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**VIA HAND DELIVERY**

October 4, 2017

Talina Mathews, Executive Director  
Kentucky Public Service Commission  
211 Sower Boulevard  
Frankfort, Kentucky 40602

RECEIVED

OCT 4 2017

PUBLIC SERVICE  
COMMISSION


**Re: Case No. 2017-00287**

Dear Ms. Mathews:

Please find enclosed the original and ten (10) copies of the DIRECT TESTIMONY AND EXHIBITS OF LANE KOLLEN on behalf of KENTUCKY INDUSTRIAL UTILITY CUSTOMERS, INC's for filing in the above-referenced matter. I also enclose a diskette that contains Mr. Kollen's workpapers.

By copy of this letter, all parties listed on the Certificate of Service have been served. Please place this document of file.

Very Truly Yours,



Michael L. Kurtz, Esq.

Kurt J. Boehm, Esq.

Jody Kyler Cohn, Esq.

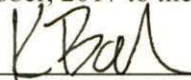
**BOEHM, KURTZ & LOWRY**

MLKkew  
Attachment

cc: Certificate of Service  
Quang Nyugen, Esq.  
Richard Raff, Esq.

## CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing was served by electronic mail (when available) and by regular, U.S. mail, unless otherwise noted, this 4<sup>th</sup> day of October, 2017 to the following:



---

Michael L. Kurtz, Esq.

Kurt J. Boehm, Esq.

Jody Kyler Cohn, Esq.

Big Rivers Electric Corporation  
201 Third Street  
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Honorable James M Miller  
Honorable Tyson A Kamuf  
Sullivan, Mountjoy, Stainback & Miller, PSC  
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COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION

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OCT 4 2017

PUBLIC SERVICE  
COMMISSION

IN THE MATTER OF:

AN EXAMINATION OF THE APPLICATION )  
OF THE FUEL ADJUSTMENT CLAUSE OF )  
BIG RIVERS ELECTRIC CORPORATION )  
FROM NOVEMBER 1, 2016 THROUGH APRIL )  
30, 2017 )

CASE NO. 2017-00287

DIRECT TESTIMONY  
AND EXHIBITS  
OF  
LANE KOLLEN

ON BEHALF OF  
THE KENTUCKY INDUSTRIAL UTILITY CUSTOMERS, INC.

J. KENNEDY AND ASSOCIATES, INC.  
ROSWELL, GEORGIA

OCTOBER 2017

COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION

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CASE NO. 2017-00287

DIRECT TESTIMONY OF LANE KOLLEN

I. QUALIFICATIONS AND SUMMARY

1 Q. Please state your name and business address.

2 A. My name is Lane Kollen. My business address is J. Kennedy and Associates, Inc.  
3 ("Kennedy and Associates"), 570 Colonial Park Drive, Suite 305, Roswell, Georgia 30075.

4  
5 Q. What is your occupation and by whom are you employed?

6 A. I am a utility rate and planning consultant holding the position of Vice President and  
7 Principal with the firm of Kennedy and Associates.

8  
9 Q. Please describe your education and professional experience.

10 A. I earned a Bachelor of Business Administration ("BBA") degree in accounting and a Master  
11 of Business Administration ("MBA") degree from the University of Toledo. I also earned a  
12 Master of Arts ("MA") degree in theology from Luther Rice University. I am a Certified  
13 Public Accountant ("CPA"), with a practice license, Certified Management Accountant

1 (“CMA”), and Chartered Global Management Accountant (“CGMA”). I am a member of  
2 numerous professional organizations.

3 I have been an active participant in the utility industry for more than thirty years,  
4 initially as an employee of The Toledo Edison Company from 1976 to 1983 and thereafter as  
5 a consultant in the industry since 1983. I have testified as an expert witness on planning,  
6 ratemaking, accounting, finance, and tax issues in proceedings before regulatory  
7 commissions and courts at the federal and state levels on hundreds of occasions.

8 I have testified before the Kentucky Public Service Commission (“Commission”) on  
9 dozens of occasions, including numerous Big Rivers Electric Corporation (“Big Rivers,”  
10 BREC,” or “Company”) proceedings.<sup>1</sup>

11  
12 **Q. On whose behalf are you testifying?**

13 A. I am testifying on behalf of the Kentucky Industrial Utility Customers, Inc. (“KIUC”), a  
14 group of large customers taking electric service on the Big Rivers’ system through Kenergy  
15 Corp. Domtar Paper Co., LLC and Kimberly Clark Corporation are the members of KIUC  
16 who participating in KIUC’s intervention in this proceeding.

17  
18 **Q. What is the purpose of your testimony?**

19 A. The purpose of my testimony is to: 1) explain why Big Rivers’ allocation of fuel expenses  
20 between native load customers and off-system sales was improper and unreasonable during  
21 the January 2017 through April 2017 portion of the six-month review period from November  
22 2016 through April 2017, 2) recommend a reasonable allocation methodology for this  
23 proceeding and going forward to ensure that native load ratepayers receive the lowest fuel

---

<sup>1</sup>My qualifications and regulatory appearances are further detailed in my Exhibit\_\_\_\_(LK-1).

1 costs and that off-system sales are allocated the highest (marginal) fuel costs, and 3) quantify  
2 the refund due to native load customers for the unreasonable amounts collected through the  
3 FAC during the review period.

4  
5 **Q. Please describe the allocation issue and why it is important.**

6 A. The Company incurs fuel expense to meet its native load and to make off-system sales. The  
7 fuel expenses incurred to serve native load customers are recovered through the FAC.  
8 However, the fuel expenses incurred to make off-system sales are recovered through the  
9 terms of bilateral contracts and other sales at market clearing prices. The allocation of fuel  
10 expense between native load and off-system sales affects the fuel expense recovered from  
11 native load customers through the FAC on the one hand and the Company's margins from  
12 off-system sales on the other hand. This issue is particularly important to Big Rivers' native  
13 load customers because more than two thirds of the Company's generation does not serve  
14 native load customers and is sold off-system.

15 The fuel expense incurred to serve native load customers and is recovered through  
16 the FAC must be proper, fair, just, and reasonable. If the methodology allocates an  
17 unreasonably high fuel expense to native load customers, then the Company's FAC rates and  
18 recoveries are excessive and the margins from off-system sales are artificially inflated.

19  
20 **Q. Has Big River's method of allocating fuel costs between native load and off-system sales**  
21 **been reviewed by the Commission in prior FAC proceedings?**

22 A. Yes. KIUC disputed the methodology used by the Company to allocate fuel expense  
23 between native load customers and off-system sales in two prior FAC cases, Case Nos.  
24 2014-00230 and 2014-00455.<sup>2</sup> During those review periods, Big Rivers allocated its fuel

---

<sup>2</sup> The Commission consolidated Case Nos. 2014-00230 and 2014-00455.

1 expense between native load customers and off-system sales using the same system average  
2 fuel expense per kWh with only minor reductions in the FAC calculations for specific  
3 ratemaking adjustments required by the Commission. In the prior proceedings, KIUC  
4 asserted that native load customers should be allocated the system's lowest fuel expense in  
5 every hour and that off-system sales should be allocated the highest fuel expense in every  
6 hour. In those proceedings, Big Rivers, the Attorney General and KIUC entered into a  
7 Stipulation and Recommendation ("Stipulation"), in which Big Rivers agreed to provide a  
8 monthly credit of \$311,111 through the FAC to all customers (residential, commercial and  
9 industrial), or a total of \$4.67 million, over 15 months. These 15 payments were credited to  
10 customers from October 2015 through December 2016 (expense months).<sup>3</sup> The credit  
11 compensated customers for the monthly difference between the two allocation methods and  
12 ensured that Big Rivers' native load customers received the benefit of the lowest fuel  
13 expense on the system, not the higher average fuel expense. This result was consistent with  
14 the allocation methodology used by other Kentucky electric utilities. In addition, Big Rivers  
15 agreed to propose a permanent change in its FAC allocation methodology in its next base  
16 rate case, which it expected to file in the first quarter of 2016.<sup>4</sup>

17  
18 **Q. Please summarize your conclusions and recommendations.**

19 A. The Company's fuel expense included in the FAC during the January 2017 through April  
20 2017 (expense months) portion of the review period is unjust and unreasonable because it is  
21 based on an incorrect allocation methodology. The Company properly credited customers  
22 \$311,111 monthly during the November 2016 and December 2016 portion of the review  
23 period to compensate them for the erroneous allocation method resolved by the Stipulation

---

<sup>3</sup> Stipulation and Recommendation at paragraph 1, attached to Order approving Stipulation in Case Nos. 2014-00230 and 2014-00455 (July 27, 2015). I have attached a copy of the Stipulation and Recommendation as my Exhibit\_\_\_(LK-2).

<sup>4</sup>*Id.*, Paragraph 2.



1 in the prior proceedings. However, during the January 2017 through April 2017 portion of  
2 the review period, Big Rivers continued its practice of allocating system average fuel  
3 expense per kWh to native load and off-system sales, but without an offsetting credit in the  
4 FAC to mitigate the harm to native load customers from this method.

5 I recommend that the Commission correct the Big Rivers allocation methodology for  
6 the January 2017 through April 2017 portion of the review period and going forward in  
7 future FAC filings and proceedings so that the lowest fuel expense is first allocated to native  
8 load customers. The Commission should recalculate the fuel expense included in the FAC  
9 using a methodology similar to that used by East Kentucky Power Cooperative  
10 (“EKPC”)/Duke Energy Kentucky (“Duke”). The EKPC/Duke methodology correctly  
11 assigns the lowest fuel expense each hour to native load customers and the remaining and  
12 higher fuel expense to off-system sales.

13 I recommend that the Commission disallow \$770,174 (\$0.00125 per kWh)  
14 improperly included in the FAC during the January 2017 through April 2017 portion of the  
15 review period and that it direct Big Rivers to refund this amount over a six-month  
16 amortization period. I also recommend that the Commission add interest to the refund at the  
17 Company’s weighted cost of debt. The Commission should include interest to ensure that  
18 customers are compensated for the lost carrying charges on the amounts that were  
19 improperly collected through the FAC.

1           **II. BIG RIVERS' METHOD OF ALLOCATING SYSTEM AVERAGE FUEL**  
2           **EXPENSE TO NATIVE LOAD AND OFF-SYSTEM SALES IS IMPROPER**  
3

4   **Q.     Please describe the Big Rivers' methodology used to allocate fuel expense between**  
5           **native load and off-system sales.**

6   A.     Big Rivers follows a multi-step process to calculate the allocation to native load customers  
7           recovered through the FAC. First, Big Rivers calculates a system average fuel expense per  
8           kWh. The system average fuel expense per kWh is the sum of the fuel expense for all units  
9           divided by the sum of the generation produced by all units, less line losses. Second, the  
10          system average fuel expense per kWh is multiplied times the off-system sales to determine  
11          the fuel expense to exclude from the total fuel expense incurred. The residual is the  
12          preliminary allocation to native load customers. Third, Big Rivers makes relatively minor  
13          adjustments to the preliminary fuel expense allocated to native load customers to reflect  
14          adjustments required by the FAC regulation and prior Commission orders.<sup>5</sup>

15  
16   **Q.     Is the Company's allocation methodology proper, fair, just and reasonable?**

17   A.     No. The Company's allocation methodology fails to allocate the lowest fuel expense to  
18          native load or allocate the highest fuel expense to off-system sales. Instead, it allocates all  
19          fuel expenses between native load and off-system sales in the same proportion as the mWh  
20          sales are allocated to native load and off-system sales. This is improper and unreasonable  
21          because the Company is required to first serve native load customers who are entitled to the  
22          lowest fuel expense. Off-system sales are supplied only after the native load customers are  
23          served and should be served only if the revenues from the sales exceed the incremental cost.  
24          Native load customers are entitled to the lowest fuel expense because they paid all allowed  
25          non-fuel costs of owning and operating the generating units, except for some environmental

---

<sup>5</sup> Company's response to KIUC 1-1. I have attached a copy of this response as my Exhibit\_\_\_\_(LK-3).

1 costs allocated to off-system sales through the environmental surcharge. These non-fuel  
2 costs include non-fuel operation and maintenance expense, depreciation expense, interest  
3 expense, and a times interest earned (“TIER”) margin in addition to the interest expense.<sup>6</sup>  
4

5 **Q. What is the standard set forth in the FAC Regulation for recovery of fuel and purchase**  
6 **power expenses in the 6-month review proceedings?**

7 A. I have been informed by counsel for KIUC that the relevant Regulation is 807 KAR 5:056  
8 *Fuel Adjustment Clause*. The Regulation requires that rates be “fair, just, and reasonable” and  
9 directs the Commission to “review and evaluate past operations of the clause, disallow  
10 improper expenses and to the extent appropriate reestablish the fuel clause charge in  
11 accordance with subsection (2) of this section.” Excerpts from the Regulation are as follows:

12 *NECESSITY, FUNCTION, AND CONFORMITY: KRS 278.030(1)*  
13 *provides that all rates received by an electric utility subject to the*  
14 *jurisdiction of the Public Service Commission shall be fair, just and*  
15 *reasonable. This administrative regulation prescribes the requirements*  
16 *with respect to the implementation of automatic fuel adjustment clauses by*  
17 *which electric utilities may immediately recover increases in fuel costs*  
18 *subject to later scrutiny by the Public Service Commission.*

19 \*\*\*

20 *(11) At six (6) month intervals, the commission will conduct public*  
21 *hearings on a utility's past fuel adjustments. The commission will order a*  
22 *utility to charge off and amortize, by means of a temporary decrease of*  
23 *rates, any adjustments it finds unjustified due to improper calculation or*  
24 *application of the charge or improper fuel procurement practices.*

25  
26 **Q. Is Big Rivers’ allocation method consistent with FERC guidance addressing the**  
27 **allocation of fuel expense between native load and off-system sales?**

---

<sup>6</sup> The Company presently defers the depreciation expense on the Coleman and Wilson plants.

1 A. No. Kentucky’s FAC regulation, 807 K.A.R. 5:056, is modeled upon the FERC’s fuel  
2 regulation, 18 C.F.R. §35.14.<sup>7</sup> 807 K.A.R. 5:056(3), provides that fuel costs recovered  
3 through the Kentucky fuel adjustment clause include a number of costs “*less...the cost of*  
4 *fossil fuel recovered through intersystem sales including the fuel costs related to economy*  
5 *energy sales and other energy sold on an economic dispatch basis.*” FERC’s fuel  
6 regulation, 18 C.F.R. §35.14(a)(2), provides that fuel costs recovered through the FERC fuel  
7 adjustment clause include a number of costs “*less the cost of fossil and nuclear fuel*  
8 *recovered through all inter-system sales.*” It therefore makes sense to examine how FERC  
9 interprets its fuel regulation and use that as guidance in interpreting Kentucky’s fuel  
10 regulation.

11 In a 2006 FERC Opinion (Opinion No. 501), the FERC rejected a fuel cost  
12 allocation approach that is substantively identical to Big Rivers’ allocation methodology. In  
13 that case, Southwestern Public Service Company had assigned system average fuel costs to  
14 both native load and off-system sales. The FERC concluded that this practice forced native  
15 load customers to subsidize off-system sales by paying higher incremental fuel costs  
16 associated with those sales.<sup>8</sup> This case is directly on point. According to the FERC, an  
17 approach that allocates fuel costs *equally* to native load and off-system sales customers is not  
18 proper.

19 In another case involving Appalachian Power Company (“APCO”), the FERC stated  
20 that it “*believe[d] that it is both appropriate, and a common industry practice to assign the*  
21 *highest fuel cost to off-system sales, while lower fuel cost resources are reserved for the*  
22 *benefit of the APCO native load customers who, through their rates, provide for the*

---

<sup>7</sup> Order, Case No. 96-524 (February 9, 1999) at 7; Order, Case Nos. 94-461-A (July 15, 1999) at 11 (“*Reviewing the purpose of Order 517 – the Order which established FERC’s FAC Regulation and upon which Administrative Regulation 807 KAR 5:056 is modeled.*”).

<sup>8</sup> Initial Decision, *Golden Spread Electric Cooperative, Inc. et al v. Southwestern Public Service Company*, 115 FERC ¶63,043 (May 24, 2006) at ¶132 (“Initial Decision”); Opinion No. 501, 123 FERC ¶61,047 (April 21, 2008) at ¶42-47.

1        *construction and operation of the generating facilities.”*<sup>9</sup> The FERC interpreted its FAC  
2        regulation to mean that it would be appropriate if costs from the highest fuel cost units  
3        formed the basis for pricing of off-system sales and the lowest cost units were dedicated to  
4        native load.<sup>10</sup>

5  
6        **Q. Do any other utilities in the Commonwealth use the Company’s methodology to**  
7        **allocate fuel expense between native load customers and off-system sales?**

8        A. No. Big Rivers is the only Kentucky electric utility that relies on system average fuel  
9        expense per kWh to allocate fuel expense native load and off-system sales. The other  
10       electric utilities regulated by this Commission use some form of an after the fact economic  
11       dispatch so that the highest cost resources are allocated to off-system sales customers for this  
12       purpose.

13                For example, under East Kentucky Power Cooperative’s (“EKPC”) fuel cost  
14       allocation approach, “[f]uel is allocated between native-load sales and off-system sales on a  
15       stacked cost basis. EKPC considers each hour of operation, determines if a sale was made  
16       from its system during that hour and then allocates the highest cost resource(s) to that sale  
17       for FAC purposes.”<sup>11</sup>

18                As another example, under Duke Energy Kentucky, Inc.’s (“Duke”) fuel cost  
19       allocation approach, “After the generating unit is dispatched, the actual energy costs  
20       consumed in a generating unit is allocated as either native or non-native based on a stacking  
21       process, allocating the lowest cost resources to native load first.”<sup>12</sup>

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<sup>9</sup> Order Accepting Rates for Filing, Granting Intervention and Terminating Docket, Docket No. ER83-63-000 (December 17, 1982) at 2.

<sup>10</sup> Order Accepting Rates for Filing, Granting Intervention and Terminating Docket, Docket No. ER83-63-000 (December 17, 1982) at 5.

<sup>11</sup> EKPC Response to Commission Staff’s Information Request Dated 08/13/014, Case No. 2014-00226, Request 29.

<sup>12</sup> Duke Kentucky Response to Staff First Set of Data Requests, Case No. 2014-00229, Staff-DR-01-029.

1           Similarly, both Kentucky Utilities Company (“KU”) and Louisville Gas & Electric  
2           Company (“LG&E”) “*use the After-the-Fact Billing (‘AFB’) model to determine the joint*  
3           *dispatch savings between LG&E and KU and to allocate the highest cost energy to off-*  
4           *system sales.*”<sup>13</sup>

5  
6   **Q.   Does Big Rivers have significant excess generating capacity?**

7   A.   Yes. Big Rivers has significantly more generating capacity than it needs to serve its native  
8           load customers due to the loss of approximately 850 MW of Smelter loads in 2013 and 2014.  
9           The Company shut down all three units at the Coleman plant (421 MW) in May 2014, but  
10          continues to operate the Wilson plant. The Big Rivers reserve margin increased to 89% after  
11          the loss of the Smelter load and the shutdown of the Coleman plant.

12  
13   **Q.   Does the Company sell most of its generation to native load customers?**

14   A.   No. The Company sells most of its generation off-system. Since the Company lost the  
15          Smelter load, it has become predominantly a merchant generator. The Company sold nearly  
16          two thirds of its generation off-system during the six-month review period. To make these  
17          off-system sales, the Company operated and dispatched its less efficient and more expensive  
18          generating units more frequently, which increased its system average fuel expense per kWh.  
19          In turn, this increased the fuel expense allocated to native load customers using the  
20          Company’s allocation methodology.

21  
22   **Q.   What is the relevance of the Company’s reserve margin and its status as a merchant**  
23          **generator?**

---

<sup>13</sup> LG&E Response to Information Request in Appendix of Commission’s Order Dated August 13, 2014, Case No. 2014-00228, Question No. 25; KU Response to Information Request in Appendix of Commission’s Order Dated August 13, 2014, Case No. 2014-00227, Question No. 25.

1 A. This highlights the importance of the allocation issue. Under the Company’s allocation  
2 methodology, the greater the off-system sales, the greater the increase in the fuel expense  
3 allocated to native load customers through the FAC and the greater the subsidization of the  
4 Company’s off-system sales margins. Given Big Rivers’ high level of off-system sales  
5 relative to its native load sales, native load customers are severely disadvantaged by Big  
6 Rivers’ current fuel cost allocation methodology.

7 In contrast, the methodology used by EKPC and Duke treats native load customers  
8 fairly because the fuel expense allocated to native load customers through the FAC always  
9 reflects the lowest cost generation rather than the average cost incurred to serve native load  
10 and off-system sales. This is particularly crucial given Big Rivers’ high level of off-system  
11 sales.

12  
13 **Q. What were the fuel expenses for each of the Company’s generating units during the**  
14 **review period?**

15 A. The following table provides the fuel expense for each of the Company’s generating units by  
16 month and in total for the review period. The least cost units over the review period were  
17 Green Unit 1, Green Unit 2, and Wilson, respectively, although their relative cost varied  
18 each month. The most expensive units during the review period were Henderson Station  
19 Two Unit 1 and Unit 2.<sup>14</sup>

BIG RIVERS GENERATING UNITS													
AVERAGE FUEL COST PER NET MWH OF GENERATION (AFTER LOSSES)/(\$/MWH)													
	<u>Nov-16</u>		<u>Dec-16</u>		<u>Jan-17</u>		<u>Feb-17</u>		<u>Mar-17</u>		<u>Apr-17</u>		<u>Total</u>
Station Two - Unit 1	\$ 26.797	\$	28.526	\$	28.871	\$	28.407	\$	29.782	\$	26.888	\$	28.213
Station Two - Unit 2	\$ 28.075	\$	28.623	\$	28.775	\$	32.436	\$	28.272	\$	27.873	\$	28.564
Reid CT	N/A	\$	99.488	\$	268.225	\$	91.816	\$	379.038	\$	N/A	\$	132.928
Wilson	\$ 22.707	\$	23.538	\$	23.546	\$	26.025	\$	24.759	\$	24.907	\$	24.040
Green - Unit 1	\$ 23.315	\$	24.332	\$	23.895	\$	27.244	\$	23.743	\$	22.606	\$	23.808
Green - Unit 2	\$ 22.156	\$	24.175	\$	23.952	\$	25.040	\$	24.886	\$	25.043	\$	23.955
<b>Average Fuel Cost</b>	<b>\$ 23.574</b>	<b>\$</b>	<b>24.824</b>	<b>\$</b>	<b>24.499</b>	<b>\$</b>	<b>26.635</b>	<b>\$</b>	<b>25.457</b>	<b>\$</b>	<b>24.672</b>	<b>\$</b>	<b>24.764</b>

<sup>14</sup> Company’s response to KIUC I-11. I have attached a copy of this response as my Exhibit \_\_ (LK-4).

1 **Q. Using the preceding table, describe how the Company's allocation methodology**  
2 **improperly increased the fuel expense allocated to native load customers through the**  
3 **FAC during the review period.**

4 A. The Company's allocation method includes the highest cost generation in the system average  
5 fuel expense per kWh, which increases the fuel expense allocated to the native load  
6 customers. For example, in November 2016, the least cost generation required to meet the  
7 native load requirements of 164,361 mWh was Green Unit 2 at \$22.16 per mWh (133,834  
8 mWh) and then Wilson at \$22.71 per mWh (50,527 mWh). Instead, the Company calculated  
9 and used an average of \$23.57 per mWh that included the Henderson Station Two Unit 1 at  
10 \$26.80 per mWh and Unit 2 at \$28.08 per mWh.<sup>15</sup>

11  
12 **Q. Why is Big River's fuel cost allocation methodology improper?**

13 A. It is inherently unreasonable and illogical to charge native load customers and off-system  
14 sales the same fuel expense per kWh. Big Rivers native load customers are entitled to and  
15 should be allocated the lowest fuel costs and off-system sales should be allocated the highest  
16 fuel costs. This is true because the Company's native load customers are allocated 100% of  
17 the allowed fixed investment and non-fuel operating costs of all the Company's generating  
18 units, including the Coleman units that are shut down, except for certain amounts that are  
19 allocated to off-system sales in the environmental surcharge. The Company's methodology  
20 runs counter to cost causation principles and results in native load customers paying  
21 unreasonably high FAC charges in order to enhance the Company's off-system sales  
22 margins.

23  

---

<sup>15</sup> Company's response to KIUC 1-11. See Exhibit\_\_(LK-4).



1 **Q. Do the inflated margins that Big Rivers is making on off-system sales due to its system**  
2 **average fuel allocation method benefit native load customers?**

3 A. No. If Big Rivers' margins from off-system sales were credited in their entirety to native  
4 load customers through the FAC or some other rider, then the allocation of average fuel  
5 costs to all sales would have no effect on native load customers. In that scenario, native load  
6 customers would pay inflated fuel costs in the FAC, but they would also receive the benefit  
7 of the higher off-system sales margins that result from allocating average, rather than  
8 incremental, fuel costs to off-system sales. In that manner, customers would be held  
9 harmless. However, that scenario does not exist and Big Rivers retains all off-system sales  
10 margins in excess of those reflected in its base revenue requirement.

11 **III. THE COMMISSION SHOULD REQUIRE BIG RIVERS TO REFUND**  
12 **EXCESSIVE FUEL EXPENSE PLUS INTEREST**

13  
14 **Q. What is your recommendation regarding the allocation of fuel expense?**

15 A. I recommend that the Company's fuel expense be allocated between native load customers  
16 and off-system sales using a methodology similar to the EKPC/Duke methodology. Under  
17 the EKPC/Duke methodology all generation is economically stacked from the lowest to the  
18 highest in each hour. The lowest cost resources, and thus, the lowest fuel expenses first are  
19 allocated to native load customers and then the remaining and highest fuel expense then are  
20 allocated to off-system sales each hour. This methodology ensures that the highest cost  
21 resources and fuel expenses are allocated to off-system sales.

22  
23 **Q. Have you calculated the fuel expense that would have been allocated to native load**  
24 **customers and included in the Company's FAC for the months of January 2017**  
25 **through April 2017 if the EKPC/Duke methodology had been used?**

1 A. Yes. The fuel expense would have been \$14,148,991, or \$770,174 less than the fuel expense  
2 using the Company's methodology for those four months.<sup>16</sup> The fuel expense would have  
3 been \$22,758,965, or \$1,235,976 less than the fuel expense using the Company's  
4 methodology for the entire review period,<sup>17</sup> although this difference was addressed for the  
5 first two months of the review period through the monthly \$311,111 credits pursuant to the  
6 Stipulation in the prior FAC proceedings.

7 I used the Company's fuel expense per kWh for each generating unit to recalculate  
8 the fuel expense allocated to native load customers using the available output from each  
9 generating unit starting with the lowest cost generating unit and then following with the next  
10 lowest cost generating until all native load requirements were supplied each month.

11  
12 **Q. How does your calculation compare to the Company's calculation provided in response**  
13 **to discovery?**<sup>18</sup>

14 A. The results are significantly different. The Company's calculation increased the fuel  
15 expense allocated to native load customers by \$299,564 for January 2017 through April  
16 2017, whereas my calculation reduced the fuel expense allocated to native load customers by  
17 \$770,174 for the four months.

18  
19 **Q. Why is that?**

20 A. In short, Big Rivers apparently developed a new and incorrect allocation method to respond  
21 to the discovery request. Despite the specific request to calculate fuel expense for the FAC  
22 as "if Big Rivers had assigned its lowest fuel cost generation to native load customers each  
23 hour," the Company did not allocate the lowest cost resources to native load customers.

---

<sup>16</sup> The calculations are reflected in my Exhibit\_\_(LK-5) and in my electronic workpapers, which have been filed concurrently with my testimony.

<sup>17</sup> *Id.*

<sup>18</sup> Company's response to KIUC 1-11. See Exhibit\_\_(LK-4).

1           Instead, the Company first allocated the most expensive generation from Station Two Unit 1  
2           and Unit 2 to native load customers and only after all generation available from those two  
3           units was allocated to native load did it then allocate generation on an economic or least cost  
4           basis to meet the remaining native load requirements.

5  
6   **Q.    Is the Company's calculation appropriate?**

7    A.    No. It was not responsive to the request and improperly allocated the highest cost generation  
8           first to native load customers. It also should be noted that the discovery request in this  
9           proceeding was nearly identical to discovery requests in the prior proceedings (Case Nos.  
10          2014-00230 and 2014-00455).<sup>19</sup> In its responses in the prior proceedings, the Company  
11          performed an after-the-fact dispatch for each hour during the review period and correctly  
12          allocated the least cost generation to native load customers. That calculation formed the  
13          quantitative basis for the monthly credits adopted in the Stipulation in the prior proceedings.  
14          Despite its correct allocation in response to the same Data Request in the previous  
15          proceedings the Company incorrectly allocated the highest cost generation to native load  
16          customers in response to KIUC 1-11 in this proceeding.

17                 The calculation that I performed in this proceeding is consistent with the  
18                 methodology and calculation performed by the Company in the prior proceedings, although I  
19                 used the monthly fuel expense per kWh for each generating unit instead of the hourly  
20                 expense per kWh. The results of the monthly calculation in the prior proceedings would not  
21                 have been materially different than the hourly calculation.

22  

---

<sup>19</sup> Company's response to KIUC 1-1 in Case No. 2014-00455. I have attached the narrative response and an excerpt of the Excel file that includes a monthly summary for the two-year review period and the first page of the summary and hourly stacking used to calculate the redispatch and allocation of the lowest fuel expense by generating unit to native load customers for October 2014 as my Exhibit\_\_\_(LK-6). See also Company's Response to Staff 3-1(c) in Case No. 2014-00230.

1 **Q. What is your recommendation regarding a refund?**

2 A. I recommend that the Company refund \$770,174 in excessive fuel costs that were  
3 improperly allocated and collected through the FAC from January 1, 2017 through April 30,  
4 2017, plus interest through the date the refunds are completed.

5

6 **Q. Do you have another recommendation?**

7 A. Yes. I recommend that the Commission order Big Rivers to adjust its fuel cost allocation  
8 methodology going forward so that the lowest cost resources and the related fuel expense are  
9 allocated to native load.

10

11 **IV. BIG RIVERS HAS ALREADY COMMITTED TO CHANGE ITS FUEL COST**  
12 **ALLOCATION METHODOLOGY TO A LEAST COST HOURLY STACKING**  
13 **METHODOLOGY**

14

15 **Q. Has the Company already committed to changing its fuel cost allocation methodology?**

16 A. Yes. In the Case Nos. 2014-00230 and 2014-00455 Stipulation, Big Rivers agreed to  
17 propose a permanent change to its FAC allocation method so that the least cost generation is  
18 first allocated to native load customers in its “next base rate case.” The Stipulation reflects  
19 the Company’s expectation that it would file this case in the first quarter of 2016. The  
20 Stipulation states:

21 *2. In Big Rivers next base rate case, which it expects to file in the*  
22 *first quarter of 2016, Big Rivers shall propose, among other things, to*  
23 *change its FAC calculation methodology to "stack" its generating units*  
24 *for purposes of allocating fuel costs between native load and off-system*  
25 *sales, allocating the highest fuel costs to off-system sales.<sup>20</sup>*

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<sup>20</sup> Commission’s Order approving Stipulation in Case Nos. 2014-00230 and 2014-00455 (July 27, 2015), See attached Stipulation and Recommendation, Paragraph 2.

1           In its Order approving the Stipulation, the Commission supported Big Rivers’  
2           commitment to credit customers with the difference between the two methodologies in the  
3           short-term and to change to a “stacking methodology” in its next rate case to be filed in the  
4           first quarter of 2016. The Order states:

5                           *“The Commission appreciates the parties efforts in entering into the*  
6                           *Stipulation and supports Big Rivers’ commitment to credit customers*  
7                           *\$4.67 million through the FAC and to change its fuel-cost allocation*  
8                           *methodology to a stacking methodology in its next general base rate*  
9                           *proceeding.”*<sup>21</sup>

10  
11   **Q.    Why hasn’t the Company yet made this change?**

12   A.    The Company has not yet filed a base rate case, some eighteen or more months after the first  
13           quarter 2016 date cited in the Stipulation. In the absence of a base rate case, the Company  
14           could have and should have made this change so that it was effective during the six-month  
15           review period. It could have proposed the change in a FAC proceeding so that it was  
16           effective in January 2017 after the expiration of the monthly credits pursuant to the  
17           Stipulation. It appears that it did not propose the change in a FAC proceeding because it  
18           would have reduced the recovery of fuel expense through the FAC and reduced the retained  
19           margins on its off-system sales. Consequently, after the expiration of the \$311,111 monthly  
20           credit in December 2016, native load customers are once again in the same position that they  
21           were in prior to the Settlement Agreement, forcing KIUC to litigate this issue for the second  
22           time.

23  
24   **Q.    Why shouldn’t the Commission wait for Big Rivers’ to file a base rate case to change its**  
25           **FAC allocation method?**

---

<sup>21</sup> Commission’s Order approving Stipulation in Case Nos. 2014-00230 and 2014-00455 (July 27, 2015), p. 5.

1 A. The Company's allocation method results in excess fuel expense recovery through the FAC.  
2 The FAC rates in January 2017 through April 2017 were not fair, just, and reasonable. The  
3 FAC rates since then have not been fair, just, and reasonable.

4 In the Stipulation, KIUC and the AG agreed to allow Big Rivers to wait until its next  
5 base rate case to change to a stacking methodology because 1) the Company represented that  
6 it expected to file a base rate case in early 2016 and 2) the monthly credit provided  
7 compensation for the incorrect methodology on an interim basis until base rates were reset.  
8 Now that Big Rivers' has not filed a base rate case and the monthly credits have expired, it is  
9 necessary that the Commission take action in this FAC review proceeding in order to avoid  
10 harm to Big Rivers' customers.

11 It is unreasonable for the native load customers of the other Kentucky electric  
12 utilities to enjoy the benefit of the lowest cost generation resources through the FAC rates,  
13 while Big Rivers' customers are forced to subsidize the fuel expense incurred to make off-  
14 system sales. As explained above, this inequity is magnified by the fact that Big Rivers also  
15 has by far the highest reserve margin in the Commonwealth and makes more off-system  
16 sales relative to native load than any other Kentucky electric utility. To the extent possible,  
17 the Commission should require a consistent methodology for the allocation of fuel expense  
18 to native load customers among all Kentucky electric utilities.

19  
20 **Q. Can the Commission change Big Rivers' fuel cost allocation methodology outside of a**  
21 **general rate case?**

1 A. Yes. The Commission's FAC Regulation does not require the Commission to wait until  
2 there is a base rate case. Excessive fuel expense is subject to refund in the six-month review  
3 proceedings. The 807 KAR 5:056 states:

4 *This administrative regulation prescribes the requirements with respect to the*  
5 *implementation of automatic fuel adjustment clauses by which electric utilities*  
6 *may immediately recover increases in fuel costs subject to later scrutiny by*  
7 *the Public Service Commission.*

8 \*\*\*

9 *At six (6) month intervals, the commission will conduct public hearings on a*  
10 *utility's past fuel adjustments. The commission will order a utility to charge*  
11 *off and amortize, by means of a temporary decrease of rates, any adjustments*  
12 *it finds unjustified due to improper calculation or application of the charge or*  
13 *improper fuel procurement practices.*

14 The Regulation requires the Commission to order refunds in proceedings such as  
15 this one if it finds that a utility has improperly calculated or applied its fuel adjustment  
16 charge. The better approach going forward is to correct the allocation methodology so that  
17 refunds for this purpose are not necessary.

18 In addition, the Supreme Court of Kentucky has held that rates may be changed  
19 outside of a rate case so long as the resulting rates are fair, just, and reasonable, stating:

20 *We hold that so long as the rates established by the utility were fair, just and*  
21 *reasonable, the PSC has broad ratemaking power to allow recovery of such*  
22 *costs outside the parameters of a general rate case and even in the absence*  
23 *of a statute specifically authorizing recovery of such costs.*<sup>22</sup>

24

25 **Q. Has the Commission previously disallowed improperly collected fuel costs outside the**  
26 **context of a general base rate proceeding?**

27 A. Yes. I am aware that the Commission has disallowed improperly collected fuel expenses  
28 outside of a base rate case on at least three occasions: with respect to Big Rivers in the mid

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<sup>22</sup> *Kentucky Pub. Service Com'n v. Com. ex. rel. Conway*, 324 S.W. 3d 373, 374 (Ky. 2010).

1           1990s,<sup>23</sup> with respect to KU/LG&E in the late-1990s,<sup>24</sup> and most recently with respect to  
2           Kentucky Power’s “no-load” fuel expenses in 2015.<sup>25</sup>

3

4   **Q.     Does this conclude your testimony?**

5   **A.     Yes.**

---

<sup>23</sup> *An Examination by the Public Service Commission of the Application of the Fuel Adjustment Clause of Big Rivers Electric Corporation from November 1, 1991 to April 30, 1992*, Order (July 21, 1994).

<sup>24</sup> *An Examination by the Public Service Commission of the Application of the Fuel Adjustment Clause of Louisville Gas & Electric Company From November 1, 1998 to October 31, 1996*, Case No. 96-524, Order (February 9, 1999); *An Examination by the Public Service Commission of the Application of the Fuel Adjustment Clause of Kentucky Utilities Company From November 1, 1997 to April 30, 1998*, Case No. 96-523-C; Order (July 21, 1999);

<sup>25</sup> *The Application Of The Fuel Adjustment Clause Of Kentucky Power Company From November 1, 2013 Through April 30, 2014*, Case No. 2014-00225, Order (January 22, 2015)



**AFFIDAVIT**


STATE OF GEORGIA        )

COUNTY OF FULTON        )

LANE KOLLEN, being duly sworn, deposes and states: that the attached is his sworn testimony and that the statements contained are true and correct to the best of his knowledge, information and belief.

  
Lane Kollen

Sworn to and subscribed before me on this  
4th day of October 2017.

  
Notary Public



**COMMONWEALTH OF KENTUCKY**

**BEFORE THE PUBLIC SERVICE COMMISSION**

**IN THE MATTER OF:**

**AN EXAMINATION OF THE APPLICATION )  
OF THE FUEL ADJUSTMENT CLAUSE OF )  
BIG RIVERS ELECTRIC CORPORATION )  
FROM NOVEMBER 1, 2016 THROUGH APRIL )  
30, 2017 )**

**CASE NO. 2017-00287**

**EXHIBITS  
OF  
LANE KOLLEN**

**ON BEHALF OF**

**THE KENTUCKY INDUSTRIAL UTILITY CUSTOMERS, INC.**

**J. KENNEDY AND ASSOCIATES, INC.  
ROSWELL, GEORGIA**

**OCTOBER 2017**

**EXHIBIT \_\_\_\_ (LK-1)**

## RESUME OF LANE KOLLEN, VICE PRESIDENT

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### EDUCATION

**University of Toledo, BBA**

Accounting

**University of Toledo, MBA**

**Luther Rice University, MA**

### PROFESSIONAL CERTIFICATIONS

**Certified Public Accountant (CPA)**

**Certified Management Accountant (CMA)**

### PROFESSIONAL AFFILIATIONS

**American Institute of Certified Public Accountants**

**Georgia Society of Certified Public Accountants**

**Institute of Management Accountants**

Mr. Kollen has more than thirty years of utility industry experience in the financial, rate, tax, and planning areas. He specializes in revenue requirements analyses, taxes, evaluation of rate and financial impacts of traditional and nontraditional ratemaking, utility mergers/acquisition and diversification. Mr. Kollen has expertise in proprietary and nonproprietary software systems used by utilities for budgeting, rate case support and strategic and financial planning.

**RESUME OF LANE KOLLEN, VICE PRESIDENT**

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**EXPERIENCE****1986 to**

**Present:** **J. Kennedy and Associates, Inc.:** Vice President and Principal. Responsible for utility stranded cost analysis, revenue requirements analysis, cash flow projections and solvency, financial and cash effects of traditional and nontraditional ratemaking, and research, speaking and writing on the effects of tax law changes. Testimony before Connecticut, Florida, Georgia, Indiana, Louisiana, Kentucky, Maine, Maryland, Minnesota, New York, North Carolina, Ohio, Pennsylvania, Tennessee, Texas, West Virginia and Wisconsin state regulatory commissions and the Federal Energy Regulatory Commission.

**1983 to**

**1986:** **Energy Management Associates:** Lead Consultant. Consulting in the areas of strategic and financial planning, traditional and nontraditional ratemaking, rate case support and testimony, diversification and generation expansion planning. Directed consulting and software development projects utilizing PROSCREEN II and ACUMEN proprietary software products. Utilized ACUMEN detailed corporate simulation system, PROSCREEN II strategic planning system and other custom developed software to support utility rate case filings including test year revenue requirements, rate base, operating income and pro-forma adjustments. Also utilized these software products for revenue simulation, budget preparation and cost-of-service analyses.

**1976 to**

**1983:** **The Toledo Edison Company:** Planning Supervisor. Responsible for financial planning activities including generation expansion planning, capital and expense budgeting, evaluation of tax law changes, rate case strategy and support and computerized financial modeling using proprietary and nonproprietary software products. Directed the modeling and evaluation of planning alternatives including:

Rate phase-ins.

Construction project cancellations and write-offs.

Construction project delays.

Capacity swaps.

Financing alternatives.

Competitive pricing for off-system sales.

Sale/leasebacks.

## RESUME OF LANE KOLLEN, VICE PRESIDENT

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### CLIENTS SERVED

#### Industrial Companies and Groups

Air Products and Chemicals, Inc.	Lehigh Valley Power Committee
Airco Industrial Gases	Maryland Industrial Group
Alcan Aluminum	Multiple Intervenors (New York)
Armco Advanced Materials Co.	National Southwire
Armco Steel	North Carolina Industrial Energy Consumers
Bethlehem Steel	Occidental Chemical Corporation
CF&I Steel, L.P.	Ohio Energy Group
Climax Molybdenum Company	Ohio Industrial Energy Consumers
Connecticut Industrial Energy Consumers	Ohio Manufacturers Association
ELCON	Philadelphia Area Industrial Energy Users Group
Enron Gas Pipeline Company	PSI Industrial Group
Florida Industrial Power Users Group	Smith Cogeneration
Gallatin Steel	Taconite Intervenors (Minnesota)
General Electric Company	West Penn Power Industrial Intervenors
GPU Industrial Intervenors	West Virginia Energy Users Group
Indiana Industrial Group	Westvaco Corporation
Industrial Consumers for Fair Utility Rates - Indiana	
Industrial Energy Consumers - Ohio	
Kentucky Industrial Utility Customers, Inc.	
Kimberly-Clark Company	

#### Regulatory Commissions and Government Agencies

Cities in Texas-New Mexico Power Company's Service Territory  
Cities in AEP Texas Central Company's Service Territory  
Cities in AEP Texas North Company's Service Territory  
Georgia Public Service Commission Staff  
Kentucky Attorney General's Office, Division of Consumer Protection  
Louisiana Public Service Commission Staff  
Maine Office of Public Advocate  
New York State Energy Office  
Office of Public Utility Counsel (Texas)

**RESUME OF LANE KOLLEN, VICE PRESIDENT**

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**Utilities**

Allegheny Power System  
Atlantic City Electric Company  
Carolina Power & Light Company  
Cleveland Electric Illuminating Company  
Delmarva Power & Light Company  
Duquesne Light Company  
General Public Utilities  
Georgia Power Company  
Middle South Services  
Nevada Power Company  
Niagara Mohawk Power Corporation

Otter Tail Power Company  
Pacific Gas & Electric Company  
Public Service Electric & Gas  
Public Service of Oklahoma  
Rochester Gas and Electric  
Savannah Electric & Power Company  
Seminole Electric Cooperative  
Southern California Edison  
Talquin Electric Cooperative  
Tampa Electric  
Texas Utilities  
Toledo Edison Company

**Expert Testimony Appearances  
of  
Lane Kollen  
As of September 2017**

<b>Date</b>	<b>Case</b>	<b>Jurisdct.</b>	<b>Party</b>	<b>Utility</b>	<b>Subject</b>
10/86	U-17282 Interim	LA	Louisiana Public Service Commission Staff	Gulf States Utilities	Cash revenue requirements financial solvency.
11/86	U-17282 Interim Rebuttal	LA	Louisiana Public Service Commission Staff	Gulf States Utilities	Cash revenue requirements financial solvency.
12/86	9613	KY	Attorney General Div. of Consumer Protection	Big Rivers Electric Corp.	Revenue requirements accounting adjustments financial workout plan.
1/87	U-17282 Interim	LA 19th Judicial District Ct.	Louisiana Public Service Commission Staff	Gulf States Utilities	Cash revenue requirements, financial solvency.
3/87	General Order 236	WV	West Virginia Energy Users' Group	Monongahela Power Co.	Tax Reform Act of 1986.
4/87	U-17282 Prudence	LA	Louisiana Public Service Commission Staff	Gulf States Utilities	Prudence of River Bend 1, economic analyses, cancellation studies.
4/87	M-100 Sub 113	NC	North Carolina Industrial Energy Consumers	Duke Power Co.	Tax Reform Act of 1986.
5/87	86-524-E-SC	WV	West Virginia Energy Users' Group	Monongahela Power Co.	Revenue requirements, Tax Reform Act of 1986.
5/87	U-17282 Case In Chief	LA	Louisiana Public Service Commission Staff	Gulf States Utilities	Revenue requirements, River Bend 1 phase-in plan, financial solvency.
7/87	U-17282 Case In Chief Surrebuttal	LA	Louisiana Public Service Commission Staff	Gulf States Utilities	Revenue requirements, River Bend 1 phase-in plan, financial solvency.
7/87	U-17282 Prudence Surrebuttal	LA	Louisiana Public Service Commission Staff	Gulf States Utilities	Prudence of River Bend 1, economic analyses, cancellation studies.
7/87	86-524 E-SC Rebuttal	WV	West Virginia Energy Users' Group	Monongahela Power Co.	Revenue requirements, Tax Reform Act of 1986.
8/87	9885	KY	Attorney General Div. of Consumer Protection	Big Rivers Electric Corp.	Financial workout plan.
8/87	E-015/GR-87-223	MN	Taconite Intervenors	Minnesota Power & Light Co.	Revenue requirements, O&M expense, Tax Reform Act of 1986.
10/87	870220-EI	FL	Occidental Chemical Corp.	Florida Power Corp.	Revenue requirements, O&M expense, Tax Reform Act of 1986.
11/87	87-07-01	CT	Connecticut Industrial Energy Consumers	Connecticut Light & Power Co.	Tax Reform Act of 1986.
1/88	U-17282	LA 19th Judicial District Ct.	Louisiana Public Service Commission	Gulf States Utilities	Revenue requirements, River Bend 1 phase-in plan, rate of return.
2/88	9934	KY	Kentucky Industrial Utility Customers	Louisville Gas & Electric Co.	Economics of Trimble County, completion.



**Expert Testimony Appearances  
of  
Lane Kollen  
As of September 2017**

<b>Date</b>	<b>Case</b>	<b>Jurisdiction</b>	<b>Party</b>	<b>Utility</b>	<b>Subject</b>
2/88	10064	KY	Kentucky Industrial Utility Customers	Louisville Gas & Electric Co.	Revenue requirements, O&M expense, capital structure, excess deferred income taxes.
5/88	10217	KY	Alcan Aluminum National Southwire	Big Rivers Electric Corp.	Financial workout plan.
5/88	M-87017-1C001	PA	GPU Industrial Intervenors	Metropolitan Edison Co.	Nonutility generator deferred cost recovery.
5/88	M-87017-2C005	PA	GPU Industrial Intervenors	Pennsylvania Electric Co.	Nonutility generator deferred cost recovery.
6/88	U-17282	LA 19th Judicial District Ct.	Louisiana Public Service Commission	Gulf States Utilities	Prudence of River Bend 1 economic analyses, cancellation studies, financial modeling.
7/88	M-87017-1C001 Rebuttal	PA	GPU Industrial Intervenors	Metropolitan Edison Co.	Nonutility generator deferred cost recovery, SFAS No. 92.
7/88	M-87017-2C005 Rebuttal	PA	GPU Industrial Intervenors	Pennsylvania Electric Co.	Nonutility generator deferred cost recovery, SFAS No. 92.
9/88	88-05-25	CT	Connecticut Industrial Energy Consumers	Connecticut Light & Power Co.	Excess deferred taxes, O&M expenses.
9/88	10064 Rehearing	KY	Kentucky Industrial Utility Customers	Louisville Gas & Electric Co.	Premature retirements, interest expense.
10/88	88-170-EL-AIR	OH	Ohio Industrial Energy Consumers	Cleveland Electric Illuminating Co.	Revenue requirements, phase-in, excess deferred taxes, O&M expenses, financial considerations, working capital.
10/88	88-171-EL-AIR	OH	Ohio Industrial Energy Consumers	Toledo Edison Co.	Revenue requirements, phase-in, excess deferred taxes, O&M expenses, financial considerations, working capital.
10/88	8800-355-EI	FL	Florida Industrial Power Users' Group	Florida Power & Light Co.	Tax Reform Act of 1986, tax expenses, O&M expenses, pension expense (SFAS No. 87).
10/88	3780-U	GA	Georgia Public Service Commission Staff	Atlanta Gas Light Co.	Pension expense (SFAS No. 87).
11/88	U-17282 Remand	LA	Louisiana Public Service Commission Staff	Gulf States Utilities	Rate base exclusion plan (SFAS No. 71).
12/88	U-17970	LA	Louisiana Public Service Commission Staff	AT&T Communications of South Central States	Pension expense (SFAS No. 87).
12/88	U-17949 Rebuttal	LA	Louisiana Public Service Commission Staff	South Central Bell	Compensated absences (SFAS No. 43), pension expense (SFAS No. 87), Part 32, income tax normalization.
2/89	U-17282 Phase II	LA	Louisiana Public Service Commission Staff	Gulf States Utilities	Revenue requirements, phase-in of River Bend 1, recovery of canceled plant.

**Expert Testimony Appearances  
of  
Lane Kollen  
As of September 2017**

<b>Date</b>	<b>Case</b>	<b>Jurisdic.</b>	<b>Party</b>	<b>Utility</b>	<b>Subject</b>
6/89	881602-EU 890326-EU	FL	Talquin Electric Cooperative	Talquin/City of Tallahassee	Economic analyses, incremental cost-of-service, average customer rates.
7/89	U-17970	LA	Louisiana Public Service Commission Staff	AT&T Communications of South Central States	Pension expense (SFAS No. 87), compensated absences (SFAS No. 43), Part 32.
8/89	8555	TX	Occidental Chemical Corp.	Houston Lighting & Power Co.	Cancellation cost recovery, tax expense, revenue requirements.
8/89	3840-U	GA	Georgia Public Service Commission Staff	Georgia Power Co.	Promotional practices, advertising, economic development.
9/89	U-17282 Phase II Detailed	LA	Louisiana Public Service Commission Staff	Gulf States Utilities	Revenue requirements, detailed investigation.
10/89	8880	TX	Enron Gas Pipeline	Texas-New Mexico Power Co.	Deferred accounting treatment, sale/leaseback.
10/89	8928	TX	Enron Gas Pipeline	Texas-New Mexico Power Co.	Revenue requirements, imputed capital structure, cash working capital.
10/89	R-891364	PA	Philadelphia Area Industrial Energy Users Group	Philadelphia Electric Co.	Revenue requirements.
11/89 12/89	R-891364 Surrebuttal (2 Filings)	PA	Philadelphia Area Industrial Energy Users Group	Philadelphia Electric Co.	Revenue requirements, sale/leaseback.
1/90	U-17282 Phase II Detailed Rebuttal	LA	Louisiana Public Service Commission Staff	Gulf States Utilities	Revenue requirements, detailed investigation.
1/90	U-17282 Phase III	LA	Louisiana Public Service Commission Staff	Gulf States Utilities	Phase-in of River Bend 1, deregulated asset plan.
3/90	890319-EI	FL	Florida Industrial Power Users Group	Florida Power & Light Co.	O&M expenses, Tax Reform Act of 1986.
4/90	890319-EI Rebuttal	FL	Florida Industrial Power Users Group	Florida Power & Light Co.	O&M expenses, Tax Reform Act of 1986.
4/90	U-17282	LA 19 <sup>th</sup> Judicial District Ct.	Louisiana Public Service Commission	Gulf States Utilities	Fuel clause, gain on sale of utility assets.
9/90	90-158	KY	Kentucky Industrial Utility Customers	Louisville Gas & Electric Co.	Revenue requirements, post-test year additions, forecasted test year.
12/90	U-17282 Phase IV	LA	Louisiana Public Service Commission Staff	Gulf States Utilities	Revenue requirements.
3/91	29327, et. al.	NY	Multiple Intervenors	Niagara Mohawk Power Corp.	Incentive regulation.

**Expert Testimony Appearances  
of  
Lane Kollen  
As of September 2017**

<b>Date</b>	<b>Case</b>	<b>Jurisdict.</b>	<b>Party</b>	<b>Utility</b>	<b>Subject</b>
5/91	9945	TX	Office of Public Utility Counsel of Texas	El Paso Electric Co.	Financial modeling, economic analyses, prudence of Palo Verde 3.
9/91	P-910511 P-910512	PA	Allegheny Ludlum Corp., Armco Advanced Materials Co., The West Penn Power Industrial Users' Group	West Penn Power Co.	Recovery of CAAA costs, least cost financing.
9/91	91-231-E-NC	WV	West Virginia Energy Users Group	Monongahela Power Co.	Recovery of CAAA costs, least cost financing.
11/91	U-17282	LA	Louisiana Public Service Commission Staff	Gulf States Utilities	Asset impairment, deregulated asset plan, revenue requirements.
12/91	91-410-EL-AIR	OH	Air Products and Chemicals, Inc., Armco Steel Co., General Electric Co., Industrial Energy Consumers	Cincinnati Gas & Electric Co.	Revenue requirements, phase-in plan.
12/91	PUC Docket 10200	TX	Office of Public Utility Counsel of Texas	Texas-New Mexico Power Co.	Financial integrity, strategic planning, declined business affiliations.
5/92	910890-EI	FL	Occidental Chemical Corp.	Florida Power Corp.	Revenue requirements, O&M expense, pension expense, OPEB expense, fossil dismantling, nuclear decommissioning.
8/92	R-00922314	PA	GPU Industrial Intervenors	Metropolitan Edison Co.	Incentive regulation, performance rewards, purchased power risk, OPEB expense.
9/92	92-043	KY	Kentucky Industrial Utility Consumers	Generic Proceeding	OPEB expense.
9/92	920324-EI	FL	Florida Industrial Power Users' Group	Tampa Electric Co.	OPEB expense.
9/92	39348	IN	Indiana Industrial Group	Generic Proceeding	OPEB expense.
9/92	910840-PU	FL	Florida Industrial Power Users' Group	Generic Proceeding	OPEB expense.
9/92	39314	IN	Industrial Consumers for Fair Utility Rates	Indiana Michigan Power Co.	OPEB expense.
11/92	U-19904	LA	Louisiana Public Service Commission Staff	Gulf States Utilities /Entergy Corp.	Merger.
11/92	8649	MD	Westvaco Corp., Eastalco Aluminum Co.	Potomac Edison Co.	OPEB expense.
11/92	92-1715-AU-COI	OH	Ohio Manufacturers Association	Generic Proceeding	OPEB expense.
12/92	R-00922378	PA	Armco Advanced Materials Co., The WPP Industrial Intervenors	West Penn Power Co.	Incentive regulation, performance rewards, purchased power risk, OPEB expense.

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12/92	U-19949	LA	Louisiana Public Service Commission Staff	South Central Bell	Affiliate transactions, cost allocations, merger.
12/92	R-00922479	PA	Philadelphia Area Industrial Energy Users' Group	Philadelphia Electric Co.	OPEB expense.
1/93	8487	MD	Maryland Industrial Group	Baltimore Gas & Electric Co., Bethlehem Steel Corp.	OPEB expense, deferred fuel, CWIP in rate base.
1/93	39498	IN	PSI Industrial Group	PSI Energy, Inc.	Refunds due to over-collection of taxes on Marble Hill cancellation.
3/93	92-11-11	CT	Connecticut Industrial Energy Consumers	Connecticut Light & Power Co	OPEB expense.
3/93	U-19904 (Surrebuttal)	LA	Louisiana Public Service Commission Staff	Gulf States Utilities /Entergy Corp.	Merger.
3/93	93-01-EL-EFC	OH	Ohio Industrial Energy Consumers	Ohio Power Co.	Affiliate transactions, fuel.
3/93	EC92-21000 ER92-806-000	FERC	Louisiana Public Service Commission Staff	Gulf States Utilities /Entergy Corp.	Merger.
4/93	92-1464-EL-AIR	OH	Air Products Armo Steel Industrial Energy Consumers	Cincinnati Gas & Electric Co.	Revenue requirements, phase-in plan.
4/93	EC92-21000 ER92-806-000 (Rebuttal)	FERC	Louisiana Public Service Commission	Gulf States Utilities /Entergy Corp.	Merger.
9/93	93-113	KY	Kentucky Industrial Utility Customers	Kentucky Utilities	Fuel clause and coal contract refund.
9/93	92-490, 92-490A, 90-360-C	KY	Kentucky Industrial Utility Customers and Kentucky Attorney General	Big Rivers Electric Corp.	Disallowances and restitution for excessive fuel costs, illegal and improper payments, recovery of mine closure costs.
10/93	U-17735	LA	Louisiana Public Service Commission Staff	Cajun Electric Power Cooperative	Revenue requirements, debt restructuring agreement, River Bend cost recovery.
1/94	U-20647	LA	Louisiana Public Service Commission Staff	Gulf States Utilities Co.	Audit and investigation into fuel clause costs.
4/94	U-20647 (Surrebuttal)	LA	Louisiana Public Service Commission Staff	Gulf States Utilities Co.	Nuclear and fossil unit performance, fuel costs, fuel clause principles and guidelines.
4/94	U-20647 (Supplemental Surrebuttal)	LA	Louisiana Public Service Commission Staff	Gulf States Utilities Co.	Audit and investigation into fuel clause costs.
5/94	U-20178	LA	Louisiana Public Service Commission Staff	Louisiana Power & Light Co.	Planning and quantification issues of least cost integrated resource plan.

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9/94	U-19904 Initial Post-Merger Earnings Review	LA	Louisiana Public Service Commission Staff	Gulf States Utilities Co.	River Bend phase-in plan, deregulated asset plan, capital structure, other revenue requirement issues.
9/94	U-17735	LA	Louisiana Public Service Commission Staff	Cajun Electric Power Cooperative	G&T cooperative ratemaking policies, exclusion of River Bend, other revenue requirement issues.
10/94	3905-U	GA	Georgia Public Service Commission Staff	Southern Bell Telephone Co.	Incentive rate plan, earnings review.
10/94	5258-U	GA	Georgia Public Service Commission Staff	Southern Bell Telephone Co.	Alternative regulation, cost allocation.
11/94	U-19904 Initial Post-Merger Earnings Review (Surrebuttal)	LA	Louisiana Public Service Commission Staff	Gulf States Utilities Co.	River Bend phase-in plan, deregulated asset plan, capital structure, other revenue requirement issues.
11/94	U-17735 (Rebuttal)	LA	Louisiana Public Service Commission Staff	Cajun Electric Power Cooperative	G&T cooperative ratemaking policy, exclusion of River Bend, other revenue requirement issues.
4/95	R-00943271	PA	PP&L Industrial Customer Alliance	Pennsylvania Power & Light Co.	Revenue requirements. Fossil dismantling, nuclear decommissioning.
6/95	3905-U Rebuttal	GA	Georgia Public Service Commission	Southern Bell Telephone Co.	Incentive regulation, affiliate transactions, revenue requirements, rate refund.
6/95	U-19904 (Direct)	LA	Louisiana Public Service Commission Staff	Gulf States Utilities Co.	Gas, coal, nuclear fuel costs, contract prudence, base/fuel realignment.
10/95	95-02614	TN	Tennessee Office of the Attorney General Consumer Advocate	BellSouth Telecommunications, Inc.	Affiliate transactions.
10/95	U-21485 (Direct)	LA	Louisiana Public Service Commission Staff	Gulf States Utilities Co.	Nuclear O&M, River Bend phase-in plan, base/fuel realignment, NOL and AltMin asset deferred taxes, other revenue requirement issues.
11/95	U-19904 (Surrebuttal)	LA	Louisiana Public Service Commission Staff	Gulf States Utilities Co. Division	Gas, coal, nuclear fuel costs, contract prudence, base/fuel realignment.
11/95	U-21485 (Supplemental Direct)	LA	Louisiana Public Service Commission Staff	Gulf States Utilities Co.	Nuclear O&M, River Bend phase-in plan, base/fuel realignment, NOL and AltMin asset deferred taxes, other revenue requirement issues.
12/95	U-21485 (Surrebuttal)				
1/96	95-299-EL-AIR 95-300-EL-AIR	OH	Industrial Energy Consumers	The Toledo Edison Co., The Cleveland Electric Illuminating Co.	Competition, asset write-offs and revaluation, O&M expense, other revenue requirement issues.
2/96	PUC Docket 14965	TX	Office of Public Utility Counsel	Central Power & Light	Nuclear decommissioning.
5/96	95-485-LCS	NM	City of Las Cruces	El Paso Electric Co.	Stranded cost recovery, municipalization.

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7/96	8725	MD	The Maryland Industrial Group and Redland Genstar, Inc.	Baltimore Gas & Electric Co., Potomac Electric Power Co., and Constellation Energy Corp.	Merger savings, tracking mechanism, earnings sharing plan, revenue requirement issues.
9/96 11/96	U-22092 U-22092 (Surrebuttal)	LA	Louisiana Public Service Commission Staff	Entergy Gulf States, Inc.	River Bend phase-in plan, base/fuel realignment, NOL and AltMin asset deferred taxes, other revenue requirement issues, allocation of regulated/nonregulated costs.
10/96	96-327	KY	Kentucky Industrial Utility Customers, Inc.	Big Rivers Electric Corp.	Environmental surcharge recoverable costs.
2/97	R-00973877	PA	Philadelphia Area Industrial Energy Users Group	PECO Energy Co.	Stranded cost recovery, regulatory assets and liabilities, intangible transition charge, revenue requirements.
3/97	96-489	KY	Kentucky Industrial Utility Customers, Inc.	Kentucky Power Co.	Environmental surcharge recoverable costs, system agreements, allowance inventory, jurisdictional allocation.
6/97	TO-97-397	MO	MCI Telecommunications Corp., Inc., MCImetro Access Transmission Services, Inc.	Southwestern Bell Telephone Co.	Price cap regulation, revenue requirements, rate of return.
6/97	R-00973953	PA	Philadelphia Area Industrial Energy Users Group	PECO Energy Co.	Restructuring, deregulation, stranded costs, regulatory assets, liabilities, nuclear and fossil decommissioning.
7/97	R-00973954	PA	PP&L Industrial Customer Alliance	Pennsylvania Power & Light Co.	Restructuring, deregulation, stranded costs, regulatory assets, liabilities, nuclear and fossil decommissioning.
7/97	U-22092	LA	Louisiana Public Service Commission Staff	Entergy Gulf States, Inc.	Depreciation rates and methodologies, River Bend phase-in plan.
8/97	97-300	KY	Kentucky Industrial Utility Customers, Inc.	Louisville Gas & Electric Co., Kentucky Utilities Co.	Merger policy, cost savings, surcredit sharing mechanism, revenue requirements, rate of return.
8/97	R-00973954 (Surrebuttal)	PA	PP&L Industrial Customer Alliance	Pennsylvania Power & Light Co.	Restructuring, deregulation, stranded costs, regulatory assets, liabilities, nuclear and fossil decommissioning.
10/97	97-204	KY	Alcan Aluminum Corp. Southwire Co.	Big Rivers Electric Corp.	Restructuring, revenue requirements, reasonableness.
10/97	R-974008	PA	Metropolitan Edison Industrial Users Group	Metropolitan Edison Co.	Restructuring, deregulation, stranded costs, regulatory assets, liabilities, nuclear and fossil decommissioning, revenue requirements.
10/97	R-974009	PA	Penelec Industrial Customer Alliance	Pennsylvania Electric Co.	Restructuring, deregulation, stranded costs, regulatory assets, liabilities, nuclear and fossil decommissioning, revenue requirements.

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11/97	97-204 (Rebuttal)	KY	Alcan Aluminum Corp. Southwire Co.	Big Rivers Electric Corp.	Restructuring, revenue requirements, reasonableness of rates, cost allocation.
11/97	U-22491	LA	Louisiana Public Service Commission Staff	Entergy Gulf States, Inc.	Allocation of regulated and nonregulated costs, other revenue requirement issues.
11/97	R-00973953 (Surrebuttal)	PA	Philadelphia Area Industrial Energy Users Group	PECO Energy Co.	Restructuring, deregulation, stranded costs, regulatory assets, liabilities, nuclear and fossil decommissioning.
11/97	R-973981	PA	West Penn Power Industrial Intervenors	West Penn Power Co.	Restructuring, deregulation, stranded costs, regulatory assets, liabilities, fossil decommissioning, revenue requirements, securitization.
11/97	R-974104	PA	Duquesne Industrial Intervenors	Duquesne Light Co.	Restructuring, deregulation, stranded costs, regulatory assets, liabilities, nuclear and fossil decommissioning, revenue requirements, securitization.
12/97	R-973981 (Surrebuttal)	PA	West Penn Power Industrial Intervenors	West Penn Power Co.	Restructuring, deregulation, stranded costs, regulatory assets, liabilities, fossil decommissioning, revenue requirements.
12/97	R-974104 (Surrebuttal)	PA	Duquesne Industrial Intervenors	Duquesne Light Co.	Restructuring, deregulation, stranded costs, regulatory assets, liabilities, nuclear and fossil decommissioning, revenue requirements, securitization.
1/98	U-22491 (Surrebuttal)	LA	Louisiana Public Service Commission Staff	Entergy Gulf States, Inc.	Allocation of regulated and nonregulated costs, other revenue requirement issues.
2/98	8774	MD	Westvaco	Potomac Edison Co.	Merger of Duquesne, AE, customer safeguards, savings sharing.
3/98	U-22092 (Allocated Stranded Cost Issues)	LA	Louisiana Public Service Commission Staff	Entergy Gulf States, Inc.	Restructuring, stranded costs, regulatory assets, securitization, regulatory mitigation.
3/98	8390-U	GA	Georgia Natural Gas Group, Georgia Textile Manufacturers Assoc.	Atlanta Gas Light Co.	Restructuring, unbundling, stranded costs, incentive regulation, revenue requirements.
3/98	U-22092 (Allocated Stranded Cost Issues) (Surrebuttal)	LA	Louisiana Public Service Commission Staff	Entergy Gulf States, Inc.	Restructuring, stranded costs, regulatory assets, securitization, regulatory mitigation.
3/98	U-22491 (Supplemental Surrebuttal)	LA	Louisiana Public Service Commission Staff	Entergy Gulf States, Inc.	Allocation of regulated and nonregulated costs, other revenue requirement issues.
10/98	97-596	ME	Maine Office of the Public Advocate	Bangor Hydro- Electric Co.	Restructuring, unbundling, stranded costs, T&D revenue requirements.

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10/98	9355-U	GA	Georgia Public Service Commission Adversary Staff	Georgia Power Co.	Affiliate transactions.
10/98	U-17735	LA	Louisiana Public Service Commission Staff	Cajun Electric Power Cooperative	G&T cooperative ratemaking policy, other revenue requirement issues.
11/98	U-23327	LA	Louisiana Public Service Commission Staff	SWEPCO, CSW and AEP	Merger policy, savings sharing mechanism, affiliate transaction conditions.
12/98	U-23358 (Direct)	LA	Louisiana Public Service Commission Staff	Entergy Gulf States, Inc.	Allocation of regulated and nonregulated costs, tax issues, and other revenue requirement issues.
12/98	98-577	ME	Maine Office of Public Advocate	Maine Public Service Co.	Restructuring, unbundling, stranded cost, T&D revenue requirements.
1/99	98-10-07	CT	Connecticut Industrial Energy Consumers	United Illuminating Co.	Stranded costs, investment tax credits, accumulated deferred income taxes, excess deferred income taxes.
3/99	U-23358 (Surrebuttal)	LA	Louisiana Public Service Commission Staff	Entergy Gulf States, Inc.	Allocation of regulated and nonregulated costs, tax issues, and other revenue requirement issues.
3/99	98-474	KY	Kentucky Industrial Utility Customers, Inc.	Louisville Gas and Electric Co.	Revenue requirements, alternative forms of regulation.
3/99	98-426	KY	Kentucky Industrial Utility Customers, Inc.	Kentucky Utilities Co.	Revenue requirements, alternative forms of regulation.
3/99	99-082	KY	Kentucky Industrial Utility Customers, Inc.	Louisville Gas and Electric Co.	Revenue requirements.
3/99	99-083	KY	Kentucky Industrial Utility Customers, Inc.	Kentucky Utilities Co.	Revenue requirements.
4/99	U-23358 (Supplemental Surrebuttal)	LA	Louisiana Public Service Commission Staff	Entergy Gulf States, Inc.	Allocation of regulated and nonregulated costs, tax issues, and other revenue requirement issues.
4/99	99-03-04	CT	Connecticut Industrial Energy Consumers	United Illuminating Co.	Regulatory assets and liabilities, stranded costs, recovery mechanisms.
4/99	99-02-05	CT	Connecticut Industrial Utility Customers	Connecticut Light and Power Co.	Regulatory assets and liabilities, stranded costs, recovery mechanisms.
5/99	98-426 99-082 (Additional Direct)	KY	Kentucky Industrial Utility Customers, Inc.	Louisville Gas and Electric Co.	Revenue requirements.
5/99	98-474 99-083 (Additional Direct)	KY	Kentucky Industrial Utility Customers, Inc.	Kentucky Utilities Co.	Revenue requirements.



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<b>Date</b>	<b>Case</b>	<b>Jurisdic.</b>	<b>Party</b>	<b>Utility</b>	<b>Subject</b>
5/99	98-426 98-474 (Response to Amended Applications)	KY	Kentucky Industrial Utility Customers, Inc.	Louisville Gas and Electric Co., Kentucky Utilities Co.	Alternative regulation.
6/99	97-596	ME	Maine Office of Public Advocate	Bangor Hydro-Electric Co.	Request for accounting order regarding electric industry restructuring costs.
6/99	U-23358	LA	Louisiana Public Service Commission Staff	Entergy Gulf States, Inc.	Affiliate transactions, cost allocations.
7/99	99-03-35	CT	Connecticut Industrial Energy Consumers	United Illuminating Co.	Stranded costs, regulatory assets, tax effects of asset divestiture.
7/99	U-23327	LA	Louisiana Public Service Commission Staff	Southwestern Electric Power Co., Central and South West Corp, American Electric Power Co.	Merger Settlement and Stipulation.
7/99	97-596 Surrebuttal	ME	Maine Office of Public Advocate	Bangor Hydro-Electric Co.	Restructuring, unbundling, stranded cost, T&D revenue requirements.
7/99	98-0452-E-GI	WV	West Virginia Energy Users Group	Monongahela Power, Potomac Edison, Appalachian Power, Wheeling Power	Regulatory assets and liabilities.
8/99	98-577 Surrebuttal	ME	Maine Office of Public Advocate	Maine Public Service Co.	Restructuring, unbundling, stranded costs, T&D revenue requirements.
8/99	98-426 99-082 Rebuttal	KY	Kentucky Industrial Utility Customers, Inc.	Louisville Gas and Electric Co.	Revenue requirements.
8/99	98-474 98-083 Rebuttal	KY	Kentucky Industrial Utility Customers, Inc.	Kentucky Utilities Co.	Revenue requirements.
8/99	98-0452-E-GI Rebuttal	WV	West Virginia Energy Users Group	Monongahela Power, Potomac Edison, Appalachian Power, Wheeling Power	Regulatory assets and liabilities.
10/99	U-24182 Direct	LA	Louisiana Public Service Commission Staff	Entergy Gulf States, Inc.	Allocation of regulated and nonregulated costs, affiliate transactions, tax issues, and other revenue requirement issues.
11/99	PUC Docket 21527	TX	The Dallas-Fort Worth Hospital Council and Coalition of Independent Colleges and Universities	TXU Electric	Restructuring, stranded costs, taxes, securitization.

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11/99	U-23358 Surrebuttal Affiliate Transactions Review	LA	Louisiana Public Service Commission Staff	Entergy Gulf States, Inc.	Service company affiliate transaction costs.
01/00	U-24182 Surrebuttal	LA	Louisiana Public Service Commission Staff	Entergy Gulf States, Inc.	Allocation of regulated and nonregulated costs, affiliate transactions, tax issues, and other revenue requirement issues.
04/00	99-1212-EL-ETP 99-1213-EL-ATA 99-1214-EL-AAM	OH	Greater Cleveland Growth Association	First Energy (Cleveland Electric Illuminating, Toledo Edison)	Historical review, stranded costs, regulatory assets, liabilities.
05/00	2000-107	KY	Kentucky Industrial Utility Customers, Inc.	Kentucky Power Co.	ECR surcharge roll-in to base rates.
05/00	U-24182 Supplemental Direct	LA	Louisiana Public Service Commission Staff	Entergy Gulf States, Inc.	Affiliate expense proforma adjustments.
05/00	A-110550F0147	PA	Philadelphia Area Industrial Energy Users Group	PECO Energy	Merger between PECO and Unicom.
05/00	99-1658-EL-ETP	OH	AK Steel Corp.	Cincinnati Gas & Electric Co.	Regulatory transition costs, including regulatory assets and liabilities, SFAS 109, ADIT, EDIT, ITC.
07/00	PUC Docket 22344	TX	The Dallas-Fort Worth Hospital Council and The Coalition of Independent Colleges and Universities	Statewide Generic Proceeding	Escalation of O&M expenses for unbundled T&D revenue requirements in projected test year.
07/00	U-21453	LA	Louisiana Public Service Commission	SWEPCO	Stranded costs, regulatory assets and liabilities.
08/00	U-24064	LA	Louisiana Public Service Commission Staff	CLECO	Affiliate transaction pricing ratemaking principles, subsidization of nonregulated affiliates, ratemaking adjustments.
10/00	SOAH Docket 473-00-1015 PUC Docket 22350	TX	The Dallas-Fort Worth Hospital Council and The Coalition of Independent Colleges and Universities	TXU Electric Co.	Restructuring, T&D revenue requirements, mitigation, regulatory assets and liabilities.
10/00	R-00974104 Affidavit	PA	Duquesne Industrial Intervenors	Duquesne Light Co.	Final accounting for stranded costs, including treatment of auction proceeds, taxes, capital costs, switchback costs, and excess pension funding.
11/00	P-00001837 R-00974008 P-00001838 R-00974009	PA	Metropolitan Edison Industrial Users Group Penelec Industrial Customer Alliance	Metropolitan Edison Co., Pennsylvania Electric Co.	Final accounting for stranded costs, including treatment of auction proceeds, taxes, regulatory assets and liabilities, transaction costs.

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12/00	U-21453, U-20925, U-22092 (Subdocket C) Surrebuttal	LA	Louisiana Public Service Commission Staff	SWEPCO	Stranded costs, regulatory assets.
01/01	U-24993 Direct	LA	Louisiana Public Service Commission Staff	Entergy Gulf States, Inc.	Allocation of regulated and nonregulated costs, tax issues, and other revenue requirement issues.
01/01	U-21453, U-20925, U-22092 (Subdocket B) Surrebuttal	LA	Louisiana Public Service Commission Staff	Entergy Gulf States, Inc.	Industry restructuring, business separation plan, organization structure, hold harmless conditions, financing.
01/01	Case No. 2000-386	KY	Kentucky Industrial Utility Customers, Inc.	Louisville Gas & Electric Co.	Recovery of environmental costs, surcharge mechanism.
01/01	Case No. 2000-439	KY	Kentucky Industrial Utility Customers, Inc.	Kentucky Utilities Co.	Recovery of environmental costs, surcharge mechanism.
02/01	A-110300F0095 A-110400F0040	PA	Met-Ed Industrial Users Group, Penelec Industrial Customer Alliance	GPU, Inc. FirstEnergy Corp.	Merger, savings, reliability.
03/01	P-00001860 P-00001861	PA	Met-Ed Industrial Users Group, Penelec Industrial Customer Alliance	Metropolitan Edison Co., Pennsylvania Electric Co.	Recovery of costs due to provider of last resort obligation.
04/01	U-21453, U-20925, U-22092 (Subdocket B) Settlement Term Sheet	LA	Louisiana Public Service Commission Staff	Entergy Gulf States, Inc.	Business separation plan: settlement agreement on overall plan structure.
04/01	U-21453, U-20925, U-22092 (Subdocket B) Contested Issues	LA	Louisiana Public Service Commission Staff	Entergy Gulf States, Inc.	Business separation plan: agreements, hold harmless conditions, separations methodology.
05/01	U-21453, U-20925, U-22092 (Subdocket B) Contested Issues Transmission and Distribution Rebuttal	LA	Louisiana Public Service Commission Staff	Entergy Gulf States, Inc.	Business separation plan: agreements, hold harmless conditions, separations methodology.

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07/01	U-21453, U-20925, U-22092 (Subdocket B) Transmission and Distribution Term Sheet	LA	Louisiana Public Service Commission Staff	Entergy Gulf States, Inc.	Business separation plan; settlement agreement on T&D issues, agreements necessary to implement T&D separations, hold harmless conditions, separations methodology.
10/01	14000-U	GA	Georgia Public Service Commission Adversary Staff	Georgia Power Company	Revenue requirements, Rate Plan, fuel clause recovery.
11/01	14311-U Direct Panel with Bolin Killings	GA	Georgia Public Service Commission Adversary Staff	Atlanta Gas Light Co	Revenue requirements, revenue forecast, O&M expense, depreciation, plant additions, cash working capital.
11/01	U-25687 Direct	LA	Louisiana Public Service Commission Staff	Entergy Gulf States, Inc.	Revenue requirements, capital structure, allocation of regulated and nonregulated costs, River Bend uprate.
02/02	PUC Docket 25230	TX	The Dallas-Fort Worth Hospital Council and the Coalition of Independent Colleges and Universities	TXU Electric	Stipulation. Regulatory assets, securitization financing.
02/02	U-25687 Surrebuttal	LA	Louisiana Public Service Commission Staff	Entergy Gulf States, Inc.	Revenue requirements, corporate franchise tax, conversion to LLC, River Bend uprate.
03/02	14311-U Rebuttal Panel with Bolin Killings	GA	Georgia Public Service Commission Adversary Staff	Atlanta Gas Light Co.	Revenue requirements, earnings sharing plan, service quality standards.
03/02	14311-U Rebuttal Panel with Michelle L. Thebert	GA	Georgia Public Service Commission Adversary Staff	Atlanta Gas Light Co.	Revenue requirements, revenue forecast, O&M expense, depreciation, plant additions, cash working capital.
03/02	001148-EI	FL	South Florida Hospital and Healthcare Assoc.	Florida Power & Light Co.	Revenue requirements. Nuclear life extension, storm damage accruals and reserve, capital structure, O&M expense.
04/02	U-25687 (Suppl. Surrebuttal)	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Revenue requirements, corporate franchise tax, conversion to LLC, River Bend uprate.
04/02	U-21453, U-20925 U-22092 (Subdocket C)	LA	Louisiana Public Service Commission	SWEPSCO	Business separation plan, T&D Term Sheet, separations methodologies, hold harmless conditions.
08/02	EL01-88-000	FERC	Louisiana Public Service Commission	Entergy Services, Inc. and the Entergy Operating Companies	System Agreement, production cost equalization, tariffs.
08/02	U-25888	LA	Louisiana Public Service Commission Staff	Entergy Gulf States, Inc. and Entergy Louisiana, Inc.	System Agreement, production cost disparities, prudence.

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09/02	2002-00224 2002-00225	KY	Kentucky Industrial Utilities Customers, Inc.	Kentucky Utilities Co., Louisville Gas & Electric Co.	Line losses and fuel clause recovery associated with off-system sales.
11/02	2002-00146 2002-00147	KY	Kentucky Industrial Utilities Customers, Inc.	Kentucky Utilities Co., Louisville Gas & Electric Co.	Environmental compliance costs and surcharge recovery.
01/03	2002-00169	KY	Kentucky Industrial Utilities Customers, Inc.	Kentucky Power Co.	Environmental compliance costs and surcharge recovery.
04/03	2002-00429 2002-00430	KY	Kentucky Industrial Utilities Customers, Inc.	Kentucky Utilities Co., Louisville Gas & Electric Co.	Extension of merger surcredit, flaws in Companies' studies.
04/03	U-26527	LA	Louisiana Public Service Commission Staff	Entergy Gulf States, Inc.	Revenue requirements, corporate franchise tax, conversion to LLC, capital structure, post-test year adjustments.
06/03	EL01-88-000 Rebuttal	FERC	Louisiana Public Service Commission	Entergy Services, Inc. and the Entergy Operating Companies	System Agreement, production cost equalization, tariffs.
06/03	2003-00068	KY	Kentucky Industrial Utility Customers	Kentucky Utilities Co.	Environmental cost recovery, correction of base rate error.
11/03	ER03-753-000	FERC	Louisiana Public Service Commission	Entergy Services, Inc. and the Entergy Operating Companies	Unit power purchases and sale cost-based tariff pursuant to System Agreement.
11/03	ER03-583-000, ER03-583-001, ER03-583-002  ER03-681-000, ER03-681-001  ER03-682-000, ER03-682-001, ER03-682-002  ER03-744-000, ER03-744-001 (Consolidated)	FERC	Louisiana Public Service Commission	Entergy Services, Inc., the Entergy Operating Companies, EWO Marketing, L.P, and Entergy Power, Inc.	Unit power purchases and sale agreements, contractual provisions, projected costs, levelized rates, and formula rates.
12/03	U-26527 Surrebuttal	LA	Louisiana Public Service Commission Staff	Entergy Gulf States, Inc.	Revenue requirements, corporate franchise tax, conversion to LLC, capital structure, post-test year adjustments.
12/03	2003-0334 2003-0335	KY	Kentucky Industrial Utility Customers, inc.	Kentucky Utilities Co., Louisville Gas & Electric Co.	Earnings Sharing Mechanism.
12/03	U-27136	LA	Louisiana Public Service Commission Staff	Entergy Louisiana, Inc.	Purchased power contracts between affiliates, terms and conditions.

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03/04	U-26527 Supplemental Surrebuttal	LA	Louisiana Public Service Commission Staff	Entergy Gulf States, Inc.	Revenue requirements, corporate franchise tax, conversion to LLC, capital structure, post-test year adjustments.
03/04	2003-00433	KY	Kentucky Industrial Utility Customers, Inc.	Louisville Gas & Electric Co.	Revenue requirements, depreciation rates, O&M expense, deferrals and amortization, earnings sharing mechanism, merger surcredit, VDT surcredit.
03/04	2003-00434	KY	Kentucky Industrial Utility Customers, Inc.	Kentucky Utilities Co.	Revenue requirements, depreciation rates, O&M expense, deferrals and amortization, earnings sharing mechanism, merger surcredit, VDT surcredit.
03/04	SOAH Docket 473-04-2459 PUC Docket 29206	TX	Cities Served by Texas- New Mexico Power Co.	Texas-New Mexico Power Co.	Stranded costs true-up, including valuation issues, ITC, ADIT, excess earnings.
05/04	04-169-EL-UNC	OH	Ohio Energy Group, Inc.	Columbus Southern Power Co. & Ohio Power Co.	Rate stabilization plan, deferrals, T&D rate increases, earnings.
06/04	SOAH Docket 473-04-4555 PUC Docket 29526	TX	Houston Council for Health and Education	CenterPoint Energy Houston Electric	Stranded costs true-up, including valuation issues, ITC, EDIT, excess mitigation credits, capacity auction true-up revenues, interest.
08/04	SOAH Docket 473-04-4555 PUC Docket 29526 (Suppl Direct)	TX	Houston Council for Health and Education	CenterPoint Energy Houston Electric	Interest on stranded cost pursuant to Texas Supreme Court remand.
09/04	U-23327 Subdocket B	LA	Louisiana Public Service Commission Staff	SWEPCO	Fuel and purchased power expenses recoverable through fuel adjustment clause, trading activities, compliance with terms of various LPSC Orders.
10/04	U-23327 Subdocket A	LA	Louisiana Public Service Commission Staff	SWEPCO	Revenue requirements.
12/04	Case Nos. 2004-00321, 2004-00372	KY	Gallatin Steel Co.	East Kentucky Power Cooperative, Inc., Big Sandy Recc, et al.	Environmental cost recovery, qualified costs, TIER requirements, cost allocation.
01/05	30485	TX	Houston Council for Health and Education	CenterPoint Energy Houston Electric, LLC	Stranded cost true-up including regulatory Central Co. assets and liabilities, ITC, EDIT, capacity auction, proceeds, excess mitigation credits, retrospective and prospective ADIT.
02/05	18638-U	GA	Georgia Public Service Commission Adversary Staff	Atlanta Gas Light Co.	Revenue requirements.
02/05	18638-U Panel with Tony Wackerly	GA	Georgia Public Service Commission Adversary Staff	Atlanta Gas Light Co.	Comprehensive rate plan, pipeline replacement program surcharge, performance based rate plan.

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02/05	18638-U Panel with Michelle Thebert	GA	Georgia Public Service Commission Adversary Staff	Atlanta Gas Light Co.	Energy conservation, economic development, and tariff issues.
03/05	Case Nos. 2004-00426, 2004-00421	KY	Kentucky Industrial Utility Customers, Inc.	Kentucky Utilities Co., Louisville Gas & Electric	Environmental cost recovery, Jobs Creation Act of 2004 and §199 deduction, excess common equity ratio, deferral and amortization of nonrecurring O&M expense.
06/05	2005-00068	KY	Kentucky Industrial Utility Customers, Inc.	Kentucky Power Co.	Environmental cost recovery, Jobs Creation Act of 2004 and §199 deduction, margins on allowances used for AEP system sales.
06/05	050045-EI	FL	South Florida Hospital and Healthcare Assoc.	Florida Power & Light Co.	Storm damage expense and reserve, RTO costs, O&M expense projections, return on equity performance incentive, capital structure, selective second phase post-test year rate increase.
08/05	31056	TX	Alliance for Valley Healthcare	AEP Texas Central Co.	Stranded cost true-up including regulatory assets and liabilities, ITC, EDIT, capacity auction, proceeds, excess mitigation credits, retrospective and prospective ADIT.
09/05	20298-U	GA	Georgia Public Service Commission Adversary Staff	Atmos Energy Corp.	Revenue requirements, roll-in of surcharges, cost recovery through surcharge, reporting requirements.
09/05	20298-U Panel with Victoria Taylor	GA	Georgia Public Service Commission Adversary Staff	Atmos Energy Corp.	Affiliate transactions, cost allocations, capitalization, cost of debt.
10/05	04-42	DE	Delaware Public Service Commission Staff	Artesian Water Co.	Allocation of tax net operating losses between regulated and unregulated.
11/05	2005-00351 2005-00352	KY	Kentucky Industrial Utility Customers, Inc.	Kentucky Utilities Co., Louisville Gas & Electric	Workforce Separation Program cost recovery and shared savings through VDT surcredit.
01/06	2005-00341	KY	Kentucky Industrial Utility Customers, Inc.	Kentucky Power Co.	System Sales Clause Rider, Environmental Cost Recovery Rider, Net Congestion Rider, Storm damage, vegetation management program, depreciation, off-system sales, maintenance normalization, pension and OPEB.
03/06	PUC Docket 31994	TX	Cities	Texas-New Mexico Power Co.	Stranded cost recovery through competition transition or change.
05/06	31994 Supplemental	TX	Cities	Texas-New Mexico Power Co.	Retrospective ADFIT, prospective ADFIT.
03/06	U-21453, U-20925, U-22092	LA	Louisiana Public Service Commission Staff	Entergy Gulf States, Inc.	Jurisdictional separation plan.

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03/06	NOPR Reg 104385-OR	IRS	Alliance for Valley Health Care and Houston Council for Health Education	AEP Texas Central Company and CenterPoint Energy Houston Electric	Proposed Regulations affecting flow-through to ratepayers of excess deferred income taxes and investment tax credits on generation plant that is sold or deregulated.
04/06	U-25116	LA	Louisiana Public Service Commission Staff	Entergy Louisiana, Inc.	2002-2004 Audit of Fuel Adjustment Clause Filings. Affiliate transactions.
07/06	R-00061366, Et. al.	PA	Met-Ed Ind. Users Group Pennsylvania Ind. Customer Alliance	Metropolitan Edison Co., Pennsylvania Electric Co.	Recovery of NUG-related stranded costs, government mandated program costs, storm damage costs.
07/06	U-23327	LA	Louisiana Public Service Commission Staff	Southwestern Electric Power Co.	Revenue requirements, formula rate plan, banking proposal.
08/06	U-21453, U-20925, U-22092 (Subdocket J)	LA	Louisiana Public Service Commission Staff	Entergy Gulf States, Inc.	Jurisdictional separation plan.
11/06	05CVH03-3375 Franklin County Court Affidavit	OH	Various Taxing Authorities (Non-Utility Proceeding)	State of Ohio Department of Revenue	Accounting for nuclear fuel assemblies as manufactured equipment and capitalized plant.
12/06	U-23327 Subdocket A Reply Testimony	LA	Louisiana Public Service Commission Staff	Southwestern Electric Power Co.	Revenue requirements, formula rate plan, banking proposal.
03/07	U-29764	LA	Louisiana Public Service Commission Staff	Entergy Gulf States, Inc., Entergy Louisiana, LLC	Jurisdictional allocation of Entergy System Agreement equalization remedy receipts.
03/07	PUC Docket 33309	TX	Cities	AEP Texas Central Co.	Revenue requirements, including functionalization of transmission and distribution costs.
03/07	PUC Docket 33310	TX	Cities	AEP Texas North Co.	Revenue requirements, including functionalization of transmission and distribution costs.
03/07	2006-00472	KY	Kentucky Industrial Utility Customers, Inc.	East Kentucky Power Cooperative	Interim rate increase, RUS loan covenants, credit facility requirements, financial condition.
03/07	U-29157	LA	Louisiana Public Service Commission Staff	Cleco Power, LLC	Permanent (Phase II) storm damage cost recovery.
04/07	U-29764 Supplemental and Rebuttal	LA	Louisiana Public Service Commission Staff	Entergy Gulf States, Inc., Entergy Louisiana, LLC	Jurisdictional allocation of Entergy System Agreement equalization remedy receipts.
04/07	ER07-682-000 Affidavit	FERC	Louisiana Public Service Commission	Entergy Services, Inc. and the Entergy Operating Companies	Allocation of intangible and general plant and A&G expenses to production and state income tax effects on equalization remedy receipts.
04/07	ER07-684-000 Affidavit	FERC	Louisiana Public Service Commission	Entergy Services, Inc. and the Entergy Operating Companies	Fuel hedging costs and compliance with FERC USOA.



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05/07	ER07-682-000 Affidavit	FERC	Louisiana Public Service Commission	Entergy Services, Inc. and the Entergy Operating Companies	Allocation of intangible and general plant and A&G expenses to production and account 924 effects on MSS-3 equalization remedy payments and receipts.
06/07	U-29764	LA	Louisiana Public Service Commission Staff	Entergy Louisiana, LLC, Entergy Gulf States, Inc.	Show cause for violating LPSC Order on fuel hedging costs.
07/07	2006-00472	KY	Kentucky Industrial Utility Customers, Inc.	East Kentucky Power Cooperative	Revenue requirements, post-test year adjustments, TIER, surcharge revenues and costs, financial need.
07/07	ER07-956-000 Affidavit	FERC	Louisiana Public Service Commission	Entergy Services, Inc.	Storm damage costs related to Hurricanes Katrina and Rita and effects of MSS-3 equalization payments and receipts.
10/07	05-UR-103 Direct	WI	Wisconsin Industrial Energy Group	Wisconsin Electric Power Company, Wisconsin Gas, LLC	Revenue requirements, carrying charges on CWIP, amortization and return on regulatory assets, working capital, incentive compensation, use of rate base in lieu of capitalization, quantification and use of Point Beach sale proceeds.
10/07	05-UR-103 Surrebuttal	WI	Wisconsin Industrial Energy Group	Wisconsin Electric Power Company, Wisconsin Gas, LLC	Revenue requirements, carrying charges on CWIP, amortization and return on regulatory assets, working capital, incentive compensation, use of rate base in lieu of capitalization, quantification and use of Point Beach sale proceeds.
10/07	25060-U Direct	GA	Georgia Public Service Commission Public Interest Adversary Staff	Georgia Power Company	Affiliate costs, incentive compensation, consolidated income taxes, §199 deduction.
11/07	06-0033-E-CN Direct	WV	West Virginia Energy Users Group	Appalachian Power Company	IGCC surcharge during construction period and post-in-service date.
11/07	ER07-682-000 Direct	FERC	Louisiana Public Service Commission	Entergy Services, Inc. and the Entergy Operating Companies	Functionalization and allocation of intangible and general plant and A&G expenses.
01/08	ER07-682-000 Cross-Answering	FERC	Louisiana Public Service Commission	Entergy Services, Inc. and the Entergy Operating Companies	Functionalization and allocation of intangible and general plant and A&G expenses.
01/08	07-551-EL-AIR Direct	OH	Ohio Energy Group, Inc.	Ohio Edison Company, Cleveland Electric Illuminating Company, Toledo Edison Company	Revenue requirements.
02/08	ER07-956-000 Direct	FERC	Louisiana Public Service Commission	Entergy Services, Inc. and the Entergy Operating Companies	Functionalization of expenses, storm damage expense and reserves, tax NOL carrybacks in accounts, ADIT, nuclear service lives and effects on depreciation and decommissioning.

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03/08	ER07-956-000 Cross-Answering	FERC	Louisiana Public Service Commission	Entergy Services, Inc. and the Entergy Operating Companies	Functionalization of expenses, storm damage expense and reserves, tax NOL carrybacks in accounts, ADIT, nuclear service lives and effects on depreciation and decommissioning.
04/08	2007-00562, 2007-00563	KY	Kentucky Industrial Utility Customers, Inc.	Kentucky Utilities Co., Louisville Gas and Electric Co.	Merger surcredit.
04/08	26837 Direct Bond, Johnson, Thebert, Kollen Panel	GA	Georgia Public Service Commission Staff	SCANA Energy Marketing, Inc.	Rule Nisi complaint.
05/08	26837 Rebuttal Bond, Johnson, Thebert, Kollen Panel	GA	Georgia Public Service Commission Staff	SCANA Energy Marketing, Inc.	Rule Nisi complaint.
05/08	26837 Suppl Rebuttal Bond, Johnson, Thebert, Kollen Panel	GA	Georgia Public Service Commission Staff	SCANA Energy Marketing, Inc.	Rule Nisi complaint.
06/08	2008-00115	KY	Kentucky Industrial Utility Customers, Inc.	East Kentucky Power Cooperative, Inc.	Environmental surcharge recoveries, including costs recovered in existing rates, TIER.
07/08	27163 Direct	GA	Georgia Public Service Commission Public Interest Advocacy Staff	Atmos Energy Corp.	Revenue requirements, including projected test year rate base and expenses.
07/08	27163 Taylor, Kollen Panel	GA	Georgia Public Service Commission Public Interest Advocacy Staff	Atmos Energy Corp.	Affiliate transactions and division cost allocations, capital structure, cost of debt.
08/08	6680-CE-170 Direct	WI	Wisconsin Industrial Energy Group, Inc.	Wisconsin Power and Light Company	Nelson Dewey 3 or Colombia 3 fixed financial parameters.
08/08	6680-UR-116 Direct	WI	Wisconsin Industrial Energy Group, Inc.	Wisconsin Power and Light Company	CWIP in rate base, labor expenses, pension expense, financing, capital structure, decoupling.
08/08	6680-UR-116 Rebuttal	WI	Wisconsin Industrial Energy Group, Inc.	Wisconsin Power and Light Company	Capital structure.
08/08	6690-UR-119 Direct	WI	Wisconsin Industrial Energy Group, Inc.	Wisconsin Public Service Corp.	Prudence of Weston 3 outage, incentive compensation, Crane Creek Wind Farm incremental revenue requirement, capital structure.
09/08	6690-UR-119 Surrebuttal	WI	Wisconsin Industrial Energy Group, Inc.	Wisconsin Public Service Corp.	Prudence of Weston 3 outage, Section 199 deduction.

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09/08	08-935-EL-SSO, 08-918-EL-SSO	OH	Ohio Energy Group, Inc.	First Energy	Standard service offer rates pursuant to electric security plan, significantly excessive earnings test.
10/08	08-917-EL-SSO	OH	Ohio Energy Group, Inc.	AEP	Standard service offer rates pursuant to electric security plan, significantly excessive earnings test.
10/08	2007-00564, 2007-00565, 2008-00251 2008-00252	KY	Kentucky Industrial Utility Customers, Inc.	Louisville Gas and Electric Co., Kentucky Utilities Company	Revenue forecast, affiliate costs, ELG v ASL depreciation procedures, depreciation expenses, federal and state income tax expense, capitalization, cost of debt.
11/08	EL08-51	FERC	Louisiana Public Service Commission	Entergy Services, Inc.	Spindletop gas storage facilities, regulatory asset and bandwidth remedy.
11/08	35717	TX	Cities Served by Oncor Delivery Company	Oncor Delivery Company	Recovery of old meter costs, asset ADIT, cash working capital, recovery of prior year restructuring costs, levelized recovery of storm damage costs, prospective storm damage accrual, consolidated tax savings adjustment.
12/08	27800	GA	Georgia Public Service Commission	Georgia Power Company	AFUDC versus CWIP in rate base, mirror CWIP, certification cost, use of short term debt and trust preferred financing, CWIP recovery, regulatory incentive.
01/09	ER08-1056	FERC	Louisiana Public Service Commission	Entergy Services, Inc.	Entergy System Agreement bandwidth remedy calculations, including depreciation expense, ADIT, capital structure.
01/09	ER08-1056 Supplemental Direct	FERC	Louisiana Public Service Commission	Entergy Services, Inc.	Blytheville leased turbines; accumulated depreciation.
02/09	EL08-51 Rebuttal	FERC	Louisiana Public Service Commission	Entergy Services, Inc.	Spindletop gas storage facilities regulatory asset and bandwidth remedy.
02/09	2008-00409 Direct	KY	Kentucky Industrial Utility Customers, Inc.	East Kentucky Power Cooperative, Inc.	Revenue requirements.
03/09	ER08-1056 Answering	FERC	Louisiana Public Service Commission	Entergy Services, Inc.	Entergy System Agreement bandwidth remedy calculations, including depreciation expense, ADIT, capital structure.
03/09	U-21453, U-20925 U-22092 (Sub J) Direct	LA	Louisiana Public Service Commission Staff	Entergy Gulf States Louisiana, LLC	Violation of EGSI separation order, ETI and EGSL separation accounting, Spindletop regulatory asset.
04/09	Rebuttal				
04/09	2009-00040 Direct-Interim (Oral)	KY	Kentucky Industrial Utility Customers, Inc.	Big Rivers Electric Corp.	Emergency interim rate increase; cash requirements.

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04/09	PUC Docket 36530	TX	State Office of Administrative Hearings	Oncor Electric Delivery Company, LLC	Rate case expenses.
05/09	ER08-1056 Rebuttal	FERC	Louisiana Public Service Commission	Entergy Services, Inc.	Entergy System Agreement bandwidth remedy calculations, including depreciation expense, ADIT, capital structure.
06/09	2009-00040 Direct-Permanent	KY	Kentucky Industrial Utility Customers, Inc.	Big Rivers Electric Corp.	Revenue requirements, TIER, cash flow.
07/09	080677-EI	FL	South Florida Hospital and Healthcare Association	Florida Power & Light Company	Multiple test years, GBRA rider, forecast assumptions, revenue requirement, O&M expense, depreciation expense, Economic Stimulus Bill, capital structure.
08/09	U-21453, U-20925, U-22092 (Subdocket J) Supplemental Rebuttal	LA	Louisiana Public Service Commission	Entergy Gulf States Louisiana, LLC	Violation of EGSI separation order, ETI and EGSL separation accounting, Spindletop regulatory asset.
08/09	8516 and 29950	GA	Georgia Public Service Commission Staff	Atlanta Gas Light Company	Modification of PRP surcharge to include infrastructure costs.
09/09	05-UR-104 Direct and Surrebuttal	WI	Wisconsin Industrial Energy Group	Wisconsin Electric Power Company	Revenue requirements, incentive compensation, depreciation, deferral mitigation, capital structure, cost of debt.
09/09	09AL-299E	CO	CF&I Steel, Rocky Mountain Steel Mills LP, Climax Molybdenum Company	Public Service Company of Colorado	Forecasted test year, historic test year, proforma adjustments for major plant additions, tax depreciation.
09/09	6680-UR-117 Direct and Surrebuttal	WI	Wisconsin Industrial Energy Group	Wisconsin Power and Light Company	Revenue requirements, CWIP in rate base, deferral mitigation, payroll, capacity shutdowns, regulatory assets, rate of return.
10/09	09A-415E Answer	CO	Cripple Creek & Victor Gold Mining Company, et al.	Black Hills/CO Electric Utility Company	Cost prudence, cost sharing mechanism.
10/09	EL09-50 Direct	FERC	Louisiana Public Service Commission	Entergy Services, Inc.	Waterford 3 sale/leaseback accumulated deferred income taxes, Entergy System Agreement bandwidth remedy calculations.
10/09	2009-00329	KY	Kentucky Industrial Utility Customers, Inc.	Louisville Gas and Electric Company, Kentucky Utilities Company	Trimble County 2 depreciation rates.
12/09	PUE-2009-00030	VA	Old Dominion Committee for Fair Utility Rates	Appalachian Power Company	Return on equity incentive.

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12/09	ER09-1224 Direct	FERC	Louisiana Public Service Commission	Entergy Services, Inc.	Hypothetical versus actual costs, out of period costs, Spindletop deferred capital costs, Waterford 3 sale/leaseback ADIT.
01/10	ER09-1224 Cross-Answering	FERC	Louisiana Public Service Commission	Entergy Services, Inc.	Hypothetical versus actual costs, out of period costs, Spindletop deferred capital costs, Waterford 3 sale/leaseback ADIT.
01/10	EL09-50 Rebuttal  Supplemental Rebuttal	FERC	Louisiana Public Service Commission	Entergy Services, Inc.	Waterford 3 sale/leaseback accumulated deferred income taxes, Entergy System Agreement bandwidth remedy calculations.
02/10	ER09-1224 Final	FERC	Louisiana Public Service Commission	Entergy Services, Inc.	Hypothetical versus actual costs, out of period costs, Spindletop deferred capital costs, Waterford 3 sale/leaseback ADIT.
02/10	30442 Wackerly-Kollen Panel	GA	Georgia Public Service Commission Staff	Atmos Energy Corporation	Revenue requirement issues.
02/10	30442 McBride-Kollen Panel	GA	Georgia Public Service Commission Staff	Atmos Energy Corporation	Affiliate/division transactions, cost allocation, capital structure.
02/10	2009-00353	KY	Kentucky Industrial Utility Customers, Inc., Attorney General	Louisville Gas and Electric Company, Kentucky Utilities Company	Ratemaking recovery of wind power purchased power agreements.
03/10	2009-00545	KY	Kentucky Industrial Utility Customers, Inc.	Kentucky Power Company	Ratemaking recovery of wind power purchased power agreement.
03/10	E015/GR-09-1151	MN	Large Power Interveners	Minnesota Power	Revenue requirement issues, cost overruns on environmental retrofit project.
03/10	EL10-55	FERC	Louisiana Public Service Commission	Entergy Services, Inc., Entergy Operating Cos	Depreciation expense and effects on System Agreement tariffs.
04/10	2009-00459	KY	Kentucky Industrial Utility Customers, Inc.	Kentucky Power Company	Revenue requirement issues.
04/10	2009-00548, 2009-00549	KY	Kentucky Industrial Utility Customers, Inc.	Kentucky Utilities Company, Louisville Gas and Electric Company	Revenue requirement issues.
08/10	31647	GA	Georgia Public Service Commission Staff	Atlanta Gas Light Company	Revenue requirement and synergy savings issues.
08/10	31647 Wackerly-Kollen Panel	GA	Georgia Public Service Commission Staff	Atlanta Gas Light Company	Affiliate transaction and Customer First program issues.

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08/10	2010-00204	KY	Kentucky Industrial Utility Customers, Inc.	Louisville Gas and Electric Company, Kentucky Utilities Company	PPL acquisition of E.ON U.S. (LG&E and KU) conditions, acquisition savings, sharing deferral mechanism.
09/10	38339 Direct and Cross-Rebuttal	TX	Gulf Coast Coalition of Cities	CenterPoint Energy Houston Electric	Revenue requirement issues, including consolidated tax savings adjustment, incentive compensation FIN 48; AMS surcharge including roll-in to base rates; rate case expenses.
09/10	EL10-55	FERC	Louisiana Public Service Commission	Entergy Services, Inc., Entergy Operating Cos	Depreciation rates and expense input effects on System Agreement tariffs.
09/10	2010-00167	KY	Gallatin Steel	East Kentucky Power Cooperative, Inc.	Revenue requirements.
09/10	U-23327 Subdocket E Direct	LA	Louisiana Public Service Commission	SWEPCO	Fuel audit: SO2 allowance expense, variable O&M expense, off-system sales margin sharing.
11/10	U-23327 Rebuttal	LA	Louisiana Public Service Commission	SWEPCO	Fuel audit: SO2 allowance expense, variable O&M expense, off-system sales margin sharing.
09/10	U-31351	LA	Louisiana Public Service Commission Staff	SWEPCO and Valley Electric Membership Cooperative	Sale of Valley assets to SWEPCO and dissolution of Valley.
10/10	10-1261-EL-UNC	OH	Ohio OCC, Ohio Manufacturers Association, Ohio Energy Group, Ohio Hospital Association, Appalachian Peace and Justice Network	Columbus Southern Power Company	Significantly excessive earnings test.
10/10	10-0713-E-PC	WV	West Virginia Energy Users Group	Monongahela Power Company, Potomac Edison Power Company	Merger of First Energy and Allegheny Energy.
10/10	U-23327 Subdocket F Direct	LA	Louisiana Public Service Commission Staff	SWEPCO	AFUDC adjustments in Formula Rate Plan.
11/10	EL10-55 Rebuttal	FERC	Louisiana Public Service Commission	Entergy Services, Inc., Entergy Operating Cos	Depreciation rates and expense input effects on System Agreement tariffs.
12/10	ER10-1350 Direct	FERC	Louisiana Public Service Commission	Entergy Services, Inc. Entergy Operating Cos	Waterford 3 lease amortization, ADIT, and fuel inventory effects on System Agreement tariffs.
01/11	ER10-1350 Cross-Answering	FERC	Louisiana Public Service Commission	Entergy Services, Inc., Entergy Operating Cos	Waterford 3 lease amortization, ADIT, and fuel inventory effects on System Agreement tariffs.

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03/11	ER10-2001 Direct	FERC	Louisiana Public Service Commission	Entergy Services, Inc., Entergy Arkansas, Inc.	EAI depreciation rates.
04/11	Cross-Answering				
04/11	U-23327 Subdocket E	LA	Louisiana Public Service Commission Staff	SWEPSCO	Settlement, incl resolution of SO2 allowance expense, var O&M expense, sharing of OSS margins.
04/11	38306 Direct	TX	Cities Served by Texas- New Mexico Power Company	Texas-New Mexico Power Company	AMS deployment plan, AMS Surcharge, rate case expenses.
05/11	Suppl Direct				
05/11	11-0274-E-GI	WV	West Virginia Energy Users Group	Appalachian Power Company, Wheeling Power Company	Deferral recovery phase-in, construction surcharge.
05/11	2011-00036	KY	Kentucky Industrial Utility Customers, Inc.	Big Rivers Electric Corp.	Revenue requirements.
06/11	29849	GA	Georgia Public Service Commission Staff	Georgia Power Company	Accounting issues related to Vogtle risk-sharing mechanism.
07/11	ER11-2161 Direct and Answering	FERC	Louisiana Public Service Commission	Entergy Services, Inc. and Entergy Texas, Inc.	ETI depreciation rates; accounting issues.
07/11	PUE-2011-00027	VA	Virginia Committee for Fair Utility Rates	Virginia Electric and Power Company	Return on equity performance incentive.
07/11	11-346-EL-SSO 11-348-EL-SSO 11-349-EL-AAM 11-350-EL-AAM	OH	Ohio Energy Group	AEP-OH	Equity Stabilization Incentive Plan; actual earned returns; ADIT offsets in riders.
08/11	U-23327 Subdocket F Rebuttal	LA	Louisiana Public Service Commission Staff	SWEPSCO	Depreciation rates and service lives; AFUDC adjustments.
08/11	05-UR-105	WI	Wisconsin Industrial Energy Group	WE Energies, Inc.	Suspended amortization expenses; revenue requirements.
08/11	ER11-2161 Cross-Answering	FERC	Louisiana Public Service Commission	Entergy Services, Inc. and Entergy Texas, Inc.	ETI depreciation rates; accounting issues.
09/11	PUC Docket 39504	TX	Gulf Coast Coalition of Cities	CenterPoint Energy Houston Electric	Investment tax credit, excess deferred income taxes; normalization.
09/11	2011-00161 2011-00162	KY	Kentucky Industrial Utility Consumers, Inc.	Louisville Gas & Electric Company, Kentucky Utilities Company	Environmental requirements and financing.
10/11	11-4571-EL-UNC 11-4572-EL-UNC	OH	Ohio Energy Group	Columbus Southern Power Company, Ohio Power Company	Significantly excessive earnings.

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10/11	4220-UR-117 Direct	WI	Wisconsin Industrial Energy Group	Northern States Power-Wisconsin	Nuclear O&M, depreciation.
11/11	4220-UR-117 Surrebuttal	WI	Wisconsin Industrial Energy Group	Northern States Power-Wisconsin	Nuclear O&M, depreciation.
11/11	PUC Docket 39722	TX	Cities Served by AEP Texas Central Company	AEP Texas Central Company	Investment tax credit, excess deferred income taxes; normalization.
02/12	PUC Docket 40020	TX	Cities Served by Oncor	Lone Star Transmission, LLC	Temporary rates.
03/12	11AL-947E Answer	CO	Climax Molybdenum Company and CF&I Steel, L.P. d/b/a Evraz Rocky Mountain Steel	Public Service Company of Colorado	Revenue requirements, including historic test year, future test year, CACJA CWIP, contra-AFUDC.
03/12	2011-00401	KY	Kentucky Industrial Utility Customers, Inc.	Kentucky Power Company	Big Sandy 2 environmental retrofits and environmental surcharge recovery.
4/12	2011-00036 Direct Rehearing Supplemental Direct Rehearing	KY	Kentucky Industrial Utility Customers, Inc.	Big Rivers Electric Corp.	Rate case expenses, depreciation rates and expense.
04/12	10-2929-EL-UNC	OH	Ohio Energy Group	AEP Ohio Power	State compensation mechanism, CRES capacity charges, Equity Stabilization Mechanism
05/12	11-346-EL-SSO 11-348-EL-SSO	OH	Ohio Energy Group	AEP Ohio Power	State compensation mechanism, Equity Stabilization Mechanism, Retail Stability Rider.
05/12	11-4393-EL-RDR	OH	Ohio Energy Group	Duke Energy Ohio, Inc.	Incentives for over-compliance on EE/PDR mandates.
06/12	40020	TX	Cities Served by Oncor	Lone Star Transmission, LLC	Revenue requirements, including ADIT, bonus depreciation and NOL, working capital, self insurance, depreciation rates, federal income tax expense.
07/12	120015-EI	FL	South Florida Hospital and Healthcare Association	Florida Power & Light Company	Revenue requirements, including vegetation management, nuclear outage expense, cash working capital, CWIP in rate base.
07/12	2012-00063	KY	Kentucky Industrial Utility Customers, Inc.	Big Rivers Electric Corp.	Environmental retrofits, including environmental surcharge recovery.
09/12	05-UR-106	WI	Wisconsin Industrial Energy Group, Inc.	Wisconsin Electric Power Company	Section 1603 grants, new solar facility, payroll expenses, cost of debt.
10/12	2012-00221 2012-00222	KY	Kentucky Industrial Utility Customers, Inc.	Louisville Gas and Electric Company, Kentucky Utilities Company	Revenue requirements, including off-system sales, outage maintenance, storm damage, injuries and damages, depreciation rates and expense.



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<b>Date</b>	<b>Case</b>	<b>Jurisdiction</b>	<b>Party</b>	<b>Utility</b>	<b>Subject</b>
10/12	120015-EI Direct	FL	South Florida Hospital and Healthcare Association	Florida Power & Light Company	Settlement issues.
11/12	120015-EI Rebuttal	FL	South Florida Hospital and Healthcare Association	Florida Power & Light Company	Settlement issues.
10/12	40604	TX	Steering Committee of Cities Served by Oncor	Cross Texas Transmission, LLC	Policy and procedural issues, revenue requirements, including AFUDC, ADIT – bonus depreciation & NOL, incentive compensation, staffing, self-insurance, net salvage, depreciation rates and expense, income tax expense.
11/12	40627 Direct	TX	City of Austin d/b/a Austin Energy	City of Austin d/b/a Austin Energy	Rate case expenses.
12/12	40443	TX	Cities Served by SWEPCO	Southwestern Electric Power Company	Revenue requirements, including depreciation rates and service lives, O&M expenses, consolidated tax savings, CWIP in rate base, Turk plant costs.
12/12	U-29764	LA	Louisiana Public Service Commission Staff	Entergy Gulf States Louisiana, LLC and Entergy Louisiana, LLC	Termination of purchased power contracts between EGSL and ETI, Spindletop regulatory asset.
01/13	ER12-1384 Rebuttal	FERC	Louisiana Public Service Commission	Entergy Gulf States Louisiana, LLC and Entergy Louisiana, LLC	Little Gypsy 3 cancellation costs.
02/13	40627 Rebuttal	TX	City of Austin d/b/a Austin Energy	City of Austin d/b/a Austin Energy	Rate case expenses.
03/13	12-426-EL-SSO	OH	The Ohio Energy Group	The Dayton Power and Light Company	Capacity charges under state compensation mechanism, Service Stability Rider, Switching Tracker.
04/13	12-2400-EL-UNC	OH	The Ohio Energy Group	Duke Energy Ohio, Inc.	Capacity charges under state compensation mechanism, deferrals, rider to recover deferrals.
04/13	2012-00578	KY	Kentucky Industrial Utility Customers, Inc.	Kentucky Power Company	Resource plan, including acquisition of interest in Mitchell plant.
05/13	2012-00535	KY	Kentucky Industrial Utility Customers, Inc.	Big Rivers Electric Corporation	Revenue requirements, excess capacity, restructuring.
06/13	12-3254-EL-UNC	OH	The Ohio Energy Group, Inc.,  Office of the Ohio Consumers' Counsel	Ohio Power Company	Energy auctions under CBP, including reserve prices.
07/13	2013-00144	KY	Kentucky Industrial Utility Customers, Inc.	Kentucky Power Company	Biomass renewable energy purchase agreement.

**Expert Testimony Appearances  
of  
Lane Kollen  
As of September 2017**

<b>Date</b>	<b>Case</b>	<b>Jurisdct.</b>	<b>Party</b>	<b>Utility</b>	<b>Subject</b>
07/13	2013-00221	KY	Kentucky Industrial Utility Customers, Inc.	Big Rivers Electric Corporation	Agreements to provide Century Hawesville Smelter market access.
10/13	2013-00199	KY	Kentucky Industrial Utility Customers, Inc.	Big Rivers Electric Corporation	Revenue requirements, excess capacity, restructuring.
12/13	2013-00413	KY	Kentucky Industrial Utility Customers, Inc.	Big Rivers Electric Corporation	Agreements to provide Century Sebree Smelter market access.
01/14	ER10-1350	FERC	Louisiana Public Service Commission	Entergy Services, Inc.	Waterford 3 lease accounting and treatment in annual bandwidth filings.
02/14	U-32981	LA	Louisiana Public Service Commission	Entergy Louisiana, LLC	Montauk renewable energy PPA.
04/14	ER13-432 Direct	FERC	Louisiana Public Service Commission	Entergy Gulf States Louisiana, LLC and Entergy Louisiana, LLC	UP Settlement benefits and damages.
05/14	PUE-2013-00132	VA	HP Hood LLC	Shenandoah Valley Electric Cooperative	Market based rate; load control tariffs.
07/14	PUE-2014-00033	VA	Virginia Committee for Fair Utility Rates	Virginia Electric and Power Company	Fuel and purchased power hedge accounting, change in FAC Definitional Framework.
08/14	ER13-432 Rebuttal	FERC	Louisiana Public Service Commission	Entergy Gulf States Louisiana, LLC and Entergy Louisiana, LLC	UP Settlement benefits and damages.
08/14	2014-00134	KY	Kentucky Industrial Utility Customers, Inc.	Big Rivers Electric Corporation	Requirements power sales agreements with Nebraska entities.
09/14	E-015/CN-12-1163 Direct	MN	Large Power Intervenors	Minnesota Power	Great Northern Transmission Line; cost cap; AFUDC v. current recovery; rider v. base recovery; class cost allocation.
10/14	2014-00225	KY	Kentucky Industrial Utility Customers, Inc.	Kentucky Power Company	Allocation of fuel costs to off-system sales.
10/14	ER13-1508	FERC	Louisiana Public Service Commission	Entergy Services, Inc.	Entergy service agreements and tariffs for affiliate power purchases and sales; return on equity.
10/14	14-0702-E-42T 14-0701-E-D	WV	West Virginia Energy Users Group	First Energy-Monongahela Power, Potomac Edison	Consolidated tax savings; payroll; pension, OPEB, amortization; depreciation; environmental surcharge.
11/14	E-015/CN-12-1163 Surrebuttal	MN	Large Power Intervenors	Minnesota Power	Great Northern Transmission Line; cost cap; AFUDC v. current recovery; rider v. base recovery; class allocation.
11/14	05-376-EL-UNC	OH	Ohio Energy Group	Ohio Power Company	Refund of IGCC CWIP financing cost recoveries.

**Expert Testimony Appearances  
of  
Lane Kollen  
As of September 2017**

<b>Date</b>	<b>Case</b>	<b>Jurisdic.</b>	<b>Party</b>	<b>Utility</b>	<b>Subject</b>
11/14	14AL-0660E	CO	Climax, CF&I Steel	Public Service Company of Colorado	Historic test year v. future test year; AFUDC v. current return; CACJA rider, transmission rider, equivalent availability rider; ADIT; depreciation; royalty income; amortization.
12/14	EL14-026	SD	Black Hills Industrial Intervenor	Black Hills Power Company	Revenue requirement issues, including depreciation expense and affiliate charges.
12/14	14-1152-E-42T	WV	West Virginia Energy Users Group	AEP-Appalachian Power Company	Income taxes, payroll, pension, OPEB, deferred costs and write offs, depreciation rates, environmental projects surcharge.
01/15	9400-YO-100 Direct	WI	Wisconsin Industrial Energy Group	Wisconsin Energy Corporation	WEC acquisition of Integrys Energy Group, Inc.
01/15	14F-0336EG 14F-0404EG	CO	Development Recovery Company LLC	Public Service Company of Colorado	Line extension policies and refunds.
02/15	9400-YO-100 Rebuttal	WI	Wisconsin Industrial Energy Group	Wisconsin Energy Corporation	WEC acquisition of Integrys Energy Group, Inc.
03/15	2014-00396	KY	Kentucky Industrial Utility Customers, Inc.	AEP-Kentucky Power Company	Base, Big Sandy 2 retirement rider, environmental surcharge, and Big Sandy 1 operation rider revenue requirements, depreciation rates, financing, deferrals.
03/15	2014-00371 2014-00372	KY	Kentucky Industrial Utility Customers, Inc.	Kentucky Utilities Company and Louisville Gas and Electric Company	Revenue requirements, staffing and payroll, depreciation rates.
04/15	2014-00450	KY	Kentucky Industrial Utility Customers, Inc. and the Attorney General of the Commonwealth of Kentucky	AEP-Kentucky Power Company	Allocation of fuel costs between native load and off-system sales.
04/15	2014-00455	KY	Kentucky Industrial Utility Customers, Inc. and the Attorney General of the Commonwealth of Kentucky	Big Rivers Electric Corporation	Allocation of fuel costs between native load and off-system sales.
04/15	ER2014-0370	MO	Midwest Energy Consumers' Group	Kansas City Power & Light Company	Affiliate transactions, operation and maintenance expense, management audit.
05/15	PUE-2015-00022	VA	Virginia Committee for Fair Utility Rates	Virginia Electric and Power Company	Fuel and purchased power hedge accounting; change in FAC Definitional Framework.
05/15 09/15	EL10-65 Direct, Rebuttal Complaint	FERC	Louisiana Public Service Commission	Entergy Services, Inc.	Accounting for AFUDC Debt, related ADIT.

**Expert Testimony Appearances  
of  
Lane Kollen  
As of September 2017**

<b>Date</b>	<b>Case</b>	<b>Jurisdic.</b>	<b>Party</b>	<b>Utility</b>	<b>Subject</b>
07/15	EL10-65 Direct and Answering Consolidated Bandwidth Dockets	FERC	Louisiana Public Service Commission	Entergy Services, Inc.	Waterford 3 sale/leaseback ADIT, Bandwidth Formula.
09/15	14-1693-EL-RDR	OH	Public Utilities Commission of Ohio	Ohio Energy Group	PPA rider for charges or credits for physical hedges against market.
12/15	45188	TX	Cities Served by Oncor Electric Delivery Company	Oncor Electric Delivery Company	Hunt family acquisition of Oncor; transaction structure; income tax savings from real estate investment trust (REIT) structure; conditions.
12/15	6680-CE-176 Direct, Surrebuttal, Supplemental Rebuttal	WI	Wisconsin Industrial Energy Group, Inc.	Wisconsin Power and Light Company	Need for capacity and economics of proposed Riverside Energy Center Expansion project; ratemaking conditions.
01/16					
03/16 0/16 04/16 05/16 06/16	EL01-88 Remand Direct Answering Cross-Answering Rebuttal	FERC	Louisiana Public Service Commission	Entergy Services, Inc.	Bandwidth Formula: Capital structure, fuel inventory, Waterford 3 sale/leaseback, Vidalia purchased power, ADIT, Blythesville, Spindletop, River Bend AFUDC, property insurance reserve, nuclear depreciation expense.
03/16	15-1673-E-T	WV	West Virginia Energy Users Group	Appalachian Power Company	Terms and conditions of utility service for commercial and industrial customers, including security deposits.
04/16	39971 Panel Direct	GA	Georgia Public Service Commission Staff	Southern Company, AGL Resources, Georgia Power Company, Atlanta Gas Light Company	Southern Company acquisition of AGL Resources, risks, opportunities, quantification of savings, ratemaking implications, conditions, settlement.
04/16	2015-00343	KY	Office of the Attorney General	Atmos Energy Corporation	Revenue requirements, including NOL ADIT, affiliate transactions.
04/16	2016-00070	KY	Office of the Attorney General	Atmos Energy Corporation	R & D Rider.
05/16	2016-00026 2016-00027	KY	Kentucky Industrial Utility Customers, Inc.	Kentucky Utilities Co., Louisville Gas & Electric Co.	Need for environmental projects, calculation of environmental surcharge rider.
05/16	16-G-0058 16-G-0059	NY	New York City	Keyspan Gas East Corp., Brooklyn Union Gas Company	Depreciation, including excess reserves, leak prone pipe.
06/16	160088-EI	FL	South Florida Hospital and Healthcare Association	Florida Power and Light Company	Fuel Adjustment Clause Incentive Mechanism re: economy sales and purchases, asset optimization.

**Expert Testimony Appearances  
of  
Lane Kollen  
As of September 2017**

<b>Date</b>	<b>Case</b>	<b>Jurisdict.</b>	<b>Party</b>	<b>Utility</b>	<b>Subject</b>
07/16	160021-EI	FL	South Florida Hospital and Healthcare Association	Florida Power and Light Company	Revenue requirements, including capital recovery, depreciation, ADIT.
08/16	15-1022-EL-UNC 16-1105-EL-UNC	OH	Ohio Energy Group	AEP Ohio Power Company	SEET earnings, effects of other pending proceedings.
9/16	2016-00162	KY	Office of the Attorney General	Columbia Gas Kentucky	Revenue requirements, O&M expense, depreciation, affiliate transactions.
09/16	E-22 Sub 519, 532, 533	NC	Nucor Steel	Dominion North Carolina Power Company	Revenue requirements, deferrals and amortizations.
09/16	15-1256-G-390P (Reopened) 16-0922-G-390P	WV	West Virginia Energy Users Group	Mountaineer Gas Company	Infrastructure rider, including NOL ADIT and other income tax normalization and calculation issues.
10/16	10-2929-EL-UNC 11-346-EL-SSO 11-348-EL-SSO 11-349-EL-SSO 11-350-EL-SSO 14-1186-EL-RDR	OH	Ohio Energy Group	AEP Ohio Power Company	State compensation mechanism, capacity cost, Retail Stability Rider deferrals, refunds, SEET.
11/16	16-0395-EL-SSO Direct	OH	Ohio Energy Group	Dayton Power & Light Company	Credit support and other riders; financial stability of Utility, holding company.
12/16	Formal Case 1139	DC	Healthcare Council of the National Capital Area	Potomac Electric Power Company	Post test year adjust, merger costs, NOL ADIT, incentive compensation, rent.
01/17	46238	TX	Steering Committee of Cities Served by Oncor	Oncor Electric Delivery Company	Acquisition of Oncor by Next Era Energy; goodwill, transaction costs, transition costs, cost deferrals, ratemaking issues.
02/17	16-0395-EL-SSO Direct (Stipulation)	OH	Ohio Energy Group	Dayton Power & Light Company	Non-unanimous stipulation re: credit support and other riders; financial stability of utility, holding company.
02/17	45414	TX	Cities of Midland, McAllen, and Colorado City	Sharyland Utilities, LP, Sharyland Distribution & Transmission Services, LLC	Income taxes, depreciation, deferred costs, affiliate expenses.
03/17	2016-00370 2016-00371	KY	Kentucky Industrial Utility Customers, Inc.	Kentucky Utilities Company, Louisville Gas and Electric Company	AMS, capital expenditures, maintenance expense, amortization expense, depreciation rates and expense.
06/17	29849 (Panel with Philip Hayet)	GA	Georgia Public Service Commission Staff	Georgia Power Company	Vogtle 3 and 4 economics.

Expert Testimony Appearances  
of  
Lane Kollen  
As of September 2017

Date	Case	Jurisdiction	Party	Utility	Subject
08/17	17-0296-E-PC	WV	Public Service Commission of West Virginia Charleston	Monongahela Power Company, The Potomac Edison Power Company	ADIT, OPEB.

**EXHIBIT \_\_\_\_ (LK-2)**

## STIPULATION AND RECOMMENDATION

This Stipulation and Recommendation ("*Stipulation*") is entered into this 26<sup>th</sup> day of May, 2015, by and between Big Rivers Electric Corporation ("*Big Rivers*"), the Office of the Attorney General ("*AG*"), and Kentucky Industrial Utility Customers, Inc. ("*KIUC*") (collectively, the "*Signatory Parties*") in the proceedings involving Big Rivers that are the subject of this Stipulation, as set forth below:

### WITNESSETH:

**WHEREAS**, pursuant to 807 KAR 5:056, the Kentucky Public Service Commission ("*Commission*") established Case No. 2014-00230 to review and evaluate the reasonableness of the application of Big Rivers' fuel adjustment clause ("*FAC*") for the six-month period that ended on April 30, 2014, and the Commission established Case No. 2014-00455 to review and evaluate the reasonableness of the application of Big Rivers' FAC for the two-year period that ended on October 31, 2014, and consolidated it with Case No. 2014-00230;

**WHEREAS**, the Commission has granted the AG and KIUC full intervention in these proceedings;

**WHEREAS**, the AG and KIUC have raised issues relating to Big Rivers' FAC practices during the periods under review;

**WHEREAS**, the Signatory Parties have reviewed the issues raised in Case Nos. 2014-00230 and 2014-00455, and the Signatory Parties have reached a settlement of the case, including the issues raised therein, as embodied in this Stipulation;



**WHEREAS**, Big Rivers believes its current FAC methodology and practices are reasonable, but desires to allocate certain margins to its three distribution cooperative members (the "*Members*");

**WHEREAS**, Big Rivers expects to file an application for a general adjustment in rates during the first quarter of 2016 (the "*2016 Rate Case*"), in which Big Rivers will propose, among other things, to change its FAC calculation methodology to "stack" its generating units for purposes of allocating fuel costs between native load and off-system sales, allocating the highest fuel costs to off-system sales, with the rates proposed in that proceeding to become effective on or about November 1, 2016;

**WHEREAS**, the Signatory Parties desire to settle issues pending before the Commission in the above-referenced proceedings;

**WHEREAS**, the adoption of this Stipulation will reduce the resources required of the Commission to finalize these proceedings and eliminate the need for the Signatory Parties potentially to expend significant resources litigating these proceedings;

**WHEREAS**, the Signatory Parties agree that this Stipulation, viewed in its entirety, is a fair, just, and reasonable resolution of all of the issues in the above-referenced proceedings; and

**WHEREAS**, it is the position of the Signatory Parties that this Stipulation is supported by sufficient and adequate data and information and should be approved by the Commission.

**WHEREAS**, this Stipulation shall not be deemed to constitute an admission by any Signatory Party to this Stipulation that any computation, formula, allegation, assertion or contention made by any other Signatory Party in these proceedings is true or

valid. Nothing in this Stipulation shall be used or construed for any purpose to imply, suggest, or otherwise indicate that the results produced through the compromise reflected herein represent fully the objectives of the Stipulation.

**NOW, THEREFORE,** for and in consideration of the premises and terms and conditions set forth herein, the Signatory Parties stipulate and recommend as follows:

1. Big Rivers will credit \$311,111.11 (the "FAC Credit") each month through its FAC to its Members beginning on the wholesale invoices issued for August 2015 consumption. The FAC Credits shall cease upon the first to occur of the following:

- (a) The date of the fifteenth FAC Credit;
- (b) The effective date of new rates to be set in Big Rivers' next base rate case;
- (c) The date the methodology Big Rivers uses to allocate fuel costs to off-system sales for purposes of calculating FAC charges is changed from a system average cost methodology to a stacked-cost methodology; and
- (d) The date, if any, the Commission orders a refund of amounts collected through Big Rivers' FAC on the basis of the methodology Big Rivers uses to allocate fuel costs to off-system sales.

Any cessation of FAC Credits under (b), (c), and (d) shall take effect beginning with the month in which that change is effective.

2. In Big Rivers next base rate case, which it expects to file in the first quarter of 2016, Big Rivers shall propose, among other things, to change its FAC

calculation methodology to "stack" its generating units for purposes of allocating fuel costs between native load and off-system sales, allocating the highest fuel costs to off-system sales.

3. The AG and KIUC each agree not to contest, seek a change in, or oppose the manner in which Big Rivers allocates FAC costs between native load and off-system sales in any Commission proceeding initiated prior to November 1, 2016, or for any FAC review period prior to November 1, 2016, but shall not be prohibited in any respect from: (a) raising issues related to the manner in which Big Rivers allocates FAC costs between native load and off-system sales in FAC proceedings initiated by Commission order after November 1, 2016, for review periods after November 1, 2016, if Big Rivers has not changed its FAC calculation methodology to an hourly stacked-cost methodology; or (b) contesting the appropriateness of the changes proposed by Big Rivers to its FAC calculation methodology in the 2016 Rate Case or in any other proceeding initiated after November 1, 2016.

4. The Signatory Parties agree that the foregoing stipulations and agreements represent a fair, just, and reasonable resolution of the issues addressed herein, and request that the Commission approve the Stipulation.

5. The Signatory Parties agree that, following the execution of this Stipulation, they will cause the Stipulation to be filed with the Commission together with a request that the Commission consider and approve the Stipulation. The Signatory Parties agree that this Stipulation is subject to the acceptance of and approval by the Commission and the Rural Utilities Service ("RUS"), and they agree to act in good faith and to use their best efforts to seek the Commission's acceptance and approval of this

Stipulation. If the Commission approves this Stipulation without modification, the Signatory Parties each waive any right to appeal or to file an action seeking review of or to seek reconsideration of any order of the Commission issued in accordance with this Stipulation.

6. Upon execution of this Stipulation, Big Rivers will promptly seek all required RUS review and approvals.

7. The Signatory Parties agree that if the Commission or RUS does not accept and approve this Stipulation in its entirety and unchanged, or if the Commission or RUS imposes conditions on its acceptance and approval that are unacceptable to Big Rivers, then:

(a) This Stipulation shall be void and withdrawn by the Signatory Parties hereto from any further consideration by the Commission, and none of the Signatory Parties shall be bound by any of the provisions herein, provided that none of the Signatory Parties is precluded from advocating any position contained in this Stipulation; and

(b) Neither the terms of the Stipulation nor any matters raised during the negotiations of this Stipulation shall be binding on any of the Signatory Parties or be construed against any of the Signatory Parties.

8. Subsequent to obtaining all required Commission and RUS review and approvals, Big Rivers shall cause the tariff amendments attached hereto as Exhibit A to be filed with the Commission. The Signatory Parties recommend that the Commission allow the tariff amendments to become effective without suspension or change.

9. The Signatory Parties hereto agree that this Stipulation shall inure to the benefit of and be binding upon the Signatory Parties hereto, their successors, and assigns.

10. The Signatory Parties hereto agree that this Stipulation constitutes the complete agreement and understanding among the Signatory Parties hereto, and any and all oral statements, representations or agreements made prior hereto or contemporaneously herewith shall be null and void and shall be deemed to have been merged into this Stipulation.

11. The Signatory Parties hereto agree that, for purposes of this Stipulation only, the terms of this Stipulation are based upon the independent analyses of the Signatory Parties, reflect a fair, just, and reasonable resolution of the issues herein, and are the product of compromise and negotiation.

12. The Stipulation shall not have any precedential value in this or any other jurisdiction.

13. Counsel for KIUC hereto warrants that he or she has informed, advised, and consulted with the KIUC members participating in these proceedings in regard to the contents and the significance of this Stipulation, and based upon the foregoing, is authorized to execute this Stipulation on behalf of those clients. The other Signatory Parties hereto warrant that they have informed, advised, and consulted with their respective clients in regard to the contents and the significance of this Stipulation, and based upon the foregoing, are authorized to execute this Stipulation on behalf of those clients.

14. The Signatory Parties agree that this Stipulation being a product of negotiation among all Signatory Parties, no provision of this Stipulation shall be strictly construed in favor of or against any party.

15. The Signatory Parties hereto agree that this Stipulation may be executed in multiple counterparts.

The Attorney General of Kentucky, by and through  
his Office of the Rate Intervention Division

By: 

Kentucky Industrial Utility Customers, Inc.

By: \_\_\_\_\_

Big Rivers Electric Corporation

By: \_\_\_\_\_

14. The Signatory Parties agree that this Stipulation being a product of negotiation among all Signatory Parties, no provision of this Stipulation shall be strictly construed in favor of or against any party.

15. The Signatory Parties hereto agree that this Stipulation may be executed in multiple counterparts.

The Attorney General of Kentucky, by and through  
his Office of the Rate Intervention Division

By: Mill P. Hunt

Kentucky Industrial Utility Customers, Inc.

By: \_\_\_\_\_

Big Rivers Electric Corporation

By: \_\_\_\_\_

14. The Signatory Parties agree that this Stipulation being a product of negotiation among all Signatory Parties, no provision of this Stipulation shall be strictly construed in favor of or against any party.

15. The Signatory Parties hereto agree that this Stipulation may be executed in multiple counterparts.

The Attorney General of Kentucky, by and through  
his Office of the Rate Intervention Division

By: \_\_\_\_\_

Kentucky Industrial Utility Customers, Inc.

By: \_\_\_\_\_

Big Rivers Electric Corporation

By: Robert W. Bennett



## FAC - Fuel Adjustment Clause

### Applicability:

To all Big Rivers' Members.

### Availability:

The Fuel Adjustment Clause ("FAC") is a mandatory rider to all wholesale sales by Big Rivers to its Members, including Base Energy sales to the Smelters under the Smelter Agreements but excluding Supplemental and Back-Up Energy sales to the Smelters under those two Agreements.

### Rate:

The FAC shall provide for periodic adjustment per kWh of sales when the unit cost of fuel  $[F(m)/S(m)]$  is above or below the base unit cost of \$0.020932 per kWh  $[F(b)/S(b)]$ . The current monthly charges shall be increased or decreased by the product of the kWh furnished during the current month and the FAC factor for the preceding month where the FAC factor is defined below:

$$\text{FAC Factor} = \frac{F(m)}{S(m)} - \frac{F(b)}{S(b)}$$

Where "F" is the expense of fossil fuel in the base (b) and current (m) periods; and S is sales in the base (b) and current (m) periods as defined in 807 KAR 5:056, all defined below:

### Definitions:

Please see Section 4 for definitions common to all tariffs.

(1) Fuel cost (F) shall be the most recent actual monthly cost of:

- (a) Fossil fuel consumed in the utility's own plants, and the utility's share of fossil and nuclear fuel consumed in jointly owned or leased plants, plus the cost of fuel which would have been used in plants suffering forced generation or transmission outages, but less the cost of fuel related to substitute generation, plus
- (b) The actual identifiable fossil and nuclear fuel costs associated with energy purchased for reasons other than identified in paragraph (c) below, but excluding the cost of fuel related to purchases to substitute the forced outages, plus
- (c) The net energy cost of energy purchases, exclusive of capacity or demand charges (irrespective of the designation assigned to such transaction) when such energy is purchased on an economic dispatch basis and exclusive of energy purchases directly related to Supplemental and Back-Up Energy sales to the Smelters. Included therein may be such costs as the charges for economy energy purchased and the charges as a result of scheduled outages, also such kinds of energy being purchased by the buyer to substitute for its own higher cost energy; ~~and less~~
- (d) The cost of fossil fuel, as denoted in (1)(a) above, recovered through inter-system sales including the fuel costs related to economy energy sales and other energy sold on an economic dispatch basis; and less
- (e) A monthly credit of \$311,111.11 for each month from the August 2015 service month, through the October 2016 service month, except that if Big Rivers' FAC methodology is changed to a

stacking methodology prior to November 1, 2016, or if Big Rivers is ordered to refund amounts collected through its FAC based on its allocation methodology prior to November 1, 2016, the monthly credit shall be zero. In all other months, the monthly credit shall be zero.

All fuel costs shall be based on weighted average inventory costing.

- (2) Forced outages are all non-scheduled losses of generation or transmission which require substitute power for a continuous period in excess of six (6) hours. Where forced outages are not a result of faulty equipment, faulty manufacture, faulty design, faulty installations, faulty operation, or faulty maintenance, but are Acts of God, riot, insurrection or acts of public enemy, the utility may, upon proper showing, with the approval of the Commission, include the fuel cost of substitute energy in the adjustment.
- (3) Sales (S) shall be kWh sold, excluding inter-system sales and Supplemental and Back-Up Energy sales to the Smelters. Where for any reason, billed system sales cannot be coordinated with fuel costs for the billing period, sales may be equated to the sum of:
  - (i) generation, plus
  - (ii) purchases, plus
  - (iii) interchange in, less
  - (iv) energy associated with pumped storage operations, less
  - (v) inter-system sales referred to in subsection (1)(d) above, less
  - (vi) total system losses.

Utility-used energy shall not be excluded in the determination of sales (S).

- (4) The cost of fossil fuel shall include no items other than the invoice price of fuel less any cash or other discounts. The invoice price of fuel includes the cost of the fuel itself and necessary charges for transportation of the fuel from the point of acquisition to the unloading point, as listed in Account 151 of the FERC Uniform System of Accounts for Public Utilities and Licenses.
- (5) Current (m) period shall be the second month preceding the month in which the FAC factor is billed.

**EXHIBIT \_\_\_\_ (LK-3)**

**BIG RIVERS ELECTRIC CORPORATION**

**AN EXAMINATION OF THE APPLICATION OF THE FUEL  
ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION  
FROM NOVEMBER 1, 2016 THROUGH APRIL 30, 2017  
CASE NO. 2017-00287**

**Responses to the Kentucky Industrial Utility Customers, Inc.'s  
Request for Information  
Dated September 18, 2017**

**September 29, 2017**

1 **Item 1)** *Please generally describe the process by which Big Rivers*  
2 *allocates fuel costs between native load and off-system sales for Fuel*  
3 *Adjustment Charge (FAC) purposes.*

4  
5 **Response)** Big Rivers accounts for its fuel inventory using weighted average  
6 inventory costing. The total cost of coal, pet coke, oil, gas, and propane burned for  
7 generation by each of Big Rivers' units during the month is calculated by  
8 multiplying the volumes (*i.e.*, tons, gallons, or MCF) used for generation by the  
9 weighted average cost per unit for the respective fuel.

10 The total costs of coal, pet coke, oil, gas, and propane burned for  
11 generation by all of Big Rivers' units during the expense month are included in  
12 the Fuel Cost Schedule (Page 2 of Big Rivers' monthly Form A filing), under  
13 Company Generation, for purposes of calculating the total fuel cost to be recovered  
14 from Big Rivers' Members through the Fuel Adjustment Clause (FAC).

15 An overall system weighted average generation fuel cost per net  
16 MWh is calculated each month by dividing the total cost of fuel used for  
17 generation by the net MWh generated (after accounting for line losses). Fuel costs  
18 are then allocated to off-system sales by multiplying the system weighted average  
19 system generation fuel cost per net MWh (after accounting for line losses) by the  
20 total off-system sales volume (MWh) during the month.

21 The total fuel cost allocated to off-system sales each month is  
22 included in the Inter-System Sales Including Interchange-Out line on Big Rivers'

**BIG RIVERS ELECTRIC CORPORATION**

**AN EXAMINATION OF THE APPLICATION OF THE FUEL  
ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION  
FROM NOVEMBER 1, 2016 THROUGH APRIL 30, 2017  
CASE NO. 2017-00287**

**Responses to the Kentucky Industrial Utility Customers, Inc.'s  
Request for Information  
Dated September 18, 2017**

**September 29, 2017**

1 Fuel Cost Schedule, and subtracted from the total fuel expense to be recovered  
2 from Big Rivers' Members for purposes of calculating the monthly FAC factor.

3

4

5 **Witness)** Nicholas R. Castlen

6

**EXHIBIT \_\_\_\_ (LK-4)**

**BIG RIVERS ELECTRIC CORPORATION**

**AN EXAMINATION OF THE APPLICATION OF THE FUEL  
ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION  
FROM NOVEMBER 1, 2016 THROUGH APRIL 30, 2017  
CASE NO. 2017-00287**

**Responses to the Kentucky Industrial Utility Customers, Inc.'s  
Request for Information  
Dated September 18, 2017**

**September 29, 2017**

1 **Item 11) For each month during the period under review in this**  
2 **proceeding, please provide the dollar amount of fuel costs that would have**  
3 **been included in the calculation of the fuel adjustment clause if Big**  
4 **Rivers had assigned its lowest fuel cost generation to native load**  
5 **customers each hour and compare that amount to the dollar amount that**  
6 **was included in the calculation. Please provide the information in the**  
7 **same format as the Attachment to Big Rivers' Response to Commission**  
8 **Staff's Third Request for Information, Item No. 1.c. in Case No. 2014-00230.**  
9 **Please provide all workpapers electronically in spreadsheet format, with**  
10 **all formulas intact. In responding to this Request please ignore any**  
11 **dollar impacts associated with the \$311,111.11 monthly "FAC Credit" paid**  
12 **by Big Rivers pursuant to the Stipulation and Recommendation in Case**  
13 **No. 2014-00455.**

14

15 **Response) Big Rivers objects to this request on the grounds that it is overly**  
16 **broad and unduly burdensome. Big Rivers further objects to this request on the**  
17 **grounds that it is irrelevant and unreasonable because Big Rivers' current**  
18 **methodology is reasonable and consistent with Commission precedent. Big Rivers'**  
19 **current fuel cost allocation is built into the determination of its base rates. Big**  
20 **Rivers' fuel cost allocation methodology was used in the test periods filed in Big**  
21 **Rivers' last three rate cases and to establish Big Rivers' current rates, which were**  
22 **approved by the Commission as fair, just, and reasonable. It would be**

**BIG RIVERS ELECTRIC CORPORATION**

**AN EXAMINATION OF THE APPLICATION OF THE FUEL  
ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION  
FROM NOVEMBER 1, 2016 THROUGH APRIL 30, 2017  
CASE NO. 2017-00287**

**Responses to the Kentucky Industrial Utility Customers, Inc.'s  
Request for Information  
Dated September 18, 2017**

**September 29, 2017**

1 unreasonable and a violation of the matching principle to change how Big Rivers  
2 allocates fuel costs between native load and off-system sales for purposes of  
3 calculating FAC charges outside of a general rate case where the reasonableness  
4 of alternate allocations can be considered in the context of Big Rivers' overall  
5 financial circumstances, including whether Big Rivers' rates are still fair, just and  
6 reasonable with such a change.

7           Notwithstanding that objection, Big Rivers has calculated an  
8 estimated impact of "stacking" Big Rivers' units in a method it believes to be  
9 similar to that requested by KIUC. Given the time and inherent complexity  
10 required to perform an hourly stacking calculation, Big Rivers has approximated  
11 the impact by "stacking" on a monthly basis. Please see the attachment to this  
12 response. An Excel file containing this attachment, including all workpapers in  
13 spreadsheet format with formulas intact, is provided on the CD accompanying  
14 these responses.

15

16

17 Witness) Lindsay N. Durbin

18



**Big Rivers Electric Corporation  
Case No. 2017-00287**

	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	Total
<b>As Filed:</b>							
Total Generation Fuel Cost	\$ 12,194,218	\$ 16,419,188	\$ 14,677,605	\$ 7,111,193	\$ 10,042,142	\$ 10,253,333	\$ 70,697,679
Less: MISO Make Whole Payments	(2,110)	(15,222)	(6,508)	(582)	(7,468)	-	(31,890)
Less: Net Forced Outage Fuel Cost Adjustment <sup>(1)</sup>	(76,576)	(60,896)	(179,523)	(67,362)	(126,735)	(203,746)	(714,838)
Less: Fuel Cost Assigned to Off-System Sales from Generation	(8,319,336)	(11,063,491)	(9,846,618)	(3,756,644)	(5,769,064)	(7,200,859)	(45,956,011)
<b>Total Generation Fuel Cost Assigned to Native Load</b>	<b>\$ 3,796,196</b>	<b>\$ 5,279,579</b>	<b>\$ 4,644,956</b>	<b>\$ 3,286,605</b>	<b>\$ 4,138,875</b>	<b>\$ 2,848,728</b>	<b>\$ 23,994,940</b>
Native Load Sales Volumes from Generation (MWh)	164,361.130	215,737.089	197,189.810	125,947.203	167,855.330	123,717.554	994,808.116
<b>Average Generation Fuel Cost Assigned to Native Load (\$/MWh)</b>	<b>\$ 23.10</b>	<b>\$ 24.47</b>	<b>\$ 23.56</b>	<b>\$ 26.10</b>	<b>\$ 24.66</b>	<b>\$ 23.03</b>	<b>\$ 24.12</b>
<b>Proforma - Using Stacking Method</b>							
Generation Fuel Cost Assigned to Native Load	\$ 4,098,329	\$ 5,617,823	\$ 5,048,584	\$ 3,343,598	\$ 4,360,634	\$ 3,043,279	\$ 25,512,247
Less: MISO Make Whole Payments <sup>(2)</sup>	(76,576)	(60,896)	(179,523)	(67,362)	(126,735)	(203,746)	(714,838)
Less: Net Forced Outage Fuel Cost Adjustment	(76,576)	(60,896)	(179,523)	(67,362)	(126,735)	(203,746)	(714,838)
<b>Total Generation Fuel Cost Assigned to Native Load</b>	<b>\$ 4,021,753</b>	<b>\$ 5,556,927</b>	<b>\$ 4,869,061</b>	<b>\$ 3,276,236</b>	<b>\$ 4,233,899</b>	<b>\$ 2,839,533</b>	<b>\$ 24,797,409</b>
Native Load Sales Volumes from Generation (MWh)	164,361.130	215,737.089	197,189.810	125,947.203	167,855.330	123,717.554	994,808.116
<b>Average Generation Fuel Cost Assigned to Native Load (\$/MWh)</b>	<b>\$ 24.47</b>	<b>\$ 25.76</b>	<b>\$ 24.69</b>	<b>\$ 26.01</b>	<b>\$ 25.22</b>	<b>\$ 22.95</b>	<b>\$ 24.93</b>
<b>Difference:</b>							
Difference in Total Fuel Cost Allocated to Native Load	\$ (225,557)	\$ (277,348)	\$ (224,105)	\$ 10,370	\$ (95,024)	\$ 9,195	\$ (802,469)
Difference in Average Fuel Cost Allocated to Native Load (\$/MWh)	\$ (1.37)	\$ (1.29)	\$ (1.13)	\$ 0.09	\$ (0.56)	\$ 0.08	\$ (0.81)

<sup>(1)</sup> Net Forced Outage Fuel Cost Adjustment = Fuel (assigned cost during Forced Outage) - Fuel (substitute cost for Forced Outage) - Identifiable fuel cost (substitute for Forced Outage)

<sup>(2)</sup> During the review period, MISO Make Whole Payments received for start-up fuel costs related to the Reid Cf (for Nov. 2016 through Apr. 2017) and Green Unit 2 (for Mar. 2017 only). Because none of the generation from these units were assigned to native load during those months under the stacking method, none of the corresponding MISO Make Whole Payments received were assigned to native load under the stacking method.

Case No. 2017-00287

Attachment for Response to KIUC Item 11

Witnesses: Lindsay N. Durbin and Nicholas R. Castlen

Page 1 of 1

**Big Rivers Electric Corporation  
Case No. 2017-00287**

	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	Total
<b>As Filed:</b>							
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Less: MISO Make Whole Payments	(2,110)	(15,222)	(6,508)	(582)	(7,468)	-	(31,890)
Less: Net Forced Outage Fuel Cost Adjustment <sup>(1)</sup>	(76,576)	(60,896)	(179,523)	(67,362)	(126,735)	(203,746)	(714,838)
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Less: MISO Make Whole Payments <sup>(2)</sup>	-	-	-	-	-	-	-
Less: Net Forced Outage Fuel Cost Adjustment	(76,576)	(60,896)	(179,523)	(67,362)	(126,735)	(203,746)	(714,838)
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<b>Difference:</b>							
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Difference in Average Fuel Cost Allocated to Native Load (\$/MWh)	\$ (1.37)	\$ (1.29)	\$ (1.13)	\$ 0.09	\$ (0.56)	\$ 0.08	\$ (0.81)

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KIUC 1-11 (Case No. 2017-00287)  
Stacking Calculations for Assigning Fuel Cost to Native Load

	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	Total
<b>Total Generation Fuel Cost by Unit (\$):</b>							
Reid - Unit 1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Coleman - Unit 1	-	-	-	-	-	-	-
Coleman - Unit 2	-	-	-	-	-	-	-
Coleman - Unit 3	-	-	-	-	-	-	-
Station Two - Unit 1	1,180,544.15	1,502,200.65	1,115,797.24	729,308.46	797,341.52	535,847.49	5,861,039.51
Station Two - Unit 2	1,196,643.71	1,559,949.69	1,099,210.03	362,312.96	1,210,518.29	852,968.52	6,281,603.20
Reid CT	3,080.00	55,407.86	12,670.40	7,673.80	6,159.37	-	84,991.43
Wilson	5,290,307.85	6,196,251.77	6,307,935.18	3,461,567.31	4,609,216.05	5,097,845.34	30,963,123.50
Green - Unit 1	2,001,571.19	3,618,682.28	3,300,054.00	848,535.60	1,874,060.39	2,801,446.25	14,244,349.71
Green - Unit 2	2,522,070.61	3,486,695.49	3,041,938.59	1,701,794.69	1,544,846.07	965,225.47	13,262,570.92
<b>Total Generation Fuel Cost (\$)</b>	<b>\$ 12,194,217.51</b>	<b>\$ 16,419,187.74</b>	<b>\$ 14,677,605.44</b>	<b>\$ 7,111,192.82</b>	<b>\$ 10,042,141.69</b>	<b>\$ 10,253,333.07</b>	<b>\$ 70,697,678.27</b>

	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	Total
<b>Net Generation by Unit (Before Losses) (MWh):</b>							
Reid - Unit 1	(1,394,000)	(1,589,000)	(1,625,000)	(1,488,000)	(1,548,000)	(1,431,000)	(9,075,000)
Coleman - Unit 1	(242,000)	(334,000)	(298,000)	(243,000)	(288,000)	(232,000)	(1,637,000)
Coleman - Unit 2	(242,000)	(334,000)	(297,000)	(244,000)	(288,000)	(232,000)	(1,637,000)
Coleman - Unit 3	(242,000)	(333,000)	(297,000)	(244,000)	(288,000)	(232,000)	(1,636,000)
Station Two - Unit 1	45,431,348	54,653,233	40,089,448	27,646,583	28,008,194	20,793,137	216,531,943
Station Two - Unit 2	43,955,652	56,561,767	39,625,552	12,028,417	44,792,806	31,790,863	228,755,057
Reid CT	(17,000)	578,000	49,000	90,000	17,000	-	667,000
Wilson	240,258,820	273,206,790	277,894,950	143,232,610	194,753,880	212,626,630	1,341,973,680
Green - Unit 1	88,531,425	154,347,274	134,573,230	33,539,595	82,573,028	128,736,934	622,301,495
Green - Unit 2	117,391,977	149,681,853	131,738,073	73,186,634	64,941,261	40,038,907	576,978,705
<b>Total Net Generation (Before Losses) (MWh)</b>	<b>533,432,222</b>	<b>686,438,917</b>	<b>621,453,262</b>	<b>287,504,839</b>	<b>412,674,169</b>	<b>431,719,471</b>	<b>2,973,222,880</b>

	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	Total
<b>Total System Losses:</b>	<b>16,168,064</b>	<b>25,024,610</b>	<b>22,344,292</b>	<b>20,516,008</b>	<b>18,198,904</b>	<b>16,138,326</b>	<b>118,390,204</b>
<b>Allocation of System Losses to Generation Units</b>							
Reid - Unit 1	(42,251)	(57,928)	(58,427)	(106,182)	(68,267)	(53,493)	(386,548)
Coleman - Unit 1	(7,335)	(12,176)	(10,715)	(17,340)	(12,701)	(8,673)	(68,939)
Coleman - Unit 2	(7,335)	(12,176)	(10,679)	(17,412)	(12,701)	(8,673)	(68,975)
Coleman - Unit 3	(7,335)	(12,140)	(10,679)	(17,412)	(12,701)	(8,673)	(68,938)
Station Two - Unit 1	1,377,001	1,992,422	1,441,412	1,972,828	1,235,160	773,915	8,792,737
Station Two - Unit 2	1,332,274	2,061,999	1,424,733	858,334	1,975,360	1,188,390	8,841,089
Reid CT	(0,515)	21,071	1,762	6,422	0,750	(1,869)	27,621
Wilson	7,282,125	9,959,944	9,991,686	10,220,911	8,588,633	7,948,305	53,991,604
Green - Unit 1	2,683,343	5,626,838	4,838,568	2,393,346	3,641,465	4,812,381	23,995,941
Green - Unit 2	3,558,092	5,456,756	4,736,630	5,222,512	2,863,905	1,496,715	23,334,611
<b>Total System Losses (MWh)</b>	<b>16,168,064</b>	<b>25,024,610</b>	<b>22,344,292</b>	<b>20,516,008</b>	<b>18,198,904</b>	<b>16,138,326</b>	<b>118,390,204</b>

	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	Total
<b>Net Generation by Unit (After Allocated Losses):</b>							
Reid - Unit 1	(1,351,749)	(1,531,072)	(1,566,573)	(1,381,818)	(1,479,733)	(1,377,507)	(8,688,452)
Coleman - Unit 1	(234,665)	(321,824)	(287,285)	(225,660)	(275,299)	(223,327)	(1,568,060)
Coleman - Unit 2	(234,665)	(321,824)	(286,321)	(226,588)	(275,299)	(223,327)	(1,568,024)
Coleman - Unit 3	(234,665)	(320,860)	(286,321)	(226,588)	(275,299)	(223,327)	(1,567,060)
Station Two - Unit 1	44,054,347	52,660,811	38,648,036	25,673,755	26,773,034	19,929,222	207,739,205
Station Two - Unit 2	42,623,378	54,499,768	38,200,819	11,170,083	42,817,446	30,602,473	219,913,967
Reid CT	(16,485)	556,929	47,238	83,578	16,250	(48,131)	639,379
Wilson	232,976,695	263,246,846	267,903,264	133,011,699	186,165,247	204,678,325	1,287,982,076
Green - Unit 1	85,848,082	148,720,436	129,734,671	31,146,249	78,931,563	123,924,553	598,305,554
Green - Unit 2	113,833,885	144,225,097	127,001,443	67,964,122	62,077,356	38,542,192	553,644,095
<b>Total Net Generation (After Losses) (MWh)</b>	<b>517,264,158</b>	<b>661,414,307</b>	<b>599,108,971</b>	<b>266,988,832</b>	<b>394,475,266</b>	<b>415,581,146</b>	<b>2,854,832,680</b>

KIUC 1-11 (Case No. 2017-00287)  
Stacking Calculations for Assigning Fuel Cost to Native Load

Average Fuel Cost per Net MWh of Generation (After Losses) (\$/MWh):	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	Total
Reid - Unit 1	N/A	N/A	N/A	N/A	N/A	N/A	\$ -
Coleman - Unit 1	N/A	N/A	N/A	N/A	N/A	N/A	\$ -
Coleman - Unit 2	N/A	N/A	N/A	N/A	N/A	N/A	\$ -
Coleman - Unit 3	N/A	N/A	N/A	N/A	N/A	N/A	\$ -
Station Two - Unit 1	\$ 26,797	\$ 28,526	\$ 28,871	\$ 28,407	\$ 29,782	\$ 26,888	\$ 28,213
Station Two - Unit 2	\$ 28,075	\$ 28,623	\$ 28,775	\$ 32,436	\$ 28,272	\$ 27,873	\$ 28,564
Reid CT	N/A	\$ 99,488	\$ 268,225	\$ 91,816	\$ 379,038	N/A	\$ 132,928
Wilson	\$ 22,707	\$ 23,538	\$ 23,546	\$ 26,025	\$ 24,759	\$ 24,907	\$ 24,040
Green - Unit 1	\$ 23,315	\$ 24,332	\$ 23,895	\$ 27,244	\$ 23,743	\$ 22,606	\$ 23,808
Green - Unit 2	\$ 22,156	\$ 24,175	\$ 23,952	\$ 25,040	\$ 24,886	\$ 25,043	\$ 23,955
<b>Average Fuel Cost per Net MWh of Gen (After Losses) (\$/MWh)</b>	<b>\$ 23,574</b>	<b>\$ 24,824</b>	<b>\$ 24,499</b>	<b>\$ 26,635</b>	<b>\$ 25,457</b>	<b>\$ 24,672</b>	<b>\$ 24,764</b>

Average Fuel Cost for Stacked Units:

1st	\$ 26,797	\$ 28,526	\$ 28,775	\$ 28,407	\$ 28,272	\$ 26,888
2nd	\$ 28,075	\$ 28,623	\$ 28,871	\$ 32,436	\$ 29,782	\$ 27,873
3rd	\$ 22,156	\$ 23,538	\$ 23,546	\$ 25,040	\$ 23,743	\$ 22,606
4th	\$ 22,707	\$ 24,175	\$ 23,895	\$ 26,025	\$ 24,759	\$ 24,907
5th	\$ 23,315	\$ 24,332	\$ 23,952	\$ 27,244	\$ 24,886	\$ 25,043

Unit Rank in Stack

1st	Station Two - Unit 1	Station Two - Unit 1	Station Two - Unit 2	Station Two - Unit 1	Station Two - Unit 2	Station Two - Unit 1
2nd	Station Two - Unit 2	Station Two - Unit 2	Station Two - Unit 1	Station Two - Unit 2	Station Two - Unit 1	Station Two - Unit 2
3rd	Green - Unit 2	Wilson	Wilson	Green - Unit 2	Green - Unit 1	Green - Unit 1
4th	Wilson	Green - Unit 2	Green - Unit 1	Wilson	Wilson	Wilson
5th	Green - Unit 1	Green - Unit 1	Green - Unit 2	Green - Unit 1	Green - Unit 2	Green - Unit 2

<b>Native Load Sales from Generation (MWh)</b>	<b>164,361.130</b>	<b>215,737.089</b>	<b>197,189.810</b>	<b>125,947.203</b>	<b>167,855.330</b>	<b>123,717.554</b>	<b>994,808.116</b>
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Volumes (MWh) Units by Stacking Position:

1st	44,054.347	52,660.811	38,200.819	25,673.735	42,817.446	19,929.222
2nd	42,623.378	54,499.768	38,648.036	11,170.083	26,773.034	30,602.473
3rd	77,683.405	108,576.510	120,340.955	67,964.122	78,931.563	73,185.859
4th				21,139.243	19,333.287	
5th						
<b>Total</b>	<b>164,361.130</b>	<b>215,737.089</b>	<b>197,189.810</b>	<b>125,947.203</b>	<b>167,855.330</b>	<b>123,717.554</b>

Fuel Costs Allocated to Native Load by Unit:

1st	\$ 1,180,524.34	\$ 1,502,202.29	\$ 1,099,228.57	\$ 729,314.36	\$ 1,210,534.83	\$ 535,856.92	\$ 6,257,661.31
2nd	\$ 1,196,651.34	\$ 1,559,946.86	\$ 1,115,807.45	\$ 362,312.81	\$ 797,354.50	\$ 852,982.73	\$ 5,885,055.68
3rd	\$ 1,721,153.52	\$ 2,555,673.89	\$ 2,833,548.13	\$ 1,701,821.61	\$ 1,874,072.10	\$ 1,654,439.53	\$ 12,340,708.78
4th	\$ -	\$ -	\$ -	\$ 550,148.80	\$ 478,672.85	\$ -	\$ 1,028,821.65
5th	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total</b>	<b>\$ 4,098,329.20</b>	<b>\$ 5,617,823.05</b>	<b>\$ 5,048,584.14</b>	<b>\$ 3,343,597.58</b>	<b>\$ 4,360,634.29</b>	<b>\$ 3,043,279.18</b>	<b>\$ 25,512,247.43</b>

KIUC 1-6 and 1-7  
DETAIL SUPPORT

FAC Review Case No. 2017-00287 (Detail Cals for KIUC 1-6 & KIUC 1-7)

Fuel Cost (\$/MWh) Assigned to NL & OSS and Purchased Power Cost Assigned to NL & OSS in FAC

Nov-16 through Apr-17

	SOURCE	Month:	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	Six-Month Total
<b>Inputs:</b>									
+ Coal Burned	Form A, p.2		\$ 10,545,722	\$ 14,601,582	\$ 12,602,110	\$ 6,215,542	\$ 8,453,818	\$ 9,185,498	\$ 61,604,272
+ Pet Coke Burned	Form A, p.2		\$ 1,407,158	\$ 1,460,090	\$ 1,924,610	\$ 674,208	\$ 1,339,461	\$ 810,929	\$ 7,616,456
+ Oil Burned	Form A, p.2		\$ 238,258	\$ 302,108	\$ 138,215	\$ 213,769	\$ 242,704	\$ 256,906	\$ 1,391,960
+ Gas Burned	Form A, p.2		\$ 3,080	\$ 55,408	\$ 12,670	\$ 7,674	\$ 6,159	\$ -	\$ 84,991
+ Propane Burned	Form A, p.2		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
- MISO Make Whole Payments (for start up costs)	Form A, p.2		\$ 2,110	\$ 15,222	\$ 6,508	\$ 582	\$ 7,468	\$ -	\$ 31,890
+ Fuel (Assigned Cost During F.O.)	Form A, p.2		\$ 347,768	\$ 699,996	\$ 696,328	\$ 2,434,554	\$ 338,644	\$ 937,028	\$ 5,454,318
- Fuel (Substitute Cost for FO)	Form A, p.2		\$ 143,017	\$ 323,277	\$ 258,269	\$ 1,586,220	\$ 91,777	\$ 200,388	\$ 2,602,748
- Fuel (Supp. & Back-Up Energy to Smelters)	Form A, p.2		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
- Fuel (Domtar Back-Up/ Imbalance Generation)	Form A, p.2		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Sub-Total</b>			<b>\$ 12,396,859</b>	<b>\$ 16,780,885</b>	<b>\$ 15,109,156</b>	<b>\$ 7,958,945</b>	<b>\$ 10,781,541</b>	<b>\$ 10,989,973</b>	<b>\$ 73,517,359</b>
<b>Net Energy Cost - Economy Purchases</b>									
+ Net Energy Cost - Economy Purchases	Form A, p.2		\$ 709,815	\$ 1,076,649	\$ 1,145,646	\$ 819,446	\$ 538,450	\$ 509,007	\$ 4,799,013
+ Identifiable Fuel Cost - Other Purchases	Form A, p.2		\$ 4,613,123	\$ 4,821,106	\$ 9,383,094	\$ 9,357,862	\$ 3,297,704	\$ 1,213,869	\$ 32,686,758
+ Identifiable fuel cost - Forced Outage purchases	Form A, p.2		\$ 281,327	\$ 437,815	\$ 617,582	\$ 915,696	\$ 373,602	\$ 940,386	\$ 3,566,408
- Identifiable fuel cost (substitute for Forced Outage)	Form A, p.2		\$ 281,327	\$ 437,815	\$ 617,582	\$ 915,696	\$ 373,602	\$ 940,386	\$ 3,566,408
- Less Purchases for Supp. & Back-Up energy to Smelters	Form A, p.2		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
- Less Purchases for Domtar back up	Form A, p.2		\$ 115,628	\$ 290,598	\$ 161,505	\$ 151,128	\$ 134,181	\$ 88,250	\$ 941,290
- Less Purchases Above Highest Cost Units	Form A, p.2		\$ 69,329	\$ 81	\$ -	\$ 517	\$ -	\$ 6,291	\$ 76,218
<b>Sub-Total</b>			<b>\$ 5,137,981</b>	<b>\$ 5,607,076</b>	<b>\$ 10,367,235</b>	<b>\$ 10,025,663</b>	<b>\$ 3,701,973</b>	<b>\$ 1,628,335</b>	<b>\$ 36,468,263</b>
<b>Total Energy Cost of Purchased Power</b>									
	Form A Support & Cals-YYYY.MMM.xlsx, tab "PowerTransactionsSummary"		\$ 6,511,037	\$ 8,168,698	\$ 13,657,476	\$ 11,031,963	\$ 4,910,299	\$ 3,982,737	\$ 48,272,209
<b>Purchases for Off-System Sales (Total Energy \$)</b>									
	Form A Support & Cals-YYYY.MMM.xlsx, tab "PowerTransactionsSummary"		\$ 5,093,514	\$ 6,361,026	\$ 11,629,883	\$ 8,893,647	\$ 3,459,402	\$ 2,088,038	\$ 37,525,510
<b>Purchases for Off-System Sales (kWh)</b>									
	Form A Support & Cals-YYYY.MMM.xlsx, tab "PowerTransactionsSummary"		177,600,000	182,400,000	371,800,000	336,200,000	108,373,300	31,151,240	1,207,524,540
<b>Off-system Sales of Generation (Fuel \$)</b>									
	Form A Support & Cals-YYYY.MMM.xlsx, tab "PowerTransactionsSummary"		\$ 8,319,336	\$ 11,063,491	\$ 9,846,618	\$ 3,756,644	\$ 5,769,064	\$ 7,200,859	\$ 45,956,011
<b>Off-system Sales of Generation (kWh)</b>									
	Form A Support & Cals-YYYY.MMM.xlsx, tab "PowerTransactionsSummary"		352,903,028	445,677,218	401,919,160	141,041,628	226,619,935	291,863,591	1,860,024,560
<b>Net Generation (before losses) (kWh)</b>									
	Form A, p.3		533,432,222	686,438,917	621,453,262	287,504,839	412,674,169	431,719,471	2,973,222,880
<b>Back-Up &amp; Supp. Sales to Smelters (from Gen) (kWh)</b>									
	Form A Support & Cals-YYYY.MMM.xlsx, tab "SmelterFuelCost"		-	-	-	-	-	-	-
<b>Domtar Back-Up Power Sales (from Gen) (kWh)</b>									
	Form A Support & Cals-YYYY.MMM.xlsx, tab "DomtarFuelCost"		-	-	-	-	-	-	-
<b>Total Purchased Power (kWh)</b>									
	Form A Support & Cals-YYYY.MMM.xlsx, tab "PowerTransactionsSummary"		242,687,803	255,720,206	452,080,250	434,880,950	176,835,562	115,709,741	1,677,914,512
<b>Net Interchange In/(Out) (kWh)</b>									
	Form A Filing (Inputs)		11,809,724	22,872,000	20,980,000	17,448,023	16,660,000	13,265,584	103,035,331
<b>Total Purchased Power Including Net Interchange (kWh)</b>									
			254,497,527	278,592,206	473,060,250	452,328,973	193,495,562	128,975,325	1,780,949,843
<b>Total Purchased Power assigned to Native Load (kWh)</b>									
	Form A Support & Cals-YYYY.MMM.xlsx, tab "PowerTransactionsSummary"		60,428,723	65,151,232	74,813,015	92,732,776	64,227,323	81,335,450	438,688,519
<b>Net Interchange In/(Out) (kWh)</b>									
	Form A Filing (Inputs)		11,809,724	22,872,000	20,980,000	17,448,023	16,660,000	13,265,584	103,035,331
<b>Total Purchased Power &amp; Net Interchange Assigned to NL</b>									
			72,238,447	88,023,232	95,793,015	110,180,799	80,887,323	94,601,034	541,723,850
<b>System Losses (kWh)</b>									
	Form A, p.3		16,168,064	25,024,610	22,344,292	20,516,008	18,198,904	16,138,326	118,390,204
<b>Total Native Load (Member) Sales (kWh)</b>									
	Form A, p.3		236,599,577	303,760,321	292,982,825	236,128,002	248,742,653	218,318,588	1,536,531,966

**KIUC 1-6 and 1-7  
DETAIL SUPPORT**

FAC Review Case No. 2017-00287 (Detail Calcs for KIUC 1-6 & KIUC 1-7)

Fuel Cost (\$/MWh) Assigned to NL & OSS and Purchased Power Cost Assigned to NL & OSS In FAC

Nov-16 through Apr-17

<u>SOURCE</u>	Month:	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	Six-Month Total
<b>KIUC 1-6 Calculations:</b>								
<b>Fuel for Generation - Native Load</b>								
Coal Burned	\$	10,545,722	\$ 14,601,582	\$ 12,602,110	\$ 6,215,542	\$ 8,453,818	\$ 9,185,498	\$ 61,604,272
Pet Coke Burned	\$	1,407,158	\$ 1,460,090	\$ 1,924,610	\$ 674,208	\$ 1,339,461	\$ 810,929	\$ 7,616,456
Oil Burned	\$	238,258	\$ 302,108	\$ 138,215	\$ 213,769	\$ 242,704	\$ 256,906	\$ -
Gas Burned	\$	3,080	\$ 55,408	\$ 12,670	\$ 7,674	\$ 6,159	\$ -	\$ 84,991
Propane Burned	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Less: MISO Make Whole Payments	\$	2,110	\$ 15,222	\$ 6,508	\$ 582	\$ 7,468	\$ -	\$ 31,890
Plus: Fuel (Assigned Cost During F.O.)	\$	347,768	\$ 699,996	\$ 696,378	\$ 2,434,554	\$ 338,644	\$ 937,028	\$ 5,454,318
Less: Fuel (Substitute Cost for F.O.)	\$	143,017	\$ 323,077	\$ 258,269	\$ 1,586,220	\$ 91,777	\$ 200,388	\$ 2,602,748
Less: Identifiable Fuel Cost (Substitute for F.O.)	\$	281,327	\$ 437,815	\$ 617,582	\$ 915,696	\$ 373,602	\$ 940,386	\$ 3,566,408
Less: Fuel (Supp. and Back-Up Energy to Smelters)	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Less: Domtar Back-Up/ Imbalance Generation	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Less: Fuel Cost of Generation for OSS	\$	8,319,336	\$ 11,063,491	\$ 9,846,618	\$ 3,756,644	\$ 5,769,064	\$ 7,200,859	\$ 45,956,011
<b>Total Cost of Fuel for Generation Allocated to Native Load</b>	\$	3,796,196	\$ 5,279,579	\$ 4,644,956	\$ 3,286,605	\$ 4,138,875	\$ 2,848,728	\$ 23,994,940
<b>Native Load Sales Volumes from Generation (kWh)</b>								
		164,361,130	215,737,089	197,189,810	125,947,203	167,855,330	123,717,554	994,808,116
<b>Generation Fuel Cost for Native Load (\$/MWh)</b>		<b>23.10</b>	<b>24.47</b>	<b>23.56</b>	<b>26.10</b>	<b>24.66</b>	<b>23.03</b>	<b>24.12</b>
<b>Fuel for Generation - OSS</b>								
Fuel Cost of Generation for OSS	\$	8,319,336	\$ 11,063,491	\$ 9,846,618	\$ 3,756,644	\$ 5,769,064	\$ 7,200,859	\$ 45,956,011
OSS Volumes from Generation		352,903,028	445,677,218	401,919,160	141,041,628	226,619,935	291,863,591	1,860,024,560
<b>Generation Fuel Cost for OSS (\$/MWh)</b>		<b>23.57</b>	<b>24.82</b>	<b>24.50</b>	<b>26.64</b>	<b>25.46</b>	<b>24.67</b>	<b>24.71</b>

**KIUC 1-7 Calculations:**

<b>Purchased Power - Native Load</b>								
Total Energy Cost of Purchased Power	\$	6,511,037	\$ 8,166,698	\$ 13,667,476	\$ 11,031,953	\$ 4,910,299	\$ 3,982,737	\$ 48,272,209
Less: Total Energy Cost of Purchased Power for OSS	\$	5,093,514	\$ 6,361,026	\$ 11,629,883	\$ 8,893,647	\$ 3,459,402	\$ 2,088,038	\$ 37,525,510
Less: Purchases for Supp. & Back-Up Energy to Smelters	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Less: Purchases for Domtar Back-Up Power	\$	115,628	\$ 290,598	\$ 161,505	\$ 151,128	\$ 134,181	\$ 88,250	\$ 941,290
Less: Purchases Above Highest Cost Units	\$	69,329	\$ 81	\$ -	\$ 517	\$ -	\$ 6,291	\$ 76,218
<b>Energy Cost of Purchased Power for Native Load Recovered through FAC</b>	\$	1,232,566	\$ 1,516,993	\$ 1,876,088	\$ 1,986,671	\$ 1,316,716	\$ 1,800,157	\$ 9,729,191
<b>Native Load Volumes from Purchased Power (kWh)</b>								
		72,738,447	88,023,232	95,793,015	110,180,799	80,887,323	94,501,034	541,723,850
<b>Total Energy Cost of Purchased Power for Native Load (\$/MWh)</b>	\$	<b>17.06</b>	<b>17.23</b>	<b>19.58</b>	<b>18.03</b>	<b>16.28</b>	<b>19.03</b>	<b>17.96</b>
<b>Purchased Power - OSS</b>								
Total Energy Cost of Purchased Power for OSS <sup>(1)</sup>	\$	5,093,514	\$ 6,361,026	\$ 11,629,883	\$ 8,893,647	\$ 3,459,402	\$ 2,088,038	\$ 37,525,510
OSS Volumes from Purchased Power		177,600,000	182,400,000	371,800,000	336,200,000	108,373,300	31,151,240	1,207,524,540
<b>Total Energy Cost of Purchased Power for OSS (\$/MWh)</b>	\$	<b>28.68</b>	<b>34.87</b>	<b>31.28</b>	<b>26.45</b>	<b>31.92</b>	<b>67.03</b>	<b>31.08</b>
<b>OSS - Total \$/MWh in FAC</b>								
	\$	<b>25.28</b>	<b>27.74</b>	<b>27.76</b>	<b>26.51</b>	<b>27.55</b>	<b>28.76</b>	<b>27.21</b>
<b>NATIVE LOAD - Total \$/MWh in FAC</b>								
	\$	<b>21.25</b>	<b>22.37</b>	<b>22.26</b>	<b>22.33</b>	<b>21.93</b>	<b>21.29</b>	<b>21.95</b>
<b>Difference (OSS vs. NL \$/MWh)</b>	\$	<b>4.03</b>	<b>5.37</b>	<b>5.50</b>	<b>4.17</b>	<b>5.62</b>	<b>7.46</b>	<b>5.27</b>

**Reconciliation to Form A Filings:**

Total Member Fuel & Purchased Power Recoverable from Above:	\$	5,028,762	\$ 6,796,572	\$ 6,521,045	\$ 5,273,276	\$ 5,455,591	\$ 4,648,886	\$ 33,724,131
Less: Over/(Under) Recovery	\$	10,630	\$ (69,713)	\$ (6,984)	\$ (76,697)	\$ 21,760	\$ (27,777)	\$ (148,781)
Less: FAC Credits	\$	311,111	\$ 311,111	\$ -	\$ -	\$ -	\$ -	\$ 622,222
<b>Recalculated Total Fuel Recovery from Detail Above</b>	\$	4,707,021	\$ 6,555,174	\$ 6,528,029	\$ 5,349,973	\$ 5,433,831	\$ 4,676,663	\$ 33,250,690
Form A Filing - Total Fuel Recovery	\$	4,707,021	\$ 6,555,174	\$ 6,528,029	\$ 5,349,974	\$ 5,433,831	\$ 4,676,663	\$ 33,250,692
Difference	\$	(0)	\$ (0)	\$ (0)	\$ (0)	\$ (0)	\$ (0)	\$ (2)
<b>Total Member Sales (Used in NL Fuel &amp; Purchased \$/MWh Calcs Above)</b>								
		236,599,577	303,760,321	292,982,825	236,128,002	248,742,653	218,318,588	1,536,531,966
Total Member Sales per Form A Filing		236,599,577	303,760,321	292,982,825	236,128,002	248,742,653	218,318,588	1,536,531,966
Difference								

**Native Load Sales Volumes by Source**  
(MWh)

<b>Native Load Sales From Generation:</b>	
Net Generation (before losses)	
Less: Back-Up & Supp. Sales to Smelters (from Gen)	
Less: Downtar Back-Up Power Sales (from Gen)	
Less: Inter-system Sales of Generation	
Less: System Losses	
<b>NI Sales Volumes from Generation</b>	

<b>Native Load Sales From Purchased Power &amp; Net Interchange:</b>	
Native Load Sales Volumes from Purchased Power (Excl. Net Interchange)	
Native Load Sales Volumes from Net Interchange	
<b>NI Sales Volumes from Purch. Power (Incl. Net Interchange)</b>	

<b>Total Native Load Sales Volumes</b>
----------------------------------------

<b>Total Native Load Sales Volume per FAC Filings</b>
-------------------------------------------------------

	Nov-16 (MWh)	Dec-16 (MWh)	Jan-17 (MWh)	Feb-17 (MWh)	Mar-17 (MWh)	Apr-17 (MWh)	6-Mo. Total (Nov-16 to Apr-17)
(A)	533,432.222	686,438.917	621,453.262	287,504.839	412,674.169	431,719.471	2,973,222.880
	-	-	-	-	-	-	-
	(352,903.028)	(445,677.218)	(401,919.160)	(141,041.628)	(226,619.935)	(291,863.591)	(1,860,024.560)
	(16,168.064)	(25,024.610)	(22,344.292)	(20,516.008)	(18,198.904)	(16,138.326)	(118,390.204)
(A)	<b>164,361.130</b>	<b>215,737.089</b>	<b>197,189.810</b>	<b>125,947.203</b>	<b>167,855.330</b>	<b>123,717.554</b>	<b>994,808.116</b>
(B)	60,428.723	65,151.232	74,813.015	92,732.776	64,227.323	81,335.450	438,688.519
(C)	11,809.724	22,872.000	20,980.000	17,448.023	16,660.000	13,265.584	103,035.331
(D) = [(B) + (C)]	<b>72,238.447</b>	<b>88,023.232</b>	<b>95,793.015</b>	<b>110,180.799</b>	<b>80,887.323</b>	<b>94,601.034</b>	<b>541,723.850</b>
(E) = [(A) + (D)]	<b>236,599.577</b>	<b>303,760.321</b>	<b>292,982.825</b>	<b>236,128.002</b>	<b>248,742.653</b>	<b>218,318.588</b>	<b>1,536,531.966</b>
	<b>236,599.577</b>	<b>303,760.321</b>	<b>292,982.825</b>	<b>236,128.002</b>	<b>248,742.653</b>	<b>218,318.588</b>	<b>1,536,531.966</b>

**EXHIBIT \_\_\_\_ (LK-5)**



**Big Rivers Electric Corporation  
Case No. 2017-00287**

	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	Total	Jan-Apr 2017 Total
<b>As Filed:</b>								
Total Generation Fuel Cost	\$ 12,194,218	\$ 16,419,188	\$ 14,677,605	\$ 7,111,193	\$ 10,042,142	\$ 10,253,333	\$ 70,697,679	
Less: MISO Make Whole Payments	(2,110)	(15,222)	(6,508)	(582)	(7,468)	-	(31,890)	
Less: Net Forced Outage Fuel Cost Adjustment <sup>(1)</sup>	(76,576)	(60,896)	(179,523)	(67,362)	(126,735)	(203,746)	(714,838)	
Less: Fuel Cost Assigned to Off-System Sales from Generation	(8,319,336)	(11,063,491)	(9,846,618)	(3,756,644)	(5,769,064)	(7,200,859)	(45,956,011)	
<b>Total Generation Fuel Cost Assigned to Native Load</b>	<b>\$ 3,796,196</b>	<b>\$ 5,279,579</b>	<b>\$ 4,644,956</b>	<b>\$ 3,286,605</b>	<b>\$ 4,138,875</b>	<b>\$ 2,848,728</b>	<b>\$ 23,994,940</b>	<b>\$ 14,919,166</b>
Native Load Sales Volumes from Generation (MWh)	164,361.130	215,737.089	197,189.810	125,947.203	167,855.330	123,717.554	994,808.116	614,709.897
<b>Average Generation Fuel Cost Assigned to Native Load (\$/MWh)</b>	<b>\$ 23.10</b>	<b>\$ 24.47</b>	<b>\$ 23.56</b>	<b>\$ 26.10</b>	<b>\$ 24.66</b>	<b>\$ 23.03</b>	<b>\$ 24.12</b>	<b>\$ 24.27</b>
<b>Proforma - Using Stacking Method</b>								
Generation Fuel Cost Assigned to Native Load	\$ 3,669,426	\$ 5,078,020	\$ 4,643,031	\$ 3,210,831	\$ 4,075,736	\$ 2,796,759	\$ 23,473,803	
Less: MISO Make Whole Payments <sup>(2)</sup>	-	-	-	-	-	-	-	
Less: Net Forced Outage Fuel Cost Adjustment	(76,576)	(60,896)	(179,523)	(67,362)	(126,735)	(203,746)	(714,838)	
<b>Total Generation Fuel Cost Assigned to Native Load</b>	<b>\$ 3,592,850</b>	<b>\$ 5,017,124</b>	<b>\$ 4,463,508</b>	<b>\$ 3,143,469</b>	<b>\$ 3,949,001</b>	<b>\$ 2,593,013</b>	<b>\$ 22,758,965</b>	<b>\$ 14,148,991</b>
Native Load Sales Volumes from Generation (MWh)	164,361.130	215,737.089	197,189.810	125,947.203	167,855.330	123,717.554	994,808.116	614,709.897
<b>Average Generation Fuel Cost Assigned to Native Load (\$/MWh)</b>	<b>\$ 21.86</b>	<b>\$ 23.26</b>	<b>\$ 22.64</b>	<b>\$ 24.96</b>	<b>\$ 23.53</b>	<b>\$ 20.96</b>	<b>\$ 22.88</b>	<b>\$ 23.02</b>
<b>Difference:</b>								
Difference in Total Fuel Cost Allocated to Native Load	\$ 203,346	\$ 262,455	\$ 181,448	\$ 143,136	\$ 189,875	\$ 255,715	\$ 1,235,976	\$ 770,174
Difference in Average Fuel Cost Allocated to Native Load (\$/MWh)	\$ 1.24	\$ 1.21	\$ 0.92	\$ 1.14	\$ 1.13	\$ 2.07	\$ 1.24	\$ 1.25

<sup>(1)</sup> Net Forced Outage Fuel Cost Adjustment = Fuel (assigned cost during Forced Outage) - Fuel (substitute cost for Forced Outage) - Identifiable fuel cost (substitute for Forced Outage)

<sup>(2)</sup> During the review period, MISO Make Whole Payments received for start-up fuel costs related to the Reid CT (for Nov. 2016 through Apr. 2017) and Green Unit 2 (for Mar. 2017 only). Because none of the generation from these units were assigned to native load during those months under the stacking method, none of the corresponding MISO Make Whole Payments received were assigned to native load under the stacking method.

KIUC 1-11 (Case No. 2017-00287)  
Stacking Calculations for Assigning Fuel Cost to Native Load

	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	Total
<b>Total Generation Fuel Cost by Unit (\$):</b>							
Reid - Unit 1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Coleman - Unit 1	-	-	-	-	-	-	-
Coleman - Unit 2	-	-	-	-	-	-	-
Coleman - Unit 3	-	-	-	-	-	-	-
Station Two - Unit 1	1,180,544.15	1,502,200.65	1,115,797.24	729,308.46	797,341.52	535,847.49	5,861,039.51
Station Two - Unit 2	1,196,643.71	1,559,949.69	1,099,210.03	362,312.96	1,210,518.29	852,968.52	6,281,603.20
Reid CT	3,080.00	55,407.86	12,670.40	7,673.80	6,159.37	-	84,991.43
Wilson	5,290,307.85	6,196,251.77	6,307,935.18	3,461,567.31	4,609,216.05	5,097,845.34	30,963,123.50
Green - Unit 1	2,001,571.19	3,618,682.28	3,100,054.00	848,535.60	1,874,060.39	2,801,446.25	14,244,349.71
Green - Unit 2	2,522,070.61	3,486,695.49	3,041,938.59	1,701,794.69	1,544,846.07	965,225.47	13,262,570.92
<b>Total Generation Fuel Cost (\$)</b>	<b>\$ 12,194,217.51</b>	<b>\$ 16,419,187.74</b>	<b>\$ 14,677,605.44</b>	<b>\$ 7,111,192.82</b>	<b>\$ 10,042,141.69</b>	<b>\$ 10,253,333.07</b>	<b>\$ 70,697,678.27</b>

<b>Net Generation by Unit (Before Losses) (MWh):</b>							
Reid - Unit 1	(1,394.000)	(1,589.000)	(1,625.000)	(1,488.000)	(1,548.000)	(1,431.000)	(9,075.000)
Coleman - Unit 1	(242.000)	(334.000)	(298.000)	(243.000)	(288.000)	(232.000)	(1,637.000)
Coleman - Unit 2	(242.000)	(334.000)	(297.000)	(244.000)	(288.000)	(232.000)	(1,637.000)
Coleman - Unit 3	(242.000)	(333.000)	(297.000)	(244.000)	(288.000)	(232.000)	(1,636.000)
Station Two - Unit 1	45,431.348	54,653.233	40,089.448	27,646.583	28,008.194	20,705.137	216,531.943
Station Two - Unit 2	43,955.652	56,561.767	39,625.552	12,028.417	44,792.806	31,790.863	228,755.057
Reid CT	(17.000)	578.000	49.000	90.000	17.000	(50.000)	667.000
Wilson	240,258.820	273,206.790	277,894.950	143,232.610	194,753.880	212,626.630	1,341,973.680
Green - Unit 1	88,531.425	154,347.274	134,573.239	33,539.595	82,573.028	128,736.934	622,301.495
Green - Unit 2	117,391.977	149,681.853	131,738.073	73,186.634	64,941.261	40,038.907	576,978.705
<b>Total Net Generation (Before Losses) (MWh)</b>	<b>533,432.222</b>	<b>686,438.917</b>	<b>621,453.262</b>	<b>287,504.839</b>	<b>412,674.169</b>	<b>431,719.471</b>	<b>2,973,222.880</b>

<b>Total System Losses:</b>							
	16,168.064	25,024.610	22,344.292	20,516.008	18,198.904	16,138.326	118,390.204
<b>Allocation of System Losses to Generation Units</b>							
Reid - Unit 1	(42.251)	(57.928)	(58.427)	(106.182)	(68.267)	(53.493)	(386.548)
Coleman - Unit 1	(7.335)	(12.176)	(10.715)	(17.340)	(12.701)	(8.673)	(68.939)
Coleman - Unit 2	(7.335)	(12.176)	(10.679)	(17.412)	(12.701)	(8.673)	(68.975)
Coleman - Unit 3	(7.335)	(12.140)	(10.679)	(17.412)	(12.701)	(8.673)	(68.938)
Station Two - Unit 1	1,377.001	1,992.422	1,441.412	1,972.828	1,235.160	773.915	8,792.737
Station Two - Unit 2	1,332.274	2,061.999	1,424.733	858.334	1,975.360	1,188.390	8,841.089
Reid CT	(0.515)	21.071	1.762	6.422	0.750	(1.869)	27.621
Wilson	7,282.125	9,959.944	9,991.686	10,220.911	8,588.633	7,948.305	53,991.604
Green - Unit 1	2,683.343	5,626.838	4,838.568	2,393.346	3,641.465	4,812.381	23,995.941
Green - Unit 2	3,558.092	5,456.756	4,736.630	5,222.512	2,863.905	1,496.715	23,334.611
<b>Total System Losses (MWh)</b>	<b>16,168.064</b>	<b>25,024.610</b>	<b>22,344.292</b>	<b>20,516.008</b>	<b>18,198.904</b>	<b>16,138.326</b>	<b>118,390.204</b>

<b>Net Generation by Unit (After Allocated Losses):</b>							
Reid - Unit 1	(1,351.749)	(1,531.072)	(1,566.573)	(1,381.818)	(1,479.733)	(1,377.507)	(8,688.452)
Coleman - Unit 1	(234.665)	(321.824)	(287.285)	(225.660)	(275.299)	(223.327)	(1,568.060)
Coleman - Unit 2	(234.665)	(321.824)	(286.321)	(226.588)	(275.299)	(223.327)	(1,568.024)
Coleman - Unit 3	(234.665)	(320.860)	(286.321)	(226.588)	(275.299)	(223.327)	(1,567.060)
Station Two - Unit 1	44,054.347	52,660.811	38,648.036	25,673.755	26,773.034	19,929.222	207,739.205
Station Two - Unit 2	42,623.378	54,499.768	38,200.819	11,170.083	42,817.446	30,602.473	219,913.967
Reid CT	(16.485)	556.929	47.238	83.578	16.250	(48.131)	639.379
Wilson	232,976.695	263,246.846	267,903.264	133,011.699	186,165.247	204,678.325	1,287,982.076
Green - Unit 1	85,848.082	148,720.436	129,734.671	31,146.249	78,931.563	123,924.553	598,305.554
Green - Unit 2	113,833.885	144,225.097	127,001.443	67,964.122	62,077.356	38,542.192	553,644.095
<b>Total Net Generation (After Losses) (MWh)</b>	<b>517,264.158</b>	<b>661,414.307</b>	<b>599,108.971</b>	<b>266,988.832</b>	<b>394,475.266</b>	<b>415,581.146</b>	<b>2,854,832.680</b>

KIUC 1-11 (Case No. 2017-00287)  
Stacking Calculations for Assigning Fuel Cost to Native Load

	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	Total
<b>Average Fuel Cost per Net MWh of Generation (After Losses) (\$/MWh):</b>							
Reid - Unit 1	N/A	N/A	N/A	N/A	N/A	N/A	\$ -
Coleman - Unit 1	N/A	N/A	N/A	N/A	N/A	N/A	\$ -
Coleman - Unit 2	N/A	N/A	N/A	N/A	N/A	N/A	\$ -
Coleman - Unit 3	N/A	N/A	N/A	N/A	N/A	N/A	\$ -
Station Two - Unit 1	\$ 26.797	\$ 28.526	\$ 28.871	\$ 28.407	\$ 29.782	\$ 26.888	\$ 28.213
Station Two - Unit 2	\$ 28.075	\$ 28.623	\$ 28.775	\$ 32.436	\$ 28.272	\$ 27.873	\$ 28.564
Reid CT	N/A	\$ 99.488	\$ 268.225	\$ 91.816	\$ 379.038	N/A	\$ 132.928
Wilson	\$ 22.707	\$ 23.538	\$ 23.546	\$ 26.025	\$ 24.759	\$ 24.907	\$ 24.040
Green - Unit 1	\$ 23.315	\$ 24.332	\$ 23.895	\$ 27.244	\$ 23.743	\$ 22.606	\$ 23.808
Green - Unit 2	\$ 22.156	\$ 24.175	\$ 23.952	\$ 25.040	\$ 24.886	\$ 25.043	\$ 23.955
<b>Average Fuel Cost per Net MWh of Gen (After Losses) (\$/MWh)</b>	<b>\$ 23.574</b>	<b>\$ 24.824</b>	<b>\$ 24.499</b>	<b>\$ 26.635</b>	<b>\$ 25.457</b>	<b>\$ 24.672</b>	<b>\$ 24.764</b>

**Average Fuel Cost for Stacked Units:**

1st	\$ 22.156	\$ 23.538	\$ 23.546	\$ 25.040	\$ 23.743	\$ 22.606
2nd	\$ 22.707	\$ 24.175	\$ 23.895	\$ 26.025	\$ 24.759	\$ 24.907
3rd	\$ 23.315	\$ 24.332	\$ 23.952	\$ 27.244	\$ 24.886	\$ 25.043
4th	\$ 26.797	\$ 28.526	\$ 28.775	\$ 28.407	\$ 28.272	\$ 26.888
5th	\$ 28.075	\$ 28.623	\$ 28.871	\$ 32.436	\$ 29.782	\$ 27.873

**Unit Rank in Stack**

1st	Green - Unit 2	Wilson	Wilson	Green - Unit 2	Green - Unit 1	Green - Unit 1
2nd	Wilson	Green - Unit 2	Green - Unit 1	Wilson	Wilson	Wilson
3rd	Green - Unit 1	Green - Unit 1	Green - Unit 2	Green - Unit 1	Green - Unit 2	Green - Unit 2
4th	Station Two - Unit 1	Station Two - Unit 1	Station Two - Unit 2	Station Two - Unit 1	Station Two - Unit 2	Station Two - Unit 1
5th	Station Two - Unit 2	Station Two - Unit 2	Station Two - Unit 1	Station Two - Unit 2	Station Two - Unit 1	Station Two - Unit 2

**Native Load Sales from Generation (MWh)**

164,361.130	215,737.089	197,189.810	125,947.203	167,855.330	123,717.554	994,808.116
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**Volumes (MWh) Units by Stacking Position:**

1st	113,833.885	215,737.089	197,189.810	67,964.122	78,931.563	123,717.554
2nd	50,527.245			57,983.081	88,923.767	
3rd						
4th						
5th						
<b>Total</b>	<b>164,361.130</b>	<b>215,737.089</b>	<b>197,189.810</b>	<b>125,947.203</b>	<b>167,855.330</b>	<b>123,717.554</b>

**Fuel Costs Allocated to Native Load by Unit:**

1st	\$ 2,522,103.56	\$ 5,078,019.60	\$ 4,643,031.27	\$ 1,701,821.61	\$ 1,874,072.10	\$ 2,796,759.03	\$ 18,615,807.16
2nd	\$ 1,147,322.15	\$ -	\$ -	\$ 1,509,009.68	\$ 2,201,663.55	\$ -	\$ 4,857,995.38
3rd	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4th	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5th	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total</b>	<b>\$ 3,669,425.71</b>	<b>\$ 5,078,019.60</b>	<b>\$ 4,643,031.27</b>	<b>\$ 3,210,831.30</b>	<b>\$ 4,075,735.65</b>	<b>\$ 2,796,759.03</b>	<b>\$ 23,473,802.55</b>

KIUC 1-6 and 1-7  
DETAIL SUPPORT

FAC Review Case No. 2017-00287 (Detail Calcs for KIUC 1-6 & KIUC 1-7)

Fuel Cost (\$/MWh) Assigned to NL & OSS and Purchased Power Cost Assigned to NL & OSS in FAC

Nov-16 through Apr-17

	SOURCE	Expense Month:	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	Six-Month Total
<b>Inputs:</b>									
+ Coal Burned	Form A, p.2		\$ 10,545,722	\$ 14,601,582	\$ 12,602,110	\$ 6,215,542	\$ 8,453,818	\$ 9,185,498	\$ 61,604,272
+ Pet Coke Burned	Form A, p.2		\$ 1,407,158	\$ 1,460,090	\$ 1,924,610	\$ 674,208	\$ 1,359,461	\$ 810,929	\$ 7,616,456
+ Oil Burned	Form A, p.2		\$ 238,258	\$ 302,108	\$ 138,215	\$ 213,769	\$ 242,704	\$ 256,906	\$ 1,391,960
+ Gas Burned	Form A, p.2		\$ 3,080	\$ 55,408	\$ 12,670	\$ 7,674	\$ 6,159	\$ -	\$ 84,991
+ Propane Burned	Form A, p.2		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
+ MISO Make Whole Payments (for start up costs)	Form A, p.2		\$ 2,110	\$ 15,222	\$ 6,508	\$ 582	\$ 7,468	\$ -	\$ 31,890
+ Fuel (Assigned Cost During F.O.)	Form A, p.2		\$ 347,768	\$ 699,996	\$ 696,328	\$ 2,434,554	\$ 338,644	\$ 937,028	\$ 5,454,318
- Fuel (Substitute Cost for FO)	Form A, p.2		\$ 143,017	\$ 323,077	\$ 258,269	\$ 1,586,220	\$ 91,777	\$ 200,388	\$ 2,602,748
- Fuel (Supp. & Back-Up Energy to Smelters)	Form A, p.2		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
- Fuel (Domtar Back-Up/ Imbalance Generation)	Form A, p.2		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Sub-Total</b>			\$ 12,396,859	\$ 16,780,885	\$ 15,109,156	\$ 7,958,945	\$ 10,281,541	\$ 10,989,973	\$ 73,517,359
+ Net Energy Cost - Economy Purchases	Form A, p.2		\$ 709,815	\$ 1,076,649	\$ 1,145,646	\$ 819,446	\$ 538,450	\$ 509,007	\$ 4,799,013
+ Identifiable Fuel Cost - Other Purchases	Form A, p.2		\$ 4,613,123	\$ 4,821,106	\$ 9,383,094	\$ 9,357,862	\$ 3,297,704	\$ 1,213,869	\$ 32,686,758
+ Identifiable fuel cost - Forced Outage purchases	Form A, p.2		\$ 281,327	\$ 437,815	\$ 617,582	\$ 915,696	\$ 373,602	\$ 940,386	\$ 3,566,408
- Identifiable fuel cost (substitute for Forced Outage)	Form A, p.2		\$ 281,327	\$ 437,815	\$ 617,582	\$ 915,696	\$ 373,602	\$ 940,386	\$ 3,566,408
- Less Purchases for Supp. & Back-Up energy to Smelters	Form A, p.2		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
- Less Purchases for Domtar back up	Form A, p.2		\$ 115,628	\$ 290,598	\$ 161,505	\$ 151,128	\$ 134,181	\$ 88,250	\$ 941,290
- Less Purchases Above Highest Cost Units	Form A, p.2		\$ 69,329	\$ 81	\$ -	\$ 517	\$ -	\$ 6,291	\$ 76,218
<b>Sub-Total</b>			\$ 5,137,981	\$ 5,607,076	\$ 10,367,235	\$ 10,025,663	\$ 3,701,973	\$ 1,628,335	\$ 36,468,263
Total Energy Cost of Purchased Power	Form A Support & Costs - Fuel Transactions Summary		\$ 6,511,037	\$ 8,168,698	\$ 13,657,476	\$ 11,031,963	\$ 4,910,299	\$ 3,982,737	\$ 48,272,209
Purchases for Off-System Sales (Total Energy \$)	Form A Support & Costs - Fuel Transactions Summary		\$ 5,093,514	\$ 6,361,026	\$ 11,629,883	\$ 8,893,647	\$ 3,459,402	\$ 2,088,038	\$ 37,525,510
Purchases for Off-System Sales (kWh)	Form A Support & Costs - Fuel Transactions Summary		177,600,000	182,400,000	371,800,000	396,200,000	108,373,300	31,151,240	1,207,524,540
Off-system Sales of Generation (Fuel \$)	Form A Support & Costs - Fuel Transactions Summary		\$ 8,319,336	\$ 11,063,491	\$ 9,846,618	\$ 3,756,644	\$ 5,769,064	\$ 7,200,859	\$ 45,956,011
Off-system Sales of Generation (kWh)	Form A Support & Costs - Fuel Transactions Summary		352,903,028	445,677,218	401,915,160	141,041,628	226,619,935	291,863,591	1,860,024,560
Net Generation (before losses) (kWh)	Form A, p.3		538,432,222	686,438,917	621,453,262	287,504,839	412,674,169	431,719,471	2,973,222,890
Back-Up & Supp. Sales to Smelters (from Gen) (kWh)	Form A Support & Costs - Fuel Transactions Summary		-	-	-	-	-	-	-
Domtar Back-Up Power Sales (from Gen) (kWh)	Form A Support & Costs - Fuel Transactions Summary		-	-	-	-	-	-	-
Total Purchased Power (kWh)	Form A Support & Costs - Fuel Transactions Summary		242,687,803	255,720,206	452,080,250	434,890,950	176,635,562	115,709,741	1,677,914,512
Net Interchange In/Out (kWh)	Form A Filing (Inputs)		11,809,724	22,872,000	20,980,000	17,448,023	16,660,000	13,265,584	103,035,331
Total Purchased Power Including Net Interchange (kWh)			254,497,527	278,592,206	473,060,250	452,328,973	193,295,562	128,975,325	1,780,949,843
Total Purchased Power assigned to Native Load (kWh)	Form A Support & Costs - Fuel Transactions Summary		60,426,723	65,151,232	74,813,015	92,732,776	64,227,323	81,335,450	438,688,519
Net Interchange In/Out (kWh)	Form A Filing (Inputs)		11,809,724	22,872,000	20,980,000	17,448,023	16,660,000	13,265,584	103,035,331
<b>Total Purchased Power &amp; Net Interchange Assigned to NL</b>			72,236,447	88,023,232	95,793,015	110,180,799	80,887,323	94,601,034	541,723,850
System Losses (kWh)	Form A, p.3		16,168,064	25,024,610	22,344,292	20,516,008	18,198,904	16,138,326	118,390,204
Total Native Load (Member) Sales (kWh)	Form A, p.3		236,599,577	303,760,321	292,962,825	236,128,002	248,742,653	218,318,588	1,536,531,966

**KIUC 1-6 and 1-7  
DETAIL SUPPORT**

FAC Review Case No. 2017-00287 (Detail Calcs for KIUC 1-6 & KIUC 1-7)

Fuel Cost (\$/MWh) Assigned to NL & OSS and Purchased Power Cost Assigned to NL & OSS in FAC

Nov-16 through Apr-17

<u>SOURCE</u>	Expense Month:	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	Six-Month Total
<b>KIUC 1-6 Calculations:</b>								
<b>Fuel for Generation - Native Load</b>								
Coal Burned	\$	10,545,722	14,601,582	12,602,110	6,215,542	8,453,818	9,185,498	61,604,272
Pet Coke Burned	\$	1,407,158	1,460,090	1,924,610	674,208	1,339,461	810,929	7,616,456
Oil Burned	\$	238,258	302,108	138,215	213,769	242,704	256,906	84,991
Gas Burned	\$	3,080	55,408	12,670	7,674	6,159	-	-
Propane Burned	\$	-	-	-	-	-	-	-
Less: MISO Make Whole Payments	\$	2,110	15,222	6,508	582	7,468	-	31,890
Plus: Fuel (Assigned Cost During F.O.)	\$	347,768	699,996	696,328	2,434,554	338,644	937,028	5,454,318
Less: Fuel (Substitute Cost for F.O.)	\$	143,017	323,077	258,269	1,586,220	91,777	200,388	2,602,748
Less: Identifiable Fuel Cost (Substitute for F.O.)	\$	281,327	437,815	617,582	915,696	373,602	940,386	3,566,408
Less: Fuel (Supp. and Back-Up Energy to Smelters)	\$	-	-	-	-	-	-	-
Less: Domtar Back-Up/ Imbalance Generation	\$	-	-	-	-	-	-	-
Less: Fuel Cost of Generation for OSS	\$	8,319,336	11,063,491	9,846,618	3,756,644	5,769,064	7,200,859	45,956,011
<b>Total Cost of Fuel for Generation Allocated to Native Load</b>	\$	3,796,196	5,279,579	4,644,956	3,286,605	4,138,875	2,848,728	23,994,940
Native Load Sales Volumes from Generation (kWh)		164,361,130	215,737,089	197,189,810	125,947,203	167,855,330	123,717,554	994,808,116
<b>Generation Fuel Cost for Native Load (\$/MWh)</b>	\$	23.10	24.47	23.56	26.10	24.66	23.03	24.02
<b>Fuel for Generation - OSS</b>								
Fuel Cost of Generation for OSS	\$	8,319,336	11,063,491	9,846,618	3,756,644	5,769,064	7,200,859	45,956,011
OSS Volumes from Generation		352,903,028	445,677,218	401,919,160	141,041,628	226,619,935	291,863,591	1,860,024,560
<b>Generation Fuel Cost for OSS (\$/MWh)</b>	\$	23.57	24.82	24.50	26.64	25.46	24.67	24.71

<b>KIUC 1-7 Calculations:</b>								
<b>Purchased Power - Native Load</b>								
Total Energy Cost of Purchased Power	\$	6,511,037	8,168,698	13,667,476	11,031,963	4,910,299	3,982,737	48,272,209
Less: Total Energy Cost of Purchased Power for OSS	\$	5,093,514	6,361,026	11,629,883	8,893,647	3,459,402	2,088,038	37,525,510
Less: Purchases for Supp. & Back-Up Energy to Smelters	\$	-	-	-	-	-	-	-
Less: Purchases for Domtar Back-Up Power	\$	115,628	290,598	161,505	151,128	134,181	88,250	941,290
Less: Purchases Above Highest Cost Units	\$	69,329	81	-	517	-	6,291	76,218
<b>Energy Cost of Purchased Power for Native Load Recovered through FAC</b>	\$	1,232,566	1,516,993	1,876,088	1,986,671	1,316,716	1,800,157	9,729,191
Native Load Volumes from Purchased Power (kWh)		72,238,447	88,023,232	95,793,015	110,180,799	80,887,323	94,601,034	541,723,850
<b>Total Energy Cost of Purchased Power for Native Load (\$/MWh)</b>	\$	17.06	17.23	19.58	18.03	16.28	19.03	17.98
<b>Purchased Power - OSS</b>								
Total Energy Cost of Purchased Power for OSS <sup>(1)</sup>	\$	5,093,514	6,361,026	11,629,883	8,893,647	3,459,402	2,088,038	37,525,510
OSS Volumes from Purchased Power		177,600,000	182,400,000	371,800,000	336,200,000	108,373,300	31,151,240	1,207,524,540
<b>Total Energy Cost of Purchased Power for OSS (\$/MWh)</b>	\$	28.68	34.87	31.28	26.45	31.92	67.03	31.08
<b>OSS - Total \$/MWh in FAC</b>	\$	25.28	27.74	27.76	26.51	27.55	28.76	27.21
<b>NATIVE LOAD - Total \$/MWh in FAC</b>	\$	21.25	22.37	22.26	22.33	21.93	21.29	21.95
<b>Difference (OSS vs. NL \$/MWh)</b>	\$	4.03	5.37	5.50	4.17	5.62	7.46	5.27

**Reconciliation to Form A Filings:**

Total Member Fuel & Purchased Power Recoverable from Above:	\$	5,028,762	6,795,572	6,521,045	5,273,276	5,455,591	4,648,886	33,724,131
Less: Over/(Under) Recovery	\$	10,680	(69,713)	(6,984)	(76,697)	21,760	(27,777)	(148,781)
Less: FAC Credits	\$	311,111	311,111	-	-	-	-	622,222
Recalculated Total Fuel Recovery from Detail Above	\$	4,707,021	6,555,174	6,528,029	5,349,973	5,433,831	4,676,663	33,250,690
Form A Filing - Total Fuel Recovery	\$	4,707,021	6,555,174	6,528,029	5,349,973	5,433,831	4,676,663	33,250,692
Difference	\$	(0)	(0)	(0)	(0)	0	(0)	(2)
Total Member Sales (Used in NL Fuel & Purchased \$/MWh Calcs Above)		236,599,577	303,760,321	292,982,825	236,128,002	248,742,653	218,318,588	1,536,531,966
Total Member Sales per Form A Filing		236,599,577	303,760,321	292,982,825	236,128,002	248,742,653	218,318,588	1,536,531,966
Difference								

**Native Load Sales Volumes by Source**  
(MWh)

	Nov-16 (MWh)	Dec-16 (MWh)	Jan-17 (MWh)	Feb-17 (MWh)	Mar-17 (MWh)	Apr-17 (MWh)	6-Mo. Total (Nov-16 to Apr-17)
<b>Native Load Sales From Generation:</b>							
Net Generation (before losses)	533,432,222	686,438,917	621,453,262	287,504,839	412,674,169	431,719,471	2,973,222,880
Less: Back-Up & Supp. Sales to Smelters (from Gen)	-	-	-	-	-	-	-
Less: Domtar Back-Up Power Sales (from Gen)	-	-	-	-	-	-	-
Less: Inter-system Sales of Generation	(352,903,028)	(445,677,218)	(401,919,160)	(141,041,628)	(226,619,935)	(291,863,591)	(1,860,024,560)
Less: System Losses	(16,168,064)	(25,024,610)	(22,344,292)	(20,516,008)	(18,198,904)	(16,138,326)	(118,390,204)
<b>NL Sales Volumes from Generation</b>	<b>164,361,130</b>	<b>215,737,089</b>	<b>197,189,810</b>	<b>125,947,203</b>	<b>167,855,330</b>	<b>123,717,554</b>	<b>994,808,116</b>
<b>Native Load Sales From Purchased Power &amp; Net Interchange:</b>							
Native Load Sales Volumes from Purchased Power (Excl. Net Interchange)	(B) 60,428,723	65,151,232	74,813,015	92,732,776	64,227,323	81,335,450	438,688,519
Native Load Sales Volumes from Net Interchange	(C) 11,809,724	22,872,000	20,980,000	17,448,023	16,660,000	13,265,584	103,035,331
<b>NL Sales Volumes from Purch. Power (Incl. Net Interchange)</b>	<b>(D) = [(B) + (C)] 72,238,447</b>	<b>88,023,232</b>	<b>95,793,015</b>	<b>110,180,799</b>	<b>80,887,323</b>	<b>94,601,034</b>	<b>541,723,850</b>
<b>Total Native Load Sales Volumes</b>	<b>(E) = [(A) + (D)] 236,599,577</b>	<b>303,760,321</b>	<b>292,982,825</b>	<b>236,128,002</b>	<b>248,742,653</b>	<b>218,318,588</b>	<b>1,536,531,966</b>
<b>Total Native Load Sales Volume per FAC Filings</b>	<b>236,599,577</b>	<b>303,760,321</b>	<b>292,982,825</b>	<b>236,128,002</b>	<b>248,742,653</b>	<b>218,318,588</b>	<b>1,536,531,966</b>

**EXHIBIT \_\_\_\_ (LK-6)**

**BIG RIVERS ELECTRIC CORPORATION**

**AN EXAMINATION OF THE APPLICATION OF THE FUEL  
ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION  
FROM NOVEMBER 1, 2013 THROUGH APRIL 30, 2014  
CASE NO. 2014-00230**

**AN EXAMINATION OF THE APPLICATION OF THE FUEL  
ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION  
FROM NOVEMBER 1, 2012 THROUGH OCTOBER 31, 2014  
CASE NO. 2014-00455**

**Response to Item 1 of the Kentucky Industrial Utility Customers, Inc.'s  
Request for Information  
dated March 6, 2015**

**April 14, 2015**

1 Item 1) *For each month during the period under review in this*  
2 *proceeding, please provide the dollar amount of fuel costs that would have*  
3 *been included in the calculation of the fuel adjustment clause if Big*  
4 *Rivers had assigned its lowest fuel cost generation to native load*  
5 *customers each hour and compare that amount to the dollar amount that*  
6 *was included in the calculation. Please provide the information in the*  
7 *same format as the Attachment to Big Rivers' Response to Commission*  
8 *Staff's Third Request for Information, Item No. 1 in Case No. 2014-00230.*  
9 *Please provide all workpapers electronically in spreadsheet format, with*  
10 *all formulas intact.*

11

12 **Response)** As Big Rivers explained in its response to Item 1 of the Public Service  
13 Commission Staff's Third Request for Information in Case No. 2014-00230 ("PSC  
14 3-1"), Big Rivers does not have the process in place to allocate fuel costs between  
15 off-system sales and native load on an hourly stacked cost basis. Big Rivers has  
16 begun work to develop a process for such an allocation methodology, but  
17 development of the process will require a significant amount of time, research and  
18 effort. However, Big Rivers has calculated an estimate of the potential impact of  
19 switching to an hourly stacked cost approach by allocating its least expensive  
20 units based on monthly average costs for each specific unit to native load on an



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1 hourly basis and applying the cost differential per MWh to FAC generation  
2 volumes used to serve native load, which is the same methodology Big Rivers  
3 employed in responding to PSC 3-1. This monthly cost approach is different than  
4 the stacked cost methodology Big Rivers plans to implement as part of its next  
5 rate case, it is different than the incremental cost approach proposed by KIUC,  
6 and it is different than the allocation methodologies used by the other  
7 Commission-jurisdictional generating utilities (who, with the exception of KU and  
8 LG&E, all use different methodologies). The estimated impact of the change in  
9 methodology is \$10.83 million and is highlighted on the attachment to this  
10 response. This attachment along with the working papers supporting it are  
11 provided on the CD accompanying this response.

12 Please note that Big Rivers' position regarding its current allocation  
13 methodology is unchanged. As Big Rivers explained in its response to KIUC's  
14 motion to compel this response and in its post-hearing brief in Case No. 2014-  
15 00230, Big Rivers' current allocation methodology is reasonable and consistent  
16 with Commission precedent, requiring Big Rivers to change methodologies outside  
17 of a general rate case would be unreasonable and contrary to traditional  
18 ratemaking principles, and ordering a refund because Big Rivers employed its  
19 current methodology rather than utilizing a stacked cost approach would be  
20 arbitrary and unreasonable.

**BIG RIVERS ELECTRIC CORPORATION**

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**AN EXAMINATION OF THE APPLICATION OF THE FUEL  
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FROM NOVEMBER 1, 2012 THROUGH OCTOBER 31, 2014  
CASE NO. 2014-00455**

**Response to Item 1 of the Kentucky Industrial Utility Customers, Inc.'s  
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**April 14, 2015**

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**Witness) Lindsay N. Barron**







PROFIT	SOURCE	Feb-14	Mar-14	Apr-14	As Adjusted in Jun-14 May-14	As Adjusted in Jul-14 Jun-14	As Adjusted in Sep-14 Jul-14	As Adjusted in Sep-14 Aug-14	Sep-14	Oct-14
Profits:										
(*) Total Fuel Cost of Generation	Form A, p.2	\$ 17,565,546	\$ 19,212,410	\$ 18,286,530	\$ 17,832,399	\$ 11,826,308	\$ 16,497,976	\$ 18,049,572	\$ 16,348,638	\$ 15,781,204
(-) MISC Make Whole Payments (for start up costs)	Form A, p.2	\$ 15,276	\$ 9,143	\$ -	\$ 2,226	\$ 4,453	\$ -	\$ 2,197	\$ 3,957	\$ -
(*) Fuel (Assigned Cost During F.O.)	Form A, p.2	\$ 310,937	\$ 340,044	\$ -	\$ 379,662	\$ 974,770	\$ 502,426	\$ 336,872	\$ 56,674	\$ 308,737
(-) Fuel (Substitute Cost for FO)	Form A, p.2	\$ 54,704	\$ 69,472	\$ -	\$ 88,573	\$ 476,378	\$ 179,874	\$ 255,947	\$ 87	\$ 9,436
(-) Fuel (Susp. & Back-Up Energy to Smelters)	Form A, p.2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
(-) Fuel (Domtar Back-Up Imbalance Generation)	Form A, p.2	\$ 10,235	\$ 6,318	\$ 27,257	\$ 13,773	\$ 23,641	\$ 27,558	\$ 31,396	\$ 51,644	\$ 26,825
Sub-Total Generation Fuel Costs		\$ 17,736,068	\$ 19,488,141	\$ 18,241,273	\$ 13,107,487	\$ 12,296,547	\$ 16,708,972	\$ 18,099,905	\$ 16,337,824	\$ 16,053,839
(*) Net Energy Cost - Economy Purchases	Form A, p.2	\$ 1,345,202	\$ 1,829,194	\$ 971,508	\$ 1,182,583	\$ 1,250,437	\$ 932,591	\$ 764,887	\$ 640,627	\$ 477,855
(*) Identifiable Fuel Cost - Other Purchases	Form A, p.2	\$ 507,535	\$ 463,629	\$ 407,870	\$ 526,876	\$ 392,749	\$ 2,560,169	\$ 2,214,001	\$ 2,390,520	\$ 2,279,800
(*) Identifiable fuel cost - Forced Outage purchases	Form A, p.2	\$ 370,896	\$ 660,305	\$ -	\$ 412,929	\$ 908,022	\$ 452,236	\$ 57,096	\$ 91,405	\$ 369,536
(-) Identifiable fuel cost (substitute for Forced Outage)	Form A, p.2	\$ 370,896	\$ 660,305	\$ -	\$ 412,929	\$ 908,022	\$ 452,236	\$ 57,096	\$ 91,405	\$ 369,536
(-) Less Purchases for Susp. & Back-Up energy in Smelters	Form A, p.2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
(-) Less Purchases for Domtar back-up	Form A, p.2	\$ 161,893	\$ 86,174	\$ 187,770	\$ 156,433	\$ 207,567	\$ 135,782	\$ 126,231	\$ 480,157	\$ 187,367
(-) Less Purchases Above Highest Cost Units	Form A, p.2	\$ 82,196	\$ 158,353	\$ 41,800	\$ 46,506	\$ 16,187	\$ 6,673	\$ 17,412	\$ 3,187	\$ 40,544
Sub-Total		\$ 1,658,862	\$ 2,949,156	\$ 1,149,868	\$ 1,507,242	\$ 1,485,432	\$ 2,948,294	\$ 2,608,976	\$ 2,478,893	\$ 2,523,914
Total Energy Cost of Purchased Power	Power Trans. Summ.	\$ 2,273,441	\$ 2,963,031	\$ 1,375,379	\$ 2,125,071	\$ 2,815,208	\$ 4,702,360	\$ 4,167,976	\$ 4,007,271	\$ 4,097,297
Purchases for Inter-System Sales (Total Energy \$)	Power Trans. Summ.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,342,655	\$ 3,170,868	\$ 2,561,202	\$ 2,706,902
Purchases for Inter-System Sales (MWh)	Power Trans. Summ.	-	-	-	-	-	88,000,000	84,000,000	67,200,000	73,650,200
Inter-system Sales of Generation (Fuel \$)	Power Trans. Summ.	\$ 12,150,024	\$ 14,664,768	\$ 14,321,377	\$ 8,872,576	\$ 6,364,512	\$ 11,041,264	\$ 11,900,429	\$ 11,363,028	\$ 11,424,466
Inter-system Sales of Generation (MWh)	Power Trans. Summ.	498,508,754	600,162,498	568,078,882	346,161,437	234,887,500	444,584,800	490,153,176	470,576,100	457,253,000
Net Generation (before losses) (MWh)	Form A, p.3	736,225,365	810,875,091	766,338,214	523,706,077	458,041,561	685,048,409	784,901,702	701,225,247	650,243,189
System Losses (MWh)	Form A, p.3	18,766,064	23,864,934	17,927,682	79,047,424	22,574,382	21,396,123	21,198,213	17,421,655	18,617,450
Back-Up & Supp. Sales to Smelters (from Gen) (MWh)	SmelterFuelCost	-	-	-	-	-	-	-	-	-
Domtar Back-Up Power Sales (from Gen) (MWh)	DomtarFuelCost	418,652	280,031	1,115,426	541,023	872,501	1,166,623	1,263,066	2,578,580	1,987,260
Interchange In (MWh)	Form A (inputs)	340,321,000	394,768,000	421,080,000	294,656,000	146,020,000	254,232,000	291,306,000	267,580,000	256,212,000
Interchange Out (MWh)	Form A (inputs)	325,852,000	368,731,000	404,320,000	278,517,000	130,653,000	236,749,000	278,408,000	254,442,000	242,738,000
Net Interchange (MWh)		14,469,000	15,977,000	16,710,000	16,339,000	15,967,000	14,483,000	14,590,000	13,038,000	13,474,000
Total Purchased Power (MWh)	Power Trans. Summ.	74,518,887	86,935,194	50,513,702	82,389,811	70,673,201	146,771,700	128,137,578	118,004,500	128,119,301
(-) Purchases for Domtar Back-up (MWh)	Power Trans. Summ.	1,847,990	2,023,719	3,979,222	3,874,755	4,244,550	4,213,500	3,662,838	15,312,581	6,030,024
(-) Purchases for Inter-system Sales	Power Trans. Summ.	-	-	-	-	-	88,000,000	84,000,000	67,200,000	73,650,000
Total Purchased Power for Native Load (MWh)		72,670,897	84,911,475	46,534,480	78,525,056	66,428,651	54,568,200	42,174,740	36,682,319	46,486,277



