COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

THE APPLICATION OF KENTUCKY UTILITIES COMPANY TO ASSESS A SURCHARGE UNDER KRS 278.183 TO RECOVER COSTS OF COMPLIANCE WITH ENVIRONMENTAL REQUIREMENTS FOR COAL COMBUSTION WASTES AND BY-PRODUCTS	)	CASE NO. 93-465

O R D E R

IT IS ORDERED that Kentucky Utilities Company ("KU") shall file the original and 12 copies of the following information with the Commission no later than April 15, 1994, with a copy to all parties of record. 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 copies material to ensure that it is legible. Where information requested herein has been provided along with the original application, 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 page 2 of Appendix A of the November 1, 1993 "Clean Air Act Amendments of 1990 Compliance Plan UPDATED Reassessment Report" ("Updated Reassessment Report") filed in this proceeding. Provide Kentucky Utilities Company's ("KU") estimate

of the producer price index used to escalate allowance prices for each year of the study period. Does KU use the producer price index or the general price deflator as the measure of inflation? Explain.

2. Refer to KU's response to Item 7 of the Commission's Order dated March 4, 1994. Provide this same information for the remainder of the plans that were analyzed in the September 24, 1993 "Clean Air Act Amendments of 1990 Compliance Plan Reassessment Report" ("Reassessment Report") filed in Case No. 93-383[1] and the Updated Reassessment Report.

3. Refer to the response to Item 15. Provide the input and output files that were used to analyze each of the compliance plans in the Reassessment and Updated Reassessment Reports. Include the ENPRO files, the PROSCREEN files and the spreadsheet files. If a plan was analyzed in both the Reassessment Report and the Updated Reassessment Report, provide only the most recent version of these files.

4. Refer to the response to Item 22. Describe how the discount rate was used to determine the fixed charge rate for evaluating capital investments. Provide all calculations, workpapers and assumptions including the tax and insurance rates used.

5. Refer to the response to Item 26. Do KU's existing contracts contain price escalation terms that include market price

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[1] Case No. 93-382, A Review Pursuant to 807 KAR 5:058 of the 1993 Integrated Resource Plan of Kentucky Utilities Company.

reopeners? If yes, indicate which contracts contain these provisions?

6. For the precipitators at the Ghent, Green River, and Brown generating units:

a. What is the collection area of the precipitators expressed as the ratio of plate area (in square feet) to gas volume (in cubic feet per second).

b. Provide any other readily available measures of the size and collection efficiency of the precipitator equipment at these units.

c. What is the age of this equipment?

d. What is the date of the last major refurbishment of this equipment?

7. Refer to Appendix B of the Reassessment Report. Do the capital cost data include indirect costs, contingency and overhead?

8. Refer to the response to Item 28. What is the forecast of opportunity sales in MWhs for each year of the study period?

9. Refer to the response to Item 33. Provide the derate in MWs that was assumed for the production costing simulation for each of the SO_2 control options.

10. Refer to the screening analysis of Powder River Basin coal for Ghent 1 and Brown 1 reported in Appendix B of the Reassessment Report:

a. Provide every calculation used to derive the $192/KW and $200/KW investment cost for this coal.

b. Provide all sources of data.

c. Provide the share of the cost that is due to the derate of the unit.

d. Provide the share of the cost that is due to investments at the plant.

e. Indicate what share of the cost is due to coal handling and precipitator investments.

11. Refer to the response to Item 39. Provide a copy of Contract G-3561 if the full text of this contract was not provided in the response to Item 75.

12. Refer to the response to Item 73. Provide a listing of the studies which KU will make available.

13. Refer to the response to Item 73:

a. Provide the economic and technical studies that justify investments in nitrogen oxide ("NO_x") control equipment. If no studies exist, describe the evaluation process that was followed to support these investments. Indicate sources of cost data, alternatives considered, vendor bidding processes, decision criteria, and methodologies and tools used for the analysis.

b. Provide a copy of the Request for Proposals ("RFP") that was released to NO_x system vendors.

c. Explain how requirements for NO_x emissions under Title I of the Clean Air Act Amendments of 1990 ("CAAA") are considered in KU's planning for compliance with Title IV NO_x requirements.

d. Provide KU's evaluation and conclusions regarding opportunities for NO_x emission averaging under Title IV of the CAAA.

14. Refer to the response to Item 73. Provide a copy of the RFP that was released to continuous emission monitoring system vendors.

15. Refer to the response to Item 73. Provide a list of the alternatives to flue gas dispersion (Item 3 of Lucas Exhibit 1) that were considered. Explain why the other alternatives were rejected. Provide meeting minutes or other documentation of any briefings made to KU management on this issue.

16. Refer to the response to Item 73. Provide meeting minutes or other documentation of any briefings made to KU management that requested approval for the investment of approximately $92 million dollars in fly and bottom ash controls (see Items 7-10 of Lucas Exhibit 1).

17. Refer to page 2 of Appendix E of the Updated Reassessment Report. Why are allowance costs of $2 million recorded for the case that measures no CAAA compliance?

18. Refer to page 3 of Appendix I of the Updated Reassessment Report. Provide a table that lists the data that is graphed. Explain why the rate effects of some plans relative to N1 (which is a no CAAA reference case) are negative.

19. Are the geographical regions in which KU's generating units are located currently in compliance with national ambient air

quality standards? To the best of KU's knowledge, is the U.S. Environmental Protection Agency ("EPA"), or other state regulatory agencies, considering revisions to these requirements?

20. KU's selected plan includes fuel switching to compliance coal at Brown in the 2008 timeframe. KU will be making investments in the precipitator equipment at Brown during 1994. Will any additional investment be required in the 2008 timeframe? Explain the environmental requirements that are motivating the near-term investment in the precipitator?

21. Provide a detailed explanation of KU's rankings for "Sensitivity to Forecast Risk" presented in Appendix J of the Updated Reassessment Report.

22. Carbon dioxide legislation, if implemented, would be likely to lower the premium in price between high-sulfur and low-sulfur coal and reduce emission allowance values. Thus, strategies that include scrubbers are not "neutral" with respect to future greenhouse gas legislation. Does the potential for future greenhouse gas legislation significantly increase the risk of scrubbing? Explain.

23. Refer to the response to Item 58. Provide a justification for the depreciation rates proposed for each type of equipment. Provide all studies that justify these depreciation rates.

24. Refer to the response to Item 62:

a. Describe the costs included in Account 51208, "Direct Air Qual."

b. In what account(s) will the cost of operating and maintaining NO_x control systems be recorded?

c. For the years 1994 through 1996, provide KU's forecast of O&M for all activities.

25. Refer to the response to Item 38. Provide a hypothetical example to illustrate the process of "re-indexing" at the time that base rates would be adjusted to reflect the environmental surcharge.

26. In several responses to the March 4, 1994 Order relating to KU's proposed rate of return on compliance-related capital expenditures, KU has cited Hewett Direct Testimony, page 11, lines 4 through 12.

a. Explain why Mr. Hewett's concern with the "appropriate focus" of this proceeding does not include a thorough examination of the reasonable rate of return on compliance-related capital expenditures.

b. Explain how the reasons cited in Hewett's testimony establish the proposed rate of return as being reasonable.

c. If KU's concern in this proceeding is to focus on the review and approval of its compliance plan, explain why KU has not concentrated as much attention on the reasonable rate of return as it has on the compliance plan, the proposed tariff, and the biennial procedures.

d. Identify the "circumstances of this case" which KU is referencing in its response to Item 64(a).

e. Provide Mr. Hewett's qualifications and experience to testify on the issue of a reasonable rate of return. Is Mr. Hewett KU's rate of return witness in this proceeding? If not, identify the appropriate witness.

27. In the response to Item 47, KU stated that it believes the overall cost of capital should be used for the rate of return for all projects, rather than a project specific rate of return approach.

a. Explain whether KU believes its proposed rate of return on compliance-related capital expenditures reflects a reasonable overall cost of capital for all KU projects.

b. If KU believes that the overall cost of capital should be used for the rate of return for all compliance-related capital projects, identify the rate of return methodology (i.e. risk premium, discounted cash flow, comparable earnings model) that should be used to establish the reasonable return as required by KRS 278.183(2).

28. In the response to Item 56(c), KU states that it is not essential at this time to develop a specific methodology for the treatment of revenues received from the sale of allowances and by-products. KU also states that the reluctance of regulatory commissions to act on this issue has created substantial regulatory uncertainty.

a. Given the response to Item 51, KU appears to have made significant progress in defining a methodology for handling these revenues. Explain in detail why it is not essential to define the treatment of revenues received from allowance sales and by-product sales as a part of the surcharge mechanism proposed by KU.

b. Does KU agree that the regulatory uncertainty would be lessened if this issue is addressed in this case?

c. Describe KU's position on the appropriate treatment of any excess allowances which may be determined to exist in the authorized compliance plan.

29. For each project listed on Lucas Exhibit 1, provide:

a. The actual date of completion.

b. KU's accounting entries made to record each asset upon completion.

c. KU's accounting entries made to record Construction Work in Progress for each asset not completed.

30. Refer to the response to Item 57(a). The original request did not seek project specific rates of return, but rather the rates of return earned on total jurisdictional rate base and capital for each quarterly financial period subsequent to the booking of the compliance-related assets included in each project. The reference to the 15 projects was to establish the point at which these assets were booked and included in KU's rate base. With this clarification, provide the originally requested rates of return on total jurisdictional rate base and capital. Include all supporting schedules which reflect the underlying assumptions and calculations used to determine jurisdictional rate base, capital, earnings, and rates of return. Start with the first quarterly

financial period after the booking of the assets related to Lucas Exhibit 1, Project No. 10 and continue through the projected 1994 calendar year baseline period proposed by KU in this case.

31. For each quarterly financial period subsequent to the booking of the assets for Project No. 10, Lucas Exhibit 1:

a. Determine the hypothetical rate of return on KU's total jurisdictional rate base and capital exclusive of the compliance-related assets listed on Lucas Exhibit 1.

b. Provide an analysis showing what KU's rate of return would have been on total jurisdictional rate base and capital if additional revenues had been collected under the surcharge methodology proposed in this proceeding.

32. Concerning the response to Item 57(c), explain KU's reasons for seeking the going-forward level of pollution control related capital costs for compliance-related assets booked prior to the effective date of the surcharge statute.

33. Refer to Item 58, "Tax" footnote A. KU has stated that the amount amortizable under Internal Revenue Code ("IRC") Section 169 will be 60 percent of the cost or basis of the facility. However, IRC Section 169 requires only a 20 percent reduction to the amortizable basis of certified pollution control facilities placed in service after 1982 for which a rapid amortization election is made. Explain how KU determined that a 40 percent reduction was necessary. Include any workpapers, calculations, or supporting documentation.

34. The response to Item 60 indicates that the pollution control assets were funded by sources of capital other than pollution control bonds.

a. Explain why KU's proposed reasonable rate of return is established as the pollution control bond rate.

b. Explain why it would be appropriate for the Commission to consider the pollution control bond rate as a reasonable overall rate of return in any future proceedings.

35. Concerning the response to Item 61(b), explain how the annual incremental O&M expenses of pollution control equipment, which KU proposed to include in the surcharge rate base, constitute "other capital expenditures."

36. For purposes of establishing a baseline to calculate subsequent increases or decreases in environmental costs, explain why it would not be appropriate to use a recent historical period or a forecasted period corresponding to a date immediately prior to the effective date of the surcharge tariff.

37. Explain whether KU believes it is necessary to determine a compliance-related revenue requirement using appropriate rate-making methodologies in order to establish current and prospective recovery of environmental costs.

38. Concerning insurance costs and property taxes to be recovered in the surcharge:

a. Explain whether KU plans to classify these items as capital costs or expenses. Include the justification for KU's position.

b. Explain whether these items will be included in total, or as an increment above or below a set baseline.

39. The response to Item 64(d) does not answer the question of where in KRS 278.183 the use of an "interim" rate of return is authorized. Provide a response to the original request.

40. In the response to Item 67(a), KU states that it believes the use of a 1994 baseline will accurately identify and track for purposes of recovery through the surcharge those O&M expenses associated with the pollution control facilities that are not already included in existing base rates.

a. Based on this statement, is KU contending that the 1994 baseline level of pollution control related O&M expenses are included in its existing base rates? Explain the response.

b. Based on this statement and the overall rates of return provided in response to Item 30, above, explain and support the conclusion KU has apparently reached that its pollution control related O&M expenses <u>are</u> included in its existing base rates, but a reasonable return on the compliance-related capital expenditures <u>is not</u>.

41. KU's proposed environmental surcharge tariff is to become effective on August 1, 1994. If approved by the Commission, after that date KU would begin a cost recovery mechanism that recognizes the going-forward level of return required on compliance-related capital assets booked between 1983 and June 1994 and other costs purportedly not included in base rates. However, incremental pollution control related O&M expenses would not be included until

after the establishment of the 1994 baseline. Explain why it is reasonable and consistent to collect the return on capital expenditures in August 1994 but not include related O&M expenses until January 1995.

42. The response to Item 72(a) addressed why comparisons with the U. S. Department of Energy ("DOE") coal price forecasts were difficult. However, the request also asked how KU's fuel cost forecasts for oil and gas compared to those prepared by DOE. Respond to the original request for oil and gas fuel cost forecasts.

43. Provide any conceptual engineering reports that relate to the design of the fly and bottom ash controls listed as Items 7-10 of Lucas Exhibit 1.

44. Explain whether a percentage adjustment to a customer's total bill as proposed by KU is consistent with standard ratemaking principles pertaining to the allocation of costs between individual customer classes.

45. Explain whether a surcharge mechanism that divides the expenses into demand- and energy-related components would be more compatible with standard ratemaking principles pertaining to the allocation of costs between individual customer classes than the mechanism proposed by KU.

46. One of the advantages of a surcharge mechanism that separates demand-related and energy-related costs is that it would facilitate the incorporation of surcharge amounts into base rates at two-year intervals. Does KU agree with this statement?

47. KU has proposed a procedure similar to the fuel adjustment clause to incorporate the surcharge amounts into base rates at two-year intervals. The surcharge mechanism will be different because both O&M and capital amounts will need to be "rolled-in" to base rates. Given KU's proposed surcharge mechanism, how does KU plan on blending surcharge-related expenses into existing rates in a reasonable and cost-effective manner? How can KU incorporate capital investment amounts into base rates without examining the overall recovery of costs in the base rates prior to the roll-in?

48. With respect to environmentally related Administrative and General ("A&G") costs:

a. Why were environmental compliance-related A&G expenses not included in the surcharge mechanism?

b. Provide an estimate of the dollar value of environmental compliance-related A&G.

c. What process would KU follow to determine these amounts?

49. Two alternatives to flow allowance sales through the surcharge are to: (1) recognize gains or losses on the sale or (2) recognize the allowance revenues. Which of these approaches does KU support? Explain.

50. KU's testimony suggests that if new rates are approved by the Commission in a general rate case, it will utilize the approved rate of return from the rate case in the environmental surcharge. Is this statement true? Is this KU's intention? Are there any

circumstances where KU believes it would be appropriate to use some other method of determining the rate of return for the surcharge?

51. KU proposes to recover through Rate Schedule ES the going forward level of capital costs associated with pollution control equipment not included in base rates as of the June 30, 1982 test year in Case No. 8624.[2] Provide any authoritative references which support the position that pollution control equipment added to KU's plant in service since its last rate case is not included in base rates.

52. Explain whether the discount rate of 9.73 percent, contained in the Updated Reassessment Report, would constitute a reasonable rate of return for KU under current economic conditions. If not, provide the reasonable rate of return, supported by appropriate analysis, assumptions, and documentation.

53. If the Commission accepts KU's proposed 5.85 percent rate of return for the environmental surcharge, will KU receive a reasonable recovery on its compliance-related costs? Explain.

54. Discuss KU's position on the accounting and rate-making treatment of emission allowance purchases and sales in the context of the environmental surcharge mechanism.

55. Analyze all administrative and general expenses KU believes are associated with compliance-related expenditures.

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[2] Case No. 8624, General Adjustment of Electric Rates of Kentucky Utilities Company.

56. In Case No. 94-032,[3] Big Rivers Electric Corporation ("Big Rivers") has identified both balance sheet and O&M expense accounts which it believes will contain amounts associated with compliance-related capital expenditures. For each of the accounts listed below, indicate whether KU would record environmental compliance amounts in these accounts and provide the amount of related environmental compliance items actually recorded in the account for calendar year 1993.

a. Account No. 154, Materials and Supplies.

b. Account No. 500, Operation Supervision and Engineering.

c. Account No. 505, Electric Expenses.

d. Account No. 511, Maintenance of Structures.

e. Account No. 513, Maintenance of Electric Plant.

f. Account No. 514, Maintenance of Miscellaneous Steam Plant.

g. Account No. 555, Purchased Power.

h. Account No. 920, Administrative and General Salaries.

i. Account No. 921, Office Supplies and Expenses.

j. Account No. 923, Outside Services Employed.

k. Account No. 924, Property Insurance.

l. Account No. 925, Injuries and Damages.

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[3] Case No. 94-032, Big Rivers Electric Corporation Application for Approval of Contract Amendments with the City of Henderson and City of Henderson, Utility Commission and to File Plan for Compliance with Clean Air Act and Environmental Surcharge.

m. Account No. 926, Employee Pensions and Benefits.

57. For the accounts listed below, indicate whether KU would experience environmental compliance transactions in these accounts and provide the amount of related environmental compliance items actually recorded in the account for calendar year 1993.

a. Prepayments.

b. Inventories.

c. Other accounts normally included in utility rate base.

d. Account No. 509, Allowances.

e. Account No. 510, Maintenance Supervision and Engineering.

58. In Case No. 94-032, Big Rivers has proposed to allocate its environmental compliance costs into demand-related and energy-related components. Provide a cost of service analysis which would allocate KU's environmental costs into demand-related and energy-related components.

59. Concerning the two year review and roll-in of the environmental surcharge, explain whether KU envisions any problems with the incorporation of the surcharge into existing rates, given that the surcharge contains a return and an expense component.

60. As part of the two year review, the Commission is to incorporate surcharge amounts into the existing base rates to the extent appropriate. In order to provide for a surcharge roll-in to the "extent appropriate":

a. Would it be necessary to re-evaluate the reasonable rate of return applied to compliance-related assets for the surcharge amount that is to be rolled into base rates?

b. Would it be necessary to adjust the O&M expense baseline used for the surcharge amount that is to be rolled into base rates?

c. Explain how KU would propose to handle any extraordinary and/or non-recurring costs included in the surcharge in the preceding periods.

61. Explain whether KU believes that, at the time of the two year review, it would be necessary to establish a more current reasonable rate of return for compliance-related capital expenditures and establish a new O&M expense baseline that would be utilized over the next two year period.

Done at Frankfort, Kentucky, this 7th day of April, 1994.

PUBLIC SERVICE COMMISSION

Robert M. Davis

For the Commission

ATTEST:

Don Mills

Executive Director