COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

2010 INTEGRATED RESOURCE PLAN OF BIG RIVERS ELECTRIC CORPORATION	))	CASE NO. 2010-00443

COMMISSION STAFF'S FIRST INFORMATION REQUEST TO BIG RIVERS ELECTRIC CORPORATION

Big Rivers Electric Corporation ("Big Rivers"), pursuant to 807 KAR 5:001, is to file with the Commission the original and 10 copies of the following information, with a copy to all parties of record. The information requested herein is due no later than January 28, 2011. Responses to requests for information shall be appropriately bound, tabbed and indexed. Each response shall include the name of the witness responsible for responding to the questions related to the information provided.

Each response shall be answered under oath or, for representatives of a public or private corporation or a partnership or association or a governmental agency, be accompanied by a signed certification of the preparer or the person supervising the preparation of the response on behalf of the entity that the response is true and accurate to the best of that person's knowledge, information, and belief formed after a reasonable inquiry.

Big Rivers shall make timely amendment to any prior response if it obtains information which indicates that the response was incorrect when made or, though correct when made, is now incorrect in any material respect. For any request to which Big Rivers fails or refuses to furnish all or part of the requested information, it shall

provide a written explanation of the specific grounds for its failure to completely and precisely respond.

Careful attention shall be given to copied material to ensure that it is legible. When the requested information has been previously provided in this proceeding in the requested format, reference may be made to the specific location of that information in responding to this request.

1. Refer to the second paragraph on page 5-11 of Big Rivers' IRP. Provide a list and description of the specific pilot projects (1) currently underway and (2) planned.

2. Refer to the third paragraph under the heading Transmission System on page 6-3 of Big Rivers' IRP. Provide the current cost estimate of the new two-way radio systems planned for Big Rivers and its three distribution cooperatives in 2012.

3. Refer to page 8-9 of Big Rivers' IRP. Explain whether each of the new Demand-Side Management ("DSM") programs listed there will be offered by each of Big Rivers' three cooperatives.

a. If yes, provide documentation that each cooperative will offer each new DSM program.

b. If no, provide a schedule which lists each new DSM program and the names of the cooperatives that have not committed to offer that program.

c. For each cooperative that has not committed to offer a new DSM program, provide the analysis which shows that the new program would not reduce customers' consumption and would not delay the need for new generating capacity.

d. Describe in detail Big Rivers' ability to require each of its member cooperatives to offer all cost-effective DSM programs to their retail customers.

4. Refer to page 8-9 of Big Rivers' 2010 IRP. Provide a list of any other energy efficiency programs considered and an explanation as to why they were not included in the programs selected for implementation.

5. Refer to page 8-12, paragraph 2, of Big Rivers' IRP. Provide a detailed explanation of the assumption that similar energy efficiency programs with the same savings will occur in the fourth through fifteenth years of the programs.

6. Refer to page 8-12, paragraph 2, and Appendix B, page 6, of Big Rivers' IRP. Provide a detailed explanation as to how the DSM study contained in Appendix B was utilized in the final analysis of the DSM programs selected for implementation.

7. Refer to on page 8-12, paragraph 3, of Big Rivers' IRP.

a. Explain why the total energy savings and cumulative annual savings listed for years 2011 and 2025, respectively, do not match the totals listed on page 8-13 in Table 8.6.

b. Explain why the total winter peak demand savings for all programs listed for 2011 and 2025, respectively, do not match the totals listed on page 8-13 in Table 8.7.

8. Refer to page 8-14, Table 8.8, of the IRP. Explain the decrease in residential cumulative energy savings by season in the lighting section for years 2020 and 2025 when compared to 2015.

9. Refer to page 8-14, Table 8.9, of the IRP. Explain the decrease in residential cumulative annual peak demand savings by season in the lighting section for years 2020 and 2025 when compared to 2015.

10. Refer to page 8-15, paragraph 4, of the IRP, regarding projected costs. Provide a detailed listing of the types and amounts of costs that will be included under each of the identified administrative costs.

11. Refer to page 8-16, Tables 8.13 and 8.14, of the IRP. Provide all information, studies, etc. upon which Big Rivers relied to determine the incentive and administrative costs for each of the energy efficiency programs.

12. Refer to page 8-18, Table 8.17, of the IRP. Explain what makes up and accounts for the Net Present Value benefits listed in the Non-Electric and Other columns.

13. Refer to pages 8-24 to 8-26 of the IRP, specifically, the first paragraph on page 8-26. Provide an expanded discussion of why "[t]he development of a CO_2 plan is not possible at this time . . . ."

14. Refer to page 8-26 of the IRP under the heading Mercury. The latter part of the paragraph states that, if mercury control should be on a unit-by-unit basis, Big Rivers' coal-fired units would likely require additional controls. The last sentence indicates that previous test results showed, with the installation of Flue Gas Desulfurization ("FGD") equipment and Selective Catalytic Reduction ("SCR") devices, that Big Rivers' coal-fired units would comply with Phases 1 and 2 of the Clean Air Mercury Rule. Table 8.21 on page 8-24 reflects that all of Big Rivers' coal-fired units are equipped with FGDs but that five units, the three Coleman units and the two Green units, do not have SCRs. Provide the most current estimates of the costs of retrofitting these units with SCRs.

15. Refer to page 8-27 regarding compliance with NOx emissions which refers to the U.S. Environmental Protection Agency's ("EPA") release of its proposed Clean Air Transport Rule ("CATR") in July 2010. This final sentence in the paragraph states that,

if Big Rivers determines that an insufficient number of allowances for SO_2 and NOx have been allocated, it will have to determine whether to purchase allowances or install additional emissions controls. Given that the CATR rule is to become effective January 1, 2012, describe the steps Big Rivers anticipates taking in advance of that date and the timeline for same.

16. Refer to Appendix A, 2009 Load Forecast ("Load Forecast"), page 1, Table 1.1, and page 5, Table 1.3.

a. Explain the difference between the Total System and Rural System.

b. The units for Peak Demand (CP) are not listed in Table 1.1. For 2003, Rural System Energy Requirements are 2,089,678 MWH and Peak Demand (CP) is 466,551 for 104,764 customers. Explain whether peak demand units are kW or MW.

c. Table 1.3 lists Peak Demand and Rural Demand in MW. The numbers appear to be quite large. Explain whether the units should be kW rather than MW. Provide a list of any other Tables, Charts and Graphs that should be corrected.

17. Refer to the Load Forecast, page 6, Figure 1.1.

a. The Peak Demand graph does not appear to agree with Table 1.1 or Table 1.3. Explain whether the graph or the tables are incorrect.

b. Explain what happened in 1997 and 1998 to account for the drop in both energy requirements and coincident peak demand.

18. Refer to the Load Forecast, page 14, Section 3.1.

a. Explain whether "the number of residential customers served by county" is equal to the number of residential customer accounts derived from the cooperative's billing data. If not, explain how the cooperative knows the actual number of residential customers served through each customer account.

b. If a county is served by two member cooperatives, explain whether the respective county weighting factors should sum to one. Explain whether, in the formula for CTYWGT, if RCON should be divided by HHOLD rather than multiplied.

19. Refer to the Load Forecast, Sections 4, 5, 6 and 7.

a. The EPA has new air and water quality regulations pending that may affect both the use of coal in the production of electricity and the price of electricity in the near future. Explain whether and how the load forecast accounts for pending EPA regulations for air and water quality.

b. There are proposed new EPA regulations on carbon emissions. Explain whether and how the load forecast accounts for the potential limits on carbon emissions.

20. Refer to the Load Forecast, page 17, Sections 4.4 and 4.5. Explain how the real price of electricity to large commercial, industrial and direct-serve customers changes over the forecast period.

21. Refer to the Load Forecast, Sections 5 and 6, Short-Term and Long-Term Energy Sales and Peak Demand Forecast.

a. Big Rivers' system peak occurs in the winter. Provide, by customer class, the number of customers that have access at their premises to natural gas.

b. Describe the extent to which Big Rivers' distribution cooperatives are actively marketing electric heating.

c. When new EPA air and water quality rules take effect, the relative prices of electricity and natural gas and propane will likely change. Explain how the load forecast accounts for these changes.

d. Explain whether it will be in the customers' best interests if the distribution cooperatives actively promote electric heat after new EPA rules take effect.

e. There is no explicit discussion of how DSM programs are incorporated into either the short-term or the long-term forecasts. Explain how the forecasts account for current and planned DSM programs.

f. Explain how Big Rivers' and the distribution cooperatives' DSM programs will change when the new EPA air and water quality rules take effect and how those changes will affect the load forecast.

22. Refer to the Load Forecast, Section 5, Short-Term Energy Sales and Peak Demand Forecast. This section includes no presentation or discussion of the models used to make projections.

a. For each customer class's short-term energy sales forecast and peak demand forecast, provide and discuss all of the models and equations used, a discussion of the steps taken to obtain the final forecast, and a description of the variables (and or the derivation of the variables) used in each equation.

b. Explain what data was obtained from the individual distribution cooperatives and how that data was used in the forecast equations.

c. Some utilities perform customer appliance surveys to establish a baseline for type and vintage of appliances used in the service territory. Explain whether or not Big Rivers has incorporated this type of data into the forecasts.

d. If not provided above, provide the equation for and an explanation of how "[a]n average coincidence factor, based on historical data, was applied to rural system CP demand to compute projections of rural system NCP."

e. Explain how Big Rivers uses the short-term energy sales and peak forecasts and why the forecasts do not include the direct serve and large industrial customers.

f. Explain how much of Big Rivers' load is interruptible, how often customer loads are interrupted, and how the ability to interrupt customer load is incorporated into the peak forecasts.

23. Refer to the Load Forecast, Section 6, Long-Term Energy Sales and Peak Demand Forecast. This section includes no presentation or discussion of the models used to make projections.

a. For each customer class's long-term energy sales forecast and each peak demand forecast, provide and discuss all of the models and equations used, a discussion of the steps taken to obtain the final forecast and a description of the variables (and or the derivation of the variables) used in each equation.

b. Explain how much of Big Rivers' load is interruptible, how often customer loads are interrupted, and how the ability to interrupt customer load is incorporated into the peak forecasts.

24. Refer to the Load Forecast, Section 6.2.1, page 22. Explain the meaning of "vintaging of heating and cooling systems." Does this phrase mean the aging of existing residential systems or the replacement of older, less efficient systems with more efficient systems or something else?

25. Refer to the Load Forecast, Section 6.2.4, page 24. Explain how total native system requirements relate to total rural system requirements.

26. Refer to the Load Forecast, Section 7.

a. Refer to Section 7.1.1 on page 25. Explain the characteristics of the large commercial customer class which support the assumption that it is non-weather sensitive.

b. Refer to Section 7.2.2 on page 27. Explain whether or not the Pessimistic Outlook takes into account the new EPA air and water quality rules that are scheduled to take effect in the near future.

c. Explain whether the Economy Scenarios in Section 7.2 take into account any potential local or regional economic events or whether the Optimistic and Pessimistic Outlooks are driven by national macroeconomic events only.

d. There is no discussion of probability of occurrence for the four Range Forecasts or how these forecasts are used relative to the base case forecast. Explain and discuss the probabilities of occurrence associated with each of the four scenarios, as well as the base case forecast.

27. Refer to Appendix B, the "Demand-Side Management (DSM) Potential Report for Big Rivers Electric Corporation" prepared by GDS Associates, Inc. ("GDS Report"), page 6. The last sentence in the first paragraph reads, "[t]he authors of this report emphasize that only energy efficiency measures that cost less than new power supply resources are considered to be cost effective."

a. Explain whether, with the statement, the authors are excluding the types of measures that utilities may target at delaying or avoiding the need to upgrade existing, or install new, transmission facilities.

b. Explain whether, with this statement, the authors are excluding the types of measures that may permit a utility to avoid running, or running as often, its existing higher-cost supply-side resources.

28. Refer to pages 9 and 13 of the GDS Report. The last paragraph on page 9 refers to Big Rivers' program potential being based on first-year spending of $1 million with a combined budget for 10 years of $17.4 million. The last paragraph on page 13, citing a study by the American Council for an Energy Efficient Economy, states that "[t]he top energy efficiency states spend roughly 2% of annual electric sales revenue on energy efficiency programs."

a. Explain in detail how the spending levels for Big Rivers were determined.

b. Provide the amounts if Big Rivers' spending were budgeted at one percent of its annual revenues and at two percent of its annual revenues.

29. Refer to pages 20 and 21 of the GDS Report. Explain whether each of the existing DSM programs listed is offered by every one of Big Rivers' three distribution cooperatives.

a. If each DSM program is not offered by all three cooperatives, provide a schedule which lists each existing DSM program and the names of the cooperatives that do not offer that program.

b. For each cooperative that does not offer an existing DSM program, provide the analysis which shows that offering the program would not reduce retail customers' consumption and would not delay the need for new generating capacity.

30. Refer to page 22 of the GDS Report regarding the estimates of annual measure savings.

a. Provide a listing of the program evaluations conducted by other utilities and other program administrators.

b. Provide a listing and explanation of the qualitative and quantitative criteria utilized in selecting information comparable to Big Rivers.

31. Refer to page 32 of the GDS Report regarding energy efficiency measures examined.

a. Provide a list of the studies that were relied upon for developing the list of energy efficiency measures.

b. Identify the individuals who conducted the qualitative screening, provide the relevant portions of their backgrounds that make them qualified to conduct the screening, and provide a general description of the steps and/or procedures that constitute the qualitative screening process.

32. Refer to page 35, second paragraph, of the GDS Report regarding current tax credits for energy efficiency. Since these credits were recently extended to some degree, describe the impact such extension would have on this analysis.

33. Refer to pages 58–66 of the GDS Report, which addresses its analysis of demand response programs.

a. The other five generating utilities regulated by the Commission have all been authorized to implement direct load control programs for residential air conditioning loads, either as pilots or full scale programs. Explain whether any review of those programs or the relevant Commission cases was performed by either Big Rivers or GDS.

b. Under Key Assumptions and Inputs on page 63, Total Resource Cost annual incentives are shown for "Air Conditioner – 33% cycling," "Air Conditioner – 50% cycling," and "Water Heater – 40/50 gallon." Explain in detail how each of these incentive amounts was selected.

34. Refer to page 66 of the GDS Report. In the study, what steps were taken to determine the impact of the demand response programs for the two cooperatives with AMI versus the cooperative without AMI?

35. Refer to page 84 of the GDS Report. Provide a detailed explanation of how the projected participation levels were determined.

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