

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

2014 INTEGRATED RESOURCE PLAN OF) CASE NO.
BIG RIVERS ELECTRIC CORPORATION) 2014-00166

COMMISSION STAFF'S INITIAL REQUEST FOR INFORMATION
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 ten copies of the following information, with a copy to all parties of record. The information requested herein is due by September 10, 2014. Responses to requests for information shall be appropriately bound, tabbed and indexed. Each response shall include the name of the individual responsible for responding to 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 footnote 14 on page 17 of the 2014 Integrated Resource Plan (“IRP”), which refers to over 200 measure permutations. Page 4 of the Demand-Side Management (“DSM”) Potential Study (“Study”) indicates that nearly 400 energy-efficiency (“EE”) measure permutations were examined. Explain the discrepancy in the number of measure permutations.

2. Refer to footnote 15 on page 17 of the 2014 IRP where it states that GDS Associates, Inc. (“GDS”) used the Mid-Atlantic Technical Reference Manual (“Manual”).

a. Identify the states whose information is included in the Manual.

b. Explain why the Manual was chosen over other regions’ technical reference manuals.

3. Refer to the first full paragraph on page 18 of the IRP where it states that “Big Rivers evaluates the cost-effectiveness of specific DSM measures when determining which DSM programs to implement.” Provide a breakdown of the value assigned to each benefit and cost for each year of the IRP planning period and explain how the value was determined.

4. Refer to the partial paragraph at the top of page 21, Section 3, of the IRP, where it states, “Due to the short timeframe since issuance of the order in Case No.

2013-00199 on April 25, 2014, analysis for the preparation of this IRP includes the rates proposed in that case.” Explain the effect it would have had on the IRP if the approved rates had been used rather than the proposed rates. Provide a listing of all exhibits that would be changed if the approved rates had been used.

5. Refer to Section 3.1.1 on page 22 of the IRP, in which changes to Big Rivers’ load-forecasting methodology are discussed. Explain why the econometric model developed for the 2013 forecast was used only to develop projections for the years 2013-2017 and not for the entire planning period.

6. Refer to the third paragraph on page 27 of the IRP, where it states, referring to DSM status reports, that “Big Rivers has filed such reports on January 31, 2012, July 31, 2012, January 31, 2013, July 31, 2013, and January 31, 2014.”

a. Identify and describe the procedures Big Rivers used to determine the accurate evaluation, measurement, and verification (“EMV”) of its programs’ results.

b. Identify and describe any best practices learned as a result of Big Rivers’ EMV processes since the inception of the DSM programs.

7. Refer to the fourth paragraph on page 27 of the IRP where it states, “Much of this work is done through a DSM/EE Working Group consisting of Big Rivers’ and its Members’ employees, which meets monthly.”

a. Identify the Working Group members and provide their respective responsibilities.

b. Explain how Big Rivers coordinates DSM/EE program advertising, promotion, implementation, and monitoring with its member cooperatives.

8. Refer to Tables 3.1, 3.2, 3.3, 4.1, 4.2, and to page 29, Section 4, of the IRP. Section 4, having been completed in 2013, indicates that the most recent historical year in the forecast is 2012. Provide revised versions of the tables which include the actual and, as appropriate, weather-adjusted results for 2013.

9. Refer to the second paragraph in Section 4.1 on page 29 of the IRP. Explain in detail of how Big Rivers determined that replacement load is expected to increase by approximately 800 percent between 2016 and 2021.

10. Refer to Section 4.2.1 of the IRP, page 34, Table 4.5. Explain the reason for the difference in the change in the number of customers from 2013 to 2014 compared with the change in number of customers from 2012 to 2013. Include in the response the actual number of residential customers for calendar year 2013.

11. Refer to Table 4.7 on page 36 of the IRP. The discussion immediately preceding the table, in Section 4.2.3, states that large commercial and industrial sales are projected to be essentially flat during the forecast period.

a. Explain what accounts for the growth in sales projected in the table for the years 2014 and 2015.

b. Provide a revised version of Table 4.7 which includes 2013 results.

12. Refer to Section 4.2.6 of the IRP, page 39, which references an economic development incentive rate proposed by Big Rivers. Provide the rate and state whether it has been approved by the Commission.

13. Refer to Section 4.3, the sentence beginning at the bottom of page 40 and continuing to the top of page 41. It reads, "As measured by degree days, 2010 was the

hottest year in over 20 years, and 2010 was the coldest year since 1997.” Confirm that both references in the sentence are intended to be to calendar year 2010.

14. Refer to Section 4.6.3 on page 49 of the IRP, specifically, the paragraph which indicates that Big Rivers uses the most recent 20-year averages of heating and cooling degree days. Footnote 41 on page 47 identifies the National Oceanic and Atmospheric Administration (“NOAA”) as the source of the degree day data.

a. State when Big Rivers began using NOAA data and for how long it has used a 20-year average of heating and cooling degree days.

b. Explain why Big Rivers uses 20-year averages and describe what consideration, if any, it has given to using averages for a period other than 20 years.

15. Refer to the discussion of retail electricity prices on page 50 of the IRP, which states that the average price to rural system customers was expected to increase 39 percent in real terms by 2016. Given that Big Rivers was awarded less than the amounts requested in the two rate cases it filed in response to the smelter contract terminations, provide the percentage increase, in real terms, it now expects by 2016.

16. Refer to the first full paragraph on page 53 of the IRP, which indicates that the t-statistic for the average household income parameter in the model for Kenergy Corp. (“Kenergy”) is significant at the “0.05 alpha, 95% confidence level,” while it is not significant at the same level for Big Rivers’ two other member cooperatives. While there is discussion of the lack of significance of average household income for those two cooperatives, there is no discussion of its significance for Kenergy.

a. Based on the discussion on the lack of significance of average household income for two of Big Rivers’ cooperatives, explain generally whether its

significance in the case of Kenergy indicates a greater correlation between income and energy consumption in its service area.

b. Explain whether there are obvious reasons or circumstances why average household income's impact is not more consistent across the service areas of all three member cooperatives.

17. Refer to Tables 4.17 and 4.18 on page 55 of the IRP, which compare energy requirements and peak demands under the base, pessimistic, and optimistic economy scenarios. Table 4.17 reflects total requirements, while Table 4.18 reflects the rural system.

a. The relative differences between the optimistic and base economy scenarios in Table 4.18 for years 2023 and 2028 vary much more than in Table 4.17. Confirm that the optimistic economy scenario results for those years are correct.

b. If the response to part a. of this request is affirmative, explain why the relationship between the base and optimistic results is so much different than the relationship between the base and pessimistic results for 2023 and 2028 in Table 4.17.

18. Refer to Section 5.1, the last bullet point on page 59 of the IRP where it states, "At the direction of Big Rivers' staff, GDS also produced a sensitivity of potential savings at an incentive budget of \$2 million." Identify the circumstances in which Big Rivers would implement the incentive budget of \$2 million.

19. Refer to Table 5.2 on page 60 of the IRP. Provide in electronic format, with cells unprotected, spreadsheets showing the information used in developing the net present value of benefits and costs in the table for the Program (\$1 million) scenario.

20. Refer to the bottom of page 60 of the IRP where nine EE programs Big Rivers plans to continue funding as part of its DSM portfolio are listed. Also refer to Table 5.15 on page 70, which shows 2013 DSM/EE program results and which shows 12 programs is 2013.

a. Identify the programs Big Rivers does not plan to continue funding and explain how it proposes to address any changes to the program(s).

b. Explain whether Big Rivers has the Table 5-15 information broken down by member cooperative. If it does, provide the information for each cooperative.

21. Refer to page 73 of the IRP, Table 5.17. Under the Commercial/Industrial Programs section, some of the cells contain “#REF!” Provide a corrected Table 5.17.

22. Refer to Section 8.7 of the IRP, page 92, and page 98, Table 9.3. The last paragraph on page 92 states, “Big Rivers plans to evaluate the conversion of a portion of its existing coal-fired fleet to natural gas as an alternative to installing additional pollution control equipment at its Green and Coleman facilities.” Table 9.3 shows natural gas as the secondary fuel type for the Coleman Station. Describe the work that would have to be done to convert the Coleman Station to natural gas.

23. Refer to the first full paragraph on page 102 of the IRP where it states that administrative costs were assumed to equal 20 percent of the incremental cost of measures. Also refer to Big Rivers’ response to Item 10 of Commission Staff’s First Information Request (“Staff’s First Request”) in Case No. 2010-00443.¹

a. Explain how Big Rivers arrived at 20 percent for the assumed level of administrative costs as a percentage of incremental cost of measures.

¹ Case No. 2010-00443, 2010 Integrated Resource Plan of Big Rivers Electric Corporation (Ky. PSC Dec. 21, 2011).

b. Explain whether the 20 percent assumption is consistent with the response to the Staff's First Request, which indicated that administrative costs varied greatly among different types of programs.

24. Refer to Section 9.1 on page 94 of the IRP, where Big Rivers discusses generation maintenance. Provide the current schedule for maintenance of Big Rivers' generators, and indicate the extent to which Big Rivers has adhered to the schedule for each generator.

25. In Section 9.2 on page 96 of the IRP, Big Rivers discusses potential resource options to model in its Strategist model. Explain whether nuclear generation is a viable alternative to include in the generation mix.

26. In Section 9.3 on page 99 of the IRP, Big Rivers states that it has no renewable resources, cogeneration or self-generation, or nonutility resources other than its SEPA allocation in its base case plan. Describe in detail Big Rivers' exploration of each of these resources and its decision to exclude them from the base case plan.

27. In Section 9.4, page 100 of the IRP, Big Rivers states that capacity purchases from the market were not modeled. Explain in detail why they were not modeled.

28. In Section 10.3, page 110 of the IRP, Big Rivers discusses a reserve margin study provided by GDS. Specifically, the study demonstrated that Big Rivers' costs decreased as its reserve margin decreased, yet its reliability was not threatened as a member of MISO. Further in Section 7.3, page 83, Big Rivers states that its reserve margin study showed reserve margins in excess of MISO's 2023 requirement

over the IRP planning period. Provide a comparison of these reserve margins to the MISO projections and a copy of the GDS reserve margin study.

29. Refer to Section 12.3 of the IRP, page 114. The first full sentence on this page states, "As of the preparation date of this IRP, a forward sale has delayed the idling of the 417 MW Wilson Station through at least the end of February 2015." Confirm that the idling of the Wilson Station has now been postponed until December 31, 2015.

30. Refer to page 18 of the Study, under Baseline and Efficient Technology Saturations where it states, "The commercial sector utilized regional specific data available from the 2003 Commercial Building Energy Consumption Survey ("CBECS") conducted by the EIA."

a. Confirm that the survey data is for 2003.

b. If the answer to part a. is affirmative, explain why more recent data was not used.

31. Refer to page 50 of the Study under MISO Demand Response.

a. Discuss what research or analysis Big Rivers has undertaken to evaluate participation in the MidContinent Independent System Operator's ("MISO") demand response market.

b. Describe how the May 2014 decision by the U.S. Court of Appeals for the District of Columbia's vacating Federal Energy Regulatory Commission ("FERC") Order 745 impacts MISO's demand response market.²

² *Electric Power Supply Ass'n v. FERC*, 11-1486, et al. (D.C. Cir. May 23, 2014); *Demand Response Compensation in Organized Wholesale Energy Markets*, Order No. 745, 134 FERC ¶ 61,187 (Mar. 15, 2011).

32. Refer to the Benefits section on page 55 of the Study where it states, "Development of the avoided costs is detailed in Section 5.9 of the report."

a. Identify the report this statement is referencing.

b. If the referenced report is not included as part of the IRP and attachments, provide a copy of the report.

33. Refer to the Carrying Cost for Capital Equipment section on page 56 of the Study.

a. Explain why a blended average is used to determine the Times Interest Earned Ratio ("TIER").

b. Explain how weights assigned to the TIERS were developed.

c. Explain why different depreciation rates are used for utility ownership and commercial ownership.

34. Refer to the Section 9.1.1 of the Study.

a. The third sentence on page 59 states that GDS recommended that the Residential Lighting Program begin to offer rebates for LED bulbs. State whether Big Rivers has implemented this recommendation.

b. The last sentence in the second paragraph on page 71 states, "GDS recommends that Big Rivers review the program level spending and savings for each incentive scenario, determine which level of incentive investment it plans to commit in the future, and modify its DSM programs to align with the programs included in the program potential evaluation in this study." State whether Big Rivers has implemented this recommendation.

35. Refer to the last paragraph on page 71 of the Study where Tables 10-1 and 10-2 are discussed. Confirm that the reference period should be 2014-2023.



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