BOEHM, KURTZ & LOWRY

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Via Overnight Mail

June 22, 2011

RECEIVED

Mr. Jeff Derouen, Executive Director Kentucky Public Service Commission 211 Sower Boulevard Frankfort, Kentucky 40602 JUN 23 2011

PUBLIC SERVICE COMMISSION

Re: <u>Case No. 2011-00036</u>

Dear Mr. Derouen:

Please find enclosed the original and twelve (12) copies each of the <u>PUBLIC VERSION</u> OF KENTUCKY INDUSTRIAL UTILITY CUSTOMERS, INC.'S RESPONSES TO BIG RIVERS ELECTRIC CORPORATION'S FIRST DATA REQUEST and the COMMISSION STAFF'S INITIAL INFORMATION REQUEST be filed in the above-referenced docket.

By copy of this letter, all parties listed on the Certificate of Service have been served. I also enclose a copy of the CONFIDENTIAL ATTACHMENTS to be filed under seal.

Please place these documents of file.

Very Truly Yours,

Michael L. Kurtz, Esq. Kurt J. Boehm, Esq.

BOEHM, KURTZ & LOWRY

MLKkew Attachment

cc:

Certificate of Service David C. Brown, Esq.

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing was served by electronic mail (when available) or by mailing a true and correct copy by overnight mail, unless other noted, this 22nd day of June, 2011 to the following

Michael L. Kurtz, Esq. Kurt J. Boehm, Esq.

Mark A Bailey President CEO Big Rivers Electric Corporation 201 Third Street Henderson, KY 42419-0024

Douglas L Beresford Hogan Lovells US LLP Columbia Square 555 Thirteenth Street, NW Washington, DC 20004

J. Christopher Hopgood Dorsey, King, Gray, Norment & Hopgood 318 Second Street Henderson, KY 42420

Mr. Dennis Howard Assistant Attorney General 1024 Capital Center Drive Frankfort, KY 40601

Honorable James M Miller Attorney at Law Sullivan, Mountjoy, Stainback & Miller, PSC 100 St. Ann Street P.O. Box 727 Owensboro, KY 42302-0727 Sanford Novick President and CEO Kenergy Corp. P. O. Box 18 Henderson, KY 42419

Melissa D Yates Attorney Denton & Keuler, LLP 555 Jefferson Street P. O. Box 929 Paducah, KY 42002-0929

Albert Yockey Vice President Government Relations Big Rivers Electric Corporation 201 Third Street Henderson, KY 42419-0024

COWWISSION LOBLIC SERVICE JUN 23 2011

In the Matter of:

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APPLICATION OF BIG RIVERS ELECTRIC CORPORATION FOR A GENERAL ADJUSTMENT IN RATES

CASE NO. 2011-00036

KENTUCKY INDUSTRIAL UTILITY CUSTOMERS RESPONSE TO COMMISSION STAFF'S INITIAL INFORMATION REQUEST PSC CASE NO. 2011-00036

June 22, 2011

Request STAFF-1

Refer to page 9, line 1-5, of the Direct Testimony and Exhibits of Henry W. Fayne ("Fayne Testimony"). Mr. Fayne states that there were 34 smelters in the U.S. in 1978 producing 31 percent of the world supply of aluminum. Today, there are ten smelters producing only 4.2 percent of the world's supply.

- a. Explain where the production has moved and whether the price of electricity is the only reason smelters have left the U.S.
- b. Considering the estimated cost impacts of the new and amended federal environmental regulations, explain whether Mr. Fayne believes that the aluminum industry in the United States can survive the impact if complying with the new regulations.

RESPONSE

- a. In all cases, the smelters that shut down in the U.S. identified the cost of electricity as the primary reason for the closure. New production capacity has developed in places around the world with either low-cost hydro or geo-thermal sources of electricity or where government subsidies had been provided (e.g., Iceland, Middle East).
- b. Considering the estimated cost impacts of the new and amended federal environmental regulations, Mr. Fayne believes that smelters supplied with electricity primarily from hydroelectric sources should continue to be viable. Smelters such as Sebree and Hawesville that are supplied with electricity primarily from coal sources are less likely to survive unless (1) the rest of the world adopts similar provisions which would adjust the LME to levels that would support such higher electricity costs or (2) special arrangements are implemented which would mitigate such costs for the smelters.

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Request STAFF-2

Refer to page 9, line 18, of the Fayne Testimony and Exhibit HWF-1. Both refer to the average global price of electricity for smelters, excluding China, of approximately \$27 per MWh. Explain why the "global price" does not include the price of electricity for smelters operating in China. If the price in China is available, provide it.

RESPONSE

The price of electricity for smelters in China is generally excluded from analyses intended to evaluate the competitive viability of smelters for the following reasons:

- 1. The high cost of electricity in China is offset by government subsidized labor and plant investment.
- 2. China is not an open market economy. Aluminum production in China is consumed internally (independent of price) and, therefore, the cost of production in China does not directly affect the LME price.

The cost of electricity in China is approximately \$58/MWh.

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Request STAFF-3

Refer to pages 18-19 of the Fayne Testimony. Provide copies of the following commission orders referenced by Mr. Fayne, which included decisions that specifically addressed cost-of-service issues for aluminum smelters:

- a. Missouri commission Case No. ER-2010-0036
- b. Ohio commission Case No. 09-119-EI-AEC
- c. West Virginia Case No. 05-278-E-PC-PW-42T

RESPONSE

Please see attached Exhibits STAFF-3A, STAFF-3B, and STAFF-3C on enclosed CD.

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Request STAFF-4

Refer to pages 23-24 of the Fayne Testimony concerning a "statewide solution" to address the issue of the price of electricity for the Sebree and Hawesville smelters.

- a. Describe the extent to which KIUC believes solutions of this type referenced by Mr. Fayne, i.e. a statewide economic development fund, tax credits, redistribution of the smelter load among multiple utilities, etc., will require legislative involvement.
- b. Describe the extent to which KIUC believes solutions of this type reference by Mr. Fayne are within the authority of the Commission.

RESPONSE

- a. Although it is not possible to determine what legal authority will be required to implement a statewide solution since that solution has not yet been determined, KIUC believes that it is likely that such a solution will require legislative involvement.
- b. KIUC believes that this Commission can be an active participant in and advocate for the development of a statewide solution, but that the Commission would not be able to unilaterally develop and implement such a solution.

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Request STAFF-5

Provide a schedule that shows the annual production capacity of the Sebree smelter in both metric tons and pounds, and show the total annual revenues that would be generated from selling the annual capacity at each of the following prices per metric tonne of aluminum: \$1300; \$1800; \$2300; \$2800; and \$3000. Include all workpapers that support the calculations.

RESPONSE

Please see Exhibit Staff-5 on enclosed CD.

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Request STAFF-6

Provide a schedule that shows the annual production capacity of the Hawesville smelter in both metric tons and pounds, and show the total annual revenues that would be generated from selling the annual capacity at each of the following prices per metric tonne of aluminum: \$1300; \$1800; \$2300; \$2800; and \$3000. Include all workpapers that support the calculations.

RESPONSE

Please see Exhibit Staff-6 on enclosed CD.

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Request STAFF 7:

Testimony of Paul A. Coomes at page 3. The table on that page, at line 9, lists Refer to the Direct "Corporate income and license taxes, State of Kentucky \$350,000.

- a. Was this amount provided to Dr. Coomes by the smelters or was it estimated by Dr. Coomes? If it was estimated, provide a detailed explanation of how the amount was determined and include all work papers that support the estimate.
- b. Describe in detail the specific type of license taxes paid by each of the smelters to the State of Kentucky.

RESPONSE:

The corporate income and license taxes paid to Kentucky state government were provided by the aluminum companies. RioTinto reported \$350,000 in payments for 2010, and Century did not report any corporate income tax payments.

Witness: Paul Coomes

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Request STAFF-8

Refer to page 5 of the Direct Testimony of Dr. Matthew J. Morey ("Morey Testimony"). Dr. Morey states that the sale of energy to the smelters over the three years 2011-2013 will contribute an average net margin of approximately \$83 million per year more than can be obtained through Big Rivers' sale of energy to the wholesale market. Explain whether Dr. Morey believes that the smelters could achieve savings of this magnitude by purchasing energy directly from the wholesale market.

RESPONSE

I do not know what the Smelters could save by purchasing energy directly from the wholesale market. I have not conducted an analysis of that question. The fact that the wholesale market price in 2010 and the projected wholesale market price for the period 2011 – 2013 is below the effective price per kWh that the Smelters may pay during that same period under the rates proposed by BREC in this rate case, if such rates are approved by the Commission, suggests that they would be able to achieve some level of savings. But the price the Smelters would pay to purchase power from the wholesale market for firm service would entail several factors that will influence the ultimate price. I do not know what influence those factors would have on the price per kWh that the Smelters would pay.

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Request STAFF-9

Refer to the Morey Testimony at page 6, line 11. Dr. Morey states that Big Rivers would only be able to sell an average of about 4,200 GWh per year in the wholesale market and, further, that Big Rivers' generating units are frequently "out of the market." Provide all supporting documentation and the calculations performed to support this claim and explain the meaning of the phrase "out of the market" as used in the testimony.

RESPONSE

Please see KIUC Response to BREC 35, and the spreadsheet labeled <u>Margin Analysis.xls</u> on the CD accompanying this response for all supporting documentation and calculations performed to support this claim. The frequencies with which BREC generation units are in and out of the market are reported in the range C8774:L8778 on each of the three annual results pages (sheet tabs 2011, 2012 and 2013) of <u>Margin Analysis.xls</u>. (See CONFIDENTIAL CD Response to BREC-35 filed under seal).

The phrase "out of the market" means that the incremental (or marginal) cost of the generation at the busbar connection to the grid is above the locational marginal price (i.e., the market price) at the commercial node or interface/interconnection.

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Request STAFF-10.

Refer to the Morey Testimony at page 15, lines 1-9. Dr. Morey discusses why he did not extend his analysis beyond 2014. With new federal environmental requirements going into effect in 2014 and 2015 and their potential impact on the cost of electricity, explain whether the impact of these changes should be considered and what that impact might be to Big Rivers' opportunities in the wholesale market.

RESPONSE

For the purposes of my analysis, new federal environmental requirements going into effect beyond 2014 do not need to be considered. The purpose of my analysis was to demonstrate that margin contribution of the Smelters to BREC revenue recovery is significant, and loss of the Smelter load would create financial difficulty for BREC over the course of several years.

The environmental requirements going into effect in 2014 and 2015 may have a broadly felt impact on the cost of electricity within the MISO market and elsewhere around the country. With those requirements imposed on BREC as well as many other utilities with coal-fired generation technologies, the cost of producing electricity from coal may rise, and along with it the price of electricity in the MISO wholesale market during hours when such units set the market price. An analysis of whether BREC would be made relatively better off or worse off under these environmental requirements vis-à-vis the sale of its surplus energy in the wholesale market would depend on a host of assumptions. The loss of Smelter load under these circumstances would still require BREC to be selling substantially more power in the wholesale market than it currently sells at prices at or above the rates it would be receiving from the Smelters.

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Request STAFF-11

Refer to the Morey Testimony, Exhibit MJM-3, which shows that during the period 2011-2013, the smelters will pay Big Rivers a total of \$1,115,513,000. Based on Dr. Morey's analysis of prices in the wholesale energy market, how much would the smelters pay over this same time period if their energy purchases were from the wholesale market rather than from Big Rivers?

RESPONSE

The question asks me to conduct an analysis of Smelter purchases in the wholesale market but does not specify whether I am to consider the day-ahead spot market, the real-time spot market or the bilateral market. Prices in the day-ahead spot and real-time spot markets vary by the hour. The question asks me to perform an original analysis to provide a response, which I am not in a position to conduct. With regard to an analysis of Smelter purchases of firm power through the bilateral market, I am not in possession of data on bilateral energy market prices. Based strictly on the information contained in Exhibit MJM-3, an estimate of the amount that the Smelters would pay for 7,300 GWh of energy in each of the three years of the study period (2011-2013) can be obtained by multiplying the 7,300 GWh by the corresponding Average Market Prices (\$/MWh) for each year. The result of this computation for each year of the study period is presented in the table below.

Table 1 – Response to CS 11 – Computation of Smelter Energy Cost at Average Market Prices - 2011 to 2013

		2011	2012	2013	Total
1	Sales To Smelters (MWh)	7,300,000	7,300,000	7,300,000	
2	Average Market Prices (\$/MWh)	\$38	\$41	\$42	
3 (1 x 2)	Smelter Market Cost	\$277,400,000	\$299,300,000	\$306,600,000	\$883,300,000

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Request STAFF-12

Refer to the Morey Testimony. State any impact the Vectren transmission line approved by the Kentucky State Board on Generating and Transmission Siting in Case No. 2010-00223 would have on Big Rivers' position in the wholesale market and whether that impact was taken into consideration in Dr. Morey's analysis.

RESPONSE

I have not studied the impact of the Vectren transmission line on energy flows from BREC's generation units to either its loads or the MISO market in general. Therefore, I cannot state what the impact of the Vectren transmission line will have on Big Rivers' position in the wholesale market.

I have not taken the Vectren transmission line into consideration in my analysis. My analysis assumes that there are no constraints on transmission that would restrict the sale of energy from BREC's generation units to the MISO wholesale market. Consequently, my analysis overstates the revenues that BREC would receive from off-system sales to the wholesale market.

¹ Case No. 2010-00223, Application of Southern Indiana Gas and Electric Co. D/B/A Vectren Energy Delivery of Indiana, Inc. for a Certificate to Construct an Electric Transmisosn Line from it's A.B. Brown Plant to the Big Rivers Reid EHV Station (Ky. PSC Dec. 21, 2010).

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Request STAFF-13

Refer to page 11 of the Direct Testimony of Charles W. King and Schedule 1 of Exhibit (CWK-1). Both the testimony and exhibit indicate that Mr. King's determination of KIUC's recommended deprecation rates pertains only to Big Rivers' production plan. However, there is no discussion of why his analysis was limited to production plant. Clarify whether the lack of discussion of deprecation on transmission or general plant should be interpreted to mean that KIUC takes no exception to Big Rivers' proposed deprecation rates for transmission and general plant.

RESPONSE:

Mr. King was not retained to address the non-production accounts.

Witness: Charles W. King

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Request STAFF-14

Refer to pages 10-1 1 of the Direct Testimony and Exhibits of Lane Kollen ("Kollen Testimony"), specifically, the discussion of Big Rivers' proposal for the current recovery of interest of Construction Work in Progress ("CWIP").

- a. Explain whether Mr. Kollen is aware that the current recovery of interest on CWlP has been authorized by the Commission for East Kentucky Power Cooperative, Inc. ("EKPC") and, for Louisville Gas and Electric Company and Kentucky Utilities Company, the Commission has authorized a current return on CWlP in lieu of accruing an Allowance for Funds Used During Construction ("AFUDC").
- b. Mr. Kollen offers three reasons for opposing Big Rivers' proposal. Explain whether Mr. Kollen agrees that:
 - (1) Current recovery of, or expensing, interest on CWIP results in the final installed cost of a construction project being lower than if recovery were deferred through the capitalizing of interest on CWIP.
 - (2) Not capitalizing interest on CWIP, or not accruing AFUDC, results in a lower revenue requirement associated with a given construction project, or item of utility plant, over the life of the item of utility plant.

RESPONSE:

- a. Yes. However, the circumstances with Big Rivers are different than with those other utilities because of the terms of the Smelter contracts and the fact that the Big Rivers revenue requirement is set based on the contract TIER as defined in those contracts and that deficiencies in the contract TIER can be recovered from the Smelters, subject to certain conditions. The contract TIER reflects a reduction in interest expense for AFUDC. If there is no AFUDC, then the interest expense is greater and the contract TIER revenue requirement is greater. If the Smelter TIER Adjustment Charge already is at the maximum, then Big Rivers has no ability to recover the interest expense that would have been capitalized and recovered in the future; the ability to recover this interest expense is lost forever. Consequently, the Company's proposal exerts greater financial pressure on the utility. This is not a good idea.
- b.(1) Yes. However, the lower installed cost is illusory because that single measure ignores the fact that the carrying costs actually were incurred and were recovered from ratepayers, albeit prematurely. The carrying cost during construction is properly considered a capital

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cost and is no different than the cost of materials and labor. Another problem with providing current recovery of carrying costs during construction is that it violates the matching principle. It requires the payment of a portion of the capital cost before the assets are placed in service instead of over the service lives of those assets when they provide service.

b.(2) No. Conceptually, on a net present value basis, the revenue requirement is the same, although, as a practical matter, there may be some difference because the base ratemaking process does not provide real-time recovery. The question assumes that the revenue requirement does not start until the assets are placed in service. This is not correct because the revenue requirement for the test year starts when the interest on the construction amounts is included in rates, not when the interest on the completed cost amounts is included.

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Request STAFF-15

Refer to pages 14-16 of the Kollen Testimony, which address the inflation portion of Big Rivers' proposed adjustment to non-outage related maintenance expense. Mr. Kollen's recommendation allows for the recognition of the 2011 inflation calculated by Big Rivers. On page 16, beginning on line 3, Mr. Kollen states, "At most, such an adjustment should be limited to the year immediately following the test year..." On the same page, on line 9, Mr. Kollen states that Big Rivers' "[e]stimate of inflation during 2012-2014 is not known and measurable" Explain how Mr. Kollen determined that Big Rivers' 2011 estimate of inflation was known and measurable and why it should be reflected in the adjustment to non-outage related maintenance expense.

RESPONSE:

Mr. Kollen agrees that 2011 also is not known and measurable, but conceded the 2011 inflation in the context of his other recommendations and his assessment of the overall result of the revenue requirement recommended by KIUC. Mr. Kollen recognizes that there is a balance between rigid adherence to the cost structure in the historical test year and the need to provide revenue sufficient to cover the present and ongoing cost structure of the utility.

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Request STAFF-16

Refer to pages 17-19 of the Kollen Testimony regarding Big Rivers' proposal to include depreciation on CWIP in its pro forma depreciation expense and his recommendation to exclude depreciation on post test-year plant retirements from the pro forma depreciation expense. Refer also to pages 20-21 of the Kollen Testimony where he discusses KIUC's proposed adjustment to Big Rivers' depreciation expense.

- a. Given the nature of Big Rivers' proposal, explain why Mr. Kollen chose to link depreciation on retirements with depreciation on CWIP rather than recommend that the proposal to include depreciation on CWIP be rejected.
- b. Provide the calculation of Big Rivers' pro forma depreciation expense based on KIUC's proposed depreciation rates being applied to Big Rivers' test year-end plant in service without including the year-end CWlP balance.

RESPONSE:

- a. The nature of the adjustment to include depreciation on CWIP is more appropriately considered as a post test year adjustment to plant in service for CWIP that was completed within six months after the end of the historic test year. Mr. Kollen recognizes that there was some growth in plant in service due to additions in excess of plant retirements in the six months after the end of the historic test year. This net increase in gross plant necessarily causes an increase in depreciation expense and thus, in the utility's cost structure. In the case of a cooperative, whose rates are set on the basis of TIER, the interest on the CWIP, to the extent not offset by AFUDC, is recovered; it matters not that the CWIP is not plant in service. However, the depreciation expense does not commence until the CWIP is completed and transferred to plant in service. Similar to Mr. Kollen's rationale in support of the 2011 inflation increase on maintenance expense, Mr. Kollen considered this issue in the context of his other recommendations and the overall result. The objective is to ensure that Big Rivers recovers sufficient revenues for its cost structure to the extent that the costs are just and reasonable.
- b. Please refer to the file on the enclosed CD labeled "Depr wo CWIP."

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Request STAFF-17

Refer to pages 19-20 of the Kollen Testimony regarding his recommended reduction to Big Rivers' Transmission of Electricity by Others Expense and to Exhibit LK-11.

- a. The testimony states that, since Big Rivers has proposed post-test year adjustments that increase its revenue requirement, the Commission should consider Mr. Kollen's proposed post-test year adjustment because it decreases Big Rivers' revenue requirement. Explain whether there are other reasons which support the Commission's consideration of this adjustment.
- b. The exhibit, a response to a KIUC data request, indicates that in addition to costs incurred for transmission service provided in the test year by the Tennessee Valley Authority ("TVA"), Big Rivers also incurred costs for transmission service provided by the Midwest ISO. However, the budgeted amount upon which Mr. Kollen bases his proposed adjustment reflects only TVA transmission service. Explain whether or not Mr. Kollen has made an independent determination that Big Rivers will not incur costs in the future for transmission service provided by entities other than TVA.

RESPONSE:

- a. Yes. The Company did not include this amount of expense in its 2011 budget or multiyear financial forecast.
- b. No. Mr. Kollen relied on Big Rivers for this assumption.

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Request STAFF-18

Refer to pages 30-33 of the Kollen Testimony which cover KIUC's proposal that Big Rivers be required to retire patronage capital on an annual basis equal to 25 percent of its prior year's margin. Explain, specifically, how 25 percent was chosen as compared to some other percentage.

RESPONSE:

Mr. Kollen chose the 25% because that is the maximum distribution that Big Rivers may make pursuant to its borrowing covenants with CoBank. It is Mr. Kollen's informed judgment that a 25% patronage capital distribution would be appropriate in light of its very strong equity capital percentage when compared to other G&T cooperatives. By way of comparison, NRECA uses a 50% factor. Big Rivers must carefully balance its financial health, its cost structure, and the rates necessary to recover its costs. The margin each year represents the amounts that the utility charged its member-owners in excess of its actual costs. These amounts belong to the member-owners, but also represent a source of capital for the utility. Recoveries from ratepayers in excess of the utility's costs are reported as margins on the utility's income statement and allow the utility to meet its required financial metrics, including MFIR and DSC. The margins, which were recognized through the utility's income statement, add to the utility's patronage capital. Unlike the margins, the retirements are not recognized through the utility's income statement. Thus, rates in excess of costs contribute to the utility's financial health and enable it to meet its required financial metrics, but retirements of patronage capital can be used to mitigate the effect of rates in excess of costs without harming the utility's financial health.

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Request STAFF-19

Refer to the Direct Testimony of Stephen J. Baron ("Baron Testimony") at page 14. Mr. Baron recommends using a 6 Coincident Peak ("CP") demand methodology to allocate production demand related costs, such as that used by Mr. Seelye for EKPC in Case No. 2008-00409.²

- a. Explain why the 6 CP methodology is not less appropriate for Big Rivers than for EKPC given the share of Big Rivers' total load for which the smelters are responsible and the relative uniformity of the average demand of the smelters.
- b. Provide a side-by-side comparison of the resultant wholesale rates for each Big Rivers rate class under the 6 CP and 12 CP methodologies, absent any other adjustments.

RESPONSE:

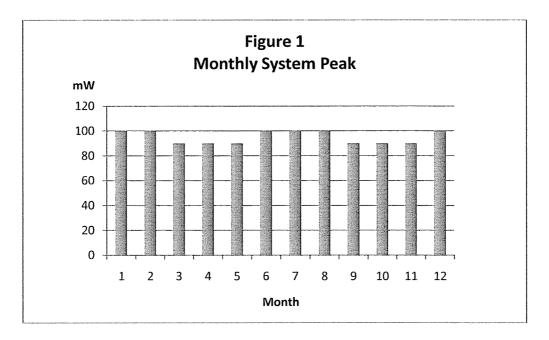
a. The relevant issue to consider in evaluating the "cost causative" factors associated with production demand (fixed generating plant revenue requirements and purchased power capacity costs) is the influence of customer loads at the time of the system peaks used by Big Rivers to determine the need for capacity. Based on Big Rivers IRP, the summer peak demand and, to a lesser extent, winter peak demands determine the need for capacity. Because of the near constant load of the Smelters (assumed 98% load factor), coupled with the fact that the Smelters comprise 70% of the total system load, Big Rivers' monthly peaks are relatively flat during the year. However, this does not change the fact that peak loads during the summer and winter months drive the need for capacity on the system. It does not matter, in this evaluation, whether the July, August or December peaks are only 200 MW greater than off-peak months such as April or October. What does matter is whether an increase in peak load during the summer or winter months (corresponding to the 6 CP used in the KIUC analysis) impacts the need for capacity on the system - the answer is that it does, while increases in the off-peak months do not cause a need for capacity (unless such an increase causes the off-peak months to become the peak month). Consider a system that is comprised of two customer classes. The first, class A, has a 100% load factor load of 90 MW. Class B has 10 MW of load only during the three summer month and three winter months, 0 MW of load in the other months. The Figure 1 below shows a plot of the monthly peaks.

² Case No. 2008-00409, General Adjustment of Electric Rates of East Kentucky Power Cooperative, Inc. (Ky. PSC Mar. 31, 2009).

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Looking at this chart, the 12 monthly peaks are almost identical – yet it is the system peak load that occurs during the summer and winter months that determines the need for and investment in capacity on the system. This would indicate that a rational allocation method for this utility would be the class contribution to the three summer and three winter peaks (6 CP). In the same manner, on the Big Rivers system, class contributions to the three summer and three winter peaks is a reasonable measure of cost responsibility, irrespective of the size of the high load factor Smelter load.

b. See Table 1 below that shows a comparison of the revenue increases using the KIUC methodology without any KIUC revenue requirement adjustments, for each rate class under both the KIUC 6 CP and 12 CP cost of service studies. Because the KIUC class cost of service studies were developed with the full Smelter test year revenues (i.e., no pro-forma adjustment to move the Smelters to the mid-point of the TIER Adjustment), the overall Big Rivers' requested revenue increase is reduced by \$7,114,653 to an increase of \$32,839,312. Also attached is the spreadsheet used to develop Table 1.

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		Table1					
6 CP vs. 12 CP - Using KIUC Cost of Service Studies							
Total Large							
Line	6 CP	System	Rurals	Industrials	Smelters		
1	Subsidy at Present Rates	-	(18,319,114)	(50,193)	18,369,307		
2	Big Rivers Requested Revenue Increase*	32,839,312					
3	Eliminate Subsidy to Rurals	18,319,114	18,319,114	-	-		
4	Spread of Increase Remainder	14,520,198	3,969,904	1,372,143	9,178,151		
5	Step 1 Increase - Rurals Subsidy	18,319,114	18,319,114	-	-		
6	Net Increase	32,839,312	22,289,018	1,372,143	9,178,151		
	12 CP						
1	Subsidy at Present Rates	~	(13,242,103)	(552,120)	13,794,223		
2	Big Rivers Requested Revenue Increase*	32,839,312					
3	Eliminate Subsidy to Rurals	13,242,103	13,242,103	-	_		
4	Spread of Increase Remainder	19,597,209	5,357,988	1,851,915	12,387,307		
5	Step 1 Increase - Rurals Subsidy	13,242,103	_13,242,103				
6	Net Increase	32,839,312	18,600,090	1,851,915	12,387,307		

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Request STAFF-20.

Refer to the Baron Testimony at page 20. Starting at line 14, Mr. Baron states that the smelter rates will automatically increase on January 1, 2012 by \$.30 per MWh, or approximately \$2.2 million, and that the \$2.2 million "increase will flow directly to the Rural and Large Industrial customer classes." Explain the reason for the automatic increase and how the increase will flow to the non-smelter classes.

RESPONSE:

The increase occurs on January 1, 2012 automatically pursuant to the provisions of Section 4.11(a) of each Smelter Agreement (Surcharges). These amounts paid by the Smelters pursuant to Section 4.11(a) flow through as credits to Rural and Large Industrial customer classes pursuant to Big Rivers' Rate "US" (Unwind Surcredit).

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Request STAFF-21

Refer to page 29 of the Baron Testimony, lines 3-1 9. KlUC recommends that the Rural Economic Reserve ("RER") be used annually to partially offset the rate increase proposed by KlUC in this case.

- a. Mr. Baron states that the Commission Order in Case No. 2007- 004553 "intended that the fund be used to mitigate the impact of future FAC and Environmental Surcharge increases." Provide the citation of the Order wherein this intention was stated.
- b. Mr. Baron proposes to withdraw approximately \$4.2 million annually from the RER fund to mitigate the Rural revenue increase proposed by KIUC, while stating that the Commission's intent for the RER fund is to mitigate future FAC and Environmental Surcharges. With environmental compliance casts accelerating due to federal environmental requirements, explain why those concerns should not be even greater given KIUC's interpretation of the Commission's intent in Case No. 2007-00455.
- c. KIUC intends that this recommendation replace the method set out in Big River's current tariff for depletion of the RER or that the RER be depleted by both methods simultaneously (note that the tariff method would not begin until the Economic Reserve is depleted). If KIUC intends that both methods be used, state whether Mr. Baron believes that customers will experience rate shock when the RER is depleted.
- d. Mr. Baron states that, if the Commission adopts the KIUC proposal, the fund would be fully utilized by late 2016 or early 2017. Provide the calculations supporting this projection.

RESPONSE:

a. The Commission order did not discuss the specific use of the RER fund. Rather, the order states that the RER is specifically to be used to "credit the bills rendered to the Rural Customers over a period 24 months commencing upon the depletion of all funds in the Economic Reserve." (order at Appendix A, paragraph 24). However, at page 11 of the Commission order, the Commission specifically states that the Economic Reserve account will be used "to offset future wholesale power cost increases for non-Smelter customers due to increases in fuel, environmental, and other costs. Since the RER

³ Case No. 2007-00455, The Applications of Big Rivers Electric Corporation for: (I) Approval of Wholesale Tariff Additions for Big Rivers Electric Corporation, (2) Approval of Transactions, (3) Approval to issue Evidences of Indebtedness, and (4) Approval of Amendments to Contracts; and of E.ON U.S., LLC, Western Kentucky Energy Corp., and LG&E Energy Marketing, Inc. for Approval of Transactions (Ky. PSC Mar. 6, 2009).

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provides credits upon the depletion of the Economic Reserve account (which is to be used to offset fuel, environmental, and other cost increases), the RER would be expected to offset the same cost increases (fuel, environmental, and other cost increases).

- b. As discussed in response to Part (c) of this question, under the KIUC proposal the RER would be depleted about 12 months earlier than otherwise projected to occur by Big Rivers. KIUC believes that the current economic environment justifies the use of the RER beginning September 1, 2011 rather than imposing the full rate increase on Rural customers. The ultimate objective of the RER is to benefit Rural customers by reducing the otherwise applicable Big Rivers charges. The KIUC proposal accomplishes this objective by reducing known Rural rate increases.
- c. KIUC's proposal is that the RER would begin providing \$4.2 million annually to off-set the Rural rate increase in this case, beginning on September 1, 2011. When the Economic Reserve fund is depleted, the RER would also begin to off-set FAC and environmental compliance costs. As shown in the analysis in response to Part (d) of this question, based on Big Rivers' projections and adoption of the KIUC proposal to utilize the RER to partially off-set the Rural rate increase, the RER fund would be depleted in early 2017 (March), rather than Big Rivers' assumed depletion date in early 2018 (about 12 months difference). Mr. Baron does not know whether consumers will experience rate shock upon the depletion of the RER, whether or not the KIUC proposal is adopted. All else being equal, Rural rates would be higher without the RER credits the determination of rate shock would be a function of the percentage change in rates as a result of the depletion of the RER credits.
- d. See attached analysis on enclosed CD.

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Refer to pages 34-37 of the Baron Testimony regarding Big Rivers' proposal to include \$1 million in its revenue requirement for the cost of Demand-Side Management ("DSM") programs. Mr. Baron's testimony emphasizes the distinctions between Big Rivers' proposal to recover these costs through its base rates and recovery pursuant to an alternative cost recovery mechanism pursuant to KRS 278.285. Explain, from a cost of service and revenue allocation perspective, whether KIUC would be opposed to an allocation of revenues which recognizes that none of Big Rivers' DSM costs are for programs that serve the aluminum smelters and which assigns them none of those costs.

RESPONSE:

KIUC believes that it is appropriate to use an alternative cost recovery mechanism in this particular case because Big Rivers has not established a reasonable estimate (via a supportable budget) to justify the inclusion of \$1 million in its base rates. From a policy standpoint, it is not desirable, in Mr. Baron's opinion, to simply grant Big Rivers a \$1 million checking account for possible DSM expenditures. The alternative cost recovery mechanism provides Big Rivers with cost recovery and at the same time permits the Commission and parties of this case to evaluate the reasonableness of actual expenditures. Notwithstanding this position, it would certainly be appropriate to limit the cost of service allocation of DSM costs that are included in base rates to the rate classes that cause the costs. In this case, these classes would not include the Smelter class. Based on Mr. Baron's review of Big Rivers data responses in this case, most of the costs would be assignable to the Rural rate class, though there does not appear to be any quantifiable allocation of the \$1 million pro-forma expense between the Rural and Large Industrial rate classes.

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Request STAFF-23

Refer to the Baron Testimony at page 38. Mr. Baron proposes to expand the Rate LICX tariff to include existing large industrial customers that may want to expand their usage rather than be required to take power at market prices. Explain whether this proposal conflicts with the Morey Testimony wherein it is stated that Big Rivers' generation is frequently "out of the market." Include in the explanation whether Mr. Baron believes Big Rivers' standard cost-based tariffed rates are economically competitive with those rates of other utilities in the region.

RESPONSE:

Mr. Baron does not believe that the KIUC proposal conflicts with Dr. Morey's testimony. Dr. Morey developed an analysis of market prices and potential sales of Big Rivers' generation under a scenario wherein the Smelters are no longer served by Big Rivers. He did not compare projected Large Industrial rates to market prices. More significantly, the issue facing a potential Large Industrial customer that may increase load on the Big Rivers' system is the cost of power over the long term, the length of which may vary by customer. Potential Large Industrial expansion would normally consider the cost, and risk, of future electric prices over a longer period than three years. As such, the ability to purchase power under a cost-based tariff could be a significant factor in the overall economic evaluation made by such an expansion customer.

Mr. Baron has not performed a comparison of Big Rivers' cost-based Large Industrial rates to the rates of other utilities in the region.

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Request STAFF-24

Provide an electronic copy of Exhibits SJB-3, SJB-4, SJB-5, and SJB-6 with the formulas intact and unprotected.

RESPONSE:

See attached on enclosed CD.

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Request STAFF-25

Refer to pages 4-5 of the Direct Testimony of Stephane Leblanc ("Leblanc Testimony"), and Mr. Fayne's exhibit HWF-1 and HWF-2. Mr. Leblanc states at page 4, lines 16-18, that due to the current relatively high market price for aluminum, "the Sebree smelter has positive margins from operations." Mr. Leblanc also states at page 5, lines 18-20, that, "during the last wave of U.S. smelter closures in 2009, most closed indefinitely because they were not in line with world average power costs.

- a. What was the average price for electricity paid by the Sebree smelter in 2009?
- b. Did the Sebree smelter have positive margins from operations in 2009 when aluminum prices were just over \$1,300 per metric tonne?
- c. Provide a schedule, similar to Exhibit HWF-1, that includes the name, owner, production and cost of electricity as of the time of closure for each of the U.S. smelters that closed in 2009.

RESPONSE

- a. The average price for electricity paid by the Sebree smelter in 2009 prior to the unwind closing was \$32.40/MWh. After the unwind closing, the average price of power for the remainder of 2009 was \$43.60/MWh.
- b. During periods in 2009 when the LME was just over \$1,300, the Sebree smelter had negative margins from operations.
- c. Mr. Leblanc's statement on page 5 of his Direct Testimony refers to four U.S. smelters that closed in 2009 (Massena East, Alcoa-IN, Ravenswood and Columbia Falls) and are based on press releases and industry publications reviewed at the time.

Witness: Henry W. Fayne Stephane Leblanc

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Request STAFF-26

Refer to the Leblanc Testimony at page 8, line 17-20.

- a. Describe in detail each of the governmental and other actions that resulted in the recently announced U.S. smelter restarts.
- b. Explain why Century Aluminum restarted its fifth potline without needing any governmental or other actions.
- c. What was the approximate cost to Century Aluminum to restart its fifth potline?

RESPONSE

- a. The four smelter restarts in 2009 were Ferndale, Wenatchee, Massena East and Ormet. The Bonneville Power Administration agreed to provide Ferndale and Wenatchee low-cost hydro power to preserve jobs. Similarly, the New York Power Authority approved a new contract which provides Massena East competitive-cost power primarily based on hydro generation. For Ormet, please refer to the 2010 incentive rate set forth in the Order described in Response to Staff 3b subsequent to which Ormet restarted its 5th and 6th lines in 2011.
- b. Century Aluminum restarted its fifth potline without needing any governmental or other actions for several reasons:
 - i. The Hawesville smelter has a take-or-pay obligation to purchase the power required for the fifth potline.
 - ii. Restarting the fifth potline produces economies of scale that reduces the cost of production for the other four potlines.
 - iii. The price of the LME has increased currently to levels that support the restart under the conditions described above.
- c. The cost to Century Aluminum to restart its fifth potline was approximately \$6 million through the first quarter of 2011.

Witnesses: Henry W. Fayne Stephane Leblanc