E determine whether the actions it takes to limit these emissions are adequate?

3. Refer to the Direct Testimony of John P. Malloy ("Malloy Testimony"), Exhibit JPM-3, the Sargent & Lundy SO₃ Mitigation Study dated March 29, 2006 ("Sargent & Lundy Study").

- a. On pages 24 through 28 of 42 of the Sargent & Lundy Study is a risk assessment of the various SO₃ mitigation technologies. The risk assessment notes that sorbent injection technologies have the risk of producing deposits in the ductwork, the air preheater, and on turning vanes and internal struts and bracing, as well as process scale-up risk. Explain in detail how these risks were quantified in the present value revenue requirements ("PVRR") analysis of SO₃ mitigation technologies.

b. On page 38 of 42 of the Sargent & Lundy Study is the statement that LG&E has agreed to prepare a life cycle cost analysis based on data presented in the study. Provide copies of this life cycle cost analysis. If the analysis has not been prepared, explain in detail why not.

4. Refer to the Malloy Testimony, Exhibit JPM-4, the 2006 SO₃ Mitigation Strategy.

a. On pages 26 and 27 of 42 in the Sargent & Lundy Study, the risk assessment has the following statements concerning hydrated lime and Trona:

Hydrated Lime: The data presented in the literature for this technology is old, and full scale results from any utility are not documented to serve as the basis for performance estimates. The dry sorbent storage and delivery system is subject to moisture, plugging and erosion problems. The effectiveness of the hydrated lime sorbent depends on high surface area, which varies between lime sources. Fly ash resistivity increases may result in ESP performance degradation.

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Trona (Sodium sesquicarbonate): Trona is an expensive reagent with a long shipping distance from Green River, Wyoming and has been limited by transportation availability at Zimmer Station. Typically shipped by rail, the Trona would have to be transferred to trucks as a centrally located storage and transfer facility. In addition, there is currently only one source of supply. AEP has applied for a patent for this technology, so a licensing fee may apply.

The Executive Summary of the 2006 SO₃ Mitigation Strategy, page 3, recommends that LG&E proceed with testing of hydrated lime and Trona at Trimble County Unit 1. Given the risks identified in the Sargent & Lundy Study, explain in detail why this recommendation was considered to be reasonable.

b. Why does the 2006 SO₃ Mitigation Strategy not contain a recommended course of action for Mill Creek Units 3 and 4?

c. Has a course of action been decided for Mill Creek Units 3 and 4? If so, provide the decision. If not, explain why not.

5. Refer to the Malloy Testimony, Exhibit JPM-4. In both the executive summary and recommendation sections of the 2006 SO₃ Mitigation Strategy it is stated that LG&E should proceed with the “testing” of different types of sorbent injection options. The recommendation for testing could imply that a final course of action has not been selected.

a. Why does the 2006 SO₃ Mitigation Strategy recommend further testing rather than proposing a final course of action?

b. Given the discussion contained in the 2006 SO₃ Mitigation Strategy, explain in detail how this report supports the statements on page 11 of the Malloy Testimony, lines 10 through 13, that the use of sorbent injection technology is the least cost alternative to mitigate SO₃ emissions.

6. Refer to the Malloy Testimony, Exhibit JPM-4, page 7. Table II on this page lists the viability of combination technologies.

a. Were the various combination technologies shown on this page evaluated using a PVRR analysis?

b. If yes to part (a), provide the results of the PVRR analysis for each combination technology evaluated.

c. If no to part (a), explain why a PVRR analysis was not performed and how the viability of the combination technologies was determined.

7. Refer to the Malloy Testimony, Exhibit JPM-4, pages 9 and 10.

a. Provide all workpapers, calculations, assumptions and other documentation supporting the PVRR values presented in the charts on page 9. In addition, explain why the PVRR analyses were not provided along with Exhibit JPM-4.

b. Explain in detail why a combination technology of hydrated lime and Trona was not included in the option ranking shown on page 9.

c. On pages 26 and 27 of 42 in the Sargent & Lundy Study, the risk assessment has the following statements concerning sodium bisulfite and soda ash:

Sodium Bisulfite: In addition to the proprietary technology, single source of supply, the yearly licensing fee, and the reagent (sodium bisulfite powder) delivered cost, the major drawback of this technology is O&M cost. The cost of the project installed at Gibson Station increased significantly from start to finish. While byproduct SBS is a less costly sorbent, Vectren may not continue to produce the material.

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Soda Ash: In addition to the proprietary technology, this sorbent injection technology requires longer duct residence time due to the multiple reactions which need to take place and does not have the experience level of SBS. Injection of soda ash upstream of the air preheater is not feasible for the LG&E/KU plants due to residence time requirements.

Given these concerns, explain in detail how it was concluded in the 2006 SO₃ Mitigation Strategy, on page 10, that soda ash and sodium bisulfite are the top sorbent options.

d. While both the Sargent & Lundy Study and the 2006 SO₃ Mitigation Strategy note that low conversion catalyst technology by itself cannot reach the target SO₃ levels, the technology appears to have benefits when combined with other technologies. Does LG&E plan to include low conversion catalyst technology as part of its SO₃ mitigation strategy? Explain the response.

8. Has LG&E made a final determination of exactly what SO₃ mitigation approach should be installed at Trimble County Unit 1, Mill Creek Unit 3, and Mill Creek Unit 4? Explain the response.

9. Refer to the Direct Testimony of Shannon L. Charnas ("Charnas Testimony"), page 3. Explain in detail why LG&E is not seeking to include operation and maintenance expenses associated with the pollution control equipment to be installed at Trimble County Unit 2 and the particulate monitor equipment to be installed at Mill Creek.

10. Refer to the Charnas Testimony, page 5, lines 21 and 22.

a. Will the particulate monitors proposed to be installed at Mill Creek replace existing monitors?

b. If yes to part (a), were the existing monitors recorded on the books of LG&E as of September 30, 2003, the end of the test year in LG&E's last general rate case?

c. If yes to part (b), explain the basis for Ms. Charnas's statement on lines 21 and 22.

11. Refer to the Direct Testimony of Robert M. Conroy ("Conroy Testimony"), pages 2 through 4. Provide ES Form 3.00 for the expense month of June 2006 and a version of ES Form 3.00 for the expense month of June 2006 reflecting LG&E's proposed changes in determining R(m).

12. Refer to the Conroy Testimony, page 5. Concerning the reporting of plant, construction work in progress, and depreciation expense, does LG&E agree that it would be reasonable to report the information for the four environmental compliance

plans under one format reference number with net subtotals for each environmental compliance plan, even though this would probably become a multiple-page format, similar to the approach used for ES Form 2.50? Explain the response.

13. Refer to the Conroy Testimony, pages 8 and 9.

a. Provide the calculations, workpapers, assumptions, and other documents used to determine the 2006 Plan estimated 1,000 kWh per month residential customer bill increase of \$0.41 in 2007 and \$0.81 in 2010.

b. Provide the calculations, workpapers, assumptions, and other documents used to determine the 2005 Plan estimated 1,000 kWh per month residential customer bill increase of \$0.11 in 2007 and \$0.23 in 2010.

14. Refer to the Conroy Testimony, Exhibit RMC-1.

a. Under the section titled "Definitions" in the proposed tariff the following phrase is included for operating expenses, "adjusted for the Average Month Expense already included in existing rates." Does LG&E agree that this adjustment is no longer part of its environmental surcharge mechanism and should be deleted from the proposed tariff? Explain the response.

b. LG&E's current Environmental Cost Recovery Surcharge ("ECR") tariff shows it was effective "with service rendered on and after July 1, 2005." Explain in detail why LG&E's proposed ECR tariff is to be effective "with bills rendered" rather than "with service rendered."



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cc: All Parties