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Your Touchstone Energy® Cooperative 

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PUBLIC SERVICE
COMMISSION

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY

In the Matter of:

**BIG RIVERS ELECTRIC CORPORATION
2014 INTEGRATED RESOURCE PLAN**

)
) **Case No.**
) **2014-00166**

**Response to the Kentucky Industrial Utility Customers, Inc.'s
Supplemental Request for Information
dated September 26, 2014**

FILED: October 15, 2014

ORIGINAL

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

Response to the Kentucky Industrial Utility Customers, Inc.'s
Supplemental Requests for Information
Dated September 26, 2014

October 15, 2014

- 1 **Item 1)** Please refer to your response to Attorney General 1-1. For each of the
2 forward power sales that are listed, please provide the following:
- 3 a. Complete pricing information.
- 4 b. If Wilson has a planned or forced outage during any of the forward
5 power sales please explain whether Big Rivers must cover the sale or whether the sale is
6 temporarily excused.
- 7 c. Please update this response for any additional forward energy sales out of
8 Wilson.
- 9
- 10 **Response)**
- 11 a. Please see Big Rivers' response to SC 1-6b.
- 12 b. Big Rivers must cover any forward energy sale in the event of a forced
13 outage. Big Rivers did not forward sell any energy during its planned outage in May and
14 June of 2014.
- 15 c. None at this time.
- 16
- 17 **Witness)** Lindsay N. Barron

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

Response to the Kentucky Industrial Utility Customers, Inc.'s
Supplemental Requests for Information
Dated September 26, 2014

October 15, 2014

1 **Item 2)** Please refer to your response to Attorney General 1-1. For each of the
2 **bilateral capacity sales and sales into the MISO Capacity Auction, please provide the**
3 **following:**

4 a. Complete pricing information.

5 b. If Wilson has a planned or forced outage during any of the forward
6 **power sales please explain whether Big Rivers must cover the sale or whether the sale is**
7 **temporarily excused.**

8 c. Please update this response with any additional capacity sales out of
9 **Wilson.**

10

11 **Response)**

12 a. Please see Big Rivers' response to SC 1-6b.

13 b. Capacity sales are not impacted by planned or forced outages.

14 c. Big Rivers has sold additional capacity for the [REDACTED]

15 [REDACTED]

16 [REDACTED]

17

18 **Witness)** Lindsay N. Barron

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

**Response to the Kentucky Industrial Utility Customers, Inc.'s
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Dated September 26, 2014**

October 15, 2014

1 **Item 3) Please refer to your response to Staff 1-29.**

2 **a. For each month of 2014, please provide the operating margins earned**
3 **from the Wilson Station. For purposes of this question, operating revenue should**
4 **include all revenue from Wilson (e.g. forward energy sales, day ahead or real time**
5 **energy sales, capacity sales, etc.) less total variable cost (e.g. fuel, variable O&M,**
6 **allowances, etc.).**

7 **b. For each month of 2014, please provide the margin earned from the**
8 **Wilson Station when all of the fixed and variable costs of Wilson are included. The**
9 **revenue should include all revenue from Wilson (e.g. forward energy sales, day ahead**
10 **or real time energy sales, capacity sales, etc.). The cost information for Wilson should**
11 **be in the same format as contained in the RUS Financial and Operating Report Electric**
12 **Power Supply for the Wilson Station that is filed with the Commission each month.**

13

14 **Response)** Big Rivers objects that this request is unduly burdensome because Big Rivers
15 does not perform accounting in the manner requested. Notwithstanding this objection, and
16 without waiving it, Big Rivers states as follows.

17 **a.** Big Rivers does not account for the margins of each station individually in its
18 normal accounting process. However, Big Rivers calculates the benefits attributable to the

BIG RIVERS ELECTRIC CORPORATION
2014 INTEGRATED RESOURCE PLAN
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1 continued operation of Wilson Station and prepares a monthly presentation to Big Rivers'
2 Board of Directors. Please see the attached CONFIDENTIAL presentation provided to Big
3 Rivers' Board of Directors on September 19, 2014.

4 b. Big Rivers does not account for the margins from each station individually in
5 its normal accounting process and does not have this information calculated. Big Rivers has
6 provided the RUS cost information for Wilson from the period for January through present in
7 the attached document.

8

9 **Witnesses)** Lindsay N. Barron and Donna M. Windhaus

Big Rivers

ELECTRIC CORPORATION

Your Touchstone Energy™ Cooperative 

Wilson Forward Sale

August 2014 Results

Wilson Forward Sale

- The table below outlines Big Rivers forward sale of the Wilson output.

Wilson Forward Sale							
Dates		Type	Amount	Period	Price	Node	Buyer
Begin	End		MW	Hours	\$/MWh		
2/1/14	3/31/14	Physical					
4/1/14	4/30/14	Physical					
7/1/14	8/31/14	Physical					
7/1/14	12/31/14	Physical					
1/1/15	2/28/15	Physical					
1/1/15	12/31/15	Physical					
6/1/15	6/30/15	Physical					
7/1/15	7/31/15	Physical					
8/1/15	8/31/15	Physical					
9/1/15	9/30/15	Physical					

* On-Peak hours are Monday - Friday from 6 AM to 10 PM (5x16)

- Historically, [REDACTED]
[REDACTED] In this analysis, Big Rivers used [REDACTED]
- Big Rivers will sell the remaining available power from Wilson into the MISO Day Ahead market.



Your Touchstone Energy Cooperative

Wilson Forward Sale 2/1/14 to 8/31/14 Results

Wilson Forward Sale, February - August 2014		
	Forecast	Actual
Margins from [REDACTED] Sale	\$ 5,974,541	\$ 5,931,482
Margins from MISO DA Market*	\$ (5,266,219)	\$ 343,469
Members FAC Benefit**	\$ 3,776,928	\$ 3,776,928
Capacity Revenue	\$ 595,328	\$ 595,328
Total	\$ 5,080,578	\$ 10,647,206

* Includes O&M outage costs

** Very little change is expected in the actual FAC benefit



Your Touchstone Energy Cooperative

Wilson Forward Sale


Capacity Revenue and Members' FAC Benefit

Wilson Capacity Revenue										
Period	Capacity - [REDACTED]			Capacity - [REDACTED]			Capacity - [REDACTED]			Capacity
	MW	\$/MW-Day	\$	MW	\$/MW-Day	\$	MW	\$/MW-Day	\$	\$
Jun-14 to May-15	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	\$ -	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Jun-15 to Dec-15	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

Executed
Forecasted

- The Members' FAC Benefit for the Wilson forward sale from February 2014 to December 2015 equals [REDACTED]



Your Touchstone Energy[®] Cooperative 

Wilson Forward Sale Summary

Wilson Gross Sales Margins and Capacity Revenue				
	2014 (Feb - Aug)	2014 (Sep - Dec)	2015 (Jan - Dec)	Total
Wilson Forward Sale Gross Sales Margins	\$ 5,931,482			
Wilson DA MISO Market Gross Sales Margins	\$ 343,469			
Capacity Revenue	\$ 595,328			
Total (Gross Sales Margins + Capacity Revenue)	\$ 6,870,278			

Net Benefits from Wilson Forward Sale				
	2014 (Feb - Aug)	2014 (Sep - Dec)	2015 (Jan - Dec)	Total
Contribution to Fixed Costs	\$ 6,870,278			
FAC Benefit to Members	\$ 3,776,928			
Total Benefit to Members	\$ 10,647,206			

Contribution to Fixed Costs equals the total gross sales margins plus capacity revenue (the non-labor outage O&M expense has been included in the DA MISO Market Gross Sales Margins).

The annual cost for maintaining the Wilson lay-up is \$2.25M and is not included in benefits above.

UNITED STATES DEPARTMENT OF AGRICULTURE RURAL UTILITIES SERVICE FINANCIAL AND OPERATING REPORT ELECTRIC POWER SUPPLY PLANT 0 - STEAM PLANT KY0062							BORROWER DESIGNATION				
INSTRUCTIONS - See help In the online application							Jan-14				
SECTION A. BOILERS/TURBINES											
NO.	UNIT NO. (a)	TIMES STARTED (b)	FUEL CONSUMPTION					OPERATING HOURS			
			COAL (1000 Lbs.)	OIL (1000 Gals.)	GAS (1000 C.F.) (e)	OTHER (f)	TOTAL (9)	IN SERVICE (h)	ON STANDBY (i)	OUT OF SERVICE	
										Scheduled (j)	Unsched (k)
1.	I	3	203,875.7	90,691	.0			519.4	.0	.0	2246
2.											
3.											
0.4											
5.											
6.	Total	3	203,875.7	90,691	0			5194	.0	.0	224.6
7.	Average BTU		11,638	138,000	0						c,
8.	Total BTU(10 ⁶)		2,372,705	12,515	0		2,385,220				
9.	Total Del. Cost (\$)		4,895,850.63	275,134.12	0.00						
SECTION A. BOILERS/TURBINES (CONT.)				SECTION B. LABOR REPORT				SECTION C. FACTORS & MAX. DEMAND			
NO.	UNIT NO. (1)	SIZE (kW) (m)	GROSS GEN. (MWh) (n)	BTU PER kWh (o)	NO.	ITEM	VALUE	NO.	ITEM	VALUE	
1		440,000	228,999.740		1	No Employees Full-Time (Inc Superintendent)	92	1	Load Factor (%)	68.61	
2								2.	Plant Factor (%)	69.95	
3					2	No Employees Part-Time		3.	Running Plant Capacity Factor (%)	100.20	
4					3.	Total Empl. - Hrs. Worked		4	15 Minute Gross Maximum Demand (kW)	448,630	
5.					4.	Oper Plant Payroll (5)		5.	Indicated Gross Maximum Demand (kW)		
6	Total	440,000	228,999.740	10,416	5.	Main Plant Payroll (\$)					
7.	Station Service (MWh)		17,738,310		6.	Other Accts. Plant Payroll (5)					
8.	Net Generation (MWh)		211,261.430	11,290	7	Total Plant Payroll (\$)					
9	Station Service (%)		775								
SECTION D. COST OF NET ENERGY GENERATED											
NO.	PRODUCTION EXPENSE			ACCOUNT NUMBER	AMOUNT (\$) (a)	MILLS/NET kWh (b)	\$/10 ⁶ BTU (c)				
1.	Operation, Supervision and Engineering			500	148,013.24						
2.	Fuel, Coal			501.1	5,079,609.26		2.14				
3.	Fuel, Oil			501.2	275,134.12		21.98				
4.	Fuel, Gas			5013	0.00		0				
5.	Fuel, Other			5014			0				
6	Fuel Sub-Total (2 thru 5)			501	5,354,743.38	2535	2.24				
7	Steam Expenses			502	777,811.19						
8.	Electric Expenses			505	117,463.22						
9.	Miscellaneous Steam Power Expenses			506	180,215.29						
10	Allowances			509	1,567.88						
11.	Rents			507	0.00						
12.	Non-Fuel Sub-Total (1 + 7 thru 11)				1,225,070.82	580					
13	Operation Expense (6 + 12)				6,579,814.20	31.15					
14	Maintenance, Supervision and Engineering			510	106,099.57						
15.	Maintenance of Structures			511	69,296.49						
16.	Maintenance of Boiler Plant			512	725,634.80						
17.	Maintenance of Electric Plant			513	146,596.49						
18.	Maintenance of Miscellaneous Plant			514	30,062.00						
19.	Maintenance Expense (14 thru 18)				1,077,689.35	510					
20.	Total Production Expense (13 + 19)				7,657,503.55	36.25					
21.	Depreciation			403.1	1,599,546.38						
22.	Interest			427	1,662,782.73						
23.	Total Fixed Cost (21 + 22)				3,262,329.11	1544					
24.	Power Cost (20 + 23)				10,919,832.66	51.69					

RUS Financial and Operating Report Electric Power Supply - Part D Steam Plant Revision Date 2010

Case No. 2014-00166

Attachment for Response to KIUC 1-3(b)

Witnesses: Lindsay N. Barron and Donna M. Windhaus

UNITED STATES DEPARTMENT OF AGRICULTURE RURAL UTILITIES SERVICE FINANCIAL AND OPERATING REPORT ELECTRIC POWER SUPPLY PLANT D - STEAM PLANT							BORROWER DESIGNATION KY0062				
							Feb-14				
INSTRUCTIONS - See help in the online application.											
SECTION A. BOILERS/TURBINES							SECTION A. BOILERS/TURBINES				
NO.	UNIT NO. (a)	TIMES STARTED (b)	FUEL CONSUMPTION				OPERATING HOURS				
			COAL (1000 Lbs.)	OIL (1000 Gals.)	GAS (1000 C.F.) (e)	OTHER (f)	TOTAL (g)	IN SERVICE (h)	ON STANDBY (i)	OUT OF SERVICE	
									Scheduled (j)	Unsched (k)	
1.	1	3	452,666.9	142,711	.0			1,191.4	.0	.0	224.6
2.											
3.											
4.											
5.											
6.	Total	3	452,666.9	142,711	.0			1,191.4	.0	.0	224.6
7.	Average BTU		11,643	138,000	0						
8.	Total BTU(10 ⁶)		5,270,401	19,694	0			5,290,095			
9.	Total Del..Cost \$		1039749.31	435 608.16	0.00						
SECTION A. BOILERS/TURBINES (CONT.)				SECTION B. LABOR REPORT				SECTION C. FACTORS & MAX. DEMAND			
NO.	UNIT NO. (1)	SIZE (kW) (m)	GROSS GEN. (MWh) (n)	BTU PER kWh (o)	NO.	ITEM	VALUE	NO.	ITEM	VALUE	
1.	1	440,000	527,102.590		1	No. Employees Full-Time (Inc. Superintendent)	89	1.	Load Factor (%)	82.33	
2.					2.	No. Employees Part-Time		2.	Plant Factor (%)	84.60	
3.					3.	Total Empl. - Hrs. Worked		3.	Running Plant Capacity Factor (%)		
4.					4.	Oper. Plant Payroll (\$)		4.	15 Minute Gross Maximum Demand (kW)	100.55	
5.					5.	Maint. Plant Payroll (\$)		5.	Indicated Gross Maximum Demand (kW)	452 155.	
6.	Total	440,000	527,102.590	10,036	6.	Other Accts. Plant Payroll (\$)					
7.	Station Service (MWh)		37,730.513		7.	Total Plant Payroll (\$)					
8.	Net Generation (MWh)		489,372.077	10,810							
9.	Station Service (%)		7.16								
SECTION D. COST OF NET ENERGY GENERATED											
NO.	PRODUCTION EXPENSE			ACCOUNT NUMBER	AMOUNT (\$) (a)	MILLS/NET kWh (b)	\$/10 ⁶ BTU (c)				
1.	Operation, Supervision and Engineering			500	275,507.07						
2.	Fuel, Coal			501.1	11,431,015.41		2.17				
3.	Fuel, Oil			501.2	435,608.16		22.12				
4.	Fuel, Gas			501.3	0.00		0				
5.	Fuel, Other			501.4			0				
6.	Fuel Sub-Total (2 thru 5)			501	11,866,623.57	24.25	2.24				
7.	Steam Expenses			502	1,448,274.03						
8.	Electric Expenses			505	214,667.45						
9.	Miscellaneous Steam Power Expenses			506		397,636.69					
10.	Allowances			509		3,079.46					
11.	Rents			507	0.00						
12.	Non-Fuel Sub-Total (1 + 7 thru 11)				2,339,164.70	4.78					
13.	Operation Expense (6 + 12)				14,205,788.27	29.03					
14.	Maintenance, Supervision and Engineering			510	184,536.23						
15.	Maintenance of Structures			511	121,644.37						
16.	Maintenance of Boiler Plant			512	1,221,021.77						
17.	Maintenance of Electric Plant			513	199,238.92						
18.	Maintenance of Miscellaneous Plant			514	66,079.26						
19.	Maintenance Expense (14 thru 18)				1,792,520.55	3.66					
20.	Total Production Ex_pense(13 + 19)				15,998,308.82	32.69					
21.	Depreciation			403.1	3,199,092.76						
22.	Interest			427	3,192,095.89						
23.	Total Fixed Cost (21 + 22)				6,391,188.65	13.06					
24.	Power Cost (20 + 23)				22,389,497.47	45.75					

UNITED STATES DEPARTMENT OF AGRICULTURE RURAL UTILITIES SERVICE FINANCIAL AND OPERATING REPORT ELECTRIC POWER SUPPLY PLANT D -STEAM PLANT PIANT							BORROWER DESIGNATION KY0062				
INSTRUCTIONS - See help in the online application.							Mar-14				
SECTION A. BOILERS/TURBINES							SECTION A. BOILERS/TURBINES				
NO.	UNIT NO. (a)	TIMES STARTED (4)	FUEL CONSUMPTION				OPERATING HOURS				
			COAL (1000 Lbs.)	OIL (1000 Gals.)	GAS (1000 C.F.) (e)	OTHER M	TOTAL (g)	IN SERVICE (h)	ON STAN DBY	OUT OF SERVICE	
									Scheduled (j)	Unsched (k)	
1.	1	3	724,563.9	181.360	.0			1,934.4	.0	.0	224.6
2.											
3.											
4.											
5.											
6.	Total	3	724,563.9	181.360	.0			1,934.4	.0	.0	224.6
7.	Average BTU		11,658	138,000	0						
8.	Total BTU (10 ⁶)		8,446,966	25,028	0		8,471,994				
9.	Total Del..Cost (\$)		17,745,679.98	554,835.99	0.00						
SECTION A. BOILERS/TURBINES (CONT.)				SECTION B. LABOR REPORT				SECTION C. FACTORS & MAX. DEMAND			
NO.	UNIT NO. (1)	SIZE (kW) (IT ¹)	GROSS GEN. (MWh) (n)	BTU PER kWh (o)	NO.	ITEM	VALUE	NO.	ITEM	VALUE	
1.	1	440,000	852,783.860		1	No. Employees Full-Time (Inc. Superintendent)	89	1	Load Factor (%)	85.42	
2.					2.	No. Employees Part-Time		2.	Plant Factor (%)	89.77	
3.					3.	Total Empl. - Hrs. Worked		3.	Running Plant Capacity Factor (%)		
4.					4.	Oper. Plant Payroll (\$)		4.	15 Minute Gross Maximum Demand (kW)	100.19	
5.					5.	Maint Plant Payroll (\$)		5.	Indicated Gross Maximum Demand (kW)	462,416	
6.	Total	440,000	852,783.860	9,935	6.	Other Accts. Plant Payroll (\$)					
7.	Station Service (MWh)		59,490.259		7.	Total Plant Payroll (\$)					
8.	Net Generation (MWh)		793,293.601	10,680							
9.	Station Service (%)		6.98								
SECTION D. COST OF NET ENERGY GENERATED											
NO.	PRODUCTION EXPENSE			ACCOUNT NUMBER	AMOUNT (\$) (a)	MILLS/NET kWh (b)	\$110 ⁶ BTU (c)				
1.	Operation, Supervision and Engineering			500	414,627.72						
2.	Kiel, Coal			501.1	18,390,854.78		2.18				
3.	Fuel, Oil			501.2	554,835.99		22.17				
4.	Fuel, Gas			501.3	0.00		0				
5.	Fuel, Other			501.4			0				
6.	Fuel Sub-Total (2 thru 5)			501	18,945,690.77	23.88	2.24				
7.	Steam Expenses			502	2,105,882.56						
8.	Electric Expenses			505	314,819.35						
9.	Miscellaneous Steam Power Expenses			506	633,457.06						
10.	Allowances			509	4,779.75						
11.	Rents			507	0.00						
12.	Non-Fuel Sub-Total (1 + 7 thru 11)				3,473,566.44	4.38					
13.	Operation Expense (6 + 12)				22,419,257.21	28.26					
14.	Maintenance, Supervision and Engineering			510	263,281.07						
15.	Maintenance of Structures			511	257,946.25						
16.	Maintenance of Boiler Plant			512	1,761,608.17						
17.	Maintenance of Electric Plant			513	257,803.28						
18.	Maintenance of Miscellaneous Plant			514	112,241.32						
19.	Maintenance Expense (14 thru 18)				2,652,880.09	3.34					
20.	Total Production Expense (13 + 19)				25,072,137.30	31.61					
21.	Depreciation			403.1		4,798,639.14					
22.	Interest			427	4,839,341.01						
23.	Total Fixed Cost (21 + 22)				9,637,980.15	12.15					
24.	Power Cost (20 + 23)				34,710,117.45	43.75					

UNITED STATES DEPARTMENT OF AGRICULTURE RURAL UTILITIES SERVICE FINANCIAL AND OPERATING REPORT ELECTRIC POWER SUPPLY							BORROWER DESIGNATION KY0062					
							PLANT WILSON					
							PLANT D - STEAM PLANT PERIOD ENDED Apr-14					
INSTRUCTIONS - See help in the online application.												
SECTION A. BOILERS/TURBINES												
NO.	UNIT NO. (a)	TIMES STARTED q_3	FUEL CONSUMPTION					OPERATING HOURS				
			COAL (1000 Lbs.)	OIL (1000 Gals.)	GAS (1000 C.F.) (e)	OTHER (f)	TOTAL (g)	IN SERVICE (h)	ON STANDBY (i)	OUT OF SERVICE		
										Scheduled (j)	Unsched (k)	
1.	1	3	990,814.5	213.298	.0				2,654.4	.0	0	224.6
2.												
3.												
4.												
5.												
6.	Total	3	990,814.6	213.298	.0				2,654.4	.0	0	224.6
7.	Average BTU		11,690	138,000	0							
8.	Total BTU(10 ⁸)		11,582,623	29,435	0			11,612,058				
9.	Total Del..Cost(\$)		24,397,884.94	655,860.92	0.00							
SECTION A. BOILERS/TURBINES (CONT.)				SECTION B. LABOR REPORT				SECTION C. FACTORS & MAX. DEMAND				
NO.	UNIT NO. (1)	SIZE (kW) (m)	GROSS GEN. (MWh) (n)	PER kWh (o)	NO.	ITEM	BTU VALUE	NO.	ITEM	VALUE		
1.	1	440,000	1,171,981.950		1	No. Employees Full-Time (Inc. Superintendent)	93	1.	Load Factor (%)	88.03		
2.												
3.					2.	No. Employees Part-Time		2.	Plant Factor (%)	92.52		
4.					3.	Total Empl. - Hrs. Worked		3.	Running Plant Capacity Factor (%)			
5.					4.	Oper. Plant Payroll (\$)				100.35		
6.	Total	440,000	1,171,981.950	9,908	5.	Maint. Plant Payroll (\$)		4.	15 Minute Gross Maximum Demand (kW)	462,416		
7.	Station Service (MWh)		80,820.147		6.	Other Accts. Plant Payroll (5)		5.	Indicated Gross Maximum Demand (kW)			
8.	Net Generation (MWh)		1,091,161.803	10,642	7.	Total Plant Payroll (\$)						
9.	Station Service (%)		6.90									
SECTION D. COST OF NET ENERGY GENERATED												
NO.	PRODUCTION EXPENSE			ACCOUNT NUMBER	AMOUNT (\$) (a)	MILLS/NET kWh (b)	5/10 ⁶ BTU (c)					
1.	Operation, Supervision and Engineering			500	540,675.29							
2.	Fuel, Coal			501.1	25,303,706.55		2.18					
3.	Fuel, Oil			501.2	655,860.92		22.28					
4.	Fuel, Gas			501.3	0.00		#					
5.	Fuel, Other			501.4			#					
6.	Fuel Sub-Total (2 thru 5)			501	25,959,567.47	23.79	2.24					
7.	Steam Expenses			502	2,858,184.44							
8.	Electric Expenses			505	410,943.66							
9.	Miscellaneous Steam Power Expenses			506	912,628.50							
10.	Allowances			509	6,373.81							
11.	Rents			507	0.00							
12.	Non-Fuel Sub-Total (1 + 7 thru 11)				4,728,805.70	4.31						
13.	Operation Expense (6 + 12)				30,688,373.17	28.12						
14.	Maintenance, Supervision and Engineering			510	347,961.68							
15.	Maintenance of Structures			511	323,763.55							
16.	Maintenance of Boiler Plant			512	2,300,461.23							
17.	Maintenance of Electric Plant			513	364,379.94							
18.	Maintenance of Miscellaneous Plant			514	172,912.16							
19.	Maintenance Expense (14 thru 18)				3,509,478.56	322						
20.	Total Production Expense (13 + 19)				34,197,851.73	31.34						
21.	Depreciation			403.1	1,599,546.38							
22.	Interest			427	6,433,329.52							
23.	Total Fixed Cost (21 + 22)				8,032,875.90	7.36						
24.	Power Cost (20 + 23)				42,230,727.63	38.70						

UNITED STATES DEPARTMENT OF AGRICULTURE RURAL UTILITIES SERVICE FINANCIAL AND OPERATING REPORT ELECTRIC POWER SUPPLY PLANT D - STEAM PLANT					BORROWER DESIGNATION KY01362						
					PLANT WILSON						
					PERIOD ENDED May-14						
INSTRUCTIONS - See help in the online application.											
SECTION A. BOILERS/TURBINES											
NO.	UNIT NO. (a)	TIMES STARTED (b)	FUEL CONSUMPTION				OPERATING HOURS				
			COAL (1000 Lbs.) (c)	OIL (1000 Gals.) (d)	GAS (1000 C.F.) (e)	OTHER (f)	TOTAL (g)	IN SERVICE (h)	ON STANDBY (i)	OUT OF SERVICE (j)	
									Scheduled (k)	Unsched (l)	
1.	1	3	1,069,525.2	218.869	.0			2,870.5	.0	527.9	224.6
2.											
3.											
4.											
5.											
	6. Total	3	1,069,525.2	218.869	.0			2,870.5	.0	527.9	224.6
7.	Average BTU		11,703	138,000	0						
8.	Total BTU(10 ⁶)		12,516,653	30,204	0			12,546,857			
9.	Total Del. Cost (\$)		26,368,452.73	673,482.43	0.00						
SECTION A. BOILERS/TURBINES (CONT.)				SECTION B. LABOR REPORT			SECTION C. FACTORS & MAX. DEMAND				
NO.	UNIT NO. (1)	SIZE (kW) (m)	GROSS GEN. (MWh) (n)	BTU PER kWh (o)	NO.	ITEM	VALUE	NO.	ITEM	VALUE	
1.	1	440,000	1,267,341.550		1	No Employees Full-Time (Inc. Superintendent)	89	1.	Load Factor (%)	75.65	
2.					2.	No. Employees Part-Time		2.	Plant Factor (%)	79.50	
3.					3.	Total Empl. - Hrs. Worked		3.	Running Plant Capacity Factor	100.34	
4.					4.	Open Plant Payroll (\$)		4.	15 Minute Gross Maximum Demand (1cW)	462,416	
5.					5.	Maint. Plant Payroll (\$)		5.	Indicated Gross Maximum Demand (kW)		
6.	Total	440,000	1,267,341.550	9,900							
7.	Station Service (MWh)		88,959.046		6.	Other Accts. Plant Payroll (\$)					
8.	Net Generation (MWh)		1,178,382.504	10,648	7.	Total Plant Payroll (\$)					
9.	Station Service (%)		7.02								
SECTION D. COST OF NET ENERGY GENERATED											
NO.	PRODUCTION EXPENSE		ACCOUNT NUMBER	AMOUNT (\$) (a)	MILLS/NET kWh (b)	5/10E BTU (c)					
1.	Operation, Supervision and Engineering		500	711,030.13							
2.	Fuel, Coal		501.1	27,453,348.70		2.19					
3.	Fuel, Oil		501.2	673,482.43		22.30					
4.	Fuel, Gas		501.3	0.00		0					
5.	Fuel, Other		501.4			0					
6.	Fuel Sub-Total (2 thru 5)		501	28,126,831.13	23.87	2.24					
7.	Steam Expenses		502		3,480,200.86						
8.	Electric Expenses		505	562,462.80							
9.	Miscellaneous Steam Power Expenses		506	1,426,645.42							
10.	Allowances		509	6,885.12							
11.	Rents		507	0.00							
12.	Non-Fuel Sub-Total (1 + 7 thru 11)			6,187,224.33	5.25						
13.	Operation Expense (6 + 12)			34,314,055.46	29.12						
14.	Maintenance, Supervision and Engineering		510		470,949.95						
15.	Maintenance of Structures		511	421,235.13							
16.	Maintenance of Boiler Plant		512	5,761,305.23							
17.	Maintenance of Electric Plant		513	787,515.91							
18.	Maintenance of Miscellaneous Plant		514	287,300.17							
19.	Maintenance Expense (14 thru 18)			7,728,306.39	6.56						
20.	Total Production Expense (13 + 19)			42,042,361.85	35.68						
21.	Depreciation		403.1	1,600,095.38							
22.	Interest		427	8,059,038.45							
23.	Total Fixed Cost (21 + 22)			9,659,133.83	8.20						
24.	Power Cost (20 + 23)			51,701,495.68	43.87						

RUS Financial and Operating Report Electric Power Supply - Part D Steam Plant Revision Date 2010

Case No. 2014-00166

Attachment for Response to KIUC 1-3(b)

Witnesses: Lindsay N. Barron and Donna M. Windhaus

UNITED STATES DEPARTMENT OF AGRICULTURE RURAL UTILITIES SERVICE FINANCIAL AND OPERATING REPORT ELECTRIC POWER SUPPLY PLANT D - STEAM PLANT							BORROWER DESIGNATION KY0062				
							PLANT WILSON				
							PERIOD ENDED Jun-14				
INSTRUCTIONS - See help in the online application.											
SECTION A. BOILERS/TURBINES											
NO.	UNIT NO. (a)	TIMES STARTED (b)	FUEL CONSUMPTION					OPERATING HOURS			
			COAL (1000 Lbs.)	OIL (1000 Gals.)	GAS (1000 C.F. (e))	OTHER (f)	TOTAL (g)	IN SERVICE (h)	ON STANDBY (i)	OUT OF SERVICE	
										Scheduled (j)	Unsched (k)
1.	1	5	1,123,839.1	320.325	.0			3,045.2	.0	1069.5	228.3
2.											
3.											
4.											
5.											
6.	Total	5	1,123,839.1	320.325	.0			3,045.2	.0	1,069.5	228.3
7.	Average BTU		11,705	138,000	0						
8.	Total BTU(10 ⁶)		13,154,537	44,205	0		13,198,742				
9.	Total Del..Cost (\$)		27,717,929.46	986,604.88	0.00						
SECTION A. BOILERS/TURBINES (CONT.)				SECTION B. LABOR REPORT				SECTION C. FACTORS & MAX. DEMAND			
NO.	UNIT NO. (1)	SIZE (kW) (11)	GROSS GEN. (MWh) (n)	BTU PER kWh (c)	NO.	ITEM	VALUE	NO.	ITEM	VALUE	
1.	1	440,000	1,332,417.970		1	No. Employees Full-Time (Inc. Superintendent)	94	1.	Load Factor (%)	66.35	
2.								2.	Plant Factor (%)	69.73	
3.					3.	Total Empl. - Hrs. Worked		3.	Running Plant /Capacity Factor (%)		
4.					4.	Oper. Plant Payroll (\$)		4.	15 Minute Gross Maximum Demand (kW)	99.44	
5.					5.	Maint. Plant Payroll (\$)		5.	Indicated Gross Demand (kW)	462416	
6.	Total	440,000	2,332,417.970	9,906	6.	Other Accts. Plant Payroll (\$)					
7.	Station Service (MWh)		96,715.594		7.	Total Plant Payroll (\$)					
8.	Net Generation (MWh)		1,235,702.376	10,681							
9.	Station Service(%)		7.26								
SECTION D. COST OF NET ENERGY GENERATED											
NO.	PRODUCTION EXPENSE			ACCOUNT NUMBER	AMOUNT (\$) (a)	MILLS/NET kWh (b)	\$/10 ³ BTU (c)				
1.	Operation			500	863,591.82		.1				
2.	Fuel, Coal			501.1	28,966,070.82		2.20				
3.	Fuel, Oil			501.2	986604.88		22.32				
4.	Fuel, Gas			501.3	0.00		0				
5.	Fuel, Other			501.4			0				
6.	Fuel Sub-Total (2 thru 5)			501	29,952,675.70	24.24	2.27				
7.	Steam Expenses			502	3,942,912.13		-				
8.	Electric Expenses			505	687,392.71						
9.	Miscellaneous Steam Power Expenses			506	1,688,057.06						
10.	Allowances			509	7,309.58						
11.	Rents			507	0.00						
12.	Non-Fuel Sub-Total (1 4 7 thru 11)				7089,263.30	5.82					
13.	Operation Expense (6 4 12)				37,141,939.00	30.06					
14.	Maintenance, Supervision and Engineering			510	596,383.35						
15.	Maintenance of Structures			511	502,050.30						
16.	Maintenance of Boiler Plant			512	8,053,938.40						
17.	Maintenance of Electric Plant			513	953,353.45						
18.	Maintenance of Miscellaneous Plant			514	383,880.29						
19.	Maintenance Expense (14 thru 18)				10,489,605.79	8.49					
20.	Total Production Expense (13 + 19)				47,631,544.79	38.55					
21.	Depreciation			403.1	1,600,095.38						
22.	Interest			427	9,615,674.65						
23.	Total Fixed Cost (21 + 22)				11,235,770.03	9.09					
24.	Power Cost 120 + 23)				58,867,314.82	47.64					

RUS Financial and Operating Report Electric Power Supply - Part D Steam Plant Revision Date 2010

Case No. 2014-00166

Attachment for Response to KIUC 1-3(b)

Witnesses: Lindsay N. Barron and Donna M. Windhaus

UNITED STATES DEPARTMENT OF AGRICULTURE RURAL UTILITIES SERVICE FINANCIAL AND OPERATING REPORT ELECTRIC POWER SUPPLY					BORROWER DESIGNATION KY0062 PLANT WILSON						
PLANT D - STEAM PLANT PERIOD ENDED Jul-14											
INSTRUCTIONS - See help in the online application.											
SECTION A. BOILERS/TURBINES											
NO.	UNIT NO. (a)	TIMES STARTED (b)	FUEL CONSUMPTION				OPERATING HOURS				
			COAL (1000 Lbs.) (c)	OIL (1000 Gals.) (d)	GAS (1000 C.F.) (e)	OTHER (f)	TOTAL (g)	IN SERVICE (h)	ON STANDBY (i)	Scheduled (j)	Unsched (k)
1.	1	6	1,375,924.3	366,577	.0			3,749.5	.0	1,069.5	268.0
2.											
3.											
4.											
5.											
6.	Total	6	1,375,924.3	366,577	.0			3,749.5	.0	1,069.5	268.0
7.	Average BTU		11,754	138,000	0						
8.	Total BTU(10 ⁶)		16,172,614	50,588	0		16,223,202				
9.	Total Del. Cost (\$)		34,005,937.11	1,129,705.02	0.00						
SECTION A. BOILERS/TURBINES (CONT.)					SECTION B. LABOR REPORT			SECTION C. FACTORS & MAX. DEMAND			
NO.	UNIT NO. (1)	SIZE (kW) (m)	GROSS GEN. (MWh) (n)	BTU PER kWh (o)	NO.	ITEM	VALUE	NO.	ITEM	VALUE	
1.	1	440,000	1,636,403.150		1	No. Employees Full-Time (Inc. Superintendent)	111	1.	Load Factor (%)	69.57	
2.					2.	No. Employees Part-Time		2.	Plant Factor (%)	73.11	
3.					3.	Total Empl. - Hrs. Worked		3.	Running Plant Capacity Factor(%)		
4.					4.	Oper. Plant Payroll (\$)		4.	15 Minute Gross Maximum Demand (kW)	99.19	
6.	Total	440,000	1,636,403.150	9,914		Plant Payroll (\$)		5.	Indicated Gross Maximum Demand (kW)	462416	
7.	Station Service (MWh)		117,418.883		6.	Other Accts. Plant Payroll (\$)					
8.	Net Generation (MWh)		1,518,984.267	10,680	7.	Total Plant Payroll (\$)					
9.	Station Service (%)		7.18								
SECTION D. COST OF NET ENERGY GENERATED											
NO.	PRODUCTION EXPENSE			ACCOUNT NUMBER	AMOUNT (\$ (a)	MILLS/NET kWh (b)	5110 ⁶ BTU (c)				
1.	Operation, Supervision and Engineering			500	1,008,255.04						
2.	Fuel, Coal			501.1	35,672,214.93		2.21				
3.	Fuel, Oil			501.2	1,129,705.02		22.33				
4.	Fuel, Gas			501.3	0.00		#				
5.	Fuel, Other			501.4			#				
6.	Fuel Sub-Total (2 thru 5)			501	36,801,919.95	24.23	2.27				
7.	Steam Expenses			502	4,750,953.39						
8.	Electric Expenses			505	824,402.76						
9.	Miscellaneous Steam Power Expenses			506	1,992,815.80						
10.	Allowances			509	9144.27						
11.	Rents			507	0.00						
12.	Non-Fuel Sub-Total (1 + 7 thru 11)				8,585,571.26	5.65					
13.	Operation Expense (6 + 12)				45,387,491.21	29.88					
14.	Maintenance, Supervision and Engineering			510	676,246.28						
15.	Maintenance of Structures			511	626,766.46						
16.	Maintenance of Boiler Plant			512	8,653,851.17						
17.	Maintenance of Electric Plant			513	979,562.55						
18.	Maintenance of Miscellaneous Plant			514	464,423.89						
19.	Maintenance Expense (14 thru 18)				11,400,850.35	7.51					
20.	Total Production Expense (13 + 19)				56,788,341.56	37.39					
21.	Depreciation			403.1		1,600,095.38					
22.	Interest			427	11,292,562.79						
23.	Total Fixed Cost (21 + 22)				12,892,658.17	8.49					
24.	Power Cost (20 + 23)				69,680,999.73	45.87					

RUS Financial and Operating Report Electric Power Supply - Part D - Steam Plant Revision Date 2010

Case No. 2014-00166

Attachment for Response to KIUC I-3(b)

Witnesses: Lindsay N. Barron and Donna M. Windhaus

Page 7 of 8

UNITED STATES DEPARTMENT OF AGRICULTURE RURAL UTILITIES SERVICE FINANCIAL AND OPERATING REPORT ELECTRIC POWER SUPPLY PLANT 0 - STEAM PLANT							BORROWER DESIGNATION				
INSTRUCTIONS - See he l. in the online a. dication.							PERIOD ENDED L11.gi -14				
SECTION A. BOILERS/TURBINES											
NO.	UNIT NO. (a)	TIMES STARTED (b)	FUEL CONSUMPTION					OPERATING HOURS			
			COAL (1000 Lbs.) (c)	OIL (1000 Gals.) (d)	GAS (1000 C.F.) (e)	OTHER (f)	TOTAL (g)	IN SERVICE (h)	ON STANDBY (i)	OUT OF SERVICE	
			Scheduled (1)	Unsched (k)							
1.	1	6	1,649,209.7	384.846	.0			4,493.4	.0	1,069.5	268.1
2.											
3.											
4.											
5.											
6.	Total	6	1,649,209.7	384.846	.0			4,493.4	.0	1,069.5	268.1
7.	Average BTU		11,795	138.00	0						
8.	Total BTU(10 ⁶)		19,452,428	53,109	1		19,505,537				
9.	Total Del..Cost (\$)		49,816,899.41	1,185,283.53	0.00						
SECTION A. BOILERS/TURBINES (CONT.)				SECTION B. LABOR REPORT				SECTION C. FACTORS & MAX. DEMAND			
NO.	UNIT NO. (1)	SIZE (kW) (111)	GROSS GEN. (MWh) (n)	BTU PER kWh (o)	NO.	ITEM	VALUE	NO.	ITEM	VALUE	
1.	1	440,000	1,967,956.550		1	No. Employees Full-Time (Inc. Superintendent)	105	1.	Load Factor (%)	72.00	
2.								2.	Plant Factor (%)	76.70	
3.					2.	No. Employees Part-Time		3.	Running Plant Capacity Factor (%)		
4.					3.	Total Empl. - Hrs. Worked					
5.					4.	Oper. Plant Payroll (5)				99.54	
6.	Total	440,000	1,967,956.550	9,912	5.	Maint.		4.	15 Minute Gross Maximum Demand (kW)	462,416	
7.	Station Service (MWh)		139,357.428		6.	Other Accts. Plant Payroll (\$)		5.	Indicated Gross Maximum Demand (kW)		
8.	Net Generation (MWh)		1,828,599.122	10,667	7.	Total Plant Payroll (\$)					
9.	Station Service (%)		7.08								
SECTION D. COST OF NET ENERGY GENERATED											
NO.	PRODUCTION EXPENSE			ACCOUNT NUMBER	AMOUNT (\$) (a)	MILLS/NET kWh (b)	\$110 ⁶ BTU (c)				
1.	Operation, Supervision and Engineering			500	1,142,893.47						
2.	Fuel Coal			501.1	42,713,455.03		2.20				
3.	Fuel, Oil			501.2	1,18583.53.		22.32				
4.	Fuel, Gas			501.3		0.01	0				
5.	Fuel, Other			501.4			0				
6.	Fuel Sub-Total (2 thru 5)			501	43,898,738.56	24.01	2.25				
7.	Steam Expenses			502	5,555,404.61						
8.	Electric Expenses			505	938,870.59						
9.	Miscellaneous Steam Power Expenses			506	2,220,877.23						
10.	Allowances			509	11,35.44						
11.	Rents			507	0.00						
12.	Non-Fuel Sub-Total (1 + 7 thru 11)				9,869,381.34	5.40					
13.	Operation Expense (6 + 12)				53,768,119.90	29.40					
14.	Maintenance, Supervision and Engineering			5-10	777,546.69						
15.	Maintenance of Structures			511	804,837.21						
16.	Maintenance of Boiler Plant			512	9,176,873.61						
17.	Maintenance of Electric Plant			513	1,080,776.95						
18.	Maintenance of Miscellaneous Plant			514	525,349.46						
19.	Maintenance Expense (14 thru 18)				12,365,383.92	6.76					
20.	Total Production Expense (13 + 19)				66,133,503.82	36.17					
21.	Depreciation			403.1	1,600,095.38						
22.	Interest			427	12,948,340.83						
23.	Total Fixed Cost (21 + 22)				14,548,436.21	7.96					
24.	Power Cost (20 + 23)				80,681,940.03	44.12					

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

Response to the Kentucky Industrial Utility Customers, Inc.’s
Supplemental Requests for Information
Dated September 26, 2014

October 15, 2014

1 **Item 4) Please refer to your response to Staff 1-29 and the statement “Big Rivers**
2 **anticipates that Wilson Station will be economic to operate for many years to come,**
3 **adding value to our Members as projected in our Load Concentration Analysis and**
4 **Mitigation Plan.”**

5 **a. Please provide all documents, studies and back-up material to support**
6 **this statement.**

7 **b. Please provide all studies done by or for Big Rivers that estimate the**
8 **expected margins that Big Rivers is projected to earn from the Wilson Station.**

9
10 **Response) Big Rivers objects that this request is overly broad and unduly burdensome**
11 **insofar as it pertains to the extensive data, testimony, and briefing provided in Cases No.**
12 **2012-00535 and 2013-00199, where this subject was addressed at length. Notwithstanding**
13 **these objections, and without waiving them, Big Rivers states as follows.**

14 **a. Please see Big Rivers’ response to AG 2-2.**

15 **b. Please see Big Rivers’ response to KIUC 1-3a.**

16
17 **Witness) Lindsay N. Barron**

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

Response to the Kentucky Industrial Utility Customers, Inc.'s
Supplemental Requests for Information
Dated September 26, 2014

October 15, 2014

1 **Item 5)** **Please refer to your response to Staff 1-12. Please provide the economic**
2 **development incentive rate as originally requested by Staff.**

3

4 **Response)** As was stated in the response to PSC 1-12, Big Rivers' economic
5 development incentive rate is as follows: The EDR is currently offered to new or expansion
6 load above 1,000 kW billing demand which is engaged in manufacturing (or similar). New
7 or expansion load in excess of 1,000kW will incur a demand rate equal to 10% of Big Rivers
8 LIC Tariff Demand Rate, before application of other adjustments. Energy will be charged
9 pursuant to Big Rivers LIC Tariff, and all additional riders and charges will apply. The term
10 for the discount period will not exceed four (4) years, and there is a minimum EDR contract
11 term of twice the term of the discount period.

12

13 **Witness)** Lindsay N. Barron

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

Response to the Kentucky Industrial Utility Customers, Inc.'s
Supplemental Requests for Information
Dated September 26, 2014

October 15, 2014

1 **Item 6)** **Please explain why Big Rivers is spending ratepayer funds on DSM, while**
2 **at the same time is: 1) trying to market its excess capacity through Replacement Load;**
3 **and 2) offering economic development discounts for new customers?**

4

5 **Response)** Big Rivers and its Members offer cost-effective DSM and energy efficiency
6 programs for the benefit of member-owners. These programs allow member-owners to use
7 energy more efficiently. Both the public policy of the Commonwealth of Kentucky and the
8 Public Service Commission encourage and support cost-effective energy efficiency and
9 demand side management (“DSM”) programs. This was explained by the Commission on
10 pages 53 and 54 of its order in Case No. 2012-00535. The Commission has found that Big
11 Rivers’ DSM programs are cost-effective and reasonable. For example, please see the
12 Commission’s order of August 22, 2012 in Case No. 2012-00142.

13 Big Rivers is executing the Load Mitigation Plan to bring value to its Members and
14 lower the rates of member-owners.

15

16 **Witness)** Lindsay N. Barron

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

**Response to the Kentucky Industrial Utility Customers, Inc.'s
Supplemental Requests for Information
Dated September 26, 2014**

October 15, 2014

1 **Item 7) Please refer to your response to Sierra Club 1-19 and AG 1-7. This**
2 **question refers to page 85 of the IRP which states: “If EPA implements CSAPR in its**
3 **original form prior to it being vacated in 2012, it appears that CSAPR will not have a**
4 **significant impact on Big Rivers’ operations (based upon original allowance allocations)**
5 **as the Coleman Station has been idled.” Your answer refers to the Sargent & Lundy**
6 **2012 Environmental Compliance Study.**

7 **a. Section 3.3.3 of the Sargent & Lundy study discusses retirement of**
8 **existing units as a CSAPR compliance strategy that would last for only four years. It**
9 **states: “ Unit retirement is another potential strategy for compliance with the various**
10 **EPA regulations. By retiring an existing unit, BREC will continue to receive that unit’s**
11 **CSAPR credit allocations for four years after the unit’s last date of operation. Once the**
12 **four year time period has elapsed, BREC will no longer have access to those credits and**
13 **will have to adjust remaining plant operations to meet the reduced fleet-wide limits.”**
14 **For the period beginning four years after the idling of Coleman, is it still the position of**
15 **Big Rivers that a newly implemented CSAPR would not have a significant impact on its**
16 **operations? Please explain.**

17
18

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

Response to the Kentucky Industrial Utility Customers, Inc.'s
Supplemental Requests for Information
Dated September 26, 2014

October 15, 2014

1

2 **b. When was the last date of operation of Coleman and when does the four**
3 **year period end?**

4 **c. Is it the position of Big Rivers that it can claim the use of Coleman's**
5 **CSAPR credit allocations for an indefinite period of time since Coleman was only idled**
6 **and not officially retired?**

7

8 **Response)**

9 a. Although Big Rivers would likely receive less allowances once Coleman has
10 been idled for four years, the actual emissions on the Big Rivers system would also be
11 reduced.

12 Regarding NOx, the idling of Coleman would have a net positive impact in that more
13 emissions would be eliminated than allowances lost at Coleman; which would reduce the
14 need for further NOx abatement of the remainder of the system. In addition, Big Rivers
15 would be banking these allowances during the first four years that Coleman is idled.

16 Regarding SO2, the idling of Coleman would have a net negative impact in that less
17 emissions would be eliminated than allowances lost at Coleman, which would aggravate SO2
18 abatement efforts for the remainder of the system. However, Big Rivers would be banking

BIG RIVERS ELECTRIC CORPORATION
2014 INTEGRATED RESOURCE PLAN
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Dated September 26, 2014

October 15, 2014

1 these allowances in the first four years that Coleman was idled, further mitigating this
2 impact. Big Rivers would continue to evaluate compliance options for the remainder of the
3 system, which could include lower sulfur fuel at Wilson and Sebree, potential FGD upgrade
4 at Wilson, and purchase of emission allowances.

5 b. Coleman 1: April, 27, 2014

6 Coleman 2: May 1, 2014

7 Coleman 3: May 8, 2014

8 Because allowances are allocated on a calendar year basis, Big Rivers believes the
9 four year period would also refer to a calendar year of operation. Therefore, the four year
10 period would end on December 31, 2018.

11 c. Big Rivers does not believe that Coleman's CSAPR credit allocations can be
12 claimed for an indefinite period of time. The USEPA or Kentucky Department of Air
13 Quality will determine future allowance allocations, which are normally allocated on unit
14 heat input. The longer Coleman is idled, the likelihood is that Big Rivers would receive less
15 allocations than in the early years of a revised CSAPR program. In addition, potential
16 changes to the National Ambient Air Quality Standards (NAAQS) could also change the
17 amount of allowances allocated to Big Rivers.

18

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CASE NO. 2014-00166

Response to the Kentucky Industrial Utility Customers, Inc.'s
Supplemental Requests for Information
Dated September 26, 2014

October 15, 2014

1 **Witnesses)** Eric M. Robeson and Duane E. Braunecker

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October 15, 2014

- 1 **Item 8) Your response to Sierra Club 1-19(c) states: “The Sargent and Lundy**
2 **2012 Environmental Compliance Study indicated that additional SO2 emission**
3 **reductions could be required under CSAPR if all Big Rivers units were in operation.**
4 **One potential solution identified in the study was replacing the FGD at Wilson.”**
- 5 **a. Tables ES-1, ES-6 and 3-1 of the Sargent & Lundy study recommend a**
6 **new \$139 million tower scrubber at Wilson for CSAPR compliance. Is \$139 million still**
7 **the expected cost?**
- 8 **b. If CSAPR is implemented in its original form and the utilization of**
9 **Coleman’s CSAPR credit allocations lasts for only four years after it was last operated,**
10 **would it be Big Rivers’ plan to invest in a new scrubber at Wilson? Please explain.**
- 11 **c. Tables ES-1, ES-6 and 3-1 of the Sargent & Lundy study contain**
12 **different assumptions than Big Rivers’ post-hearing data response Item 14 in Case No.**
13 **2013-00199 (attached). For example, the Sargent & Lundy study lists the existing**
14 **Wilson scrubber as having a 91% SO2 removal efficiency, an emission rate of 0.510 lbs.**
15 **SO2/MMBTU and baseline SO2 emissions (tpy) of 9,438, whereas Item 14 lists Wilson’s**
16 **SO2 removal efficiency at 92%, an emission rate of 0.445 lbs. SO2/MMBTU and**
17 **baseline SO2 emissions (tpy) of 7,483. Please reconcile these differences.**

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1 **d. If Big Rivers is uncertain about the length of time it can continue to use**
2 **Coleman's CSAPR credit allocations and whether a new scrubber would be needed at**
3 **Wilson, then please explain why it would be reasonable to enter into long-term power**
4 **supply contracts with out-of-state utilities as part of its Rate Mitigation Strategy.**

5

6 **Response)**

7 a. Yes, subject to adjustment for inflation.

8 b. If CSAPR is implemented in its original form and the utilization of Coleman's
9 CSAPR credit allocations lasts for only four years after it was last operated, then Big Rivers
10 would evaluate its compliance options. These options could include a new scrubber tower at
11 Wilson, but could also include lowering the sulfur content of the fuel burned at Wilson (and
12 other plants) as well as allowance purchases.

13 c. The assumptions used in the Sargent & Lundy study reflect plant operations in
14 the 2009-2011 timeframe, while the post hearing data response reflects more recent
15 operations.

16 Big Rivers is currently burning fuel lower in sulfur than that used in the Sargent &
17 Lundy study, and Wilson's SO₂ percent removal has been about 92% in the recent years.

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1 The lower sulfur fuel and higher percent removal resulted in lower projected annual
2 emissions of SO₂.

3 d. Big Rivers objects that this request is overly broad and not reasonably
4 calculated to lead to the discovery of admissible evidence. Notwithstanding these objections,
5 and without waiving them, Big Rivers states as follows. The capacity needed to serve the
6 Nebraska contracts is available from Big Rivers' assets without the operation of Wilson and
7 Coleman Stations. To the extent that this question is intended to address more than the
8 Nebraska contracts, Big Rivers states that it will analyze the cost/benefit of each new
9 potential power transaction on a stand-alone basis and evaluate whether the operation of
10 Wilson Station or Coleman Station is required to support the proposed sale. In the event a
11 unit is required, Big Rivers will weigh the anticipated benefit of the sale against the
12 anticipated cost of operating that plant, given the most current information known and
13 available at the time.

14

15 **Witnesses)** Eric M. Robeson (a.-c.) and Lindsay N. Barron (d.)

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- 1 **Item 9) Please refer to your response to Sierra Club 1-34 wherein Big Rivers**
2 **states that it has not evaluated the retirement, rather than the idling, of generating**
3 **units as an option for mitigating the impact of the termination of the smelter contracts**
4 **a. Please explain why retirement was not evaluated.**
5 **b. Does Big Rivers agree that if a retirement study were preformed, it would**
6 **require comparing the projected net present value of the costs operating and**
7 **maintaining the unit (including all future environmental upgrades) and avoidable fixed**
8 **costs such as FDE, labor and depreciation, compared to the projected net present value**
9 **of revenue from the unit? If no, then please explain.**
10 **c. Please explain how Big Rivers can evaluate the economics of entering into**
11 **long-term power contracts with out-of-state utilities as part of its Rate Mitigation Plan**
12 **if it has not studied plant retirement as an alternative.**

13
14 **Response)**

- 15 **a. As Big Rivers has previously stated in Cases No. 2012-00535 and 2013-**
16 **00199, the units are valuable assets that should be maintained to provide future benefits to**
17 **Big Rivers' Members. No formal analysis is required to understand that the retirement of**
18 **assets at this juncture would be imprudent and not in the best interests of Big Rivers'**

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1 Members. The cost of maintaining Coleman Station is minimal, and idling it will allow Big
2 Rivers to evaluate its continued operation based upon how the power markets change over
3 the next few years. The Wilson Station has already proven its ability to add value to Big
4 Rivers' Members. Thus, consideration of its retirement would be irresponsible at this time.

5 b. No. The principal and interest on the units will be a cost borne by Big Rivers'
6 Members whether the units are operating or retired.

7 c. Big Rivers objects that this request is overly broad and not reasonably
8 calculated to lead to the discovery of admissible evidence. Notwithstanding these objections,
9 and without waiving them, Big Rivers states as follows. The Nebraska contracts are not
10 sufficient in size to require the continued operation of either Wilson or Coleman.

11

12 **Witness)** Lindsay N. Barron