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July 6, 2011

**Federal Express**

Jeff DeRouen  
Executive Director  
Public Service Commission  
211 Sower Boulevard, P.O. Box 615  
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JUL 06 2011

PUBLIC SERVICE  
COMMISSION

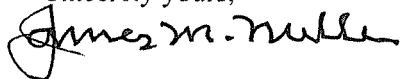
Re: In the Matter of: Notice and Application of Big Rivers  
Electric Corporation for a General Adjustment in Rates,  
PSC Case No. 2011-00036

Dear Mr. DeRouen:

Enclosed are an original and ten (10) copies of the rebuttal testimony of Big Rivers Electric Corporation ("Big Rivers"). Please note that this rebuttal testimony was substantially complete before Big Rivers received the corrected testimony from Kentucky Industrial Utility Customers ("KIUC") of Mr. King, Mr. Kollen and Mr. Baron, which was filed June 30, 2011. Big Rivers' rebuttal testimony does not reflect the contents of the KIUC corrected testimony. I certify that a copy of this cover letter and attachment has been served upon each party of record in this matter.

Also enclosed are an original and ten copies of a petition for confidential treatment of certain information contained in Exhibit Berry Rebuttal-1. One copy of the confidential information is attached. A copy of Exhibit Berry Rebuttal-1 with the confidential material redacted is found in Big Rivers' Exhibit 64, Rebuttal Testimony of Robert Berry in the original and each copy of Big Rivers' rebuttal testimony. I further certify that a copy of the petition for confidential treatment has been served on each party of record.

Sincerely yours,



James M. Miller

JMM/ej  
Enclosures

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Albert Yockey  
Douglas Beresford, Esq.  
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PSC CASE NO. 2011-00036

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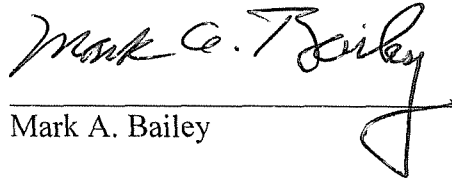
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**BIG RIVERS ELECTRIC CORPORATION**

**APPLICATION OF BIG RIVERS ELECTRIC CORPORATION  
FOR A GENERAL ADJUSTMENT IN RATES  
CASE NO. 2011-00036**

**VERIFICATION**

I, Mark A. Bailey, verify, state, and affirm that I prepared or supervised the preparation of my rebuttal testimony filed with this Verification, and that rebuttal testimony is true and accurate to the best of my knowledge, information, and belief formed after a reasonable inquiry.

  
Mark A. Bailey

COMMONWEALTH OF KENTUCKY     )  
COUNTY OF HENDERSON         )

SUBSCRIBED AND SWORN TO before me by Mark A. Bailey on this the 5<sup>th</sup>  
day of July, 2011.

  
Notary Public, Ky. State at Large  
My Commission Expires 1-12-13

**BIG RIVERS ELECTRIC CORPORATION**

**APPLICATION OF BIG RIVERS ELECTRIC CORPORATION  
FOR A GENERAL ADJUSTMENT IN RATES  
CASE NO. 2011-00036**

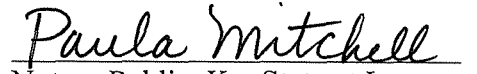
**VERIFICATION**

I, C. William Blackburn, verify, state, and affirm that I prepared or supervised the preparation of my rebuttal testimony filed with this Verification, and that rebuttal testimony is true and accurate to the best of my knowledge, information, and belief formed after a reasonable inquiry.

  
C. William Blackburn

COMMONWEALTH OF KENTUCKY     )  
COUNTY OF HENDERSON         )

5<sup>th</sup> SUBSCRIBED AND SWORN TO before me by C. William Blackburn on this the  
day of July, 2011.

  
Notary Public, Ky. State at Large  
My Commission Expires 1-12-13

**BIG RIVERS ELECTRIC CORPORATION**


**APPLICATION OF BIG RIVERS ELECTRIC CORPORATION**

**FOR A GENERAL ADJUSTMENT IN RATES**

**CASE NO. 2011-00036**

**VERIFICATION**

I, Alan Spen, verify, state, and affirm that I prepared or supervised the preparation of my rebuttal testimony filed with this Verification, and that rebuttal testimony is true and accurate to the best of my knowledge, information, and belief formed after a reasonable inquiry.

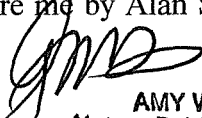


Alan Spen

STATE OF NEW YORK )

COUNTY OF Suffolk )

SUBSCRIBED AND SWORN TO before me by Alan Spen on this the 24<sup>th</sup> day of June,  
2011.



**AMY WILLEN SPIROS**  
Notary Public, State of New York  
NO. 01SP4940854  
Qualified in Suffolk County  
Commission Expires Aug. 15, 2016


12

**BIG RIVERS ELECTRIC CORPORATION**

**APPLICATION OF BIG RIVERS ELECTRIC CORPORATION**

**FOR A GENERAL ADJUSTMENT IN RATES**

**CASE NO. 2011-00036**

  
\_\_\_\_\_  
Notary Public

My Commission Expires \_\_\_\_\_

**AMY WILLEN SPIROS**  
Notary Public, State of New York  
NO. 01SP4940854  
Qualified in Suffolk County  
Commission Expires Aug. 15, 2010


1/12

**BIG RIVERS ELECTRIC CORPORATION**

**APPLICATION OF BIG RIVERS ELECTRIC CORPORATION  
FOR A GENERAL ADJUSTMENT IN RATES  
CASE NO. 2011-00036**

**VERIFICATION**

I, John Wolfram, verify, state, and affirm that I prepared or supervised the preparation of my rebuttal testimony filed with this Verification, and that rebuttal testimony is true and accurate to the best of my knowledge, information, and belief formed after a reasonable inquiry.

John Wolfram 

COMMONWEALTH OF KENTUCKY    )  
COUNTY OF HENDERSON        )

SUBSCRIBED AND SWORN TO before me by John Wolfram on this the 5<sup>th</sup> day of July, 2011.

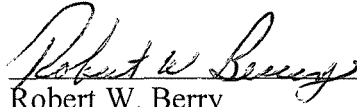
Paula Mitchell  
Notary Public, Ky. State at Large  
My Commission Expires 1-12-13

**BIG RIVERS ELECTRIC CORPORATION**

**APPLICATION OF BIG RIVERS ELECTRIC CORPORATION  
FOR A GENERAL ADJUSTMENT IN RATES  
CASE NO. 2011-00036**

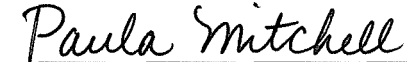
**VERIFICATION**

I, Robert W. Berry, verify, state, and affirm that I prepared or supervised the preparation of my rebuttal testimony filed with this Verification, and that rebuttal testimony is true and accurate to the best of my knowledge, information, and belief formed after a reasonable inquiry.

  
Robert W. Berry

COMMONWEALTH OF KENTUCKY     )  
COUNTY OF HENDERSON         )

SUBSCRIBED AND SWORN TO before me by Robert W. Berry on this the 5<sup>th</sup> day of July, 2011.

  
Notary Public, Ky. State at Large  
My Commission Expires 1-12-13



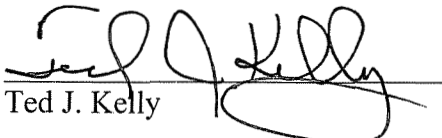
**BIG RIVERS ELECTRIC CORPORATION**

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

**CASE NO. 2011-00036**

**VERIFICATION**

I, Ted J. Kelly, verify, state, and affirm that I prepared or supervised the preparation of my rebuttal testimony filed with this Verification, and that rebuttal testimony is true and accurate to the best of my knowledge, information, and belief formed after a reasonable inquiry.

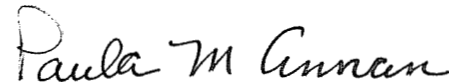
  
Ted J. Kelly

STATE OF MISSOURI                                    )  
COUNTY OF JACKSON                                )

SUBSCRIBED AND SWORN TO before me by Ted J. Kelly on this the 29th day of  
June, 2011.



PAULA M. ANNAN  
My Commission Expires  
January 19, 2015  
Jackson County  
Commission #11992872


  
Notary Public  
My Commission Expires Jan 19, 2015

**BIG RIVERS ELECTRIC CORPORATION**

**APPLICATION OF BIG RIVERS ELECTRIC CORPORATION  
FOR A GENERAL ADJUSTMENT IN RATES  
CASE NO. 2011-00036**

**VERIFICATION**

I, Mark A. Hite, verify, state, and affirm that I prepared or supervised the preparation of my rebuttal testimony filed with this Verification, and that rebuttal testimony is true and accurate to the best of my knowledge, information, and belief formed after a reasonable inquiry.

  
Mark A. Hite

COMMONWEALTH OF KENTUCKY     )  
COUNTY OF HENDERSON         )

SUBSCRIBED AND SWORN TO before me by Mark A. Hite on this the 5<sup>th</sup> day of July, 2011.

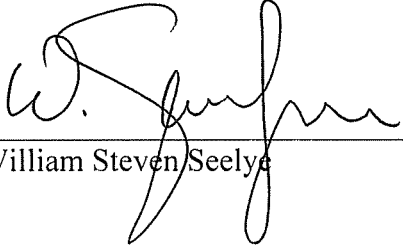
  
Notary Public, Ky. State at Large  
My Commission Expires 1-12-13

**BIG RIVERS ELECTRIC CORPORATION**

**APPLICATION OF BIG RIVERS ELECTRIC CORPORATION  
FOR A GENERAL ADJUSTMENT IN RATES  
CASE NO. 2011-00036**

**VERIFICATION**

I, William Steven Seelye, verify, state, and affirm that I prepared or supervised the preparation of my rebuttal testimony filed with this Verification, and that rebuttal testimony is true and accurate to the best of my knowledge, information, and belief formed after a reasonable inquiry.

  
\_\_\_\_\_  
William Steven Seelye

COMMONWEALTH OF KENTUCKY     )  
COUNTY OF HENDERSON         )

SUBSCRIBED AND SWORN TO before me by William Steven Seelye on this the 5<sup>th</sup>  
day of July, 2011.

  
\_\_\_\_\_  
Notary Public, Ky. State at Large  
My Commission Expires 1-12-13

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JUL 06 2011

PUBLIC SERVICE  
COMMISSION

COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

APPLICATION OF BIG RIVERS ELECTRIC )  
CORPORATION FOR A GENERAL ) CASE NO. 2011-00036  
ADJUSTMENT IN RATES )

**PETITION OF BIG RIVERS ELECTRIC CORPORATION FOR CONFIDENTIAL  
PROTECTION**

1. Big Rivers Electric Corporation ("Big Rivers") hereby petitions the Kentucky Public Service Commission ("Commission"), pursuant to 807 KAR 5:001 Section 7 and KRS 61.878(1)(c), to grant confidential protection to portions of its Exhibit Berry Rebuttal-1 that is attached to the Rebuttal Testimony of Robert W. Berry filed with this petition. The portions of the exhibit that Big Rivers seeks to protect as confidential are hereinafter referred to as the "Confidential Information."

2. One (1) sealed copy of Exhibit Berry Rebuttal-1 with the Confidential Information highlighted with transparent ink is attached to this petition. A copy of Exhibit Berry Rebuttal-1 with the Confidential Information redacted is attached to the original and each of the ten (10) copies of the Rebuttal Testimony of Robert W. Berry filed with this petition. 807 KAR 5:001 Sections 7(2)(a)(2), 7(2)(b).

3. A copy of this petition and a copy of the Rebuttal Testimony of Robert W. Berry containing the redacted exhibit have been served on all parties to this proceeding. 807 KAR 5:001 Section 7(2)(c). Big Rivers has provided a copy of the unredacted exhibit to the parties who have signed a confidentiality agreement, and Big Rivers will provide a copy of the unredacted exhibit to any other party who signs a confidentiality agreement.

1           4.           The Confidential Information is not publicly available, is not disseminated within  
2 Big Rivers except to those employees and professionals with a legitimate business need to know  
3 and act upon the information, and is not disseminated to others without a legitimate need to  
4 know and act upon the information.

5           5.           If and to the extent the Confidential Information becomes generally available to  
6 the public, whether through filings required by other agencies or otherwise, Big Rivers will  
7 notify the Commission and have its confidential status removed. 807 KAR 5:001 Section  
8 7(9)(a).

9           6.           As discussed below, the Confidential Information is entitled to confidential  
10 protection based upon KRS 61.878(1)(c)(1), which protects “records confidentially disclosed to  
11 an agency or required by an agency to be disclosed to it, generally recognized as confidential or  
12 proprietary, which if openly disclosed would permit an unfair commercial advantage to  
13 competitors of the entity that disclosed the records.” KRS 61.878(1)(c)(1).

14   **I.           Big Rivers Faces Actual Competition**

15           7.           Big Rivers competes in the wholesale power market to sell energy excess to its  
16 members’ needs. Big Rivers’ ability to successfully compete in the wholesale power market is  
17 dependent upon a combination of its ability to get the maximum price for the power sold, and  
18 keeping the cost of producing that power as low as possible. Fundamentally, if Big Rivers’ cost  
19 of producing a kilowatt hour increases, its ability to sell that kilowatt hour in competition with  
20 other utilities is adversely affected. As is well-documented in multiple proceedings before this  
21 Commission, Big Rivers’ margins are derived almost exclusively from its off-system sales.

22           8.           Big Rivers also competes for reasonably-priced credit in the credit markets, and  
23 its ability to compete is directly impacted by its financial results. Any event that adversely

1 affects Big Rivers' margins will adversely affect its financial results and potentially impact the  
2 price it pays for credit. As discussed in the Rebuttal Testimony of C. William Blackburn filed  
3 with this petition, Big Rivers expects to be in the credit markets in the future.

4 **II. The Confidential Information is Generally Recognized as Confidential or**  
5 **Proprietary**

6 9. The Confidential Information for which Big Rivers seeks confidential treatment  
7 under KRS 61.878(1)(c)(1) is generally recognized as confidential or proprietary under Kentucky  
8 law. The Confidential Information contains a list of the next scheduled major outage at each Big  
9 Rivers generating unit, the projected duration of each of those outages, and other numbers that  
10 would enable one to calculate the next scheduled major outage at each unit.

11 10. Public disclosure of the Confidential Information will allow Big Rivers' suppliers  
12 and competitors to know Big Rivers' future maintenance plans and will give them insight into  
13 Big Rivers' wholesale power needs. Information about a company's detailed inner workings is  
14 generally recognized as confidential or proprietary. *See, e.g., Hoy v. Kentucky Indus.*  
15 *Revitalization Authority*, 907 S.W.2d 766, 768 (Ky. 1995) ("It does not take a degree in finance  
16 to recognize that such information concerning the inner workings of a corporation is 'generally  
17 recognized as confidential or proprietary'"). The Commission previously granted confidential  
18 treatment to this type of information. *See, e.g.,* letter from the Commission dated July 20, 2010,  
19 in Administrative Case No. 387 (granting confidential treatment to a list of future scheduled  
20 outages that Big Rivers filed as part of the supplement to its annual report).

1           **III. Public Disclosure of the Confidential Information Would Permit an Unfair**  
2   **Commercial Advantage to Big Rivers' Competitors**

3           11.           Public disclosure of the Confidential Information would permit an unfair  
4 commercial advantage to Big Rivers' competitors. As discussed above, Big Rivers faces actual  
5 competition in the wholesale power market and in the credit market. It is likely that Big Rivers  
6 would suffer competitive injury if that Confidential Information was publicly disclosed.

7           12.           If the Confidential Information is publicly disclosed, Big Rivers' competitors  
8 would have insight into when Big Rivers' generating plants will be down for maintenance and  
9 thus know a crucial input into Big Rivers' generating costs and need for power and energy  
10 during those periods. With that information, potential suppliers to Big Rivers will be able to  
11 manipulate the price of power bid to Big Rivers in order to maximize their revenues, thereby  
12 driving up Big Rivers' costs and impairing Big Rivers' ability to compete in the wholesale power  
13 and credit markets. Additionally, Big Rivers' competitors in the wholesale power market could  
14 use the information to potentially underbid Big Rivers to Big Rivers' competitive disadvantage  
15 in competing for wholesale sales.

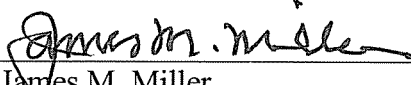
16           **IV. The Confidential Information is Entitled to Confidential Protection**

17           13.           Based on the foregoing, the Confidential Information is entitled to confidential  
18 protection. If the Commission disagrees that Big Rivers is entitled to confidential protection, due  
19 process requires the Commission to hold an evidentiary hearing. *Utility Regulatory Com'n v.*  
20 *Kentucky Water Service Co., Inc.*, 642 S.W.2d 591 (Ky. App. 1982).

21           WHEREFORE, Big Rivers respectfully requests that the Commission classify and protect  
22 as confidential the Confidential Information.

23           On this the 6<sup>th</sup> day of July, 2011.  
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Tyson Kamuf  
Sullivan, Mountjoy, Stainback & Miller, P.S.C.  
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P.O. Box 727  
Owensboro, Kentucky 42302-0727  
(270) 926-4000


and

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Hogan Lovells US LLP  
Columbia Square  
555 Thirteenth Street, NW  
Washington, DC 20004  
(202) 637-5819  
  
COUNSEL FOR BIG RIVERS  
ELECTRIC CORPORATION



ORIGINAL



Your Touchstone Energy® Cooperative 

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY

In the Matter of:

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

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Case No. 2011-00036

REBUTTAL TESTIMONY

FILED: July 6, 2011

ORIGINAL

**COMMONWEALTH OF KENTUCKY**  
**BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY**

**In the Matter of:**

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

)  
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)  
**Case No. 2011-00036**

**REBUTTAL TESTIMONY**  
  
**OF**  
  
**MARK A. BAILEY**  
**PRESIDENT & CHIEF EXECUTIVE OFFICER**  
  
**ON BEHALF OF**  
  
**BIG RIVERS ELECTRIC CORPORATION**

**FILED: July 6, 2011**

**Case No. 2011-00036**  
**Exhibit 60**  
**Page 1 of 20**

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**REBUTTAL TESTIMONY  
OF  
MARK A. BAILEY**

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**REBUTTAL TESTIMONY  
OF  
MARK A. BAILEY**

5 **I. INTRODUCTION**

6

7 **Q. Please state your name, business address, and position.**

8 A. My name is Mark A. Bailey. I am employed by Big Rivers Electric Corporation ("Big  
9 Rivers") at 201 Third Street, Henderson Kentucky, 42420, as its President and Chief  
10 Executive Officer.

11 **Q. Did you submit direct testimony in this proceeding?**

12 A. Yes, in Application Exhibit 48.

13 **Q. What is the purpose of your rebuttal testimony?**

14 A. The purpose of my testimony is to provide an overview of Big Rivers' rebuttal of the  
15 positions put forth by the Kentucky Industrial Utility Customers, Inc. ("KIUC") in their  
16 testimony, and to broadly explain why the KIUC proposal does not meet the needs of  
17 Big Rivers or its members. Furthermore, I will describe why the Commission should  
18 reject the KIUC proposal and approve the request for rate relief made by Big Rivers in  
19 this proceeding.

20 **Q. Please summarize your rebuttal testimony.**

21 A. Simply put, the rates proposed by the KIUC do not allow Big Rivers to meet its  
22 financial and service obligations.

23 Big Rivers needs to increase its base rates in order to meet the financial  
24 requirements set forth in its debt agreements. Specifically, an increase in base rates is  
25 necessary so that Big Rivers can meet its Margins for Interest Ratio ("MFIR")

1 requirement and maintain investment grade credit ratings, as required by its debt  
2 covenants. The rate proposal by Big Rivers in this proceeding allows Big Rivers to do  
3 so; the rate proposal by the KIUC does not.

4 Big Rivers also must maintain its generating assets in a prudent manner to  
5 ensure the continued reliable operation of these facilities in the future. Again, the rate  
6 proposal by Big Rivers in this proceeding allows Big Rivers to do so; the rate proposal  
7 by the KIUC does not.

8 Finally, the KIUC witnesses offer several other recommendations to the  
9 Commission that are flawed and should be rejected. These are summarized in my  
10 testimony and are explained further in the rebuttal testimony of the following  
11 individuals on behalf of Big Rivers:

12  
13 **1) C. William Blackburn**, Big Rivers' Senior Vice President Financial & Energy  
14 Services and Chief Financial Officer, describes why the KIUC proposal will not allow  
15 Big Rivers to meet its financial obligations and why the Commission should reject the  
16 recommendation of Stephen J. Baron regarding Big Rivers' proposed pro forma  
17 adjustment for Energy Efficiency and Demand Side Management ("DSM") program  
18 costs.

19  
20 **2) Alan Spen**, Senior Director at Public Financial Management, Inc., describes the  
21 likely negative impact of the KIUC proposal on Big Rivers' financial outlook from the  
22 perspective of the ratings agencies and explains why the KIUC proposal would place

1 Big Rivers' ability to maintain the necessary investment grade credit ratings in  
2 jeopardy.

3  
4 **3) John Wolfram**, Senior Consultant at The Prime Group, LLC, provides the  
5 updated revenue requirement and revenue deficiency calculation for Big Rivers. He  
6 describes updates to certain pro forma adjustments and he rebuts the proposals by Lane  
7 Kollen on behalf of the KIUC regarding certain pro forma adjustments.

8  
9 **4) Robert W. Berry**, Big Rivers' Vice President of Production, explains why the  
10 KIUC proposal does not allow Big Rivers to perform the necessary and appropriate  
11 maintenance on its generating assets and rebuts the proposal by Mr. Kollen regarding  
12 the pro forma adjustment for non-labor production maintenance expenses.

13  
14 **5) Ted J. Kelly**, a Principal at the firm of Burns & McDonnell, describes why the  
15 depreciation analysis by Charles W. King is flawed, and why the deprecation analysis  
16 put forth by Big Rivers in this proceeding should be approved by the Commission.

17  
18 **6) Mark A. Hite**, Big Rivers' Vice President of Accounting, explains why the  
19 KIUC proposal does not allow Big Rivers to meet its financial obligations. Mr. Hite  
20 describes why the pro forma adjustments proposed by Mr. Kollen and Mr. King on  
21 behalf of the KIUC are inappropriate and why the KIUC recommendation that the  
22 Commission should direct Big Rivers to adopt and implement a plan to distribute

1 patronage capital is misplaced. All of these aspects of the KIUC proposal should be  
2 rejected by the Commission.

3  
4 **7) William Steven Seelye**, Principal and Senior Consultant at The Prime Group,  
5 LLC, describes why the KIUC proposal to emasculate the TIER Adjustment, and  
6 economically eliminate the Smelter Surcharge, and the \$0.25/MWh adder to the Large  
7 Industrial rate (collectively, the “Smelter Unwind Commitments”) is inappropriate.  
8 Negating the Smelter Unwind Commitments would benefit the Smelters to the  
9 detriment of the Non-Smelter members of Big Rivers. Mr. Seelye also explains why  
10 the KIUC testimonies of Henry W. Fayne, Stephane Leblanc, Dr. Paul A. Coomes,  
11 Gene Strong, and Dr. Matthew J. Morey are irrelevant to the revenue requirement and  
12 relate only to revenue allocation, why the pro forma adjustments proposed by Mr.  
13 Kollen and Mr. Baron are inappropriate, and why the recommendation proposed by Mr.  
14 Baron to utilize a 6 coincident peak (“CP”) methodology to allocate production-related  
15 demand costs instead of a 12 CP methodology is misplaced. Mr. Seelye further  
16 describes why the KIUC proposal to rely on subsidization from the Rural Economic  
17 Reserve (“RER”) to mitigate the rate impact on the Rural rate class is inappropriate,  
18 and why the KIUC proposal to modify the LICX tariff to allow current customers to  
19 expand their contractual loads by 5 megawatts (“MW”) or more and continue taking  
20 service for the expanded load under the existing Large Industrial Customer rate is  
21 flawed and should be rejected.

1 **II. THE KIUC PROPOSAL DOES NOT ALLOW BIG RIVERS TO MEET ITS**  
2 **OBLIGATIONS AND SHOULD BE REJECTED.**  
3

4 **Q. Does the KIUC proposal allow Big Rivers to meet the requirements of its debt**  
5 **covenants?**

6 A. No. As discussed in greater detail in the testimony of Mr. Blackburn, the KIUC  
7 proposal would not allow Big Rivers to maintain an MFIR of at least 1.10, which it is  
8 obligated to maintain under covenants in the documents required by Big Rivers'  
9 lenders. In the event that Big Rivers fails to achieve the minimum required MFIR, Big  
10 Rivers would likely be in default of its obligations to its lenders and would face  
11 potential bankruptcy. Obviously, this would be an untenable situation.

12 **Q. Are there other financial implications of the KIUC proposal if it were to be**  
13 **adopted by the Commission?**

14 A. Yes. Big Rivers has investment grade ratings from the three principal credit rating  
15 agencies, Moody's, Standard & Poor's, and Fitch. However, two of these three ratings  
16 are at the lowest level of investment grade. As explained in greater detail in the  
17 testimony of Mr. Spen, a failure to meet MFIR, or the failure to meet any number of  
18 other financial metrics, could result in Big Rivers losing one or more of its investment  
19 grade ratings. Failure to meet MFIR would have a severe and substantial impact on Big  
20 Rivers' ability to refinance its current debt as required by current loan agreements or to  
21 borrow additional money in the future. As Mr. Hite explains in his rebuttal testimony,  
22 even with the full rate adjustment requested by Big Rivers, the company will be  
23 required to borrow additional money as early as 2012. Without an investment grade



1 rating, any borrowings would certainly be more expensive, and Big Rivers' access to  
2 credit markets could be impaired.

3 **Q. Are you saying that the KIUC proposal, if adopted by the Commission, would put**  
4 **Big Rivers in a financially unsound situation?**

5 A. That is exactly what I am saying. As discussed in more detail in the rebuttal  
6 testimonies of Mr. Hite and Mr. Berry, the KIUC proposal would negatively impact Big  
7 Rivers' margins, would negatively impact cash flows, would negatively impact Big  
8 Rivers' MFIR and Times Interest Earned Ratio ("TIER"), and would not allow Big  
9 Rivers to prudently maintain its generating and other assets. Big Rivers is only  
10 requesting the minimum increase necessary so that it can meet its financial obligations  
11 and maintain its investment grade credit ratings, as required by its debt covenants. As I  
12 stated in my initial testimony, there is no leeway in Big Rivers' request for rate relief in  
13 this proceeding. (Direct Testimony of Mark A. Bailey, Exhibit 49, p. 12.)

14 **Q. How does Big Rivers' Conventional TIER compare to that of other generation and**  
15 **transmission ("G&T") cooperatives?**

16 A. Exhibit Bailey Rebuttal-1 contains data from the Annual Directory of the G&T  
17 Accounting & Finance Association, dated June 2011. On page 140, Big Rivers is listed  
18 45<sup>th</sup> out of the 48 G&T cooperatives listed for 2010, with a Conventional TIER of 1.15.  
19 Even with Big Rivers' full rate increase request, Big Rivers' Conventional TIER will  
20 be only 1.30. Clearly Big Rivers' placement in the bottom decile of listed G&Ts is not  
21 a favorable comparison.

22 **Q. How does Big Rivers' Conventional TIER compare to that of East Kentucky**  
23 **Power Cooperative ("EKPC")?**

1 A. By comparison, EKPC's 2010 Conventional TIER was listed 41<sup>st</sup> out of 48 of the  
2 G&Ts listed, with a Conventional TIER of 1.28.

3 **Q. Is Big Rivers more constrained than EKPC in its ability to improve its**  
4 **Conventional TIER?**

5 A. Yes. EKPC is not as dependent on one industry, while Big Rivers is limited in its  
6 movement because of the Smelter Agreements. If wholesale power prices fall even  
7 more, Big Rivers could be in grave jeopardy. Big Rivers will have to cut costs  
8 everywhere reasonably possible to "thread the margin needle" -- the narrow operations  
9 margin Big Rivers must navigate, as I discuss later. This would hurt consumers in the  
10 long run, because when off-system sales improve, Big Rivers will likely be performing  
11 maintenance that has been deferred and purchasing expensive power instead of selling  
12 power into a profitable off-system market.

13 **Q. How do Big Rivers' operating margins compare to other G&T cooperatives?**

14 A. On page 137 of Exhibit Bailey Rebuttal-1, Big Rivers is listed 30<sup>th</sup> out of 59 listed  
15 G&Ts in operating margins with a \$4,256,517 margin. It is important to understand  
16 what a very small portion of total operating revenue this operating margin is. As shown  
17 on page 135 of the Exhibit, Big Rivers' total operating revenue for 2010 was  
18 \$527,324,452, making Big Rivers' operating margin less than one percent. Because of  
19 the Smelter Agreements, the most Big Rivers' operating margin can be is two or three  
20 percent (capped at approximately \$11.4 million for Contract TIER), giving Big Rivers  
21 very little margin for error. This is what I refer to as "the margin needle."

22 **Q. What are the implications of this narrow maneuvering room for Big Rivers?**

1 A. The implications are three-fold. First, with projected environmental costs proposed by  
2 the U.S. Environmental Protection Agency (“EPA”) looming, the Smelters’ proposal to  
3 distribute patronage capital is a non-starter. Second, Big Rivers has very little cushion  
4 to meet debt covenants, refinance its loans, or borrow additional funds to meet  
5 operating and capital expenditures. Any unusual event – for example, lower off-system  
6 sales prices, extraordinary forced outages, or new EPA requirements – could jeopardize  
7 Big Rivers financially. Third, it is clear that adjusting the TIER Adjustment Charge  
8 bandwidth to the midpoint or below is critical to help preserve Big Rivers’ financial  
9 health. Even setting the TIER Adjustment Charge at the midpoint of the current  
10 bandwidth may not be sufficient. Big Rivers absolutely needs the flexibility of the  
11 TIER Adjustment Charge mechanism – a mechanism that we intentionally bargained  
12 for, and that the Smelters agreed to in the Unwind Transaction.

13

14 **III. THE KIUC PROPOSAL TO ALLOCATE THE ENTIRE INCREASE TO THE**  
15 **RURAL RATE CLASS IS UNREASONABLE, UNFAIRLY BURDENS THE**  
16 **RURAL RATE CLASS, AND EFFECTIVELY SEEKS TO NULLIFY THE**  
17 **SMELETER AGREEMENTS.**  
18

19 **Q. The KIUC witnesses, particularly Dr. Coomes, testify to the importance of the**  
20 **Smelters to the economy of the Commonwealth of Kentucky. The KIUC witnesses**  
21 **describe in detail the labor-related and financial contributions of the Smelters to**  
22 **the Commonwealth. Do you agree that the Smelters are important to the economy**  
23 **of Kentucky?**

24 A. Without question. Big Rivers acknowledges and appreciates the contribution of the  
25 Smelters to the economy of Kentucky. Indeed, one of the fundamental reasons why

1 Big Rivers undertook the Unwind Transaction, which closed in July 2009, was to help  
2 preserve the Smelters as good corporate employers in Kentucky for as long as  
3 practicable.

4 **Q. Did Big Rivers' Board of Directors take the importance of the Smelters to the**  
5 **economy of Kentucky into consideration when it voted to approve the request for**  
6 **a rate increase in this case?**

7 A. Absolutely. The Board of Directors carefully considered the effect of the rate increase  
8 on all ratepayers, and fully appreciated the economic contributions the Smelters have  
9 made, and will hopefully continue to make, to the economy of Kentucky.

10 **Q. Did the Smelters willingly agree to the terms and conditions of the Smelter**  
11 **Agreements in the Unwind Transaction, including terms that they call**  
12 **"subsidiaries"?**

13 A. Yes. The Smelters are extremely sophisticated businesses with very capable leadership  
14 and extraordinary advisors and lawyers. The Smelters considered all of the rate issues  
15 and potential ramifications of purchasing Big Rivers power through Kenergy Corp.  
16 over the several years we negotiated the Unwind Transaction. They agreed to all of the  
17 terms of Smelter Agreements, including the TIER Adjustment Charge, and the  
18 surcharges. They willingly agreed to the Unwind Transaction. The Smelters got the  
19 power supply agreements that they bargained for.

20 **Q. Can you enumerate some of benefits the Smelters received in connection with the**  
21 **Unwind Transaction?**

22 A. Of course. The Smelters received substantial payments from E.ON U.S., they received  
23 credit support from E.ON U.S., and they received payments from Big Rivers. In

1 addition, the Smelters did not want to pay market-based rates; instead, the Smelters  
2 received rates based on Large Industrial cost-based rates. The Smelters also were  
3 granted the right to review and comment on Big Rivers' budget. Smelter  
4 representatives are part of a "coordinating committee" which reviews Big Rivers'  
5 operations. The Smelters also gained the ability to substantially mitigate the  
6 consequences of their take-or-pay provisions when they shut down and restart potlines.  
7 The Smelters also received the right to terminate their contracts on one year's notice.

8 **Q. What is the effect of the KIUC proposal on the Smelter Agreements that were**  
9 **approved by the Commission in the Unwind Transaction?**

10 A. Essentially, the KIUC proposal attempts to nullify many of the commitments the  
11 Smelters made when they signed the Smelter Agreements that were approved by the  
12 Commission in the Unwind Transaction. All of the terms that were favorable to Big  
13 Rivers were bargained for by Big Rivers and were contractual commitments made by  
14 the Smelters, including all of the Smelter Unwind Commitments, which they call  
15 "subsidies." The Smelters now propose to burden the Rural rate class exclusively with  
16 the full increase of Big Rivers' revenue requirements, which would economically  
17 nullify many of the terms of the Smelter Agreements, including certain of the benefits  
18 to Big Rivers of the Unwind Transaction.

19 **Q. Do the Smelters identify any significant changes in circumstances since the closing**  
20 **of the Unwind Transaction two years ago to support their revenue allocation**  
21 **argument?**

22 A. Not really. The principal changes in circumstances that I can identify are seriously  
23 reduced revenues to Big Rivers from off-system sales, and stronger than anticipated

1 world aluminum prices on the London Metals Exchange, which were mentioned by Mr.  
2 Fayne in his testimony.

3 **Q. Mr. Fayne states on page 11 of his direct testimony that the KIUC proposal**  
4 **benefits all constituencies. Is this correct?**

5 A. No. The KIUC proposal does not benefit all constituencies, and Mr. Fayne's assertion  
6 that it does cannot be reconciled with the facts. The KIUC proposal benefits the  
7 Smelters, with some incidental benefits by association accruing to the Large Industrial  
8 class. It is unclear to me how the KIUC proposal benefits the Rural customers or Big  
9 Rivers.

10 **Q. Why does the KIUC proposal provide no benefit to the Rurals and Big Rivers?**

11 A. First, in my opinion, the KIUC proposal is a short-term proposal focused on modestly  
12 strengthening the Smelters against the economic effects of a cyclical world aluminum  
13 price downturn and other circumstances, which the Smelters say put their survival at  
14 risk. By contrast, the KIUC proposal weakens Big Rivers, leaving it in danger of  
15 defaulting on its credit agreements and less able to survive the difficult circumstances  
16 that the KIUC forecasts for Big Rivers if the Smelters are forced to close their  
17 operations. It depletes benefits that have been flowing to Big Rivers' members since  
18 the closing of the Unwind Transaction, and leaves them to deal with the implications of  
19 Smelter closure. Big Rivers very much wants to see the Smelters survive and prosper.  
20 But it is also Big Rivers' responsibility to plan for the long-term, and the future of the  
21 approximately 112,000 retail customers of its members.

22 The KIUC proposal imposes \$18,417,509, or a 16.7% increase on the Rural rate  
23 class, which is essentially the entire amount of the KIUC proposal, with a rate decrease

1 to the Large Industrial class and the Smelters. By contrast, Big Rivers proposed that  
2 the increase for the Rurals would be \$14,173,003, or a 12.82% increase on the Rural  
3 rate class. (This compares unmitigated base non-net increases in both cases.) The  
4 KIUC proposes to mitigate the rate impact of their proposed revenue allocation on the  
5 Rurals by amortizing \$4.2 million per year from the Rural Economic Reserve. The  
6 KIUC asserts that this benefits the Rurals by making the proposed increase equivalent  
7 to that originally filed by Big Rivers in this case. (Note that thus, even on its face, the  
8 KIUC proposal provides no *incremental* benefit to the Rurals relative to the rates  
9 proposed by Big Rivers; they are at best equivalent.) More to the point, however, is the  
10 KIUC proposal to draw from the Rural Economic Reserve to mitigate the rate impact  
11 on the Rurals. The proposal to draw from the RER is actually harmful to the Rural rate  
12 class.

13 **Q. Why is the KIUC proposal to draw from the RER harmful to the Rural rate class?**

14 A. The KIUC proposal will necessarily exhaust the funds in the RER sooner that they  
15 would otherwise be exhausted. When this occurs, the Rurals will be exposed to rate  
16 increases associated with fuel and environmental costs. Thus the KIUC proposal  
17 merely shifts the effect of increasing the Rurals' rates from the present to the future.  
18 Any benefit to the Rurals in this instance is illusory; under the KIUC proposal, the  
19 Rurals ultimately incur a greater risk of rate shock resulting from premature exhaustion  
20 of the RER funds.

21 **Q. Why does the KIUC proposal provide no benefit to Big Rivers?**

22 A. As explained more fully by Mr. Blackburn in his rebuttal testimony, the KIUC proposal  
23 has a dramatic adverse effect on Big Rivers' ability to meet its financial obligations that

1 in my opinion will have detrimental long-term effects on Big Rivers' assets and its  
2 ability to keep power costs lower over the long term. The KIUC proposal does not  
3 provide Big Rivers with sufficient revenues to meet its full revenue requirements. The  
4 KIUC proposal threatens Big Rivers' ability to comply with its debt covenants. The  
5 KIUC proposal also prohibits positive margins for Big Rivers in two of the next three  
6 years, depletes Big Rivers' cash reserves, and increases Big Rivers' need for additional  
7 borrowings. These effects, whether taken separately or together, are extremely  
8 negative to Big Rivers. Simply put, the KIUC proposal places Big Rivers' future  
9 financial viability very much in jeopardy.

10 **Q. Did Big Rivers model the effects of the KIUC proposal on the Big Rivers financial**  
11 **forecast(s)?**

12 A. Yes. KIUC proposed a base rate increase of \$18,679,000 compared to the \$39,953,965  
13 base rate increase proposed by Big Rivers -- or 46.75% of that proposed by Big Rivers.  
14 The KIUC proposal was incorporated into the Big Rivers' multi-year financial forecast  
15 (through 2014) that was filed in response to KIUC Request for Information 1-43, in  
16 order to evaluate the effects of the KIUC proposal on Big Rivers' financials. Mr. Hite  
17 describes this modeling in greater detail in his rebuttal testimony.

18 **Q. Please briefly describe the results of this analysis.**

19 A. The analysis clearly indicates that if the KIUC proposal were adopted, Big Rivers  
20 would not be positioned to meet its financial obligations. The result is that Big Rivers'  
21 margin, MFIR, TIER and cash flow would each suffer greatly. In fact, under the KIUC  
22 proposal as modeled, Big Rivers' margins are forecast to be negative in both 2012 and  
23 2014. MFIR and Conventional TIER are less than 1.10 in all years except 2013. Big



1 Rivers' cash is reduced by approximately \$17 million annually, requiring additional  
2 new borrowings. These are significantly adverse financial impacts on Big Rivers.

3 These detriments are described in greater detail in the rebuttal testimony of Mr. Hite.

4 **Q. In light of these results, how then do you characterize the view that the KIUC  
5 proposal provides a benefit to Big Rivers?**

6 A. For the reasons noted above, Mr. Fayne's assertion that the KIUC proposal benefits Big  
7 Rivers is plainly unsubstantiated. I am already uncomfortable about the long-term  
8 effects of the cost reduction and deferral measures that Big Rivers has been required to  
9 undertake. As Big Rivers completes its second full year of post-Unwind operation, the  
10 entire revenue increase sought by Big Rivers in this proceeding is needed to help keep  
11 Big Rivers financially viable.

12  
13 **IV. ANY LONG-TERM SOLUTION TO THE SMELTERS' VIABILITY IS NOT**  
14 **WITHIN THE SCOPE OF BIG RIVERS' OR THE COMMISSION'S POWER**  
15 **IN THIS RATE CASE.**  
16

17 **Q. On page 19 of his testimony, Mr. Baron states that "by setting rates in this case  
18 based on the mid-point of the TIER Adjustment, Big Rivers would effectively have  
19 an additional \$7.1 million 'credit card balance' at its disposal, with no  
20 Commission oversight. While the agreement contemplated a measure of  
21 protection from the TIER Adjustment, this cushion should not be used to  
22 eliminate spending constraints on the company." Do you agree?**

23 A. Absolutely not. First, as described more fully in the testimony of Mr. Seelye, choosing  
24 the current mid-point of the TIER Adjustment Charge bandwidth is a reasonable

1           compromise position. A case could well be made for setting rates at the floor of the  
2           TIER Adjustment Charge bandwidth to help ensure that Big Rivers has sufficient  
3           revenue going forward and retains the full benefit of the TIER Adjustment Charge  
4           mechanisms in the Smelter Agreements. It must be remembered that if the Smelters  
5           were at the ceiling of the current TIER Adjustment Charge bandwidth as they propose,  
6           and if Big Rivers exceeds the 1.24 Contract TIER in the future, the TIER Adjustment  
7           Charges would be automatically reduced by up to approximately \$14.2 million to the  
8           Smelters, down to the floor of the bandwidth, depending on the level of Big Rivers'  
9           margins.

10                       Second, expenses are not the issue in this proceeding. As I stated in my direct  
11           testimony, at page 16, "Since the closing of the Unwind Transaction, Big Rivers has  
12           very closely managed its operations in order to purge unnecessary costs from the  
13           business." As I mentioned, Smelter representatives review and comment on Big  
14           Rivers' budget and have seen firsthand Big Rivers' efforts at controlling expenses.

15   **Q.    If expenses are not the issue in this case, what is the principal reason for the**  
16   **requested rate relief?**

17   A.    A primary reason for Big Rivers' request for rate relief is to make up for the decrease in  
18   wholesale power sales revenue associated with the drop in the wholesale price of  
19   power. The depressed prices in the wholesale power market are likely to persist as long  
20   as the United States economy remains relatively stagnant.

21   **Q.    What about the future? Are costs likely to increase in the future?**

22   A.    Costs will almost certainly increase in the future. For example, as I stated in my direct  
23   testimony, at pages 14-15, maintenance on Big Rivers' generating units has been

1 deferred. I testified, “Big Rivers is requesting a pro forma adjustment in this  
2 proceeding to provide for the inclusion of a prudent level of maintenance costs, because  
3 the level of maintenance costs in the test year is inadequate on a going-forward basis.”

4 **Q. Do the Smelter witnesses recognize that Big Rivers’ costs will increase in the  
5 future?**

6 A. Yes. For example, Mr. Fayne, in his testimony at page 22, states that “we recognize  
7 that Big Rivers’ costs will increase. . . .” Mr. Fayne also acknowledged that “Big  
8 Rivers must increase rates to recover its prudently incurred costs to meets its financial  
9 obligations. . . .”

10 **Q. Can Big Rivers help with the Smelters’ long-term viability?**

11 A. Unfortunately, no. Even Mr. Fayne acknowledges, “We also understand that the size of  
12 Big Rivers in relationship to the size of the smelter load limits the extent to which a  
13 long-term solution can be developed through the regulatory process.” (Direct  
14 Testimony of Henry W. Fayne, pp. 22-23.)

15 **Q. So Mr. Fayne acknowledges that the Commission is not in a position to provide  
16 relief in the context of a regulatory proceeding?**

17 A. Yes. In response to the Commission Staff’s Initial Information Request to the KIUC,  
18 Item No. 4(b), Mr. Fayne stated, “KIUC believes that this Commission can be an active  
19 participant in and advocate for the development of a statewide solution, but that the  
20 Commission would not be able to unilaterally develop and implement such a solution.”

21 **Q. What is your overall assessment of the KIUC proposal?**

22 A. My overall assessment is that the Smelters are essentially requesting a change in the  
23 commitments they made as part of the Unwind Transaction, which is unreasonable

1 since their decision to close, if it comes, will be based on global forces beyond the  
2 control of either Big Rivers or this Commission.

3  
4 **V. CONCLUSION**

5  
6 **Q. Do you have any closing comments?**

7 **A.** Yes. Big Rivers takes its commitments and its financial health very seriously.

8 Decisions regarding rate increases and the allocation of revenue increases to customer  
9 classes are difficult. The rate proposal by Big Rivers in this proceeding is necessary at  
10 this time in order for Big Rivers to adequately recover its costs and to meet its existing  
11 debt covenants with its creditors.

12 Big Rivers recognizes the importance of the Smelters to Big Rivers, its  
13 members, and the western Kentucky region. We share in the hope that the Smelters  
14 will continue to operate, to the benefit of all. The Smelters' viability is clearly a  
15 challenge and an important issue. However, this filing is about the financial viability of  
16 Big Rivers. The Board of Directors and the management team are committed to  
17 ensuring that Big Rivers remains positioned to meet its financial and service  
18 obligations, both now and over the long term. The KIUC rate proposal ignores this  
19 critical issue.

20 Big Rivers recognizes the extent of the differential in the class rates of return  
21 between the Smelters and the Rurals. The rates proposed by Big Rivers strike a  
22 reasonable balance between narrowing the differential in the class rates of return and  
23 mitigating the burden on the Rurals, in a manner that is consistent with the principles of

1 incrementalism and gradualism that has been endorsed by the Commission for many  
2 years. The rates proposed by the KIUC strike no such balance. The KIUC proposal  
3 increases the burden on the Rurals, and then proposes to offset this increase by using  
4 the Rural Economic Reserve in a manner which will simply deplete the RER sooner  
5 than would be the case otherwise, to the further detriment of the Rurals.

6 Most importantly, however, the KIUC proposal does not position Big Rivers to  
7 meet its financial and service obligations. It does not provide Big Rivers with  
8 sufficient revenues to meet its full revenue requirement. It does not permit Big Rivers  
9 to achieve its MFIR and conventional TIER requirements, which threatens Big Rivers'  
10 ability to comply with its debt covenants. It prohibits positive margins for Big Rivers  
11 in two of the next three years. It depletes Big Rivers' cash reserves and increases Big  
12 Rivers' need for additional borrowings. These effects are extremely negative. Simply  
13 put, the KIUC proposal places Big Rivers' future financial viability very much in  
14 jeopardy. The Commission should reject the KIUC proposal.

15 The rates proposed by Big Rivers in this proceeding, on the other hand, should  
16 allow Big Rivers to achieve its MFIR and conventional TIER requirements, thus  
17 enhancing Big Rivers' ability to comply with its debt covenants. The Big Rivers  
18 proposal should allow for positive margins for Big Rivers in future years. These effects  
19 are positive and necessary, particularly relative to the adverse effects of the KIUC  
20 proposal. The rates proposed by Big Rivers thus are fair, just and reasonable and  
21 should be approved by the Commission.

22 **Q. Does this conclude your rebuttal testimony?**

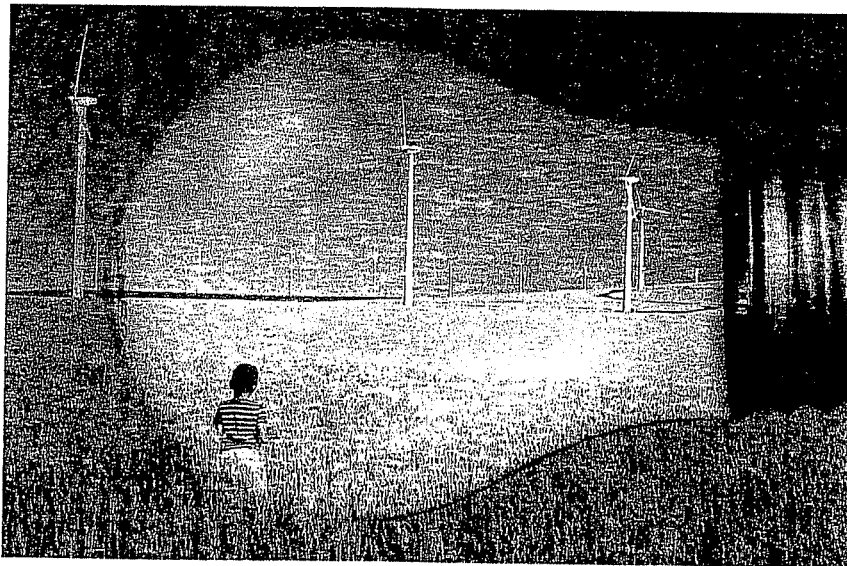
23 **A.** Yes, it does.

**Exhibit Bailey Rebuttal-1  
Annual Directory - G&T Accounting & Finance Association, June 2011**

**G&T**  
**Accounting & Finance**  
**Association**

**Annual Directory**

**June 2011**



## Disclaimer

The G&T Accounting and Finance Association (Association) provides this directory as an information source for employees of the Generation and Transmission Electric Cooperatives (G&Ts) of the United States, the National Rural Electric Cooperative Association, the Rural Utilities Service, the National Rural Utilities Cooperative Finance Corporation, and CoBank.

The directory reflects information provided by each G&T. The Association made no attempt to audit or verify the data submitted. Caution should be used in making statistical comparisons between two or more G&Ts due to significant diversity in the organizational, operating, and capital structures of many G&Ts. Questions regarding information should be directed to the G&T in question.

Ala  
Ark  
Cal  
Col  
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Fla  
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Ind  
Iowa  
Kan  
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La  
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Ohio  
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Total I  
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MWh's  
Cost Pe  
MWh's  
Cost Pe  
Numb  
Total A  
Total O  
Interest

Direct P  
Map  
G&T Ph



# Big Rivers Electric Corporation

P.O. Box 24  
Henderson, KY 42419-0024

Main Telephone (270) 827-2561  
Main FAX (270) 827-2558  
www.bigrivers.coop

## Executive Contacts

President & CEO ..... Mark A. Bailey  
Executive Secretary ..... Paula Mitchell  
Senior Vice President, Financial/Energy Services & CFO ..... C. William Blackburn  
Vice President, Production ..... Robert W. Berry  
Vice President, System Operations ..... David G. Crockett  
Vice President, Administrative Services ..... James V. Haner  
Vice President, Governmental Relations & Risk Mgt. .... Albert M. Yockey  
Vice President, Accounting ..... Mark A. Hite

## Accounting & Finance Related Personnel

Finance ..... C. William Blackburn  
Treasury ..... C. William Blackburn  
Accounting ..... Mark A. Hite/Donna Windhaus - Manager, General Accounting  
Property Accounting ..... Ralph Ashworth—Director, Finance  
Tax Accounting ..... Mark A. Hite/Ralph Ashworth  
Insurance-Plant ..... James V. Haner  
Information Technology ..... David Tüzer - Director, Information Systems  
Employee Benefits ..... James V. Haner  
Resource Planning ..... C. William Blackburn

Ultimate Meters Served..... 112,735	Taxable..... Yes
REC Members..... 3	State Regulated..... Yes
Other Firm Power Customers..... N/A	Year Organized..... 1961
Power Pool..... Midwest ISO	CPA - Tax..... KPMG LLP
Total Plant Capacity..... 1,444 MW	CPA - Audit..... KPMG LLP
# of Substations..... 22	<b>Corporate Insurance Providers</b>
Miles of Transmission Line..... 1,265	Worker's Comp..... Liberty Mutual
Total Employees..... 611	Primary Liability..... Federated
Union Employees..... 362	Commercial Umbrella..... Federated
RUS Designation..... KY 62	Electric Property..... FM Gopal

### 2010 Financial Keys

Total Assets ..... \$1,472,185,126  
Total Operating Revenue ..... \$527,324,452  
Net Margins ..... \$6,990,915  
Equity Ratio ..... 26.26%  
T.I.E.R. .... 1.15  
DSC Ratio..... 1.47  
Cost of Debt..... 5.73%

### MW Peak Demands

Winter ..... 1,367  
Summer..... 1,393

### 2010 MWH Sales

Member..... 9,795,261 @ \$44.10 per MWH  
Non-Mem. 2,174,159 @ \$37.94 per MWH

**ORGAN**  
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and trans  
members  
reliable w  
for-profit  
cooperativ  
owned by  
distribute t  
profit basis  
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**MEMBER**  
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of six direct  
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on Big Riv  
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**POWER SU**  
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(HMP&L) it  
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currently prov  
of capacity  
generating uni  
MW oil/natur  
which is locate  
plant and is u  
emergency pur  
capacity of 130  
combustion u  
Coleman plant  
443 MW of net  
units totaling 41  
Plant. The D  
capacity of 41  
generation cap  
Rivers has av  
hydroelectric pe  
-term contract  
Administration  
not met through

## Big Rivers Electric Corporation

### ORGANIZATION

Headquartered in Henderson, Kentucky, Big Rivers Electric Corporation is a generation and transmission cooperative owned by the members it serves. Big Rivers provides reliable wholesale electric service on a not-for-profit basis to its three member cooperatives. In turn, these cooperatives, owned by their 112,735 consumer-members, distribute the electricity at retail, on a not-for-profit basis, in portions of 22 counties located in western Kentucky.

### MEMBERSHIP

Big Rivers' Board of Directors is comprised of six directors. Each of the three distribution cooperatives has two of its members serving on Big Rivers' Board. The Board normally meets once each month and is responsible for setting corporate policy.

### POWER SUPPLY

Big Rivers owns and operates four generating plants. It also operates for Henderson Municipal Power and Light (HMP&L) its Station Two generating plant, which has a net capacity of 312 MW. Under the terms of a long-term contract, Big Rivers takes all the Station Two capacity in excess of HMP&L's needs. HMP&L Station Two currently provides Big Rivers with 207 MW of capacity rights. All of Big Rivers generating units are coal-fired except for a 65 MW oil/natural gas-fired combustion turbine which is located at the Robert A. Reid (Reid) plant and is used primarily for peaking and emergency purposes. The Reid plant has a net capacity of 130 MW, 65 MW of which is the combustion turbine. The Kenneth C. Coleman plant consists of three units totaling 443 MW of net capacity. Big Rivers has two units totaling 454 MW at its Robert D. Green Plant. The D.B. Wilson plant has a net capacity of 417 MW. In addition to the generation capacity described above, Big Rivers has available to it 178 MW of hydroelectric peaking capacity through a long-term contract with the Southeastern Power Administration (SEPA). Power requirements not met through available generation and the

SEPA agreement are obtained by accessing the wholesale power market.

### TRANSMISSION

Big Rivers owns and operates its transmission system and provides transmission services to its members, LEM, and other third parties in accordance with its open access transmission tariff. The transmission system is comprised of approximately 1,265 miles of line - 68 miles of 345 kV line for interconnecting power plants; 350 miles of 161 kV line for bulk power transmission, interconnections, and service to large industries; 14 miles of 138 kV line for bulk power transmission and interconnections; and 833 miles of 69 kV line for sub-transmission power delivery. Big Rivers has physical interconnections with six utilities and an interchange agreement with another utility.

### OTHER POINTS OF INTEREST

On July 16, 2009, Big Rivers and LG&E and KU Energy (formerly E.ON U.S.) closed a transaction resulting in a mutually acceptable early termination of the 1998 LG&E Lease Agreement (referred to as the "Unwind Transaction" or "Unwind"). Under the terms of the Unwind Transaction, operational control of the generating stations was returned to Big Rivers. The Unwind resulted in Big Rivers recognizing a net gain of \$538 million and receiving \$863.3 million of compensation, both cash and non-cash. Two key results of the Unwind are Big Rivers resuming operation of its own 1,444 MW of generating capacity and 312 MW of Henderson Municipal Power and Light (HMP&L) Station Two leased generating capacity (Big Rivers currently has capacity rights to 207 MW of HMP&L Station Two), and assuming the power supply obligation for Kenergy's (a Big Rivers' member distribution cooperative) two large aluminum smelter loads totaling 850 MW at full capacity.

# East Kentucky Power Cooperative

P.O. Box 707  
Winchester, KY 40392-0707

Main Telephone (859) 744-4812  
Main FAX (859) 744-6008  
www.ekpc.coop

### Executive Contacts

President/Chief Executive Officer .....	Anthony S. Campbell
Executive Secretary .....	Terri Combs
Senior Vice President & CFO.....	Michael A. McNalley
Chief Operating Officer.....	Don Mosier
Senior Vice President, Power Supply .....	David Crews
Senior Vice President, Power Production.....	Craig Johnson
Senior Vice President, Power Delivery & System Operations .....	Stacy Barker
Internal Auditor .....	Michelle Carpenter
Vice President, System Operations.....	Denver York

### Accounting & Finance Related Personnel

Finance .....	Frank Oliva, Treasurer
Treasury.....	Frank Oliva
Accounting .....	Graham Johns - Manager
Property Accounting.....	Graham Johns
Tax Accounting.....	Graham Johns
Insurance Plant.....	Darrell Ishmael
Data Processing.....	Bill Schmidt - Manager, Information Technology
Employee Benefits.....	Steve McClure - Manager, Human Resources & Support Services

Ultimate Meters Served .....	518,364	Taxable .....	No
REC Members .....	16	State Regulated.....	Yes
Other Firm Power Customers .....	0	Year Organized.....	1941
Power Pool .....	N/A	CPA - Tax.....	N/A
Total Plant Capacity .....	2,680 MW	CPA-Audit.....	Deloitte & Touche LLP
# of Substations .....	354	<b>Corporate Insurance Providers</b>	
Miles of Transmission Line.....	2,950	Excess Worker's Comp .....	AEGIS
Total Employees .....	689	Primary Liability.....	Self-Insured
Union Employees .....	N/A	Commercial Umbrella .....	AEGIS
RUS Designation.....	KY 59	Electric Property.....	PM Global

#### 2010 Financial Keys

Total Assets .....	\$3,060,875,575
Total Operating Revenue.....	\$827,446,294
Net Margin .....	\$32,800,268
Equity Ratio.....	8.09%
T.I.E.R.....	1.28
DSC Ratio .....	1.12
Cost of Debt .....	4.39%

#### MW Peak Demands

Winter.....	2,868
Summer.....	2,443

#### 2010 MWH Sales

Member.....	13,104,994 @ \$61.45 per MWH
Non-Mem .....	544,218 @ \$36.18 per MWH

#### ORGANIZ

East Kentucky Power Cooperative was formed in 1941, following the end of World War II. It was the result of voluntary planning by the people of Kentucky. Its first general meeting was held in Dale Station, Kentucky in 1941. Public Service

#### MEMBER

East Kentucky Power Cooperative is one of the largest electric cooperatives in the world. It was formed from each of the 15 original cooperatives operating in Kentucky's eastern region throughout the 1940s.

#### POWER S

Construction of Kentucky's first nuclear power plant, the William C. Coker, was completed in 1974. Dale Station's capacity, combined with the East Kentucky

In 1965, Sherman County's second unit was added to the total capacity of 1,000 megawatts.

## East Kentucky Power Cooperative

### ORGANIZATION

East Kentucky Power Cooperative was formed in 1941 as East Kentucky Rural Electric Cooperative Corporation. When World War II broke out, plans for the system were voluntarily suspended. In 1951, planning was resumed and East Kentucky opened its offices in Winchester, Kentucky. Its first generating station, the William C. Dale Station, was completed in 1954. East Kentucky is fully regulated by the Kentucky Public Service Commission.

### MEMBERSHIP

East Kentucky's Board of Directors is made up of one director and one alternate director from each of its sixteen member distribution cooperatives. This board sets overall operating policies for the cooperative. East Kentucky's sixteen member distribution cooperatives serve member/consumers throughout the eastern two-thirds of Kentucky.

### POWER SUPPLY

Construction began in 1951 on East Kentucky's first generating station, the William C. Dale Station. The first two units were completed in 1954. The third unit was completed in 1957 and the fourth unit in 1960. Dale Station, with 196 megawatts of net capacity, continues to supply power to the East Kentucky system.

In 1965, the first of two units at the John Sherman Cooper Station was completed. The second unit, completed in 1969, increased the total capacity of the Cooper Station to 341 megawatts.

In 1977, Unit 1 of the H. L. Spurlock Station was completed and Unit 2 was added in 1981. A third unit began commercial operation on March 1, 2005, and a fourth unit became commercial on April 1, 2009. The total capacity of the Spurlock Station is 1,386 megawatts.

East Kentucky has at its J. K. Smith Power Station seven gas-fired combustion turbines to provide peaking capacity. The combustion turbines will have a total nominal summer rating of 626 megawatts.

East Kentucky has six landfill gas facilities with a total capacity of 17 megawatts with a sixth to be completed in 2009.

In addition to this 2,564 megawatts of its own net generating capacity, East Kentucky has access to 170 megawatts of hydro generation from the Southeastern Power Administration.

### TRANSMISSION

At the end of 2009, East Kentucky Power had 2,950 miles of transmission line ranging in size from 34.5 kV to 345 kV. These lines provide service to 354 distribution substations and 64 transmission substations.

### OTHER POINTS OF INTEREST

East Kentucky Power (EKP) is the only member of Charleston Bottoms Rural Electric Cooperative Corporation (CB). CB, the owner of Unit 1 of the H.L. Spurlock Generating Station, was formed for the purpose of providing a financing mechanism for the construction of this generating unit. EKP operates and maintains Spurlock Unit 1 and takes all of the output of the unit.

2010	Total MWh Sales
------	-----------------

1	23,269,001	Associated
2	22,658,473	Oglethorpe
3	22,538,000	Basin
4	18,980,883	North Carolina
5	18,863,156	Tri-State
6	17,446,093	Seminole
7	16,880,752	Central Electric - SC
8	14,292,742	Great River
9	13,941,606	Brazos
10	13,811,574	Arkansas
11	13,649,212	East Kentucky
12	12,914,634	Wabash Valley
13	12,610,811	Old Dominion
14	11,969,420	Big Rivers
15	10,850,388	Hoosier
16	10,705,907	South Mississippi
17	10,328,210	Buckeye
18	8,855,188	PowerSouth
19	7,537,108	Western Farmers
20	6,807,785	Golden Spread
21	6,456,892	KAMO
22	6,390,501	Dairyland
23	5,581,387	Deseret
24	5,542,239	Minnkota
25	5,259,012	PNGC Power
26	4,982,660	Wolverine
27	4,543,682	South Texas
28	4,128,298	East Texas
29	3,950,781	Nebraska
30	3,922,573	Sho-Me Power
31	3,754,841	Sunflower
32	3,751,207	Rayburn Electric Cooperative
33	3,580,599	Central Electric - MO
34	3,262,980	Allegheny
35	3,136,436	East River
36	2,859,362	San Miguel
37	2,803,862	Arizona
38	2,782,752	Central Iowa
39	2,706,609	Chugach
40	2,585,807	Square Butte
41	2,529,634	Southern Illinois
42	2,095,436	Kansas Electric
43	1,921,700	Corn Belt
44	1,910,373	N. W. Electric
45	1,904,506	Sam Rayburn
46	1,866,506	Upper Missouri
47	1,832,006	Central Power - ND
48	1,820,964	M & A Electric
49	1,659,449	Prairie Power
50	1,656,517	Tex-La
51	1,515,835	Northwest Iowa
52	1,266,884	Northeast Missouri
53	1,042,521	Rushmore
54	562,975	Central Montana
55	504,306	Alaska Electric
56	461,947	Power Resources

Note: Member Information Excluded if No Data Available or Category N/A

**2010 Total Revenue Per MWh**

1	33.12	PNGC Power
2	37.40	Upper Missouri
3	41.21	Deseret
4	41.27	Central Montana
5	41.94	Basin
6	42.57	Arkansas
7	42.90	Northwest Iowa
8	42.98	Big Rivers
9	43.01	Minnkota
10	43.10	Square Butte
11	43.22	Central Power - ND
12	43.92	Rushmore
13	45.30	Power Resources
14	45.34	Associated
15	46.41	East River
16	46.74	San Miguel
17	48.49	Nebraska
18	50.91	Central Electric - MO
19	50.96	Northeast Missouri
20	51.10	Sunflower
21	51.22	N. W. Electric
22	51.31	M & A Electric
23	52.54	KAMO
24	52.60	Corn Belt
25	53.91	Buckeye
26	53.93	Sho-Me Power
27	56.30	Western Farmers
28	56.91	East Texas
29	57.11	Ozlethorpe
30	57.28	Great River
31	57.57	North Carolina
32	57.88	Wabash Valley
33	58.30	Golden Spread
34	59.03	Wolverine
35	60.18	Hoosier
36	60.44	East Kentucky
37	60.93	Southern Illinois
38	62.12	Dairyland
39	62.36	Central Iowa
40	62.50	Tex-La
41	62.81	Tri-State
42	62.84	Sam Rayburn
43	66.33	Kansas Electric
44	66.96	Old Dominion
45	67.92	South Texas
46	68.97	Arizona
47	69.11	Central Electric - SC
48	70.10	Brazos
49	70.48	Rayburn Electric Cooperative
50	71.78	Prairie Power
51	72.37	South Mississippi
52	74.26	PowerSouth
53	83.20	Seminole
54	85.75	Alaska Electric
55	95.44	Chugach

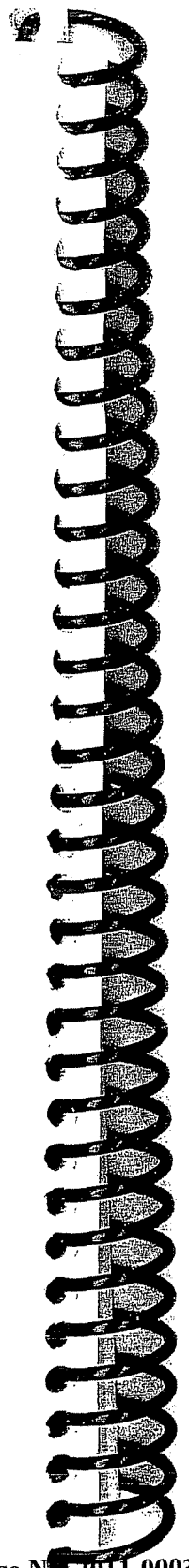
The Membership Average for this Ranking is 56.63

Note: Member Information Excluded if No Data Available or Category N/A

<b>2010</b>	<b>Member MWh Sales</b>	
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1	22,644,790	Ozlethorpe
2	18,962,284	Associated
3	16,929,466	Seminole
4	16,898,481	North Carolina
5	16,880,752	Central Electric - SC
6	16,523,000	Basin
7	15,026,510	Tri-State
8	13,690,147	Brazos
9	13,104,994	East Kentucky
10	12,756,994	Arkansas
11	11,754,808	Great River
12	11,254,269	Old Dominion
13	10,645,623	South Mississippi
14	9,967,250	Wabash Valley
15	9,795,261	Big Rivers
16	8,700,629	PowerSouth
17	8,288,426	Buckeye
18	7,155,738	Western Farmers
19	7,037,225	Hoosier
20	6,456,892	KAMO
21	5,453,317	Golden Spread
22	5,367,158	Dairyland
23	4,485,657	South Texas
24	4,245,098	PNGC Power
25	3,950,781	Nebraska
26	3,931,619	East Texas
27	3,666,575	Wolverine
28	3,580,599	Central Electric - MO
29	3,526,401	Rayburn Electric Cooperative
30	3,418,861	Minnkota
31	3,136,436	East River
32	3,100,030	Allegheny
33	2,962,439	Sho-Me Power
34	2,859,362	San Miguel
35	2,782,752	Central Iowa
36	2,292,011	Deseret
37	2,226,102	Southern Illinois
38	2,208,144	Sunflower
39	2,176,598	Arizona
40	2,095,436	Kansas Electric
41	1,921,700	Corn Belt
42	1,910,373	N. W. Electric
43	1,904,506	Sam Rayburn
44	1,832,006	Central Power - ND
45	1,820,964	M & A Electric
46	1,656,517	Tex-La
47	1,564,379	Prairie Power
48	1,537,179	Chugach
49	1,515,835	Northwest Iowa
50	1,296,055	Square Butte
51	1,266,884	Northeast Missouri
52	1,042,521	Rushmore
53	562,975	Central Montana
54	19,609	Power Resources

Note: Member Information Excluded if No Data Available or Category N/A



## 2010 Member Revenue Per MWh

1	27.30	Power Resources
2	33.88	PNGC Power
3	40.55	Basin
4	41.27	Central Montana
5	41.57	Deseret
6	42.90	Northwest Iowa
7	43.10	Square Butte
8	43.22	Central Power - ND
9	43.54	Arkansas
10	43.92	Rushmore
11	44.10	Big Rivers
12	45.75	Associated
13	46.41	East River
14	46.74	San Miguel
15	48.49	Nebraska
16	50.32	Sho-Me Power
17	50.91	Central Electric - MO
18	50.96	Northeast Missouri
19	51.22	N. W. Electric
20	51.31	M & A Electric
21	52.54	KAMO
22	52.60	Corn Belt
23	52.99	Minnkota
24	55.13	Western Farmers
25	56.60	Allegheny
26	57.08	Oglethorpe
27	57.74	East Texas
28	58.67	Sunflower
29	59.20	Buckeye
30	59.82	North Carolina
31	60.98	Golden Spread
32	61.45	East Kentucky
33	62.36	Central Iowa
34	62.50	Tex-La
35	62.84	Sam Rayburn
36	63.24	Great River
37	63.44	Southern Illinois
38	64.98	Tri-State
39	65.06	Dairyland
40	65.60	Wabash Valley
41	66.33	Kansas Electric
42	68.31	South Texas
43	68.83	Hoosier
44	69.11	Central Electric - SC
45	69.22	Old Dominion
46	69.50	Arizona
47	70.48	Rayburn Electric Cooperative
48	71.23	Brazos
49	73.51	South Mississippi
50	74.08	Prairie Power
51	74.89	PowerSouth
52	75.11	Chugach
53	83.83	Seminole

The Membership Average for this Ranking is 56.92

Note: Member Information Excluded if No Data Available or Category N/A



2010	MWh's Generated
------	-----------------

238

1	22,599,257	Ozlethorpe
2	15,535,666	Basin
3	13,857,542	Associated
4	13,272,317	Tri-State
5	12,570,249	East Kentucky
6	11,850,763	Seminole
7	11,390,365	Arkansas
8	10,387,455	Great River
9	9,895,512	Big Rivers
10	8,405,515	Hoosier
11	7,006,855	PowerSouth
12	6,290,702	North Carolina
13	5,848,557	Old Dominion
14	5,739,524	Buckeye
15	5,201,495	Dairyland
16	4,916,044	Brazos
17	4,608,242	Western Farmers
18	4,153,408	Deseret
19	3,600,878	South Mississippi
20	2,859,362	San Miguel
21	2,690,843	Sunflower
22	2,585,807	Square Butte
23	2,534,155	Central Iowa
24	2,346,408	Chugach
25	2,260,163	Wabash Valley
26	2,219,724	Arizona
27	1,961,997	Southern Illinois
28	1,954,351	Minnkota
29	1,935,255	Allegheny
30	1,566,219	Corn Belt
31	1,167,061	East Texas
32	746,124	Golden Spread
33	573,369	Kansas Electric
34	461,947	Power Resources
35	428,823	South Texas
36	354,201	Sam Rayburn
37	242,057	Northwest Iowa
38	191,586	Wolverine
39	61,114	Rayburn Electric Cooperative
40	4,631	Sho-Me Power

Note: Member Information Excluded if No Data Available or Category N/A

**2010 Cost Per MWh Generated**

1	21.30	Northwest Iowa
2	22.35	Minnkota
3	24.74	Buckeye
4	30.91	Basin
5	31.16	Power Resources
6	31.55	Arkansas
7	31.62	Deseret
8	33.21	Hoosier
9	35.20	Allegheny
10	37.36	Big Rivers
11	37.63	Corn Belt
12	37.97	Sunflower
13	39.54	Great River
14	40.60	Central Iowa
15	41.39	Square Butte
16	42.84	Associated
17	45.63	Dairyland
18	45.96	Kansas Electric
19	47.07	North Carolina
20	47.48	Oglethorpe
21	47.59	San Miguel
22	47.65	East Kentucky
23	49.13	Tri-State
24	50.23	Sam Rayburn
25	50.40	Western Farmers
26	50.76	East Texas
27	57.01	Wabash Valley
28	57.39	Old Dominion
29	57.52	PowerSouth
30	58.93	Southern Illinois
31	59.98	Seminole
32	62.79	Chugach
33	64.80	South Mississippi
34	67.15	Wolverine
35	68.66	Rayburn Electric Cooperative
36	89.00	Golden Spread
37	144.39	South Texas

The Membership Average for this Ranking is 48.89

Note: Member Information Excluded if No Data Available or Category N/A

## 2010 MWh's Purchased

1	17,289,949	Central Electric - SC
2	13,058,803	North Carolina
3	10,843,361	Wabash Valley
4	10,379,771	Associated
5	9,281,181	Brazos
6	7,761,102	Basin
7	7,273,772	South Mississippi
8	6,903,349	Old Dominion
9	6,461,579	KAMO
10	6,442,746	Tri-State
11	6,103,620	Golden Spread
12	6,001,436	Seminole
13	5,307,652	PNGC Power
14	4,891,595	Wolverine
15	4,719,622	Great River
16	4,138,024	South Texas
17	3,950,781	Nebraska
18	3,919,794	Sho-Me Power
19	3,858,681	Minnkota
20	3,766,670	Rayburn Electric Cooperative
21	3,580,599	Central Electric - MO
22	3,317,539	Western Farmers
23	3,180,493	East River
24	2,990,384	Arkansas
25	2,970,666	East Texas
26	2,692,258	Hoosier
27	2,683,639	Buckeye
28	2,220,995	Big Rivers
29	2,205,645	PowerSouth
30	1,911,352	N. W. Electric
31	1,894,490	Central Power - ND
32	1,866,506	Upper Missouri
33	1,820,964	M & A Electric
34	1,743,236	Tex-La
35	1,618,199	Sam Rayburn
36	1,613,166	Prairie Power
37	1,599,051	Kansas Electric
38	1,538,660	East Kentucky
39	1,494,998	Deseret
40	1,327,719	Northwest Iowa
41	1,326,203	Dairyland
42	1,312,722	Sunflower
43	1,267,896	Northeast Missouri
44	1,164,775	Allegheny
45	1,042,521	Rushmore
46	762,185	Southern Illinois
47	705,496	Arizona
48	569,300	Central Montana
49	504,306	Alaska Electric
50	504,205	Chugach
51	417,094	Oglethorpe
52	409,454	Corn Belt
53	236,614	Central Iowa

53

Note: Member Information Excluded if No Data Available or Category N/A

## 2010 Cost Per MWh Purchased

1	27.24	Buckeye
2	28.74	PNGC Power
3	29.11	Associated
4	32.34	Southern Illinois
5	34.76	Deseret
6	35.23	Sunflower
7	35.32	Arkansas
8	35.85	Dairyland
187 9	36.17	Big Rivers
10	36.36	Central Power - ND
11	36.66	East River
12	36.68	Western Farmers
13	37.59	Northwest Iowa
14	38.71	Great River
15	39.39	Tri-State
16	39.94	Minnkota
17	41.97	Rushmore
18	42.48	Basin
19	43.80	Arizona
20	44.44	Wabash Valley
21	44.58	East Kentucky
22	44.83	N. W. Electric
23	45.04	Northeast Missouri
24	45.92	South Texas
25	46.00	M & A Electric
26	46.27	Wolverine
27	46.70	Sho-Me Power
28	46.90	KAMO
29	47.01	Central Electric - MO
30	47.11	Golden Spread
31	48.49	Nebraska
32	50.13	Chuzach
33	50.79	North Carolina
34	52.04	East Texas
35	55.53	Prairie Power
36	56.07	Hoosier
37	56.71	Tex-La
38	58.02	Kansas Electric
39	58.41	Corn Belt
40	58.57	Central Iowa
41	59.14	Sam Rayburn
42	59.63	Rayburn Electric Cooperative
43	60.51	South Mississippi
44	60.58	Old Dominion
45	61.51	PowerSouth
46	65.40	Central Electric - SC
47	66.13	Alaska Electric
48	90.93	Seminole
49	188.95	Oglethorpe
50	35,334.00	Central Montana

The Membership Average for this Ranking is 755.69

Note: Member Information Excluded if No Data Available or Category N/A

**2010 Number of Employees**

1	1,324	Basin
2	1,182	Tri-State
3	852	Great River
4	689	East Kentucky
5	661	Associated
6	611	Big Rivers
7	611	Dairyland
8	605	PowerSouth
9	508	Seminole
10	475	Hoosier
11	394	Brazos
12	377	Western Farmers
13	364	Sunflower
14	353	Minnkota
15	340	South Mississippi
16	318	Deseret
17	315	Chugach
18	288	Georgia
19	250	Sierra Southwest
20	248	Arkansas
21	216	South Texas
22	209	Oglethorpe
23	185	San Miguel
24	149	North Carolina
25	147	Sho-Me Power
26	137	KAMO
27	134	Central Electric - MO
28	127	Southern Illinois
29	120	East River
30	117	Central Iowa
31	113	Wolverine
32	107	Old Dominion
33	94	Corn Belt
34	69	Wabash Valley
35	66	Allegheny
36	62	Northeast Missouri
37	60	N. W. Electric
38	57	Prairie Power
39	45	Southwest Transmission
40	44	M & A Electric
41	43	Northwest Iowa
42	41	Central Power - ND
43	41	Central Electric - SC
44	33	Buckeye
45	29	Golden Spread
46	26	New Horizon
47	22	Kansas Electric
48	22	Arizona
49	21	Rushmore
50	9	Rayburn Electric Cooperative
51	6	Sam Rayburn
52	6	Tex-La
53	6	East Texas
54	4	Nebraska
55	2	Upper Missouri
56	1	Central Montana

Note: Member Information Excluded if No Data Available or Category N/A



## 2010 Total Assets

1	6,997,062,000	Onlethorpe
2	5,146,119,151	Basin
3	3,794,155,000	Tri-State
4	3,349,947,000	Great River
5	3,060,875,575	East Kentucky
6	2,852,097,961	Associated
7	2,662,336,888	Brazos
8	1,939,358,000	Georgia
9	1,859,206,226	Buckeye
10	1,844,557,929	Seminole
11	1,769,821,865	PowerSouth
12	1,539,391,237	North Carolina
13	1,512,435,000	Old Dominion
14	1,472,185,126	Big Rivers
15	1,373,141,212	Hoosier
16	1,321,189,101	Dairvland
17	1,283,119,735	South Mississippi
18	1,214,336,971	Arkansas
19	1,059,249,989	Western Farmers
20	953,350,515	Wabash Valley
21	845,333,763	South Texas
22	760,486,714	Southern Illinois
23	687,714,740	East Texas
24	629,727,728	Churach
25	587,839,273	Central Iowa
26	583,719,300	Golden Spread
27	581,280,443	KAMO
28	562,823,528	Mimkota
29	550,647,000	Prairie Power
30	497,347,000	Allegheny
31	484,653,983	Wolverine
32	479,899,126	Square Butte
33	436,670,490	Deseret
34	375,312,002	Sunflower
35	346,739,861	Corn Belt
36	343,657,501	Sho-Me Power
37	330,193,635	Rayburn Electric Cooperative
38	326,950,131	Arizona
39	312,733,523	Central Electric - SC
40	284,190,580	Central Electric - MO
41	282,561,283	East River
42	277,915,538	San Miguel
43	274,976,194	Kansas Electric
44	167,615,508	N. W. Electric
45	150,167,582	M & A Electric
46	150,095,395	Tex-La
47	127,136,730	Central Power - ND
48	126,510,024	Southwest Transmission
49	106,168,749	Northeast Missouri
50	104,310,322	Alaska Electric
51	83,495,733	Northwest Iowa
52	74,647,145	Sam Rayburn
53	56,185,014	New Horizon
54	53,253,562	Upper Missouri
55	36,910,438	Rushmore
56	35,809,237	Power Resources
57	29,949,042	PNGC Power
58	21,021,240	Nebraska
59	11,014,410	Sierra Southwest
60	7,628,537	Central Montana

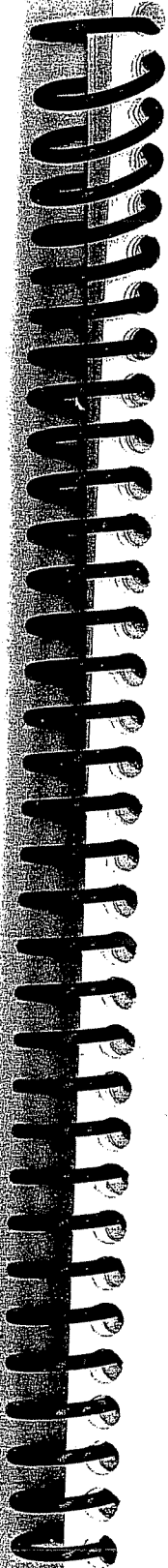
Note: Member Information Excluded if No Data Available or Category N/A

**2010 Total Operating Revenue**

1	1,458,915,324	Seminole
2	1,293,992,000	Oglethorpe
3	1,212,416,000	Tri-State
4	1,166,519,358	Central Electric - SC
5	1,093,340,361	North Carolina
6	1,057,106,542	Associated
7	991,314,548	Brazos
8	953,736,397	Basin
9	847,156,000	Great River
10	844,470,000	Old Dominion
11	827,446,294	East Kentucky
12	775,074,256	South Mississippi
13	750,136,897	Wabash Valley
14	660,248,726	PowerSouth
15	653,016,159	Hoosier
16	588,834,054	Arkansas
17	556,792,901	Buckeye
18	527,324,452	Big Rivers
19	450,973,648	Western Farmers
20	415,484,014	Dairyland
21	396,926,939	Golden Spread
22	342,091,307	KAMO
23	328,799,341	South Texas
24	294,117,473	Wolverine
25	258,325,345	Chugach
26	245,722,024	Mimkota
27	240,447,276	Rayburn Electric Cooperative
28	239,223,000	Georgia
29	235,187,182	Sho-N e Power
30	234,960,156	East Texas
31	229,452,367	Deseret
32	213,815,102	Sunflower
33	207,569,097	Arizona
34	204,921,000	Allegheny
35	191,406,241	Nebraska
36	183,656,588	Central Electric - MO
37	178,721,505	Central Iowa
38	175,655,783	PNGC Power
39	154,241,985	Southern Illinois
40	149,123,125	East River
41	138,987,985	Kansas Electric
42	136,631,047	San Miguel
43	119,647,745	Sam Rayburn
44	116,151,000	Prairie Power
45	112,607,721	Square Butte
46	107,301,811	Corn Belt
47	103,529,365	Tex-La
48	99,536,159	N. W. Electric
49	93,440,282	M & A Electric
50	79,321,243	Central Power - ND
51	73,568,813	Sierra Southwest
52	70,865,714	Upper Missouri
53	67,687,366	Northeast Missouri
54	67,335,240	Northwest Iowa
55	45,531,919	Rushmore
56	43,245,076	Alaska Electric
57	34,545,991	Southwest Transmission
58	23,497,897	Central Montana
59	20,984,556	Power Resources
60	10,376,439	New Horizon

Note: Member Information Excluded If No Data Available or Category N/A





**2010 Interest Income**

1	54,329,756	Basin
2	30,208,000	Oglethorpe
3	20,932,000	Tri-Statz
4	11,510,085	Associated
5	8,245,255	Western Farmers
6	6,166,969	North Carolina
7	6,061,000	Allegheny
8	4,860,691	PowerSouth
9	4,831,527	Brazos
10	4,576,000	Old Dominion
11	4,321,000	Georgia
12	3,942,844	South Mississippi
13	3,376,508	Seminole
14	3,334,954	Arkansas
15	3,251,487	East Kentucky
16	2,315,000	Great River
17	1,987,889	Hoosier
18	1,912,808	Deseret
19	1,775,201	South Texas
20	1,633,245	Central Iowa
21	1,587,000	Prairie Power
22	1,308,547	Central Electric - MO
23	1,191,612	Buckeye
24	1,179,990	East Texas
25	1,140,463	San Miguel
26	1,047,971	Wabash Valley
27	1,035,620	Kansas Electric
28	888,849	Sunflower
29	873,949	East River
30	785,731	Wolverine
31	779,602	KAMO
32	723,808	Corn Belt
33	710,307	N. W. Electric
34	588,058	Sho-Me Power
35	522,893	Dairyland
36	505,258	Golden Spread
37	398,742	Northeast Missouri
38	394,973	Rayburn Electric Cooperative
39	393,960	Arizona
40	391,494	Big Rivers
41	351,117	Southern Illinois
42	342,015	Central Electric - SC
43	310,964	Chugach
44	268,459	Tex-La
45	177,440	New Horizon
46	169,775	Northwest Iowa
47	137,719	Minnkota
48	87,935	M & A Electric
49	81,310	Southwest Transmission
50	80,941	Power Resources
51	79,222	Central Power - ND
52	76,072	Sam Rayburn
53	55,092	Alaska Electric
54	32,530	Square Butte
55	21,500	Rushmore
56	16,524	Nebraska
57	14,689	PNGC Power
58	8,822	Upper Missouri
59	6,906	Central Montann
60	1,809	Sierra Southwest

Note: Member Information Excluded if No Data Available or Category N/A



## 2010 Operating Margins

1	239,249,000	Oglethorpe
2	198,489,000	Tri-State
3	80,591,000	Georgia
4	59,865,038	Buckeye
5	53,845,650	Seminole
6	53,671,000	Old Dominion
7	51,142,329	Brazos
8	46,488,704	Golden Spread
9	29,993,319	Associated
10	29,559,906	Hoosier
11	29,068,897	East Kentucky
12	24,599,596	South Mississippi
13	23,167,220	Arkansas
14	19,396,159	PowerSouth
15	18,875,427	Sunflower
16	17,856,146	South Texas
17	15,530,565	Great River
18	13,737,192	North Carolina
19	13,724,384	Central Iowa
20	12,880,168	Western Farmers
21	10,670,858	East Texas
22	10,316,092	Wabash Valley
23	9,705,322	Dairyland
24	8,717,854	Sho-Me Power
25	7,020,327	Arizona
26	6,226,772	Kansas Electric
27	5,909,000	Prairie Power
28	4,880,696	Sam Rayburn
29	4,352,446	Chugach
30	4,256,517	Big Rivers
31	4,081,149	Deseret
32	3,768,508	Southern Illinois
33	3,113,744	Corn Belt
34	2,487,184	Power Resources
35	2,371,421	M & A Electric
36	2,336,308	Central Electric - MO
37	2,227,540	East River
38	2,065,370	Central Electric - SC
39	1,728,599	Minnkota
40	1,287,752	Alaska Electric
41	1,099,273	Tex-La
42	985,671	Central Montann
43	927,799	Rayburn Electric Cooperative
44	843,492	New Horizon
45	712,241	KAMO
46	635,416	Upper Missouri
47	555,479	Square Butte
48	547,180	San Miguel
49	517,798	Northwest Iowa
50	497,882	Northeast Missouri
51	490,000	Allegheny
52	244,091	Rushmore
53	94,121	N. W. Electric
54	18,603	Nebraska
55	-75,162	Central Power - ND
56	-921,414	Southwest Transmission
57	-2,772,438	PNGC Power
58	-18,737,812	Wolverine
59	-48,764,211	Basin

Note: Member Information Excluded If No Data Available or Category N/A

**2010 Net Margins**

1	77,144,000	Tri-State
2	60,443,751	Seminole
3	59,557,788	Brazos
4	47,130,097	Golden Spread
5	45,803,710	Associated
6	33,733,000	Oglethorpe
7	32,800,268	East Kentucky
8	32,448,119	Hoosier
9	29,794,008	Buckeye
10	29,100,000	South Mississippi
11	27,228,000	Great River
12	26,999,000	Arkansas
13	25,915,253	PowerSouth
14	23,954,073	Western Farmers
15	23,603,436	South Texas
16	21,836,084	Sunflower
17	19,243,115	KAMO
18	18,862,648	Central Iowa
19	16,043,090	North Carolina
20	14,461,000	Georgia
21	14,000,000	Wabash Valley
22	13,161,411	Dairyland
23	12,721,130	East Texas
24	12,720,157	Central Electric - MO
25	12,001,094	Sho-Me Power
26	11,954,455	Basin
27	10,158,000	Old Dominion
28	10,149,988	Arizona
29	9,988,611	Sam Rayburn
30	9,123,000	Allegheny
31	7,721,857	East River
32	7,646,619	Kansas Electric
33	6,990,915	Big Rivers
34	6,877,942	M & A Electric
35	5,825,162	Tex-La
36	5,500,789	N. W. Electric
37	5,429,000	Prairie Power
38	5,410,009	Chugach
39	5,356,890	Corn Belt
40	5,080,299	Minnkota
41	5,065,490	Deseret
42	4,280,700	Southern Illinois
43	3,604,338	Northeast Missouri
44	3,508,938	San Miguel
45	2,978,382	Upper Missouri
46	2,786,354	Northwest Iowa
47	2,669,353	Power Resources
48	2,656,491	Central Electric - SC
49	2,486,078	Central Power - ND
50	1,828,684	Alaska Electric
51	1,815,297	Central Montana
52	1,781,142	Rushmore
53	1,642,342	Square Butte
54	1,464,502	Rayburn Electric Cooperative
55	1,129,838	New Horizon
56	35,560	Nebraska
57	-645,204	Southwest Transmission
58	-2,877,302	PNGC Power
59	-16,989,464	Wolverine

Note: Member Information Excluded If No Data Available or Category N/A

**2010 DSC Ratio**

1	4.90	Tex-La
2	3.15	Golden Spread
3	3.06	Chugach
4	2.95	M & A Electric
5	2.90	Sam Rayburn
6	2.51	Old Dominion
7	2.43	Upper Missouri
8	2.30	East Texas
9	2.14	Northwest Iowa
10	2.12	South Texas
11	1.99	Rayburn Electric Cooperative
12	1.98	Arkansas
13	1.89	Central Power - ND
14	1.65	Arizona
15	1.62	Tri-State
16	1.62	Northeast Missouri
17	1.60	Allegheny
18	1.58	Buckeye
19	1.57	KAMO
20	1.53	San Miguel
21	1.52	Brazos
22	1.51	Seminole
23	1.50	Central Electric - MO
24	1.47	Associated
25	1.47	Big Rivers
26	1.46	Central Iowa
27	1.44	Prairie Power
28	1.44	Western Farmers
29	1.42	N. W. Electric
30	1.40	Hoosier
31	1.39	North Carolina
32	1.35	Wabash Valley
33	1.31	Southern Illinois
34	1.31	Minnkota
35	1.29	Sunflower
36	1.24	South Mississippi
37	1.21	Dairyland
38	1.20	Great River
39	1.19	Corn Belt
40	1.18	East River
41	1.17	PowerSouth
42	1.16	Southwest Transmission
43	1.12	East Kentucky
44	1.11	Alaska Electric
45	1.10	Square Butte
46	1.10	Central Electric - SC
47	1.08	Kansas Electric
48	1.03	Power Resources
49	1.00	New Horizon
50	0.93	Sho-Me Power
51	0.80	Deseret

Note: Member Information Excluded if No Data Available or Category N/A

## 2010 TIER

1	7.20	Tex-La
2	5.22	Upper Missouri
3	5.06	Golden Spread
4	3.30	Sam Rayburn
5	3.23	Central Electric - MO
6	3.20	M & A Electric
7	3.19	Northwest Iowa
8	3.11	Sho-Me Power
9	2.97	Prairie Power
10	2.91	Northeast Missouri
11	2.66	Power Resources
12	2.41	Sunflower
13	2.36	Arkansas
14	2.35	Central Power - ND
15	2.34	N. W. Electric
16	2.20	East River
17	2.16	KAMO
18	2.13	Kansas Electric
19	2.05	Brazos
20	2.04	Central Iowa
21	2.00	East Texas
22	1.96	Arizona
23	1.90	Seminole
24	1.87	Allegheny
25	1.80	South Texas
26	1.76	Rayburn Electric Cooperative
27	1.72	Alaska Electric
28	1.71	South Mississippi
29	1.70	Hoosier
30	1.66	Western Farmers
31	1.54	Associated
32	1.54	Corn Belt
33	1.51	Buckeye
34	1.50	San Miguel
35	1.48	Minnkota
36	1.44	Chugach
37	1.43	PowerSouth
38	1.36	Wabash Valley
39	1.33	Southern Illinois
40	1.31	Dairyland
41	1.28	East Kentucky
42	1.25	North Carolina
43	1.20	Old Dominion
44	1.16	Deseret
45	1.15	Big Rivers
46	1.09	Square Butte
47	1.05	New Horizon
48	0.97	Southwest Transmission

**2010 Margins for Interest**

1	1.25	Great River
2	1.51	Associated
3	1.49	Central Electric - SC
4	1.20	Georgia
5	10.25	North Carolina
6	1.86	Hoosier
7	1.90	Seminole
8	2.36	Arkansas
9	1.26	Chugach
10	2.04	Brazos
11	1.15	Big Rivers
12	1.14	Oglethorpe
13	1.23	Old Dominion
14	1.43	PowerSouth
15	2.11	Central Iowa
16	1.19	Basin
17	1.80	South Texas

Note: Member Information Excluded if No Data Available or Category N/A

## 2010 Equity/Asset Ratio

1	84.03	Rushmore
2	65.24	Upper Missouri
3	53.90	Sam Rayburn
4	51.90	Central Electric - MO
5	46.90	Sho-Me Power
6	44.26	Northeast Missouri
7	43.87	M & A Electric
8	43.07	Golden Spread
9	42.22	Northwest Iowa
10	40.37	PNGC Power
11	38.31	Arkansas
12	38.24	N. W. Electric
13	35.57	Central Power - ND
14	33.43	East River
15	29.10	Arizona
16	27.19	New Horizon
17	26.55	KAMO
18	26.26	Big Rivers
19	26.06	Wolverine
20	25.70	Chugach
21	24.35	Tex-La
22	22.64	Alaska Electric
23	22.46	Old Dominion
24	22.17	Central Iowa
25	22.00	Tri-State
26	20.03	Corn Belt
27	19.96	Deseret
28	19.54	Buckeye
29	18.35	Basin
30	16.43	Western Farmers
31	16.24	South Mississippi
32	15.64	Allegheny
33	15.24	Minnkota
34	14.80	Associated
35	14.37	Hoosier
36	14.33	Brazos
37	14.04	South Texas
38	13.88	Wabash Valley
39	13.88	Prairie Power
40	13.38	San Miguel
41	12.37	PowerSouth
42	11.92	Dairyland
43	11.38	Seminole
44	10.97	Great River
45	9.95	Georgia
46	8.52	Oglethorpe
47	8.23	Central Electric - SC
48	8.09	East Kentucky
49	7.56	Southern Illinois
50	7.30	Southwest Transmission
51	6.98	Kansas Electric
52	6.37	Square Butte
53	6.16	East Texas
54	6.01	Rayburn Electric Cooperative
55	4.35	North Carolina
56	4.29	Nebraska

Note: Member Information Excluded if No Data Available or Category N/A

**2010 Equity to Capitalization**

1	66.86	Sam Rayburn
2	60.76	Arkansas
3	60.00	Northwest Iowa
4	53.14	Northeast Missouri
5	34.71	Chugach
6	32.80	Old Dominion
7	32.32	Big Rivers
8	30.16	Alaska Electric
9	29.07	Tex-La
10	27.79	Corn Belt
11	27.74	Central Iowa
12	27.54	Basin
13	24.03	Deseret
14	24.00	Tri-State
15	19.22	Associated
16	18.40	Western Farmers
17	17.79	Brazos
18	17.25	San Miguel
19	16.44	Hoosier
20	14.95	Dairyland
21	14.78	South Texas
22	14.76	Prairie Power
23	13.80	PowerSouth
24	13.77	Seminole
25	12.17	Georgia
26	12.10	Great River
27	10.40	Oglethorpe
28	8.03	Southern Illinois
29	8.00	East Kentucky
30	6.42	East Texas
31	5.50	North Carolina
32	0.59	Sho-Me Power
33	0.23	Buckeye

Note: Member Information Excluded if No Data Available or Category N/A



## 2010 Rate of Return on Rate Base

1	23.58	Golden Spread
2	23.04	Power Resources
3	17.67	Sam Rayburn
4	14.67	M & A Electric
5	11.77	Buckeye
6	11.51	Deseret
7	11.45	Arkansas
8	11.28	Sunflower
9	10.97	Georgia
10	9.85	Seminole
11	8.94	Central Iowa
12	8.71	Arizona
13	8.68	South Mississippi
14	7.91	Northeast Missouri
15	7.87	South Texas
16	7.76	Western Farmers
17	7.48	Hoosier
18	7.08	Great River
19	6.95	Wabash Valley
20	6.84	East River
21	6.71	KAMO
22	6.71	Alaska Electric
23	6.68	Tri-State
24	6.38	Northwest Iowa
25	5.91	Nebraska
26	5.81	N. W. Electric
27	5.79	Corn Belt
28	5.74	Dairyland
29	5.72	Square Butte
30	5.53	East Kentucky
31	5.44	Associated
32	4.83	Southwest Transmission
33	4.75	Tex-La
34	4.71	Minnkota
35	4.59	Big Rivers
36	4.51	Central Electric - MO
37	4.46	Chugach
38	4.26	East Texas
39	4.11	Southern Illinois
40	3.99	San Miguel
41	3.85	Allegheny
42	3.82	Basin
43	3.30	North Carolina
44	2.88	Central Power - ND
45	1.19	Rayburn Electric Cooperative

Note: Member Information Excluded if No Data Available or Category N/A



**2010 Amount of RUS Insured Debt**

1	674,895,916	
2	73,789,265	Big Rivers
3	53,725,000	Central Electric - MO
4	37,200,000	Tex-La
5	25,712,603	Sunflower
6	25,587,495	Brazos
7	24,409,587	East River
8	21,860,666	New Horizon
9	16,985,636	Northwest Iowa
10	12,833,288	Central Power - ND
11	12,522,040	Central Electric - SC
12	11,772,206	PowerSouth
13	11,564,000	South Mississippi
14	10,991,000	Tri-State
15	9,859,609	Hoosier
16	8,847,575	M & A Electric
17	8,688,780	East Kentucky
18	8,128,674	Western Farmers
19	7,871,141	N. W. Electric
20	6,770,163	Central Iowa
21	6,052,031	KAMO
22	4,626,883	Dairyland
23	4,350,005	Minnkota
24	3,457,621	Northeast Missouri
25	2,009,000	Seminole
26	1,562,144	Georgia
27	1,253,088	Upper Missouri
28	16,779	Arkansas Associated

Note: Member Information Excluded if No Data Available or Category N/A

**2010 Amount of FFB Debt**

1	2,116,905,506	East Kentucky
2	1,784,611,000	Oglethorpe
3	1,679,969,217	Brazos
4	1,214,625,000	Tri-State
5	1,157,229,468	Associated
6	1,054,495,660	North Carolina
7	973,940,000	Georgia
8	897,961,918	Seminole
9	822,265,737	Dairyland
10	811,525,674	Basin
11	764,546,809	PowerSouth
12	759,949,779	Buckeye
13	686,424,000	Hoosier
14	535,349,857	South Mississippi
15	444,316,509	Western Farmers
16	264,405,151	Central Iowa
17	262,738,839	Minnkota
18	251,066,730	Arkansas
19	211,734,607	Southern Illinois
20	206,795,686	East Texas
21	194,591,954	KAMO
22	182,239,359	Corn Belt
23	142,689,655	Arizona
24	99,803,011	Southwest Transmission
25	97,469,485	Central Electric - SC
26	94,538,331	San Miguel
27	87,885,063	Sho-Me Power
28	74,875,137	Square Butte
29	62,859,478	Kansas Electric
30	52,285,388	Tex-La
31	52,098,157	N. W. Electric
32	48,660,113	M & A Electric
33	34,071,668	East River
34	33,661,308	Central Electric - MO
35	33,469,769	Central Power - ND
36	27,524,059	Northeast Missouri
37	21,934,062	Sam Rayburn
38	15,329,944	New Horizon
39	11,682,717	Power Resources
40	2,229,373	Upper Missouri
41	1,418,545	Northwest Iowa

Note: Member Information Excluded if No Data Available or Category N/A

**2010 Amount of Total Debt**

1	4,796,154,000	Ozlethorpe
2	2,684,205,000	Great River
3	2,637,549,000	Tri-State
4	2,613,395,107	East Kentucky
5	2,484,975,971	Basin
6	1,840,766,790	Associated
7	1,765,454,900	Brazos
8	1,676,459,000	Georgia
9	1,367,010,675	PowerSouth
10	1,314,590,323	Seminole
11	1,269,157,330	Buckeye
12	1,162,622,603	North Carolina
13	1,060,873,000	Hoosier
14	895,785,959	Dairyland
15	816,995,916	Big Rivers
16	771,748,397	Western Farmers
17	710,704,097	South Mississippi
18	695,758,000	Old Dominion
19	684,456,534	South Texas
20	669,758,565	Southern Illinois
21	658,736,109	Wabash Valley
22	623,444,196	East Texas
23	441,348,000	Prairie Power
24	422,287,817	Minnkota
25	379,597,970	Square Butte
26	367,085,731	Arkansas
27	350,886,878	Central Iowa
28	337,870,326	KAMO
29	307,301,818	Chugach
30	294,582,609	Sunflower
31	275,516,294	Deseret
32	266,734,200	Wolverine
33	244,202,069	Rayburn Electric Cooperative
34	215,079,076	San Miguel
35	195,551,884	Kansas Electric
36	195,368,110	Arizona
37	194,838,132	Corn Belt
38	158,259,000	Allegheny
39	154,151,329	Central Electric - SC
40	141,114,221	Golden Spread
41	132,643,053	East River
42	119,318,673	Central Electric - MO
43	113,768,026	Southwest Transmission
44	110,067,079	Sho-Me Power
45	106,010,388	Tex-La
46	79,551,957	N. W. Electric
47	67,832,220	M & A Electric
48	63,217,844	Central Power - ND
49	54,677,629	Alaska Electric
50	41,434,213	Northeast Missouri
51	39,739,531	New Horizon
52	25,395,394	Power Resources
53	24,275,724	Sam Rayburn
54	23,279,211	Northwest Iowa
55	10,304,526	Upper Missouri

Note: Member Information Excluded if No Data Available or Category N/A



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Hite, Mark A.		Mark.Hite@bigrivers.com

**COMMONWEALTH OF KENTUCKY**  
**BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY**

**In the Matter of:**

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

)  
)  
)  
)  
**Case No. 2011-00036**

**REBUTAL TESTIMONY**

**OF**

**C. WILLIAM BLACKBURN  
SENIOR VICE PRESIDENT FINANCIAL & ENERGY SERVICES  
& CHIEF FINANCIAL OFFICER**

**ON BEHALF OF**

**BIG RIVERS ELECTRIC CORPORATION**

**FILED: July 6, 2011**

**Case No. 2011-00036  
Exhibit 61  
Page 1 of 19**

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**REBUTTAL TESTIMONY  
OF  
C. WILLIAM BLACKBURN**

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**REBUTTAL TESTIMONY  
OF  
C. WILLIAM BLACKBURN**

5 **I. INTRODUCTION**

6 **Q. Please state your name, business address, and position.**

7 A. My name is C. William Blackburn. I am employed by Big Rivers Electric Corporation  
8 (“Big Rivers”) at 201 Third Street, Henderson Kentucky, 42420, as its Senior Vice  
9 President Financial & Energy Services and Chief Financial Officer.

10 **Q. Did you submit direct testimony in this proceeding?**

11 A. Yes, in Exhibit 49 of the Application.

12 **Q. What is the purpose of your rebuttal testimony?**

13 A. The purpose of my rebuttal testimony is to explain why (a) the proposal of the  
14 Kentucky Industrial Utility Customers, Inc. (“KIUC”) does not allow Big Rivers to  
15 meet its obligations and should be rejected, (b) the KIUC proposal is not the first step  
16 of a long-term solution, and (c) the Energy Efficiency and Demand Side Management  
17 (“DSM”) pro forma adjustment should be approved as filed and the recommendation by  
18 the KIUC on this item should be rejected by the Commission.

19  
20 **II. THE KIUC PROPOSAL DOES NOT ALLOW BIG RIVERS TO MEET ITS**  
21 **OBLIGATIONS AND SHOULD BE REJECTED.**  
22

23 **Q. Did Big Rivers model the effects of the KIUC proposal on the Big Rivers financial**  
24 **forecast(s)?**

25 A. Yes. The KIUC proposed a base rate increase of \$18,679,000 compared to the  
26 \$39,953,965 base rate increase proposed by Big Rivers. This is 46.75% of the increase

1 proposed by Big Rivers. The KIUC proposal was incorporated into Big Rivers' multi-  
2 year financial forecast that was filed in response to KIUC Request for Information 1-  
3 43, in order to evaluate the effects of the KIUC proposal on Big Rivers' financials. Mr.  
4 Hite describes this modeling in greater detail in his rebuttal testimony.

5 **Q. Please briefly describe the results of this analysis.**

6 A. The analysis clearly indicates that if the KIUC proposal were adopted, Big Rivers  
7 would not be positioned to meet its financial obligations. The result is that Big Rivers'  
8 margins, Margins For Interest Ratio ("MFIR"), Times Interest Earned Ratio ("TIER")  
9 and cash flow would each suffer greatly. In fact, under the KIUC proposal as modeled,  
10 Big Rivers' margins are forecast to be negative in both 2012 and 2014. MFIR and  
11 Conventional TIER are less than 1.10 in all years except 2013. Big Rivers' cash is  
12 reduced by approximately \$17 million annually, requiring additional borrowings.  
13 These are significantly adverse financial impacts on Big Rivers. These detriments are  
14 described in greater detail in the rebuttal testimony of Mr. Hite.

15 **Q. Does the KIUC proposal allow Big Rivers to meet the requirements of its debt**  
16 **covenants?**

17 A. No. The KIUC proposal would not allow Big Rivers to maintain a MFIR of at least  
18 1.10, which it is obligated to maintain under covenants in the documents required by  
19 Big Rivers' lenders. In the event that Big Rivers fails to achieve the minimum required  
20 MFIR, Big Rivers would be in violation of its obligations to its lenders. If Big Rivers  
21 cannot make the required MFIR representation in connection with a required  
22 refinancing of the Rural Utilities Service ("RUS") debt in 2012, Big Rivers will default  
23 under the RUS 2009 Promissory Note Series A, creating a cascade of problems under



1 Big Rivers' credit agreements. This is obviously the gravest consequence of the KIUC  
2 proposal.

3 **Q. Are there other financial implications of the KIUC proposal if it were to be**  
4 **adopted by the Commission?**

5 A. Yes. Big Rivers has investment grade ratings from the three principal credit rating  
6 agencies, Moody's, Standard & Poor's, and Fitch. However, two of these three ratings  
7 are at the lowest level of investment grade. As explained in greater detail in the  
8 testimony of Mr. Spen, a failure to meet MFIR, or the failure to meet any number of  
9 other financial metrics, could result in Big Rivers losing one or more of its investment  
10 grade ratings. This could have a severe and substantial impact on Big Rivers' ability to  
11 refinance its current debt or to borrow additional money in the future, including the cost  
12 of debt. The RUS Loan Contract requires that Big Rivers maintain two investment  
13 grade ratings. As Mr. Hite explains in his rebuttal testimony, even with the full rate  
14 adjustment requested by Big Rivers, the company will be required to borrow additional  
15 money as early as 2012. Without an investment grade rating, such additional  
16 borrowing would certainly be more expensive, and Big Rivers' access to credit markets  
17 could be impaired.

18 **Q. Are you saying that the KIUC proposal, if adopted by the Commission, would put**  
19 **Big Rivers in a financially unsound situation?**

20 A. Yes. The KIUC proposal would negatively impact Big Rivers' margins, would  
21 negatively impact cash flows, would negatively impact Big Rivers' MFIR and TIER,  
22 and would not allow Big Rivers to prudently maintain its assets. The financial  
23 wherewithal of Big Rivers will be jeopardized if the KIUC proposal is adopted.

1 **Q. Please explain further the financial covenants applicable to Big Rivers under its**  
2 **credit documents.**

3 A Big Rivers' principal obligations to its creditors under its credit documents are outlined  
4 in my direct testimony, Big Rivers' Application Exhibit 49, beginning at page 6. Some  
5 of the principal covenants are that Big Rivers maintain a minimum 1.10 MFIR each  
6 fiscal year, a minimum 1.20 Debt Service Coverage ratio, and an investment grade  
7 credit rating from at least two rating agencies.

8 **Q Please explain why the KIUC revenue requirement and rate recommendation put**  
9 **Big Rivers at risk of not complying with the requirement that it maintain an**  
10 **investment grade credit rating from at least two ratings agencies.**

11 A As of the Unwind Transaction closing in 2009, Big Rivers had three investment-grade  
12 credit ratings, two of which were at the minimum level. Those ratings were reaffirmed  
13 in 2010 during the refunding of one issue of Big Rivers' pollution control bonds based  
14 upon Big Rivers' financial condition at that time, which included the following:

- 15 • Projected Member base rate increases of 11.75% effective January 1, 2012 and  
16 7.0% effective January 1, 2016;
- 17 • Contract TIER of 1.24 for 2012 and beyond;
- 18 • Equity to total capitalization ratio of
  - 19 ○ 32% in 2012,
  - 20 ○ 33% in 2013,
  - 21 ○ 34% in 2014,
  - 22 ○ 35% in 2015.

23 The KIUC revenue requirements and rate recommendations, if adopted, would erode  
24 the strengths on which Big Rivers' credit ratings were based at the Unwind. As Mr.

1 Alan Spen notes in his testimony, Big Rivers should at least maintain the financial  
2 condition that enabled it to achieve investment grade ratings in 2009 and 2010.

3 Big Rivers is also struggling to maintain financial performance that will enable  
4 it to comply with the minimum MFIR requirements of Big Rivers' Indenture. As noted  
5 on page 8 of my direct testimony, to achieve a MFIR of only 1.15 in 2010, Big Rivers  
6 was forced to cut costs and defer scheduled maintenance outages on some of its  
7 generating units. As I discuss below, Big Rivers has already begun deferring  
8 maintenance outages on generating units this year to help achieve the minimum MFIR  
9 because of the calamitous consequences of failing to do so.

10 **Q Is this practice of deferring scheduled maintenance outages to achieve the**  
11 **financial targets required by Big Rivers' financial documents a good practice?**

12 A I believe it is a very bad practice for Big Rivers regularly to be in a financial condition  
13 so precarious that it must defer prudently-planned outages of its generating units and/or  
14 maintenance of its transmission facilities to meet its contractually-mandated financial  
15 targets. Deferring maintenance on generating units puts them at greater risk of an  
16 unplanned outage, which can be untimely. As Mr. Berry testifies in his rebuttal  
17 testimony, Big Rivers has been benefiting from the condition of the generating units at  
18 the Unwind Transaction closing in July of 2009, and cannot expect that the generating  
19 units will continue to perform that consistently if they are not properly and regularly  
20 maintained. Big Rivers is basically at the point that, even with the proposed increases,  
21 a significant forced outage could cause Big Rivers to fail to meet its MFIR requirement  
22 for 2011.

1    **Q.    Why does Big Rivers continue to defer maintenance outages if the practice is so**  
2    **risky?**

3    A.    This is simply a matter of available alternatives.  As a result of the economic downturn,  
4    which is continuing to persist, Big Rivers has experienced an alarming reduction in its  
5    off-system sales revenues as a result of the low price of power in the market.  As  
6    discussed in Mr. Hite's testimony, in 2010 Big Rivers' off-system sales revenues are  
7    \$55.7 million lower than were projected in the financial models supplied to the  
8    Commission in the Unwind Transaction proceeding.  Lower off-system sales revenue  
9    has required Big Rivers to defer maintenance of its power plants and is the principal  
10   reason that we have filed this rate case application.  Indeed, the deterioration in Big  
11   Rivers' off-system sales is the primary reason Big Rivers was required to file this rate  
12   case.

13           As long as off-system sales revenues remain suppressed, in the short-term Big  
14   Rivers faces a dilemma -- further reduce costs or risk failure to achieve the minimum  
15   required MFIR.  The former can only be accomplished to the necessary scale by  
16   deferring generator maintenance, as other cost-saving measures have already been  
17   deployed and are of insufficient magnitude.  The latter places Big Rivers at risk of  
18   defaulting on its obligations to its lenders and facing potential bankruptcy, which is  
19   simply untenable.  In the short-term, Big Rivers has chosen to defer the unit  
20   maintenance.  In the longer term, the solution to this challenge is to continually manage  
21   expenses and to increase the base rates and implement all of the recommendations  
22   made by Big Rivers in its Application in this proceeding.

1 **Q. You testified on page 8 of your direct testimony that the rates proposed by Big**  
2 **Rivers, if placed in effect, could be reasonably expected to produce at least a 1.10**  
3 **MFIR for 2011. Is that still your opinion?**

4 A. Yes. In my opinion, based upon the best information I currently have available to me,  
5 Big Rivers will have a reasonable chance to achieve at least a 1.10 MFIR for 2011 if  
6 Big Rivers places its proposed rates into effect on September 1, 2011. However, Big  
7 Rivers still anticipates the need for additional deferral of planned outages at its  
8 generation plants during 2011. This opinion is based upon the current financial  
9 forecasts for 2011 developed by Big Rivers (which include the full amount of the  
10 requested rate relief in this case) and actual financial results through May 2011.

11 **Q. Will the revenue requirement recommended by KIUC have any other implications**  
12 **for Big Rivers?**

13 A. Yes. If Big Rivers is restricted to the revenue requirement proposed by KIUC, Big  
14 Rivers will be at substantial risk of failing the Indenture tests required for Big Rivers to  
15 refinance \$60 million in debt under the RUS 2009 Promissory Note Series A, as is  
16 required by October of 2012 under the terms of Big Rivers' credit documents. I would  
17 point out that Big Rivers also expects to borrow at the same time an additional \$52  
18 million to replenish its cash reserves.

19 **Q How does the KIUC revenue requirement proposal put those plans at risk?**

20 A In order to refinance the RUS 2009 Promissory Note Series A and to replenish its cash,  
21 Big Rivers must issue debt under its Indenture. In order to issue debt under its  
22 Indenture, Big Rivers must, as of the date of the "Application," deliver an "Available  
23 Margins Certificate" to the Indenture Trustee to secure the new debt instruments under

1 the Indenture. I describe this requirement in my direct testimony, Big Rivers'  
2 Application Exhibit 49, at page 10. Basically the Available Margins Certificate  
3 certifies that Big Rivers has met the minimum MFIR requirement of the indenture  
4 during one of the periods specified in the definition of Available Margins Certificate.

5 **Q. What is the "Application" that you say must be made to the indenture trustee?**

6 A. The Application means, insofar as Big Rivers' plans are concerned, an application for  
7 the authentication and delivery of Additional Obligations under the Indenture.

8 **Q. What is the date of the Application for purposes of the MFIR certification**  
9 **required in the Available Margins Certificate?**

10 A. The date of the Application is the date of completion of all deliveries to the Indenture  
11 Trustee of all the securities and documents that are required to establish the right of Big  
12 Rivers to secure additional debt obligations under the Indenture. In basic terms, the  
13 date of the Application is the date of closing of the sale of the debt obligations Big  
14 Rivers will issue for the purposes mentioned. Based upon the refinancing required  
15 under the RUS loan documents, I would expect that closing to occur in August of 2012.

16 **Q. Based upon an August 2012 time period for issuance of an Available Margins**  
17 **Certificate, what is the period for which Big Rivers must demonstrate at least a**  
18 **1.10 MFIR?**

19 A. The requirements for the Available Margins Certificate are described in my direct  
20 testimony at page 10. But based upon an August 2012 closing, the two options for the  
21 period in which Big Rivers must be able to demonstrate a minimum 1.10 MFIR are:

22 

- Calendar year 2011; or

- 1                   • Any twelve consecutive calendar months during the period of fifteen  
2                   calendar months immediately preceding the first day of August, 2012.

3 **Q     In addition to the Indenture, are there any other financing documents that impose**  
4 **financial covenants upon Big Rivers?**

5 A     Yes. The Revolving of Credit Agreement dated as of July 16, 2009 (the “CFC  
6     Revolving Credit Agreement”) with the National Rural Utilities Cooperative Finance  
7     Corporation (“CFC”) and the Revolving Credit Agreement entered into as of July 16,  
8     2009 (the “CoBank Revolving Credit Agreement”) with CoBank both impose financial  
9     tests upon Big Rivers.

10 **Q.    What financial covenants do the CFC Revolving Credit Agreement and the**  
11 **CoBank Revolving Credit Agreement impose upon Big Rivers and what are the**  
12 **ramifications for Big Rivers if Big Rivers fails to meet these covenants?**

13 A.    Under the CFC Revolving Line of Credit Agreement Big Rivers has covenanted to  
14    operate and maintain its business to achieve and maintain a Margins for Interest Ratio  
15    of not less than 1.10. The MFIR is the same requirement as in the Indenture. Under  
16    the CFC Revolving Credit Agreement failure to comply with this covenant would result  
17    in an event of default under that agreement. An event of default under the CFC  
18    Revolving Credit Agreement would allow CFC to cease making advances under the  
19    Agreement, terminate the line of credit and cease issuing letters of credit under the  
20    Agreement. An event of default also could result in the acceleration of any debt  
21    outstanding under the Agreement. This would eliminate Big Rivers’ ability to borrow  
22    under the Agreement and would make it virtually impossible for Big Rivers to borrow  
23    funds from any other lender. In addition, the event of default under the CFC Revolving

1 Credit Agreement could precipitate an event of default under the RUS Loan Contract.  
2 Under the RUS Loan Contract, upon an event of default thereunder, RUS may pursue  
3 all rights and remedies available to it at law or in equity. Although default under the  
4 RUS Loan Contract would not result in an acceleration, it would make any financing by  
5 Big Rivers virtually impossible.

6 Under the CoBank Revolving Credit Agreement Big Rivers has covenanted to  
7 have at the end of each year a Debt Service Coverage ratio (as defined in such  
8 Agreement) of not less than 1.20. If Big Rivers is restricted to the revenue requirement  
9 proposed by the KIUC, Big Rivers will be at a substantial risk of failing this test, which  
10 failure would constitute an event of default under the CoBank Revolving Credit  
11 Agreement. Upon an event of default, CoBank may terminate its commitment and  
12 accelerate any debt outstanding under the Agreement. This would eliminate Big  
13 Rivers' ability to borrow under the Agreement and would make it virtually impossible  
14 for Big Rivers to borrow funds from any other Lender. This also could precipitate an  
15 event of default under the RUS Loan Contract.

16 **Q. Are you concerned about whether Big Rivers will be able to demonstrate in**  
17 **September of 2012 a minimum 1.10 MFIR for one of those two periods?**

18 A. Yes. Big Rivers' MFIR for the twelve months ending May 31, 2011, is only 1.02, and  
19 for the twelve months ending March and April, 2011, MFIR was only 0.95 and 0.98,  
20 respectively. The principal reason MFIR went up so dramatically at the end of May is  
21 that Big Rivers had advanced a portion of a scheduled outage of Station Two Unit 1  
22 from May into April (and deferred the remaining portion of the outage to 2012). As a  
23 result, Big Rivers sold more energy than expected into the wholesale market in May.



1           Additionally, Big Rivers did not incur a portion of the costs associated with a scheduled  
2           outage in May since the outage was moved. The fortuitous alignment of these  
3           circumstances resulted in stronger-than-anticipated financial results for May 2011.

4   **Q.    Why did Big Rivers reschedule that planned outage?**

5   A.    Because of our concern that Big Rivers would be unable to achieve a minimum MFIR  
6           of 1.10 for 2011, Big Rivers has begun deferring generating plant maintenance  
7           scheduled for this year. We are currently monitoring the need to defer other outages  
8           during 2011, including a 28-day outage for Green Unit 1, previously scheduled for  
9           2010, and now scheduled in October, and a 10-day outage for Green Unit 2 scheduled  
10          in November (which was originally scheduled as a 28-day outage in March 2011 but  
11          was deferred and shortened earlier this year).

12 **Q.    Based on these facts, what is your opinion of how the KIUC proposal, if adopted**  
13 **by the Commission, would position Big Rivers financially?**

14 A.    The KIUC proposal would put Big Rivers in a very precarious financial position. The  
15          KIUC proposal would negatively impact Big Rivers' margins, would negatively impact  
16          cash flows, would negatively impact Big Rivers' TIER, and would not allow Big  
17          Rivers to prudently maintain its generation and transmission assets. The KIUC  
18          proposal does not permit Big Rivers to meet its financial obligations and maintain its  
19          investment grade credit ratings, as required by its debt covenants.

20

21

22

23

1 **III. THE KIUC PROPOSAL IS NOT THE FIRST STEP OF A LONG-TERM**  
2 **SOLUTION**  
3

4 **Q. Mr. Fayne states on page 11 of his direct testimony that the KIUC proposal**  
5 **benefits all constituencies. Is this correct?**

6 A. No. The KIUC proposal does not benefit all constituencies. The KIUC proposal  
7 benefits the Smelters but does not benefit Big Rivers or its Rural rate class.

8 **Q. Why does the KIUC proposal provide no benefit to Big Rivers or its Rural rate**  
9 **class?**

10 A. As I described above, the KIUC proposal does not allow Big Rivers to meet its  
11 financial obligations. As Mr. Hite describes in his rebuttal testimony, the KIUC  
12 proposal does not provide Big Rivers with sufficient revenues to meet its full revenue  
13 requirement. The KIUC proposal does not permit Big Rivers to achieve its MFIR and  
14 Conventional TIER requirements, which threatens Big Rivers' ability to comply with its  
15 debt covenants. The KIUC proposal prohibits positive margins for Big Rivers in two of  
16 the next three years. The KIUC proposal reduces Big Rivers' cash reserves and  
17 increases Big Rivers' need for additional borrowings. These effects, taken separately or  
18 together, are extremely adverse. Simply put, the KIUC proposal places Big Rivers'  
19 future financial viability very much in jeopardy. Furthermore, the KIUC proposal to  
20 mitigate the Rural rate class increase by relying on the Rural Economic Reserve will  
21 prematurely exhaust that fund to the long-term detriment of the Rural customers, as was  
22 described in the rebuttal testimony of Mr. Bailey.

23 **Q. In light of these results, how then do you characterize the view that the KIUC**  
24 **proposal provides a benefit to Big Rivers and its Rural rate class?**

1 A. For the reasons noted above, the assertion that the KIUC proposal benefits Big Rivers  
2 and the Rural rate class is plainly unsubstantiated. In fact, as generally explained by  
3 Mr. Bailey in his testimony, and in more detail in Mr. Seelye's testimony, the KIUC  
4 proposal economically nullifies some of the consideration Big Rivers and the Rural and  
5 Large Industrial classes received from the Smelters in connection with the Unwind  
6 Transaction less than two years ago. The Smelter Retail Agreements create a TIER  
7 Adjustment Charge mechanism (Section 4.7) and a Surcharge (Section 4.11), and  
8 require a payment by the Smelters of \$0.25 per MWh (Section 1.1.20). These charges  
9 payable by the Smelters benefit all customer classes except the Smelters, and the KIUC  
10 proposal would economically nullify the benefit of those payments to the Rural  
11 customer rate class.

12 The KIUC proposal on behalf of its Smelter members violates the spirit, if not  
13 the letter of the prohibition in Section 13.1.1(b) of the Smelter Retail Agreements that a  
14 Smelter will not "support or seek, directly or indirectly, from . . . [the Commission] any  
15 challenge to or change in the rate formula set forth in this Agreement or other terms and  
16 conditions set forth herein . . . ." KIUC attempts to justify the position taken on behalf  
17 of the Smelters as a permissible cost of service challenge. But the Smelter Retail  
18 Agreements permit only participation in cost of service issues relating to the rates of the  
19 Non-Smelter Ratepayers, as is stated in Section 13.1.1(b) of the Smelter Retail  
20 Agreements. In this proceeding, the Large Industrial retail class benefits incidentally  
21 from arguments that are all about the Smelter cost of service. For this reason alone the  
22 Commission should reject the KIUC revenue allocation arguments.

1                   While the Smelter Agreements are on file with the Commission, for  
2                   convenience of reference I attach to my testimony, as Exhibit Blackburn Rebuttal-1, the  
3                   Retail Electric Service Agreement dated as of July 1, 2009, between Kenergy Corp. and  
4                   Alcan Primary Products Corporation (“Alcan”), and as Exhibit Blackburn Rebuttal-2,  
5                   the Wholesale Electric Service Agreement (Alcan) between Big Rivers and Kenergy  
6                   Corp. dated as of July 1, 2009, which are almost identical to the corresponding  
7                   agreements entered into with respect to Century Aluminum of Kentucky General  
8                   Partnership (“Century”). I also attach to my testimony, as Exhibits Blackburn Rebuttal-  
9                   3 and Blackburn Rebuttal-4, the Coordination Agreements dated as of July 1, 2009,  
10                  entered into between Big Rivers and Alcan and Century, respectively.

11   **Q.   Mr. Fayne states on pages 9-10 of his direct testimony that “the cost of electricity**  
12   **to the smelters is projected to increase even more beginning in 2012...” Is this**  
13   **increase a function of the Big Rivers rate proposal in this case?**

14   A.   No. The 2012 increase that Mr. Fayne mentions is a function of the Smelter  
15   Agreements. It does not stem from Big Rivers' Application in this docket, and thus is  
16   not relevant to the issue pending before the Commission in this proceeding.

17   **Q.   What is your opinion about the KIUC position that the Commission should grant**  
18   **the KIUC rate proposal as the first step of a “long term solution” as outlined by**  
19   **the KIUC witnesses?**

20   A.   Big Rivers and its members are not positioned to solve the problems facing the  
21   Smelters. And Mr. Fayne acknowledges that the Commission will not be able to  
22   unilaterally develop and implement the long-term solution called for by the KIUC  
23   (Direct Testimony of Henry W. Fayne at pages 22-23 and Mr. Fayne’s Response to

1 Staff's Initial Information Request to the KIUC, Item No. 4(b)). As described in the  
2 rebuttal testimony of Mr. Seelye, the point that must be understood on this issue is that  
3 the Smelters are subject to the vagaries of the international market for aluminum.  
4 These Smelter global competitive problems cannot be solved by Big Rivers – or by the  
5 Commission in the context of this rate case proceeding. The suggestion that the KIUC  
6 proposal should be approved as a first step of a “long-term solution” to the difficulties  
7 surrounding the viability of the Smelters is simply not credible.

8  
9 **IV. THE ENERGY EFFICIENCY & DSM PRO FORMA ADJUSTMENT SHOULD**  
10 **BE APPROVED AS FILED BY BIG RIVERS.**  
11

12 **Q. Mr. Baron states on page 34 of his direct testimony that the Commission should**  
13 **not accept Big Rivers' proposed pro forma adjustment of \$1 million related to**  
14 **Energy Efficiency and DSM expenses. Do you agree with this recommendation?**

15 **A.** No. As Big Rivers stated in its response to Item KIUC 2-3, KRS 278.285 permits  
16 utilities to implement DSM cost recovery mechanisms but does not prohibit the  
17 recovery of such costs through base rates. The inclusion of these energy efficiency  
18 program costs in base rates will avoid the implementation of another cost recovery  
19 mechanism by Big Rivers and would thus avoid the need for Big Rivers' rural member  
20 systems to develop DSM recovery mechanisms of their own to flow through costs from  
21 a Big Rivers DSM cost recovery mechanism.

22 **Q. Is it appropriate to allocate the costs of these programs to both the Rural and**  
23 **Large Industrial rate classes?**

1 A. Yes. The purpose of the programs is to reduce overall demand, which benefits both  
2 rate classes by virtue of reducing Big Rivers' costs. It is reasonable for both rate  
3 classes to bear the costs since both rate classes will benefit from reduced overall  
4 demand.

5 **Q. Please reiterate the commitment that Big Rivers is prepared to make regarding**  
6 **Energy Efficiency and DSM Programs.**

7 A. As I noted on page 32 of my direct testimony, contingent upon the acceptance of this  
8 pro forma adjustment to test year expenses and its inclusion in base rates, Big Rivers  
9 commits that it will spend \$1 million annually on the Energy Efficiency and DSM  
10 programs as proposed in the 2010 Integrated Resource Plan, and/or any subsequent  
11 program filings, to create and promote incentives for a number of consumer energy  
12 efficiency measures. Big Rivers believes that providing cost-effective Energy  
13 Efficiency offerings to our Members is a high priority and proposes to include this pro  
14 forma adjustment at this time to better enable Big Rivers to implement these programs,  
15 without requiring its members to incorporate another rate mechanism with a separate  
16 line item on customer bills.

17

18 **V. CONCLUSION**

19

20 **Q. Do you have any closing comments?**

21 A. Yes. As I explained herein, the KIUC proposal does not allow Big Rivers to meet its  
22 obligations. In particular, it would not allow Big Rivers to maintain a MFIR of at least  
23 1.10, which it is obligated to maintain under covenants in Big Rivers' loan documents.  
24 Failure to meet MFIR, or the failure to meet any number of other financial metrics,

1 could result in Big Rivers losing one or more of its investment grade ratings. This could  
2 have a severe and substantial impact on Big Rivers' cost and ability to refinance its  
3 current debt or to borrow additional money in the future.

4 The KIUC proposal does not work for Big Rivers and is simply not a viable  
5 solution to the challenge that the Smelters face in the global competitive aluminum  
6 market. The Smelters' global competitive problems cannot be solved by Big Rivers, or  
7 by the Commission in the context of this rate case proceeding. The Commission should  
8 not view the KIUC recommendation as a necessary first step of any plan and should  
9 reject it.

10 Finally, the DSM pro forma adjustment proposed by Big Rivers in this  
11 proceeding should be approved as filed. Contingent upon the acceptance of this pro  
12 forma adjustment and its inclusion in base rates, Big Rivers commits that it will spend  
13 \$1 million annually on the Energy Efficiency and DSM programs. These programs will  
14 reduce Big Rivers' total system demand, which will benefit all rate classes. The pro  
15 forma adjustment should be approved as filed so Big Rivers can advance incentives for  
16 a number of consumer energy efficiency measures for its members.

17 **Q. Does this conclude your rebuttal testimony?**

18 A. Yes, it does.

**Exhibit Blackburn Rebuttal-1**

**Retail Electric Service Agreement dated as of July 1, 2009,  
between Kenergy Corp. and Alcan Primary Products Corporation**



**RETAIL ELECTRIC SERVICE AGREEMENT**

Dated as of July 1, 2009,

by and between

**KENERGY CORP.**

and

**ALCAN PRIMARY PRODUCTS CORPORATION**

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## RETAIL ELECTRIC SERVICE AGREEMENT

This RETAIL ELECTRIC SERVICE AGREEMENT (this "Agreement") is dated as of July 1, 2009, and made by and between KENERGY CORP., a Kentucky rural electric cooperative corporation ("Kenergy"), and ALCAN PRIMARY PRODUCTS CORPORATION, a Texas corporation ("Alcan").

### RECITALS

A. Kenergy currently supplies and delivers to Alcan, the owner and operator of an aluminum reduction plant in Sebree, Kentucky, electric energy and related services pursuant to an Agreement for Electric Service, dated July 15, 1998, between Henderson Union Electric Cooperative Corp., Kenergy's predecessor-in-interest, and Alcan Aluminum Corporation, Alcan's predecessor-in-interest (the "Existing Alcan Agreement").

B. Kenergy currently purchases electric energy and related services for resale to Alcan from Western Kentucky Energy Corp., an affiliate of E. ON U.S., LLC, formerly known as LG&E Energy Corp. (together with its affiliates and parent, collectively, "LG&E"), under an Agreement for Electric Service, dated as of July 15, 1998, with Kenergy (the "Kenergy/LG&E Contract").

C. Kenergy also currently purchases additional electric energy and related services for resale to Alcan, to serve the energy requirements of Alcan not provided by LG&E, from third-party energy suppliers, including Big Rivers Electric Corporation ("Big Rivers"), an electric generation and transmission cooperative of which Kenergy is a Member.

D. The Existing Alcan Agreement and the Kenergy/LG&E Contract were entered into in connection with the consummation of a series of transactions implementing the First Amended Plan of Reorganization of Big Rivers, as part of which, among other things (i) Big Rivers leased its generating facilities to LG&E, and (ii) Big Rivers entered into a power purchase arrangement with LG&E whereby LG&E supplied Big Rivers with electric energy and related services for resale to its Members.

E. Big Rivers, Kenergy, LG&E, Century Aluminum of Kentucky General Partnership ("Century"), and Alcan have agreed to enter into a series of transactions referred to herein as the New Transaction and the Unwind Transaction, as defined below.

F. In connection with and as a condition to the Unwind Transaction, Kenergy and Big Rivers have agreed to enter into a wholesale electric service agreement, dated as of the date hereof, for the purchase and sale of electric energy and related services for resale by Kenergy to Alcan ("Alcan Wholesale Agreement").

G. In connection with and as a condition to the Unwind Transaction and the Alcan Wholesale Agreement, Kenergy will supply and deliver, and Alcan will purchase, retail electric service on the terms and conditions set forth herein.

## AGREEMENT

NOW, THEREFORE, in consideration of the premises and the mutual covenants hereinafter set forth, the Parties, intending to be legally bound, hereby covenant and agree as follows:

### ARTICLE 1

#### DEFINITIONS AND RULES OF INTERPRETATION

1.1 Definitions. Capitalized terms when used in this Agreement have the meanings specified herein, including the definitions provided in Article 1, unless stated otherwise or the context requires otherwise.

1.1.1 Accounting Principles: Generally accepted accounting principles consistently applied or, if generally accepted accounting principles in accordance with the uniform system of accounts of an applicable Governmental Authority or RUS are required, the generally accepted accounting principles consistently applied in accordance with such uniform system of accounts, each as in effect from time to time.

1.1.2 Affiliate: With respect to a specified Person, another Person that directly, or indirectly through one or more intermediaries, controls or is controlled by or is under common control with the specified Person. For avoidance of doubt, no Member is an Affiliate of Big Rivers.

1.1.3 Agreement: As defined in the Preamble.

1.1.4 Alcan: As defined in the Preamble.

1.1.5 Alcan Guarantee: As defined in Section 13.3.

1.1.6 Alcan Parent: Alcan Corporation, a Texas corporation, and parent corporation of Alcan.

1.1.7 Alcan Wholesale Agreement: As defined in the Recitals.

1.1.8 Ancillary Services: Those services that are necessary to support the transmission of Energy from resources to loads while maintaining reliable operations of Big Rivers' transmission system, as set forth and described in the OATT.

1.1.9 Applicable Law: All laws, statutes, codes, treaties, ordinances, judgments, decrees, injunctions, writs, orders, rules, regulations, interpretations, issuances, enactments, decisions, authorizations, permits or directives of any Governmental Authority having jurisdiction over the matter in question.

1.1.10 Applicable Percentage: The percentage determined in each Fiscal Year that is the quotient of the Base Demand divided by the sum of the Base Demand and the "Base Demand" as defined in and as then in effect under the Century Retail Agreement. If the Century

Retail Agreement is terminated or no longer in effect for any reason, Century's "Base Demand" shall be deemed to be 482 MW for purposes of calculating the Applicable Percentage.

1.1.11 Avoidable Base Charge: The amount in any Billing Month equal to the sum of:

(a) the product of (i) the sum of the Base Rate, the FAC Factor, the Environmental Surcharge Factor, and the Non-FAC Purchased Power Adjustment Factor, and (ii) the amount of Base Fixed Energy that was made available by Alcan to Big Rivers for Surplus Sales, regardless of whether Big Rivers was able to sell such Energy as Surplus Sales;

(b) *plus* the product of (i) the sum of the Base Variable Rate, the FAC Factor, the Environmental Surcharge Factor, and the Non-FAC Purchased Power Adjustment Factor, and (ii) the amount of Base Variable Energy that was made available by Alcan to Big Rivers for Surplus Sales, regardless of whether Big Rivers was able to sell such Energy as Surplus Sales; and

(c) *less* the product of (i) the sum of the Base Variable Rate, the FAC Factor, the Environmental Surcharge Factor, and the Non-FAC Purchased Power Adjustment Factor, and (ii) any Base Fixed Energy or Base Variable Energy made available by Alcan to Big Rivers for Surplus Sales that was neither metered at the Point of Delivery nor sold by Big Rivers as Surplus Sales.

Sample calculations of the Avoidable Base Charge are set forth in Exhibit A.

1.1.12 Back-Up Energy: For any Hour in a Billing Month, the amount of Energy metered at the Point of Delivery during such Hour, less the sum of (i) the Base Demand per Hour less Base Curtailed Energy in such Hour, and (ii) any Supplemental Energy metered at the Point of Delivery during such Hour; *provided*, that the amount of Back-Up Energy may not be less than zero.

1.1.13 Back-Up Energy Charge: As defined in Section 4.4.

1.1.14 Base Curtailed Energy: For any Hour in a Billing Month, the amount of Energy that is either (a) curtailed by Alcan pursuant to Section 4.13.2, or (b) sold by Big Rivers to one or more Third Parties pursuant to (i) Section 4.13.3 as Economic Sales, (ii) Section 10.1 as Surplus Sales, (iii) Section 10.2 as Undeliverable Energy Sales, or (iv) Section 10.3 as Potline Reduction Sales.

1.1.15 Base Demand: 368 MW, or such other amount of electric demand agreed in accordance with Section 3.1, integrated over an Hour.

1.1.16 Base Energy Charge: As defined in Section 4.2.

1.1.17 Base Fixed Energy: For any Billing Month, the product of (a) the Base Demand, (b) the number of Hours in the Billing Month, and (c) 0.98.



1.1.18 Base Hourly Energy: For any Hour in a Billing Month, the amount of Energy equal to the sum of (a) the Energy metered at the Point of Delivery during such Hour *less* Supplemental Energy metered at the Point of Delivery, if any, and (b) Base Curtailed Energy; *provided*, that for purposes of calculating Base Hourly Energy, the sum of clauses (a) and (b) above during any Hour shall not exceed the Base Demand per Hour.

1.1.19 Base Monthly Energy: The sum of the Base Hourly Energy for all Hours of a Billing Month.

1.1.20 Base Rate: The rate, expressed in dollars per MWh, resulting from the application of the Large Industrial Rate to a load with a 98% load factor, plus \$0.25 per MWh.

1.1.21 Base Variable Energy: For any Billing Month, Base Monthly Energy less Base Fixed Energy, whether positive or negative.

1.1.22 Base Variable Rate: The rate, expressed in dollars per MWh, equal to the sum of (i) the "FAC Base" with respect to Big Rivers' Tariff, (ii) the "Environmental Surcharge Base" with respect to Big Rivers' Tariff, and (iii) the "Purchased Power Base" as defined in Appendix A.

1.1.23 Big Rivers: As defined in the Recitals.

1.1.24 Big Rivers' Tariff: Big Rivers' Rates, Rules and Administrative Regulations For Furnishing Electric Service, as filed with and approved by the KPSC.

1.1.25 Billing Month: Each calendar month during the Service Period.

1.1.26 Budget: The annual operating and capital budget approved by Big Rivers' Board of Directors that estimates all revenues and expenditures of Big Rivers for a specified Fiscal Year, as amended and in effect from time to time.

1.1.27 Business Day: Mondays through Fridays of each week except legal holidays established by federal law in the United States of America or state law in the Commonwealth of Kentucky.

1.1.28 Buy-Through Energy: As defined in Section 2.3.2(b).

1.1.29 Buy-Through Energy Charge: As defined in Section 4.3.2.

1.1.30 Century: As defined in the Recitals.

1.1.31 Century Retail Agreement: The retail electric service agreement, dated as of the date hereof, by and between Kenegy and Century.

1.1.32 Century Wholesale Agreement: The wholesale electric service agreement, dated as of the date hereof, between Big Rivers and Kenegy for the benefit of Century.

1.1.33 Cut-Off Date: As defined in Section 10.3.6.

1.1.34 Economic Reserve: A reserve established by Big Rivers, which may be held by Big Rivers or another Person, in an initial principal amount equal to the sum of (a) \$157 million, and (b) such additional amount as Big Rivers may designate on or prior to the consummation of the Unwind Transaction, subject to increases or decreases resulting from earnings or losses thereon or expenditures therefrom. The amount designated by Big Rivers pursuant to clause (b) above may not exceed (i) an amount equal to Big Rivers' unrestricted cash on hand following the consummation of the Unwind Transaction less \$125 million, and (ii) zero if Big Rivers shall not have prepaid at least \$200 million of obligations owed to RUS debt as part of the Unwind Transaction. No additional principal amounts will be contributed by Big Rivers to the Economic Reserve after the Effective Date.

1.1.35 Economic Sales: As defined in Section 4.13.3.

1.1.36 Effective Date: As defined in Section 6.1.

1.1.37 Electric Services: Electric services, including capacity and associated Energy and Transmission Services, provided by Kenergy pursuant to this Agreement.

1.1.38 Energy: The flow of electricity denominated in kWh or MWh.

1.1.39 Environmental Surcharge: As defined in Section 4.8.3.

1.1.40 Environmental Surcharge Factor: With respect to any Billing Month, a monthly environmental surcharge factor, expressed in dollars per MWh, that is calculated in accordance with the "Monthly Environmental Surcharge Factor" as defined in Big Rivers' Environmental Surcharge Rider.

1.1.41 Environmental Surcharge Rider: The Environmental Surcharge Rider to Big Rivers' Tariff.

1.1.42 Equity Development Credit: As defined in Section 4.10.

1.1.43 Event of Default: As defined in Section 14.1.

1.1.44 Excess TIER Amount: The amount of the TIER Adjustment, if negative, with respect to any Fiscal Year.

1.1.45 Excess Reactive Demand Charge: As defined in Section 4.6.

1.1.46 Existing Alcan Agreement: As defined in the Recitals.

1.1.47 FAC: The Fuel Adjustment Clause Rider to Big Rivers' Tariff.

1.1.48 FAC Charge: As defined in Section 4.8.1.

1.1.49 FAC Factor: With respect to any Billing Month, the fuel adjustment factor, expressed in dollars per MWh, that is calculated in accordance with the FAC in dollars per kWh.

1.1.50 FERC: Federal Energy Regulatory Commission.

1.1.51 Firm: An obligation to supply Energy subject only to the occurrence of an Uncontrollable Force.

1.1.52 Fiscal Year: The fiscal year of Big Rivers.

1.1.53 Governmental Authority: Any international, national, federal, state, territorial, local or other government, or any political subdivision thereof, and any governmental, judicial, public or statutory instrumentality, tribunal, agency, authority, body or entity having legal jurisdiction over the matter or Person in question, including the KPSC; *provided, however* that the RUS is not a Governmental Authority for purposes of this Agreement.

1.1.54 Hour or Hourly: A clock hour or per clock hour, respectively.

1.1.55 Imputed Interest: As defined in Section 4.7.5(e).

1.1.56 Interruptible Energy: As defined in Section 2.3.2(a).

1.1.57 Interruptible Energy Charge: As defined in Section 4.3.1.

1.1.58 Interruptible Energy Terms: As defined in Schedule 2.3.2(a).

1.1.59 Kenergy/LG&E Contract: As defined in the Recitals.

1.1.60 KPSC: Kentucky Public Service Commission.

1.1.61 kW: Kilowatt.

1.1.62 kWh: Kilowatt-hour.

1.1.63 Large Industrial Rate: Big Rivers' Tariff Rate Schedule No. 7 and all applicable rate adjustments thereto but exclusive of (a) the Rebate, (b) the FAC Factor and the Environmental Surcharge Rider, and (c) any roll-in of costs from the Regulatory Account. As of the Effective Date, the Large Industrial Rate will consist of separate rate components for demand and Energy consumption. The Large Industrial Rate subsequently may be defined in terms of more than two separate rate components, including, potentially, separate rate components for transmission services. For the avoidance of doubt, the Large Industrial Rate shall be determined without regard to the effect of the Surcharge, the Rural Economic Reserve, the Economic Reserve or the Transition Reserve.

1.1.64 LG&E: As defined in the Recitals.

1.1.65 Lockbox Agreement: The Security and Lockbox Agreement to be entered into among Alcan, Kenergy, Big Rivers and a depository bank prior to the Effective Date with respect to the payment of certain amounts due by Alcan to Kenergy under this Agreement.

1.1.66 Market Energy: As defined in Section 2.3.2(c).

1.1.67 Market Energy Charge: As defined in Section 4.3.3.

1.1.68 Market Reference Rate: For any Hour, a rate equal to the all-inclusive cost, including transmission and related charges on the transmission system of any Third Party (expressed in dollars per MWh), that Big Rivers estimates, in its sole discretion exercised in good faith, that it would have paid to purchase Energy from a Third Party if there had been no curtailment pursuant to Section 4.13.2 during such Hour.

1.1.69 Members: The members of Big Rivers. As of the date hereof, the Members of Big Rivers are Jackson Purchase Energy Corporation, Kenergy, and Meade County Rural Electric Cooperative Corporation.

1.1.70 Model: As defined in Section 1.2(o).

1.1.71 Monthly Charge: As defined in Section 4.1.

1.1.72 MW: Megawatt.

1.1.73 MWh: Megawatt-hour.

1.1.74 Net Margins: Net margins as determined by Accounting Principles. For the avoidance of doubt, Net Margins will include all operating and non-operating margins.

1.1.75 Net Proceeds: The proceeds from the sale of Energy by Big Rivers to Third Parties, net of transaction costs, whenever incurred, and taxes, including Big Rivers' estimated income tax liability on such proceeds without regard to any net operating loss carry-forward of Big Rivers existing on the date of the consummation of the Unwind Transaction, unless and to the extent Big Rivers reasonably determines that such net operating loss carry-forward otherwise would have expired unused.

1.1.76 New Facilities: As defined in Section 4.7.5(e).

1.1.77 New Ratepayer: A Non-Smelter Ratepayer which is (i) interconnected directly with Big Rivers' transmission system, and (ii) first receives electric service at a location served by a meter required for service at such location which meter was installed specifically for new service at such location after the Effective Date. For the avoidance of doubt, Southwire Company is not a New Ratepayer.

1.1.78 New Transaction: The transactions by and between or among one or more of Kenergy, Alcan, Century and Big Rivers related to the supply of Electric Services to Alcan under this Agreement and "Electric Services" as defined in the Century Retail Agreement to Century including the Alcan Wholesale Agreement, the Century Wholesale Agreement, coordination agreements, lockbox agreements, and all other related agreements.

1.1.79 Non-FAC Purchased Power Adjustment Charge: As defined in Section 4.8.2.

1.1.80 Non-FAC Purchased Power Adjustment Factor: A rate (expressed in dollars per MWh and calculated in accordance with Appendix A in dollars per kWh) for the recovery of purchased power costs that are not otherwise included in the FAC.

1.1.81 Non-Smelter Member Rates: Big Rivers' tariff rates applicable to sales of electric services to Members for resale to Non-Smelter Ratepayers and all applicable rate adjustments thereto but exclusive of (a) the Rebate and (b) the FAC Factor and the Environmental Surcharge Rider. For the avoidance of doubt, the Non-Smelter Member Rates shall be determined without regard to the effect of the Surcharge, the Rural Economic Reserve, the Economic Reserve or the Transition Reserve.

1.1.82 Non-Smelter Ratepayers: Retail ratepayers of the Members other than Alcan and Century.

1.1.83 Notice of Interruption: As defined in Schedule 2.3.2(a).

1.1.84 Notice of Termination for Closure: As defined in Section 7.3.1(a).

1.1.85 OATT: Big Rivers' Open Access Transmission Tariff as filed with FERC and found by FERC to constitute a reciprocal open access transmission tariff.

1.1.86 Parties: Kenergy and Alcan.

1.1.87 Permitted Interruption: As defined in Schedule 2.3.2(a).

1.1.88 Person: Any individual, corporation, cooperative, partnership, joint venture, association, joint-stock company, limited partnership, limited liability company, limited liability partnership, trust, unincorporated organization, RUS or Governmental Authority.

1.1.89 Point of Delivery: The existing set of meters at Big Rivers' Reid substation or such other point of delivery mutually agreed by the Parties and Big Rivers.

1.1.90 Potential Tax Liability: As defined in Section 13.3.

1.1.91 Potline Reduction: As defined in Section 10.3.1.

1.1.92 Potline Reduction Sales: As defined in Section 10.3.1.

1.1.93 Potline Reduction Sales Agreement: As defined in Section 10.3.3.

1.1.94 Prime Rate: The then-effective prime commercial lending rate per annum published in the "Money Rates" section of *The Wall Street Journal*. If *The Wall Street Journal* discontinues publication of the prime commercial lending rate, the Parties and Big Rivers shall agree on a mutually acceptable alternative source for that rate.

1.1.95 Prudent Utility Practice: Any of the practices, methods, and acts engaged in or approved by a significant portion of the electric utility industry during the relevant time period; or any of the practices, methods, and acts which, in the exercise of reasonable judgment

in light of the facts known at the time a decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety and expedition. Prudent Utility Practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather to be any and all acceptable practices, methods, or acts generally accepted.

1.1.96 Rebate: As defined in Section 4.9.

1.1.97 Regulatory Account: The regulatory account containing purchased power costs to be recovered by Big Rivers from the Members with respect to sales to their Non-Smelter Ratepayers.

1.1.98 Response: As defined in Schedule 2.3.2(a).

1.1.99 Restructuring: The occurrence of any of the following:

(a) the merger, consolidation or other combination of Big Rivers or an Affiliate or a Member with any Person (including acquisition of another utility system) if following such transaction Big Rivers or its successor would have had sales of Energy to all Members or regulated customers on a *pro forma* basis in the prior Fiscal Year in excess of 105% of Big Rivers' actual sales of Energy to the Members for such Fiscal Year;

(b) the acquisition of Big Rivers; or

(c) the admission of a new Member if following such admission Big Rivers would have had sales of Energy to all Members on a *pro forma* basis in the prior Fiscal Year in excess of 105% of Big Rivers' actual sales of Energy to the Members for such Fiscal Year.

1.1.100 Restructuring Amount: As defined in Section 16.5.1.

1.1.101 Retail Fee: As defined in Section 4.12.

1.1.102 Rural Economic Reserve: A reserve established by Big Rivers, which may be held by Big Rivers or another Person, in an initial principal amount equal to \$60.9 million, subject to increases or decreases resulting from earnings or losses thereon or expenditures therefrom. No additional principal amounts will be contributed by Big Rivers to the Rural Economic Reserve after the Effective Date.

1.1.103 RUS: United States Department of Agriculture Rural Utilities Service.

1.1.104 Scheduled Interruptible Energy: As defined in Schedule 2.3.2(a).

1.1.105 Sebree Smelter: The aluminum reduction plant owned and operated by Alcan, located at Sebree, Kentucky, including any expansions, additions, improvements and replacements thereof or thereto at the existing site.

1.1.106 SERC: SERC Reliability Corporation, a regional reliability organization.

1.1.107 Service Period: As defined in Section 2.1.

1.1.108 Smelters: Alcan and Century.

1.1.109 Supplemental Energy: As defined in Section 2.3.2.

1.1.110 Supplemental Energy Charge: As defined in Section 4.3.

1.1.111 Surcharge: As defined in Section 4.11.

1.1.112 Surplus Sales: As defined in Section 10.1.1.

1.1.113 System Emergency: Any cessation of operation or reduction in the provision or delivery of Electric Services by Kenergy due in whole or in part to: (a) a disconnection of all or a portion of Big Rivers' or Kenergy's system from the transmission grid (other than as a direct result of Big Rivers' or Kenergy's gross negligence or willful misconduct), (b) a system emergency on the transmission grid of a Third Party, or (c) the occurrence of a condition or situation where the delivery of Energy to a transmission grid with which Big Rivers is directly interconnected or the making available of generation services or Transmission Services which could cause (i) harm to life or limb or imminent serious threat of harm to life or limb, (ii) material damage to Big Rivers' or Kenergy's system or any material component thereof or imminent danger of material damage to property, or (iii) other dangerous occurrences that Big Rivers or Kenergy believes, in the exercise of Prudent Utility Practice, should be prevented or curtailed.

1.1.114 System Firm: An obligation to supply Energy from:

- (a) Big Rivers' owned or leased generation facilities,
  - (b) Big Rivers' contract with the Southeastern Power Authority (Contract No. 89-00-1501-637), or
  - (c) Big Rivers' Firm power purchase agreements with a term of two years or more which were not entered into for purpose of serving a specific non-Smelter load,
- in each case subject to the occurrence of an Uncontrollable Force or similar event of force majeure, a System Emergency or Big Rivers' prior satisfaction of the Energy requirements of the Non-Smelter Ratepayers, the Smelters and Third Parties under power sales agreements entered into prior to the making of such obligation to supply Energy.

1.1.115 Term: As defined in Section 7.1.

1.1.116 Third Party: A Person other than Kenergy, Alcan, Big Rivers or Century.

1.1.117 Third Party Supplier(s): As defined in Section 2.3.2(c).

1.1.118 TIER: The quotient for a Fiscal Year of (i) Big Rivers' interest expenses plus Net Margins, divided by (ii) Big Rivers' interest expenses; in each case, calculated in accordance with Accounting Principles.

1.1.119 TIER Adjustment: As defined in Section 4.7.5.

1.1.120 TIER Adjustment Charge: As defined in Section 4.7.1.

1.1.121 Transition Reserve: A reserve established by Big Rivers, which may be held by Big Rivers or another Person, in an initial principal amount equal to \$35 million, subject to increases or decreases resulting from earnings or losses thereon or expenditures therefrom. No additional principal amounts will be contributed by Big Rivers to the Transition Reserve after the Effective Date.

1.1.122 Transmission Charge: As defined in Section 4.5.

1.1.123 Transmission Services: Network transmission services as described in the OATT and Ancillary Services. Transmission Services are currently included in the Large Industrial Rate but may be unbundled in accordance with the terms and conditions of the Alcan Wholesale Agreement.

1.1.124 Transmission Upgrade: The transmission upgrade described in the Coordination Agreement dated the date hereof between Alcan and Big Rivers.

1.1.125 Uncontrollable Force: Any cause beyond the control of the Party unable, in whole or in part, to perform its obligations under this Agreement which, despite exercise of due diligence and foresight, such Party could not reasonably have been expected to avoid and which, despite the exercise of due diligence, it has been unable to overcome. Examples of events that may constitute the basis of an event which constitutes an "Uncontrollable Force" include: acts of God; strikes, slowdowns or labor disputes; acts of the public enemy; wars; blockades; insurrections; riots; epidemics; landslides; lightning; earthquakes; fires; storms; floods; washouts; arrests and restraints of any Governmental Authority; civil or military disturbances; explosions, breakage of or accident to machinery, equipment or transmission lines; inability of a Party to obtain necessary materials, supplies or permits due to existing or future rules, regulations, orders, laws or proclamations of Governmental Authorities, civil or military; transmission constraints or System Emergencies; a forced outage of a generating unit or units preventing the physical delivery of Energy to Kenergy for resale to Alcan; and any other forces which are not reasonably within the control of the Party claiming suspension. "Uncontrollable Forces" do not include an insufficiency of funds or decline in credit ratings or customary, expected or routine maintenance or repair of plant or equipment. Nothing contained herein shall be construed to obligate a Party to prevent or to settle a labor dispute against its will.

1.1.126 Undeliverable Energy Sales: As defined in Section 10.2.1.

1.1.127 Unwind Transaction: The consummation of the transactions contemplated on the date of the "Closing" as defined in and pursuant to the Transaction Termination Agreement among Big Rivers, LG&E Energy Marketing Inc., and Western Kentucky Energy Corp.



1.2 Rules of Interpretation. Unless otherwise required by the context in which any term appears: (a) capitalized terms used in this Agreement will have the meanings specified in this Article 1 unless the context requires otherwise; (b) the singular will include the plural and vice versa; (c) references to “Recitals,” “Articles,” “Sections,” “Exhibits” or “Schedules” are to the recitals, articles, sections, exhibits or schedules of this Agreement, unless otherwise specified; (d) all references to a particular Person in any capacity will be deemed to refer also to such Person’s authorized agents, permitted successors and assigns in such capacity; (e) the words “herein,” “hereof” and “hereunder” will refer to this Agreement as a whole and not to any particular section or subsection hereof; (f) the words “include,” “includes” and “including” will be deemed to be followed by the phrase “without limitation” and will not be construed to mean that the examples given are an exclusive list of the topics covered; (g) references to this Agreement will include a reference to all exhibits and schedules hereto; (h) references to any agreement, document or instrument will be construed at a particular time to refer to such agreement, document or instrument as the same may be amended, modified, supplemented or replaced as of such time; (i) the masculine will include the feminine and neuter and vice versa; (j) references to any tariff, rate, or order of any Governmental Authority will mean such tariff, rate or order, as the same may be amended, modified, supplemented or restated and be in effect from time to time; (k) if any action or obligation is required to be taken or performed on any day which is not a Business Day, such action or obligation must be performed on the next succeeding Business Day; (l) references to an Applicable Law will mean a reference to such Applicable Law as the same may be amended, modified, supplemented or restated and be in effect from time to time; (m) all accounting terms not defined in this Agreement will be construed in accordance with Accounting Principles; (n) all references to a time of day shall be a reference to the prevailing time in Henderson, Kentucky; and (o) the financial and production cost models prepared by Big Rivers, including models filed with the KPSC, in connection with the application for approval of the Unwind Transaction and the New Transaction (the “Model”) have been prepared solely by Big Rivers and shall not be used by the Parties or any Governmental Authority to construe or interpret any provision of this Agreement. The Parties collectively have prepared this Agreement, and none of the provisions hereof will be construed against one Party on the ground that it is the author of this Agreement or any part hereof.

1.3 Calculations and Rounding. In making any mathematical calculation provided for or contemplated by this Agreement, the calculation will be made to six decimal places (rounded up if the numeral in the seventh decimal place is five or higher, and rounded down if the numeral in the seventh decimal place is lower than five).

## ARTICLE 2

### ELECTRIC SERVICES AND RATES

2.1 Service Period Obligations. In accordance with the terms and conditions of this Agreement, Kenergy will supply, and Alcan will purchase, Electric Services for a period beginning at 12:00:01 A.M. on the day next succeeding the Effective Date and continuing until 12:00:00 midnight on December 31, 2023, unless the Parties’ respective obligations to supply and purchase Electric Services are earlier terminated pursuant to the terms of this Agreement (the “Service Period”).

2.2 Characteristics of Service. Electric service to be supplied by Kenergy to Alcan under this Agreement shall be nominally three-phase, sixty cycle at 161,000 volts or as otherwise agreed to by the Parties and Big Rivers. The Parties and Big Rivers will mutually agree on limits of the regulation of voltage but at no time may such regulation of such limits be inconsistent with standards required by applicable Governmental Authorities or any other organizations that establish reliability and electric operation standards for the region.

2.3 Delivery Obligation. In accordance with this Agreement, during the Service Period, Kenergy will deliver, or cause to be delivered, at the Point of Delivery to Alcan Base Monthly Energy, Supplemental Energy and Back-Up Energy.

2.3.1 Base Monthly Energy. Alcan may purchase in each Hour of the Service Period an amount of Energy up to the Base Demand per Hour. For billing purposes, Base Monthly Energy consists of two components: Base Fixed Energy charged at the Base Rate and Base Variable Energy (which may be either a positive or negative amount) charged or credited at the Base Variable Rate.

2.3.2 Supplemental Energy. "Supplemental Energy" shall consist of (i) Interruptible Energy purchased by Kenergy from Big Rivers pursuant to Section 2.3.2(a) and Schedule 2.3.2(a), (ii) Buy-Through Energy purchased by Kenergy from Big Rivers and, in turn, by Big Rivers from Third Party Suppliers upon the interruption of Interruptible Energy, pursuant to Section 2.3.2(b), and (iii) Market Energy purchased by Kenergy from Big Rivers or Third Party Suppliers pursuant to Section 2.3.2(c).

(a) Interruptible Energy. As of the Effective Date, Kenergy shall make available to Alcan up to 10 MW per Hour of Energy subject to Kenergy's right to interrupt the delivery of such Energy ("Interruptible Energy") in accordance with the terms and conditions set forth in Schedule 2.3.2(a). Alcan hereby agrees to the terms and conditions of Schedule 2.3.2(a) and agrees to purchase the Scheduled Interruptible Energy made available thereunder and through its consent to quarterly confirmations from Big Rivers to Kenergy as described in Schedule 2.3.2(a).

(b) Buy-Through Energy. Upon each Notice of Interruption, Kenergy will offer to sell to Alcan any Firm Energy which Big Rivers in its sole discretion offers to Kenergy for resale to Alcan in lieu of the interrupted Scheduled Interruptible Energy ("Buy-Through Energy") and the estimated price or prices during the specified Hour or Hours of Permitted Interruption upon which Big Rivers would supply such Energy. Alcan shall have ten minutes from the time it receives verbal Notice of Interruption to notify Big Rivers and Kenergy whether Alcan agrees to purchase Buy-Through Energy offered to be supplied by Big Rivers to Kenergy for resale to Alcan. Alcan promptly shall confirm verbal acceptance of the Buy-Through Energy with a facsimile confirmation or pursuant to other electronic communications acceptable to Kenergy and Big Rivers. Upon Kenergy's acceptance of the Buy-Through Energy, the obligation of Big Rivers to provide the Buy-Through Energy shall become a Firm service commitment. The failure of Alcan to notify Kenergy and Big Rivers of acceptance of the Buy-Through Energy during the period provided shall constitute a rejection of the Buy-Through Energy, and the Permitted Interruption shall thereafter be implemented in accordance with the

applicable Notice of Interruption and neither Kenergy nor Big Rivers shall have any obligation to supply Alcan Buy-Through Energy during such Permitted Interruption.

(c) Market Energy. Kenergy shall use reasonable commercial efforts to acquire Supplemental Energy (other than Interruptible Energy or Buy-Through Energy) from either Big Rivers or one or more suppliers other than Big Rivers ("Third Party Suppliers") for resale to Alcan, upon the request of Alcan ("Market Energy") specifying (i) the requested amount and duration of such Energy, and (ii) all requested prices and material terms and conditions. Alcan shall pay to Kenergy all amounts that Kenergy is obligated to pay to either Big Rivers or any Third Party Supplier, including the purchase price paid by Kenergy for such Market Energy and the costs, if any, of transmission services or related services incurred on Third Party transmission systems to transmit such Market Energy to a point of interconnection with Big Rivers' transmission system. Nothing in this Agreement may be construed to limit the ability of Kenergy to purchase Energy or other electric services from Third Party Suppliers to serve Alcan.

(i) Kenergy's obligation to enter into any contractual arrangements with Big Rivers or a Third Party Supplier for the purchase of Market Energy shall be conditioned upon Kenergy's prior receipt of a written notification from Alcan setting forth Alcan's consent to the execution, delivery and performance of such contractual arrangements and upon Alcan's providing such financial assurances as may be reasonably required to hold Kenergy harmless for its obligations in connection therewith.

(ii) As a condition to the effectiveness of any contractual arrangements for the purchase of Market Energy for resale to Alcan, Kenergy shall make application to, and use reasonable commercial efforts to obtain approval of, the KPSC to sell such Market Energy to Alcan each Billing Month in an amount that is equal to the amount that Kenergy is required to pay each Billing Month to Big Rivers or a Third Party Supplier, as applicable, for such Market Energy.

(iii) Promptly following request by Alcan for Market Energy, Kenergy shall request that Big Rivers provide all Transmission Services necessary to transmit Market Energy requested by Alcan from a point of interconnection on Big Rivers' transmission system to the Point of Delivery. The amount of Market Energy transmitted from a point of interconnection on Big Rivers' system to the Point of Delivery shall be reduced by the applicable system loss factor as provided in the OATT. Alcan acknowledges and agrees that Kenergy shall have no liability to Alcan for Big Rivers' denial of Kenergy's duly submitted request for reservation of Transmission Services.

(iv) With respect to a purchase of Market Energy from a Third Party Supplier, Kenergy shall be obligated to deliver to Alcan only those amounts of Market Energy received from such Third Party Supplier, net of applicable losses of Energy on Big Rivers' transmission system. Kenergy will not be in default under any provision of this Agreement nor will it have any liability to Alcan if the non-delivery of Market Energy is due to a failure by a Third Party Supplier to deliver the full amount of Market Energy under the terms and conditions of the agreement between Kenergy and such Third Party Supplier provided that

Kenergy has assigned to Alcan Kenergy's rights and remedies against the Third Party Supplier under such agreement.

(v) If Alcan is unable to receive and consume Market Energy purchased by Kenergy from a Third Party Supplier because of an Uncontrollable Force, then upon the request of Alcan, Kenergy shall use reasonable commercial efforts to sell or cause to be sold such Market Energy to other Third Parties for the duration specified by Alcan's request. Kenergy shall apply all revenues derived from such resale as a credit to Alcan, net of any transmission services charges or related charges or other expenses incurred to make such resale.

2.3.3 Back-Up Energy. Kenergy shall provide Back-Up Energy to Alcan at the Point of Delivery through purchases of Energy from Big Rivers at the prices and on the terms and conditions set forth in Section 4.4.

2.4 Power Factor. Alcan shall use commercially reasonable efforts to maintain (a) a power factor at the Point of Delivery as nearly as practicable to unity, and (b) a power factor that is not below 0.90 leading or lagging with respect to maximum electric demand incurred by Alcan during any Billing Month. Alcan shall, without regard to the obligations of Big Rivers pursuant to the Alcan Wholesale Agreement, cause to be maintained a power factor at the Point of Delivery at unity with respect to Energy purchased by Kenergy or Big Rivers from Third Parties for resale to Alcan.

2.5 Title and Risk of Loss. Title to and risk of loss with respect to Energy provided by Kenergy to Alcan pursuant to this Agreement will pass from Kenergy to and rest in Alcan when the same is made available by Kenergy (or Big Rivers on behalf of Kenergy) at the Point of Delivery. After title passes to Alcan, Alcan will be deemed in exclusive control of the Energy and will be responsible for any damage or injury caused thereby.

2.6 Performance by Kenergy. Alcan acknowledges and agrees that, to the extent Big Rivers has a corresponding or related obligation to Kenergy under the Alcan Wholesale Agreement, Kenergy's performance of an obligation under this Agreement is subject to and conditioned upon Big Rivers' performance of such corresponding or related obligation to Kenergy. Alcan acknowledges and agrees that Big Rivers may enforce an obligation of Alcan under this Agreement which corresponds or relates to an obligation of Kenergy to Big Rivers under the Alcan Wholesale Agreement.

### ARTICLE 3

#### CHANGES IN DEMAND AND SCHEDULING

3.1 Change In Base Demand. Alcan may change the Base Demand for any Fiscal Year only with the written consent of Kenergy and Big Rivers.

3.2 Scheduling.

3.2.1 Alcan shall not be required to schedule Base Monthly Energy, Buy-Through Energy or Back-Up Energy but shall use reasonable commercial efforts to inform Kenergy and Big Rivers promptly of any material change in its intended usage.

3.2.2 In accordance with the OATT, Alcan must schedule and arrange with Kenergy and Big Rivers no later than 9:00 A.M. on the Business Day immediately preceding the day or days of delivery, or as otherwise mutually agreed by the Parties and, if applicable, Big Rivers, the delivery of Interruptible Energy and Market Energy.

#### ARTICLE 4

##### CHARGES AND CREDITS

4.1 Monthly Charge. Alcan shall pay Kenergy the following (the "Monthly Charge") for the Electric Services provided or made available under this Agreement:

- 4.1.1 the Base Energy Charge calculated pursuant to Section 4.2,
- 4.1.2 plus the Supplemental Energy Charge calculated pursuant to Section 4.3,
- 4.1.3 plus the Back-Up Energy Charge calculated pursuant to Section 4.4,
- 4.1.4 plus the Transmission Charge pursuant to Section 4.5,
- 4.1.5 plus the Excess Reactive Demand Charge calculated pursuant to Section 4.6,
- 4.1.6 plus the TIER Adjustment Charge calculated pursuant to Section 4.7,
- 4.1.7 plus the FAC Charge calculated pursuant to Section 4.8.1,
- 4.1.8 plus the Non-FAC Purchased Power Adjustment Charge calculated pursuant to Section 4.8.2,
- 4.1.9 plus the Environmental Surcharge calculated pursuant to Section 4.8.3,
- 4.1.10 plus or minus the monthly amortization of the Restructuring Amount calculated pursuant to Section 16.5,
- 4.1.11 less the Rebate calculated pursuant to Section 4.9,
- 4.1.12 less the Equity Development Credit calculated pursuant to Section 4.10,
- 4.1.13 plus the Surcharge calculated pursuant to Section 4.11,
- 4.1.14 plus the Retail Fee calculated pursuant to Section 4.12,
- 4.1.15 less the credits calculated pursuant to Section 4.13,
- 4.1.16 plus or minus other amounts calculated pursuant to Section 4.14, and
- 4.1.17 plus taxes calculated pursuant to Section 4.15.

4.2 Base Energy Charge. For any Billing Month, the “Base Energy Charge” shall be the sum of:

- (a) the product of Base Fixed Energy and the Base Rate; and
- (b) the product, whether positive or negative, of the Base Variable Energy and the Base Variable Rate.

Sample calculations of the Base Energy Charge at different load factors are set forth in Exhibit A.

4.3 Supplemental Energy Charge. For any Billing Month, the “Supplemental Energy Charge” shall be the sum of the charges, whenever determined, Kenergy is obligated to pay for the Interruptible Energy Charge, the Buy-Through Energy Charge, and the Market Energy Charge, as calculated below.

4.3.1 The “Interruptible Energy Charge” shall be the product of (i) the quantity of Interruptible Energy metered at the Point of Delivery during the Billing Month and (ii) the rate or rates for Interruptible Energy with respect to such Billing Month.

4.3.2 The “Buy-Through Energy Charge” shall be the sum of:

- (a) any and all of the charges for Buy-Through Energy purchased by Kenergy for delivery to Alcan pursuant to Section 2.3.2(b) during such Billing Month including any and all separate charges for transmission services and related services, whenever incurred (including financial transmission rights, transmission congestion charges and similar costs or expenses), provided by a Third Party whose transmission system is used to transmit Buy-Through Energy purchased from a Third Party to a point at which Big Rivers’ transmission system is interconnected with such system; and

- (b) all other charges that Kenergy may be required to pay to Big Rivers in connection with Buy-Through Energy, including any amount payable upon termination by reason of default of the supply arrangements between Big Rivers and Third Party Suppliers, net of recoveries by Big Rivers from such suppliers with respect to the supply of Buy-Through Energy to Kenergy for resale to Alcan.

4.3.3 The “Market Energy Charge” shall be the sum of:

- (a) any and all of the charges for Market Energy purchased by Kenergy for delivery to Alcan pursuant to Section 2.3.2(c) during such Billing Month including any and all separate charges for transmission services and related services, whenever incurred (including financial transmission rights, transmission congestion charges and similar costs or expenses), provided by a Third Party whose transmission system is used to transmit Market Energy purchased from a Third Party to a point at which Big Rivers’ transmission system is interconnected with such system; and

- (b) all other charges that Kenergy may be required to pay to Big Rivers or any Third Party Suppliers in connection with Market Energy, including any amount

payable upon termination by reason of default of the supply arrangements between Kenergy and Big Rivers or Kenergy and a Third Party Supplier, net of recoveries by Kenergy or Big Rivers from such suppliers with respect to the supply of Market Energy to Kenergy for resale to Alcan.

4.4 Back-Up Energy Charge. For any Billing Month, the “Back-Up Energy Charge” shall be the sum of the Hourly charges for Back-Up Energy calculated as follows:

4.4.1 The charge for Back-Up Energy supplied in any Hour shall equal the following:

(a) to the extent the Back-Up Energy was supplied by Big Rivers from generating facilities owned or controlled by Big Rivers and located within Big Rivers’ transmission control area, the charge shall be the product of (i) the amount of such Back-Up Energy, and (ii) the quotient of (A) a price equal to the greater of (1) the real time Hourly locational marginal price at Big Rivers’ interface with the Midwest Independent System Operator (or such other pricing reference point that shall be mutually agreed upon by the Parties and Big Rivers), and (2) Big Rivers’ system lambda; divided by (B) 1.00 minus the loss factor set forth in the OATT;

(b) to the extent the Back-Up Energy was not supplied pursuant to Section 4.4.1(a), the charge shall be the product of (i) the amount of such Back-Up Energy, and (ii) the quotient of (A) a price equal to 110% of the highest Hourly all inclusive cost incurred by Big Rivers to acquire any Energy, including such Back-Up Energy, and the separate cost, if any, whenever determined, of transmission services and related services provided by a Third Party whose transmission system is used to transmit Back-Up Energy purchased from a Third Party to a point at which Big Rivers’ transmission system is interconnected with such system and including any imbalance charges or other costs arising from the failure of a Third Party Supplier to deliver Energy that it is obligated to deliver; divided by (B) 1.00 minus the loss factor set forth in the OATT; and

(c) to the extent that the amount of Back-Up Energy required by Alcan during any Hour exceeds the sum of (x) ten MW per Hour, (y) the amount of Back-Up Energy resulting from deemed interruption of Scheduled Interruptible Energy pursuant to Schedule 2.3.2(a), and (z) the amount of Back-Up Energy resulting from the non-delivery of Market Energy purchased by Kenergy from a Third Party Supplier, then the charge for the excess amount of Back-Up Energy shall be the product of (i) the excess amount of Back-Up Energy, and (ii) the greater of (A) \$250 per MWh and (B) the price set forth in Section 4.4.1(b)(ii).

Sample calculations of the Back-Up Energy Charge are set forth in Exhibit A.

4.4.2 If during any Hour Kenergy provides Back-Up Energy to Alcan and “Back-Up Energy” (as defined in the Century Retail Agreement) to Century, then the provisions of Section 4.4.1 shall apply to a proportional number of MW of Back-Up Energy for each of Alcan and Century.

4.5 Charge for Transmission Services and Ancillary Services. For any Billing Month, the charge for transmission services and ancillary services (the “Transmission Charge”) shall be the sum of the charges, calculated in accordance with the OATT, for Transmission Services for

(a) Base Monthly Energy that are unbundled from the Large Industrial Rate in accordance with the terms of the Alcan Wholesale Agreement, if any; and (b) Supplemental Energy.

4.6 Excess Reactive Demand Charge. For any Billing Month, the “Excess Reactive Demand Charge”, if any, shall be the product of \$0.1433 and the amount, expressed in kilovars, of the difference, if positive, between:

(a) the maximum metered reactive demand of Alcan during the Billing Month, and

(b) an amount of kilovars equal to the sum of:

(i) the product of (A) 0.4843, and (B) the maximum hourly demand during a Billing Month, denominated in kilowatts, associated with Base Monthly Energy, Interruptible Energy, Market Energy, and Back-Up Energy provided by Big Rivers to Kenergy for resale to Alcan, but less the amount of such Interruptible Energy, Market Energy or Back-Up Energy that was purchased by Big Rivers from Third Parties, and

(ii) 54,114.

4.7 TIER Adjustment Charge.

4.7.1 The “TIER Adjustment Charge” shall be, for any Fiscal Year, the amount that is the product of the Applicable Percentage and the TIER Adjustment if, and only if, such TIER Adjustment is a positive amount; *provided, however*, that in no case will the TIER Adjustment Charge for any Fiscal Year exceed the amount that is the product of the Base Fixed Energy and the maximum additional charge per MWh set forth below for the applicable Fiscal Year:

<u>Fiscal Years</u>	<u>Maximum Additional Charge</u>
2008-2011	\$1.95 per MWh
2012-2014	\$2.95 per MWh
2015-2017	\$3.55 per MWh
2018-2020	\$4.15 per MWh
2021-2023	\$4.75 per MWh

If the TIER Adjustment shall be negative, there will be an Excess TIER Amount and no TIER Adjustment Charge.

4.7.2 Prior to each Fiscal Year, Big Rivers shall estimate both the TIER Adjustment and, if the TIER Adjustment is positive, the TIER Adjustment Charge based on the Budget for such Fiscal Year. Kenergy shall collect such estimated amount from Alcan in equal monthly installments as part of the Monthly Charge for each Billing Month during the applicable Fiscal Year.

4.7.3 Within 45 days following the end of the first, second and third fiscal quarters of each Fiscal Year, Big Rivers shall again estimate the TIER Adjustment and the corresponding amount of the TIER Adjustment Charge based on a comparison of the Budget and



year-to-date results of operations, and shall calculate a modified amount to be collected from, or refunded as a credit to, the Monthly Charge to Kenergy with respect to service to Alcan during the remaining portion of the Fiscal Year, including any amounts necessary to address any estimated under- or over-collection of the TIER Adjustment Charge from Alcan as compared to the Budget during the remainder of the Fiscal Year. Kenergy shall collect or credit such modified amount from Alcan in equal monthly installments as part of the Monthly Charge for the remaining Billing Months of the subject Fiscal Year.

4.7.4 As soon as reasonably practicable but no later than 120 days after the end of each Fiscal Year, Big Rivers shall calculate the TIER Adjustment and TIER Adjustment Charge for such Fiscal Year. The TIER Adjustment Charge for such Fiscal Year shall be compared to the aggregate amounts paid by Alcan in respect of the estimated TIER Adjustment Charge for such Fiscal Year, and the difference between such amounts shall be included as a charge or credit, as applicable, in the Monthly Charges for the fourth Billing Month of the next Fiscal Year.

4.7.5 The “TIER Adjustment” shall be the amount of incremental revenue, whether positive or negative, calculated with respect to each Fiscal Year after determination of Net Margins for such Fiscal Year (excluding amounts payable to Kenergy with respect to or relating to the revenue that results from the TIER Adjustment Charge and the “TIER Adjustment Charge” as defined in the Century Retail Agreement), that is necessary for Big Rivers to receive in order to achieve a TIER of 1.24 for such Fiscal Year; *provided, however*, that if the Service Period commences or terminates on a date other than the first or last day of a Fiscal Year and to give effect to this Section 4.7.5, the TIER Adjustment will be calculated on an Hourly basis only with respect to the partial period of the first or final Fiscal Year of the Service Period, as applicable. The determination of the TIER Adjustment shall be subject to the following:

(a) It shall be assumed that: Big Rivers shall have generated additional revenue from service to the Members for resale to the Non-Smelter Ratepayers as if Big Rivers had increased the Non-Smelter Member Rates by a weighted average of 2.00% in 2010, another 2.50% in 2018 and another 4.00% in 2021 if and to the extent Big Rivers had not prior to or during the year of the calculation increased the Non-Smelter Member Rates by at least such amounts. The revenues from any roll-in of the costs associated with costs recovered under the FAC, the Environmental Surcharge Rider or the Regulatory Account that are incorporated into base rates comprising a portion of the Non-Smelter Member Rates will not constitute an increase in the Non-Smelter Member Rates for purposes of this clause (a), and the revenues attributable to any such roll-in will be excluded in calculating the percentage of any increases in the Non-Smelter Member Rates. The expiration or termination of Big Rivers' Member Discount Adjustment Rider shall be deemed to be an increase in the Non-Smelter Member Rates for purposes of this clause (a), without regard to whether such expiration or termination occurs prior to, on or after the Effective Date.

(b) It shall be assumed that: If a Member provides electric service to a New Ratepayer with a Firm demand in excess of 15 MW, such Member shall have paid to Big Rivers for wholesale Energy purchased and resold to the New Ratepayer at a price equal to the greater of: (i) the amount paid for such service and (ii) an amount calculated for the same period equal to (A) a rate, expressed in dollars per MWh, resulting from the application of the Large

Industrial Rate to a load with the New Ratepayer's load factor, plus \$0.25 per MWh, *plus* (B) the sum of the FAC Factor, the Environmental Surcharge Factor, and the Non-FAC Purchased Power Adjustment Factor (each calculated on a per MWh basis), *plus* (C) the Surcharge (the Surcharge being calculated on an amount per MWh based on Base Fixed Energy for such Fiscal Year) set forth in Section 4.11; *plus* (D) amounts corresponding to the amount per MWh paid by Kenergy during the same period for the TIER Adjustment Charge. If a Member provides electric service to a New Ratepayer with a Firm demand of 15 MW or less, such Member shall have paid to Big Rivers for wholesale Energy purchased and resold to the New Ratepayer at a price equal to the sum of (i) the Large Industrial Rate and (ii) the sum of the FAC Factor, the Environmental Surcharge Factor, and the Non-FAC Purchased Power Adjustment Factor (each calculated on a per MWh basis). For purpose of this clause (b), the revenues produced by any surcharge with respect to a New Ratepayer similar to the Surcharge or the "Surcharge" under the Century Retail Agreement will be assumed to accrue solely to the benefit of the Non-Smelter Ratepayers except to the extent such surcharge is paid by or imputed to a New Ratepayer pursuant to subclause (A) of this clause (b). The assumptions contained in this clause (b) shall not apply with respect to a New Ratepayer that first interconnects with Big Rivers' transmission system during the last three Fiscal Years of the Service Period or following notice of termination of this Agreement or the Century Retail Agreement.

(c) It shall be assumed that: Big Rivers' interest expense shall have been reduced by the product of (i) Big Rivers' average effective interest rate for borrowed money for the prior Fiscal Year, and (ii) the aggregate amount of any patronage capital retired by Big Rivers to its Members during the Service Period (other than any distribution from the Rural Economic Reserve, the Economic Reserve or the Transition Reserve or relating to the Surcharge or the "Surcharge" under the Century Retail Agreement), from and after the date of such retirement.

(d) It shall be assumed that: Interest on construction work-in-progress relating to the construction of new electric generating facilities or transmission facilities shall have been capitalized by Big Rivers if it has the right to elect to do so or it is obligated to capitalize such interest under Accounting Principles unless a Governmental Authority has approved the inclusion of such interest expenses in Big Rivers' revenue requirements for rate-making purposes or otherwise approved a surcharge for collecting such interest expenses.

(e) If Big Rivers acquires or constructs non-peaking electric generating facilities alone or with others ("New Facilities"), Big Rivers' interest expenses shall not include the interest imputed on the debt relating to the New Facilities ("Imputed Interest"); *provided, however*, that if a Governmental Authority has approved the inclusion of such generating facilities in Big Rivers' revenue requirements for rate-making purposes or otherwise approved a surcharge to provide for the recovery of the costs of such New Facilities, then actual interest expense with respect to such New Facilities shall be included in the TIER calculation to the extent recovery is permitted; *provided, further*, that this clause (e) may not cause the TIER Adjustment to become negative. For purposes of determining Imputed Interest, it shall be assumed that the New Facilities were financed 80% with debt and 20% with equity. Imputed Interest shall equal the product of (i) the weighted average interest rate on Big Rivers' debt for the Fiscal Year, and (ii) the amount of debt equal to 80% of the capital invested in the New Facilities.

(f) It shall be assumed that: The Rural Economic Reserve, the Economic Reserve and the Transition Reserve shall not generate any revenue or tax liability and the application of funds from the Rural Economic Reserve, the Economic Reserve or the Transition Reserve shall not result in any change in the Net Margins of Big Rivers.

(g) It shall be assumed that: Big Rivers shall have made no payment for damages or indemnification to or for the benefit of a Smelter with respect to the provision of Electric Services or "Electric Services" as defined in the Century Retail Agreement.

(h) It shall be assumed that: Big Rivers shall have paid no criminal penalties with respect to its acts or omissions other than criminal penalties that a Governmental Authority has approved the inclusion of in Big Rivers' revenue requirements for rate-making purposes or otherwise approved a surcharge for collecting such penalties.

(i) It shall be assumed that: Big Rivers shall have received no proceeds from the sale of Energy to the wholesale market pursuant to Section 4.13.3 or the corresponding section of the Century Retail Agreement.

(j) It shall be assumed that: Big Rivers shall have incurred no expenses that are impermissible for inclusion in rates of electric generation and transmission cooperative utilities subject to the jurisdiction of the KPSC for rate-making purposes (currently including advertising expenses, branding expenses, charitable contributions and lobbying expenses) or specifically disallowed for rate making purposes by a Governmental Authority; *provided, however*, that denial by a Governmental Authority of expense recovery through the FAC or the Environmental Surcharge Rider shall not constitute an expense that is impermissible for inclusion in rates if the nature of such expense is recoverable in base rates.

(k) It shall be assumed that: There are no revenues and expenses associated with non-regulated businesses of Big Rivers.

(l) It shall be assumed that: No interest is paid pursuant either to Section 5.3 or Section 5.4 or pursuant to the corresponding sections of the Century Retail Agreement.

(m) It shall be assumed that: No amounts have been or are payable with respect to Excess Reactive Demand Charges or with respect to "Excess Reactive Demand Charges" under the Century Retail Agreement.

(n) It shall be assumed that: No administrative fee shall have been received by Big Rivers as a result of any Surplus Sales, Undeliverable Energy Sales or Potline Reduction Sales or sales of Energy pursuant to the corresponding sections of the Century Retail Agreement.

(o) Additional costs related to a change in Big Rivers' depreciation rates may not be included in the calculation of the TIER Adjustment unless such change has been approved, consented to or accepted by the KPSC or, if the KPSC no longer has jurisdiction over Big Rivers, by the RUS or any other Governmental Authority having jurisdiction over such change, if any.

(p) It shall be assumed that: The amortization of any Restructuring Amount is zero.

4.7.6 Any proceeds received or transaction costs paid by Big Rivers as part of or in connection with the consummation of the Unwind Transaction shall be disregarded for purposes of computing the TIER Adjustment Charge for the Fiscal Year in which the Unwind Transaction occurs.

4.8 Adjustable Charges.

4.8.1 The "FAC Charge" shall be the product of the FAC Factor (expressed in dollars per MWh) and Base Monthly Energy.

4.8.2 The "Non-FAC Purchased Power Adjustment Charge" shall be the product of the Non-FAC Purchased Power Adjustment Factor (expressed in dollars per MWh) and Base Monthly Energy.

4.8.3 The "Environmental Surcharge" shall be the product of the Monthly Environmental Surcharge Factor (expressed in dollars per MWh) and Base Monthly Energy.

4.9 Rebate. If there is an Excess TIER Amount in any Fiscal Year and Big Rivers elects to implement a rebate to its Members in respect thereof, then no later than the first day of the fifth month of the following Fiscal Year, Kenergy will credit to Alcan an amount (the "Rebate") equal to the product of:

- (i) the Excess TIER Amount, and
- (ii) a fraction:
  - (1) the numerator of which is the Base Fixed Energy for such Fiscal Year, and
  - (2) the denominator of which is the sum during the applicable Fiscal Year of (A) Big Rivers' aggregate sales of Energy to Members for resale to Non-Smelter Ratepayers, (B) the Base Fixed Energy, and (C) the aggregate amount of "Base Fixed Energy" as defined in the Century Retail Agreement (without regard to whether the Century Retail Agreement is then in effect).

4.10 Equity Development Credit. If there is an Excess TIER Amount in any Fiscal Year and Big Rivers does not elect to implement a rebate to its Members, then no later than the first day of the fifth month of the following Fiscal Year, Kenergy will credit against the next Monthly Charge an amount (the "Equity Development Credit") equal to the product of:

- (i) the Excess TIER Amount, and
- (ii) a fraction:

(1) the numerator of which is the Base Fixed Energy for such Fiscal Year, and

(2) the denominator of which is the sum during the applicable Fiscal Year of (A) Big Rivers' aggregate sales of Energy to Members for resale to Non-Smelter Ratepayers, (B) the Base Fixed Energy, and (C) the aggregate amount of "Base Fixed Energy" as defined in the Century Retail Agreement (without regard to whether the Century Retail Agreement is then in effect).

Notwithstanding the above, the Equity Development Credit for any Fiscal Year may not exceed an amount which would cause the charge for Base Fixed Energy (including Energy curtailed pursuant to Section 4.13.2 or sold to Third Parties pursuant to Section 4.13.3 as Economic Sales, Section 10.1 as Surplus Sales, Section 10.2 as Undeliverable Energy Sales or Section 10.3 as Potline Reduction Sales) less the Equity Development Credit for such Fiscal Year on a per MWh basis to be less than (A) the Large Industrial Rate for a customer with a 98% load factor plus (B) the sum of the FAC Factor, the Environmental Surcharge Factor and the Non-FAC Purchased Power Adjustment Factor (each calculated on a per MWh basis).

4.11 Surcharge. In addition to any other amounts payable under this Agreement, and notwithstanding anything in this Agreement to the contrary, Alcan shall pay a surcharge (the "Surcharge") equal to the sum of the following:

(a) As applicable:

(i) \$184,361 each Billing Month from the Effective Date through and including December, 2011;

(ii) \$263,373 each Billing Month from January, 2012 through and including December, 2016;

(iii) \$367,380 each Billing Month from January, 2017 through the expiration of the stated Term of this Agreement; *plus*

(b) For any Billing Month, the product of (i) Base Fixed Energy and (ii) \$0.60 per MWh; *plus*

(c) For any Billing Month, the product of (i) Base Fixed Energy and (ii) the number of cents per MW per Hour (which number shall not exceed 60 or be less than zero) that Big Rivers' projected annual average costs per MWh for fuel consumed by Big Rivers in its coal-fired generation as set forth in its Budget are greater than the amounts set forth on Schedule 4.11(c), in each case, for that Fiscal Year relating to such Billing Month. Big Rivers shall within 45 days following the end of each fiscal quarter compute its actual costs per MWh for fuel consumed by Big Rivers' coal-fired generation in each Billing Month for such fiscal quarter and shall calculate (on a fiscal-year-to-date basis in a manner consistent with this Section 4.11(c)) an additional amount to be paid by or credited to Alcan based on such actual costs incurred for fuel consumed compared to the amounts set forth in the Budget for such Billing Months; *provided*, any additional amounts to be paid by or credited to Alcan shall be applied to amounts due for the remainder of the Fiscal Year under this Section 4.11(c). Within 120 days of

the end of each Fiscal Year, an additional amount shall be credited to Alcan if necessary so that the total amounts paid pursuant to this Section 4.11(c) for such Fiscal Year shall not exceed an amount equal to the product of Base Fixed Energy for such Fiscal Year and 60 cents per MW per Hour; such amount shall be included as a credit, if applicable, in the Monthly Charges for the fourth Billing Month of the next Fiscal Year; *minus*

(d) For each of the first 96 Billing Months, \$86,588.

The obligations of Alcan to pay the Surcharge will cease to accrue upon the termination of this Agreement. Sample calculations of the Surcharge under Section 4.11(c) are set forth in Exhibit A.

4.12 Retail Fee. For any Billing Month, the "Retail Fee" shall, unless modified in accordance with Section 13.1.2, be an amount equal to the sum of:

- (a) the product of:
  - (i) \$0.000045 per kWh, and
  - (ii) the sum of the Base Monthly Energy, Supplemental Energy, and Back-Up Energy purchased by Alcan pursuant to this Agreement, and
- (b) \$2,614 per month.

4.13 Credits.

4.13.1 Surplus Sales, Undeliverable Energy Sales and Potline Reduction Sales.

For any Billing Month, Kenergy will credit Alcan (a) the Net Proceeds of any Surplus Sales pursuant to Section 10.1 to the extent of the Avoidable Base Charge; and (b) the amount of Net Proceeds of any Undeliverable Energy Sales or Potline Reduction Sales to which Alcan is entitled pursuant to Section 10.2 or Section 10.3, respectively, less \$0.25 per MWh as an administrative fee in each case. Sample calculations of the Net Proceeds from Surplus Sales, Undeliverable Energy Sales and Potline Reduction Sales that would be credited to Alcan are set forth in Exhibit A.

4.13.2 Curtailment of Purchased Power.

For any Billing Month, Kenergy will credit Alcan for any Hour during such Billing Month an amount equal to the product of (a) the Market Reference Rate during such Hour, and (b) the amount of Base Demand per Hour curtailed, if any, during such Hour in an amount and for a duration mutually agreed among Alcan, Kenergy and Big Rivers pursuant to this Section 4.13.2 and the corresponding section of the Century Retail Agreement. If both Alcan and Century agree to the curtailment of the delivery of Base Demand per Hour pursuant to this Section 4.13.2 and the corresponding section of the Century Retail Agreement, Alcan and Century shall notify Kenergy and Big Rivers as to whose curtailment shall take precedence. If Kenergy and Big Rivers are not notified as to whose curtailment shall take precedence, the Smelter whose curtailment is largest shall take precedence, and if the amount of curtailment by each Smelter is the same, then the Smelter whose curtailment notice was received by Kenergy and Big Rivers first shall take precedence. From time to time,

Alcan shall notify Kenergy and Big Rivers of the minimum price at which it is willing to consider curtailment of the delivery of Base Demand per Hour pursuant to this Section 4.13.2. Notwithstanding the foregoing, Alcan hereby releases Kenergy and Big Rivers from any or all claims or liabilities resulting from a failure of Kenergy or Big Rivers to fulfill its obligations pursuant to this Section 4.13.2 (other than applying credits under this Section 4.13.2 to the Monthly Charge), including a failure to notify Alcan of Energy prices reaching or exceeding the minimum price at which Alcan will consider curtailment. Sample calculations of credit that would be due to Alcan for curtailment of purchased power are set forth in Exhibit A.

4.13.3 Economic Sales. For any Billing Month, Kenergy will credit Alcan 100% of the Net Proceeds Kenergy receives from Big Rivers (which is 75% of the Net Proceeds that Big Rivers receives) in respect of the curtailment of the delivery of Base Demand per Hour in an amount and for a duration mutually agreed among Alcan, Kenergy and Big Rivers if Big Rivers sells such curtailed Base Demand per Hour to the wholesale Energy market ("Economic Sales"); *provided*, that unless otherwise agreed among Kenergy, Alcan and Big Rivers, (a) the amount of Base Demand per Hour curtailed by Alcan may not exceed 100 MW per Hour, (b) the number of curtailments each year shall be limited to twelve, and (c) each curtailment may not last longer than four Hours, and *provided further*, that Big Rivers shall have no obligation to make Economic Sales until after Big Rivers first sells all of its own surplus Energy to the wholesale Energy market. If both Alcan and Century agree to the curtailment of the delivery of Base Demand per Hour pursuant to this Section 4.13.3 and the corresponding section of the Century Retail Agreement, Alcan and Century must notify Kenergy and Big Rivers as to whose curtailment shall take precedence. If Kenergy and Big Rivers are not notified as to whose curtailment shall take precedence, the Smelter whose curtailment is largest shall take precedence, and if the amount of curtailment by each Smelter is the same, then the Smelter whose curtailment notice was received by Kenergy and Big Rivers first shall take precedence. From time to time, Alcan shall notify Kenergy and Big Rivers of the minimum price at which it is willing to consider curtailment pursuant to this Section 4.13.3. Notwithstanding the foregoing, Alcan hereby releases Kenergy and Big Rivers from any or all claims or liabilities resulting from the failure of Kenergy or Big Rivers to fulfill its obligations pursuant to this Section 4.13.3 (other than applying credits under this Section 4.13.3 to the Monthly Charge), including a failure to notify Alcan of Energy prices reaching or exceeding the price of which Alcan will consider curtailment and the failure to make such sales after such notification. Sample calculations of the portion of the Net Proceeds from Economic Sales that would be credited to Alcan are set forth in Exhibit A.

4.13.4 Market Energy Sales. For any Billing Month, Kenergy will credit Alcan all revenues derived from the resale of Market Energy purchased from Third Party Suppliers, net of any transmission services charges or any other charges or other expenses in connection therewith whenever incurred, that Kenergy receives from the sale of Market Energy to Third Parties pursuant to Section 2.3.2(c)(v). Sample calculations of credit that would be due to Alcan for such sales of Market Energy are set forth in Exhibit A.

4.14 Other Amounts. For any Billing Month, any amounts payable pursuant to Section 10.1.4, 10.2.3 or 10.3.7 shall be added to or subtracted as applicable from the calculation of the Monthly Charge.

4.15 Taxes. No state or local sales, excise, gross receipts or other taxes are included in the charges and credits set forth in this Article 4. Alcan shall pay or cause to be paid any such taxes which are now or hereafter become applicable to the sale of Electric Services to Alcan under this Agreement.

## ARTICLE 5

### BILLING

5.1 Monthly Invoice. Kenergy shall bill Alcan on or before the tenth Business Day of each month for the Monthly Charge as calculated pursuant to Article 4 based on the sale of Electric Services during the most recently ended Billing Month plus any other amounts then due and owing pursuant to this Agreement. Alcan shall pay Kenergy (or Big Rivers on behalf of Kenergy) the Monthly Charge and any other amounts due and owing in immediately available funds to an account designated in the Lockbox Agreement on the Business Day following the 24th day of the month following the Billing Month or such earlier date of such month on which the Members' payment to Big Rivers for the provision of electric services is due. For the convenience of the Parties, and to facilitate satisfaction of Kenergy's obligation to Big Rivers, Alcan hereby acknowledges and consents to the assignment by Kenergy to Big Rivers of its right to receive such payment from Alcan under this Agreement other than with respect to the Retail Fee and Kenergy's rights to collect and enforce collection of such amounts due from Alcan. If Big Rivers owes credits or funds to Kenergy for the benefit of Alcan, Kenergy hereby assigns such credits or funds to Alcan and shall cooperate with and assist Alcan with respect to any collections of amounts due from Big Rivers to Kenergy; *provided*, that Alcan shall reimburse Kenergy for any reasonable expenses Kenergy incurs in providing such cooperation or assistance.

5.2 Right to Discontinue Service. If Alcan fails to pay any monthly invoice rendered by Kenergy (or Big Rivers on behalf of Kenergy) within the time prescribed in Section 5.1, Kenergy may discontinue delivery of any or all Electric Services hereunder upon 120 Hours prior written notice to Alcan and Big Rivers of its intention to do so. Kenergy's discontinuance of such service for non-payment will not in any way affect, diminish or limit the obligations of Alcan to make all payments required under this Agreement, as and when due.

5.3 Default Interest. If any monthly invoice rendered by Kenergy (or Big Rivers on behalf of Kenergy) is not paid on the due date, interest will accrue and become payable by Alcan to Kenergy on all unpaid amounts at a rate of four percentage points over the Prime Rate commencing on the first day after the due date.

5.4 Payments Under Protest. If any portion of any monthly statement is disputed by Alcan, the disputed amount must be paid, under protest, when due. If the disputed amount of the payment is found to be incorrect, following receipt from Big Rivers, Kenergy (or Big Rivers on behalf of Kenergy) shall promptly cause to be refunded to Alcan the amount that was not then due and payable, together with interest at the Prime Rate commencing on the first day after the date of payment and accruing on each day thereafter until the date the refund is made.



5.5 Release and Indemnification.

(a) Alcan (i) shall release Kenergy from any and all claims Alcan may have against Kenergy for the failure of Big Rivers to satisfy its obligations under the Alcan Wholesale Agreement, and (ii) agrees to indemnify, hold harmless and defend Kenergy from and against any and all claims Big Rivers may assert against Kenergy in connection with any failure by Big Rivers to perform under the Alcan Wholesale Agreement, but only if Kenergy shall have fully performed its obligations set forth in clause (b) below.

(b) If Big Rivers shall default under the Alcan Wholesale Agreement, Kenergy shall immediately deliver to Alcan (i) a power-of-attorney with full power of substitution which shall designate Alcan or its designee as Kenergy's attorney-in-fact (which shall be coupled with an interest and irrevocable) for purposes of negotiating and prosecuting any and all claims Kenergy may have against Big Rivers for a failure of Big Rivers to satisfy its obligations under the Alcan Wholesale Agreement and to file or prosecute any claim, litigation, suit or proceeding before any Governmental Authority in the name of Kenergy or in its own name, or take such other action otherwise deemed appropriate by Alcan for the purposes of obtaining legal or equitable relief as a result of the failure of Big Rivers to satisfy its obligations under the Alcan Wholesale Agreement and to compromise, settle, or adjust any suit, action or proceeding related to Big Rivers' failure to satisfy such obligations and to give such discharges or releases as Alcan may deem appropriate, and (ii) an assignment conveying to Alcan all of Kenergy's right, title and interest in and to any legal, equitable or other relief, including the recovery of damages and the grant of injunctive relief or other remedies to which Kenergy may be entitled with respect to Big Rivers' failure to satisfy its obligations under the Alcan Wholesale Agreement. The power-of-attorney and the assignment shall be in form and substance reasonably satisfactory to Alcan and shall be legally effective and enforceable under Kentucky or other Applicable Law.

5.6 No Waiver. No payment made by Alcan pursuant to this Article 5 will constitute a waiver of any right of Alcan to contest the correctness of any charge or credit.

5.7 No Payment. In no case shall Kenergy or Big Rivers be obligated to make a payment to Alcan in connection with the application of a credit to Alcan's Monthly Charges except to the extent otherwise expressly provided in Section 10.2.1(a) with respect to Undeliverable Energy Sales.

ARTICLE 6

EFFECTIVE DATE AND CONDITIONS

6.1 Effective Date. The obligations of the Parties under Article 2, Article 3, Article 4, Article 5, Section 7.3, Article 8, Article 9, Article 10, Article 11, Article 12, Article 13, Article 14 and Section 16.5 shall not commence until the Effective Date. The "Effective Date" will occur on the first date each of the conditions set forth in Section 6.2 has been satisfied in full or waived in writing by the Party in whose favor such condition exists (to the extent one or more conditions is subject to being waived).

6.2 Conditions to Occurrence of Effective Date. The following shall be conditions to the occurrence of the Effective Date:

6.2.1 Each of the representations and warranties of the Parties contained in this Agreement and the representations and warranties of Big Rivers and Kenergy in the Alcan Wholesale Agreement will be true and correct as of the date hereof and the Effective Date (as though such representations and warranties were made at and as of the date hereof and the Effective Date), and each of the Parties shall have received a certificate to such effect from the other Party with respect to the other Party's representations and warranties in this Agreement and Alcan shall have received a certificate to such effect from Kenergy and Big Rivers in respect of their respective representations and warranties in the Alcan Wholesale Agreement.

6.2.2 The Unwind Transaction will have been consummated, including the termination of the agreements set forth on Schedule 6.2.2.

6.2.3 Each of the documents and agreements set forth in Schedule 6.2.3 will have been duly authorized, executed and delivered by the parties thereto, and all conditions precedent to the effectiveness of such agreements will have been satisfied or waived, and shall, if amended after the date hereof and prior to the Effective Date, be acceptable to Alcan.

6.2.4 The Alcan Wholesale Agreement shall be acceptable in form and substance to Alcan and shall not have been amended, or, if amended, shall be acceptable in form and substance to Alcan.

6.2.5 The Alcan Guarantee will have been duly authorized, executed and delivered by Alcan Parent and be in full force and effect.

6.2.6 Release documents releasing the liabilities and obligations under the documents listed on Schedule 6.2.2 will have been duly authorized, executed and delivered by Big Rivers, Kenergy, Century, LG&E and Alcan, as applicable.

6.2.7 No authorization or approval or other action by, and no notice to or filing or registration with, or license or permit from any Person, including any Governmental Authority, will be necessary prior to start of the Service Period, other than (i) as may be required under Applicable Law to be obtained, given, accomplished or renewed at any time or from time to time after the Effective Date and which are routine in nature or which cannot be obtained, or are not normally applied for, prior to the time they are required and which Kenergy has no reason to believe will not be timely obtained and in each case which do not prevent provision of Electric Services as described herein, and (ii) with respect to the approval of the KPSC or FERC, on the Effective Date, such approvals will have been duly given or issued, received and will be in full force and effect and unappealable, and all conditions therein will have been satisfied to the extent required to be satisfied by Kenergy or Big Rivers on or prior to the Effective Date.

6.2.8 The Alcan Wholesale Agreement, the Century Wholesale Agreement and the Century Retail Agreement will have been duly authorized, executed and delivered by the parties thereto and be in full force and effect and all conditions precedent to the effectiveness will have been satisfied or waived other than conditions within the control of Kenergy or

conditions that automatically will become effective simultaneously with the Effective Date or the Unwind Transaction.

6.2.9 No authorization or approval or other action by, and no notice to or filing or registration with, or license or permit from any Person, including any Governmental Authority, will be necessary for the execution, delivery or performance by Alcan of its obligations under this Agreement.

6.2.10 RUS shall have consented to the Unwind Transaction and the New Transaction and to all arrangements and agreements required to implement the Unwind Transaction and the New Transaction.

6.3 Efforts to Satisfy Conditions to Effective Date. Each of the Parties shall use commercially reasonable efforts and act in good faith to satisfy all of the conditions set forth in Section 6.2 at the earliest practicable date (other than those which the applicable Party agrees to waive). At such time as Kenergy or Alcan believes such conditions have been satisfied, such Party shall notify the other Party in writing. The obligations of the Parties under this Section 6.3 will continue until the earlier of (a) such time as this Agreement terminates pursuant to Section 7.2, and (b) the Effective Date.

## ARTICLE 7

### TERM AND TERMINATION

7.1 Term. Subject to Section 6.1, this Agreement will become binding on the Parties on the date of execution and delivery by the Parties and will remain in full force and effect until December 31, 2023 (the "Term"), unless earlier terminated pursuant to the terms hereof.

7.2 Termination Prior to Effective Date. This Agreement may be terminated without cost or penalty prior to the occurrence of the Effective Date in accordance with this Section 7.2.

7.2.1 Termination for Failure to Satisfy Conditions to Effective Date. Either Party may terminate this Agreement without cost or penalty by providing five Business Days' prior written notice of termination to the other Party upon the failure of the conditions in Section 6.2 to be satisfied in full or waived by the Person in whose favor the condition exists on or before July 31, 2009, or such later date as the Parties may agree, unless any such condition is satisfied or waived by the applicable Person within such five Business Day period.

7.2.2 Termination In Event Unwind Transaction Will Not Be Consummated. This Agreement may be terminated by either Party at any time prior to the Effective Date upon receipt of notice from LG&E or Big Rivers that either LG&E or Big Rivers does not intend to consummate the Unwind Transaction.

7.2.3 Termination Due to KPSC Modification. If the KPSC issues an order on any of the filings by Big Rivers or other Persons seeking necessary approvals for the Unwind Transaction and the New Transaction that disapproves or changes the pricing or other material terms of this Agreement or the Alcan Wholesale Agreement or Big Rivers' ability to recover costs from the Smelters or the Non-Smelter Ratepayers other than as contemplated in connection

with the New Transaction, either Party may terminate this Agreement without cost or penalty by providing written notice of termination to the other Party and Big Rivers no later than three Business Days after the first to occur of the following: (i) the last date on which a petition for re-hearing may be filed if such a petition has not been filed, (ii) the date on which the KPSC issues an order denying the request for re-hearing for any petition for re-hearing that may have been filed during the allowed period and (iii) if a rehearing occurs, following the date on which an order on rehearing is issued.

#### 7.2.4 Termination Due to Business Judgment.

(a) Either Party may terminate this Agreement without cost or penalty by providing written notice of termination to the other Party and Big Rivers if it determines in its business judgment, exercised in good faith, that based on information considered by it, including information provided by Big Rivers, Big Rivers' operations cannot produce during the first five years of the Service Period the charges projected in Big Rivers' financial model and filed with the KPSC in the application for approval of the New Transaction.

(b) Alcan may terminate this Agreement without cost or penalty by providing written notice of termination to Kenergy and Big Rivers if it determines in its business judgment, exercised in good faith, that there has been a material adverse change in the production facilities of Alcan or a material change in economic or business factors external to the terms of the New Transaction, that would have a material adverse financial effect on Alcan if the New Transaction is consummated.

7.2.5 Alcan Wholesale Agreement Termination. Kenergy may terminate this Agreement if Big Rivers terminates the Alcan Wholesale Agreement prior to the Effective Date.

7.2.6 Effect of Pre-Effective Date Termination. If this Agreement is terminated in accordance with this Section 7.2, Kenergy and Alcan acknowledge and agree that the Existing Alcan Agreement and the Kenergy/LG&E Contract and all other related documents and agreements will continue in full force and effect as if this Agreement had not been executed and delivered by the Parties.

7.3 Termination After the Effective Date. This Agreement may be terminated after the occurrence of the Effective Date in accordance with this Section 7.3.

#### 7.3.1 Termination for Closing of Sebree Smelter.

(a) Alcan may terminate this Agreement as of a date not less than one year from the date it provides written notice (a "Notice of Termination for Closure") to Kenergy and Big Rivers of the termination of this Agreement in accordance with this Section 7.3 in connection with the termination and cessation of all aluminum smelting operations at the Sebree Smelter.

(b) No termination pursuant to Section 7.3.1(a) may be effective prior to December 31, 2010. If Century has given a "Notice of Termination for Closure" under the Century Retail Agreement prior to the delivery of Notice of Termination for Closure by Alcan and if the Transmission Upgrade has not been completed at the time of such termination, Alcan

may not exercise its right to terminate this Agreement pursuant to this Section 7.3.1 with an effective date prior to December 31, 2011. To be effective, any Notice of Termination for Closure must be accompanied by a certificate of the president of Alcan Parent including a representation and warranty that it has made a business judgment in good faith to terminate and cease all aluminum smelting at the Sebree Smelter and has no current intention of re-commencing smelting operations at the Sebree Smelter.

7.3.2 Termination for Event of Default. This Agreement may be terminated following the occurrence and during the continuation of an Event of Default pursuant to Article 14.

## ARTICLE 8

### METERING

8.1 Metering Facilities. Kenergy will provide or cause to be provided metering facilities at the Point of Delivery which measure Hourly kW, kWh, kilovars, kilovar-hours and voltage fluctuation spectra.

8.2 Reading. Kenergy will read or cause to be read the meters at the Point of Delivery on the last date of each month (or such other date as may be agreed upon by the Parties).

8.3 Testing. Kenergy will test, or cause to be tested, the calibration of the meters at the Point of Delivery by comparison of accurate standards at least once every twelve months (or more often if so required by Applicable Law) and will give Alcan not less than five Business Days' prior notice of such testing. Alcan will have the right to observe and participate in all meter tests. Meters registering not more than plus or minus 1% inaccurate will be deemed to be accurate (unless Applicable Law establishes a standard more stringent than 1%, in which case, the more stringent standard will apply). The reading of any meter which will have been disclosed by tests to be inaccurate will be corrected for the 60 days before such tests (or for such shorter period if applicable) in accordance with the percentage of inaccuracy found by such tests. If any meter should fail to register for any period, the Parties and Big Rivers will make mutually agreed upon estimates for such period from the best information available. If Alcan requests a special meter test, Kenergy shall cause such test to be conducted; *provided, however*, that if any special meter test made at the request of Alcan discloses that the meters are not more than plus or minus 1% inaccurate, Alcan shall reimburse Kenergy for the reasonable cost of such test. In all other respects, meters through which Kenergy delivers Energy to Alcan shall be installed, operated, maintained and tested in accordance with all Applicable Law and Prudent Utility Practice.

## ARTICLE 9

### OPERATIONAL MATTERS

9.1 Operations and Operational Responsibility. In carrying out the requirements of this Agreement, each Party will comply with the reliability criteria, standards, guidelines and

operating procedures of any national electric reliability organization, SERC, Applicable Law and any regional transmission organization (if applicable), and neither Party will be required to take any action in violation of any thereof.

9.1.1 Kenergy will operate and maintain or cause to be operated and maintained any facilities owned by it on the premises of Alcan.

9.1.2 Alcan will operate and maintain, or cause to be operated and maintained, all of the facilities and equipment owned by it.

9.2 Facilities Provided by Kenergy. Kenergy has caused to be furnished and installed, or shall cause to be furnished or installed, all of the facilities required for the delivery of Energy to the Point of Delivery, as well as the 161 kilovolt transmission lines required between the Point of Delivery and Alcan's electrical substation. Kenergy shall install and maintain, or shall cause to be installed and maintained, any and all interconnection equipment, metering, or substation equipment, and other equipment, including switching and protective equipment, necessary to deliver Energy to Alcan at the Point of Delivery. Kenergy will keep or cause to be kept, all such equipment in good working order, condition and repair (ordinary wear and tear excepted) such that all such equipment is capable of operating, consistent with Prudent Utility Practice, to the extent necessary to assure sufficient capability to take and use the Electric Services to be delivered by Kenergy to Alcan as provided for in this Agreement.

9.3 Facilities Provided by Alcan.

9.3.1 Alcan has provided or shall provide, without cost to Kenergy or Big Rivers all easements for rights-of-way upon Alcan's property at the Sebree Smelter (at such locations and of such dimensions as may be mutually agreed upon) for Big Rivers' transmission lines and for any Kenergy distribution lines.

9.3.2 Alcan has furnished and installed, shall furnish and install, or cause to be furnished or installed, such facilities and equipment as may be necessary to enable it to receive and use Energy purchased hereunder at and from Alcan's substation located adjacent to the Sebree Smelter, including such protective devices as may be reasonably necessary to protect Big Rivers' transmission system from disturbance caused by Alcan. Additional plans for equipment to be installed for such protection of the facilities of Kenergy or Big Rivers shall be submitted to Kenergy and Big Rivers for prior approval.

9.4 Curtailment. If Big Rivers determines in accordance with Prudent Utility Practice, or in compliance with any national electric reliability organization, SERC, Applicable Law and other regulation, any applicable regional transmission organization, or other applicable operating criteria or rules, that a System Emergency has occurred or is imminent, and after suspending or reducing deliveries to Persons purchasing interruptible Energy from Big Rivers, Kenergy may suspend or reduce the delivery of Energy hereunder and may cease to make available in whole or in part the Electric Services, in each case to the extent caused by, or that Kenergy or Big Rivers determines necessary or prudent under the circumstances to prevent or attempt to prevent, or counter or reduce the effects of, such System Emergency. Alcan acknowledges and agrees that any curtailment caused by a System Emergency (or for any other

reason) that cannot be avoided after the suspension or reduction of deliveries to Persons purchasing interruptible Energy from Big Rivers will be effected in a non-discriminatory manner consistent with Big Rivers' then-current policies and procedures. Kenergy shall request Big Rivers notify Alcan as to the occurrence or threatened occurrence of any System Emergency or other event that may require curtailment, its cause and its impact on the delivery of Energy or the provision of Electric Services, as soon as practicable. Kenergy will not be obligated to supply Electric Services to the extent suspended or curtailed as a result of the System Emergency.

9.5 Ownership and Removal of Equipment. Any and all equipment, apparatus, devices or facilities placed or installed, or caused to be placed or installed, by either of the Parties hereto (or by Big Rivers) on or in the premises of the other Party (or Big Rivers) to receive service under this Agreement shall be and remain the property of the Party (or Big Rivers) owning and installing such equipment, apparatus, devices or facilities regardless of the mode or manner of annexation or attachment to real property of the other. Upon the termination of this Agreement or any extension thereof, the owner (including, if applicable, Big Rivers) of any equipment, apparatus, devices or facilities on the property of a Party shall have the right to enter upon the premises of that Party, and shall, within a reasonable time and at the sole expense of the owner, remove such equipment, apparatus, devices or facilities.

9.6 Right of Access. Alcan grants the duly authorized agents and employees of Kenergy and Big Rivers the right to reasonable access to the premises of Alcan to the extent reasonably required for the purposes of installing, repairing, inspecting, testing, renewing or exchanging any or all of its equipment located on the premises of Alcan, for reading or testing meters, or for performing any other work incident to the performance of this Agreement. Kenergy or Big Rivers shall make reasonable advance arrangements before entering the premises of Alcan.

9.6.1 Alcan shall use commercially reasonable efforts to properly protect the property of Kenergy or Big Rivers, located on its premises, and shall permit no Person to inspect or adjust the wiring and apparatus of Kenergy (or Big Rivers) except with Kenergy's consent. Neither Party assumes the duty or responsibility of inspecting the wiring or apparatus of the other Party.

9.6.2 Alcan grants to Kenergy and its agents and employees a license to enter Alcan's electrical substation located adjacent to the Sebree Smelter and upon Alcan's easements and rights-of-way to accomplish the purposes of this Agreement, *provided* that reasonable advance arrangements appropriate under the circumstances are made.

## ARTICLE 10

### COVENANTS

#### 10.1 Surplus Sales.

10.1.1 Alcan may request that Kenergy sell Energy through Big Rivers which is surplus to Alcan's needs by delivering prior written notice to Kenergy and Big Rivers (a) identifying the portion of Base Demand per Hour Alcan requests Kenergy and Big Rivers sell

and the associated times and duration of the requested sales, and (b) agreeing to curtail its demand per Hour so Alcan's actual demand and the Energy sold pursuant to this Section 10.1 ("Surplus Sales") is not expected to exceed the Base Demand per Hour. Kenergy and Big Rivers shall have no obligation to make Surplus Sales if the portion of Base Demand per Hour Alcan requests to be sold exceeds the Base Demand per Hour or is less than ten MW or not in integral multiples of one MW. For the avoidance of doubt, Surplus Sales shall not include sales of Economic Sales, Undeliverable Energy Sales or Potline Reduction Sales. Any request by Alcan pursuant to this Section 10.1 shall be irrevocable following Big Rivers' entry into contractual obligations with a Third Party relating to such Surplus Sales.

10.1.2 Alcan acknowledges and agrees that Big Rivers and Kenergy shall have no obligation to use any efforts to make Surplus Sales if Big Rivers, in its sole discretion exercised in good faith, estimates the *Net Proceeds therefrom would be less than \$1.00 per MWh* in excess of the sum of the Base Variable Rate, the FAC Factor, the Non-FAC Purchased Power Adjustment Factor and the Environmental Surcharge Factor (each calculated on a per MWh basis). Alcan acknowledges that neither Kenergy nor Big Rivers will have any obligation to market or resell Energy pursuant to this Section 10.1 (a) until Big Rivers first has sold or elected not to sell all amounts of its own surplus Energy, or (b) if Big Rivers is unable to sell any or all Energy as a result of transmission constraints (whether on or off Big Rivers' transmission system) or other constraints, including constraints imposed by Applicable Law.

10.1.3 For the avoidance of doubt, nothing in this Section 10.1 shall relieve Alcan of its obligation for the Base Energy Charge or the TIER Adjustment Charge or any other portion of the Monthly Charge pursuant to Article 4.

10.1.4 For any applicable Surplus Sale, (i) Alcan shall pay to Kenergy for payment to Big Rivers any excess of Big Rivers' actual income tax liability relating to such Surplus Sale over the estimated income tax liability for such Surplus Sale that was used for purposes of calculating the Net Proceeds on such Surplus Sale, and (ii) Kenergy shall pay to Alcan, upon Kenergy's receipt of such payment from Big Rivers, any excess of Big Rivers' estimated income tax liability for such Surplus Sale that was used for purposes of calculating the *Net Proceeds on such Surplus Sale over the actual income tax liability of Big Rivers relating to such Surplus Sale.*

## 10.2 Undeliverable Energy Sales.

10.2.1 Alcan shall notify Kenergy and Big Rivers of the occurrence of (i) any event which results in damage to or destruction of plant or equipment that renders all or a portion of the Sebree Smelter unfit for normal use and limits Alcan's ability to engage in aluminum reduction operations thereat; (ii) Alcan's demand is initially reduced by at least 50 MW per Hour or more as a result thereof; (iii) such limitation is expected to continue for a period of 48 consecutive hours or longer; and (iv) the proximate cause of such casualty is not an intentional misconduct or willful misconduct of Alcan or any of its Affiliates. If and to the extent directed by Alcan, Kenergy immediately will request Big Rivers to use reasonable commercial efforts to sell an amount of Energy up to the corresponding reduction in Alcan's demand as a result of such event during the continuance of such limitation, subject to the same terms, conditions and limitations as set forth for Surplus Sales in Section 10.1. The sales of Energy described in this



Section 10.2 shall be referred to as "Undeliverable Energy Sales." Alcan may provide such notice orally if followed promptly by written notice.

(a) For a period of up to six months from the date of the occurrence of such event, all of the Net Proceeds of any such sales (less the administrative fee pursuant to Section 4.13.1) shall be credited against the Monthly Charge or, if in excess of the Monthly Charge otherwise applicable, such excess shall be paid to Alcan. Upon Alcan providing a certificate representing that the event can not be remedied with reasonable diligence within six months, Alcan's rights under this Section 10.2 shall be extended for an additional period up to three months.

(b) Upon expiration of the period of Alcan's rights under this Section 10.2, neither Kenergy nor Big Rivers shall have any obligations to sell or cause to be sold Energy to a Third Party which otherwise would be available for purchase by Alcan hereunder except as otherwise expressly required pursuant to Section 4.13.3 as Economic Sales, Section 10.1 as Surplus Sales, or Section 10.3 as Potline Reduction Sales. Undeliverable Energy Sales may not be greater than Base Demand per Hour.

(c) If the circumstances described in clauses (i), (ii), and (iv) of this Section 10.2.1 do not continue for a period of 48 consecutive hours or longer, such sales of Energy will be treated as Surplus Sales under Section 10.1 unless Section 10.3 applies.

10.2.2 ALCAN HEREBY WAIVES ANY AND ALL FUTURE CLAIMS OR OTHER RIGHTS FOR DAMAGES FROM KENERGY OR BIG RIVERS IN CONNECTION WITH ANY EVENT GIVING RISE TO OR RELATING TO AN EVENT RESULTING IN ALCAN NOT BEING ABLE TO ACCEPT ENERGY AS CONTEMPLATED BY SECTION 10.2.1, *PROVIDED* THAT THIS WAIVER SHALL NOT APPLY TO CLAIMS FOR DAMAGES OR OTHER REMEDIES BROUGHT BY THIRD PARTIES WHICH ARE NOT AFFILIATES, OFFICERS, DIRECTORS OR EMPLOYEES OF ALCAN. THIS WAIVER SHALL ALSO NOT APPLY TO CLAIMS FOR DAMAGES OR OTHER REMEDIES FROM KENERGY OR BIG RIVERS BROUGHT BY ALCAN OR ITS SUBROGEE IN CONNECTION WITH A CIRCUMSTANCE WHERE (I) ALCAN IS UNABLE TO ACCEPT ENERGY AS CONTEMPLATED IN SECTION 10.2.1, (II) BIG RIVERS IS UNABLE TO DELIVER ENERGY TO THE SMELTERS, AND (III) BIG RIVERS IS UNABLE TO MAKE UNDELIVERABLE ENERGY SALES FROM ITS OWN GENERATING FACILITIES PURSUANT TO SECTION 10.2.1 ALL AS A RESULT OF INTENTIONAL MISCONDUCT OR WILLFUL MISCONDUCT OF BIG RIVERS.

10.2.3 For any applicable Undeliverable Energy Sale, (i) Alcan shall pay to Kenergy for payment to Big Rivers any excess of Big Rivers' actual income tax liability relating to such Undeliverable Energy Sale over the estimated income tax liability for such Undeliverable Energy Sale that was used for purposes of calculating the Net Proceeds on such Undeliverable Energy Sale, and (ii) Kenergy shall pay to Alcan, upon Kenergy's receipt of such payment from Big Rivers, any excess of Big Rivers' estimated income tax liability for such Undeliverable Energy Sale that was used for purposes of calculating the Net Proceeds on such Undeliverable Energy Sale over the actual income tax liability of Big Rivers relating to such Undeliverable Energy Sale.

### 10.3 Potline Reduction Sales.

10.3.1 Alcan may request Kenergy cause Big Rivers to sell 115 MW (plus or minus 10 MW) per Hour to Third Parties (such sales of Energy are referred to as "Potline Reduction Sales"), such amount subject to Section 10.3.2 below, on either a Firm basis or a System Firm basis by delivering not less than 30 days' prior notice to Kenergy and Big Rivers (which notice Kenergy and Big Rivers shall keep confidential) if (i) Alcan has ceased or will cease all aluminum smelting operations on one and only one of its potlines at the Sebree Smelter (a "Potline Reduction"); (ii) Alcan is reasonably likely to be able to continue aluminum smelting operations with respect to all of its other potlines at the Sebree Smelter as a result of the cessation of aluminum smelting operations on the potline referred to in clause (i); (iii) Alcan in good faith reasonably estimates the duration of such cessation will equal or exceed 12 months; and (iv) no Potline Reduction Sales have been made for a period of twelve consecutive months prior to the date of such notice. Such notice also shall state the requested duration of the sales of Energy and must be accompanied by a certificate of an officer of Alcan Parent certifying as to the matters set forth in clauses (i), (ii), (iii), and (iv) above.

10.3.2 Alcan, Kenergy and Big Rivers shall reasonably cooperate on a schedule for the graduated reduction and, in the case of a potline restoration, the graduated increase in Alcan's demand in such amounts and over a period of time as is mutually satisfactory.

10.3.3 Alcan may not withdraw its request for Potline Reduction Sales to the extent that Big Rivers has a legally binding agreement with a Third Party for Potline Reduction Sales (a "Potline Reduction Sales Agreement"), provided that Alcan may at any time terminate the Potline Reduction and assume responsibility for acquiring Market Energy required during the remainder of the Potline Reduction Sales Agreement.

10.3.4 Alcan acknowledges that neither Kenergy nor Big Rivers will have any obligation to market or resell Energy pursuant to this Section 10.3 (i) until Big Rivers first has sold or elected not to sell all amounts of its own surplus Energy available for sale or (ii) to the extent Big Rivers is unable to make Potline Reduction Sales as a result of transmission constraints (whether on or off Big Rivers' transmission system) or other constraints, including constraints imposed by Applicable Law.

10.3.5 Kenergy and Big Rivers shall consult with Alcan and agree on the Potline Reduction Sales that will be made on a Firm basis or a System Firm basis and the terms of same. To the extent Alcan requests the Potline Reduction Sales be made on a Firm basis, Alcan agrees that if during the term of such sale or sales Big Rivers is required to purchase replacement Energy or otherwise make payments to meet such Potline Reduction Sales on a Firm basis, Alcan will reimburse Kenergy for the benefit of Big Rivers the full cost of such actions and indemnify Kenergy and Big Rivers for any costs, obligations or liabilities incurred by either of them, including liabilities to Third Parties.

10.3.6 All of the Net Proceeds of any Potline Reduction Sales (less the administrative fee pursuant to Section 4.13.1) shall be credited against the Monthly Charge from the effective date of the notice pursuant to Section 10.3.1 until the Cut-Off Date or, if such amount is in excess of the Monthly Charge otherwise applicable, such excess shall be paid to

Alcan. The "Cut-Off Date" shall mean the earliest to occur of (a) the first day of the 49th Billing Month after the effective date of the notice given under Section 10.3.1, (b) a date specified in a written notice, if any, by Alcan to Kenergy and Big Rivers, and (c) the earlier of the date (i) one year after the date Alcan commences smelting operations with respect to one or more pots on the suspended potline or (ii) all Potline Reduction Sales Agreements have been terminated or expired after Alcan commences smelting operations with respect to one or more pots on the suspended potline. Sales of Energy after the Cut-Off Date shall be Surplus Sales pursuant to Section 10.1 and not Potline Reduction Sales pursuant to this Section 10.3. Alcan agrees that it shall not be permitted to extend the term of Potline Reduction Sales beyond forty-eight months, provided that nothing in this Section 10.3.6 shall preclude Alcan from providing a new notice under Section 10.3.1 after aluminum smelting operations at the suspended potline have been restored.

10.3.7 For any Potline Reduction Sale, (i) Alcan shall pay to Kenergy for payment to Big Rivers any excess of Big Rivers' actual income tax liability relating to such Potline Reduction Sale over the estimated income tax liability for such Potline Reduction Sale that was used for purposes of calculating the Net Proceeds on such Potline Reduction Sale, and (ii) Kenergy shall pay to Alcan, upon Kenergy's receipt of such payment from Big Rivers, any excess of Big Rivers' estimated income tax liability for such Potline Reduction Sale that was used for purposes of calculating the Net Proceeds on such Potline Reduction Sale over the actual income tax liability of Big Rivers relating to such Potline Reduction Sale.

10.3.8 For the avoidance of doubt, (i) Potline Reduction Sales shall not include Surplus Sales, Economic Sales or Undeliverable Energy Sales; (ii) nothing in this Section 10.3 shall be construed to relieve Alcan of its obligation with respect to the Base Energy Charge, the TIER Adjustment or other components of the Monthly Charge payable pursuant to Article 4; and (iii) nothing in this Agreement precludes Undeliverable Energy Sales under Section 10.2 from becoming Potline Reduction Sales if all conditions of this Section 10.3 are met.

10.4 Resale. Alcan may not resell or cause to be resold any Electric Services purchased from Kenergy under this Agreement, except as expressly permitted in this Agreement or with the prior written consent of Kenergy and Big Rivers, which may be withheld by either of them in their sole discretion. Alcan shall consume all Energy purchased under this Agreement in connection with the operation of its Sebree Smelter except as expressly permitted pursuant to this Agreement.

10.5 Refund of Income Tax Estimated for Net Proceeds. Kenergy shall return to Alcan any income taxes deducted in calculating the Net Proceeds of a sale of Energy by Big Rivers which Big Rivers ultimately determines are not required to be paid due to the application of a net operating loss carry-forward of Big Rivers that existed on the Effective Date and that otherwise would have expired unused.

## ARTICLE 11

### UNCONTROLLABLE FORCES

11.1 Occurrence of an Uncontrollable Force. No Party will be considered to be in breach or default in the performance of any of its obligations under this Agreement if the failure of performance is due to an Uncontrollable Force, except as otherwise provided in this Article 11. If either Party is unable, in whole or in part, by reason of Uncontrollable Force to carry out its obligations, then the obligations of the Parties, to the extent that they are affected by such Uncontrollable Force, will be suspended during the continuance of any inability so caused, but for no longer period. A Party will not be relieved of liability for failing to perform if such failure is due to causes arising out of its own negligence or willful acts or omissions.

11.2 Mitigation. A Party rendered unable to fulfill any obligation by reason of an Uncontrollable Force shall exercise due diligence to remove or remedy such inability as promptly as reasonably possible. Nothing contained herein may be construed to require a Party to prevent or to settle a labor dispute against its will.

11.3 Notice of Uncontrollable Force. A Party shall notify the other Party at the earliest practicable time following (i) the occurrence of any Uncontrollable Force which renders such Party incapable of performing hereunder or (ii) the time at which such Party has reason to expect that such an Uncontrollable Force is imminent. Kenergy also shall notify Alcan if it receives notice from Big Rivers that Big Rivers anticipates that it will be unable to perform its obligations to Kenergy under any contract or agreement that affects Kenergy's performance under this Agreement due to an Uncontrollable Force and Alcan is not an additional addressee of such notice.

11.4 Payment Obligations. Notwithstanding anything in this Agreement to the contrary, the occurrence of an Uncontrollable Force shall not relieve Alcan of its payment obligations under Article 4, including its payment obligations with respect to the Base Energy Charge. ALCAN ACKNOWLEDGES AND AGREES THAT THE PROVISIONS OF SECTION 10.1 (SURPLUS SALES), SECTION 10.2 (UNDELIVERABLE ENERGY SALES) AND SECTION 10.3 (POTLINE REDUCTION SALES) SHALL CONSTITUTE ALCAN'S SOLE AND EXCLUSIVE REMEDIES IN THE EVENT THAT ALCAN IS UNABLE TO RECEIVE ENERGY INCLUDING IF THAT INABILITY IS CAUSED BY AN UNCONTROLLABLE FORCE.

## ARTICLE 12

### REPRESENTATIONS AND WARRANTIES

12.1 Representations and Warranties of Kenergy. Kenergy hereby represents and warrants to Alcan as follows:

12.1.1 Kenergy is an electric cooperative corporation duly organized, validly existing and in good standing under the laws of the Commonwealth of Kentucky, and has the power and authority to execute and deliver this Agreement, to perform its obligation hereunder, and to carry on its business as such business is now being conducted and as is contemplated hereunder to be conducted during the Term hereof.

12.1.2 The execution, delivery and performance of this Agreement by Kenergy have been duly and effectively authorized by all requisite corporate action.

12.2 Representations and Warranties of Alcan. Alcan hereby represents and warrants to Kenergy as follows:

12.2.1 Alcan is a corporation duly organized and validly existing and in good standing under the laws of the State of Texas, is authorized to do business in the Commonwealth of Kentucky, and has the power and authority to execute and deliver this Agreement, to perform its obligations hereunder, and to carry on its business as it is now being conducted and as it is contemplated hereunder to be conducted during the Term hereof.

12.2.2 The execution, delivery and performance of this Agreement by Alcan have been duly and effectively authorized by all requisite corporate action.

## ARTICLE 13

### ADDITIONAL AGREEMENTS

#### 13.1 Regulatory Proceedings.

##### 13.1.1 Proceedings That Affect Rates.

(a) The Parties acknowledge and agree that

(i) Big Rivers shall have the right to seek KPSC approval for changes to the Non-Smelter Member Rates from time to time, but Big Rivers shall not seek an increase in its base rates to take effect before January 1, 2010, excluding any roll-in to Big Rivers' base rates of costs that would otherwise be recovered by the Environmental Surcharge or the FAC; and

(ii) Big Rivers will not seek to implement a wholesale rate reduction other than the Rebate to its Members under the procedures available in KRS 278.455 without the consent of Alcan;

*provided* that this commitment by Big Rivers will have no effect on the availability to Kenergy of the procedures in KRS 278.455 to flow-through any wholesale rate decrease to the Non-Smelter Ratepayers.

(b) Alcan shall have the right to intervene and participate in any proceeding that may affect rates at the KPSC or FERC or before any other Governmental Authority. Neither Kenergy nor Alcan will support or seek, directly or indirectly, from any Governmental Authority, including the KPSC, any challenge to or change in the rate formula set forth in this Agreement or other terms and conditions set forth herein, including the relationship of the Large Industrial Rate to amounts payable by Alcan pursuant hereto, except that any Party may initiate or intervene in a proceeding to (i) clarify, interpret or enforce this Agreement, or (ii) challenge the applicable rate for Transmission Services should those services be unbundled for purposes of calculating the Large Industrial Rate. For the avoidance of doubt, Alcan's

intervention and participation in a regulatory proceeding involving cost of service issues relating to the rates of the Non-Smelter Ratepayers shall **not** be considered a challenge to the rate formula.

(c) If *Commonwealth of Kentucky ex rel. Gregory D. Stumbo, Attorney General v. Public Service Comm'n and Union Light, Heat and Power Co.*, Franklin Circuit Court, C.A. No. 06-CI-269, or any Applicable Law relating thereto restricts the amounts recovered under the FAC, Appendix A, or the Environmental Surcharge Rider, then Kenergy, Alcan, Big Rivers and, if the Century Retail Agreement is then in effect, Century, shall negotiate in good faith to amend this Agreement (and other agreements entered into in connection herewith) to restore the relative rights and economic benefits thereunder. If such parties are unable to reach an agreement on such amendments, then this Section 13.1.1 shall not restrict Big Rivers from seeking KPSC approval for an increase to its base rates or an amendment to the FAC, Appendix A, or the Environmental Surcharge Rider.

13.1.2 Kenergy Retail Fee. Kenergy or Alcan may seek approval of any changes to the Retail Fee not earlier than ten years after the Effective Date of this Agreement.

13.1.3 KPSC Jurisdiction. Nothing in this Agreement shall limit or expand the jurisdiction of the KPSC over Kenergy, Big Rivers or the rates, terms and conditions of Electric Service to Alcan.

13.1.4 Notice of Material Filings. Kenergy shall provide or cause to be provided to Alcan a copy of any filing with the KPSC or FERC that seeks a change in Big Rivers' tariff, or relief authorized by KRS 278.020, KRS 278.030, KRS 278.212, KRS 278.218, KRS 278.300, KRS 278.183 or 807 KAR 5:056.

13.2 Audit Rights. Kenergy will permit Alcan to audit, upon reasonable notice, at its own expense, at a mutually agreeable time, all information in the possession of Kenergy relating to its service to Alcan under this Agreement, including scheduled usage, meter records and billing records. Kenergy shall retain all documentation applicable to service to Alcan under this Agreement for a period of three years beyond the date of the service. Nothing in this Section 13.2 shall obligate Kenergy to disclose attorney-client privileged information.

13.3 Alcan Credit Support. Alcan shall (i) if the rating of the unenhanced, unsecured debt obligations of Alcan Parent with Standard & Poor's is not "A+" or higher (and in addition, if Alcan Parent has such a rating from Moody's, that rating with Moody's is not "A1" or higher), provide and maintain credit support in the form of a letter of credit from a bank rated "A+" or higher, or other credit support acceptable to Big Rivers and Kenergy, in an amount equal to the amounts estimated by Big Rivers to be due to Big Rivers and Kenergy with respect to Alcan's obligations under this Agreement for a period of two months and any amount which Big Rivers estimates reasonably could be due with respect to taxes relating to any sale of Energy pursuant to Section 4.13.3 as Economic Sales, Section 10.1 as Surplus Sales, Section 10.2 as Undeliverable Energy Sales or Section 10.3 as Potline Reduction Sales ("Potential Tax Liability"); and (ii) cause Alcan Parent to guarantee to Big Rivers and Kenergy the payment and performance of all obligations of Alcan under this Agreement, including Potential Tax Liability, and the other documents entered into by Alcan and its affiliates in connection with the New Transaction

pursuant to a Guarantee Agreement executed by Alcan Parent in favor of Big Rivers and Kenergy which shall be satisfactory in form and substance to Big Rivers and Kenergy (the "Alcan Guarantee"). At the request of Big Rivers or Kenergy, Alcan will maintain the Alcan Guarantee until closure of all applicable tax years of Big Rivers. At the request of Alcan, Kenergy shall request that Big Rivers provide Alcan with information as to the amount and calculation of the estimated Potential Tax Liability and documentation in support thereof.

#### 13.4 Patronage Capital.

13.4.1 Kenergy is a non-profit Kentucky corporation that, during any calendar year, may realize revenues from its own operations in excess of related expenses ("margins"). For financial accounting purposes, such margins have been and shall continue to be recorded as patronage capital held for the benefit of Kenergy's customers. Such patronage capital shall be recorded by Kenergy for the benefit of Alcan as earned during the term of this Agreement.

13.4.2 Kenergy will not permit any amendments or modifications of its Bylaws that would adversely affect the rights of Alcan to distributions of patronage capital or payments on account of property rights of the Members distributed by Big Rivers to Kenergy.

13.4.3 Kenergy agrees that Alcan will share on a nondiscriminatory basis in the allocations of patronage capital and payments on account of property rights of Members distributed by Big Rivers to Kenergy and that such allocations shall be promptly distributed to Alcan.

13.4.4 The expiration or earlier termination of this Agreement shall not modify or revoke the then existing entitlement of Alcan to allocations or distributions of patronage capital or the entitlement of Alcan to payments on account of property rights as set forth in this Section 13.4 when such property rights are determined.

13.4.5 Kenergy and Alcan agree that the provisions of this Section 13.4 are not the exclusive provisions for determining Alcan's entitlement to distributions by Kenergy of patronage capital or payments on account of property rights.

13.5 Post-Termination Obligation. Subject to Section 13.7, upon termination of this Agreement, neither Kenergy nor Big Rivers will have any contractual obligation under this Agreement to supply any capacity, Energy or other related services to Alcan.

13.6 Negotiation of Replacement Agreement. If this Agreement has not been terminated earlier, Kenergy shall negotiate in good faith with Alcan and Big Rivers, no later than January 1, 2023, concerning rates and terms and conditions for new power supply arrangements following the expiration of this Agreement on December 31, 2023.

13.7 Entitlement to Large Industrial Rate. If this Agreement terminates pursuant to a closure of the Sebree Smelter as set forth in Section 7.3.1 and Alcan continues non-smelting operations, Alcan will be entitled to be served by Kenergy under the Large Industrial Rate; *provided, however*, the capacity and associated Energy served under the Large Industrial Rate shall not exceed 15 MW.

## ARTICLE 14

### EVENTS OF DEFAULT; REMEDIES

14.1 Events of Default. Each of the following constitutes an “Event of Default” under this Agreement:

14.1.1 Failure by a Party to make any payment in accordance with this Agreement within three Business Days following the non-performing Party’s receipt of written notice of the non-performing Party’s default in its payment obligation;

14.1.2 Failure of a Party to perform any material duty imposed on it by this Agreement (other than a failure to make a payment when due) within 30 days following the non-performing Party’s receipt of written notice of the non-performing Party’s breach of its duty hereunder;

14.1.3 Any attempt by a Party to transfer an interest in this Agreement other than as permitted pursuant to Article 16;

14.1.4 The occurrence and continuance of an “Event of Default” under the Alcan Wholesale Agreement;

14.1.5 Any filing of a petition in bankruptcy or insolvency, or for reorganization or arrangement under any bankruptcy or insolvency laws, or voluntarily taking advantage of any such laws by answer or otherwise or the commencement of involuntary proceedings under any such laws by a Party and such petition has not been withdrawn or dismissed within 60 days after filing;

14.1.6 Assignment by a Party for the benefit of its creditors;

14.1.7 Allowance by a Party of the appointment of a receiver or trustee of all or a material part of its property and such receiver or trustee has not been discharged within 60 days after appointment; or

14.1.8 Failure, inability or refusal of Kenergy to cure a breach or default by Kenergy under the Alcan Wholesale Agreement which gives rise to a termination of the Alcan Wholesale Agreement, or any termination by Kenergy of the Alcan Wholesale Agreement in breach or default thereof.

14.2 Remedies, General. Except as otherwise provided in this Agreement, following the occurrence and during the continuance of an Event of Default by either Party, the non-defaulting Party may, in its sole discretion, elect to terminate this Agreement upon written notice to the other Party, or to seek enforcement of its terms at law or in equity. Unless otherwise provided herein, remedies provided in this Agreement are cumulative, unless specifically designated to be an exclusive remedy and nothing contained in this Agreement may be construed to abridge, limit, or deprive either Party of any means of enforcing any remedy either at law or in equity for the breach or default of any of the provisions herein provided that:



14.2.1 UNDER NO CIRCUMSTANCE WILL EITHER PARTY OR ITS RESPECTIVE AFFILIATES, DIRECTORS, OFFICERS, MEMBERS, MANAGER, EMPLOYEES OR AGENTS BE LIABLE HEREUNDER TO THE OTHER PARTY, ITS AFFILIATES, DIRECTORS, OFFICERS, MEMBERS, MANAGERS EMPLOYEES OR AGENTS WHETHER IN TORT, CONTRACT OR OTHERWISE FOR ANY SPECIAL, INDIRECT, PUNITIVE, EXEMPLARY OR CONSEQUENTIAL DAMAGES, INCLUDING LOST PROFITS. EACH PARTY'S LIABILITY HEREUNDER WILL BE LIMITED TO DIRECT, ACTUAL DAMAGES. THE EXCLUSION OF ALL OTHER DAMAGES SPECIFIED IN THIS SECTION IS WITHOUT REGARD TO THE CAUSE OR CAUSES RELATING THERETO. THIS PROVISION WILL SURVIVE TERMINATION OF THIS AGREEMENT.

14.2.2 Neither Party may terminate this Agreement as a result of an "Event of Default" under the Alcan Wholesale Agreement if the actions or omissions of Kenergy caused such "Event of Default"; *provided, that either Party may terminate this Agreement if the Alcan Wholesale Agreement is terminated for any reason.*

14.2.3 Unless otherwise provided herein, if a Party is in breach of its obligations under this Agreement but such breach does not constitute, or would not with the passage of time or the giving of notice constitute, an Event of Default and this Agreement does not provide any other remedy therefor, if such breach has not been cured by the breaching Party within 60 days after receiving written notice from the non-breaching Party setting forth, in reasonable detail, the nature of such breach, the non-breaching Party may bring a claim for money damages with respect to such breach and exercise its rights under Section 15.2, but will not be entitled to terminate, or seek to terminate, this Agreement, or suspend performance of its obligations and duties hereunder as a result of such breach.

## ARTICLE 15

### DISPUTE RESOLUTION

15.1 Resolution Meetings. If a dispute arises between the Parties concerning the terms or conditions of this Agreement, the duties or obligations of the Parties under this Agreement, or the implementation, interpretation or breach of this Agreement, either Party may request in writing a meeting among an authorized representative of each of the Parties and Big Rivers to discuss and attempt to reach a resolution of the dispute. Such meeting will take place within ten days or such shorter or longer time as agreed upon by the Parties of the request. Nothing in this Section 15.1 shall toll or extend the cure period with respect to the failure by a Party to perform its obligations under this Agreement.

15.2 Right to Pursue Rights and Remedies. Absent resolution of a dispute pursuant to Section 15.1, the Parties may pursue at any Governmental Authority all rights and remedies that they may have at law, in equity or pursuant to this Agreement subject to the limitations set forth in this Agreement. Notwithstanding the provisions of this Article 15, each Party may at all times seek injunctive relief, where its delay in doing so could result in irreparable injury.

## ARTICLE 16

### GENERAL PROVISIONS/SUCCESSORS AND ASSIGNS

16.1 Binding Nature. This Agreement will inure to the benefit of and be binding upon the Parties hereto and their respective successors and permitted assigns. No interest in this Agreement may be transferred or assigned by either Party, in whole or in part, by instrument or operation of law, without the prior written consent of the other Party, except as provided in Section 16.4, and except that, subject to satisfaction of the conditions of Section 16.2, assignment may be made by either Party to such Person as acquires all or substantially all the assets of the assigning Party or which merges with or acquires all or substantially all of the equity of such Party. When consent is required, consent may not be unreasonably withheld, conditioned or delayed.

16.2 Limitation on Assignment. In no event may either Party assign this Agreement (including as part of a sale of all or substantially all the assets of the assigning Party or a merger with or purchase of substantially all the equity interests of such Party) (i) to any Person that does not have adequate financial capacity as demonstrated to the reasonable satisfaction of the non-assigning Party or that would otherwise be unable to perform the obligations of the assigning Party pursuant to this Agreement or (ii) on any terms at variance from those set forth in this Agreement except as agreed to in writing by the Parties.

16.3 Duties. No permitted assignment or transfer will change the duties of the Parties, or impair the performance under this Agreement except to the extent set forth in such permitted assignment and approved in writing by the Parties. No Party is released from its obligations under this Agreement pursuant to any assignment, unless such release is granted in writing.

16.4 Financing Lien. Either Party may, without the approval of the other Party, assign this Agreement as collateral security or grant one or more mortgages (including one or more deeds of trust or indentures) on or security interests in its interest under this Agreement in connection with the general financing of its assets or operations.

#### 16.5 Big Rivers Restructuring.

16.5.1 In connection with a Restructuring, Kenergy, Alcan, Century and Big Rivers shall determine a good faith estimate of the cumulative increase or decrease in the TIER Adjustment that such Restructuring would cause in each Fiscal Year over the 24-Billing Month period following the date of the effectiveness of Restructuring (the "Restructuring Amount"). Any change in the Large Industrial Rate approved at the time of or in connection with the Restructuring shall not be considered as an effect of the Restructuring. Except for the restrictions set forth in Section 13.1, nothing in this Agreement, including this Section 16.5, shall limit the ability of Big Rivers to seek a change in or modification of the Large Industrial Rate in connection with the occurrence of a Restructuring.

16.5.2 The Monthly Charge in each month of the 48-month period following the effectiveness of the Restructuring shall be increased or decreased, as applicable, by an amount equal to 1/48th of the product of the Restructuring Amount and the Applicable Percentage;

*provided*, that the application of this Section 16.5 shall not result in Alcan paying less than the sum of the Large Industrial Rate, the FAC Factor, the Non-FAC Purchased Power Adjustment Factor, and the Environmental Surcharge Factor, all on a per MWh basis, for a customer with a 98% load factor with respect to Base Monthly Energy in any Fiscal Year. Sample calculations for determining a Restructuring Amount are set forth in Exhibit A.

16.5.3 This Section 16.5 shall not be applicable to any Restructuring undertaken in response to the loss of revenue caused by the termination of the Century Retail Agreement.

16.5.4 If Alcan, Century, Kenergy and Big Rivers are not able to determine a mutually agreeable estimate of the Restructuring Amount, then Kenergy, Alcan, Century or Big Rivers may petition to the KPSC to determine the Restructuring Amount.

## ARTICLE 17

### MISCELLANEOUS

17.1 Governing Law. This Agreement shall be interpreted, governed by and construed under the laws of the Commonwealth of Kentucky, without regard to its conflicts of law rules.

17.2 Jurisdiction. The Parties hereby agree that the courts of the Commonwealth of Kentucky will have exclusive jurisdiction over each and every judicial action brought under or in relationship to this Agreement; *provided* that the subject matter of such dispute is not a matter reserved by law to the KPSC, or to the U.S. federal judicial system (in which event exclusive jurisdiction and venue will lie with the U.S. District Court for the Western District of Kentucky), and the Parties hereby agree to submit to the jurisdiction of Kentucky courts for such purpose. Venue in state court actions will be in the Henderson Circuit Court as the court in which venue will lie for the resolution of any disputes under this Agreement. Nothing in this paragraph prohibits a Party from referring to FERC any matter properly within FERC's jurisdiction.

17.3 Waiver. The waiver by either Party of any breach of any term, covenant or condition contained herein will not be deemed a waiver of any other term, covenant or condition, nor will it be deemed a waiver of any subsequent breach of the same or any other term, covenant or condition contained herein.

#### 17.4 Amendments.

17.4.1 This Agreement may be amended, revised or modified by, and only by, a written instrument duly executed by both Parties.

17.4.2 The Parties acknowledge and agree that nothing in this Agreement shall limit the right of Big Rivers to file changes to the OATT, or limit the right of any Party to challenge any aspect of the OATT, including the applicable loss factor, the transmission service rates or any other transmission or ancillary service issue presented to FERC.

17.5 Good Faith Efforts. The Parties agree that each will in good faith take all reasonable actions within their reasonable control as are necessary to permit the other Party to fulfill its obligations under this Agreement; *provided* that no Party will be obligated to expend

money or incur material economic loss in order to facilitate performance by the other Party. Where the consent, agreement, or approval of either Party must be obtained hereunder, such consent, agreement or approval may not be unreasonably withheld, conditioned, or delayed unless otherwise provided herein. Where either Party is required or permitted to act or fail to act based upon its opinion or judgment, such opinion or judgment may not be unreasonably exercised. Where notice to the other Party is required to be given herein, and no notice period is specified, reasonable notice shall be given.

17.6 Notices. A notice, consent, approval or other communication under this Agreement must be in writing, addressed to the Person to whom it is to be delivered at such Person's address shown below and (a) personally delivered (including delivery by a nationally recognized overnight courier service), or (b) transmitted by facsimile, with a duplicate notice sent by a nationally recognized overnight courier service, *provided however*, that (i) a notice given pursuant to Schedule 2.3.2(a) or Section 10.2 may be given by telephone to be followed as soon as reasonably practicable by written notice as described herein and (ii) a notice of Uncontrollable Force shall be given by whatever means is available followed by notice in writing as described herein as soon as reasonably practicable. A notice given to a Person in accordance with this Section 17.6 will be deemed to have been delivered (a) if personally delivered to a Person's address, on the day of delivery if such day is a Business Day, or otherwise on the next Business Day, or (b) if transmitted by facsimile to a Person's facsimile number and a correct and complete transmission report is received, or receipt is confirmed by telephone, on the day of transmission if a Business Day, otherwise on the next Business Day; *provided, however*, that such facsimile transmission will be followed on the same day with the sending to such Person of a duplicate notice by a nationally recognized overnight courier to that Person's address. For the purpose of this Section 17.6, the address of a Party is the address set out below or such other address which that Party may from time to time deliver by notice to the other Party, in accordance with this Section 17.6, with copies of all such notices to Big Rivers to the address set forth below, in the same manner as notice is otherwise given hereunder:

If to Kenergy:	Kenergy Corp. 6402 Old Corydon Road Henderson, Kentucky 42420 Facsimile: (270) 826-3999 Attn: President and CEO
With a copy to:	Big Rivers Electric Corporation 201 Third Street Henderson, Kentucky 42420 Facsimile: (270) 827-2558 Attn: President and CEO
If to Alcan:	Sebree Smelter Alcan Primary Products Corporation 9404 State Route 2096 Henderson, Kentucky 42452-9735 Facsimile: (270) 521-7341 Attn: Plant Manager

With a copy to: Rio Tinto Alcan  
1188 Sherbrooke Street West  
Montreal, Quebec H3A 3G2  
Canada  
Facsimile: (514) 848-1439  
Attn: Director Energy

If to Big Rivers: Big Rivers Electric Corporation  
201 Third Street  
Henderson, Kentucky 42420  
Facsimile: (270) 827-2558  
Attn: President and CEO

For notices pursuant to Section 14.1 :

If to Kenergy: Kenergy Corp.  
6402 Old Corydon Road  
Henderson, Kentucky 42420  
Facsimile: (270) 826-3999  
Attn: President and CEO

With a copy to: Big Rivers Electric Corporation  
201 Third Street  
Henderson, Kentucky 42420  
Facsimile: (270) 827-2558  
Attn: President and CEO

If to Alcan: Sebree Smelter  
Alcan Primary Products Corporation  
9404 State Route 2096  
Henderson, Kentucky 42452-9735  
Facsimile: (270) 521-7341  
Attn: Plant Manager

17.7 Severability. If any clause, sentence, paragraph or part of this Agreement should for any reason be finally adjudged by any court of competent jurisdiction to be unenforceable or invalid, such judgment will not affect, impair or invalidate the remainder of this Agreement but will be confined in its operation to the clause, sentence, paragraph or any part thereof directly involved in the controversy in which the judgment is rendered, unless the loss or failure of such clause, sentence, paragraph or part of this Agreement materially adversely affects the benefit of the bargain to be received by either or both of the Parties, in which event the Parties shall promptly meet and use their good faith best efforts to renegotiate this Agreement in such a fashion as will restore the relative rights and benefits of both Parties or, absent such renegotiation, the Party that was so materially adversely affected will be entitled, in its discretion, to terminate this Agreement.

17.8 Survival. Each provision of this Agreement providing for payment for Electric Services and any other amounts due hereunder, distribution of patronage capital, assignment of the right to collect and enforce collection of amounts due, or related to remedies for default, damage claims, indemnification or payment of other liabilities will survive termination of this Agreement to the full extent necessary for their enforcement and the protection of the Party in whose favor they run.

17.9 Merger. This Agreement constitutes the entire agreement and understanding of the Parties with respect to the matters addressed herein and supersedes all other prior or contemporaneous understandings or agreements, both written and oral, between the Parties relating to the subject matter of this Agreement except as otherwise expressly provided in Section 6.1 and Section 7.2.6 hereof.

17.10 Further Assurances. The Parties shall execute such additional documents including a consent to assignment, legal opinions, estoppel letters or similar documents, and shall cause such additional actions to be taken as may be required or, in the judgment of any Party, be necessary or desirable, to effect or evidence the provisions of this Agreement and the transactions contemplated hereby.

17.11 Counterparts. This Agreement may be executed in any number of counterparts, which together will constitute but one and the same instrument and each counterpart will have the same force and effect as if they were one original.

17.12 Third-Party Beneficiaries. Nothing in this Agreement may be construed to create any duty to, or standard or care with reference to, or any liability to, or any benefit for, any Person not a Party to this Agreement other than Big Rivers.

17.13 Headings. The headings contained in this Agreement are solely for convenience and do not constitute a part of the agreement between the Parties, nor should such headings be used to aid in any manner in the construction of this Agreement.

17.14 No Agency. This Agreement is not intended, and may not be construed to create any association, joint venture, agency relationship or partnership between the Parties or to impose any such obligation or liability upon either Party. Neither Party will have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or to be an agent or representative of, or otherwise bind, the other Party.

[Signatures Follow on Next Page]

IN WITNESS WHEREOF, this Agreement is hereby executed as of the day and year first above written.

KENERGY CORP.

By: Stanford Novick  
Name: STANFORD NOVICK  
Title: PRESIDENT & CEO

ALCAN PRIMARY PRODUCTS  
CORPORATION

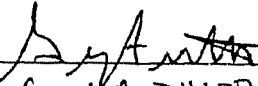
By: \_\_\_\_\_  
Name:  
Title:

IN WITNESS WHEREOF, this Agreement is hereby executed as of the day and year first above written.

KENERGY CORP.

By: \_\_\_\_\_  
Name:  
Title:

ALCAN PRIMARY PRODUCTS CORPORATION

By:   
Name: GUY AUTHIER  
Title: PRESIDENT



## SCHEDULE 2.3.2(a)

### INTERRUPTIBLE ENERGY

(a) Interruptible Energy. Kenergy may purchase from Big Rivers on a System Firm basis up to 10 MW per Hour of Interruptible Energy for resale to Alcan, subject to availability, the scheduling requirements and Big Rivers' right to interrupt the sale and delivery of such Energy, all as set forth in this Section (a).

(i) Confirmation. Not less than seven days prior to the beginning of each fiscal quarter of the Service Period (or the Effective Date with respect to the initial fiscal quarter of the Service Period), Big Rivers shall provide to Kenergy and Alcan a confirmation setting forth the price or prices and other terms and conditions ("Interruptible Energy Terms") under which Interruptible Energy may be available during each Hour of the subject fiscal quarter. If Big Rivers fails to provide a timely confirmation with respect to any fiscal quarter, the Interruptible Energy Terms for the prior fiscal quarter shall remain in effect. Big Rivers and Kenergy shall obtain Alcan's consent to each confirmation as a condition to Big Rivers' obligation to make Interruptible Energy available to Kenergy for scheduling during each fiscal quarter.

(ii) Scheduling of Interruptible Energy. The provision of Interruptible Energy shall be subject to the following requirements:

(A) At the request of Alcan, Kenergy shall submit to Big Rivers, no later than 3:00 PM on the second Business Day prior to the day of the scheduled delivery (or such shorter period agreed to by Big Rivers), a schedule for up to 10 MW of Interruptible Energy, in integral multiples of one MW per Hour, for the times and durations specified in the schedule.

(B) Big Rivers shall be under no obligation to accept the schedule submitted by Kenergy or to deliver the Interruptible Energy so scheduled, but shall, upon receipt of such schedule, notify Kenergy and Alcan by 9:00 AM of the Business Day prior to the day of scheduled delivery of the number of MW, if any, Big Rivers is willing to deliver and the hour and duration when the delivery shall take place (the "Response").

(C) Subject to Big Rivers' rights to interrupt in accordance with Section (a)(iii) below, Big Rivers shall sell and deliver the volume of Interruptible Energy at the time and for the duration specified in the Response (the "Scheduled Interruptible Energy").

(iii) Interruption of Scheduled Interruptible Energy. The sale and delivery of Scheduled Interruptible Energy may be interrupted by Big Rivers at any time (a "Permitted Interruption") upon the following terms and conditions:

(A) Upon a determination by Big Rivers in its sole discretion exercised in good faith that all or any portion of the Scheduled Interruptible Energy will not be available on a System Firm basis, Big Rivers may implement a Permitted Interruption of all or any portion of the Scheduled Interruptible Energy by providing a notice of interruption ("Notice of Interruption") to Kenergy and Alcan at least 30 minutes in advance of the estimated interruption;

(B) A Notice of Interruption may be made orally but shall be followed by facsimile or other electronic means acceptable to Kenergy and Alcan; and

(C) Upon an after-the-fact determination by Big Rivers in its sole discretion exercised in good faith that all or any portion of the Scheduled Interruptible Energy was not available on a System Firm basis during a prior Hour or Hours, and notwithstanding that no Notice of Interruption had been issued, Big Rivers may implement retroactively a Permitted Interruption of Scheduled Interruptible Energy for such prior Hour or Hours, to the extent that such Scheduled Interruptible Energy was not available on a System Firm basis.

Upon meeting the conditions required for a Permitted Interruption, Big Rivers shall have no obligation to sell and deliver the amount of Scheduled Interruptible Energy designated to be interrupted in the applicable Notice of Interruption. In connection with a Permitted Interruption, Big Rivers may provide, but shall not be required to provide, an opportunity for Kenergy to acquire Firm Energy, in lieu of the Scheduled Interruptible Energy, for resale to Alcan pursuant to the terms and conditions of Section 2.3.2(b). In the case of a Permitted Interruption that is implemented retroactively, the Energy delivered by Big Rivers shall be deemed to have been delivered as Back-Up Energy pursuant and subject to Sections 2.3.3 and 4.4. Big Rivers shall not be limited in the number of times that it may issue a Notice of Interruption or may implement a Permitted Interruption, or of the amount or duration of any Permitted Interruption.

(iv) Allocation of Permitted Interruptions. If Kenergy has arranged for Scheduled Interruptible Energy during any Hour to Kenergy under this Agreement for resale to Alcan and to Kenergy under the Century Wholesale Agreement for resale to Century and Big Rivers determines that it will be unable or was unable during any prior Hour or Hours, to supply the full amount of Scheduled Interruptible Energy to Kenergy for both Alcan and Century, then:

(A) Big Rivers may provide a Notice of Interruption and implement a Permitted Interruption to Kenergy with respect to the Scheduled Interruptible Energy for Alcan or with respect to "Scheduled Interruptible Energy" as defined in the Century Retail Agreement, or any combination thereof; and

(B) Big Rivers may retroactively implement Permitted Interruptions for any Hour to Kenergy for Alcan and Century in equal amounts, taking into consideration any Permitted Interruption to Kenergy that had previously been implemented for the same Hour under part (A) above.

(v) Termination of Interruptions. During any period of Permitted Interruption, Big Rivers may notify Kenergy and Alcan of its willingness to terminate the Permitted Interruption and resume the delivery of Scheduled Interruptible Energy at the Interruptible Energy Terms. Upon notification from Big Rivers terminating the Permitted Interruption, Kenergy shall purchase from Big Rivers and resell and deliver Scheduled Interruptible Energy to Alcan at the beginning of the next Hour that starts at least 10 minutes following such notice.

**SCHEDULE 4.11(c)**  
**REFERENCE ANNUAL FUEL COSTS PER MWH**

<u>Year</u>	<u>Fuel Cost per MWH Sales*</u>
2008	15.68
2009	16.44
2010	16.74
2011	17.23
2012	17.65
2013	18.25
2014	17.82
2015	18.37
2016	18.38
2017	18.74
2018	18.43
2019	19.18
2020	19.04
2021	19.90
2022	19.23
2023	19.74

\* Includes cost of Startups

**SCHEDULE 6.2.2**  
**LISTING OF OBLIGATIONS TERMINATED PURSUANT TO THE UNWIND**  
**TRANSACTIONS**

**RETAIL OBLIGATIONS AND AMENDMENTS**

1. Agreement for Electric Service, dated July 15, 1998, between Henderson Union Electric Cooperative Corp. and Alcan Aluminum Corporation
2. Agreement for Electric Service, dated July 15, 1998, between Green River Electric Corporation and Southwire Company
3. Amendment No. 1 to Agreement for Electric Service, dated as of July 15, 1998, between Henderson Union Electric Cooperative Corp. and Alcan Aluminum Corporation
4. Amendment No. 1 to Agreement for Electric Service, dated as of July 15, 1998, between Green River Electric Corporation and Southwire Company
5. Amendment No. 2 to Agreement for Electric Service, dated as of November 30, 2000, between Kenergy Corp. and Alcan Aluminum Corporation
6. Amendment No. 2 to Agreement for Electric Service, dated as of November 30, 2000, between Kenergy Corp. and Southwire Company

**WHOLESALE OBLIGATIONS AND AMENDMENTS**

7. Agreement for Electric Service, dated as of July 15, 1998, between Green River Electric Corporation and LG&E Energy Marketing Inc.
8. Agreement for Electric Service, dated as of July 15, 1998, between Henderson Union Electric Cooperative Corp. and LG&E Energy Marketing Inc.
9. Amendment to Wholesale Power Agreements Dated October 12, 1974 and June 11, 1962 Between Big Rivers Electric Corporation and Kenergy Corp., dated as of November 30, 2000, between Big Rivers Electric Corporation and Kenergy Corp.
10. Amendment to Wholesale Power Agreements Dated February 16, 1988 and June 11, 1962 Between Big Rivers Electric Corporation and Kenergy Corp., dated as of November 30, 2000, between Big Rivers Electric Corporation and Kenergy Corp.
11. Agreement of Big Rivers Electric Corporation with Respect to Future Policies and Procedures Regarding Big Rivers' Transmission System (sometimes referred to as the "Wholesale ISO Agreement"), dated as of July 15, 1998, between Big Rivers Electric Corporation, Green River Electric Corporation, Henderson Union Electric Cooperative Corp., Jackson Purchase Electric Cooperative Corporation, and Meade County Rural Electric Cooperative

#### **CERTAIN REORGANIZATION DOCUMENTS**

12. Letter Regarding Schedule 5.4(a)(1) Provisions Regarding Restitution Amounts, dated July 2, 1998, from Geo. F. Hobday, Jr. on behalf of Big Rivers, sent to Frank N. King, W. David Denton, David C. Brown, Michael Kurtz, Allison Wade, and Charles Ritz
13. Letter Regarding Restitution Payments, dated July 13, 1998, from Michael Kurtz sent to James M. Miller and Geoff Hobday
14. Letter Regarding Restitution Payments, dated July 14, 1998, from Michael Core, on behalf of Big Rivers, sent to Allan Eyre and John Henderson
15. Letter Regarding Restitution Payments, dated July 15, 1998, from Allan B. Eyre, on behalf of Alcan, and John Henderson, on behalf of NSA and Southwire, sent to Michael Core

#### **SECURITY AND LOCKBOX AGREEMENTS**

16. Security and Lockbox Agreement, dated as of July 15, 1998, among PNC Bank, N.A., LG&E Energy Marketing Inc., Kenergy (as successor to Henderson Union), Alcan Corporation (as successor to Alcan Aluminum Corporation) and Alcan Primary Products Corporation (as successor to Alcan Corporation)
17. Security and Lockbox Agreement, dated as of July 15, 1998, by and among LG&E Marketing Inc., Green River Electric Corporation, and Southwire Company

#### **LOAD MANAGEMENT AGREEMENTS**

18. Load Management Agreement for Electric Power Supply, dated as of July 15, 1998, among LG&E Energy Marketing Inc., Alcan Corporation (as successor to Alcan Aluminum Corporation) and Alcan Primary Products Corporation (as successor to Alcan Corporation)
19. Load Management Agreement for Electric Power Supply, dated as of July 15, 1998, among LG&E Energy Marketing Inc., Southwire Company, Century Aluminum Company (as successor to Southwire Company), Century Aluminum of Kentucky LLC (as successor to Century Aluminum Company), Hancock Aluminum LLC (as successor to Century Aluminum of Kentucky LLC), and Century Aluminum of Kentucky General Partnership (as successor to Hancock Aluminum LLC and NSA, Ltd.)

#### **ASSURANCES AND GUARANTIES**

20. Assurances Agreement, dated July 15, 1998, between LG&E Energy Marketing Inc. and Alcan Aluminum Corporation, with Related Guaranty, dated July 15, 1998, executed by LG&E Energy Corp. in favor of Alcan Aluminum Corporation

21. Assurances Agreement, dated July 15, 1998, between LG&E Energy Marketing Inc. and Southwire Company, with Related Guaranty, dated July 15, 1998, executed by LG&E Energy Corp. in favor of Southwire Company
22. Assurances Agreement, dated as of November 30, 2006, between Century Aluminum of Kentucky General Partnership and Big Rivers Electric Corporation
23. First Amendment to Assurances Agreement Dated as of November, 30, 2006, dated as of November \_\_, 2007, by and between Century Aluminum of Kentucky General Partnership and Big Rivers Electric Corporation
24. Guaranty, dated August 1, 2003, from Alcan Corporation to and in favor of the E.ON Parties
25. Guaranty, dated July 15, 1998, of E.ON (as successor to LG&E Energy Corp.) to and in favor of Kenergy (as successor to Henderson Union)
26. Guaranty, dated July 15, 1998, by E.ON (as successor to LG&E Energy Corp.) to and in favor of Kenergy (as successor to Green River Electric Corporation)

#### **INDEMNIFICATION AGREEMENTS**

27. Indemnification and Assignment Agreement, dated July 15, 1998, between Henderson Union Electric Cooperative Corp. and Alcan Aluminum Corporation
28. Indemnification and Assignment Agreement, dated July 15, 1998, between Green River Electric Corporation and Southwire Company

#### **TIER 3 CONTRACTS AND RELATED DOCUMENTS**

29. Agreement for Tier 3 Electric Service (2001-2002), dated as of July 15, 1998, between Green River Electric Company and LG&E Energy Marketing, Inc., with Southwire Company as a third-party beneficiary
30. Agreement for Tier 3 Electric Service (2001-2005), dated as of July 15, 1998, between Green River Electric Company and LG&E Energy Marketing, Inc., with Southwire Company as a third-party beneficiary
31. Agreement for Interruptible Tier 3 Energy, dated as of July 25, 2002, between Kenergy Corp. and Big Rivers Electric Corporation
32. Agreement for Interruptible Tier 3 Energy, dated as of November 5, 2002, between Kenergy Corp. and Big Rivers Electric Corporation
33. Agreement for Interruptible Tier 3 Energy, dated as of September 15, 2003, between Kenergy Corp. and Big Rivers Electric Corporation

34. Agreement for Interruptible Tier 3 Energy, dated as of November 30, 2006, between Kenergy Corp. and Big Rivers Electric Corporation
35. Agreement for Tier 3 Energy (Century), dated as of November 29, 2007, between Kenergy Corp. and Big Rivers Electric Corporation
36. Agreement for Tier 3 Energy (Alcan), dated as of November 29, 2007, between Kenergy Corp. and Big Rivers Electric Corporation
37. Consent to the Agreement for Tier 3 Energy (Alcan), dated November 29, 2007, by Alcan Primary Products Corporation
38. Consent to the Agreement for Tier 3 Energy (Century), dated November 29, 2007, by Century Aluminum of Kentucky General Partnership
39. All other agreements related to the provision of Tier 3 service by or among Big Rivers, Kenergy, the Smelters or any LG&E parties

#### **OTHER AGREEMENTS**

40. Assumption and Consent Agreement, dated as of August 1, 2003, among Alcan Primary Products Corporation, WKE Station Two Inc., LG&E Energy Marketing Inc., Western Kentucky Energy Corp. and Kenergy
41. Undertaking of Alcan Corporation, dated August 1, 2003, from Alcan to and in favor of LG&E Energy Marketing Inc., and the Undertaking of Alcan Aluminum Corporation, dated July 15, 1998, in favor of Henderson Union Electric Cooperative Corporation and LG&E Energy Marketing Inc.
42. Special Assignment Agreement, dated as of March 26, 2001, among LG&E Marketing Inc., Southwire Company, Century Aluminum of Kentucky LLC and Century Aluminum Company
43. Consent and Agreement, dated December 23, 2005, among Century Aluminum of Kentucky LLC, Century Aluminum Company, Hancock Aluminum LLC, NSA, Ltd., Century Aluminum of Kentucky General Partnership, Metalsco, Ltd., Skyliner, Inc., Century Kentucky, Inc. and LG&E Energy Marketing Inc.
44. Agreement with Respect to Procedures Regarding Big Rivers' Transmission System, dated as of July 15, 1998, between Green River Electric Corporation and Southwire Company
45. Agreement with Respect to Procedures Regarding Big Rivers' Transmission System, dated as of July 15, 1998, between Henderson Union Electric Cooperative Corp. and Alcan Aluminum Corporation
46. Joint Use Agreement, dated as of February 8, 2000, between Western Kentucky Energy Corp. and Big Rivers Electric Corporation



**SCHEDULE 6.2.3**  
**LISTING OF CERTAIN DULY AUTHORIZED AND EXECUTED AGREEMENTS**

**RETAIL AGREEMENTS**

1. Retail Electric Service Agreement by and between Kenergy Corp. and Alcan Primary Products Corporation
2. Retail Electric Service Agreement by and between Kenergy Corp. and Century Aluminum General Partnership

**WHOLESALE AGREEMENTS**

3. Wholesale Electric Service Agreement (Alcan) by and between Big Rivers Electric Corporation and Kenergy Corp.
4. Wholesale Electric Service Agreement (Century) by and between Big Rivers Electric Corporation and Kenergy Corp.

**COORDINATION AGREEMENTS**

5. Coordination Agreement by and between Big Rivers Electric Corporation and Alcan Primary Products Corporation
6. Coordination Agreement by and between Big Rivers Electric Corporation and Century Aluminum of Kentucky General Partnership

**LOCKBOX AGREEMENTS**

7. Security and Lockbox Agreement (Alcan) by and among Old National Bank, Big Rivers Electric Corporation, Kenergy Corp., and Alcan Primary Products Corporation
8. Security and Lockbox Agreement (Century) by and among Old National Bank, Big Rivers Electric Corporation, Kenergy Corp., and Century Aluminum of Kentucky General Partnership

**GUARANTEES**

9. Parent Guarantee by Alcan Corporation in favor of Kenergy Corp., and Big Rivers Electric Corporation
10. Parent Guarantee by Century Aluminum Company in favor of Kenergy Corp., and Big Rivers Electric Corporation

**APPENDIX A**  
**Non-FAC Purchased Power Adjustment Factor**

- A. Base Monthly Energy Sales to the smelters are subject to a Non-FAC Purchased Power Adjustment (PPA) to recover purchased power costs that the smelters have agreed to pay and are not otherwise included in Big Rivers' Fuel Adjustment Clause (FAC).
- B. Definitions

Definitions have the meanings given to them in the Agreement except as provided below:

"Account" is the specified numbered account as set forth in the Uniform System of Accounts – Electric, promulgated under Bulletin 1767B-1 by the Rural Utilities Service, an agency of the U.S. Department of Agriculture.

"SEPA" is the Southeastern Power Administration, an agency of the U.S. Department of Energy, or any successor agency.

"Wholesale Smelter Agreements" are the Alcan Wholesale Agreement and the Century Wholesale Agreement.

C. Determination of the PPA

- (1) The monthly amount computed for all wholesale sales to which this PPA is applicable shall be increased or decreased at a rate per kWh in accordance with the following formula:

$$PPA = PP(m)/S(m) - PP(b)/S(b)$$

Where PPA is the PPA Factor for the month; PP(m) is the current Purchased Power Cost for the month; S(m) is the current applicable sales; PP(b) is the Purchased Power Cost for the base period; and S(b) is the sales in the base period. For the initial base period, PP(b)/S(b) (the "Purchased Power Base") is \$0.00175.

- (2) Purchased Power Costs (PP) shall be the sum of:
- (a) The total cost of power purchased (including purchases from SEPA) that is expensed by Big Rivers to Account 555 (excluding those costs that are recovered through Big Rivers' FAC and excluding costs expensed to Account Nos. 555.150, 555.151, and 555.152 regarding Big Rivers' cost share of HMP&L's Station Two) including transmission and related costs that are expensed to Account 565;
  - (b) The total amount of any adjustments to Purchased Power Costs attributable to prior months, whether positive or negative; and
  - (c) The total cost of amounts credited by Big Rivers to Kenergy with respect to voluntary curtailments under Section 4.13.2 of either Smelter Wholesale Agreement to allow Big Rivers to avoid market priced purchases of power.

Less:

- (d) The total cost of power purchased directly associated with sales (including related system energy losses) by Big Rivers either to non-Member purchasers of power or to Kenergy under either Wholesale Smelter Agreement for resale to either Smelter as energy products other than Base Monthly Energy, assuming SEPA power followed by the lowest cost power, whether generated or purchased, shall be allocated to Applicable Sales.
- (3) Applicable Sales (S) shall be all kilowatt-hours sold at wholesale by Big Rivers (a) to its Members under all electric rate schedules, including the Large Industrial Rate, for resale to Kentucky ratepayers (other than the Smelters), and (b) to Kenergy as Base Monthly Energy as defined in each of the Wholesale Smelter Agreements.
- (4) The current month (m) shall be the second month preceding the month in which the PPA Factor is billed.

Exhibit A - Retail and Wholesale Service Agreement Examples - Combines Alcan and Century Smelter Charges and Credits - (for purposes of examples, Retail Fee set at zero)  
2009

Annualized Basis

Case	Derivation	Base Case	Low Load Factor	High Load Factor	Supplemental Energy (4.3)	Backup Energy (4.4)	Surplus Sales (10.1)	Undeliverable Energy Sales (10.2)	Profile Reduction Sales (10.3)	Curtailment (for Purchased Power) (4.13.2)	Economic Sales (4.13.3)
1	1.1.15 - Base Demand (MW) (a)	850.0	850.0	850.0							
2	1.1.16 - Base Fixed Energy (TWh) (b)	7,297	7,297	7,297							
3	Energy Balance (Annual TWh)										
4	Assumed Load Factor										
5	Metered Energy	98%	98%	100%							
6	2.3.2 - Supplemental Energy	7,297	7,146	7,446							
7	2.3.2(a) Interruptible Energy/				Interruptible Energy	Buy-Through Energy	Market Energy	4.4.1 (a) and (b)	4.4.1 (c)		
8	2.3.2(b) Buy-Through Energy				20 MW (10 Smelters) for 75% of Hours in Year	40 MW (10 Smelters) for 75% of Hours in Year	40 MW (10 Smelters) for 75% of Hours in Year	10% of Base Fixed Energy	115 MW @ 98% Load Factor x 12 Months	Example curtail all market purchases	Max of 9,600 MWh
9	2.3.2(c) Market Energy				0.131	0.131	0.131				
10	Sold										
11	1.1.13 - Backup Energy										
12	4.4.1(a) and (b) (within 10MW per Smelter)										
13	4.4.1(c) - Excess										
14	1.1.15 - Base Curtailment of Purchased Power										
15	4.13.3 - Economic Sales										
16	10.1 - Surplus Sales										
17	10.2 - Undeliverable Energy Sales										
18	10.3 - Profile Reduction Sales										
19	1.1.19 / 19 - Base Hourly/Monthly Energy										
20	1.1.20 - Base Variable Energy										
21	Key Rates										
22	Market Energy Price										
23	4.3 - Supplemental Energy **										
24	4.3.1 - Interruptible Energy Rate										
25	4.3.2 - Buy-Through Energy Rate										
26	4.3.3 - Market Energy Rate										
27	4.4 - Backup Energy Rate										
28	4.4.1(a) and (b) (within 10MW per Smelter)										
29	4.4.1(c) - Excess										
30	1.1.21 - Base Rate										
31	1.1.23 - Base Variable Rate										
32	1.1.52 - FAC Factor										
33	1.1.43 - Environmental Surcharge Factor										
34	1.1.64 - Non-FAC Purchased Power Adjustment Factor										
35	4.11.4 - Surcharges:										
36	4.11 (a)										
37	4.11 (b)										
38	4.11 (c)										
39	* Placeholder value intended to represent costs of energy, plus appropriate inclusion or exclusion of transmission services charges or other expenses, per the Retail Service Agreement (see also Net Proceeds, below).										
40	** Assumed prices at cost, for illustration										

**Exhibit A - Retail and Wholesale Service Agreement Examples - Combines Alcan and Century Smelter Charges and Credits (for purposes of examples, Retail Fee set at zero)**  
**2009**

Case	Derivation	Annualized Basis								Economic Sales (4,13.3)										
		Base Case	Low Load Factor	High Load Factor	Supplemental Energy (4.3)	Backup Energy (4.4)	Surplus Sales (10.1)	Undeliverable Sales (10.2)	Postline Reduction Sales (10.3)		Containment 1 for Purchased Power (4,13.2)									
46																				
47																				
48	4.2 Base Energy Charge	205.4	203.6	207.3	205.4	205.4	205.4	205.4	205.4	205.4	205.4	205.4	205.4	205.4	205.4	205.4	205.4	205.4	205.4	
49	4.3 Supplemental Energy Charge																			
50	4.3.1 Interruptible Energy				8.0															
51	4.3.2 Buy-Through Energy				8.0															
52	4.3.3 Market Energy																			
53	4.4 Backup Energy Charge																			
54	4.4.1(a) and (b) (within 10MW per Smelter)																			
55	4.4.1(c) - Excess																			
56	4.5 Transmission Services Charge																			
57	4.6 Excess Reactive Demand Charge																			
58	4.7 TIER Adjustable Charge																			
59	4.8 Adjustable Charges																			
60	4.9.1 FAC Charge																			
61	4.9.2 Non-FAC Purchased Power Adjustment Charge																			
62	4.9.3 Environmental Surcharge																			
63	4.9 Rebate																			
64	4.10 Equity Development Credit																			
65	4.11 Surecharge																			
66	4.11 (a)																			
67	4.11 (b)																			
68	4.11 (c)																			
69	4.11 (d)																			
70	4.12 Retail Fee																			
71	Total Charges																			
72	Credits (\$M)	314.6	310.7	318.4	322.6	330.6	322.6	339.6	322.6	338.6	308.2	314.6	314.6	314.6	314.6	314.6	314.6	314.6	314.6	314.6
73	Net Proceeds																			
74	Avoidable Base Charge																			
75	4.13																			
76	4.13.1 Surplus, Undeliverable Energy, and Postline Reduction Sales																			
77	Surplus Sales																			
78	Undeliverable Energy, and Postline Reduction Sales																			
79	4.13.2 Curtailment for Purchased Power																			
80	4.13.3 Economic Sales																			
81	4.13.4 Market Energy Sales																			
82	Total Credits																			
83	Net Charges	314.6	310.7	318.4	322.6	326.6	322.6	338.6	322.6	338.6	308.2	314.6	314.6	314.6	314.6	314.6	314.6	314.6	314.6	314.6
84	Net Charges per MWh Metered																			
85	1.1, 7.9, 10.1, 10.2, 3, 10.3, 7, and 13.3). Administrative fees are modeled per section 4.13.1.																			
86																				
87																				
88																				



Exhibit A - Retail and Wholesale Service Agreement Examples - Combines Alcan and Century Smelter Charges and Credits - (for purposes of examples, Retail Fee set at zero) Year Modified:

2003

Case	Derivation	Base Case	Low Load Factor	High Load Factor	Supplemental Energy (4.3)	Backup Energy (4.4)	Surplus Sales (10.1)	Undeliverable Energy Sales (10.2)	Poline Reduction Sales (10.3)	Curtailment for Purchased Power (4.13.2)	Economic Sales (4.13.3)		
					Interruptible Energy Through Market Buy-Through Energy (10) 20 MW per Smelter for 75% of Hours in Year	Market Energy (10) 40 MW for 75% of Hours in Year	4.4.1 (a) and (b) 20 MW for 75% of Hours in Year	4.4.1 (c) 40 MW for 75% of Hours in Year	10% of Base Fixed Energy	6 Month Duration	115 MW @ 98% Load Factor x 12 Months	Example curtails all market purchases	Max. of 9,600 MWh
131	4.7 TIER Adjustment Charge												
132	4.7.5 TIER Adjustment												
133	System Revenues Before TIER Adjustment												
134	Base Case	579,409	579,409	579,409	579,409	579,409	579,409	579,409	579,409	579,409	579,409	579,409	579,409
135	Increment from Base Case (Accounts for Both Smelters)												
136	Base Energy Charge		(1.9)	1.9									
137	FACI/ES/PPA Charges		(2.0)	2.0									
138	Supplemental Energy												
139	Backup Energy				8.0	8.0	16.0	8.0	8.0	8.0	8.0	8.0	8.0
140	Net Proceeds												
141	Less: Credits												
142	Total Increment from Base Case		(3.9)	3.9	8.0	8.0	16.0	8.0	8.0	8.0	8.0	8.0	8.0
143	Total Revenues		575.5	583.3	587.4	595.4	597.4	603.3	597.4	603.3	597.4	603.3	597.4
144	System Expenses Before TIER Adjustment												
145	Base Case - Gross	579.4											
146	Net Debit to Power Purchases reflected in Regulatory Account	564.4	564.4	564.4	564.4	564.4	564.4	564.4	564.4	564.4	564.4	564.4	564.4
147	Base Case - Net	(0.3)	(0.3)	(0.3)	(0.3)	(0.3)	(0.3)	(0.3)	(0.3)	(0.3)	(0.3)	(0.3)	(0.3)
148	Increment from Base Case	564.1	564.1	564.1	564.1	564.1	564.1	564.1	564.1	564.1	564.1	564.1	564.1
149	Variable Costs -												
150	Power Purchases		(3.9)	3.9									
151	Interest (net of capitalization)												
152	Other												
153	Total Increment from Base Case												
154	Total Expenses		(3.9)	3.9	8.0	8.0	16.0	8.0	8.0	8.0	8.0	8.0	8.0
155	Net Margin Before TIER Adjustment	564.1	560.3	565.0	572.1	580.1	572.1	580.1	572.1	580.1	572.1	580.1	572.1
156	Interest Charges Plus Net Margin	15.3	15.3	15.3	15.3	15.3	15.3	15.3	15.3	15.3	15.3	15.3	15.3
157	Interest Charges	68.8	68.8	68.8	68.8	68.8	68.8	68.8	68.8	68.8	68.8	68.8	68.8
158	Base Case	53.6	53.6	53.6	53.6	53.6	53.6	53.6	53.6	53.6	53.6	53.6	53.6
159	Increment from Base Case												
160	Total	53.6	53.6	53.6	53.6	53.6	53.6	53.6	53.6	53.6	53.6	53.6	53.6
161	Pre-Adjustment TIER	53.6	53.6	53.6	53.6	53.6	53.6	53.6	53.6	53.6	53.6	53.6	53.6
162	Incremental Revenue Needed to Achieve TIER = 1.24x	1,285	1,285	1,285	1,285	1,285	1,285	1,285	1,285	1,285	1,285	1,285	1,285
163	Adjustments:	(2.4)	(2.4)	(2.4)	(2.4)	(2.4)	(2.4)	(2.4)	(2.4)	(2.4)	(2.4)	(2.4)	(2.4)
164	4.7.5(f) No revenue from Economic/ Transition Reserves												
165	Other	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
166	Total	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
167	TIER Adjustment	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
168	TIER Adjustment Charge	(1.0)	(1.0)	(1.0)	(1.0)	(1.0)	(1.0)	(1.0)	(1.0)	(1.0)	(1.0)	(1.0)	(1.0)
169	Max. of line 167 and zero												
170	4.9 Rebate												
171	Excess TIER Amount	(1.0)	(1.0)	(1.0)	(1.0)	(1.0)	(1.0)	(1.0)	(1.0)	(1.0)	(1.0)	(1.0)	(1.0)
172	Rebate:												
173	Smelter MWh	66%	66%	66%	66%	66%	66%	66%	66%	66%	66%	66%	66%
174	Rebate	(0.7)	(0.7)	(0.7)	(0.7)	(0.7)	(0.7)	(0.7)	(0.7)	(0.7)	(0.7)	(0.7)	(0.7)
175													
176	Example assumes variable costs incurred at rate stipulated in 1.1.2.1, plus FAC, Environmental Surcharge, and PPA												
177													

Exhibit A - Retail and Wholesale Service Assessment Examples - Combines Alean and Century Smelter Charges and Credits - (for purposes of examples, Retail Fee set at zero) Year Modeled: 2009

Case	Derivation	Annualized Basis									
		Base Case	Low Load Factor	High Load Factor	Supplemental Energy (4.3)	Backup Energy (4.4)	Surplus Sales (10.1)	Undeliverable Energy Sales (10.2)	Poling Reduction Sales (10.3)	Curtailment Purchased Power (4.13.2)	Economic Sales (4.13.3)
178	Quarterly TIER Adjustment Charge				Interruptible Energy	4.4.1 (a)	4.4.1 (c)	6 Month Duration	115 MW @ 98% Load Factor x 12 Months	Example Curtailment all market purchases	Max. of 9,600 MWh
179		Base Case			Through Energy	4.4.1 (a) and (b)	4.4.1 (c)	10% of Base Fixed Energy			
180	Revenues				Buy-Through Energy						
181	Expenses	579.4			Market Energy						
182	Net Margin Before TIER	564.1			20 MW (10 Smelter) for 75% of Hours in Year	20 MW (10 Smelter) for 75% of Hours in Year	40 MW for 75% of Hours in Year/10 Resold				
183	Interest + Margin	15.3									
184	Interest Charges	68.6									
185	Pre-Adjustment TIER	53.6									
186	Increment Needed for 1.24x	1.28									
187	Adjustments	(2.4)									
188	TIER Adjustment	1.4									
189	TIER Adjustment Charge	(1.0)									
190	1st Q										
191	2nd Q										
192	3rd Q										
193	4th Q										
194											
195											
196	* Illustrative Forecast Weights (actual forecast methodologies to be determined)										
197	YTD										
198	Original Budget										
199											
200	YTD										
201	Revenues										
202	Expenses										
203	Net Margin Before TIER										
204	Interest + Margin										
205	Interest Charges										
206	Pre-Adjustment TIER										
207	Increment Needed for 1.24x										
208	Adjustments										
209	TIER Adjustment										
210	TIER Adjustment Charge										
211	Revised Full-Year Forecast										
212	Revenues										
213	Expenses										
214	Net Margin Before TIER										
215	Interest + Margin										
216	Interest Charges										
217	Pre-Adjustment TIER										
218	Increment Needed for 1.24x										
219	Adjustments										
220	TIER Adjustment										
221	TIER Adjustment Charge										



Exhibit A - Retail and Wholesale Service Agreement Examples - Combines Alean and Century Smelter Charges and Credits - (for purposes of examples, Retail Fee set at zero)  
2009

Illustrative Quarterly Basis - Base Case

Case	Derivation	Base Case				Q1	Q2	Q3	Q4	Pre-Adjusted Year	Adjust. TIER Adjustment	Rebate	Adjusted Year
		Q1	Q2	Q3	Q4								
1	1.1.16 - Base Demand (MWh) (a)	850.0	850.0	850.0	850.0	850.0	850.0	850.0	850.0			850.0	
2	1.1.16 - Base Fixed Energy (TWh) (b)	7.297	1.824	1.824	1.824	1.824	1.824	1.824	1.824			7.297	
3													
4	Energy Balance (Annual TWh)												
5	Net Load Factor	99%	96%	96%	96%	96%	96%	96%	96%			96%	
6	Net Load Energy	7.297	1.787	1.787	1.787	1.787	1.787	1.787	1.787			7.297	
7	2.3.2 - Supplemental Energy												
8	2.3.2(a) Interruptible Energy												
9	2.3.2(b) Buy-Through Energy												
10	2.3.2(c) Market Energy												
11	Consumed												
12	Sold												
13	1.1.13 - Backup Energy												
14	4.4.1(a) and (b) (within 10MW per Smelter)												
15	4.4.1(c) - Excess												
16	1.1.15 - Base Curtailed Energy												
17	4.13.2 - Curtailment of Purchased Power												
18	4.13.3 - Economic Sales												
19	10.1 - Surplus Sales												
20	10.2 - Undeliverable Energy Sales												
21	10.3 - Potline Reduction Sales												
22	1.1.18 / 19 - Base Hourly/Monthly Energy												
23	1.1.22 - Base Variable Energy												
24													
25	Key Rates												
26	Market Energy Price												
27	4.3 - Supplemental Energy **												
28	4.3.1 - Interruptible Energy Rate												
29	4.3.2 - Buy-Through Energy Rate												
30	4.3.3 - Market Energy Rate												
31	4.4 - Backup Energy Rate												
32	4.4.1(a) and (b) (within 10MW per Smelter)												
33	4.4.1(c) - Excess												
34	1.1.72 - Market Reference Rate												
35	1.1.21 - Base Rate												
36	1.1.23 - Base Variable Rate												
37	1.1.24 - FAC Factor												
38	1.1.43 - Environmental Surcharge Factor												
39	1.1.84 - Non-FAC Purchased Power Adjustment Factor												
40	4.11.4 - Surcharges:												
41	4.11 (a)												
42	4.11 (b)												
43	4.11 (c)												
44	** Placeholder value intended to represent costs of energy, plus appropriate inclusion or exclusion of transmission service												
45	** Assumed priced at cost, for illustration												

Exhibit A - Retail and Wholesale Service Agreement Examples - Combines Alean and Century Smelter Charges and Credits - (for purposes of examples, Retail Fee set at zero)  
2009

Case	Derivation	Illustrative Quarterly Basis - Base Case				Rebate	Adjusted Year
		Q1	Q2	Q3	Q4		
46	Charges (\$M)						
47	4.2 Base Energy Charge						
48	4.3 Supplemental Energy Charge						
49	4.3.1 Interruptible Energy						
50	4.3.2 Buy-Through Energy						
51	4.3.3 Market Energy						
52	4.4 Back-up Energy Charge						
53	4.4.1(a) and (b) (within 10MW per Smelter)						
54	4.4.1(c) - Excess						
55	4.5 Transmission Services Charge						
56	4.6 Excess Reactive Demand Charge						
57	4.7 TIER Adjustment Charge						
58	4.8 Adjustable Charge						
59	4.8.1 FAC Charge						
60	4.8.2 Non-FAC Purchased Power Adjustment Charge						
61	4.8.3 Environmental Surcharge						
62	4.9 Rebate						
63	4.10 Equity Development Credit						
64	4.11 Surcharge						
65	4.11(a)						
66	4.11(b)						
67	4.11(c)						
67A	4.11(d)						
68	4.12 Retail Fee						
69	Total Charges						
70							
71							
72	Credits (\$M)						
73	Net Proceeds						
74	Available Base Charge						
75							
76	4.13						
77	4.13.1 Surplus, Undeliverable Energy, and Profile Reduction Sales						
78	Surplus Sales						
79	Undeliverable Energy, and Profile Reduction Sales						
80	4.13.2 Curtailment and Purchased Power						
81	4.13.3 Economic Sales						
82	4.13.4 Market Energy Sales						
83							
84	Total Credits						
85	Net Charges						
86	Net Charges per MWh Metered						
87	* Computed calculation; in practice would include estimated Big Rivers tax liability (as applicable per sections 1.1.7.9, 10.1.4, 10.3.3, 10.3.7, and 13.3). Administrative fees are modeled per section 4.13.1.						
88							

Exhibit A - Retail and Wholesale Service Agreement Examples - Combines Alean and Century Smelter Charges and Credits... (for purposes of examples, Retail Fee set at zero) 2009

Illustrative Quarterly Basis - Base Case

Case	Derivation	Base Case	Illustrative Quarterly Basis - Base Case				Rebate	Adjusted Year
			Q1	Q2	Q3	Q4		
89	Supporting Schedules							
90	1.1.21 Smelter Base Rate							
91	Large Industrial Rate							
92	Load Factor (%)							
93	Energy (\$/MWh)							
94	Demand (\$/KWmo.)							
95	Blend							
96	MDA (\$/MWh)							
97	Net Rate (\$/MWh)							
98	Large Industrial Rate @ 95% LF							
99	Plus Margin							
100	Smelter Base Rate							
101								
102								
103	1.1.23 Base Variable Rate							
104	FAC Base							
105	Environmental Surcharge base							
106	Purchased Power Base							
107	Total							
108								
109	4.11 (c) Surcharge							
110	Reference Fuel Expense (\$/MWh)							
111	Actual Fuel Expense (\$/MWh)							
112	Min. of (i) Actual Less Reference and (ii) \$0.60 (not less than zero)							
113								
114	1.1.12 Avoidable Base Charge							
115	1.1.11(b)							
116	(i) Base Rate plus Adjustable Charge Rates							
117	(ii) Base Fixed Energy made available whether or not sold							
118	SM							
119	Plus							
120	1.1.11(b)							
121	(i) Base Variable Rate plus Adjustable Charge Rates							
122	(ii) Base Variable Energy made available whether or not sold							
123	SM							
124	Less							
125	1.1.11(c)							
126	(i) Base Variable Rate plus Adjustable Charge Rates							
127	(ii) Base Fixed or Variable Energy neither Metered nor Sold							
128	SM							
129	Net							
130								

Exhibit A - Retail and Wholesale Service Agreement Examples - Combines Alean and Century Smelter Charges and Credits - (for purposes of examples, Retail Fees set at zero) Year Modeled: 2009

Case	Derivation	Illustrative Quarterly Basis - Base Case					Rebate	Adjusted Year
		Q1	Q2	Q3	Q4	Pre-Adjusted Year		
131	4.7 TIER Adjustment Charge							
132	4.7.5 TIER Adjustment							
133	System Revenues Before TIER Adjustment							
134	Base Case	Adj. Per 4.7.3	Adj. Per 4.7.3	Adj. Per 4.7.3	Adj. Per 4.7.3	4.7.4	4.9	
135	Increment from Base Case (Accounts for Both Smelters):							
136	Base Energy Charge	96% load factor/ expense 5% above avg.	100% load factor/ expense 5% above avg.	88% load factor/ expense 0% above avg.	98% load factor/ expense 10% below avg.			
137	FAC/ ESI/ PPA Charges	(0.5)	0.5	-	-			
138	Supplemental Energy	(0.5)	0.5	-	-			
139	Backup Energy							
140	Net Proceeds							
141	Less: Credits							
142	Total Increment from Base Case	(1.0)	1.0	-	-	(0.0)		
143	Total Revenues	138 + 137 + 136 + 139 + 140 + 141	143.9	144.9	144.9	144.9	579.4	579.4
144	System Expenses Before TIER Adjustment							
145	Base Case - Gross							
146	Net Debit to Power Purchases reflected in Regulatory Account							
147	Base Case - Net							
148	Increment from Base Case							
149	Variable Costs *							
150	Power Purchases							
151	Interest (net of capitalization)							
152	Other							
153	Total Increment from Base Case							
154	Total Expenses							
155	Net Margin Before TIER Adjustment							
156	Interest Charges Plus Net Margin							
157	Interest Charges:							
158	Base Case							
159	Increment from Base Case							
160	Total							
161	Pre-Adjustment TIER							
162	Incremental Revenue Needed to Achieve TIER = 1.24x							
163	Adjustments:							
164	4.7.5(0) No revenue from Economic/ Transition Reserves							
165	Other							
166	Total							
167	TIER Adjustment							
168	TIER Adjustment Charge							
169	4.9 Rebate							
170	Excess TIER Amount							
171	Rebate:							
172	Smelter MWH							
173	Rebate							
174	Example assumes variable costs incurred at rate stipulated in 1.1.2.1, plus FAC, Environmental Surcharge, and PPA							
175								
176								
177								

Exhibit A - Retail and Wholesale Service Agreement Examples - Combines Alcan and Century  
Smaller Charges and Credits - (for purposes of examples, Retail Fee set at zero)  
Year Modeled: 2009

Illustrative Quarterly Basis - Base Case

Case	Derivation	Base Case				Intermediate Annual Forecasts *				Rebate	Adjusted Year	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
		3 Months Actual, 9 Months Forecast	6 Months Actual, 6 Months Forecast	9 Months Actual, 3 Months Forecast	Change Applicable to Next Quarter	Change Applicable to Next Quarter	Change Applicable to Next Quarter	Change Applicable to Next Quarter	Pre-Adjusted Year	Adjusted Tier Adjustment		
176	Quarterly TIER Adjustment Charge											
179	Base Case											
180	Revenues	579.4	579.4	579.4		579.4	579.4	579.4				
181	Expenses	584.1	570.2	578.2		578.2	578.2	578.2				
183	Net Margin Before TIER	15.3	9.2	1.2		1.2	1.2	1.2				
184	Interest + Margin	68.8	61.8	54.7		54.7	54.7	54.7				
185	Interest Charges	53.6	53.6	53.6		53.6	53.6	53.6				
186	Pre-Adjustment TIER	1.28	1.2	1.0		1.0	1.0	1.0				
187	Increment Needed for 1.24x	(2.4)	4.8	11.7		11.7	11.7	11.7				
188	Adjustments	1.4	1.4	1.4		1.4	1.4	1.4				
189	TIER Adjustment	(1.0)	6.0	13.1		13.1	13.1	13.1				
190	TIER Adjustment Charge											
191	1st Q											
192	2nd Q											
193	3rd Q											
194	4th Q											
195												
196	* Illustrative Forecast Weightings (actual forecast methodologies to be determined)											
197	YTD	25%	75%	50%		50%	50%	75%				
198	Original Budget											
199	YTD											
200	YTD											
201	Revenues	143.9	289.7	434.6		289.7	434.6	434.6				
202	Expenses	147.1	286.2	437.2		286.2	437.2	437.2				
203	Net Margin Before TIER	(3.2)	(6.5)	(2.6)		(6.5)	(6.5)	(6.5)				
204	Interest + Margin	10.2	20.3	37.5		20.3	37.5	37.5				
205	Interest Charges	13.4	26.8	40.2		26.8	40.2	40.2				
206	Pre-Adjustment TIER	0.76	0.76	0.95		0.76	0.76	0.95				
207	Increment Needed for 1.24x	6.4	12.9	12.3		12.9	12.3	12.3				
208	Adjustments	0.4	0.7	1.1		0.7	1.1	1.1				
209	TIER Adjustment	6.8	13.6	13.3		13.6	13.3	13.3				
210	TIER Adjustment											
211	Revised Full-Year Forecast											
212	Revenues	578.4	578.4	578.4		578.4	578.4	578.4				
213	Expenses	570.2	570.2	570.2		570.2	570.2	570.2				
214	Net Margin Before TIER	8.2	8.2	8.2		8.2	8.2	8.2				
215	Interest + Margin	61.8	61.8	61.8		61.8	61.8	61.8				
216	Interest Charges	53.6	53.6	53.6		53.6	53.6	53.6				
217	Pre-Adjustment TIER	1.15	1.15	1.02		1.02	1.02	1.02				
218	Increment Needed for 1.24x	4.8	11.7	11.7		11.7	11.7	11.7				
219	Adjustments	1.4	1.4	1.4		1.4	1.4	1.4				
220	TIER Adjustment	6.0	6.0	6.0		6.0	6.0	6.0				
221												

## **Exhibit Blackburn Rebuttal-2**

**Wholesale Electric Service Agreement (Alcan) dated as of July 1, 2009  
between Big Rivers Electric Corporation and Kenegy Corp.**

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**WHOLESALE ELECTRIC SERVICE AGREEMENT  
(ALCAN)**

Dated as of July 1, 2009,

by and between

**BIG RIVERS ELECTRIC CORPORATION**

and

**KENERGY CORP.**

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## WHOLESALE ELECTRIC SERVICE AGREEMENT (ALCAN)

This WHOLESALE ELECTRIC SERVICE AGREEMENT (ALCAN) (this "Agreement") is dated as of July 1, 2009, and made by and between BIG RIVERS ELECTRIC CORPORATION, a Kentucky rural electric cooperative corporation ("Big Rivers"), and KENERGY CORP., a Kentucky rural electric cooperative corporation ("Kenergy").

### RECITALS

A. Big Rivers is a generation and transmission cooperative and Kenergy is a member of Big Rivers.

B. Kenergy currently supplies and delivers to Alcan Primary Products Corporation, a Texas corporation ("Alcan"), the owner and operator of an aluminum reduction plant in Sebree, Kentucky, electric energy and related services pursuant to an Agreement for Electric Service, dated July 15, 1998, between Henderson Union Electric Cooperative Corp., Kenergy's predecessor-in-interest, and Alcan Aluminum Corporation, Alcan's predecessor-in-interest (the "Existing Alcan Agreement").

C. Kenergy currently purchases electric energy and related services for resale to Alcan from Western Kentucky Energy Corp., an affiliate of E. ON U.S., LLC, formerly known as LG&E Energy Corp. (together with its affiliates and parent, collectively, "LG&E"), under an Agreement for Electric Service, dated as of July 15, 1998, with Kenergy (the "Kenergy/LG&E Contract").

D. Kenergy also currently purchases additional electric energy and related services for resale to Alcan, to serve the energy requirements of Alcan not provided by LG&E, from third-party energy suppliers, including Big Rivers.

E. The Existing Alcan Agreement and the Kenergy/LG&E Contract were entered into in connection with the consummation of a series of transactions implementing the First Amended Plan of Reorganization of Big Rivers, as part of which, among other things (i) Big Rivers leased its generating facilities to LG&E, and (ii) Big Rivers entered into a power purchase arrangement with LG&E whereby LG&E supplied Big Rivers with electric energy and related services for resale to its Members.

F. Big Rivers, Kenergy, LG&E, Century Aluminum of Kentucky General Partnership ("Century"), and Alcan have agreed to enter into a series of transactions referred to herein as the New Transaction and the Unwind Transaction, as defined below.

G. In connection with and as a condition to the Unwind Transaction, Big Rivers has agreed to supply, and Kenergy has agreed to purchase, a certain amount of wholesale electric service for resale to Alcan on the terms and conditions set forth herein, and Kenergy and Alcan have agreed to enter into a retail electric service agreement, dated as of the date hereof, with obligations corresponding to those set forth in this Agreement (the "Alcan Retail Agreement").

## AGREEMENT

NOW, THEREFORE, in consideration of the premises and the mutual covenants hereinafter set forth, the Parties, intending to be legally bound, hereby covenant and agree as follows:

### ARTICLE 1

#### DEFINITIONS AND RULES OF INTERPRETATION

1.1 Definitions. Capitalized terms when used in this Agreement have the meanings specified herein, including the definitions provided in Article 1, unless stated otherwise or the context requires otherwise.

1.1.1 Accounting Principles: Generally accepted accounting principles consistently applied or, if generally accepted accounting principles in accordance with the uniform system of accounts of an applicable Governmental Authority or RUS are required, the generally accepted accounting principles consistently applied in accordance with such uniform system of accounts, each as in effect from time to time.

1.1.2 Affiliate: With respect to a specified Person, another Person that directly, or indirectly through one or more intermediaries, controls or is controlled by or is under common control with the specified Person. For avoidance of doubt, no Member is an Affiliate of Big Rivers.

1.1.3 Agreement: As defined in the Preamble.

1.1.4 Alcan: As defined in the Recitals.

1.1.5 Alcan Guarantee: As defined in the Alcan Retail Agreement.

1.1.6 Alcan Parent: Alcan Corporation, a Texas corporation, and parent corporation to Alcan.

1.1.7 Alcan Retail Agreement: As defined in the Recitals.

1.1.8 Ancillary Services: Those services that are necessary to support the transmission of Energy from resources to loads while maintaining reliable operations of Big Rivers' transmission system, as set forth and described in the OATT.

1.1.9 Applicable Law: All laws, statutes, codes, treaties, ordinances, judgments, decrees, injunctions, writs, orders, rules, regulations, interpretations, issuances, enactments, decisions, authorizations, permits or directives of any Governmental Authority having jurisdiction over the matter in question.

1.1.10 Applicable Percentage: The percentage determined in each Fiscal Year that is the quotient of the Base Demand divided by the sum of the Base Demand and the "Base Demand" as defined in and as then in effect under the Century Retail Agreement. If the

Century Retail Agreement is terminated or no longer in effect for any reason, Century's "Base Demand" shall be deemed to be 482 MW for purposes of calculating the Applicable Percentage.

1.1.11 Avoidable Base Charge: The amount in any Billing Month equal to the sum of:

(a) the product of (i) the sum of the Base Rate, the FAC Factor, the Environmental Surcharge Factor, and the Non-FAC Purchased Power Adjustment Factor, and (ii) the amount of Base Fixed Energy that was made available by Alcan to Big Rivers for Surplus Sales, regardless of whether Big Rivers was able to sell such Energy as Surplus Sales;

(b) *plus* the product of (i) the sum of the Base Variable Rate, the FAC Factor, the Environmental Surcharge Factor, and the Non-FAC Purchased Power Adjustment Factor, and (ii) the amount of Base Variable Energy that was made available by Alcan to Big Rivers for Surplus Sales, regardless of whether Big Rivers was able to sell such Energy as Surplus Sales; and

(c) *less* the product of (i) the sum of the Base Variable Rate, the FAC Factor, the Environmental Surcharge Factor, and the Non-FAC Purchased Power Adjustment Factor, and (ii) any Base Fixed Energy or Base Variable Energy made available by Alcan to Big Rivers for Surplus Sales that was neither metered at the Point of Delivery nor sold by Big Rivers as Surplus Sales.

Sample calculations of the Avoidable Base Charge are set forth in Exhibit A.

1.1.12 Back-Up Energy: For any Hour in a Billing Month, the amount of Energy metered at the Point of Delivery during such Hour, less the sum of (i) the Base Demand per Hour less Base Curtailed Energy in such Hour, and (ii) any Supplemental Energy metered at the Point of Delivery during such Hour; *provided*, that the amount of Back-Up Energy may not be less than zero.

1.1.13 Back-Up Energy Charge: As defined in Section 4.4.

1.1.14 Base Curtailed Energy: For any Hour in a Billing Month, the amount of Energy that is either (a) curtailed by Alcan pursuant to Section 4.13.2, or (b) sold by Big Rivers to one or more Third Parties pursuant to (i) Section 4.13.3 as Economic Sales, (ii) Section 10.1 as Surplus Sales, (iii) Section 10.2 as Undeliverable Energy Sales, or (iv) Section 10.3 as Potline Reduction Sales.

1.1.15 Base Demand: 368 MW, or such other amount of electric demand agreed in accordance with Section 3.1, integrated over an Hour.

1.1.16 Base Energy Charge: As defined in Section 4.2.

1.1.17 Base Fixed Energy: For any Billing Month, the product of (a) the Base Demand, (b) the number of Hours in the Billing Month, and (c) 0.98.

1.1.18 Base Hourly Energy: For any Hour in a Billing Month, the amount of Energy equal to the sum of (a) the Energy metered at the Point of Delivery during such Hour *less* (i) Supplemental Energy and (ii) “Market Energy” as defined under the Alcan Retail Agreement that was purchased by Kenergy from Third Party Suppliers for resale to Alcan, each as metered at the Point of Delivery, if any, and (b) Base Curtailed Energy; *provided*, that for purposes of calculating Base Hourly Energy, the sum of clauses (a) and (b) above during any Hour shall not exceed the Base Demand per Hour.

1.1.19 Base Monthly Energy: The sum of the Base Hourly Energy for all Hours of a Billing Month.

1.1.20 Base Rate: The rate, expressed in dollars per MWh, resulting from the application of the Large Industrial Rate to a load with a 98% load factor, plus \$0.25 per MWh.

1.1.21 Base Variable Energy: For any Billing Month, Base Monthly Energy less Base Fixed Energy, whether positive or negative.

1.1.22 Base Variable Rate: The rate shall be expressed in dollars per MWh, equal to the sum of (i) the “FAC Base” with respect to Big Rivers’ Tariff, (ii) the “Environmental Surcharge Base” with respect to Big Rivers’ Tariff, and (iii) the “Purchased Power Base” as defined in Appendix A.

1.1.23 Big Rivers: As defined in the Preamble.

1.1.24 Big Rivers’ Tariff: Big Rivers’ Rates, Rules and Administrative Regulations For Furnishing Electric Service, as filed with and approved by the KPSC.

1.1.25 Billing Month: Each calendar month during the Service Period.

1.1.26 Budget: The annual operating and capital budget approved by Big Rivers’ Board of Directors that estimates all revenues and expenditures of Big Rivers for a specified Fiscal Year, as amended and in effect from time to time.

1.1.27 Business Day: Mondays through Fridays of each week except legal holidays established by federal law in the United States of America or state law in the Commonwealth of Kentucky.

1.1.28 Buy-Through Energy: As defined in Section 2.3.2(b).

1.1.29 Buy-Through Energy Charge: As defined in Section 4.3.2.

1.1.30 Century: As defined in the Recitals.

1.1.31 Century Retail Agreement: The retail electric service agreement, dated as of the date hereof, by and between Kenergy and Century.

1.1.32 Century Wholesale Agreement: The wholesale electric service agreement, dated as of the date hereof, between Big Rivers and Kenergy for the benefit of Century.

1.1.33 Cut-Off Date: As defined in Section 10.3.6.

1.1.34 Economic Reserve: A reserve established by Big Rivers, which may be held by Big Rivers or another Person, in an initial principal amount equal to the sum of (a) \$157 million, and (b) such additional amount as Big Rivers may designate on or prior to the consummation of the Unwind Transaction, subject to increases or decreases resulting from earnings or losses thereon or expenditures therefrom. The amount designated by Big Rivers pursuant to clause (b) above may not exceed (i) an amount equal to Big Rivers' unrestricted cash on hand following the consummation of the Unwind Transaction *less* \$125 million, and (ii) zero if Big Rivers shall not have prepaid at least \$200 million of obligations owed to RUS debt as part of the Unwind Transaction. No additional principal amounts will be contributed by Big Rivers to the Economic Reserve after the Effective Date.

1.1.35 Economic Sales: As defined in Section 4.13.3.

1.1.36 Effective Date: As defined in Section 6.1.

1.1.37 Electric Services: Electric services including capacity and associated Energy and Transmission Services provided by Big Rivers to Kenergy pursuant to this Agreement for resale to Alcan.

1.1.38 Energy: The flow of electricity denominated in kWh or MWh.

1.1.39 Environmental Surcharge: As defined in Section 4.8.3.

1.1.40 Environmental Surcharge Factor: With respect to any Billing Month, a monthly environmental surcharge factor, expressed in dollars per MWh, that is calculated in accordance with the "Monthly Environmental Surcharge Factor" as defined in Big Rivers' Environmental Surcharge Rider.

1.1.41 Environmental Surcharge Rider: The Environmental Surcharge Rider to Big Rivers' Tariff.

1.1.42 Equity Development Credit: As defined in Section 4.10.

1.1.43 Event of Default: As defined in Section 14.1.

1.1.44 Excess TIER Amount: The amount of the TIER Adjustment, if negative, with respect to any Fiscal Year.

1.1.45 Excess Reactive Demand Charge: As defined in Section 4.6.

1.1.46 Existing Alcan Agreement: As defined in the Recitals.



- 1.1.47 FAC: The Fuel Adjustment Clause Rider to Big Rivers' Tariff.
- 1.1.48 FAC Charge: As defined in Section 4.8.1.
- 1.1.49 FAC Factor: With respect to any Billing Month, the fuel adjustment factor, expressed in dollars per MWh, that is calculated in accordance with the FAC in dollars per kWh.
- 1.1.50 FERC: Federal Energy Regulatory Commission.
- 1.1.51 Firm: An obligation to supply Energy subject only to the occurrence of an Uncontrollable Force.
- 1.1.52 Fiscal Year: The fiscal year of Big Rivers.
- 1.1.53 Governmental Authority: Any international, national, federal, state, territorial, local or other government, or any political subdivision thereof, and any governmental, judicial, public or statutory instrumentality, tribunal, agency, authority, body or entity having legal jurisdiction over the matter or Person in question, including the KPSC; *provided, however* that the RUS is not a Governmental Authority for purposes of this Agreement.
- 1.1.54 Hour or Hourly: A clock hour or per clock hour, respectively.
- 1.1.55 Imputed Interest: As defined in Section 4.7.5(e).
- 1.1.56 Interruptible Energy: As defined in Section 2.3.2(a).
- 1.1.57 Interruptible Energy Charge: As defined in Section 4.3.1.
- 1.1.58 Interruptible Energy Terms: As defined in Section 2.3.2(a)(i).
- 1.1.59 Kenergy/LG&E Contract: As defined in the Recitals.
- 1.1.60 KPSC: Kentucky Public Service Commission.
- 1.1.61 kW: Kilowatt.
- 1.1.62 kWh: Kilowatt-hour.
- 1.1.63 Large Industrial Rate: Big Rivers' Tariff Rate Schedule No. 7 and all applicable rate adjustments thereto but exclusive of (a) the Rebate, (b) the FAC Factor and the Environmental Surcharge Rider, and (c) any roll-in of costs recovered in the Regulatory Account. As of the Effective Date, the Large Industrial Rate will consist of separate rate components for demand and Energy consumption. The Large Industrial Rate subsequently may be defined in terms of more than two separate rate components, including, potentially, separate rate components for transmission services. For the avoidance of doubt, the Large Industrial Rate shall be determined without regard to the effect of the Surcharge, the Rural Economic Reserve, the Economic Reserve or the Transition Reserve.

1.1.64 LG&E: As defined in the Recitals.

1.1.65 Lockbox Agreement: The Security and Lockbox Agreement to be entered into among Alcan, Kenergy, Big Rivers and a depository bank prior to the Effective Date with respect to the payment of certain amounts due by Kenergy to Big Rivers hereunder.

1.1.66 Market Energy: As defined in Section 2.3.2(c).

1.1.67 Market Energy Charge: As defined in Section 4.3.3.

1.1.68 Market Reference Rate: For any Hour, a rate equal to the all-inclusive cost, including transmission and related charges on the transmission system of any Third Party (expressed in dollars per MWh), that Big Rivers estimates, in its sole discretion exercised in good faith, that it would have paid to purchase Energy from a Third Party if there had been no curtailment pursuant Section 4.13.2 during such Hour.

1.1.69 Members: The members of Big Rivers. As of the date hereof, the Members of Big Rivers are Jackson Purchase Energy Corporation, Kenergy, and Meade County Rural Electric Cooperative Corporation.

1.1.70 Model: As defined in Section 1.2(o).

1.1.71 Monthly Charge: As defined in Section 4.1.

1.1.72 MW: Megawatt.

1.1.73 MWh: Megawatt-hour.

1.1.74 Net Margins: Net margins as determined by Accounting Principles. For the avoidance of doubt, Net Margins will include all operating and non-operating margins.

1.1.75 Net Proceeds: The proceeds from the sale of Energy by Big Rivers to Third Parties, net of transaction costs, whenever incurred, and taxes, including Big Rivers' estimated income tax liability on such proceeds without regard to any net operating loss carry-forward of Big Rivers existing on the date of the consummation of the Unwind Transaction, unless and to the extent Big Rivers reasonably determines that such net operating loss carry-forward otherwise would have expired unused.

1.1.76 New Facilities: As defined in Section 4.7.5(e).

1.1.77 New Ratepayer: A Non-Smelter Ratepayer which is (i) interconnected directly with Big Rivers' transmission system, and (ii) first receives electric service at a location served by a meter required for service at such location which meter was installed specifically for new service at such location after the Effective Date. For the avoidance of doubt, Southwire Company is not a New Ratepayer.

1.1.78 New Transaction: The transactions by and between or among one or more of Kenergy, Alcan, Century and Big Rivers related to the supply of Electric Services to

Kenergy under this Agreement and “Electric Services” as defined in the Century Wholesale Agreement and including the Alcan Retail Agreement, the Century Retail Agreement, coordination agreements, lockbox agreements, and all other related agreements.

1.1.79 Non-FAC Purchased Power Adjustment Charge: As defined in Section 4.8.2.

1.1.80 Non-FAC Purchased Power Adjustment Factor: A rate (expressed in dollars per MWh and calculated in accordance with Appendix A in dollars per kWh) for the recovery of purchased power costs that are not otherwise included in the FAC.

1.1.81 Non-Smelter Member Rates: Big Rivers’ tariff rates applicable to sales of electric services to Members for resale to Non-Smelter Ratepayers and all applicable rate adjustments thereto but exclusive of (a) the Rebate and (b) the FAC Factor and the Environmental Surcharge Rider. For the avoidance of doubt, the Non-Smelter Member Rates shall be determined without regard to the effect of the Surcharge, the Rural Economic Reserve, the Economic Reserve or the Transition Reserve.

1.1.82 Non-Smelter Ratepayers: Retail ratepayers of the Members other than Alcan and Century.

1.1.83 Notice of Interruption: As defined in Section 2.3.2(a)(iii)(1).

1.1.84 OATT: Big Rivers’ Open Access Transmission Tariff as filed with FERC and found by FERC to constitute a reciprocal open access transmission tariff.

1.1.85 Parties: Big Rivers and Kenergy.

1.1.86 Permitted Interruption: As defined in Section 2.3.2(a)(iii).

1.1.87 Person: Any individual, corporation, cooperative, partnership, joint venture, association, joint-stock company, limited partnership, limited liability company, limited liability partnership, trust, unincorporated organization, RUS or Governmental Authority.

1.1.88 Point of Delivery: The existing set of meters at Big Rivers’ Reid substation or such other point of delivery mutually agreed by the Parties and Alcan.

1.1.89 Potline Reduction: As defined in Section 10.3.1.

1.1.90 Potline Reduction Sales: As defined in Section 10.3.1.

1.1.91 Potline Reduction Sales Agreement: As defined in Section 10.3.3.

1.1.92 Prime Rate: The then-effective prime commercial lending rate per annum published in the “Money Rates” section of *The Wall Street Journal*. If *The Wall Street Journal* discontinues publication of the prime commercial lending rate, the Parties and Alcan shall agree on a mutually acceptable alternative source for that rate.

1.1.93 Prudent Utility Practice: Any of the practices, methods, and acts engaged in or approved by a significant portion of the electric utility industry during the relevant time period; or any of the practices, methods, and acts which, in the exercise of reasonable judgment in light of the facts known at the time a decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety and expedition. Prudent Utility Practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather to be any and all acceptable practices, methods, or acts generally accepted.

1.1.94 Rebate: As defined in Section 4.9.

1.1.95 Regulatory Account: The regulatory account containing purchased power costs to be recovered by Big Rivers from the Members with respect to sales to their Non-Smelter Ratepayers.

1.1.96 Response: As defined in Section 2.3.2(a)(ii)(2).

1.1.97 Restructuring: The occurrence of any of the following:

(a) the merger, consolidation or other combination of Big Rivers or an Affiliate or a Member with any Person (including acquisition of another utility system) if following such transaction Big Rivers or its successor would have had sales of Energy to all Members or regulated customers on a *pro forma* basis in the prior Fiscal Year in excess of 105% of Big Rivers' actual sales of Energy to the Members for such Fiscal Year;

(b) the acquisition of Big Rivers; or

(c) the admission of a new Member if following such admission Big Rivers would have had sales of Energy to all Members on a *pro forma* basis in the prior Fiscal Year in excess of 105% of Big Rivers' actual sales of Energy to the Members for such Fiscal Year.

1.1.98 Restructuring Amount: As defined in Section 16.5.1.

1.1.99 Rural Economic Reserve: A reserve established by Big Rivers, which may be held by Big Rivers or another Person, in an initial principal amount equal to \$60.9 million, subject to increases or decreases resulting from earnings or losses thereon or expenditures therefrom. No additional principal amounts will be contributed by Big Rivers to the Rural Economic Reserve after the Effective Date.

1.1.100 RUS: United States Department of Agriculture Rural Utilities Service.

1.1.101 Scheduled Interruptible Energy: As defined in Section 2.3.2(a)(ii)(3).

1.1.102 Sebree Smelter: The aluminum reduction plant owned and operated by Alcan, located at Sebree, Kentucky, including any expansions, additions, improvements and replacements thereof or thereto at the existing site.

1.1.103 SERC: SERC Reliability Corporation, a regional reliability organization.

1.1.104 Service Period: As defined in Section 2.1.

1.1.105 Smelters: Alcan and Century.

1.1.106 Supplemental Energy: As defined in Section 2.3.2.

1.1.107 Supplemental Energy Charge: As defined in Section 4.3.

1.1.108 Surcharge: As defined in Section 4.11.

1.1.109 Surplus Sales: As defined in Section 10.1.1.

1.1.110 System Emergency: Any cessation of operation or reduction in the provision or delivery of Electric Services by Big Rivers due in whole or in part to: (a) a disconnection of all or a portion of Big Rivers' system from the transmission grid (other than as a direct result of Big Rivers' gross negligence or willful misconduct), (b) a system emergency on the transmission grid of a Third Party, or (c) the occurrence of a condition or situation where the delivery of Energy to a transmission grid with which Big Rivers is directly interconnected or the making available of generation services or Transmission Services which could cause (i) harm to life or limb or imminent serious threat of harm to life or limb, (ii) material damage to Big Rivers' system or any material component thereof or imminent danger of material damage to property, or (iii) other dangerous occurrences that Big Rivers believes, in the exercise of Prudent Utility Practice, should be prevented or curtailed.

1.1.111 System Firm: An obligation to supply Energy from:

- (a) Big Rivers' owned or leased generation facilities,
- (b) Big Rivers' contract with the Southeastern Power Authority (Contract No. 89-00-1501-637), or
- (c) Big Rivers' Firm power purchase agreements with a term of two years or more which were not entered into for purpose of serving a specific non-Smelter load,

in each case subject to the occurrence of an Uncontrollable Force or similar event of force majeure, a System Emergency or Big Rivers' prior satisfaction of the Energy requirements of the Non-Smelter Ratepayers, the Smelters and Third Parties under power sales agreements entered into prior to the making of such obligation to supply Energy.

1.1.112 Term: As defined in Section 7.1.

1.1.113 Third Party: A Person other than Kenergy, Alcan, Big Rivers or Century.

1.1.114 Third Party Supplier(s): As defined in Section 2.3.2(c).

1.1.115 TIER: The quotient for a Fiscal Year of (i) Big Rivers' interest expenses plus Net Margins, divided by (ii) Big Rivers' interest expenses; in each case, calculated in accordance with Accounting Principles.

1.1.116 TIER Adjustment: As defined in Section 4.7.5.

1.1.117 TIER Adjustment Charge: As defined in Section 4.7.1.

1.1.118 Transition Reserve: A reserve established by Big Rivers, which may be held by Big Rivers or another Person, in an initial principal amount equal to \$35 million, subject to increases or decreases resulting from earnings or losses thereon or expenditures therefrom. No additional principal amounts will be contributed by Big Rivers to the Transition Reserve after the Effective Date.

1.1.119 Transmission Charge: As defined in Section 4.5.

1.1.120 Transmission Services: Network transmission services as described in the OATT and Ancillary Services. Transmission Services are currently included in the Large Industrial Rate but may be unbundled.

1.1.121 Uncontrollable Force: Any cause beyond the control of the Party unable, in whole or in part, to perform its obligations under this Agreement which, despite exercise of due diligence and foresight, such Party could not reasonably have been expected to avoid and which, despite the exercise of due diligence, it has been unable to overcome. Examples of events that may constitute the basis of an event which constitutes an "Uncontrollable Force" include: acts of God; strikes, slowdowns or labor disputes; acts of the public enemy; wars; blockades; insurrections; riots; epidemics; landslides; lightning; earthquakes; fires; storms; floods; washouts; arrests and restraints of any Governmental Authority; civil or military disturbances; explosions, breakage of or accident to machinery, equipment or transmission lines; inability of a Party to obtain necessary materials, supplies or permits due to existing or future rules, regulations, orders, laws or proclamations of Governmental Authorities, civil or military; transmission constraints or System Emergencies; a forced outage of a generating unit or units preventing the physical delivery of Energy to Kenergy for resale to Alcan; and any other forces which are not reasonably within the control of the Party claiming suspension. "Uncontrollable Forces" do not include an insufficiency of funds or decline in credit ratings or customary, expected or routine maintenance or repair of plant or equipment. Nothing contained herein shall be construed to obligate a Party to prevent or to settle a labor dispute against its will.

1.1.122 Undeliverable Energy Sales: As defined in Section 10.2.1.

1.1.123 Unwind Transaction: The consummation of the transactions contemplated on date of the "Closing" as defined in and pursuant to the Transaction Termination Agreement among Big Rivers, LG&E Energy Marketing Inc., and Western Kentucky Energy Corp.

1.2 Rules of Interpretation. Unless otherwise required by the context in which any term appears: (a) capitalized terms used in this Agreement will have the meanings specified in this Article 1 unless the context requires otherwise; (b) the singular will include the plural and vice versa; (c) references to “Recitals,” “Articles,” “Sections,” “Exhibits” or “Schedules” are to the recitals, articles, sections, exhibits or schedules of this Agreement, unless otherwise specified; (d) all references to a particular Person in any capacity will be deemed to refer also to such Person’s authorized agents, permitted successors and assigns in such capacity; (e) the words “herein,” “hereof” and “hereunder” will refer to this Agreement as a whole and not to any particular section or subsection hereof; (f) the words “include,” “includes” and “including” will be deemed to be followed by the phrase “without limitation” and will not be construed to mean that the examples given are an exclusive list of the topics covered; (g) references to this Agreement will include a reference to all exhibits and schedules hereto; (h) references to any agreement, document or instrument will be construed at a particular time to refer to such agreement, document or instrument as the same may be amended, modified, supplemented or replaced as of such time; (i) the masculine will include the feminine and neuter and vice versa; (j) references to any tariff, rate, or order of any Governmental Authority will mean such tariff, rate or order, as the same may be amended, modified, supplemented or restated and be in effect from time to time; (k) if any action or obligation is required to be taken or performed on any day which is not a Business Day, such action or obligation must be performed on the next succeeding Business Day; (l) references to an Applicable Law will mean a reference to such Applicable Law as the same may be amended, modified, supplemented or restated and be in effect from time to time; (m) all accounting terms not defined in this Agreement will be construed in accordance with Accounting Principles; (n) all references to a time of day shall be a reference to the prevailing time in Henderson, Kentucky; and (o) the financial and production cost models prepared by Big Rivers, including models filed with the KPSC, in connection with the application for approval of the Unwind Transaction and the New Transaction (the “Model”) have been prepared solely by Big Rivers and shall not be used by the Parties or any Governmental Authority to construe or interpret any provision of this Agreement. The Parties collectively have prepared this Agreement, and none of the provisions hereof will be construed against one Party on the ground that it is the author of this Agreement or any part hereof.

1.3 Calculations and Rounding. In making any mathematical calculation provided for or contemplated by this Agreement, the calculation will be made to six decimal places (rounded up if the numeral in the seventh decimal place is five or higher, and rounded down if the numeral in the seventh decimal place is lower than five).

## ARTICLE 2

### ELECTRIC SERVICES AND RATES

2.1 Service Period Obligations. In accordance with the terms and conditions of this Agreement, Big Rivers will sell and deliver, and Kenergy will purchase, Electric Services for resale to Alcan for a period beginning at 12:00:01 A.M. on the day next succeeding the Effective Date and continuing until 12:00:00 midnight on December 31, 2023, unless the Parties’ respective obligations to supply and purchase Electric Services are earlier terminated pursuant to the terms of this Agreement (the “Service Period”).

2.2 Characteristics of Service. Electric service to be supplied by Big Rivers to Kenergy under this Agreement for resale to Alcan shall be nominally three-phase, sixty cycle at 161,000 volts or as otherwise agreed to by the Parties and Alcan. The Parties and Alcan will mutually agree on limits of the regulation of voltage but at no time may such regulation of such limits be inconsistent with standards required by applicable Governmental Authorities or any other organizations that establish reliability and electric operation standards for the region.

2.3 Delivery Obligation. In accordance with this Agreement, during the Service Period, Big Rivers will deliver at the Point of Delivery to Kenergy for resale to Alcan Base Monthly Energy, Supplemental Energy and Back-Up Energy.

2.3.1 Base Monthly Energy. Kenergy may purchase for resale to Alcan in each Hour of the Service Period an amount of Energy up to the Base Demand per Hour. For billing purposes, Base Monthly Energy consists of two components: Base Fixed Energy charged at the Base Rate and Base Variable Energy (which may be either a positive or negative amount) charged or credited at the Base Variable Rate.

2.3.2 Supplemental Energy. “Supplemental Energy” shall consist of (i) Interruptible Energy purchased by Kenergy from Big Rivers pursuant to Section 2.3.2(a), (ii) Buy-Through Energy purchased by Kenergy from Big Rivers and, in turn, by Big Rivers from Third Party Suppliers upon the interruption of Interruptible Energy, pursuant to Section 2.3.2(b), and (iii) Market Energy purchased by Kenergy from Big Rivers pursuant to Section 2.3.2(c).

(a) Interruptible Energy. Kenergy may purchase from Big Rivers on a System Firm basis up to 10 MW per Hour of Energy for resale to Alcan, subject to availability, the scheduling requirements and Big Rivers’ right to interrupt the sale and delivery of such Energy, all as set forth in this Section 2.3.2(a) (“Interruptible Energy”).

(i) Confirmation. Not less than seven days prior to the beginning of each fiscal quarter of the Service Period (or the Effective Date with respect to the initial fiscal quarter of the Service Period), Big Rivers shall provide to Kenergy and Alcan a confirmation setting forth the price or prices and other terms and conditions (“Interruptible Energy Terms”) under which Interruptible Energy may be available during each Hour of the subject fiscal quarter. If Big Rivers fails to provide a timely confirmation with respect to any fiscal quarter, the Interruptible Energy Terms for the prior fiscal quarter shall remain in effect. Big Rivers and Kenergy shall obtain Alcan’s consent to each confirmation as a condition to Big Rivers’ obligation to make Interruptible Energy available to Kenergy for scheduling during each fiscal quarter.

(ii) Scheduling of Interruptible Energy. The provision of Interruptible Energy shall be subject to the following requirements:

(1) At the request of Alcan, Kenergy shall submit to Big Rivers, no later than 3:00 PM on the second Business Day prior to the day of the scheduled delivery (or such shorter period agreed to by Big Rivers), a schedule for up to 10 MW of



Interruptible Energy, in integral multiples of one MW per Hour, for the times and durations specified in the schedule.

(2) Big Rivers shall be under no obligation to accept the schedule submitted by Kenergy or to deliver the Interruptible Energy so scheduled, but shall, upon receipt of such schedule, notify Kenergy and Alcan by 9:00 AM of the Business Day prior to the day of scheduled delivery of the number of MW, if any, Big Rivers is willing to deliver and the hour and duration when the delivery shall take place (the "Response").

(3) Subject to Big Rivers' rights to interrupt in accordance with Section 2.3.2(a)(iii) below, Big Rivers shall sell and deliver the volume of Interruptible Energy at the time and for the duration specified in the Response (the "Scheduled Interruptible Energy").

(iii) Interruption of Scheduled Interruptible Energy. The sale and delivery of Scheduled Interruptible Energy may be interrupted by Big Rivers at any time (a "Permitted Interruption") upon the following terms and conditions:

(1) Upon a determination by Big Rivers in its sole discretion exercised in good faith that all or any portion of the Scheduled Interruptible Energy will not be available on a System Firm basis, Big Rivers may implement a Permitted Interruption of all or any portion of the Scheduled Interruptible Energy by providing a notice of interruption ("Notice of Interruption") to Kenergy and Alcan at least 30 minutes in advance of the estimated interruption;

(2) A Notice of Interruption may be made orally but shall be followed by facsimile or other electronic means acceptable to Kenergy and Alcan; and

(3) Upon an after-the-fact determination by Big Rivers in its sole discretion exercised in good faith that all or any portion of the Scheduled Interruptible Energy was not available on a System Firm basis during a prior Hour or Hours, and notwithstanding that no Notice of Interruption had been issued, Big Rivers may implement retroactively a Permitted Interruption of Scheduled Interruptible Energy for such prior Hour or Hours, to the extent that such Scheduled Interruptible Energy was not available on a System Firm basis.

(iv) Upon meeting the conditions required for a Permitted Interruption, Big Rivers shall have no obligation to sell and deliver the amount of Scheduled Interruptible Energy designated to be interrupted in the applicable Notice of Interruption. In connection with a Permitted Interruption, Big Rivers may provide, but shall not be required to provide, an opportunity for Kenergy to acquire Firm Energy, in lieu of the Scheduled Interruptible Energy, for resale to Alcan pursuant to the terms and conditions of Section 2.3.2(b) below. In the case of a Permitted Interruption that is implemented retroactively, the Energy delivered by Big Rivers shall be deemed to have been delivered as Back-Up Energy pursuant and subject to Sections 2.3.3 and 4.4. Big Rivers shall not be limited in the number of times that it may issue a Notice of Interruption or may implement a Permitted Interruption, or of the amount or duration of any Permitted Interruption.

(v) Allocation of Permitted Interruptions. If Kenergy has arranged for Scheduled Interruptible Energy during any Hour both to Kenergy under this Agreement for resale to Alcan and to Kenergy under the Century Wholesale Agreement for resale to Century, and Big Rivers determines that it will be unable or was unable during any prior Hour or Hours to supply the full amount of Scheduled Interruptible Energy to Kenergy for both Alcan and Century, then:

(1) Big Rivers may provide a Notice of Interruption and implement a Permitted Interruption to Kenergy with respect to the Scheduled Interruptible Energy for Alcan or with respect to "Scheduled Interruptible Energy" as defined in the Century Retail Agreement, or any combination thereof; and

(2) Big Rivers may retroactively implement Permitted Interruptions for any Hour to Kenergy for Alcan and Century in equal amounts, taking into consideration any Permitted Interruption to Kenergy that had previously been implemented for the same Hour under clause (1) above.

(vi) Termination of Interruptions. During any period of Permitted Interruption, Big Rivers may notify Kenergy and Alcan of its willingness to terminate the Permitted Interruption and resume the delivery of Scheduled Interruptible Energy at the Interruptible Energy Terms. Upon notification from Big Rivers terminating the Permitted Interruption, Kenergy shall purchase from Big Rivers and resell and deliver Scheduled Interruptible Energy to Alcan at the beginning of the next Hour that starts at least 10 minutes following such notice.

(b) Buy-Through Energy. Upon each Notice of Interruption, Big Rivers may in its sole discretion offer to sell to Kenergy Firm Energy purchased from Third Party Suppliers for resale to Alcan in lieu of the interrupted Scheduled Interruptible Energy ("Buy-Through Energy") and the estimated price or prices during the specified Hour or Hours of Permitted Interruption upon which Big Rivers would supply such Energy. Big Rivers shall provide Kenergy and Alcan not less than ten minutes from the time Alcan receives verbal Notice of Interruption to notify Big Rivers and Kenergy whether Alcan agrees to purchase Buy-Through Energy offered to be supplied by Big Rivers to Kenergy for resale to Alcan. Upon Alcan's or Kenergy's acceptance of the Buy-Through Energy, the obligation of Big Rivers to provide the Buy-Through Energy shall become a Firm service commitment. The failure of Alcan or Kenergy to notify Big Rivers of acceptance of the Buy-Through Energy during the period provided shall constitute a rejection of the Buy-Through Energy, and the Permitted Interruption shall thereafter be implemented in accordance with the applicable Notice of Interruption and Big Rivers shall not have any obligation to supply Kenergy Buy-Through Energy for resale to Alcan during such Permitted Interruption.

(c) Market Energy. Big Rivers acknowledges and agrees that Kenergy may acquire Supplemental Energy (other than Interruptible Energy or Buy-Through Energy) from either Big Rivers or one or more suppliers other than Big Rivers ("Third Party Suppliers") for resale to Alcan ("Market Energy"), upon the request of Alcan specifying (i) the requested amount and duration of such Energy, and (ii) all requested prices and material terms and conditions. The sale of any Market Energy by Big Rivers shall be at the sole discretion of

Big Rivers and shall be such terms and conditions as Big Rivers and Kenergy shall agree. Nothing in this Agreement shall be construed to limit the ability of Kenergy to purchase Energy or other electric services from Third Party Suppliers to serve Alcan.

(i) The Parties acknowledge and agree that (A) Kenergy shall request that Big Rivers provide all Transmission Services necessary to transmit Market Energy requested by Alcan from a point of interconnection on Big Rivers' transmission system to the Point of Delivery promptly following such request, (B) the amount of Market Energy transmitted from a point of interconnection on Big Rivers' system to the Point of Delivery would be reduced by the applicable system loss factor as provided in the OATT, and (C) Big Rivers shall have no liability to Kenergy for denial of Kenergy's duly submitted request for reservation of Transmission Services.

(ii) If Alcan is unable to receive and consume Market Energy purchased by Kenergy from Big Rivers or a Third Party Supplier because of an Uncontrollable Force, then upon the request of Kenergy, Big Rivers shall use reasonable commercial efforts to sell such Market Energy to other Third Parties for the duration specified by Alcan's request. Big Rivers shall apply all revenues derived from such resale as a credit to Kenergy, net of any transmission services charges or related charges or other expenses incurred to make such resale.

2.3.3 Back-Up Energy. Big Rivers shall sell and deliver and Kenergy shall purchase Back-Up Energy for resale to Alcan at the Point of Delivery through purchases of Energy at the prices and on the terms and conditions set forth in Section 4.4.

2.4 [Reserved]

2.5 Title and Risk of Loss. Title to and risk of loss with respect to Energy provided by Big Rivers to Kenergy for resale to Alcan pursuant to this Agreement will pass from Big Rivers to and rest in Kenergy when the same is made available by Big Rivers at the Point of Delivery. Until title passes, Big Rivers will be deemed in exclusive control of the Energy and will be responsible for any damage or injury caused thereby. After title passes to Alcan, Big Rivers acknowledges and agrees that Alcan will be deemed in exclusive control of the Energy and will be responsible for any damage or injury caused thereby.

2.6 Performance by Kenergy. Big Rivers acknowledges and agrees that, to the extent Alcan has a *corresponding or related obligation to Kenergy under the Alcan Retail Agreement*, Kenergy's performance of an obligation under this Agreement is subject to and conditioned upon Alcan's performance of such corresponding or related obligation to Kenergy. Big Rivers acknowledges and agrees that Alcan may enforce an obligation of Big Rivers under this Agreement which corresponds or relates to an obligation of Kenergy to Alcan under the Alcan Retail Agreement.

ARTICLE 3

CHANGES IN DEMAND AND SCHEDULING

3.1 Change In Base Demand. Big Rivers acknowledges and agrees that Alcan may change the Base Demand for any Fiscal Year only with the written consent of Big Rivers and Kenergy.

3.2 Scheduling. Big Rivers acknowledges and agrees that:

(a) Alcan shall not be required to schedule Base Monthly Energy, Buy-Through Energy or Back-Up Energy but shall use reasonable commercial efforts to inform Big Rivers promptly of any material change in Alcan's intended usage; and

(b) In accordance with the OATT, Alcan shall schedule and arrange with Kenergy and Big Rivers no later than 9:00 A.M. on the Business Day immediately preceding the day or days of delivery pursuant to the Alcan Retail Agreement, or as otherwise mutually agreed by the Parties, the delivery of Interruptible Energy and Market Energy.

ARTICLE 4

CHARGES AND CREDITS

4.1 Monthly Charge. Kenergy shall pay Big Rivers the following (the "Monthly Charge") for the Electric Services provided or made available under this Agreement:

- 4.1.1 the Base Energy Charge calculated pursuant to Section 4.2,
- 4.1.2 plus the Supplemental Energy Charge calculated pursuant to Section 4.3,
- 4.1.3 plus the Back-Up Energy Charge calculated pursuant to Section 4.4,
- 4.1.4 plus the Transmission Charge pursuant to Section 4.5,
- 4.1.5 plus the Excess Reactive Demand Charge calculated pursuant to Section 4.6,
- 4.1.6 plus the TIER Adjustment Charge calculated pursuant to Section 4.7,
- 4.1.7 plus the FAC Charge calculated pursuant to Section 4.8.1,
- 4.1.8 plus the Non-FAC Purchased Power Adjustment Charge calculated pursuant to Section 4.8.2,
- 4.1.9 plus the Environmental Surcharge calculated pursuant to Section 4.8.3,
- 4.1.10 plus or minus the monthly amortization of the Restructuring Amount calculated pursuant to Section 16.5,

- 4.1.11 less the Rebate calculated pursuant to Section 4.9,
- 4.1.12 less the Equity Development Credit calculated pursuant to Section 4.10,
- 4.1.13 plus the Surcharge calculated pursuant to Section 4.11,
- 4.1.14 [Reserved].
- 4.1.15 less credits calculated pursuant to Section 4.13,
- 4.1.16 plus or minus other amounts calculated pursuant to Section 4.14, and
- 4.1.17 plus taxes calculated pursuant to Section 4.15.

4.2 Base Energy Charge. For any Billing Month, the “Base Energy Charge” shall be the sum of:

- (a) the product of Base Fixed Energy and the Base Rate; and
- (b) the product, whether positive or negative, of the Base Variable Energy and the Base Variable Rate.
- (c) Sample calculations of the Base Energy Charge at different load factors are set forth in Exhibit A.

4.3 Supplemental Energy Charge. For any Billing Month, the “Supplemental Energy Charge” shall be the sum of the charges, whenever determined, for the Interruptible Energy Charge, the Buy-Through Energy Charge, and the Market Energy Charge as calculated below.

4.3.1 The “Interruptible Energy Charge” shall be the product of (i) the quantity of Interruptible Energy metered at the Point of Delivery during the Billing Month and (ii) the rate or rates for Interruptible Energy with respect to such Billing Month.

4.3.2 The “Buy-Through Energy Charge” shall be the sum of:

- (a) the product of (i) the quantity of Buy-Through Energy metered at the Point of Delivery during the Billing Month and (ii) the quotient of (A) the actual rate or rates for such Buy-Through Energy that Big Rivers pays to a Third Party Supplier over (B) 1.00 less the loss factor set forth in the OATT; and
- (b) all other charges that Big Rivers may be required to pay in connection with Buy-Through Energy, including (i) any and all separate charges for transmission services and related services, whenever incurred (including financial transmission rights, transmission congestion charges and similar costs or expenses), provided by a Third Party whose transmission system is used to transmit Buy-Through Energy purchased from a Third Party to a point at which Big Rivers’ transmission system is interconnected with such system, and (ii) any amount payable upon termination by reason of default of the supply arrangements between Big

Rivers and Third Party Suppliers, net of recoveries by Big Rivers from such suppliers with respect to the supply of Buy-Through Energy to Kenergy for resale to Alcan.

4.3.3 The “Market Energy Charge” shall be the sum of:

(a) the product of (i) the quantity of Market Energy metered at the Point of Delivery during the Billing Month and (ii) the quotient of (A) the actual rate or rates for such Market Energy agreed to between Big Rivers and Kenergy, over (B) 1.00 less the loss factor set forth in the OATT; and

(b) all other charges that Big Rivers may be required to pay to Third Party Suppliers in connection with Market Energy, including (i) any and all separate charges for transmission services and related services, whenever incurred (including financial transmission rights, transmission congestion charges and similar costs or expenses), provided by a Third Party whose transmission system is used to transmit Market Energy purchased from a Third Party to a point at which Big Rivers’ transmission system is interconnected with such system and (ii) any amount payable upon termination by reason of default of the supply arrangements between Big Rivers and Third Party Suppliers, net of recoveries by Big Rivers from such suppliers with respect to the supply of Market Energy to Kenergy for resale to Alcan.

4.4 Back-Up Energy Charge. For any Billing Month, the “Back-Up Energy Charge” shall be the sum of the Hourly charges for Back-Up Energy calculated as follows:

4.4.1 The charge for Back-Up Energy supplied in any Hour shall equal the following:

(a) to the extent the Back-Up Energy was supplied from generating facilities owned or controlled by Big Rivers and located within Big Rivers’ transmission control area, the charge shall be the product of (i) the amount of such Back-Up Energy, and (ii) the quotient of (A) a price equal to the greater of (1) the real time Hourly locational marginal price at Big Rivers’ interface with the Midwest Independent System Operator (or such other pricing reference point that shall be mutually agreed upon by the Parties and Big Rivers), and (2) Big Rivers’ system lambda; divided by (B) 1.00 minus the loss factor set forth in the OATT;

(b) to the extent the Back-Up Energy was not supplied pursuant to Section 4.4.1(a), the charge shall be the product of (i) the amount of such Back-Up Energy, and (ii) the quotient of (A) a price equal to 110% of the highest Hourly all inclusive cost incurred by Big Rivers to acquire any Energy, including such Back-Up Energy, and the separate cost, if any, whenever determined, of transmission services and related services provided by a Third Party whose transmission system is used to transmit Back-Up Energy purchased from a Third Party to a point at which Big Rivers’ transmission system is interconnected with such system and including any imbalance charges or other costs arising from the failure of a Third Party Supplier to deliver Energy that it is obligated to deliver; divided by (B) 1.00 minus the loss factor set forth in the OATT; and

(c) to the extent that the amount of Back-Up Energy required by Kenergy for resale to Alcan during any Hour exceeds the sum of (x) ten MW per Hour, (y) the

amount of Back-Up Energy resulting from deemed interruption of Scheduled Interruptible Energy pursuant to Section 2.3.2(a)(iii), and (z) the amount of Back-Up Energy resulting from the non-delivery of Market Energy purchased by a Third Party Supplier, then the charge for the excess amount of Back-Up Energy shall be the product of (i) the excess amount of Back-Up Energy, and (ii) the greater of (A) \$250 per MWh and (B) the price set forth in Section 4.4.1(b)(ii).

Sample calculations of the Back-Up Energy Charge are set forth in Exhibit A.

4.4.2 If during any Hour Big Rivers provides Back-Up Energy to Kenergy for resale to Alcan and "Back-Up Energy" (as defined in the Century Wholesale Agreement) to Kenergy for resale to Century, then the provisions of Section 4.4.1 shall apply to a proportional number of MW of Back-Up Energy for resale to each of Alcan and Century.

4.5 Charge for Transmission Services and Ancillary Services. For any Billing Month, the charge for transmission services and ancillary services (the "Transmission Charge") shall be the sum of the charges, calculated in accordance with the OATT, for Transmission Services for (a) Base Monthly Energy that are unbundled from the Large Industrial Rate, if any; and (b) Supplemental Energy.

4.6 Excess Reactive Demand Charge. For any Billing Month, the "Excess Reactive Demand Charge", if any, shall be the product of \$0.1433 and the amount, expressed in kilovars, of the difference, if positive, between:

(a) the maximum metered reactive demand of Alcan during the Billing Month, and

(b) an amount of kilovars equal to the sum of:

(i) the product of (A) 0.4843, and (B) the maximum hourly demand during a Billing Month, denominated in kilowatts, associated with Base Monthly Energy, Interruptible Energy, Market Energy, "Market Energy" under the Alcan Retail Agreement that is purchased by Kenergy from Third Party Suppliers for resale to Alcan, and Back-Up Energy provided by Big Rivers to Kenergy for resale to Alcan, but less the amount of such Interruptible Energy, Market Energy or Back-Up Energy that was purchased by Big Rivers from Third Parties, and

(ii) 54,114.

4.7 TIER Adjustment Charge.

4.7.1 The "TIER Adjustment Charge" shall be, for any Fiscal Year, the amount that is the product of the Applicable Percentage and the TIER Adjustment if, and only if, such TIER Adjustment is a positive amount; *provided, however*, that in no case will the TIER Adjustment Charge for any Fiscal Year exceed the amount that is the product of the Base Fixed Energy and the maximum additional charge per MWh set forth below for the applicable Fiscal Year:

<b>Fiscal Years</b>	<b>Maximum Additional Charge</b>
2008-2011	\$1.95 per MWh
2012-2014	\$2.95 per MWh
2015-2017	\$3.55 per MWh
2018-2020	\$4.15 per MWh
2021-2023	\$4.75 per MWh

If the TIER Adjustment shall be negative, there will be an Excess TIER Amount and no TIER Adjustment Charge.

4.7.2 Prior to each Fiscal Year, Big Rivers shall estimate both the TIER Adjustment and, if the TIER Adjustment is positive, the TIER Adjustment Charge based on the Budget for such Fiscal Year. Big Rivers shall collect such estimated amount from Kenergy in equal monthly installments as part of the Monthly Charge for each Billing Month during the applicable Fiscal Year.

4.7.3 Within 45 days following the end of the first, second and third fiscal quarters of each Fiscal Year beginning with the first fiscal quarter after the first anniversary of this Agreement, Big Rivers shall again estimate the TIER Adjustment and the corresponding amount of the TIER Adjustment Charge based on a comparison of the Budget and year-to-date results of operations, and shall calculate a modified amount to be collected from, or refunded as a credit to, the Monthly Charge to Kenergy with respect to service to Alcan during the remaining portion of the Fiscal Year, including any amounts necessary to address any estimated under- or over-collection of the TIER Adjustment Charge from Kenergy with respect to service to Alcan as compared to the Budget during the remainder of the Fiscal Year. Big Rivers shall collect or credit such modified amount from Kenergy pursuant to this Agreement in equal monthly installments as part of the Monthly Charge for the remaining Billing Months of the subject Fiscal Year.

4.7.4 As soon as reasonably practicable but no later than 120 days after the end of each Fiscal Year, Big Rivers shall calculate the TIER Adjustment and TIER Adjustment Charge for such Fiscal Year. The TIER Adjustment Charge for such Fiscal Year shall be compared to the aggregate amounts paid by Kenergy in respect of the estimated TIER Adjustment Charge for such Fiscal Year, and the difference between such amounts shall be included as a charge or credit, as applicable, in the Monthly Charges for the fourth Billing Month of the next Fiscal Year.

4.7.5 The "TIER Adjustment" shall be the amount of incremental revenue, whether positive or negative, calculated with respect to each Fiscal Year after determination of Net Margins for such Fiscal Year (excluding amounts payable by Kenergy with respect to or relating to the revenue that results from the TIER Adjustment Charge and the "TIER Adjustment Charge" as defined in the Century Wholesale Agreement), that is necessary for Big Rivers to receive in order to achieve a TIER of 1.24 for such Fiscal Year; *provided, however*, that if the Service Period commences or terminates on a date other than the first or last day of a Fiscal Year and to give effect to this Section 4.7.5, the TIER Adjustment will be calculated on an Hourly basis only with respect to the partial period of the first, second or final Fiscal Year of the Service



Period, as applicable. The determination of the TIER Adjustment shall be subject to the following:

(a) It shall be assumed that: Big Rivers shall have generated additional revenue from service to the Members for resale to the Non-Smelter Ratepayers as if Big Rivers had increased the Non-Smelter Member Rates by a weighted average of 2.00% in 2010, another 2.50% in 2018 and another 4.00% in 2021 if and to the extent Big Rivers had not prior to or during the year of the calculation increased the Non-Smelter Member Rates by at least such amounts. The revenues from any roll-in of the costs associated with costs recovered under the FAC, the Environmental Surcharge Rider or the Regulatory Account that are incorporated into base rates comprising a portion of the Non-Smelter Member Rates will not constitute an increase in the Non-Smelter Member Rates for purposes of this clause (a), and the revenues attributable to any such roll-in will be excluded in calculating the percentage of any increases in the Non-Smelter Member Rates. The expiration or termination of Big Rivers' Member Discount Adjustment Rider shall be deemed to be an increase in the Non-Smelter Member Rates for purposes of this clause (a), without regard to whether such expiration or termination occurs prior to, on or after the Effective Date.

(b) It shall be assumed that: If a Member provides electric service to a New Ratepayer with a Firm demand in excess of 15 MW, such Member shall have paid to Big Rivers for wholesale Energy purchased and resold to the New Ratepayer at a price equal to the greater of: (i) the amount paid for such service and (ii) an amount calculated for the same period equal to (A) a rate, expressed in dollars per MWh, resulting from the application of the Large Industrial Rate to a load with the New Ratepayer's load factor, plus \$0.25 per MWh, *plus* (B) the sum of the FAC Factor, the Environmental Surcharge Factor, and the Non-FAC Purchased Power Adjustment Factor (each calculated on a per MWh basis), *plus* (C) the Surcharge (the Surcharge being calculated on an amount per MWh based on Base Fixed Energy for such Fiscal Year) set forth in Section 4.11, *plus* (D) amounts corresponding to the amount per MWh paid by Kenergy during the same period for the TIER Adjustment Charge. If a Member provides electric service to a New Ratepayer with a Firm demand of 15 MW or less, such Member shall have paid to Big Rivers for wholesale Energy purchased and resold to the New Ratepayer at a price equal to the sum of: (i) the Large Industrial Rate, and (ii) the sum of the FAC Factor, the Environmental Surcharge Factor, and the Non-FAC Purchased Power Adjustment Factor (each calculated on a per MWh basis). For purpose of this clause (b), the revenues produced by any surcharge with respect to a New Ratepayer similar to the Surcharge or the "Surcharge" under the Century Retail Agreement will be assumed to accrue solely to the benefit of the Non-Smelter Ratepayers except to the extent such surcharge is paid by or imputed to a New Ratepayer pursuant to subclause (A) of this clause (b). The assumptions contained in this clause (b) shall not apply with respect to a New Ratepayer that first interconnects with Big Rivers' transmission system during the last three Fiscal Years of the Service Period or following notice of termination of this Agreement or the Century Retail Agreement.

(c) It shall be assumed that: Big Rivers' interest expense shall have been reduced by the product of (i) Big Rivers' average effective interest rate for borrowed money for the prior Fiscal Year, and (ii) the aggregate amount of any patronage capital retired by Big Rivers to its Members during the Service Period (other than any distribution from the Rural Economic Reserve, the Economic Reserve or the Transition Reserve or relating to the Surcharge

or the “Surcharge” under the Century Wholesale Agreement), from and after the date of such retirement.

(d) It shall be assumed that: Interest on construction work-in-progress relating to the construction of new electric generating facilities or transmission facilities shall have been capitalized by Big Rivers if it has the right to elect to do so or it is obligated to capitalize such interest under Accounting Principles unless a Governmental Authority has approved the inclusion of such interest expenses in Big Rivers’ revenue requirements for rate-making purposes or otherwise approved a surcharge for collecting such interest expenses.

(e) If Big Rivers acquires or constructs non-peaking electric generating facilities alone or with others (“New Facilities”), Big Rivers’ interest expenses shall not include the interest imputed on the debt relating to the New Facilities (“Imputed Interest”); *provided, however*, that if a Governmental Authority has approved the inclusion of such generating facilities in Big Rivers’ revenue requirements for rate-making purposes or otherwise approved a surcharge to provide for the recovery of the costs of such New Facilities, then actual interest expense with respect to such New Facilities shall be included in the TIER calculation to the extent recovery is permitted; *provided, further*, that this clause (e) may not cause the TIER Adjustment to become negative. For purposes of determining Imputed Interest, it shall be assumed that the New Facilities were financed 80% with debt and 20% with equity. Imputed Interest shall equal the product of (i) the weighted average interest rate on Big Rivers’ debt for the Fiscal Year, and (ii) the amount of debt equal to 80% of the capital invested in the New Facilities.

(f) It shall be assumed that: The Rural Economic Reserve, the Economic Reserve and the Transition Reserve shall not generate any revenue or tax liability and the application of funds from the Rural Economic Reserve, the Economic Reserve or the Transition Reserve shall not result in any change in the Net Margins of Big Rivers.

(g) It shall be assumed that: Big Rivers shall have made no payment for damages or indemnification to or for the benefit of a Smelter with respect to the provision of Electric Services or “Electric Services” as defined in the Century Wholesale Agreement.

(h) It shall be assumed that: Big Rivers shall have paid no criminal penalties with respect to its acts or omissions other than criminal penalties that a Governmental Authority has approved the inclusion of in Big Rivers’ revenue requirements for rate-making purposes or otherwise approved a surcharge for collecting such penalties.

(i) It shall be assumed that: Big Rivers shall have received no proceeds from the sale of Energy to the wholesale market pursuant to Section 4.13.3 or the corresponding section of the Century Wholesale Agreement.

(j) It shall be assumed that: Big Rivers shall have incurred no expenses that are impermissible for inclusion in rates of electric generation and transmission cooperative utilities subject to the jurisdiction of the KPSC for rate-making purposes (currently including advertising expenses, branding expenses, charitable contributions and lobbying

expenses) or specifically disallowed for rate making purposes by a Governmental Authority; *provided, however*, that denial by a Governmental Authority of expense recovery through the FAC or the Environmental Surcharge Rider shall not constitute an expense that is impermissible for inclusion in rates if the nature of such expense is recoverable in base rates.

(k) It shall be assumed that: There are no revenues and expenses associated with non-regulated businesses of Big Rivers.

(l) It shall be assumed that: No interest is paid pursuant either to Section 5.3 or Section 5.4 or pursuant to the corresponding sections of the Century Wholesale Agreement.

(m) It shall be assumed that: No amounts have been or are payable with respect to Excess Reactive Demand Charges or with respect to “Excess Reactive Demand Charges” under the Century Wholesale Agreement.

(n) It shall be assumed that: No administrative fee shall have been received by Big Rivers as a result of any Surplus Sales, Undeliverable Energy Sales or Potline Reduction Sales or sales of Energy pursuant to the corresponding sections of the Century Wholesale Agreement.

(o) Additional costs related to a change in Big Rivers’ depreciation rates may not be included in the calculation of the TIER Adjustment unless such change has been approved, consented to or accepted by the KPSC or, if the KPSC no longer has jurisdiction over Big Rivers, by the RUS or any other Governmental Authority having jurisdiction over such change, if any.

(p) It shall be assumed that: The amortization of any Restructuring Amount is zero.

4.7.6 Any proceeds received or transaction costs paid by Big Rivers as part of or in connection with the consummation of the Unwind Transaction shall be disregarded for purposes of computing the TIER Adjustment Charge for the Fiscal Year in which the Unwind Transaction occurs.

#### 4.8 Adjustable Charges.

4.8.1 The “FAC Charge” shall be the product of the FAC Factor (expressed in dollars per MWh) and Base Monthly Energy.

4.8.2 The “Non-FAC Purchased Power Adjustment Charge” shall be the product of the Non-FAC Purchased Power Adjustment Factor (expressed in dollars per MWh) and Base Monthly Energy.

4.8.3 The “Environmental Surcharge” shall be the product of the Monthly Environmental Surcharge Factor (expressed in dollars per MWh) and Base Monthly Energy.

4.9 Rebate. If there is an Excess TIER Amount in any Fiscal Year and Big Rivers elects to implement a rebate to its Members in respect thereof, then no later than the first day of the fifth month of the following Fiscal Year, Big Rivers will credit to Kenergy for further credit to Alcan an amount (the "Rebate") equal to the product of:

- (i) the Excess TIER Amount, and
- (ii) a fraction:
  - (1) the numerator of which is the Base Fixed Energy for such Fiscal Year, and
  - (2) the denominator of which is the sum during the applicable Fiscal Year of (A) Big Rivers' aggregate sales of Energy to Members for resale to Non-Smelter Ratepayers, (B) the Base Fixed Energy, and (C) the aggregate amount of "Base Fixed Energy" as defined in the Century Retail Agreement (without regard to whether the Century Retail Agreement is then in effect).

4.10 Equity Development Credit. If there is an Excess TIER Amount in any Fiscal Year and Big Rivers does not elect to implement a rebate to its Members, then no later than the first day of the fifth month of the following Fiscal Year, Big Rivers will credit against the next Monthly Charge an amount (the "Equity Development Credit") equal to the product of:

- (i) the Excess TIER Amount, and
- (ii) a fraction:
  - (1) the numerator of which is the Base Fixed Energy for such Fiscal Year, and
  - (2) the denominator of which is the sum during the applicable Fiscal Year of (A) Big Rivers' aggregate sales of Energy to Members for resale to Non-Smelter Ratepayers, (B) the Base Fixed Energy, and (C) the aggregate amount of "Base Fixed Energy" as defined in the Century Retail Agreement (without regard to whether the Century Retail Agreement is then in effect).

4.10.2 Notwithstanding the above, the Equity Development Credit for any Fiscal Year may not exceed an amount which would cause the charge for Base Fixed Energy (including Energy curtailed pursuant to Section 4.13.2 or sold to Third Parties pursuant to Section 4.13.3 as Economic Sales, Section 10.1 as Surplus Sales, Section 10.2 as Undeliverable Energy Sales or Section 10.3 as Potline Reduction Sales) less the Equity Development Credit for such Fiscal Year on a per MWh basis to be less than (A) the Large Industrial Rate for a customer with a 98% load factor *plus* (B) the sum of the FAC Factor, the Environmental Surcharge Factor and the Non-FAC Purchased Power Adjustment Factor (each calculated on a per MWh basis).

4.11 Surcharge. In addition to any other amounts payable under this Agreement, and notwithstanding anything in this Agreement to the contrary, Kenergy shall pay a surcharge (the "Surcharge") equal to the sum of the following:

(a) As applicable:

(i) \$184,361 each Billing Month from the Effective Date through and including December, 2011;

(ii) \$263,373 each Billing Month from January, 2012 through and including December, 2016;

(iii) \$367,380 each Billing Month from January, 2017 through the expiration of the stated Term of this Agreement; *plus*

(b) For any Billing Month, the product of (i) Base Fixed Energy and (ii) \$0.60 per MWh; *plus*

(c) For any Billing Month, the product of (i) Base Fixed Energy and (ii) the number of cents per MW per Hour (which number shall not exceed 60 or be less than zero) that Big Rivers' projected annual average costs per MWh for fuel consumed by Big Rivers in its coal-fired generation as set forth in its Budget are greater than the amounts set forth on Schedule 4.11(c), in each case, for that Fiscal Year relating to such Billing Month. Big Rivers shall within 45 days following the end of each fiscal quarter compute its actual costs per MWh for fuel consumed by Big Rivers' coal-fired generation in each Billing Month for such fiscal quarter and shall calculate (on a fiscal-year-to-date basis in a manner consistent with this Section 4.11(c)) an additional amount to be paid by or credited to Kenergy based on such actual costs incurred for fuel consumed compared to the amounts set forth in the Budget for such Billing Months; *provided*, any additional amounts to be paid by or credited to Kenergy shall be applied to amounts due for the remainder of the Fiscal Year under this Section 4.11(c). Within 120 days of the end of each Fiscal Year, an additional amount shall be credited to Kenergy if necessary so that the total amounts paid pursuant to this Section 4.11(c) for such Fiscal Year shall not exceed an amount equal to the product of Base Fixed Energy for such Fiscal Year and 60 cents per MW per Hour; such amount shall be included as a credit, if applicable, in the Monthly Charges for the fourth Billing Month of the next Fiscal Year; *minus*

(d) For each of the first 96 Billing Months, \$86,588.

4.11.2 The obligation of Kenergy to pay the Surcharge will cease to accrue upon the termination of this Agreement. Sample calculations of the Surcharge under Section 4.11(c) are set forth in Exhibit A.

4.12 [Reserved]

4.13 Credits.

4.13.1 Surplus Sales, Undeliverable Energy Sales and Potline Reduction Sales. For any Billing Month, Big Rivers shall credit Kenergy (a) the Net Proceeds of any

Surplus Sales pursuant to Section 10.1 to the extent of the Avoidable Base Charge; and (b) the amount of Net Proceeds of any Undeliverable Energy Sales or Potline Reduction Sales to which Kenergy is entitled pursuant to Section 10.2 or Section 10.3, respectively, less \$0.25 per MWh as Big Rivers' administrative fee in each case. Sample calculations of the Net Proceeds from Surplus Sales, Undeliverable Energy Sales and Potline Reduction Sales that would be credited to Kenergy are set forth in Exhibit A.

4.13.2 Curtailment of Purchased Power. For any Billing Month, Big Rivers will credit Kenergy for any Hour during such Billing Month an amount equal to the product of (a) the Market Reference Rate during such Hour, and (b) the amount of Base Demand per Hour curtailed, if any, during such Hour in an amount and for a duration mutually agreed among Big Rivers, Kenergy and Alcan pursuant to this Section 4.13.2 and the corresponding section of the Century Wholesale Agreement. If both Alcan and Century agree to the curtailment of the delivery of Base Demand per Hour pursuant to this Section 4.13.2 of the Alcan Retail Agreement and the corresponding section of the Century Retail Agreement, Alcan and Century must notify Big Rivers and Kenergy as to whose curtailment shall take precedence. If Big Rivers is not notified as to whose curtailment shall take precedence, the Smelter whose curtailment is largest shall take precedence, and if the amount of curtailment by each Smelter is the same, then the Smelter whose curtailment notice was received by Big Rivers first shall take precedence. Sample calculations of credit that would be due to Kenergy for curtailment of purchased power are set forth in Exhibit A.

4.13.3 Economic Sales. For any Billing Month, Big Rivers will credit Kenergy 75% of the Net Proceeds that Big Rivers receives in respect of the curtailment of the delivery of Base Demand per Hour in an amount and for a duration mutually agreed among Big Rivers, Kenergy and Alcan if Big Rivers sells such curtailed Base Demand per Hour to the wholesale Energy market ("Economic Sales"); *provided*, that unless otherwise agreed among Big Rivers, Kenergy and Alcan, (a) the amount of Base Demand per Hour curtailed by Kenergy on behalf of Alcan may not exceed 100 MW per Hour, (b) the number of curtailments each year shall be limited to twelve, and (c) each curtailment may not last longer than four Hours, and *provided further*, that Big Rivers shall have no obligation to make Economic Sales until after Big Rivers first sells all of its own surplus Energy to the wholesale Energy market. If Kenergy on behalf of both Alcan and Century agree to the curtailment of the delivery of Base Demand per Hour pursuant to this Section 4.13.3 and the corresponding section of the Century Wholesale Agreement, Alcan and Century must notify Big Rivers and Kenergy as to whose curtailment shall take precedence. If Big Rivers is not notified as to whose curtailment shall take precedence, the Smelter whose curtailment is largest shall take precedence, and if the amount of curtailment by each Smelter is the same, then the Smelter whose curtailment notice was received by Big Rivers first shall take precedence. Sample calculations of the portion of the Net Proceeds from Economic Sales that would be credited to Kenergy are set forth in Exhibit A.

4.14 Other Amounts. For any Billing Month, any amounts payable pursuant to Section 10.1.4, 10.2.2 or 10.3.7 shall be added to or subtracted as applicable from the calculation of the Monthly Charge.

4.15 Taxes. No state or local sales, excise, gross receipts or other taxes are included in the charges and credits set forth in this Article 4. Kenergy shall pay or cause to be paid any such

taxes which are now or hereafter become applicable to the sale of Electric Services to Kenergy under this Agreement.

## ARTICLE 5

### BILLING

5.1 Monthly Invoice. Big Rivers shall bill Kenergy on or before the tenth Business Day of each month for the Monthly Charge as calculated pursuant to Article 4 based on the sale of Electric Services during the most recently ended Billing Month plus any other amounts then due and owing pursuant to this Agreement. Kenergy shall pay or cause to be paid to Big Rivers the Monthly Charge and any other amounts due and owing in immediately available funds to an account designated in the Lockbox Agreement on the Business Day following the 24th day of the month following the Billing Month. For the convenience of the Parties, and to facilitate satisfaction of Kenergy's obligation to Big Rivers, Kenergy has assigned to Big Rivers its right to receive payment from Alcan under the Alcan Retail Agreement and its rights to collect and enforce collection of such amounts due from Alcan other than with respect to the "Retail Fee" as defined in the Alcan Retail Agreement pursuant to the Lockbox Agreement. Big Rivers hereby releases Kenergy from further liability under this Agreement for amounts subject to such assignment to Big Rivers, *provided* that such release does not relieve Kenergy of its other liabilities or responsibilities under this Agreement. Kenergy shall cooperate with and assist Big Rivers with respect to any collections of amounts due from Alcan to Kenergy which are assigned to Big Rivers; *provided*, that Big Rivers will reimburse Kenergy for any reasonable expenses Kenergy incurs in providing such cooperation or assistance.

5.2 Right to Discontinue Service. If Kenergy (or Alcan on behalf of Kenergy) fails to pay any monthly invoice rendered by Big Rivers within the time prescribed in Section 5.1, Big Rivers may discontinue delivery of any or all Electric Services hereunder upon 120 Hours prior written notice to Kenergy and Alcan of its intention to do so. Big Rivers' discontinuance of such service for non-payment will not in any way affect, diminish or limit the obligations of Kenergy (or Alcan on behalf of Kenergy) to make all payments required under this Agreement or the Alcan Retail Agreement, as and when due.

5.3 Default Interest. If any monthly invoice rendered by Big Rivers is not paid on the due date, interest will accrue and become payable by Kenergy to Big Rivers on all unpaid amounts at a rate of four percentage points over the Prime Rate commencing on the first day after the due date.

5.4 Payments Under Protest. If any portion of any monthly statement is disputed by Kenergy (or Alcan), the disputed amount must be paid, under protest, when due. If the disputed amount of the payment is found to be incorrect, Big Rivers shall promptly cause to be refunded to Kenergy (or to Alcan on behalf of Kenergy, as applicable) the amount that was not then due and payable, together with interest at the Prime Rate commencing on the first day after the date of payment and accruing on each day thereafter until the date the refund is made.

5.5 [Reserved.]

5.6 No Waiver. No payment made by Kenergy (or Alcan on Kenergy's behalf) pursuant to this Article 5 will constitute a waiver of any right of Kenergy (or Alcan) to contest the correctness of any charge or credit.

5.7 No Payment. In no case shall Big Rivers be obligated to make a payment to Kenergy in connection with the application of a credit to Kenergy's Monthly Charges except to the extent otherwise expressly provided in Section 10.2.1(a) with respect to Undeliverable Energy Sales.

## ARTICLE 6

### EFFECTIVE DATE AND CONDITIONS

6.1 Effective Date. The obligations of the Parties under Article 2, Article 3, Article 4, Article 5, Section 7.3, Article 8, Article 9, Article 10, Article 11, Article 12, Article 13, Article 14 and Section 16.5 shall not commence until the Effective Date. The "Effective Date" will occur on the first date each of the conditions set forth in Section 6.2 has been satisfied in full or waived in writing by the Party in whose favor such condition exists (to the extent one or more conditions is subject to being waived).

6.2 Conditions to Occurrence of Effective Date. The following shall be conditions to the occurrence of the Effective Date:

6.2.1 Each of the representations and warranties of the Parties contained in this Agreement and the representations and warranties of Kenergy and Alcan in the Alcan Retail Agreement will be true and correct as of the date hereof and the Effective Date (as though such representations and warranties were made at and as of the date hereof and the Effective Date), and each of the Parties shall have received a certificate to such effect from the other Party with respect to the other Party's representations and warranties in this Agreement and Big Rivers shall have received a certificate to such effect from Kenergy and Alcan in respect of their respective representations and warranties in the Alcan Retail Agreement.

6.2.2 The Unwind Transaction will have been consummated, including the termination of the agreements set forth on Schedule 6.2.2.

6.2.3 Each of the documents and agreements set forth in Schedule 6.2.3 will have been duly authorized, executed and delivered by the parties thereto, and all conditions precedent to the effectiveness of such agreements will have been satisfied or waived, and shall, if amended after the date hereof and prior to the Effective Date, be acceptable to Alcan.

6.2.4 [Reserved]

6.2.5 The Alcan Guarantee will have been duly authorized, executed and delivered by Alcan Parent and be in full force and effect.

6.2.6 Release documents releasing the liabilities and obligations under the documents listed on Schedule 6.2.2 will have been duly authorized, executed and delivered by Big Rivers, Kenergy, Century, LG&E and Alcan, as applicable.



6.2.7 Each Member will have authorized, executed and delivered an amendment to its wholesale power contract with Big Rivers relating to the supply of electric service to the Member for its requirements (other than in the case of Kenergy, the requirements of Alcan and Century) to extend the term of such contract until a date satisfactory to Big Rivers.

6.2.8 No authorization or approval or other action by, and no notice to or filing or registration with, or license or permit from any Person, including any Governmental Authority, will be necessary prior to start of the Service Period, other than (i) as may be required under Applicable Law to be obtained, given, accomplished or renewed at any time or from time to time after the Effective Date and which are routine in nature or which cannot be obtained, or are not normally applied for, prior to the time they are required and which Big Rivers has no reason to believe will not be timely obtained and in each case which do not prevent provision of Electric Services as described herein, and (ii) with respect to the approval of the KPSC or FERC, on the Effective Date, such approvals will have been duly given or issued, received and will be in full force and effect and unappealable, and all conditions therein will have been satisfied to the extent required to be satisfied by Kenergy or Big Rivers on or prior to the Effective Date.

6.2.9 The Alcan Retail Agreement, the Century Wholesale Agreement and the Century Retail Agreement will have been duly authorized, executed and delivered by the parties thereto and be in full force and effect and all conditions precedent to the effectiveness will have been satisfied or waived other than conditions within the control of Kenergy or conditions that automatically will become effective simultaneously with the Effective Date or the Unwind Transaction.

6.2.10 RUS shall have consented to the Unwind Transaction and the New Transaction and to all arrangements and agreements required to implement the Unwind Transaction and the New Transaction.

6.3 Efforts to Satisfy Conditions to Effective Date. Each of the Parties shall use commercially reasonable efforts and act in good faith to satisfy all of the conditions set forth in Section 6.2 at the earliest practicable date (other than those which the applicable Party agrees to waive). At such time as Big Rivers or Kenergy believes such conditions have been satisfied, such Party shall notify the other Party in writing. The obligations of the Parties under this Section 6.3 will continue until the earlier of (a) such time as this Agreement terminates pursuant to Section 7.2, and (b) the Effective Date.

## ARTICLE 7

### TERM AND TERMINATION

7.1 Term. Subject to Section 6.1, this Agreement will become binding on the Parties on the date of execution and delivery by the Parties and will remain in full force and effect until December 31, 2023 (the "Term"), unless earlier terminated pursuant to the terms hereof.

7.2 Termination Prior to Effective Date. This Agreement may be terminated without cost or penalty prior to the occurrence of the Effective Date in accordance with this Section 7.2.

7.2.1 Termination for Failure to Satisfy Conditions to Effective Date. Either Party may terminate this Agreement without cost or penalty by providing five Business Days' prior written notice of termination to the other Party upon the failure of the conditions in Section 6.2 to be satisfied in full or waived by the Person in whose favor the condition exists on or before July 31, 2009, or such later date as the Parties may agree, unless any such condition is satisfied or waived by the applicable Person within such five Business Day period.

7.2.2 Termination In Event Unwind Transaction Will Not Be Consummated. This Agreement may be terminated by either Party at any time prior to the Effective Date upon receipt of notice from LG&E or Big Rivers that either LG&E or Big Rivers does not intend to consummate the Unwind Transaction.

7.2.3 Termination Due to KPSC Modification. If the KPSC issues an order on any of the filings by Big Rivers or other Persons seeking necessary approvals for the Unwind Transaction and the New Transaction that disapproves or changes the pricing or other material terms of this Agreement or the Alcan Retail Agreement or Big Rivers' ability to recover costs from the Smelters or the Non-Smelter Ratepayers other than as contemplated in connection with the New Transaction, either Party may terminate this Agreement without cost or penalty by providing written notice of termination to the other Party and Alcan no later than three Business Days after the first to occur of the following: (i) the last date on which a petition for re-hearing may be filed if such a petition has not been filed, (ii) the date on which the KPSC issues an order denying the request for re-hearing for any petition for re-hearing that may have been filed during the allowed period, and (iii) if a rehearing occurs, following the date on which an order on rehearing is issued.

7.2.4 Termination Pursuant to Alcan Termination. Either Party may terminate this Agreement without cost or penalty by providing written notice of termination to the other following receipt by Kenergy of a notice of termination from Alcan pursuant to and in accordance with Section 7.2.3 of the Alcan Retail Agreement.

7.2.5 Effect of Pre-Effective Date Termination. If this Agreement is terminated in accordance with this Section 7.2, Big Rivers and Kenergy acknowledge and agree that the Existing Alcan Agreement and the Kenergy/LG&E Contract and all other related documents and agreements will continue in full force and effect as if this Agreement had not been executed and delivered by the Parties.

7.3 Termination After the Effective Date. This Agreement may be terminated after the occurrence of the Effective Date in accordance with this Section 7.3.

7.3.1 Termination for Closing of Sebree Smelter. Either Party may terminate this Agreement as of the date Alcan terminates the Alcan Retail Agreement pursuant to Section 7.3.1 therein in connection with the termination and cessation of all aluminum smelting operations at the Sebree Smelter.

7.3.2 Termination for Event of Default. This Agreement may be terminated following the occurrence and during the continuation of an Event of Default pursuant to Article 14.

7.3.3 Termination Following KPSC Order.

(a) Big Rivers may terminate this Agreement without cost or penalty by providing written notice of termination to Kenergy and Alcan within three Business Days of the issuance by the KPSC of an order unconditionally or conditionally approving this Agreement and the Alcan Retail Agreement in connection with the consummation of the Unwind Transaction if Big Rivers determines in its business judgment, exercised in good faith, that the Unwind Transaction is not in Big Rivers' best interests.

## ARTICLE 8

### METERING

8.1 Metering Facilities. Big Rivers will provide, or cause to be provided metering facilities at the Point of Delivery which measure Hourly kW, kWh, kilovars, kilovar-hours and voltage fluctuation spectra.

8.2 Reading. Big Rivers will read or cause to be read the meters at the Point of Delivery on the last date of each month (or such other date as may be agreed upon by the Parties).

8.3 Testing. Big Rivers will test, or cause to be tested, the calibration of the meters at the Point of Delivery by comparison of accurate standards at least once every twelve months (or more often if so required by Applicable Law) and will give Kenergy and Alcan not less than five Business Days' prior notice of such testing. Kenergy and Alcan will have the right to observe and participate in all meter tests. Meters registering not more than plus or minus 1% inaccurate will be deemed to be accurate (unless Applicable Law establishes a standard more stringent than 1%, in which case, the more stringent standard will apply). The reading of any meter which will have been disclosed by tests to be inaccurate will be corrected for the 60 days before such tests (or for such shorter period if applicable) in accordance with the percentage of inaccuracy found by such tests. If any meter should fail to register for any period, the Parties and Alcan will make mutually agreed upon estimates for such period from the best information available. If Kenergy or Alcan requests a special meter test, Big Rivers shall cause such test to be conducted; *provided, however,* that if any special meter test made at the request of Kenergy or Alcan discloses that the meters are not more than plus or minus 1% inaccurate, Kenergy or Alcan, as applicable, shall reimburse Big Rivers for the reasonable cost of such test. In all other respects, meters through

which Big Rivers delivers Energy to Kenergy for resale to Alcan shall be installed, operated, maintained and tested in accordance with all Applicable Law and Prudent Utility Practice.

## ARTICLE 9

### OPERATIONAL MATTERS

9.1 Operations and Operational Responsibility. In carrying out the requirements of this Agreement, each Party will comply with the reliability criteria, standards, guidelines and operating procedures of any national electric reliability organization, SERC, Applicable Law and any regional transmission organization (if applicable), and neither Party will be required to take any action in violation of any thereof.

9.1.1 Big Rivers will operate and maintain or cause to be operated and maintained all of the facilities owned by it on the premises of Kenergy or Alcan.

9.1.2 Kenergy will operate and maintain, or cause to be operated and maintained, all of the facilities and equipment owned by it.

9.2 Installation and Maintenance of Interconnection Equipment. Big Rivers has furnished or installed all of the facilities required for the delivery of Energy to the Point of Delivery, as well as the 161 kilovolt transmission lines required between the Point of Delivery and Alcan's electrical substation. Big Rivers shall install and maintain, or shall cause to be installed and maintained, any and all interconnection equipment, metering, or substation equipment, and other equipment, including switching and protective equipment, necessary to enable Kenergy to deliver Energy to Alcan at the Point of Delivery. Big Rivers will keep or cause to be kept, all such equipment in good working order, condition and repair (ordinary wear and tear excepted) such that all such equipment is capable of operating, consistent with Prudent Utility Practice, to the extent necessary to assure sufficient capability to take and use the Electric Services to be delivered by Big Rivers to Kenergy as provided for in this Agreement.

9.3 [Reserved.]

9.4 Curtailed by Big Rivers. If Big Rivers determines in accordance with Prudent Utility Practice, or in compliance with any national electric reliability organization, SERC, Applicable Law and other regulation, any applicable regional transmission organization, or other applicable operating criteria or rules, that a System Emergency has occurred or is imminent, and after suspending or reducing deliveries to Persons purchasing interruptible Energy from Big Rivers, Big Rivers may suspend or reduce the delivery of Energy hereunder and may cease to make available in whole or in part the Electric Services, in each case to the extent caused by, or that Big Rivers determines necessary or prudent under the circumstances to prevent or attempt to prevent, or counter or reduce the effects of, such System Emergency. Any curtailment caused by a System Emergency (or for any other reason) that cannot be avoided after the suspension or reduction of deliveries to Persons purchasing interruptible Energy from Big Rivers will be effected in a non-discriminatory manner consistent with Big Rivers' then-current policies and procedures. Big Rivers shall notify Kenergy and Alcan as to the occurrence or threatened occurrence of any System Emergency or other event that may require curtailment, its cause and

its impact on the delivery of Energy or the provision of Electric Services, as soon as practicable. Big Rivers will not be obligated to supply Electric Services to the extent suspended or curtailed as a result of the System Emergency.

9.5 Ownership and Removal of Equipment. Any and all equipment, apparatus, devices or facilities placed or installed, or caused to be placed or installed, by either of the Parties hereto (or by Alcan) on or in the premises of the other Party (or Alcan) to receive service under this Agreement shall be and remain the property of the Party (or Alcan) owning and installing such equipment, apparatus, devices or facilities regardless of the mode or manner of annexation or attachment to real property of the other. Upon the termination of this Agreement or any extension thereof, the owner (including, if applicable, Alcan) of any equipment, apparatus, devices or facilities on the property of a Party shall have the right to enter upon the premises of that Party, and shall, within a reasonable time and at the sole expense of the owner, remove such equipment, apparatus, devices or facilities.

## ARTICLE 10

### COVENANTS

#### 10.1 Surplus Sales.

10.1.1 Big Rivers acknowledges and agrees that Alcan may request Big Rivers and Kenergy sell Energy which is surplus to Alcan's needs by delivering prior written notice to Kenergy and Big Rivers (a) identifying the portion of Base Demand per Hour to be sold and the associated times and duration of the requested sales, and (b) agreeing to curtail its demand per Hour so Alcan's actual demand and the Energy sold pursuant to this Section 10.1 ("Surplus Sales") is not expected to exceed the Base Demand per Hour. Big Rivers shall have no obligation to make Surplus Sales if the portion of Base Demand per Hour Alcan requests to be sold exceeds the Base Demand per Hour or is less than ten MW or not in integral multiples of one MW. For the avoidance of doubt, Surplus Sales shall not include sales of Economic Sales, Undeliverable Energy Sales or Potline Reduction Sales.

10.1.2 Big Rivers shall use reasonable commercial efforts to make Surplus Sales and, to the extent consistent with notices from Alcan to Big Rivers, maximize the Net Proceeds thereof. Big Rivers shall have no obligation to use any efforts to make Surplus Sales if Big Rivers, in its sole discretion exercised in good faith, estimates the Net Proceeds therefrom would be less than \$1.00 per MWh in excess of the sum of the Base Variable Rate, the FAC Factor, the Non-FAC Purchased Power Adjustment Factor and the Environmental Surcharge Factor (each calculated on a per MWh basis). Big Rivers will not have any obligation to Kenergy to market or resell Energy pursuant to this Section 10.1 (a) until Big Rivers first has sold or elected not to sell all amounts of its own surplus Energy, or (b) if Big Rivers is unable to sell any or all Energy as a result of transmission constraints (whether on or off Big Rivers' transmission system) or other constraints, including constraints imposed by Applicable Law.

10.1.3 For the avoidance of doubt, nothing in this Section 10.1 shall relieve Kenergy of its obligation for the Base Energy Charge or the TIER Adjustment Charge or any other portion of the Monthly Charge pursuant to Article 4.

10.1.4 For any applicable Surplus Sale, (i) Kenergy shall pay Big Rivers any excess of Big Rivers' actual income tax liability relating to such Surplus Sale over the estimated income tax liability for such Surplus Sale that was used for purposes of calculating the Net Proceeds on such Surplus Sale, and (ii) Big Rivers shall pay to Kenergy any excess of Big Rivers' estimated income tax liability for such Surplus Sale that was used for purposes of calculating the Net Proceeds on such Surplus Sale over the actual income tax liability of Big Rivers relating to such Surplus Sale.

## 10.2 Undeliverable Energy Sales.

10.2.1 If Alcan notifies Big Rivers and Kenergy of the occurrence of (i) any event which results in damage to or destruction of plant or equipment that renders all or a portion of the Sebree Smelter unfit for normal use and limits Alcan's ability to engage in aluminum reduction operations thereat; (ii) Alcan's demand is initially reduced by at least 50 MW per Hour or more as a result thereof; (iii) such limitation is expected to continue for a period of 48 consecutive hours or longer; and (iv) the proximate cause of such casualty is not an intentional misconduct or willful misconduct of Alcan or any of its Affiliates, Big Rivers shall use reasonable commercial efforts to sell an amount of Energy up to the corresponding reduction in Alcan's demand as a result of such event during the continuance of such limitation, subject to the same terms, conditions and limitations as set forth for Surplus Sales in Section 10.1. The sales of Energy described in this Section 10.2 shall be referred to as "Undeliverable Energy Sales." Alcan may provide such notice orally if followed promptly by written notice. Big Rivers shall use reasonable commercial efforts to make such Undeliverable Energy Sales and, to the extent consistent with notices from Alcan to Big Rivers, maximize the Net Proceeds thereof.

(a) For a period of up to six months from the date of the occurrence of such event, all of the Net Proceeds of any such sales (less the administrative fee pursuant to Section 4.13.1) shall be credited against the Monthly Charge or, if in excess of the Monthly Charge otherwise applicable, such excess shall be paid to Alcan. Upon Alcan providing a certificate representing that the event can not be remedied with reasonable diligence within six months, Kenergy's rights under this Section 10.2 shall be extended for an additional period up to three months.

(b) Upon expiration of the period of Kenergy's rights under this Section 10.2, Big Rivers shall not have any obligations to sell Energy to a Third Party which otherwise would be available for purchase by Alcan hereunder except as otherwise expressly required pursuant to Section 4.13.3 as Economic Sales, Section 10.1 as Surplus Sales, or Section 10.3 as Potline Reduction Sales. Undeliverable Energy Sales may not be greater than Base Demand per Hour.

(c) If the circumstances described in clauses (i), (ii), and (iv) of this Section 10.2.1 do not continue for a period of 48 consecutive hours or longer, such sales of Energy will be treated as Surplus Sales under Section 10.1 unless Section 10.3 applies.

10.2.2 For any applicable Undeliverable Energy Sale, (i) Kenergy shall pay to Big Rivers any excess of Big Rivers' actual income tax liability relating to such Undeliverable Energy Sale over the estimated income tax liability for such Undeliverable Energy Sale that was

used for purposes of calculating the Net Proceeds on such Undeliverable Energy Sale, and (ii) Big Rivers shall pay to Kenergy, upon Kenergy's receipt of such payment from Big Rivers, any excess of Big Rivers' estimated income tax liability for such Undeliverable Energy Sale that was used for purposes of calculating the Net Proceeds on such Undeliverable Energy Sale over the actual income tax liability of Big Rivers relating to such Undeliverable Energy Sale.

### 10.3 Potline Reduction Sales.

10.3.1 At the request of Kenergy, Big Rivers shall sell 115 MW (plus or minus 10 MW) per Hour to Third Parties (such sales of Energy are referred to as "Potline Reduction Sales"), such amount subject to Section 10.3.2 below, on either a Firm basis or a System Firm basis concurrently with delivery of not less than 30 days' prior notice from Alcan to Kenergy and Big Rivers (which notice Kenergy and Big Rivers shall keep confidential) if (i) Alcan has ceased or will cease all aluminum smelting operations on one and only one of its potlines at the Sebree Smelter (a "Potline Reduction"); (ii) Alcan is reasonably likely to be able to continue aluminum smelting operations with respect to all of its other potlines at the Sebree Smelter as a result of the cessation of aluminum smelting operations on the potline referred to in clause (i); (iii) Alcan in good faith reasonably estimates the duration of such cessation will equal or exceed 12 months; and (iv) no Potline Reduction Sales have been made for a period of twelve consecutive months prior to the date of such notice. Such notice also shall state the requested duration of the sales of Energy and must be accompanied by a certificate of an officer of Alcan Parent certifying as to the matters set forth in clauses (i), (ii), (iii), and (iv) above.

10.3.2 Alcan, Kenergy and Big Rivers shall reasonably cooperate on a schedule for the graduated reduction and, in the case of a potline restoration, the graduated increase in the demand effected pursuant to Section 10.3.1 in such amounts and over a period of time as is mutually satisfactory.

10.3.3 Kenergy may not withdraw its request for Potline Reduction Sales to the extent that Big Rivers has a legally binding agreement with a Third Party for Potline Reduction Sales (a "Potline Reduction Sales Agreement"), *provided* that Big Rivers acknowledges and agrees that Alcan may at any time increase demand pursuant to Section 10.3.2 and assume responsibility for acquiring Market Energy required during the remainder of the Potline Reduction Sales Agreement.

10.3.4 Big Rivers shall use reasonable commercial efforts to make Potline Reduction Sales and, to the extent consistent with notices from Alcan to Big Rivers, maximize the Net Proceeds thereof. Big Rivers will not have any obligation to market or resell Energy pursuant to this Section 10.3 (i) until Big Rivers first has sold or elected not to sell all amounts of its own surplus Energy available for sale or (ii) to the extent Big Rivers is unable to make Potline Reduction Sales as a result of transmission constraints (whether on or off Big Rivers' transmission system) or other constraints, including constraints imposed by Applicable Law.

10.3.5 Kenergy and Big Rivers shall consult with Alcan and agree on the Potline Reduction Sales that will be made on a Firm basis or a System Firm basis and the terms of same. To the extent Kenergy request the Potline Reduction Sales be made on a Firm basis, Kenergy agrees that if during the term of such sale or sales Big Rivers is required to purchase

replacement Energy or otherwise make payments to meet such Potline Reduction Sales on a Firm basis, Kenergy will reimburse Big Rivers the full cost of such actions and indemnify Big Rivers for any costs, obligations or liabilities incurred by Big Rivers, including liabilities to Third Parties.

10.3.6 All of the Net Proceeds of any Potline Reduction Sales (less the administrative fee pursuant to Section 4.13.1) shall be credited against the Monthly Charge from the effective date of the notice pursuant to Section 10.3.1 until the Cut-Off Date or, if such amount is in excess of the Monthly Charge otherwise applicable, such excess shall be paid to Kenergy for payment to Alcan. The "Cut-Off Date" shall mean the earliest to occur of (a) the first day of the 49th Billing Month after the effective date of the notice given under Section 10.3.1, (b) a date specified in a written notice, if any, by Alcan to Kenergy and Big Rivers, and (c) the earlier of the date (i) one year after the date Alcan commences smelting operations with respect to one or more pots on the previously suspended potline or (ii) all Potline Reduction Sales Agreements have been terminated or expired after Alcan commences smelting operations with respect to one or more pots on the previously suspended potline. Sales of Energy after the Cut-Off Date shall be Surplus Sales pursuant to Section 10.1 and not Potline Reduction Sales pursuant to this Section 10.3. Kenergy agrees that it shall not be permitted to extend the term of Potline Reduction Sales beyond forty-eight months, *provided* that nothing in this Section 10.3.6 shall preclude Kenergy from providing a new notice under Section 10.3.1 after aluminum smelting operations at the suspended potline have been restored, subject to Section 10.3.1(iv).

10.3.7 For any Potline Reduction Sale, (i) Kenergy shall pay to Big Rivers any excess of Big Rivers' actual income tax liability relating to such Potline Reduction Sale over the estimated income tax liability for such Potline Reduction Sale that was used for purposes of calculating the Net Proceeds on such Potline Reduction Sale, and (ii) Big Rivers shall pay to Kenergy any excess of Big Rivers' estimated income tax liability for such Potline Reduction Sale that was used for purposes of calculating the Net Proceeds on such Potline Reduction Sale over the actual income tax liability of Big Rivers relating to such Potline Reduction Sale.

10.3.8 For the avoidance of doubt, (i) Potline Reduction Sales shall not include Surplus Sales, Economic Sales or Undeliverable Energy Sales; (ii) nothing in this Section 10.3 shall be construed to relieve Kenergy of its obligation with respect to the Base Energy Charge, the TIER Adjustment or other components of the Monthly Charge payable pursuant to Article 4; and (iii) nothing in this Agreement precludes Undeliverable Energy Sales under Section 10.2 from becoming Potline Reduction Sales if all conditions of this Section 10.3 are met.

10.4 Alcan Retail Agreement. Kenergy covenants that:

10.4.1 it will at all times fully perform and discharge all of its obligations under the Alcan Retail Agreement, and under any transmission agreement pursuant to which amounts of Energy are delivered directly or indirectly to Kenergy for sale and transmission to Alcan;

10.4.2 it will not resell any Electric Services purchased from Big Rivers under this Agreement to any user other than Alcan, except as expressly permitted in this



Agreement or with the prior written consent of Big Rivers, which may be withheld by Big Rivers in its sole discretion, and shall require that any Energy that Kenergy purchases from Big Rivers under this Agreement and resells to Alcan must be consumed by Alcan in connection with the operation of its Sebree Smelter;

10.4.3 it will not take any action or support any action by others that in any manner would impede Kenergy's ability to fulfill its obligations to Big Rivers under this Agreement nor will it amend or modify the Alcan Retail Agreement, including with respect to (i) the rates, terms and conditions for service; (ii) the "Base Monthly Energy," "Supplemental Energy," or "Market Energy" under the Alcan Retail Agreement; (iii) Alcan's payment obligations; or (iv) the term of the Alcan Retail Agreement without the prior written consent of Big Rivers;

10.4.4 it will not waive compliance by Alcan with any of its obligations under the Alcan Retail Agreement, fail to fully enforce the Alcan Retail Agreement against Alcan, or act in any manner that would adversely affect Kenergy's ability to fulfill its obligations under this Agreement;

10.4.5 it will provide to Big Rivers all notices of default received or sent by Kenergy pursuant to the Alcan Retail Agreement;

10.4.6 it will not terminate the Alcan Retail Agreement if the termination would be a breach by Kenergy thereof (including rejection of the agreement in bankruptcy or reorganization proceeding);

10.4.7 it will not terminate the Alcan Retail Agreement for breach by Alcan without providing Big Rivers notice of such Alcan breach and a reasonable opportunity for Big Rivers to cure such Alcan breach, if it should elect, in its sole discretion, to do so. Big Rivers' opportunity to cure will extend, at a minimum, for a period of not less than ten Business Days after the later of (i) the applicable period of time available for a cure by Alcan under the Alcan Retail Agreement, or (ii) notice of the breach by Alcan is delivered by Kenergy to Big Rivers; and

10.4.8 it will not assign or transfer (by operation of law or otherwise) any rights or interests that it may have in the Alcan Retail Agreement to any Person without (i) subject to Section 16.2, first obtaining the written consent of Big Rivers, which consent will not be unreasonably withheld or delayed, and (ii) causing the transferee of the Alcan Retail Agreement to assume and agree to perform all of Kenergy's obligations under this Agreement which arise following that assignment or transfer.

10.5 Refund of Income Tax Estimated for Net Proceeds. Big Rivers shall return to Kenergy for the benefit of Alcan any income taxes deducted in calculating the Net Proceeds of a sale of Energy by Big Rivers which Big Rivers ultimately determines are not required to be paid due to the application of a net operating loss carry-forward of Big Rivers that existed on the Effective Date and that otherwise would have expired unused.

10.6 Mitigation of Uncontrollable Force. Kenergy covenants that (a) if there is an Uncontrollable Force that prevents Big Rivers from delivering or Kenergy from receiving any

Electric Services as required under this Agreement, Kenergy shall use reasonable commercial efforts to obtain Energy and related services from a Third Party Supplier for sale and delivery to Alcan as required under the Alcan Retail Agreement, and (b) Kenergy will take such other actions as are reasonably necessary to avoid a breach or default under the Alcan Retail Agreement that might, if not cured as required by that agreement, result in Alcan's invocation of any of the remedies set forth in Article 14 of the Alcan Retail Agreement.

## ARTICLE 11

### UNCONTROLLABLE FORCES

11.1 Occurrence of an Uncontrollable Force. No Party will be considered to be in breach or default in the performance of any of its obligations under this Agreement if the failure of performance is due to an Uncontrollable Force, except as otherwise provided in this Article 11. If either Party is unable, in whole or in part, by reason of Uncontrollable Force to carry out its obligations, then the obligations of the Parties, to the extent that they are affected by such Uncontrollable Force, will be suspended during the continuance of any inability so caused, but for no longer period. A Party will not be relieved of liability for failing to perform if such failure is due to causes arising out of its own negligence or willful acts or omissions.

11.2 Mitigation. A Party rendered unable to fulfill any obligation by reason of an Uncontrollable Force shall exercise due diligence to remove or remedy such inability as promptly as reasonably possible. Nothing contained herein may be construed to require a Party to prevent or to settle a labor dispute against its will.

11.3 Notice of Uncontrollable Force. A Party shall notify the other Party at the earliest practicable time following (i) the occurrence of any Uncontrollable Force which renders such Party incapable of performing hereunder or (ii) the time at which such Party has reason to expect that such an Uncontrollable Force is imminent. Kenergy also shall notify Big Rivers if it receives notice from Alcan that Alcan anticipates that it will be unable to perform its obligations to Kenergy under any contract or agreement that affects Kenergy's performance under this Agreement due to an Uncontrollable Force and Big Rivers is not an additional addressee of such notice.

11.4 Payment Obligations. Notwithstanding anything in this Agreement to the contrary, the occurrence of an Uncontrollable Force shall not relieve Kenergy of its payment obligations under Article 4, including its payment obligations with respect to the Base Energy Charge.

## ARTICLE 12

### REPRESENTATIONS AND WARRANTIES

12.1 Representations and Warranties of Big Rivers. Big Rivers hereby represents and warrants to Kenergy as follows:

12.1.1 Big Rivers is an electric generation and transmission cooperative corporation duly organized and validly existing and in good standing under the laws of the

Commonwealth of Kentucky, and has the power and authority to execute and deliver this Agreement, to perform its obligations hereunder, and to carry on its business as it is now being conducted and as it is contemplated hereunder to be conducted during the Term hereof.

12.1.2 The execution, delivery and performance of this Agreement by Big Rivers have been duly and effectively authorized by all requisite corporate action.

12.2 Representations and Warranties of Kenergy. Kenergy hereby represents and warrants to Big Rivers as follows:

12.2.1 Kenergy is an electric cooperative corporation duly organized, validly existing and in good standing under the laws of the Commonwealth of Kentucky, and has the power and authority to execute and deliver this Agreement, to perform its obligation hereunder, and to carry on its business as such business is now being conducted and as is contemplated hereunder to be conducted during the Term hereof.

12.2.2 The execution, delivery and performance of this Agreement by Kenergy have been duly and effectively authorized by all requisite corporate action.

## ARTICLE 13

### ADDITIONAL AGREEMENTS

#### 13.1 Regulatory Proceedings.

13.1.1 KPSC Jurisdiction. Nothing in this Agreement shall limit or expand the jurisdiction of the KPSC over Big Rivers, Kenergy or the rates, terms and conditions of Electric Service to Kenergy.

13.1.2 Notice of Material Filings. Big Rivers shall provide to Kenergy and Alcan a copy of any filing with the KPSC or FERC that seeks a change in Big Rivers' tariff, or relief authorized by KRS 278.020, KRS 278.030, KRS 278.212, KRS 278.218, KRS 278.300, KRS 278.183 or 807 KAR 5:056.

#### 13.2 Audit Rights.

13.2.1 Kenergy will permit Big Rivers to audit, upon reasonable notice, at its own expense, at a mutually agreeable time, all information in the possession of Kenergy relating to its service to Alcan under the Alcan Retail Agreement, including scheduled usage, meter records and billing records. Kenergy shall retain all documentation applicable to service to Alcan under the Alcan Retail Agreement for a period of three years beyond the date of the service. Nothing in this Section 13.2 shall obligate Kenergy to disclose attorney-client privileged information.

13.2.2 Big Rivers will permit Kenergy and Alcan to audit, upon reasonable notice, at its own expense, at a mutually agreeable time, all information in the possession of Big Rivers relating to its service to Kenergy under this Agreement, including scheduled deliveries, meter records, billing records, records related to payments made by Alcan to Big Rivers pursuant

to the assignment described in Section 5.1, and such other documents related to payment for and determination of the amount of Electric Services supplied by Big Rivers and delivered to Kenergy for resale and delivery to Alcan and the appropriate classification of such Energy. Big Rivers shall retain all documentation applicable to service to Kenergy under this Agreement for a period of three years.

13.3 [Reserved.]

13.4 Patronage Capital. Big Rivers shall amend its bylaws to adopt the provisions set forth in Appendix B.

13.5 [Reserved.]

13.6 Negotiation of Replacement Agreement. If this Agreement has not been terminated earlier, Big Rivers shall negotiate in good faith with Kenergy and Alcan, no later than January 1, 2023, concerning rates and terms and conditions for new power supply arrangements following the expiration of this Agreement on December 31, 2023.

13.7 Entitlement to Large Industrial Rate. If this Agreement terminates pursuant to a closure of the Sebree Smelter as set forth in Section 7.3.1 and Alcan continues non-smelting operations, Big Rivers acknowledges and agrees that Alcan will be entitled to be served by Kenergy under the Large Industrial Rate; *provided, however*, the capacity and associated Energy served under the Large Industrial Rate shall not exceed 15 MW.

13.8 Unbundling. Unless required by Applicable Law, Big Rivers will not seek to amend the Large Industrial Rate:

(a) To create unbundled services if unbundling those services alone would result in a more than \$1 million of additional revenue to Big Rivers; and

(b) In a manner which results in categories of OATT costs being charged to Kenergy which Alcan is responsible for under the Alcan Retail Agreement and which are utilized by but not charged to the Non-Smelter Ratepayers.

13.9 Not Exclusive Service Arrangement. Nothing in this Agreement may be construed (i) to limit the ability of Kenergy to purchase capacity, Energy or other services from Persons other than Big Rivers to serve Alcan, or (ii) to amend, waive or otherwise alter the terms of Big Rivers' plan of reorganization, as modified June 1, 1998, or agreements relating thereto regarding the supply obligation of Big Rivers after July 17, 1998, for wholesale power required by Kenergy to provide Electric Service to Alcan or Century.

## ARTICLE 14

### EVENTS OF DEFAULT; REMEDIES

14.1 Events of Default. Each of the following constitutes an “Event of Default” under this Agreement:

14.1.1 Failure by a Party to make any payment in accordance with this Agreement within three Business Days following the non-performing Party’s receipt of written notice of the non-performing Party’s default in its payment obligation;

14.1.2 Failure of a Party to perform any material duty imposed on it by this Agreement (other than a failure to make a payment when due) within 30 days following the non-performing Party’s receipt of written notice of the non-performing Party’s breach of its duty hereunder;

14.1.3 Any attempt by a Party to transfer an interest in this Agreement other than as permitted pursuant to Article 16;

14.1.4 The occurrence and continuance of an “Event of Default” under the Alcan Retail Agreement;

14.1.5 Any filing of a petition in bankruptcy or insolvency, or for reorganization or arrangement under any bankruptcy or insolvency laws, or voluntarily taking advantage of any such laws by answer or otherwise or the commencement of involuntary proceedings under any such laws by a Party and such petition has not been withdrawn or dismissed within 60 days after filing;

14.1.6 Assignment by a Party for the benefit of its creditors;

14.1.7 Allowance by a Party of the appointment of a receiver or trustee of all or a material part of its property and such receiver or trustee has not been discharged within 60 days after appointment; or

14.1.8 Failure, inability or refusal of Kenergy to cure a breach or default by Kenergy under the Alcan Retail Agreement which gives rise to a termination of the Alcan Retail Agreement, or any termination by Kenergy of the Alcan Retail Agreement in breach or default thereof.

14.2 Remedies, General. Except as otherwise provided in this Agreement, following the occurrence and during the continuance of an Event of Default by either Party, the non-defaulting Party may, in its sole discretion, elect to terminate this Agreement upon written notice to the other Party, or to seek enforcement of its terms at law or in equity. Unless otherwise provided herein, remedies provided in this Agreement are cumulative, unless specifically designated to be an exclusive remedy and nothing contained in this Agreement may be construed to abridge, limit, or deprive either Party of any means of enforcing any remedy either at law or in equity for the breach or default of any of the provisions herein provided that:

14.2.1 UNDER NO CIRCUMSTANCE WILL EITHER PARTY OR ITS RESPECTIVE AFFILIATES, DIRECTORS, OFFICERS, MEMBERS, MANAGER, EMPLOYEES OR AGENTS BE LIABLE HEREUNDER TO THE OTHER PARTY, ITS AFFILIATES, DIRECTORS, OFFICERS, MEMBERS, MANAGERS EMPLOYÉES OR AGENTS WHETHER IN TORT, CONTRACT OR OTHERWISE FOR ANY SPECIAL, INDIRECT, PUNITIVE, EXEMPLARY OR CONSEQUENTIAL DAMAGES, INCLUDING LOST PROFITS. EACH PARTY'S LIABILITY HEREUNDER WILL BE LIMITED TO DIRECT, ACTUAL DAMAGES. THE EXCLUSION OF ALL OTHER DAMAGES SPECIFIED IN THIS SECTION IS WITHOUT REGARD TO THE CAUSE OR CAUSES RELATING THERETO. THIS PROVISION WILL SURVIVE TERMINATION OF THIS AGREEMENT.

14.2.2 Neither Party may terminate this Agreement as a result of an "Event of Default" under the Alcan Retail Agreement if the actions or omissions of Kenergy caused such "Event of Default"; *provided*, that either Party may terminate this Agreement if the Alcan Retail Agreement is terminated for any reason.

14.2.3 Unless otherwise provided herein, if a Party is in breach of its obligations under this Agreement but such breach does not constitute, or would not with the passage of time or the giving of notice constitute, an Event of Default and this Agreement does not provide any other remedy therefor, if such breach has not been cured by the breaching Party within 60 days after receiving written notice from the non-breaching Party setting forth, in reasonable detail, the nature of such breach, the non-breaching Party may bring a claim for money damages with respect to such breach and exercise its rights under Section 15.2, but will not be entitled to terminate, or seek to terminate, this Agreement, or suspend performance of its obligations and duties hereunder as a result of such breach.

## ARTICLE 15

### DISPUTE RESOLUTION

15.1 Resolution Meetings. If a dispute arises between the Parties concerning the terms or conditions of this Agreement, the duties or obligations of the Parties under this Agreement, or the implementation, interpretation or breach of this Agreement, either Party may request in writing a meeting among an authorized representative of each of the Parties and, if applicable, Alcan to discuss and attempt to reach a resolution of the dispute. Such meeting will take place within ten days or such shorter or longer time as agreed upon by the Parties of the request. Nothing in this Section 15.1 shall toll or extend the cure period with respect to the failure by a Party to perform its obligations under this Agreement.

15.2 Right to Pursue Rights and Remedies. Absent resolution of a dispute pursuant to Section 15.1, the Parties may pursue at any Governmental Authority all rights and remedies that they may have at law, in equity or pursuant to this Agreement subject to the limitations set forth in this Agreement. Notwithstanding the provisions of this Article 15, each Party may at all times seek injunctive relief, where its delay in doing so could result in irreparable injury.

## ARTICLE 16

### GENERAL PROVISIONS/SUCCESSORS AND ASSIGNS

16.1 Binding Nature. This Agreement will inure to the benefit of and be binding upon the Parties hereto and their respective successors and permitted assigns. No interest in this Agreement may be transferred or assigned by either Party, in whole or in part, by instrument or operation of law, without the prior written consent of the other Party, except as provided in Section 16.4, and except that, subject to satisfaction of the conditions of Section 16.2, assignment may be made by either Party to such Person as acquires all or substantially all the assets of the assigning Party or which merges with or acquires all or substantially all of the equity of such Party. When consent is required, consent may not be unreasonably withheld, conditioned or delayed.

16.2 Limitation on Assignment. In no event may either Party assign this Agreement (including as part of a sale of all or substantially all the assets of the assigning Party or a merger with or purchase of substantially all the equity interests of such Party) (i) to any Person that does not have adequate financial capacity as demonstrated to the reasonable satisfaction of the non-assigning Party or that would otherwise be unable to perform the obligations of the assigning Party pursuant to this Agreement or (ii) on any terms at variance from those set forth in this Agreement except as agreed to in writing by the Parties.

16.3 Duties. No permitted assignment or transfer will change the duties of the Parties, or impair the performance under this Agreement except to the extent set forth in such permitted assignment and approved in writing by the Parties. No Party is released from its obligations under this Agreement pursuant to any assignment, unless such release is granted in writing.

16.4 Financing Lien. Either Party may, without the approval of the other Party, assign this Agreement as collateral security or grant one or more mortgages (including one or more deeds of trust or indentures) on or security interests in its interest under this Agreement in connection with the general financing of its assets or operations.

#### 16.5 Big Rivers Restructuring.

16.5.1 In connection with a Restructuring, Kenergy, Alcan, Century and Big Rivers shall determine a good faith estimate of the cumulative increase or decrease in the TIER Adjustment that such Restructuring would cause in each Fiscal Year over the 24-Billing Month period following the date of the effectiveness of Restructuring (the "Restructuring Amount"). Any change in the Large Industrial Rate approved at the time of or in connection with the Restructuring shall not be considered as an effect of the Restructuring. Nothing in this Agreement, including this Section 16.5, shall limit the ability of Big Rivers to seek a change in or modification of the Large Industrial Rate in connection with the occurrence of a Restructuring.

16.5.2 The Monthly Charge in each month of the 48-month period following the effectiveness of the Restructuring shall be increased or decreased, as applicable, by an amount equal to 1/48th of the product of the Restructuring Amount and the Applicable

Percentage; *provided*, that the application of this Section 16.5 shall not result in Kenergy paying less than the sum of the Large Industrial Rate, the FAC Factor, the Environmental Surcharge Factor and the Non-FAC Purchased Power Adjustment Factor, all on a per MWh basis, for a customer with a 98% load factor with respect to Base Monthly Energy in any Fiscal Year. Sample calculations for determining a Restructuring Amount are set forth in Exhibit A.

16.5.3 This Section 16.5 shall not be applicable to any Restructuring undertaken in response to the loss of revenue caused by the termination of the Century Wholesale Agreement.

16.5.4 If Alcan, Century, Kenergy and Big Rivers are not able to determine a mutually agreeable estimate of the Restructuring Amount, then Big Rivers, Kenergy, Alcan or Century may petition to the KPSC to determine the Restructuring Amount.

## ARTICLE 17

### MISCELLANEOUS

17.1 Governing Law. This Agreement shall be interpreted, governed by and construed under the laws of the Commonwealth of Kentucky, without regard to its conflicts of law rules.

17.2 Jurisdiction. The Parties hereby agree that the courts of the Commonwealth of Kentucky will have exclusive jurisdiction over each and every judicial action brought under or in relationship to this Agreement; *provided* that the subject matter of such dispute is not a matter reserved by law to the KPSC, or to the U.S. federal judicial system (in which event exclusive jurisdiction and venue will lie with the U.S. District Court for the Western District of Kentucky), and the Parties hereby agree to submit to the jurisdiction of Kentucky courts for such purpose. Venue in state court actions will be in the Henderson Circuit Court as the court in which venue will lie for the resolution of any disputes under this Agreement. Nothing in this paragraph prohibits a Party from referring to FERC any matter properly within FERC's jurisdiction.

17.3 Waiver. The waiver by either Party of any breach of any term, covenant or condition contained herein will not be deemed a waiver of any other term, covenant or condition, nor will it be deemed a waiver of any subsequent breach of the same or any other term, covenant or condition contained herein.

#### 17.4 Amendments.

17.4.1 This Agreement may be amended, revised or modified by, and only by, a written instrument duly executed by both Parties.

17.4.2 The Parties acknowledge and agree that nothing in this Agreement shall limit the right of Big Rivers to file changes to the OATT, or limit the right of any Party to challenge any aspect of the OATT, including the applicable loss factor, the transmission service rates or any other transmission or ancillary service issue presented to FERC.

17.5 Good Faith Efforts. The Parties agree that each will in good faith take all reasonable actions within their reasonable control as are necessary to permit the other Party to



fulfill its obligations under this Agreement; *provided* that no Party will be obligated to expend money or incur material economic loss in order to facilitate performance by the other Party. Where the consent, agreement, or approval of either Party must be obtained hereunder, such consent, agreement or approval may not be unreasonably withheld, conditioned or delayed unless otherwise provided herein. Where either Party is required or permitted to act or fail to act based upon its opinion or judgment, such opinion or judgment may not be unreasonably exercised. Where notice to the other Party is required to be given herein, and no notice period is specified, reasonable notice shall be given.

17.6 Notices. A notice, consent, approval or other communication under this Agreement must be in writing, addressed to the Person to whom it is to be delivered at such Person's address shown below and (a) personally delivered (including delivery by a nationally recognized overnight courier service), or (b) transmitted by facsimile, with a duplicate notice sent by a nationally recognized overnight courier service, *provided however*, that (i) a notice under Section 2.3.2(a)(iii) or Section 10.2 may be given by telephone to be followed as soon as reasonably practicable by written notice as described herein and (ii) a notice of Uncontrollable Force shall be given by whatever means is available followed by notice in writing as described herein as soon as reasonably practicable. A notice given to a Person in accordance with this Section 17.6 will be deemed to have been delivered (a) if personally delivered to a Person's address, on the day of delivery if such day is a Business Day, or otherwise on the next Business Day, or (b) if transmitted by facsimile to a Person's facsimile number and a correct and complete transmission report is received, or receipt is confirmed by telephone, on the day of transmission if a Business Day, otherwise on the next Business Day; *provided, however*, that such facsimile transmission will be followed on the same day with the sending to such Person of a duplicate notice by a nationally recognized overnight courier to that Person's address. For the purpose of this Section 17.6, the address of a Party is the address set out below or such other address which that Party may from time to time deliver by notice to the other Party, in accordance with this Section 17.6:

If to Big Rivers:	Big Rivers Electric Corporation 201 Third Street Henderson, Kentucky 42420 Facsimile: (270) 827-2558 Attn: President and CEO
If to Kenergy:	Kenergy Corp. 6402 Old Corydon Road Henderson, Kentucky 42420 Facsimile: (270) 826-3999 Attn: President and CEO

17.7 Severability. If any clause, sentence, paragraph or part of this Agreement should for any reason be finally adjudged by any court of competent jurisdiction to be unenforceable or invalid, such judgment will not affect, impair or invalidate the remainder of this Agreement but will be confined in its operation to the clause, sentence, paragraph or any part thereof directly involved in the controversy in which the judgment is rendered, unless the loss or failure of such

clause, sentence, paragraph or part of this Agreement materially adversely affects the benefit of the bargain to be received by either or both of the Parties, in which event the Parties shall promptly meet and use their good faith best efforts to renegotiate this Agreement in such a fashion as will restore the relative rights and benefits of both Parties or, absent such renegotiation, the Party that was so materially adversely affected will be entitled, in its discretion, to terminate this Agreement.

17.8 Survival. Each provision of this Agreement providing for payment for Electric Services and any other amounts due hereunder, distribution of patronage capital, assignment of the right to collect and enforce collection of amounts due, or related to remedies for default, damage claims, indemnification or payment of other liabilities will survive termination of this Agreement to the full extent necessary for their enforcement and the protection of the Party in whose favor they run.

17.9 Merger. This Agreement constitutes the entire agreement and understanding of the Parties with respect to the matters addressed herein and supersedes all other prior or contemporaneous understandings or agreements, both written and oral, between the Parties relating to the subject matter of this Agreement, except as otherwise provided in (a) Section 6.1 and Section 7.2.5 hereof, (b) Amendment to Wholesale Power Agreements, dated as of July 15, 1998, by and between Big Rivers and Green River Electric Corporation, or (c) Amendment to Wholesale Power Agreements, dated as of July 15, 1998, by and between Big Rivers and Henderson Union Electric Cooperative Corp. The Parties agree and acknowledge that the agreements referred to in clauses (b) and (c) shall survive following the effectiveness of this Agreement. The Parties acknowledge that Big Rivers and Alcan disagree, notwithstanding the Unwind Transaction, as to the obligation of Big Rivers, in the absence of a new or amended contract, to serve Kenergy for the benefit of Alcan when the Existing Alcan Agreement terminates or when this Agreement terminates.

17.10 Further Assurances. The Parties shall execute such additional documents including a consent to assignment, legal opinions, estoppel letters or similar documents, and shall cause such additional actions to be taken as may be required or, in the judgment of any Party, be necessary or desirable, to effect or evidence the provisions of this Agreement and the transactions contemplated hereby.

17.11 Counterparts. This Agreement may be executed in any number of counterparts, which together will constitute but one and the same instrument and each counterpart will have the same force and effect as if they were one original.

17.12 Third-Party Beneficiaries. Nothing in this Agreement may be construed to create any duty to, or standard or care with reference to, or any liability to, or any benefit for, any Person not a Party to this Agreement other than Alcan.

17.13 Headings. The headings contained in this Agreement are solely for convenience and do not constitute a part of the agreement between the Parties, nor should such headings be used to aid in any manner in the construction of this Agreement.

17.14 No Agency. This Agreement is not intended, and may not be construed to create any association, joint venture, agency relationship or partnership between the Parties or to impose any such obligation or liability upon either Party. Neither Party will have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or to be an agent or representative of, or otherwise bind, the other Party.

[Signatures Follow on Next Page]

IN WITNESS WHEREOF, this Agreement is hereby executed as of the day and year first above written.

BIG RIVERS ELECTRIC CORPORATION

By: \_\_\_\_\_  
Name:  
Title:

KENERGY CORP.

By: Sanford Novick  
Name: Sanford Novick  
Title: President and CEO

BIG RIVERS ELECTRIC CORPORATION

By: Mark A. Bailey  
Name: Mark A. Bailey  
Title: President and CEO

[Alcan Wholesale Agreement]

**SCHEDULE 4.11(c)**  
**REFERENCE ANNUAL FUEL COSTS PER MWH**

<u>Year</u>	<u>Fuel Cost per MWH Sales*</u>
2008	15.68
2009	16.44
2010	16.74
2011	17.23
2012	17.65
2013	18.25
2014	17.82
2015	18.37
2016	18.38
2017	18.74
2018	18.43
2019	19.18
2020	19.04
2021	19.90
2022	19.23
2023	19.74

\* Includes cost of Startups

**SCHEDULE 6.2.2**  
**LISTING OF OBLIGATIONS TERMINATED PURSUANT TO THE UNWIND**  
**TRANSACTIONS**

**RETAIL OBLIGATIONS AND AMENDMENTS**

1. Agreement for Electric Service, dated July 15, 1998, between Henderson Union Electric Cooperative Corp. and Alcan Aluminum Corporation
2. Agreement for Electric Service, dated July 15, 1998, between Green River Electric Corporation and Southwire Company
3. Amendment No. 1 to Agreement for Electric Service, dated as of July 15, 1998, between Henderson Union Electric Cooperative Corp. and Alcan Aluminum Corporation
4. Amendment No. 1 to Agreement for Electric Service, dated as of July 15, 1998, between Green River Electric Corporation and Southwire Company
5. Amendment No. 2 to Agreement for Electric Service, dated as of November 30, 2000, between Kenergy Corp. and Alcan Aluminum Corporation
6. Amendment No. 2 to Agreement for Electric Service, dated as of November 30, 2000, between Kenergy Corp. and Southwire Company

**WHOLESALE OBLIGATIONS AND AMENDMENTS**

7. Agreement for Electric Service, dated as of July 15, 1998, between Green River Electric Corporation and LG&E Energy Marketing Inc.
8. Agreement for Electric Service, dated as of July 15, 1998, between Henderson Union Electric Cooperative Corp. and LG&E Energy Marketing Inc.
9. Amendment to Wholesale Power Agreements Dated October 12, 1974 and June 11, 1962 Between Big Rivers Electric Corporation and Kenergy Corp., dated as of November 30, 2000, between Big Rivers Electric Corporation and Kenergy Corp.
10. Amendment to Wholesale Power Agreements Dated February 16, 1988 and June 11, 1962 Between Big Rivers Electric Corporation and Kenergy Corp., dated as of November 30, 2000, between Big Rivers Electric Corporation and Kenergy Corp.
11. Agreement of Big Rivers Electric Corporation with Respect to Future Policies and Procedures Regarding Big Rivers' Transmission System (sometimes referred to as the "Wholesale ISO Agreement"), dated as of July 15, 1998, between Big Rivers Electric Corporation, Green River Electric Corporation, Henderson Union Electric Cooperative Corp., Jackson Purchase Electric Cooperative Corporation, and Meade County Rural Electric Cooperative

#### **CERTAIN REORGANIZATION DOCUMENTS**

12. Letter Regarding Schedule 5.4(a)(1) Provisions Regarding Restitution Amounts, dated July 2, 1998, from Geo. F. Hobday, Jr. on behalf of Big Rivers, sent to Frank N. King, W. David Denton, David C. Brown, Michael Kurtz, Allison Wade, and Charles Ritz
13. Letter Regarding Restitution Payments, dated July 13, 1998, from Michael Kurtz sent to James M. Miller and Geoff Hobday
14. Letter Regarding Restitution Payments, dated July 14, 1998, from Michael Core, on behalf of Big Rivers, sent to Allan Eyre and John Henderson
15. Letter Regarding Restitution Payments, dated July 15, 1998, from Allan B. Eyre, on behalf of Alcan, and John Henderson, on behalf of NSA and Southwire, sent to Michael Core

#### **SECURITY AND LOCKBOX AGREEMENTS**

16. Security and Lockbox Agreement, dated as of July 15, 1998, among PNC Bank, N.A., LG&E Energy Marketing Inc., Kenergy (as successor to Henderson Union), Alcan Corporation (as successor to Alcan Aluminum Corporation) and Alcan Primary Products Corporation (as successor to Alcan Corporation)
17. Security and Lockbox Agreement, dated as of July 15, 1998, by and among LG&E Marketing Inc., Green River Electric Corporation, and Southwire Company

#### **LOAD MANAGEMENT AGREEMENTS**

18. Load Management Agreement for Electric Power Supply, dated as of July 15, 1998, among LG&E Energy Marketing Inc., Alcan Corporation (as successor to Alcan Aluminum Corporation) and Alcan Primary Products Corporation (as successor to Alcan Corporation)
19. Load Management Agreement for Electric Power Supply, dated as of July 15, 1998, among LG&E Energy Marketing Inc., Southwire Company, Century Aluminum Company (as successor to Southwire Company), Century Aluminum of Kentucky LLC (as successor to Century Aluminum Company), Hancock Aluminum LLC (as successor to Century Aluminum of Kentucky LLC), and Century Aluminum of Kentucky General Partnership (as successor to Hancock Aluminum LLC and NSA, Ltd.)

#### **ASSURANCES AND GUARANTIES**

20. Assurances Agreement, dated July 15, 1998, between LG&E Energy Marketing Inc. and Alcan Aluminum Corporation, with Related Guaranty, dated July 15, 1998, executed by LG&E Energy Corp. in favor of Alcan Aluminum Corporation



21. Assurances Agreement, dated July 15, 1998, between LG&E Energy Marketing Inc. and Southwire Company, with Related Guaranty, dated July 15, 1998, executed by LG&E Energy Corp. in favor of Southwire Company
22. Assurances Agreement, dated as of November 30, 2006, between Century Aluminum of Kentucky General Partnership and Big Rivers Electric Corporation
23. First Amendment to Assurances Agreement Dated as of November, 30, 2006, dated as of November \_\_, 2007, by and between Century Aluminum of Kentucky General Partnership and Big Rivers Electric Corporation
24. Guaranty, dated August 1, 2003, from Alcan Corporation to and in favor of the E.ON Parties
25. Guaranty, dated July 15, 1998, of E.ON (as successor to LG&E Energy Corp.) to and in favor of Kenergy (as successor to Henderson Union)
26. Guaranty, dated July 15, 1998, by E.ON (as successor to LG&E Energy Corp.) to and in favor of Kenergy (as successor to Green River Electric Corporation)

#### **INDEMNIFICATION AGREEMENTS**

27. Indemnification and Assignment Agreement, dated July 15, 1998, between Henderson Union Electric Cooperative Corp. and Alcan Aluminum Corporation
28. Indemnification and Assignment Agreement, dated July 15, 1998, between Green River Electric Corporation and Southwire Company

#### **TIER 3 CONTRACTS AND RELATED DOCUMENTS**

29. Agreement for Tier 3 Electric Service (2001-2002), dated as of July 15, 1998, between Green River Electric Company and LG&E Energy Marketing, Inc., with Southwire Company as a third-party beneficiary
30. Agreement for Tier 3 Electric Service (2001-2005), dated as of July 15, 1998, between Green River Electric Company and LG&E Energy Marketing, Inc., with Southwire Company as a third-party beneficiary
31. Agreement for Interruptible Tier 3 Energy, dated as of July 25, 2002, between Kenergy Corp. and Big Rivers Electric Corporation
32. Agreement for Interruptible Tier 3 Energy, dated as of November 5, 2002, between Kenergy Corp. and Big Rivers Electric Corporation
33. Agreement for Interruptible Tier 3 Energy, dated as of September 15, 2003, between Kenergy Corp. and Big Rivers Electric Corporation

34. Agreement for Interruptible Tier 3 Energy, dated as of November 30, 2006, between Kenergy Corp. and Big Rivers Electric Corporation
35. Agreement for Tier 3 Energy (Century), dated as of November 29, 2007, between Kenergy Corp. and Big Rivers Electric Corporation
36. Agreement for Tier 3 Energy (Alcan), dated as of November 29, 2007, between Kenergy Corp. and Big Rivers Electric Corporation
37. Consent to the Agreement for Tier 3 Energy (Alcan), dated November 29, 2007, by Alcan Primary Products Corporation
38. Consent to the Agreement for Tier 3 Energy (Century), dated November 29, 2007, by Century Aluminum of Kentucky General Partnership
39. All other agreements related to the provision of Tier 3 service by or among Big Rivers, Kenergy, the Smelters or any LG&E parties

#### **OTHER AGREEMENTS**

40. Assumption and Consent Agreement, dated as of August 1, 2003, among Alcan Primary Products Corporation, WKE Station Two Inc., LG&E Energy Marketing Inc., Western Kentucky Energy Corp. and Kenergy
41. Undertaking of Alcan Corporation, dated August 1, 2003, from Alcan to and in favor of LG&E Energy Marketing Inc., and the Undertaking of Alcan Aluminum Corporation, dated July 15, 1998, in favor of Henderson Union Electric Cooperative Corporation and LG&E Energy Marketing Inc.
42. Special Assignment Agreement, dated as of March 26, 2001, among LG&E Marketing Inc., Southwire Company, Century Aluminum of Kentucky LLC and Century Aluminum Company
43. Consent and Agreement, dated December 23, 2005, among Century Aluminum of Kentucky LLC, Century Aluminum Company, Hancock Aluminum LLC, NSA, Ltd., Century Aluminum of Kentucky General Partnership, Metalsco, Ltd., Skyliner, Inc., Century Kentucky, Inc. and LG&E Energy Marketing Inc.
44. Agreement with Respect to Procedures Regarding Big Rivers' Transmission System, dated as of July 15, 1998, between Green River Electric Corporation and Southwire Company
45. Agreement with Respect to Procedures Regarding Big Rivers' Transmission System, dated as of July 15, 1998, between Henderson Union Electric Cooperative Corp. and Alcan Aluminum Corporation
46. Joint Use Agreement, dated as of February 8, 2000, between Western Kentucky Energy Corp. and Big Rivers Electric Corporation

**SCHEDULE 6.2.3**  
**LISTING OF CERTAIN DULY AUTHORIZED AND EXECUTED AGREEMENTS**

**RETAIL AGREEMENTS**

1. Retail Electric Service Agreement by and between Kenergy Corp. and Alcan Primary Products Corporation
2. Retail Electric Service Agreement by and between Kenergy Corp. and Century Aluminum General Partnership

**WHOLESALE AGREEMENTS**

3. Wholesale Electric Service Agreement (Alcan) by and between Big Rivers Electric Corporation and Kenergy Corp.
4. Wholesale Electric Service Agreement (Century) by and between Big Rivers Electric Corporation and Kenergy Corp.

**COORDINATION AGREEMENTS**

5. Coordination Agreement by and between Big Rivers Electric Corporation and Alcan Primary Products Corporation
6. Coordination Agreement by and between Big Rivers Electric Corporation and Century Aluminum of Kentucky General Partnership

**LOCKBOX AGREEMENTS**

7. Security and Lockbox Agreement (Alcan) by and among Old National Bank, Big Rivers Electric Corporation, Kenergy Corp., and Alcan Primary Products Corporation
8. Security and Lockbox Agreement (Century) by and among Old National Bank, Big Rivers Electric Corporation, Kenergy Corp., and Century Aluminum of Kentucky General Partnership

**GUARANTEES**

9. Parent Guarantee by Alcan Corporation in favor of Kenergy Corp., and Big Rivers Electric Corporation
10. Parent Guarantee by Century Aluminum Company in favor of Kenergy Corp., and Big Rivers Electric Corporation

**APPENDIX A**  
**Non-FAC Purchased Power Adjustment Factor**

- A. Base Monthly Energy Sales to the smelters are subject to a Non-FAC Purchased Power Adjustment (PPA) to recover purchased power costs that the smelters have agreed to pay and are not otherwise included in Big Rivers' Fuel Adjustment Clause (FAC).
- B. Definitions

Definitions have the meanings given to them in the Agreement except as provided below:

"Account" is the specified numbered account as set forth in the Uniform System of Accounts – Electric, promulgated under Bulletin 1767B-1 by the Rural Utilities Service, an agency of the U.S. Department of Agriculture.

"SEPA" is the Southeastern Power Administration, an agency of the U.S. Department of Energy, or any successor agency.

"Wholesale Smelter Agreements" are the Alcan Wholesale Agreement and the Century Wholesale Agreement.

- C. Determination of the PPA

- (1) The monthly amount computed for all wholesale sales to which this PPA is applicable shall be increased or decreased at a rate per kWh in accordance with the following formula:

$$PPA = PP(m)/S(m) - PP(b)/S(b)$$

Where PPA is the PPA Factor for the month; PP(m) is the current Purchased Power Cost for the month; S(m) is the current applicable sales; PP(b) is the Purchased Power Cost for the base period; and S(b) is the sales in the base period. For the initial base period, PP(b)/S(b) (the "Purchased Power Base") is \$0.00175.

- (2) Purchased Power Costs (PP) shall be the sum of:
  - (a) The total cost of power purchased (including purchases from SEPA) that is expensed by Big Rivers to Account 555 (excluding those costs that are recovered through Big Rivers' FAC and excluding costs expensed to Account Nos. 555.150, 555.151, and 555.152 regarding Big Rivers' cost share of HMP&L's Station Two) including transmission and related costs that are expensed to Account 565;
  - (b) The total amount of any adjustments to Purchased Power Costs attributable to prior months, whether positive or negative; and

- (c) The total cost of amounts credited by Big Rivers to Kenergy with respect to voluntary curtailments under Section 4.13.2 of either Smelter Wholesale Agreement to allow Big Rivers to avoid market priced purchases of power.

Less:

- (c) The total cost of power purchased directly associated with sales (including related system energy losses) by Big Rivers either to non-Member purchasers of power or to Kenergy under either Wholesale Smelter Agreement for resale to either Smelter as energy products other than Base Monthly Energy, assuming SEPA power followed by the lowest cost power, whether generated or purchased, shall be allocated to Applicable Sales.
- (3) Applicable Sales (S) shall be all kilowatt-hours sold at wholesale by Big Rivers (a) to its Members under all electric rate schedules, including the Large Industrial Rate, for resale to Kentucky ratepayers (other than the Smelters), and (b) to Kenergy as Base Monthly Energy as defined in each of the Wholesale Smelter Agreements.
  - (4) The current month (m) shall be the second month preceding the month in which the PPA Factor is billed.

## APPENDIX B

### Proposed Big Rivers Bylaw Provisions

**Section 1. Operation on a Cooperative Basis.** The cooperative shall at all times be operated on a non-profit, cooperative basis for the mutual benefit of its patrons. As used in these Bylaws, "patron" shall include members and non-members alike, who have expressly contracted in writing to do all or a portion of their business with the cooperative on a patronage basis on the terms contained in these Bylaws. No interest or dividends shall be paid or payable by the cooperative on any capital furnished by its patrons.

**Section 2. Patronage Net Earnings.** (a) The patronage net earnings of the cooperative (1) attributable to that portion of the year during which the closing of the Unwind Transaction occurs (the "Unwind Year") that commences on January 1 of such year and ends on the last day of the month preceding the month in which the closing of the Unwind Transaction occurs (the "Initial Unwind Period") and (2) attributable to 2008 (if the Unwind Year shall not be 2008) and all subsequent years preceding the Unwind Year shall be determined and allocated to the patrons in accordance with the bylaws as in effect on January 1, 2008. The patronage net earnings of the cooperative attributable to that portion of the Unwind Year that commences on first day of the month in which the closing of the Unwind Transaction occurs and ends on December 31 of such year (the "Subsequent Unwind Period") (and all subsequent years) shall be determined and allocated to the patrons in accordance with the bylaws currently in effect. The patronage net earnings attributable to each of the Initial Unwind Period and the Subsequent Unwind Period will be determined by closing the books of the cooperative as of the last day of the Initial Unwind Period and by treating each of the Initial Unwind Period and the Subsequent Unwind Period as a short period taxable year; provided, that, the patronage net earnings of the cooperative attributable to the Unwind Transaction will be allocated solely as provided in clause (c)(2) below.

(b) The taxable income or loss of the cooperative from business done with or for its patrons on a cooperative basis, as computed for U.S. federal income tax purposes for purposes of calculating regular taxable income tax and alternative minimum taxable income, prior to taking into account any deduction for patronage dividends but after offset (if applicable) by any available tax loss carryforward amounts attributable to a deficit in patronage earnings from prior taxable years ("patronage net earnings") shall, if positive, be allocated in an amount no less than the greater of such patronage net earnings as computed for regular income tax purposes and such patronage net earnings as computed for alternative minimum tax purposes to the patrons of the cooperative in the manner detailed in clause (c) below and, if negative, be treated in the manner detailed in clause (d) below.

(c)(1) As of the end of each taxable year, the amount of the patronage net earnings of the cooperative (except as provided in clauses (c)(2) and (c)(3) below relating to the Unwind Transaction and Extraordinary Transactions) shall be allocated to the patrons of

the cooperative based on the ratio of the patronage net book earnings attributable to each such patron for the year over the patronage net book earnings attributable to all of the patrons for that year provided, however, that for the Subsequent Unwind Period, the allocation shall be made based on the ratio of the patronage net book earnings attributable to each such patron for the Subsequent Unwind Period over the patronage net book earnings attributable to all of the patrons for the Subsequent Unwind Period. For this purpose, the patronage net book earnings attributable to each patron with respect to any year shall be  $M_{Rural} + M_{LargeIndustrial} + M_{Smelters}$ , where

$M_{Rural}$  = the greater of zero or  $((R_{Rural} - A) * K_{Rural})$

$M_{LargeIndustrial}$  = the greater of zero or  $((R_{LargeIndustrial} - A) * K_{LargeIndustrial})$ ;

$M_{Smelters}$  = the greater of zero or  $((R_{Smelters} - A) * K_{Smelters})$ .

For purposes of the foregoing:

$R_{Rural}$  = the cooperative's system-average revenue per kWh for that year from sales to the applicable patron for resale to rural consumers (as determined pursuant to GAAP);

$R_{LargeIndustrial}$  = the cooperative's system-average revenue per kWh for that year from sales to the applicable patron for resale to large industrial consumers (as determined pursuant to GAAP);

$R_{Smelters}$  = the cooperative's system-average revenue per kWh for that year from sales to the applicable patron for resale to smelter consumers (as determined pursuant to GAAP);

$A$  = the cooperative's system-average cost per kWh for that year (based on the Total Cost of Electric Service, as set forth in the cooperative's RUS Form 12a for the year, and the Sales of Electricity (Grand Total), as set forth in the cooperative's RUS Form 12b for the year, and, hence, determined pursuant to GAAP);

$K_{Rural}$  = the number of kWh purchased by the applicable patron during that year for resale to rural consumers;

$K_{LargeIndustrial}$  = the number of kWh purchased by the applicable patron during that year for resale to large industrial consumers;

$K_{Smelters}$  = the number of kWh purchased by the applicable patron during that year for resale to smelter consumers (if any).

Notwithstanding the foregoing, if the patronage net book earnings attributable to all of the patrons is negative for any year, the allocation of the patronage net earnings for that year shall instead be based on the ratio of (i) the cumulative patronage net earnings of the cooperative allocated to each of the patrons in all prior years subsequent to 1998, which is the year in which Big Rivers' bankruptcy reorganization closed, to (ii) the cumulative patronage net earnings allocated to all of the patrons during such years.

(2) The patronage net earnings of the cooperative attributable to the Unwind Transaction will be allocated amongst the patrons of the cooperative based on the ratio of the historic patronage allocations made to each of the patrons to the historic patronage allocations made to all of the patrons with respect to the period commencing with January 1, 1999, which is the year subsequent to the year in which Big Rivers' bankruptcy

reorganization closed, and terminating on the last day of the month preceding the month in which the closing of the Unwind Transaction occurs.

(3) In the event that an Extraordinary Transaction occurs as the result of the sale of generation or transmission assets, the patronage net earnings of the cooperative attributable to such sale of assets (but not in excess of the patronage net earnings for the year of such sale) will be allocated among the patrons of the cooperative based on the ratio of the historic patronage allocations made to each of the patrons (other than allocations made pursuant to (i) the 2000 Patronage Capital Allocation, (ii) the Unwind Transaction, and (iii) this Section 2(c)(3)) to the historic patronage allocations made to all of the patrons (other than allocations made pursuant to (i) the 2000 Patronage Capital Allocation, (ii) the Unwind Transaction, and (iii) this Section 2(c)(3)) for the period commencing on the first day of the year during which depreciation allowances were first allowed for federal income tax purposes with respect to the assets sold and terminating on the last day of the year during which such assets were sold. In the event that an Extraordinary Transaction occurs other than as the result of the sale of generation or transmission assets, the patronage net earnings of the cooperative attributable to such Extraordinary Transaction (but not in excess of the patronage net earnings for the year of such Extraordinary Transaction) will be allocated among the patrons of the cooperative based on the ratio of the historic patronage allocations made to each of the patrons (other than allocations made pursuant to (i) the 2000 Patronage Capital Allocation, (ii) the Unwind Transaction, and (iii) this Section 2(c)(3)) to the historic patronage allocations made to all of the patrons (other than allocations made pursuant to (i) the 2000 Patronage Capital Allocation, (ii) the Unwind Transaction, and (iii) this Section 2(c)(3)) for the period that most equitably relates to the income or gain arising from the Extraordinary Transaction, taking into account all relevant facts and circumstances.

(d) If the patronage net earnings of the cooperative for any taxable year is negative, the deficit shall be carried forward and applied as an offset against future positive patronage net earnings (in accordance with clause (b) above).

(e) If patronage net earnings of the cooperative shall be adjusted (by the IRS on audit or otherwise) for any year, the amount of patronage net earnings allocated to each patron pursuant to this Section 2 for that year shall be automatically adjusted in accordance with this Section 2 to reflect the recomputed patronage net earnings, with each member being notified within a reasonable time thereafter of the amount of the adjustment allocated to the patron's capital account.

**Section 3. Nonpatronage Net Earnings.** The taxable income or loss of the cooperative from business not done with or for its patrons on a cooperative basis for any taxable year, as computed for U.S. federal income tax purposes ("nonpatronage net earnings"), after offset (if applicable) by any available tax loss carryforward amounts attributable to a deficit in nonpatronage net earnings from prior taxable years, shall, if positive, be retained by the cooperative as a permanent source of equity and, if negative, shall be carried forward to be applied as an offset against future positive nonpatronage net earnings. If the nonpatronage net earnings of the cooperative shall be adjusted (by the



IRS on audit or otherwise) for any year, the calculations made pursuant to this Section 3 for that year shall be automatically adjusted in accordance with this Section 3 to reflect the recomputed nonpatronage net earnings.

**Section 4. Record-Keeping.** The membership fee paid and the amount of patronage net earnings allocated to each patron shall be credited to a capital account maintained for such patron, with the books and records of the cooperative being set up and kept in such manner that, at the end of each taxable year, the amount of capital allocated and credited to each patron is clearly reflected in an appropriate record to the capital account of each patron (with the cooperative notifying each patron within a reasonable time after the close of the taxable year notify the amount of the patronage net earnings allocated to the patron's account with respect to such taxable year). All such amounts allocated to the capital account of any patron in accordance with this Article VIII shall be in pursuance of a legal obligation to do so. The capital account of each patron shall be assignable only on the books of the cooperative pursuant to written instructions from the assignor and only to successors in interest or successors in occupancy of all or a part of such patron's premises served by the cooperative unless the board of directors, acting under policies of general application, shall otherwise determine.

**Section 5. Retirement of Patronage Capital.** If, at any time prior to the liquidation of the cooperative, the board of directors shall determine that the financial condition of the cooperative will not be impaired thereby, the patrons' capital accounts may be retired in full or in part (except that no distribution shall be made that would result in a violation of any financial covenant of the cooperative). Generally, such retirements of capital shall be made in order of priority according to the year in which the patronage net earnings were allocated. Notwithstanding the foregoing, however, the board of directors shall have the discretion to determine the method of allocation, basis and order of priority of repayment for all amounts furnished as patronage capital.

Upon the liquidation of the cooperative, the assets of the cooperative shall be distributed in the following order: (i) all debts and obligations of the cooperative shall be paid in accordance with lawful priorities; (ii) each patron's capital account balance shall be paid without priority on a pro rata basis until all such capital accounts (as determined subsequent to adjusting such accounts by allocations of patronage net earnings for the year of liquidation) have been reduced to zero and (iii) any remaining assets of the cooperative shall be paid to the current and former patrons of the cooperative based upon the amount of their historic patronage with the cooperative measured by kilowatt-hours purchased from Big Rivers over the life of the cooperative. The life of the cooperative is defined to begin at the date Big Rivers was formed in 1961 and to continue uninterrupted through Big Rivers' bankruptcy reorganization to the date of liquidation.

**Section 6. Definitions.** For purposes of this Article VIII, the "Unwind Transaction" shall mean the transactions contemplated by that certain *Transaction Termination Agreement dated as of March 26, 2007 to which the cooperative is a party*, and an "Extraordinary Transaction" shall mean any transaction or event occurring after the completion of the Unwind Transaction and other than in the ordinary course of the

business of the cooperative (including without limitation a sale of generation or transmission assets) where the patronage net earnings from such transaction or event are in excess of \$30 million.

Exhibit A - Retail and Wholesale Service Agreement Examples - Combines Alcan and Century Smelter Charges and Credits - (for purposes of examples, Retail Fee set at zero) Year Modeled: 2009

Annualized Basis

Case	Derivation	Base Case	Low Load Factor	High Load Factor	Supplemental Energy (4.3)	Backup Energy (4.4)	Surplus Sales (10.1)	Undeliverable Energy Sales (10.2)	Polling Reduction Sales (10.3)	Curtailment for Purchased Power (4.13.2)	Economic (4.13.3)
1	1.1.16 - Base Demand (MW) (a)										
2	1.1.18 - Base Fixed Energy (TWh) (b)	850.0	850.0	850.0	850.0	850.0	850.0	850.0	850.0	850.0	850.0
3		7.297	7.297	7.297	7.297	7.297	7.297	7.297	7.297	7.297	7.297
4	Energy Balance (Annual TWh)										
5	Assumed Load Factor										
6	Metered Energy	98%	95%	100%	100%	100%	88%	49%	85%	94%	98%
7	2.3.2 - Supplemental Energy	7.297	7.148	7.446	7.428	7.560	6.567	3.648	6.310	7.012	7.287
8	2.3.2(a) Interruptible Energy										
9	2.3.2(b) Buy-Through Energy										
10	2.3.2(c) Market Energy										
11	Consumed				0.131						
12	Sold										
13	1.1.13 - Backup Energy										
14	4.4.1(a) and (b) (within 10MW per Smelter)										
15	4.4.1(c) - Excess										
16	1.1.15 - Base Curtailed Energy					0.131					
17	4.13.2 - Curtailment of Purchased Power										
18	4.13.3 - Economic Sales										
19	10.1 - Surplus Sales						0.730			0.285	0.010
20	10.2 - Undeliverable Energy Sales							3.648			
21	10.3 - Polling Reduction Sales										
22	1.1.18/19 - Base Hourly Monthly Energy										
23	1.1.22 - Base Variable Energy	7.297	7.148	7.446	7.297	7.297	7.297	7.297	7.297	7.297	7.297
24			(0.149)	0.149							
25	Key Rates										
26	Market Energy Price										
27	4.3 - Supplemental Energy **	60.94	60.94	60.94	60.94	60.94	60.94	60.94	60.94	60.94	121.89
28	4.3.1 - Interruptible Energy Rate										
29	4.3.2 - Buy-Through Energy Rate										
30	4.3.3 - Market Energy Rate				60.94						
31	4.4 - Backup Energy Rate										
32	4.4.1(a) and (b) (within 10MW per Smelter)										
33	4.4.1(c) - Excess										
34	1.1.72 - Market Reference Rate										
35	1.1.21 - Base Rate										
36	1.1.23 - Base Variable Rate	28.15	28.15	28.15	28.15	28.15	28.15	28.15	28.15	28.15	28.15
37	1.1.52 - FAC Factor	12.47	12.47	12.47	12.47	12.47	12.47	12.47	12.47	12.47	12.47
38	1.1.43 - Environmental Surcharge Factor	11.22	11.22	11.22	11.22	11.22	11.22	11.22	11.22	11.22	11.22
39	1.1.84 - Non-FAC Purchased Power Adjustment Factor	2.19	2.19	2.19	2.19	2.19	2.19	2.19	2.19	2.19	2.19
40	4.11.4 - Surcharges:	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
41	4.11(a)										
42	4.11(b)										
43	4.11(c)										
44	* Placeholder value intended to represent costs of energy plus appropriate inclusion or exclusion of transmission services charges or other expenses, per the Retail Service Agreement (see also Net Proceeds, below)	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60
45	** Assumed priced at cost, for illustration	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60

Exhibit A - Retail and Wholesale Service Agreement Examples - Combines Alcan and Century Smelter Charges and Credits - (for purposes of examples, Retail Fee set at zero)  
Year Modeled: 2009

Annualized Basis

Case	Derivation	Base Case	Low Load Factor	High Load Factor	Interruptible Energy	Buy-Through Energy	Market Energy	Backup Energy (4.4)	Surplus Sales (10.1)	Undeliverable Energy Sales (10.2)	Poliline Reduction Sales (10.3)	Curtailment for Purchased Power (4.13.2)	Economic Sales (4.13.3)
46													
47													
48													
49													
50													
51													
52													
53													
54													
55													
56													
57													
58													
59													
60													
61													
62													
63													
64													
65													
66													
67													
67A													
68													
69													
70													
71													
72													
73													
74													
75													
76													
77													
78													
79													
80													
81													
82													
83													
84													
85													
86													
87													
88													

Exhibit A - Retail and Wholesale Service Agreement Examples - Combines Alcan and Century  
 Smelter Charges and Credits - (for purposes of examples, Retail Fee set at zero)  
 2009

Case	Derivation	Base Case	Low Load Factor	High Load Factor	Supplemental Energy (4.3)	Backup Energy (4.4)	Surplus Sales (10.1)	Undeliverable Energy Sales (10.2)	Portfolio Reduction Sales (10.3)	Curtailment for Purchased Power (4.13.2)	Economic Sales (4.13.3)
					Interruptible Energy 20 MW (10 Smelter) for 75% of Hours in Year	Market Energy 40 MW (10 Smelter) for 75% of Hours in Year/10 Resold	4.4.1 (a) and (b) 10% of Base Fixed Energy	6 Month Duration	115 MW @ 98% Load Factor x 12 Months	Example Curtailment market purchases	Max. of 9,600 MWh
89	Supporting Schedules										
90											
91	1.1.21 Smelter Base Rate										
92	Large Industrial Rate										
93	Load Factor (%)	79%	79%	79%	79%	79%	79%	79%	79%	79%	79%
94	Energy (\$/MWh)	13.72	13.72	13.72	13.72	13.72	13.72	13.72	13.72	13.72	13.72
95	Demand (\$/KW-mo.)	10.15	10.15	10.15	10.15	10.15	10.15	10.15	10.15	10.15	10.15
96	Blend	31.39	31.39	31.39	31.39	31.39	31.39	31.39	31.39	31.39	31.39
97	MGA (\$/MWh)										
98	Net Rate (\$/MWh)	31.39	31.39	31.39	31.39	31.39	31.39	31.39	31.39	31.39	31.39
99	Large Industrial Rate @ 98% LF	27.90	27.90	27.90	27.90	27.90	27.90	27.90	27.90	27.90	27.90
100	Plus Margin	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
101	Smelter Base Rate	28.15	28.15	28.15	28.15	28.15	28.15	28.15	28.15	28.15	28.15
102											
103	1.1.23 Base Variable Rate										
104	FAC Base	10.72	10.72	10.72	10.72	10.72	10.72	10.72	10.72	10.72	10.72
105	Environmental Surcharge base										
106	Purchased Power Base	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75
107	Total	12.47	12.47	12.47	12.47	12.47	12.47	12.47	12.47	12.47	12.47
108											
109	4.11 (c) Surcharge										
110	Reference Fuel Expense (\$/MWh)	16.44	16.44	16.44	16.44	16.44	16.44	16.44	16.44	16.44	16.44
111	Actual Fuel Expense (\$/MWh)	21.94	21.94	21.94	21.94	21.94	21.94	21.94	21.94	21.94	21.94
112	Min. of (i) Actual Less Reference and (ii) \$0.60 (not less than zero)	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60
113											
114	1.1.12 Avoidable Base Charge										
115	1.1.11(a)										
116	(i) Base Rate plus Adjustable Charge Rates	35 + 37 + 38 + 39									
117	(ii) Base Fixed Energy made available whether or not sold	line 19									
118	\$M	line 116 x line 117									
119	Plus										
120	1.1.11(b)										
121	(i) Base Variable Rate plus Adjustable Charge Rates	36 + 37 + 38 + 39									
122	(ii) Base Variable Energy made available whether or not sold	line 23									
123	\$M	line 121 x line 122									
124	Less										
125	1.1.11(c)										
126	(i) Base Variable Rate plus Adjustable Charge Rates	36 + 37 + 38 + 39									
127	(ii) Base Fixed or Variable Energy neither Metered nor Sold	line 126 x line 127									
128	\$M	line 116 + line 123 - line 128									
129	Net										
130											

Exhibit A - Retail and Wholesale Service Agreement Examples - Combines Alean and Century Smelter Charges and Credits - (for purposes of examples, Retail Fee set at zero) Year Modified: 2009

Annualized Basis

Case	Derivation	Base Case	Low Load Factor	High Load Factor	Supplemental Energy (4.3)	Backup Energy (4.4)	Surplus Sales (10.1)	Undeliverable Energy Sales (10.2)	Polling Sales Reduction (10.3)	Curtailment (for Purchased Power) (4.13.2)	Economic Sales (4.13.3)
131	4.7 TIER Adjustment Charge										
132	4.7.5 TIER Adjustment										
133	System Revenues Before TIER Adjustment										
134	Base Case	579,409	579,409	579,409	579,409	579,409	579,409	579,409	579,409	579,409	579,409
135	Increment from Base Case (Accounts for Both Smelters):										
136	Base Energy Charge		(1.9)	1.9							
137	FACI/ESY PPA Charges		(2.0)	2.0							
138	Supplemental Energy										
139	Backup Energy										
140	Net Proceeds										
141	Less: Credits										
142	Total Increment from Base Case		(3.9)	3.9							
143	Total Revenues	579,409	575.5	593.3	587.4	587.4	588.9	579.4	579.4	562.0	579.7
144	System Expenses Before TIER Adjustment										
145	Base Case - Gross										
146	Net Debit to Power Purchases reflected in Regulatory Account										
147	Base Case - Net										
148	Increment from Base Case										
149	Variable Costs *										
150	Power Purchases										
151	Interest (net of capitalization)										
152	Other										
153	Total Increment from Base Case		(3.9)	3.9							
154	Total Expenses										
155	Net Margin Before TIER Adjustment										
156	Interest Charges Plus Net Margin										
157	Interest Charges										
158	Base Case										
159	Increment from Base Case										
160	Total										
161	Pre-Adjustment TIER										
162	Incremental Revenue Needed to Achieve TIER = 1.24x										
163	Adjustments										
164	4.7.5(f) No revenue from Economic Transition Reserves										
165	Other										
166	Total										
167	TIER Adjustment										
168	TIER Adjustment Charge										
169											
170	4.9 Rebate										
171	Excess TIER Amount										
172	Rebate										
173	Smelter MWh										
174	Rebate										
175											
176	* Example assumes variable costs incurred at rate stipulated in 1.1.21, plus FAC, Environmental Surcharge, and PPA										
177											

Exhibit A - Retail and Wholesale Service Agreement Examples - Combines Acan and Century  
 Smelter Charges and Credits - for purposes of examples. Retail Fee set at zero  
 2009  
 Year Modified:

Case	Derivation	Base Case	Low Load Factor	High Load Factor	Annualized Basis				Surplus Sales (10.1)	Undeliverable Energy Sales (10.2)	Polling Reduction Sales (10.3)	Curtailment for Purchased Power (4.13.2)	Economic Sales (4.13.3)
					Intermittent Energy	Buy-Through Energy	Market Energy	Backup Energy (4.4)					
176	Quarterly TIER Adjustment Charge												
179		Base Case											
180	Revenues												
181	Expenses	579.4											
182	Net Margin Before TIER	564.1											
183	Interest + Margin	15.3											
184	Interest Changes	66.9											
185	Pre-Adjustment TIER	53.6											
186	Increment Needed for 1.24x	1.29											
187	Adjustments	(2.4)											
188	TIER Adjustment	1.4											
189	TIER Adjustment Charge	(1.0)											
190	1st Q												
191	2nd Q												
192	3rd Q												
193	4th Q												
194													
195													
196	Illustrative Forecast Weightings (actual forecast methodologies to be determined)												
197	YTD												
198	Original Budget												
199													
200	YTD												
201	Revenues												
202	Expenses												
203	Net Margin Before TIER												
204	Interest + Margin												
205	Interest Changes												
206	Pre-Adjustment TIER												
207	Increment Needed for 1.24x												
208	Adjustments												
209	TIER Adjustment												
210													
211	Revised Full-Year Forecast												
212	Revenues												
213	Expenses												
214	Net Margin Before TIER												
215	Interest + Margin												
216	Interest Changes												
217	Pre-Adjustment TIER												
218	Increment Needed for 1.24x												
219	Adjustments												
220	TIER Adjustment												
221													

Exhibit A - Retail and Wholesale Service Agreement Examples - Combines Alean and Century Smelter Charges and Credits - (for purposes of examples, Retail Fee set at zero)  
2009

Case	Derivation	Base Case				Rebates	Adjusted Year
		Q1	Q2	Q3	Q4		
1	1.1.15 - Base Demand (MW) (a)						
2	1.1.19 - Base Fixed Energy (TWh) (b)						
3	Energy Balance (Annual TWh)						
4	Assumed Load Factor						
5	Retained Energy						
6	2.3.2 - Supplemental Energy						
7	2.3.2(a) Interruptible Energy						
8	2.3.2(b) Buy-Through Energy						
9	2.3.2(c) Market Energy						
10	Consumed						
11	Sold						
12	1.1.13 - Backup Energy						
13	4.4.(a) and (b) (within 10MW per Smelter)						
14	4.4.(c) - Excess						
15	1.1.15 - Base Curtailed Energy						
16	4.13.2 - Curtailment of Purchased Power						
17	4.13.3 - Economic Sales						
18	10.1 - Surplus Sales						
19	10.2 - Undeliverable Energy Sales						
20	10.3 - Profile Reduction Sales						
21	1.1.18 / 19 - Base Hourly Monthly Energy						
22	1.1.22 - Base Variable Energy						
23	Key Rates						
24	Market Energy Price						
25	4.3 - Supplemental Energy **						
26	4.3.1 - Interruptible Energy Rate						
27	4.3.2 - Buy-Through Energy Rate						
28	4.3.3 - Market Energy Rate						
29	4.4 - Backup Energy Rate						
30	4.4.(a) and (b) (within 10MW per Smelter)						
31	4.4.(c) - Excess						
32	1.1.72 - Market Reference Rate						
33	1.1.21 - Base Rate						
34	1.1.23 - Base Variable Rate						
35	1.1.52 - FAC Factor						
36	1.1.43 - Environmental Surcharge Factor						
37	1.1.84 - Non-FAC Purchased Power Adjustment Factor						
38	4.11.4 - Surcharges:						
39	4.11(a)						
40	4.11(b)						
41	4.11(c)						
42	* Placeholder value intended (s) to represent costs of energy plus appropriate inclusion or exclusion of transmission service						
43	** Assumed priced at cost, for illustration						
44							
45							



Exhibit A - Retail and Wholesale Service Agreement Examples - Combines Alcan and Century Smelter Charges and Credits - (for purposes of examples, Retail Fee set at zero)  
2009

Illustrative Quarterly Basis - Base Case

Case	Denotation	Base Case	Illustrative Quarterly Basis - Base Case				Pre-Adjusted Year	Adjust. TIER Adjustment	Rebate	Adjusted Year
			Q1	Q2	Q3	Q4				
46										
47	4.2 Base Energy Charge									
48	4.3 Supplemental Energy Charge									
49	4.3.1 Interruptible Energy									
50	4.3.2 Buy-Through Energy									
51	4.3.3 Market Energy									
52	4.4 Back-up Energy Charge									
53	4.4.1(a) and (b) (within 10MW per Smelter)									
54	4.4.1(c) - Excess									
55	4.5 Transmission Services Charge									
56	4.6 Excess Reactive Demand Charge									
57	4.7 TIER Adjustment Charge									
58	4.8 Adjustable Charges									
59	4.8.1 FAC Charge									
60	4.8.2 Non-FAC Purchased Power Adjustment Charge									
61	4.8.3 Environmental Surcharge									
62	4.9 Rebate									
63	4.10 Equity Development Credit									
64	4.11 Surcharge									
65	4.11(a)									
66	4.11(b)									
67	4.11(c)									
67A	4.11(d)									
68	4.12 Retail Fee									
69										
70	Total Charges									
71										
72	Credits (\$M)									
73	Net Proceeds									
74	Avoidable Base Charge									
75										
76	4.13									
77	4.13.1 Surplus, Undeliverable Energy, and Potline Reduction Sales									
78	Surplus Sales									
79	Undeliverable Energy, and Potline Reduction Sales									
80	4.13.2 Curtailment for Purchased Power									
81	4.13.3 Economic Sales									
82	4.13.4 Market Energy Sales									
83										
84	Total Credits									
85	Net Charges									
86	Net Charges per MWh Metered									
87	Smelter calculation: in practice would include estimated Big Rivers tax liability (as applicable per sections 1.1.79, 10.1.4, 10.2.3, 10.3.7, and 13.3). Administrative fees are modeled per section 4.13.1.									
88										

Exhibit A - Retail and Wholesale Service Agreement Examples - Combines Alcan and Century Smelter Charges and Credits - (for purposes of examples, Retail Fee set at zero)  
2009

Illustrative Quarterly Basis - Base Case

Case	Derivation	Base Case				Q4	Pre-Adjusted Year	Adjust. TIER Adjustment	Rebate	Adjusted Year
		Q1	Q2	Q3	Q4					
68										
69										
90										
91										
92										
93										
94										
95										
96										
97										
98										
99										
100										
101										
102										
103										
104										
105										
106										
107										
108										
109										
110										
111										
112										
113										
114										
115										
116										
117										
118										
119										
120										
121										
122										
123										
124										
125										
126										
127										
128										
129										
130										

Exhibit A - Retail and Wholesale Service Agreement Examples - Combines Alcan and Century Smelter Charges and Credits - for purposes of examples. Retail Fee set at zero. Year Modified: 2009

Case	Derivation	Illustrative Quarterly Basis - Base Case				Pre-Adjusted Year	Rebate	Adjusted Year
		Base Case	Q1	Q2	Q3			
131	4.7 TIER Adjustment Charge							
132	4.7.5 TIER Adjustment							
133	System Revenues Before TIER Adjustment							
134	Base Case	579,409	144,852	144,852	144,852	579,409		579,409
135	Increment from Base Case (Accounts for Both Smelters):							
136	Base Energy Charge							
137	FAC/ES/PPA Charges		(0.5)	0.5				
138	Supplemental Energy		(0.5)	0.5				
139	Backup Energy							
140	Net Process							
141	Less: Credits							
142	Total Increment from Base Case		(1.0)	1.0				
143	System Expenses Before TIER Adjustment	579,409	143,9	145,8	144,9	579,409		
144	Base Case - Gross							
145	Net Debit to Power Purchases reflected in Regulatory Account							
146	Base Case - Net	564.4	(0.3)	141.1	141.1	564.4		564.4
147	Increment from Base Case							
148	Variable Costs *	564.1	141.0	141.0	141.0	564.1		564.1
149	Power Purchases							
150	Interest (net of capitalization)							
151	Other							
152	Total Increment from Base Case							
153	Total Expenses		7.1	7.1				
154	Net Margin Before TIER Adjustment		6.1	6.0				
155	Interest Charges Plus Net Margin		147.1	149.0				
156	Interest Charges		(3.2)	(3.2)				
157	Base Case	68.8	10.2	10.2	17.2	68.8		68.8
158	Increment from Base Case							
159	Total	53.6	13.4	13.4	13.4	53.6		53.6
160	Pre-Adjustment TIER							
161	Incremental Revenue Needed to Achieve TIER = 1.24x							
162	Adjustments:							
163	4.7.5(1) No revenue from Economic Transition Reserves							
164	Other							
165	Total	1.4	0.4	0.4	0.4	1.4		1.4
166	TIER Adjustment							
167	TIER Adjustment Charge							
168	4.9 Rebate							
169	Excess TIER Amount							
170	Rebate:							
171	Smelter MWh							
172	Rebate							
173	Example assumes variable costs incurred at rate stipulated in 1.1.2.1, plus FAC, Environmental Surcharge, and PPA							
174								
175								
176								
177								

Exhibit A - Retail and Wholesale Service Agreement Examples - Combines Acan and Century  
 Smaller Charges and Credits - For purposes of examples, Retail Fee set at zero  
 2009

Case	Derivation	Illustrative Quarterly Basis - Base Case				Q4	Rebate	Adjusted Year
		Q1	Q2	Q3	Q4			
		Base Case	Base Case	Base Case	Base Case			
178	Quarterly TIER Adjustment Charge							
179								
Intermediate Annual Forecasts *								
180	Revenues	578.4	578.4	578.4	578.4			
181	Expenses	564.1	570.2	576.2	576.2			
182	Net Margin Before TIER	15.3	8.2	1.2	1.2			
183	Interest + Margin	68.8	61.8	54.7	54.7			
184	Interest Charges	53.6	53.6	53.6	53.6			
185	Pre-Adjustment TIER	1.29	7.2	1.0	1.0			
186	Increment Needed for 1.24x	(2.4)	4.6	11.7	11.7			
187	TIER Adjustment	1.4	1.4	1.4	1.4			
188	TIER Adjustment Charge	(1.0)	6.0	13.1	13.1			
189	1st Q							
190	2nd Q							
191	3rd Q							
192	4th Q							
193								
194								
195								
196	Illustrative Forecast Weightings (actual forecast methodologies to be determined)							
197	YTD	2.0	2.0	2.0	2.0			
198	Original Budget	2.0	5.3	5.3	5.3			
199								
200	YTD	25%	50%	50%	75%			
201	Revenues	75%	50%	50%	25%			
202	Expenses							
203								
204	Net Margin Before TIER	143.9	289.7	289.7	434.8			
205	Interest + Margin	147.1	296.2	296.2	437.2			
206	Interest Charges	(3.2)	(6.5)	(6.5)	(2.6)			
207	Pre-Adjustment TIER	10.2	20.3	20.3	37.5			
208	Increment Needed for 1.24x	13.4	26.8	26.8	40.2			
209	Adjustments	0.76	0.76	0.93	0.93			
210	TIER Adjustment	6.4	6.4	12.9	12.3			
211	Revised Full-Year Forecast	0.4	0.7	1.1	1.1			
212	Revenues	6.8	13.6	13.3	13.3			
213	Expenses							
214	Net Margin Before TIER	578.4	578.4	578.4	578.4			
215	Interest + Margin	570.2	578.2	578.2	578.2			
216	Interest Charges	8.2	1.2	1.2	1.2			
217	Pre-Adjustment TIER	61.8	54.7	54.7	54.7			
218	Increment Needed for 1.24x	53.6	53.6	53.6	53.6			
219	Adjustments	1.15	1.02	1.02	1.02			
220	TIER Adjustment	4.6	11.7	11.7	11.7			
221		6.0	13.1	13.1	13.1			

**Exhibit Blackburn Rebuttal-3**  
**Coordination Agreement dated as of July 1, 2009,**  
**between Big Rivers Electric Corporation and**  
**Alean Primary Products Corporation**

**COORDINATION AGREEMENT**

Dated as of July 1, 2009,

by and between

**BIG RIVERS ELECTRIC CORPORATION**

and

**ALCAN PRIMARY PRODUCTS CORPORATION**

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## COORDINATION AGREEMENT

This COORDINATION AGREEMENT ("Agreement") is made and entered into as of July 1, 2009, by and between BIG RIVERS ELECTRIC CORPORATION, a Kentucky rural electric cooperative ("Big Rivers"), and ALCAN PRIMARY PRODUCTS CORPORATION, a Texas corporation ("Alcan"). Big Rivers and Alcan are sometimes referred to herein collectively as the "Parties" and individually as a "Party."

### RECITALS

A. Kenergy Corp., a Kentucky retail rural electric cooperative, currently supplies and delivers to Alcan, the owner and operator of an aluminum reduction plant in Sebree, Kentucky, electric energy and related services pursuant to an Agreement for Electric Service, dated July 15, 1998, between Henderson Union Electric Cooperative Corp., Kenergy's predecessor-in-interest, and Alcan Aluminum Corporation, Alcan's predecessor in interest (the "Existing Alcan Agreement").

B. Kenergy currently purchases certain electric energy and related services for resale to Alcan from Western Kentucky Energy Corp., an affiliate of E. ON U.S., LLC, formerly known as LG&E Energy Corp. (together with such affiliates and parent, collectively, "LG&E") under an Agreement for Electric Service, dated as of July 15, 1998 (the "Kenergy/LG&E Contract").

C. Kenergy also currently purchases additional electric energy and related services for resale to Alcan, to serve the energy requirements of Alcan not provided by LG&E, from third-party suppliers, including Big Rivers.

D. The Existing Alcan Agreement and the Kenergy/LG&E Contract were entered into in connection with the consummation of a series of transactions implementing the First Amended Plan of Reorganization of Big Rivers, as part of which, among other things (i) Big Rivers leased its generating facilities to LG&E and (ii) Big Rivers entered into a power purchase arrangement with LG&E whereby LG&E supplied Big Rivers with electric energy and related services for resale to its Members.

E. Big Rivers and LG&E have agreed to terminate and unwind existing transactions among them relating to the lease by Big Rivers of its interest in its generating facilities to LG&E and the sale by LG&E of electric energy and related services to Big Rivers.

F. In connection with and as a condition to such termination and unwind transactions, Big Rivers has agreed to supply electric energy and related services to Kenergy for resale to Alcan pursuant to a wholesale power sales agreement, dated as of the date hereof (the "Alcan Wholesale Agreement").

G. Kenergy has agreed to supply a similar amount of electric energy and related services to Alcan pursuant to a retail electric service agreement, dated as of the date hereof (the "Alcan Retail Agreement").

H. Big Rivers, Kenergy and Alcan have further agreed that Alcan will make payments due under the Alcan Retail Agreement to a depository bank under a certain Security and Lockbox Agreement to be executed among Big Rivers, Kenergy, Alcan and a depository bank selected by those parties (the "Lockbox Agreement") or, under arrangements relating to sales of Energy by Third Party Suppliers to Kenergy for resale to Alcan to the depository under other similar lockbox arrangements among Kenergy, Alcan and the Third Party Supplier.

I. As a further condition to the execution and delivery of the Alcan Wholesale Agreement by Big Rivers, and the execution and delivery of the Alcan Retail Agreement by Alcan, respectively, the Parties desire to enter into this Agreement to coordinate the performance of their respective obligations under such agreements.

### AGREEMENT

NOW, THEREFORE, in consideration of the premises and their mutual covenants set forth herein, and for other good and valuable consideration, receipt of which is hereby acknowledged, and intending to be legally bound hereby, the Parties hereto agree as follows:

1. Definitions; Rules of Interpretations. Capitalized terms used in this Agreement and not defined herein have the meanings assigned to those terms in the Alcan Retail Agreement. The rules of interpretation set forth in Section 1.2 of the Alcan Retail Agreement shall apply to this Agreement as though fully set forth herein.

2. Term and Survival of Obligations. This Agreement shall commence on the date first written above, provided that the obligations of the Parties under Section 3 and Section 5 shall not commence until the Effective Date. This Agreement shall continue in effect until the Alcan Retail Agreement expires or is terminated in accordance with its terms. Notwithstanding the foregoing, any provision of this Agreement providing for payment from one party to the other for assignment of the right to collect and enforce collection of amounts due, or related to remedies for default, damage claims, or payment of other amounts will survive termination or expiration of this Agreement to the extent necessary for its enforcement and the protection of the Party in whose favor such provision exists.

3. Covenants and Agreements.

3.1 Alcan Retail Agreement. Alcan shall (i) fully perform and discharge all of its obligations under the Alcan Retail Agreement unless excused in accordance with the terms thereof; (ii) not act or rely upon any written or oral waivers granted by Kenergy of Alcan's performance under or compliance with provisions of the Alcan Retail Agreement that could be reasonably expected to materially adversely affect Big Rivers' rights or interests under the Alcan Wholesale Agreement without the prior written consent of Big Rivers; (iii) not waive the performance and discharge by Kenergy of its material obligations under the Alcan Retail Agreement without the prior written consent of Big Rivers; (iv) not amend or modify the Alcan Retail Agreement without the prior written consent of Big Rivers (the addition, deletion, modification or amendment of supplemental tariffs contemplated by the Alcan Retail Agreement which has been approved by the KPSC is deemed not to be an amendment or modification of the Alcan Retail Agreement for the purposes of this Section 3.1); (v) not terminate or repudiate the



Alcan Retail Agreement (including by rejection or similar termination in a bankruptcy proceeding involving Alcan) other than in accordance with the provisions thereof without the prior written consent of Big Rivers; (vi) make payments pursuant to the Alcan Retail Agreement when due and in accordance therewith and the Lockbox Agreement for so long as such agreements exist; (vii) not take any action or support any action by others that in any manner would impede Alcan's ability to fulfill its obligations to Kenergy or Big Rivers under the Alcan Retail Agreement or this Agreement or act in any manner that could reasonably be expected to materially adversely affect its ability to perform or discharge its obligations under this Agreement; (viii) provide Big Rivers with a copy of all notices sent to Kenergy pursuant to the Alcan Retail Agreement; and (ix) not assign or transfer (by operation of law or otherwise) any rights or interests that it may have in the Alcan Retail Agreement except in accordance with Article 16 thereof; *provided*, that any transfer or assignment pursuant to Article 16 thereof which requires the consent or approval of Kenergy also shall require the consent of Big Rivers.

3.2 Alcan Wholesale Agreement. Big Rivers shall (i) fully perform and discharge all of its obligations under the Alcan Wholesale Agreement unless excused in accordance with the terms thereof; (ii) not act or rely upon any written or oral waivers granted by Kenergy of Big Rivers' performance under or compliance with provisions of the Alcan Wholesale Agreement that could be reasonably expected to materially adversely affect Alcan's rights or interests under the Alcan Retail Agreement without the prior written consent of Alcan; (iii) enforce the performance and discharge by Kenergy of its material obligations under the Alcan Wholesale Agreement and not waive the performance and discharge by Kenergy of its material obligations thereunder; (iv) not amend or modify the Alcan Wholesale Agreement without the prior written consent of Alcan (the addition, deletion, modification or amendment of supplemental tariffs contemplated by the Alcan Wholesale Agreement which has been approved by the KPSC is deemed not to be an amendment or modification of the Alcan Wholesale Agreement for the purposes of this Section 3.2); (v) not terminate or repudiate the Alcan Wholesale Agreement (including by rejection or similar termination in a bankruptcy proceeding involving Big Rivers) other than in accordance with the provisions thereof; (vi) not take any action or support any action by others that in any manner would impede Big Rivers' ability to fulfill its obligations to Kenergy or Alcan under the Alcan Wholesale Agreement or this Agreement or act in any manner that could reasonably be expected to materially adversely affect its ability to perform or discharge its obligations under this Agreement; (vii) provide Alcan with a copy of all notices sent to Kenergy pursuant to the Alcan Wholesale Agreement; and (viii) not assign or transfer (by operation of law or otherwise) any rights or interests that it may have in the Alcan Wholesale Agreement except in accordance with Article 16 thereof; *provided*, that any transfer or assignment pursuant to Article 16 thereof which requires the consent or approval of Kenergy also shall require the consent of Alcan.

### 3.3 Payments.

(a) Big Rivers shall pay Alcan upon the Effective Date an amount equal to \$3,485,577 less \$83,333 for each month after December 31, 2006 (calculated as of the 25th day of each month) (the "Assurances Agreement Payment") in lieu of amounts otherwise payable under Section 3(i) of the Assurances Agreement between Alcan and LG&E Energy Marketing Inc., dated as of July 15, 1998. Big Rivers shall make the Assurances Agreement Payment to Alcan on the Effective Date; *provided*, that Big Rivers may credit all or any portion

of the Assurances Agreement Payment against one or more invoices relating to the sale of electric energy or related services to Kenergy for resale to Alcan prior to the Effective Date.

(b) Big Rivers shall pay Alcan upon the Effective Date \$3,031,000.

(c) Upon the Effective Date, Big Rivers shall be obligated to pay Alcan within five (5) days of the Effective Date an amount equal to the difference between (i) the aggregate dollar amount charged by Big Rivers to Kenergy for Block A Energy, Block A-1 Energy, Block B Energy and Block C Energy as defined in the Agreement for Tier 3 Energy dated November 29, 2007 and the First Amendment thereto dated June 6, 2008 between Big Rivers and Kenergy for the benefit of Alcan (collectively, as extended, the "2008 Tier 3 Agreement"), for the period beginning at 12:01 AM on October 6, 2008 through midnight of the Effective Date (the "Payment Period") and (ii) the dollar amount calculated by multiplying the aggregate volume of Block A Energy, Block A-1 Energy, Block B Energy and Block C Energy delivered by Big Rivers to Kenergy for resale to Alcan pursuant to the 2008 Tier 3 Agreement during the Payment Period times the rate of \$43.11 per MWh. For example, if the volume of Block A Energy, Block A-1 Energy, Block B Energy and Block C Energy delivered by Big Rivers during the Payment Period was 175,000 megawatt hours for an aggregate charge of \$8,900,000, the payment would be \$1,226,420 (\$8,900,000 less (175,000 x \$43.11 = \$7,673,580) = \$1,226,420).

### 3.4 Budget.

(a) Big Rivers shall provide to Alcan for its review and evaluation (i) on or prior to the date 90 days prior to the end of each Fiscal Year, a copy of Big Rivers' then-current draft proposed annual capital and operating budget (the "Proposed Budget") for the following Fiscal Year, and (ii) any reasonably requested supporting information with respect to the Proposed Budget or expenditures in excess of the Budget.

(b) If requested by either Alcan or Century, Big Rivers and Alcan and, if the Century Retail Agreement is in effect, Century, shall jointly engage an independent expert (the "Independent Engineer") and shall agree on the scope of review required to evaluate the draft Proposed Budget. Big Rivers shall pay 50% and Alcan shall pay 50% of the fees and expenses of the Independent Engineer (or Alcan shall pay 25% if the Century Retail Agreement is in effect).

(c) Alcan shall have the opportunity to present the conclusions and recommendations of the Independent Engineer with respect to the Proposed Budget to the Coordinating Committee and to Big Rivers' Board of Directors as soon as reasonably practicable following the Independent Engineer's completion of the Proposed Budget evaluation.

(d) Big Rivers and Alcan will treat the reports, opinions and other work product of the Independent Engineer as confidential, proprietary business information that will not be publicly disclosed or offered as evidence in any regulatory or legal proceeding by Big Rivers, Kenergy or Alcan.

(e) On or prior to the last day of each Fiscal Year, Big Rivers shall provide Alcan copies of the final Budget for the following year. Big Rivers intends to use

reasonable commercial efforts to keep its expenses each year within such year's Budget, but makes no representation that keeping its expenses within such year's Budget will be commercially feasible.

(f) Big Rivers shall provide Alcan notice if:

(i) Big Rivers (A) incurs or plans to incur \$4 million of capital expenditures in any Fiscal Year in excess of the capital expenditures in the Budget for such Fiscal Year, or (B) thereafter incurs or plans to incur an additional \$3 million of capital expenditures in excess of the capital expenditures in the Budget for such Fiscal Year; or

(ii) Big Rivers (A) incurs or plans to incur operating expenses in any Fiscal Year aggregating 2.5% in excess of Big Rivers' total operating expenses in the Budget for such Fiscal Year, or (B) thereafter, incurs or plans to incur an additional 1.25% of such total operating expenses in the Budget, excluding in each case expenses for fuel, environmental compliance or purchased power.

At the request of Alcan, the Coordinating Committee shall meet to discuss the causes of such capital expenditures or operating expenses in excess of the budgeted amounts and, after meeting with the Coordinating Committee, if further requested, Big Rivers shall permit Alcan to make one presentation to Big Rivers' Board with respect thereto.

3.5 Plan of Reorganization. The Parties acknowledge and agree that nothing in the Alcan Retail Agreement, the Alcan Wholesale Agreement, this Agreement or any document or agreement relating thereto may be construed to amend, affirm, waive or otherwise alter the terms of Schedule 5.4(a) of the Big Rivers' plan of reorganization, as modified June 1, 1998, or any document or agreement relating thereto regarding the obligation of Big Rivers to serve Kenergy for the benefit of Alcan; *provided*, that Alcan and Big Rivers disagree, notwithstanding the Unwind Transaction, as to the obligation of Big Rivers, in the absence of a new or amended contract, to serve Kenergy for the benefit of Alcan when the Existing Alcan Agreement terminates or when the Alcan Retail Agreement terminates. The Parties acknowledge that clarity on this issue is desired by both Parties so that necessary and appropriate capital planning and decision-making can be undertaken. The Parties agree to endeavor in good faith to resolve this disagreement prior to 2015.

3.6 Alcan Credit Support. Alcan shall (i) if the rating of the unenhanced, unsecured debt obligation of Alcan Parent with Standard & Poor's is not "A+" or higher (and in addition, if Alcan Parent has such a rating from Moody's, that rating with Moody's is not "A1" or higher), provide and maintain credit support in the form of a letter of credit from a bank rated "A+" or higher, or other credit support acceptable to Big Rivers and Kenergy, in an amount equal to the amounts estimated by Big Rivers to be due to Big Rivers and Kenergy with respect to Alcan's obligations under the Alcan Retail Agreement for a period of two months, and any amount which Big Rivers estimates reasonably could be due with respect to taxes relating to any sale of Energy pursuant to Section 4.13.3 as Economic Sales, Section 10.1 as Surplus Sales, Section 10.2 as Undeliverable Energy Sales or Section 10.3 as Potline Reduction Sales, in each

case, of the Alcan Retail Agreement (“Potential Tax Liability”); and (ii) cause Alcan Parent to guarantee to Big Rivers and Kenergy payment and performance of all obligations of Alcan under the Alcan Retail Agreement, including Potential Tax Liability, and all obligations of Alcan under the other documents entered into by Alcan and its Affiliates in connection with the New Transaction pursuant to a Guarantee Agreement executed by Alcan Parent in favor of Big Rivers and Kenergy which shall be satisfactory in form and substance to Big Rivers (the “Alcan Guarantee”). At the request of Big Rivers, Alcan will maintain the Alcan Guarantee until closure of all applicable tax years of Big Rivers. At the request of Alcan, Big Rivers will provide Alcan with information as to the amount and calculation of the estimated Potential Tax Liability and reasonably detailed documentation in support thereof.

3.7 Transmission Upgrade. As soon as reasonably practicable, Big Rivers will develop, finance and construct improvements to its transmission facilities to permit Big Rivers to transmit to its border all Base Fixed Energy.

3.8 Proceedings Affecting Rates.

(a) The Parties acknowledge and agree that

(i) Big Rivers shall have the right to seek KPSC approval for changes to the Non-Smelter Member Rates, and FERC approval of changes to the OATT, from time to time, but Big Rivers shall not seek an increase in its base rates to take effect before January 1, 2010, excluding any roll-in to Big Rivers’ base rates of costs that would otherwise be recovered by the Environmental Surcharge or the FAC, and

(ii) Big Rivers will not seek to implement a wholesale rate reduction other than the Rebate to its Members under the procedures available in KRS 278.455 without the consent of Alcan;

*provided* that this commitment by Big Rivers will have no effect on the availability to Big Rivers’ Members of the procedures in KRS 278.455 to flow-through any wholesale rate decrease to the Non-Smelter Ratepayers.

(b) Alcan shall have the right to intervene and participate in any proceeding that may affect rates at the KPSC or FERC or before any other Governmental Authority. Neither Big Rivers nor Alcan will support or seek, directly or indirectly, from any Governmental Authority, including the KPSC, any challenge to or change in the rate formula set forth in the Alcan Wholesale Agreement or the Alcan Retail Agreement or other terms and conditions set forth therein, including the relationship of the Large Industrial Rate to amounts payable by Alcan pursuant to the Alcan Retail Agreement, except that any Party may initiate or intervene in a proceeding to (i) clarify, interpret or enforce the Alcan Wholesale Agreement or the Alcan Retail Agreement, or (ii) challenge the applicable rate for Transmission Services should those services be unbundled for purposes of calculating the Large Industrial Rate. For the avoidance of doubt, Alcan’s intervention and participation in a regulatory proceeding involving cost of service issues relating to the rates of the Non-Smelter Ratepayers shall not be considered a challenge to the rate formula.

(c) If *Commonwealth of Kentucky ex rel. Gregory D. Stumbo, Attorney General v. Public Service Comm'n and Union Light, Heat and Power Co.*, Franklin Circuit Court, C.A. No. 06-CI-269, or any Applicable Law relating thereto restricts the amounts recovered under the FAC, Appendix A, or the Environmental Surcharge Rider, then Kenergy, Alcan, Big Rivers and, if the Century Retail Agreement is then in effect, Century, shall negotiate in good faith to amend this Agreement (and other agreements entered into in connection herewith) to restore the relative rights and economic benefits thereunder. If such parties are unable to reach an agreement on such amendments, then this Section 3.8 shall not restrict Big Rivers from seeking KPSC approval for an increase to its base rates or an amendment to the FAC, Appendix A, or the Environmental Surcharge Rider.

(d) Nothing in this Agreement shall limit or expand the jurisdiction of the KPSC or the FERC over Big Rivers or the rates, terms and conditions of electric service to Alcan pursuant to the Alcan Retail Agreement or otherwise.

(e) Big Rivers will provide Alcan a copy of any filing with the KPSC or FERC that seeks a change in Big Rivers' tariff or relief authorized by KRS 278.020, KRS 278.030, KRS 278.212, KRS 278.218, KRS 278.300, KRS 278.183 or 807 KAR 5:056.

3.9 Communications; Request for Meetings. Big Rivers will establish with Alcan procedures for the regular dissemination of information relating to the operational and financial performance of Big Rivers. If Alcan believes Big Rivers has or may incur unreasonable costs or expenses, Alcan may request in writing a meeting with Big Rivers' management to discuss such costs or expenses. Such meeting will take place within ten Business Days of the request but shall not be held more frequently than once per fiscal quarter. Nothing in this Section shall obligate Big Rivers to take any action as a result of such meeting.

### 3.10 Depreciation Rates.

(a) Big Rivers shall not modify its depreciation rates without the approval of or consent or acceptance by the KPSC or, if the KPSC no longer has jurisdiction over Big Rivers, by any other Governmental Authority having jurisdiction over such modification. Big Rivers will provide Alcan reasonable notice of the implementation of such modification together with reasonably detailed documentation describing such modification and an opportunity to discuss such modification with Big Rivers' management prior to the filing of an application for approval of the modification of such depreciation rates with the KPSC or other Governmental Authority having jurisdiction.

(b) Big Rivers shall not initiate a request to a Governmental Authority or RUS for changes to its depreciation rates that would be projected to cause the weighted average depreciation rates for the period from the Effective Date through December 31, 2016, to exceed the weighted average depreciation rates for the same period set forth in the Model; *unless* (1) Big Rivers determines in good faith, based on discussions with a nationally recognized statistical rating organization and after consultation with Alcan, that it is necessary to make such a modification to its depreciation rates in order to maintain an investment grade credit rating, (2) a Governmental Authority with jurisdiction or RUS directs Big Rivers to modify its depreciation rates, or (3) Big Rivers' independent auditors assert that they would not be able to deliver an

unqualified audit opinion with respect to Big Rivers' financial statements as a result of Big Rivers' failure to seek or implement a modification of its depreciation rates. For purposes of this clause (b), Big Rivers' weighted average depreciation rates for the period from Effective Date through December 31, 2016, shall be the sum of its total depreciation expense for each year for that same period over the sum of the average gross depreciable plant for each year over that same period, with appropriate adjustments for partial years.

3.11 Audit Rights. Big Rivers will permit Alcan to audit, upon reasonable notice, at its own expense, at a mutually agreeable time, all information in the possession of Big Rivers relating to its service under the Alcan Wholesale Agreement to Kenergy for resale to Alcan, including scheduled deliveries, meter records, billing records, records related to payments to Big Rivers and such other documents related to payment for and determination of the amount of electric energy, Transmission Services and other related services supplied by Big Rivers and delivered to Kenergy for resale and delivery to Alcan. Big Rivers shall retain all documentation applicable to service to Kenergy under the Alcan Wholesale Agreement for a period of three years. Nothing in this Section 3.11 shall obligate Big Rivers to provide attorney-client privileged information.

3.12 Bylaw Amendments.

(a) Subject to Section 3.12(b) and (c), Big Rivers agrees not to amend its Bylaws after the adoption of the amendment set forth in Section 13.4 of the Alcan Wholesale Agreement in a manner that adversely affects the rights of Alcan to receive patronage capital or other distributions from Big Rivers through Kenergy without the prior consent of Alcan.

(b) Notwithstanding Section 3.12(a), nothing in this Section 3.12 shall restrict Big Rivers' ability to amend its Bylaws (i) without the consent of Alcan if Big Rivers gives notice to Alcan of the proposed Bylaw amendment, together with a copy of such proposed amendment, and Alcan does not object to the proposed amendment within 60 days after the notice is delivered, (ii) with the consent of Alcan during the Consent Period (as defined in Section 3.12(c)), or (iii) without the consent of Alcan following the Consent Period.

(c) The provisions of this Section 3.12 (and the obligations of the parties to notify the other Party of any change in its address pursuant to Section 7.4 hereof) shall survive for 10 years after the end of the Service Period (the "Consent Period") regardless of the termination or expiration of this Agreement.

3.13 Operation of System. Big Rivers shall operate its electric generation and transmission system for the mutual benefit of the Members and patrons consistent with Prudent Utility Practices, and will apply the same standards to operating decisions that may affect the Monthly Charge. Big Rivers will not use the payment obligation of Alcan under Section 4.7 (TIER Adjustment Charge) of the Alcan Retail Agreement as the substantive basis for making an operating decision.

3.14 Property Rights.

(a) Big Rivers' nonpatronage net earnings, after offset (if applicable) by any available tax loss carryforward amounts attributable to a deficit in nonpatronage net

earnings from prior taxable years, shall, if positive, be retained by Big Rivers as a permanent source of equity and, if negative, shall be carried forward to be applied as an offset against future positive nonpatronage net earnings.

(b) Upon liquidation, the assets of Big Rivers shall be distributed in the following order: (i) all debts and obligations of Big Rivers shall be paid in accordance with lawful priorities, (ii) each Member's or other patron's capital account balance shall be paid without priority on a *pro rata* basis until all such capital accounts (as determined subsequent to adjusting such accounts by allocations of patronage net earnings for the year of liquidation exclusive of any gain arising from the liquidation) have been reduced to zero, and (iii) any remaining assets of Big Rivers shall be paid to the current and former Members or other patrons of Big Rivers based upon the amount of their historic patronage with Big Rivers measured by kilowatt-hours purchased from Big Rivers over the life of Big Rivers. The life of Big Rivers is defined to begin at the date Big Rivers was formed in 1961 and to continue uninterrupted through Big Rivers' bankruptcy reorganization to the date of liquidation.

(c) The provisions of this Section 3.14 shall survive the expiration or earlier termination of this Agreement.

3.15 Big Rivers Capitalization Policy. To the extent consistent with Accounting Principles, Applicable Law and guidance of applicable Governmental Authorities or RUS, Big Rivers shall capitalize expenditures for the replacement of the items related to Big Rivers' generation facilities identified in the list of the retirement units set forth in the Schedule 3.15.

3.16 Purchased Power Regulatory Account. Big Rivers will request KPSC to and, if the KPSC approves, shall (a) establish a regulatory account containing purchased power costs to be recovered by Big Rivers from the Members with respect to sales to their Non-Smelter Ratepayers in an amount equal to the sum of the Non-FAC Purchased Power Adjustment Factor in each month multiplied by the amount of Energy delivered in each month to the Members for such sales; and (b) establish the method of recovery of such amounts from Non-Smelter Ratepayers at each general rate adjustment case.

3.17 Model. It is understood and agreed that (i) all financial and production cost models ("Model") including the Model filed with the KPSC in connection with the application for approval of the Unwind Transaction and the New Transaction have been developed solely by Big Rivers to provide its best estimate of the future operations of Big Rivers after the Unwind Transaction is consummated, and (ii) Alcan by executing this Agreement and consummating the Unwind Transaction is not indicating its agreement or disagreement with the forecasted work plans, assumptions or specific expenditures embedded in the Model.

#### 4. Coordinating Committee.

4.1 The parties have agreed to the establishment of a committee ("Coordinating Committee"), consisting of representatives of the Members' chief executive officers, Alcan, Century, and Big Rivers management, organized for the purpose of reviewing,

analyzing and discussing information relating to Big Rivers' operational and financial performance. The Coordinating Committee shall meet at least once each calendar quarter.

4.2 If the Coordinating Committee does not exist or does not function with the subject matter of this Section 4, then Big Rivers shall have the same obligations as to the Smelters, jointly.

4.3 At a minimum of once a year and at such other times as the Parties may agree, the members of the Coordinating Committee will establish a meeting with Big Rivers' board members. These meetings will be informal and the purpose of such meetings will be to discuss Big Rivers' operating and financial performances and plans, and issues affecting the electric utility and smelting industry operations.

4.4 The information to be discussed by the Coordinating Committee shall include (i) analysis criteria and procedures for evaluating plans, procedures, expenditures and maintenance programs, (ii) budgets, (iii) operations and capital expenditures, (iv) fuel procurement or supply, (v) comparison of actual performance to the Budget and an explanation of variances to the Budget, (vi) load forecasts and integrated resource plans, (vii) depreciation studies, proposed changes in depreciation rates and associated proposed changes in electric rates, and (viii) other activities, such as the timing and terms of refinancing the RUS debt or whether to join an independent transmission system operator, that may impact Big Rivers' operational and financial performance. Big Rivers shall provide the Coordinating Committee members any reasonably requested supporting information relating to the items discussed.

4.5 The activities of the Coordinating Committee shall be a standing report item on the agenda of the monthly meeting of the Big Rivers Board of Directors. From time to time Alcan's representatives may make a request to the chairman of the Big Rivers Board of Directors that they be allowed to participate with management in making such report.

## 5. Cure Rights.

5.1 Notwithstanding any provision contained in the Alcan Retail Agreement that affords Alcan the right to terminate the Alcan Retail Agreement upon any breach or default by Kenergy thereunder, Alcan shall provide Big Rivers a reasonable opportunity, exercisable in Big Rivers' sole discretion, to cure any such breach or default by Kenergy prior to exercising such termination rights, which opportunity shall extend, at a minimum, for a period of not less than 10 Business Days after the later of (i) the date of expiration of the applicable period of time (if any) available for a cure by Kenergy under the Alcan Retail Agreement, and (ii) the date on which notice of the breach or default by Kenergy is delivered by Alcan to Big Rivers. Alcan hereby consents to any attempt by Big Rivers to cure any breaches or defaults by Alcan under the Alcan Retail Agreement that may hereafter occur, provided, that Big Rivers does not materially interfere with Alcan's attempts (if any) to so cure such breaches or defaults.

5.2 Notwithstanding any provision contained in the Alcan Wholesale Agreement that affords Big Rivers the right to terminate the Alcan Wholesale Agreement upon any breach or default by Kenergy thereunder, Big Rivers shall provide Alcan a reasonable opportunity, exercisable in Alcan's sole discretion, to cure any such breach or default by



Kenergy prior to exercising such termination rights, which opportunity shall extend, at a minimum, for a period of not less than ten Business Days after the later of (i) the date of expiration of the applicable period of time (if any) available for a cure by Kenergy under the Alcan Wholesale Agreement, and (ii) the date on which notice of the breach or default by Kenergy is delivered by Big Rivers to Alcan. Big Rivers hereby consents to any attempt by Alcan to cure any breaches or defaults by Big Rivers under the Alcan Wholesale Agreement that may hereafter occur, provided, that Alcan does not materially interfere with Big Rivers' attempts (if any) to so cure such breaches or defaults.

6. Representations and Warranties.

6.1 Big Rivers. Big Rivers hereby represents and warrants to Alcan as follows:

(a) Big Rivers is an electric generation and transmission cooperative corporation duly organized and validly existing and in good standing under the laws of the Commonwealth of Kentucky, and has the power and authority to execute and deliver this Agreement and the Alcan Wholesale Agreement, to perform its obligations hereunder and thereunder, and to carry on its business as it is now being conducted and as it is contemplated hereunder to be conducted during the term hereof.

(b) Subject to Section 6.1(c), this Agreement, the Alcan Wholesale Agreement and other agreements entered into by Big Rivers in connection therewith constitute Big Rivers' valid and binding obligation enforceable against it in accordance with their terms, except as enforceability may be affected by bankruptcy, insolvency or other similar laws affecting creditors' rights generally and by general equitable principles. The execution, delivery and performance of this Agreement and the Alcan Wholesale Agreement by Big Rivers have been duly and effectively authorized by all requisite corporate action.

(c) As of the Effective Date, all consents, approvals, authorizations, actions or orders, including without limitation, those which must be obtained from Governmental Authorities and the RUS, required for its authorization, execution and delivery of, and for the consummation of the transactions contemplated by, this Agreement and the Alcan Wholesale Agreement have been obtained other than as may be required under Applicable Law to be obtained, given, accomplished or renewed at any time or from time to time, and which are routine in nature or which cannot be obtained, or are not normally applied for, prior to the time they are required and which Big Rivers has no reason to believe will not be timely obtained.

(d) Subject to Section 6.1(c), its execution and delivery of this Agreement and the Alcan Wholesale Agreement, its consummation of the transactions contemplated by this Agreement and the Alcan Wholesale Agreement, and its fulfillment of and compliance with the terms and provisions hereof and thereof do not conflict with or violate any judicial or administrative order, award, judgment or decree applicable to it, or conflict with any of the terms, conditions or provisions of its Articles of Incorporation or Bylaws or any material instrument, mortgage, agreement, contract or restriction to which it is a party, or by which any of its properties are bound, or require the approval, consent or authorization of any federal, state or local court, or any of its creditors, or of any other Person, or give any party with rights under any

such instrument, agreement, contract, mortgage, judgment, award, order or other restriction the right to terminate, modify or otherwise change its rights or obligations thereunder which has not been obtained.

6.2 Alcan. Alcan hereby represents and warrants to Big Rivers as follows:

(a) Alcan is a corporation duly organized and validly existing and in good standing under the laws of the State of Texas, is authorized to do business in the Commonwealth of Kentucky, and has the power and authority to execute and deliver this Agreement, to perform its obligations hereunder, and to carry on its business as it is now being conducted and as it is contemplated hereunder to be conducted during the term hereof.

(b) This Agreement, the Alcan Retail Agreement and other agreements entered into by Alcan in connection therewith constitute Alcan's valid and binding obligation enforceable against it in accordance with their terms, except as enforceability may be affected by bankruptcy, insolvency or other similar laws affecting creditors' rights generally and by general equitable principles. The execution, delivery and performance of this Agreement and the Alcan Retail Agreement by Alcan have been duly and effectively authorized by all requisite corporate action.

(c) All consents, approvals, authorizations, actions or orders, including without limitation, those which must be obtained from governmental agencies or authorities, required for its authorization, execution and delivery of, and for the consummation of the transactions contemplated by, this Agreement and the Alcan Wholesale Agreement have been obtained.

(d) Its execution and delivery of this Agreement and the Alcan Retail Agreement, its consummation of the transactions contemplated by this Agreement and the Alcan Retail Agreement, and its fulfillment of and compliance with the terms and provisions hereof and thereof do not conflict with or violate any judicial or administrative order, award, judgment or decree applicable to it, or conflict with any of the terms, conditions or provisions of its Articles of Incorporation or Bylaws or any material instrument, mortgage, agreement, contract or restriction to which it is a party, or by which any of its properties are bound, or require the approval, consent or authorization of any federal, state or local court, or any of its creditors, or of any other Person, or give any party with rights under any such instrument, agreement, contract, mortgage, judgment, award, order or other restriction the right to terminate, modify or otherwise change its rights or obligations thereunder which has not been obtained.

## 7. Miscellaneous.

7.1 No Affect on Rights or Defenses. Nothing in this Agreement shall require performance by a Party of any of its obligations under the Alcan Retail Agreement or the Alcan Wholesale Agreement, as applicable, if it may assert, as a defense to its non-performance, any defenses or excuses to such performance that may be available to it under the provisions of the Alcan Retail Agreement or the Alcan Wholesale Agreement, or under Applicable Law.

7.2 Entire Agreement. This Agreement, the Alcan Retail Agreement, the Alcan Wholesale Agreement and the other agreements and documents denoted on Schedule 6.2.3

of the Alcan Retail Agreement constitute the entire agreement of the Parties hereto with respect to the subject matter hereof and supersede all prior agreements, whether oral or written. This Agreement may be amended only by a written document signed by each of the Parties hereto. Each Party acknowledges that it has not relied upon any representations, statements or warranties of the other Party in executing this Agreement except for those representations and warranties expressly set forth in the foregoing documents.

7.3 Waiver. The waiver by either Party of any breach of any term, covenant or condition contained herein will not be deemed a waiver of any other term, covenant or condition, nor will it be deemed a waiver of an subsequent breach of the same or any other term, covenant or condition contained herein.

7.4 Notices. A notice, consent, approval or other communication under this Agreement must be delivered in writing, addressed to the Person to whom it is to be delivered, and must be (a) personally delivered to that Person's address (which will include delivery by a nationally recognized overnight courier service), or (b) transmitted by facsimile to that Person's address, with a duplicate notice sent by a nationally recognized overnight courier service to that Person's address. A notice given to a Person in accordance with this Section will be deemed to have been delivered (i) if personally delivered to a Person's address, on the day of delivery if such day is a Business Day, or otherwise on the next Business Day, or (ii) if transmitted by facsimile to a Person's facsimile number and a correct and complete transmission report is received, or receipt is confirmed by telephone, on the day of transmission if a Business Day, otherwise on the next Business Day; *provided, however*, that such facsimile transmission will be followed on the same day with the sending to such Person of a duplicate notice by a nationally recognized overnight courier to that Person's address. For the purpose of this Section, the address of a Party is the address set out below or such other address which that Party may from time to time deliver by notice to the other Party in accordance with this Section:

If to Big Rivers:        Big Rivers Electric Corporation  
                                  201 Third Street  
                                  Henderson, Kentucky 42420  
                                  Attn: President and CEO  
                                  Fax: (270) 827-2558

If to Alcan:                Plant Manager  
                                  Sebree Smelter  
                                  Alcan Primary Products Corporation  
                                  9404 State Route 2096  
                                  Robards, Kentucky 42452  
                                  Fax: (270) 521-7341

With copy to:            Director of Energy  
                                  Rio Tinto Alcan  
                                  1188 Sherbrooke Street West  
                                  Montreal, Quebec H3A 3G2  
                                  Canada  
                                  Fax: (514) 848-1439

7.5 Dispute Resolution. If a dispute arises between the Parties concerning the terms or conditions of this Agreement, the duties or obligations of the Parties under this Agreement, or the implementation, interpretation or breach of this Agreement, either Party may request in writing a meeting between an authorized representative of the other Party to discuss and attempt to reach a resolution of the dispute. Such meeting will take place within ten Business Days or such shorter or longer time as agreed upon by the Parties of the request. Nothing in this Section shall toll or extend the cure period with respect to the failure by a Party to perform its obligations under this Agreement. Absent such resolution, the Parties may pursue all rights and remedies that they may have at law, in equity or pursuant to this Agreement subject to the limitations set forth in this Agreement to resolve that dispute. Notwithstanding the provisions of this Section each Party may at all times seek injunctive relief, where its delay in doing so could result in irreparable injury.

7.6 Assignments and Transfers. No Party shall assign any of its rights or obligations under this Agreement, whether by operation of law or otherwise, without the prior written consent of the other Party, *provided, however*, that no prior consent shall be required with respect to an assignment to any person who is a permitted assignee of Alcan pursuant to the Alcan Retail Agreement or a permitted assignee of Big Rivers pursuant to the Alcan Wholesale Agreement. Either Party may, without the approval of the other Party, assign this Agreement as collateral security or grant one or more mortgages (including one or more deeds of trust or indentures) on or security interests in its interest under this Agreement in connection with the general financing of its assets or operations.

7.7 Governing Law. This Agreement shall be interpreted, governed by and construed under the laws of the Commonwealth of Kentucky, without regard to its conflicts of law rules.

7.8 Jurisdiction. The Parties hereby agree that the courts of the Commonwealth of Kentucky will have exclusive jurisdiction over each and every judicial action brought under or in relationship to this Agreement, *provided* that the subject matter of such dispute is not a matter reserved by law to the KPSC, or to the U.S. federal judicial system (in which event exclusive jurisdiction and venue will lie with the U.S. District Court for the Western District of Kentucky), and the Parties hereby agree to submit to the jurisdiction of Kentucky courts for such purpose. Venue in state court actions will be in the Henderson Circuit Court as the court in which venue will lie for the resolution of any related disputes under this Agreement. Nothing in this paragraph prohibits a Party from referring to FERC or any other Governmental Authority any matter properly within its jurisdiction.

7.9 Good Faith Efforts. The Parties agree that each will in good faith take all reasonable actions within their reasonable control as are necessary to permit the other Party to fulfill its obligations under this Agreement, the Alcan Wholesale Agreement and the Alcan Retail Agreement; *provided* that no Party will be obligated to expend money or incur material economic loss in order to facilitate performance by the other Party. Where the consent, agreement, or approval of either Party must be obtained hereunder, such consent, agreement or approval may not be unreasonably withheld, conditioned, or delayed unless otherwise provided herein. Where either Party is required or permitted to act or fail to act based upon its opinion or judgment, such opinion or judgment may not be unreasonably exercised. Where notice to the

other Party is required to be given herein, and no notice period is specified, reasonable notice shall be given.

7.10 Successors and Assigns. This Agreement shall be binding upon, and shall inure to the benefit of and be enforceable by, the Parties and their respective successors and permitted assigns.

7.11 Headings. The headings contained in this Agreement are solely for convenience and do not constitute a part of the agreement between the Parties, nor should such headings be used to aid in any manner in the construction of this Agreement.

7.12 Third-Party Beneficiaries. Nothing in this Agreement may be construed to create any duty to, or standard of care with reference to, or any liability to, or any benefit for, any person not a Party to this Agreement.

7.13 Kenergy Obligations Separate. Nothing contained in this Agreement shall obligate Alcan or Big Rivers for any obligations or liabilities of Kenergy, whether under or pursuant to the Alcan Retail Agreement, the Alcan Wholesale Agreement or otherwise.

7.14 No Power Sales Commitment. The Parties acknowledge that Big Rivers and Kenergy intend to enter into the Alcan Wholesale Agreement and Alcan and Kenergy intend to enter into the Alcan Retail Agreement which agreements contain the terms and conditions setting forth the wholesale sale of power by Big Rivers and the purchase of such power by Kenergy, and the corresponding retail sale of such power by Kenergy and the purchase of such power by Alcan. Nothing contained in this Agreement shall be deemed to be or create an agreement or commitment of Big Rivers to sell to Alcan, or an agreement of Alcan to purchase from Big Rivers, any electric energy or related services.

IN WITNESS WHEREOF, this Agreement is hereby executed as of the day and year first above written.

BIG RIVERS ELECTRIC CORPORATION

By:

\_\_\_\_\_  
Name:

Title:

ALCAN PRIMARY PRODUCTS  
CORPORATION

By:

\_\_\_\_\_  
Name:

Title:

*Guy Authier*  
GUY AUTHIER  
PRESIDENT

BIG RIVERS ELECTRIC CORPORATION

By: Mark A. Bailey  
Name: Mark A. Bailey  
Title: President and CEO

[Coordination Agreement between BREC and Alcan]

**Schedule 3.15**

(See following pages.)



\*\* This Retirement Unit Listing is subject to change from time to time consistent with the Coordination Agreement. \*\*

**310: Land and Land Rights**

**310-001**

001	LAND AND LAND RIGHTS
001	LAND FOR ASH POND
001	LAND R-O-W FOR POTABLE WATER LINE
001	LAND R-O-W COAL HAUL ROAD
001	LAND R-O-W, COAL SCALES & GUARDHOUSE

### 311: Structures and Improvements (Steam Production)

#### 311-001

##### FOUNDATION

001 CELL, BARGE UNLOADER, FOUNDATION  
001 CELL, UNLOADING FACILITY, FDN, BRIDGE  
001 EXCAVATION BUILDING, FORMWORK, REBAR, FOUNDATION  
001 FIRE PROTECTION, PUMP HOUSE FDNS  
001 FOUNDATION, CONCRETE SERVICE BUILDING  
001 FOUNDATION, FGD CONTROL BUILDING  
001 FOUNDATION, MAINTENANCE SHOP  
001 FOUNDATION, PERMANENT WAREHOUSE  
001 FOUNDATION, POTABLE WATER BUILDING  
001 FOUNDATION, POWER PLANT  
001 FOUNDATION, REID WAREHOUSE  
001 FOUNDATION, SERVICE BUILDING, SUPERSTRUCTURE  
001 FOUNDATION, SHELTER ON COAL HANDLING EQUIPMENT  
001 FOUNDATION, SOLID WASTE HANDLING BUILDING  
001 FOUNDATION, TOOL ROOM  
001 FOUNDATION, TURBINE BUILDING  
001 FOUNDATION, TURBINE BUILDING, SUPERSTRUCTURE  
001 FOUNDATION, WATER TREATMENT BUILDING  
001 FOUNDATIONS  
001 FOUNDATIONS, EARTHWORK, GENERAL PLANT SITE  
001 FOUNDATIONS, FLOOR DRAINS, TURBINE BUILDING  
001 FOUNDATIONS, FOR WATER PLANT BLDG, CONCRETE  
001 FOUNDATIONS, PROPANE TANKS  
001 RECORDS STORAGE WAREHOUSE, CONCRETE PLACEMENT  
001 RIP RAP, FILL, DEWATER  
001 SERVICE BUILDING-FOUNDATIONS  
001 TURBINE BUILDING FOUNDATIONS, CONCRETE, CAISSONS

#### 311-002

##### STRUCTURE

002 BUILDING, CLARIFIER EQUIPMENT, GREEN 2  
002 BUILDING, COAL HANDLING EQUIP.  
002 BUILDING, COAL HANDLING, OFFICE,  
002 BUILDING, MAINTENANCE  
002 BUILDING, OIL STORAGE FLOOR  
002 BUILDING, SERVICE, THIRD FLOOR, MODIFICATION  
002 BUILDING, STEEL  
002 BUILDING, STORAGE/BOILER TUBE  
002 BUILDING, ELECTRICAL STORAGE  
002 BUILDING, WATER PLANT, W/ ELECTRICAL WIRING  
002 BUILDING, HEAVY EQUIPMENT, MAINT, COAL HANDLING  
002 BUILDING, TOOL ROOM WAREHOUSE  
002 CABLE, TELEPHONE  
002 CATWALK, STRUCTURE  
002 CIRCULATING WATER OUTFALL, CANAL, & ETC  
002 CLOSET, LIBRARY/STATIONERY  
002 COAL HANDLING SERVICE BUILDING-STRUCTURE  
002 CONTROL HOUSE, ELECTRICAL  
002 CONTROL HOUSE, UNLOADING  
002 CONTROL ROOM  
002 DOOR, ELECTRIC STEEL  
002 DOOR, OVERHEAD  
002 DOOR, STEEL SERVICE EQUIP, MACHINE SHOP  
002 DRAPERIES, FIRST FLOOR, WILSON STATION  
002 FLOOR, CONCRETE, WELDED WIRE  
002 FLOOR, MEZZANINE, W/ ACCESS STAIRWAY, TOOL ROOM  
002 GRATING, GALVANIZED, CENTRAL STEEL & WIRE  
002 GUARDHOUSE  
002 INSULATION  
002 LUNCH & LOCKER ROOM  
002 MAINT. SUPV OFFICE

\*\* This Retirement Unit Listing is subject to change from time to time consistent with the Coordination Agreement. \*\*

**311: Structures and Improvements (Steam Production)**

002 OFFICE  
002 PANAMA HOIST HOUSE BUILDING  
002 PANAMA SERVICE BUILDING  
002 PERMANENT WAREHOUSE  
002 RAILROAD, SERVICE  
002 RECORDS STORAGE WAREHOUSE, PREFAB BUILDING  
002 SERVICE BUILDING  
002 STORAGE ROOMS  
002 STRUCTURES & PLATFORMS, STEEL ACCESS  
002 TOOL ROOM ANNEX  
002 TURBINE BUILDING  
002 WALL, COAL HANDLING RETAINER  
002 WALL, CONCRETE, RETAIN COAL PILE  
002 WALL, FIRE  
002 WALL, RETAINING @ RECLAIM TUNNEL  
002 WAREHOUSE STRUCTURE  
002 WAREHOUSE UNLOADING RAMP & STORAGE PADS  
002 WATER TREATMENT BUILDING

**311-003**

**ROOF**

**311-004**

**HVAC-AIR CONDITIONING SYSTEM (CENTRAL UNITS ONLY)**

004 AIR CONDITIONER  
004 AIR HANDLER  
004 CONDENSER  
004 CONTROL SYSTEM  
004 DUCT WORK  
004 FAN  
004 FAN, MOTOR  
004 FILTER  
004 LOUVERS  
004 VENTS

**311-006**

**ELEVATOR, CRANE, HOIST, ETC.**

006 ELEVATOR, BOILER BUILDING  
006 ELEVATOR, PASSENGER  
006 ELEVATOR, TRAC, SERVICE BUILDING  
006 LIFT, VERTICAL MATERIAL

**311-007**

**HVAC-FAN, VENTILATING**

007 AIR HANDLER  
007 CONTROL SYSTEM  
007 DUCT WORK  
007 FAN  
007 FAN, MOTOR  
007 FILTER  
007 LOUVERS

**311-009**

**FIRE PROTECTION SYSTEM**

009 CABINET, FIRE HOSE  
009 CONTROL CABINET, FIRE PROTECTION  
009 CONVEYOR FLOOR FOAM EQUIPMENT  
009 FIRE DETECTION SPRINKLER SYSTEM  
009 FIRE DETECTOR  
009 FIRE HYDRANT  
009 FIRE HYDRANT ENCLOSER  
009 FIRE PROTECTION  
009 FIRE PUMP  
009 FIRE PUMP CONTROLLER  
009 FIRE PUMP, DIESEL ENGINE

**\*\* This Retirement Unit Listing is subject to change from time to time consistent with the Coordination Agreement. \*\***

**311: Structures and Improvements (Steam Production)**

009 LIGHTNING PROTECTION SYSTEM  
009 MOTOR, FIRE PUMP  
009 PIPE SYSTEM, DRY, FOR CRUSHER HOUSE  
009 PIPING SYSTEM, UNDERGROUND YARD FIRE PROTECTION  
009 REEL, SWINGING HOSE WITH CLAMP  
009 TANK, FIRE WATER STORAGE

**311-010**

**FIXTURES, LIGHTING**

010 LAMP, MERCURY  
010 LIGHTING  
010 LIGHTING, POWER DISTRIBUTION LINE  
010 SODIUM LIGHTING, HIGH PRESSURE

**311-011**

**HVAC-FURNACE OR BOILER**

011 AIR HANDLER  
011 CONTROL SYSTEM  
011 HEATING SYSTEM

**311-013**

**HVAC-HEAT PUMP OR HEATER**

013 AIR HANDLER  
013 CONDENSER  
013 CONTROL SYSTEM  
013 EVAPORATOR  
013 FILTER  
013 HEATING SYSTEM

**311-014**

**HOUSE LIGHTING OR POWER BOARD**

014 LIGHTING  
014 PANEL, UTILITY

**311-017**

**REFRIGERATION SYSTEM**

017 REFRIGERANT, TOOL

**311-018**

**HVAC-SPACE HEATER**

018 HEATER  
018 HEATER, SPACE

**311-023**

**WATER HEATER, DOMESTIC**

023 WATER HEATER

**311-024**

**MISCELLANEOUS MINOR STRUCTURE**

024 AIR LINE PIPING EXTENSION TO SANDBLASTING UNIT  
024 CAGE, STORAGE, 3 SIDED, W/SLIDING GATE  
024 CURTAINS, CLEAR, CONTROL ROOM WINDOW  
024 DITCH, CONCRETE  
024 ELECTRIC SERVICE SYSTEM ADDITION W/TRANSFORMER  
024 FLOOR, CONCRETE  
024 GAS LINE  
024 GUARD HOUSE  
024 GUARD RAIL  
024 LOCKER, WALL  
024 OUTFALL FLUME & DITCH  
024 OUTFALL STRUCTURE  
024 PIPE RACK & FITTING BINS  
024 SERVICE WINDOW, VERTICAL SLIDING  
024 SHOWER, FACILITIES  
024 SIGN, ALUMINUM  
024 SINK  
024 SINK, CABINET

\*\* This Retirement Unit Listing is subject to change from time to time consistent with the Coordination Agreement. \*\*

### 311: Structures and Improvements (Steam Production)

024 STAIRWAY, INTAKE  
024 TANK, WATER STORAGE  
024 TOOL CRIB  
024 WELL, SEAL

#### 311-025

#### ANY PRINCIPAL ITEM OF EQUIPMENT

025 BATHHOUSE EQUIPMENT  
025 DEHUMIDIFIER  
025 STORAGE RACKS

#### 311-026

#### BRIDGE OR TRESTLE

026 BRIDGE (ACCESS) TO UNLOADER CELLS  
026 BRIDGE OVER PIPE SHELF  
026 RIP RAP

#### 311-028

#### CULVERT

028 CULVERT

#### 311-029

#### DOCK

029 UNLOADING DOCK  
029 WAREHOUSE, RAMP

#### 311-030

#### FENCE

030 FENCE  
030 GATE, BARRIER, MAIN ENTRANCE & RADIO CONTROL

#### 311-031

#### FLAG POLE

031 POLE, FLAG

#### 311-033

#### PARKING LOT

033 PARKING LOT  
033 PAVING  
033 STEPS, GALVANIZED METAL

#### 311-034

#### RETAINING WALL OR DIKE

034 DIKES, GENERAL PLANT SITE  
034 RETAINER WALL

#### 311-035

#### ROAD

035 APRON, CONCRETE  
035 BLACKTOP  
035 BLACKTOP, SEALER  
035 ROAD

#### 311-036

#### SEWER

036 FLOWMETER  
036 PIPING, SANITARY SEWER, PIPE & GRINDER PUMP  
036 SANITARY SEWERS  
036 SEWAGE LIFT STATION  
036 SEWER SYSTEM

#### 311-038

#### TREATING PLANT

038 BUILDING, SEWAGE TREATMENT PLANT  
038 SEWAGE TREATMENT PLANT

#### 311-040

#### WELL

040 WELL, INSTALLATION & DRILLING SERV, OIL CLEANUP

**311: Structures and Improvements (Steam Production)**

**311-041**

**YARD DRAINAGE SYSTEM**

- 041 DISCHARGE BASIN
- 041 DRAINAGE, COAL HDLG SERVICE BLDG
- 041 DRAINAGE, DITCH
- 041 DRAINAGE, LINE
- 041 DRAINAGE, SYSTEM
- 041 OIL TRENCHES W/GRAVEL BED & DRAINAGE LATERALS
- 041 PANEL, SITE DRAINAGE CONTROL
- 041 PUMP, VERTICAL, SITE DRAINAGE

**311-042**

**YARD LIGHTING SYSTEM**

- 042 LIGHTING, YARD
- 042 LIGHTING, PARKING LOT AND SIDEWALK

**311-043**

**FUEL OIL DIKE**

- 043 OIL SPILL RECOVERY UNIT
- 043 UNLOADING PAD, FUEL TRUCK

**311-045**

**ROCK SURFACE AND RIP RAP**

- 045 RIP RAP, RIVER BANK

**311-047**

**HOLDING PONDS**

- 047 PIPE, DRAINAGE CULVERT DREDGE POND
- 047 PONDS

**311-048**

**PAVEMENT**

- 048 PAVING, SIDEWALK

**311-051**

**AMBIENT AIR MONITORING SYSTEM**

- 051 AMBIENT AIR MONITORING BUILDING
- 051 FENCE, AMBIENT AIR MONITORING SYSTEM
- 051 GRAVEL & CULVERTS, AMBIENT AIR MONITORING SYSTEM
- 051 TRAILER, STRUCTURE, AMBIENT AIR MONITORING SYSTEM

**311-052**

**POTABLE WATER SYSTEM**

- 052 FLOWMETER
- 052 FOUNTAIN, DRINKING
- 052 FOUNTAIN, WASH
- 052 LINE, WATER, SAFETY SHOWER, WATER PLANT
- 052 POTABLE WATER BOOSTER SYSTEM
- 052 POTABLE WATER LINE
- 052 POTABLE WATER PLANT FILTER UNIT BYPASS LOOPS
- 052 POTABLE WATER SYSTEM
- 052 TANK, HYDROPNEUMATIC WATER STORAGE
- 052 TANK, POTABLE STORAGE

**\*\* This Retirement Unit Listing is subject to change from time to time consistent with the Coordination Agreement. \*\***

### **312: Boiler Plant Equipment (Steam Production)**

#### **312-A01**

##### **STEAM BOILER**

A01 BOILER DRUM, W/ACCESSORIES  
A01 BOILER, AUX EQUIPMENT  
A01 BOILER, TUBE CASTINGS, CASING RINGS  
A01 CHILLER SYSTEM, BOILER  
A01 COMBUSTION CONTROLS  
A01 FAN, PENTHOUSE VENT  
A01 FIRE DETECTION, AIR PREHEATER  
A01 HOIST, BOILER BLDG  
A01 MONITOR, DRUM  
A01 PUMP, BOILER  
A01 TANK, BLOWDOWN  
A01 VALVE, TANK SAFETY

#### **312-A02**

##### **STEAM BOILER FOUNDATION & SUPPORTING STRUCTURES**

A02 BOILER ENCLOSURE  
A02 BOILER, FOUNDATION  
A02 BOILER, SUPPORTING STEEL, W/PLATFORMS & WALKWAYS  
A02 BUILDING, BOILER, STEEL  
A02 FOUNDATION, BOILER AND FURNACE  
A02 FOUNDATION, BOILER FEED PUMP  
A02 FOUNDATION, CONCRETE, DRAFT BREECHING SYS  
A02 FOUNDATION, CONCRETE, DRAFT CHIMNEY STACK  
A02 FOUNDATION, CONCRETE, LIME SILO EQUIPMENT  
A02 FOUNDATION, CONCRETE, PRECIPITATOR  
A02 FOUNDATION, CONCRETE, PRIMARY AIR SYSTEM  
A02 FOUNDATION, CONCRETE, SOLID WASTE HANDLING  
A02 FOUNDATION, ID FANS  
A02 ROOF, BOILER, STEEL BLDG, DECKING

#### **312-A03**

##### **FUEL BURNING EQUIPMENT FOR ONE BOILER**

A03 BURNER FLAME SCANNER SYSTEM  
A03 BURNER MANAGEMENT SAFETY SYSTEM  
A03 BURNERS, BOILER  
A03 BURNERS, LOW NOX  
A03 CABINET, BURNER CONTROL  
A03 CERAMIC LINER, BURNERS  
A03 CYCLONE SAMPLER & PROBE  
A03 FAN, BOILER  
A03 FUEL DELIVERY CONTROL  
A03 MONITOR, COAL FLOW  
A03 PUMP, FUEL OIL SUPPLY, W/METER & FDN

#### **312-A04**

##### **FURNACE**

A04 FURNACE

#### **312-A05**

##### **FURNACE WALLS FOR ONE BOILER**

A05 FURNACE WATER WALLS

#### **312-A06**

##### **REHEATER**

A06 REHEAT DAMPER  
A06 REHEATER TUBES  
A06 VALVE, REHEAT SYSTEM

#### **312-A07**

##### **SETTING, BOILER**

A07 BOILER, CASING  
A07 BOILER, SETTING  
A07 MEMBRANE, HIGH TEMP  
A07 THERMOWELLS

**\*\* This Retirement Unit Listing is subject to change from time to time consistent with the Coordination Agreement. \*\***

### **312: Boiler Plant Equipment (Steam Production)**

A07 THERMOWELLS

#### **312-A08**

##### **SOOT BLOWER SYSTEM FOR ONE BOILER**

A08 PANEL, WIRING, POWER & CONTROL, SOOT BLOWER  
A08 SOOT BLOWER  
A08 SOOT BLOWER ELECTRIC EQUIPMENT CONTROLS  
A08 SOOT BLOWER PRESSURE INDICATORS  
A08 SOOT RETRACT TOOL  
A08 WATER BLOWER/DESLAGGER

#### **312-A09**

##### **SUPERHEATER**

A09 DESUPERHEATER  
A09 SUPERHEATER, PRIMARY  
A09 SUPERHEATER, SECONDARY  
A09 VALVE, SUPERHEAT SPRAY CHECK  
A09 VALVE, SUPERHEAT SPRAY ISOLATION

#### **312-B01**

##### **AIR DUCT SYSTEM**

B01 ADAPTER, SPINDLE, W/AIR MOTOR ASSEMBLY  
B01 AIR PRESSURE MANIFOLD ASSEMBLY W/BOX & SADDLE  
B01 BOX, WIND  
B01 DUCT, FLUE GAS BYPASS  
B01 ELECTRICAL DEVICES FOR PRIMARY AIR SYSTEM  
B01 FLUES, DUCTS, DAMPERS  
B01 RESTRICTING ORIFICES

#### **312-B02**

##### **AIR HEATER**

B02 AIR HEATER  
B02 AIR HEATER LINE, ISOLATION VALVE  
B02 AIR HEATER, STEAM COIL  
B02 CONTROLLER, AIR HEATER W/DRIVES  
B02 HEATER, AIR PREHEATER, FIRE DETECTION SYSTEM  
B02 VALVE, AUX STEAM REGULATOR ISOLATION

#### **312-B03**

##### **BREECHING SYSTEM**

B03 BREECHING SYSTEM

#### **312-B04**

##### **CINDER CATCHER**

B04 CINDER CATCHERS  
B04 CLINKER GRINDER  
B04 TANK, STORAGE TANK

#### **312-B05**

##### **FAN, DRAFT**

B05 BOOSTER FAN, BOILER SEAL AIR  
B05 FAN, BOILER DRAFT, AIR MONITOR  
B05 FAN, DIRECT DRIVE  
B05 FAN, EXHAUST, FGD BLDG  
B05 FAN, FLUID DRIVE  
B05 FAN, FORCED DRAFT  
B05 FAN, INDUCED DRAFT  
B05 FAN, PRIMARY AIR  
B05 FAN, SEAL AIR  
B05 FOUNDATION, BOOSTER FAN  
B05 FOUNDATION, CONCRETE, DIRECT DRIVE FANS  
B05 HEATER, ID FAN  
B05 HOIST, FORCED DRAFT FAN  
B05 HOIST, INDUCED DRAFT FAN ROTOR  
B05 HVAC, UNITS FOR DIRECT DRIVE FANS  
B05 IGNITOR, AIR FAN SYSTEM  
B05 MOTOR, FD FAN



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### 312: Boiler Plant Equipment (Steam Production)

B05 SEAL AIR SYSTEM - BOILER  
B05 TOTALIZER SYSTEM, STATIC BOILER DRAFT, AIR MONITOR

#### 312-B06

#### STACK, WITH OR WITHOUT FOUNDATION

B06 CABLE/CONDUIT, OPACITY MONITOR  
B06 CHIMNEY STACK  
B06 ELEVATOR, CHIMNEY  
B06 FILTER DRUM, SW  
B06 HOIST, JIB, CHIMNEY  
B06 LADDER, CHIMNEY & PLATFORMS  
B06 LADDER, SAFETY CAGE  
B06 LINE, UMBILICAL, MULTITUBE BUNDLE  
B06 PLATFORM, STACK CEMENT  
B06 SHUTTER, W/TIME DELAY FOR OPACITY MONITOR  
B06 VENT, STACK EXT, COMBUST. AIR, STEAM COIL, DRAIN TANK  
B06 WINCH, STACK TEST PROBE HOIST

#### 312-B07

#### PRECIPITATOR, ELECTROSTATIC

B07 AC UNIT FOR PRECIPITATOR CONTROL ROOM  
B07 BOILER, PRECIPITATOR AREA, FINAL SITE WORK  
B07 CABINET, PRECIPITATOR CONTROL  
B07 CONTROL, FLYASH  
B07 DAMPER, LOUVER  
B07 FAN, AIR PURGE  
B07 FAN, SEAL AIR  
B07 GRATING, GALVANIZED  
B07 HOIST  
B07 HOPPER VIBRATORS  
B07 LINEAR REACTOR, PRECIPITATOR  
B07 LINING, BRICK  
B07 MOTOR, GUILLOTINE DAMPER, ACTUATORS  
B07 OUTLET NOZZLE, EXTERIOR LAG/INSULATION  
B07 OUTLET NOZZLE, INTERNAL BRICK LINING  
B07 PANEL, FLY ASH CONTROL  
B07 PANEL, PRECIPITATOR CONTROL  
B07 PLATFORM, PRECIPITATOR ACCESS  
B07 PRECIPITATOR  
B07 PRECIPITATOR CONTROL  
B07 PRECIPITATOR FIELD  
B07 PRECIPITATOR, ASH SILO PLATFORMS  
B07 PRECIPITATOR, CONTROL HOUSE  
B07 PRECIPITATOR, ENCLOSURE FOUNDATIONS  
B07 PRECIPITATOR, ROOF AND ACCESSORIES  
B07 PRECIPITATOR, STONE FILL  
B07 PRECIPITATOR, TRANSFORMER/RECTIFIER SET  
B07 PROTECTIVE COVERS ON PRECIPITATOR CONTROL PANELS  
B07 SUPPORTS, PRECIPITATOR  
B07 TRANSFORMER, PRECIPITATOR  
B07 TRANSFORMER, RECTIFIER  
B07 VACUUM PIPING, PRECIPITATOR HOPPERS

#### 312-B08

#### SOLID WASTE EQUIPMENT, FGD & SCRUBBER

B08 ACID STORAGE, FGD, DIBASIC, DBA, FEED FACILITY  
B08 ACTIVATOR, SW LIME SILO BIN  
B08 ADDITIVE FEED SYSTEM  
B08 AGITATOR & CONTROLS  
B08 AGITATOR, W/PLATFORMS LIME SYSTEM  
B08 AIR DRYER, DESSICANT & BYPASS SYSTEM @ IUS BLDG  
B08 AMMETER, DIGITAL  
B08 BATTERY, BACKUP, UPS  
B08 BELT CLEANER  
B08 BLOWER, CAKE DISCHARGE

**\*\* This Retirement Unit Listing is subject to change from time to time consistent with the Coordination Agreement. \*\***

### **312: Boiler Plant Equipment (Steam Production)**

B08 BREAKER, MAIN & TIE  
B08 BUILDING, FGD & SOLID WASTE  
B08 BUILDING, REAGENT LIME PREP  
B08 BUILDING, SWITCHGEAR, AUXILIARY  
B08 BUS WORK  
B08 BUS WORK FOUNDATION  
B08 CABLE, POWER AND CONTROL  
B08 CAKE BLOWER, W/CLOTH ROPE, SOLID WASTE  
B08 CEM/DA, A/C UNIT  
B08 CIRCUIT BREAKER, SLURRY CIRC PUMP  
B08 CLEANER, STEAM, HOT WATER, SOLID WASTE FILTER  
B08 COLLECTOR, LIME SILO DUST  
B08 COMPACTOR, VIBRATORY, SOLID WASTE  
B08 CONTROL SYSTEM, PH, LANDFILL RUNOFF POND  
B08 CONTROLS SYSTEM, SOLID WASTE PROCESSING  
B08 CONTROLLER, FGD  
B08 CONTROLLER, PROGRAMMABLE LOGIC  
B08 CONTROLS, FILTER DRUM VAT LEVEL MONITORING  
B08 CONVEYOR  
B08 CYCLONES  
B08 DAMPER, OUTLET  
B08 DAMPER, SCRUBBER MOD INLET LOUVER  
B08 DISTRIBUTION CONTROL SYSTEM  
B08 DUCT BANK  
B08 DUST COLLECTORS  
B08 ELECTRICAL POWER SUPPLY  
B08 ELEMENT, SW FLY ASH WEIGHT  
B08 ELEMENT, SW LIME WEIGH  
B08 FAN, VENTILATION, THICKENER TUNNEL  
B08 FEEDER, SW FLY ASH  
B08 FEEDER, SW LIME, VIBRA SCREW  
B08 FGD & FLY ASH CONTROL SYSTEM  
B08 FGD & SOLID WASTE PLATFORMS  
B08 FGD OUTLET GUILLOTINE ISOLATION DAMPER  
B08 FGD, CONTROL / POWER CABLE  
B08 FGD, CONTROL PANELS & TRAY SUPPORTS  
B08 FGD, HEAT TRACING  
B08 FGD, HEATERS  
B08 FGD, HVAC FOR CONTROL ROOM  
B08 FGD, INLET DUCT  
B08 FGD, INSTRUMENTS  
B08 FGD, LIGHTING FIXTURES  
B08 FGD, LIME HANDLING SYSTEM  
B08 FGD, LIME SILO EQUIPMENT  
B08 FGD, MOTOR CONTROL CENTER  
B08 FGD, PH ANALYZERS, SENSORS, PROTECTORS  
B08 FGD, PIPING  
B08 FGD, PUMP BUILDING, ENCLOSURE  
B08 FGD, REACTION TANK EQUIPMENT  
B08 FGD, SPRAY TOWER EQUIPMENT  
B08 FGD, THICKENER EQUIPMENT  
B08 FGD, THICKENER TRANSFORMERS, FGD & SOLID WASTE  
B08 FILTER, DRUM  
B08 FILTER, SEAL WATER  
B08 FILTERS, VACUUM PUMPS, RECEIVER, SW  
B08 FILTRATE SYSTEM POWER DISTRIBUTION  
B08 FIRE PROTECTION SYSTEM  
B08 FLOW METER, MAGNETIC, SLURRY SYSTEM  
B08 FLOWMETER, SCRUBBER  
B08 FLY ASH, FEEDER CONTROL  
B08 FLYASH, IUCS, SILO VACUUM LINES  
B08 FOUNDATION, FGD, SW, MISC.  
B08 FOUNDATION, FLOOR CRANE, SOLID WASTE HANDLING

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### 312: Boiler Plant Equipment (Steam Production)

B08 GATE, FLY ASH SILO SLIDE  
B08 GATE, SLIDE, SOLID WASTE FLYASH  
B08 GATE, SW LIME SILO SLIDE  
B08 GRAVEL, YARD SURFACING  
B08 HEADERS, RECIRC  
B08 HEATER, CSI  
B08 HEATER, FGD ENVIR  
B08 HOIST, LIME SILO TOWER  
B08 LIME SILO EQUIPMENT - DESULFURIZATION  
B08 LIME, DRY, HANDLING SYSTEM  
B08 LIME, DRY, TANK W/JIB CRANE & ACTIVATOR  
B08 LIMESTONE HOPPER  
B08 LIMESTONE PARTICLE SIZE ANALYZER  
B08 LINING, BRICK  
B08 LINING, SCRUBBER MODULE  
B08 LINING, SCRUBBER OUTLET DUCT  
B08 METER, ELECTRICAL & INSTRUMENTATION  
B08 METER, SOLID WASTE  
B08 METER, WATTHOUR, SCRUBBER ALTERNATE POWER FEED  
B08 MIST ELIMINATOR, HOIST CRANE  
B08 MIXER, SOLID WASTE  
B08 MODEM, BOILER & FGD  
B08 MONORAIL, LIME SILO  
B08 MOTOR  
B08 MOTOR CONTROL CENTER  
B08 MOTOR, FGD & SOLID WASTE AGITATORS  
B08 MOTOR, FGD & SOLID WASTE PUMPS  
B08 OUTLET DUCT  
B08 OUTLET DUCT, PREKRETE LINER  
B08 PANEL, RELAY  
B08 PAYLOADER, SW DISPOSAL  
B08 PIPE, DRAINAGE, LANDFILL  
B08 PIPE SUPPORT, THICKENER OVERFLOW  
B08 PIPE, THICKENER OVERFLOW  
B08 PIPING FROM POND TO FILTRATE  
B08 PIPING SYSTEM, SOLID WASTE  
B08 PIPING, ADDITIVE SLURRY  
B08 PIPING, ASH POND MAKEUP WATER  
B08 PIPING, BLOWDOWN BLEED SLURRY  
B08 PIPING, FILTRATE WATER  
B08 PIPING, FLUIDIZER ASH SILOS  
B08 PIPING, INSTRUMENT AIR  
B08 PIPING, LIME SLURRY CROSSTIE  
B08 PIPING, RECYCLE SLURRY  
B08 PIPING, THICKENER RETURN WATER  
B08 PIPING, THICKENER UNDERFLOW  
B08 POND DIKE, SOLID WASTE  
B08 POND, COAL PILE RUN-OFF, SPILLWAY, OVERFLOW  
B08 POND, LANDFILL RUNOFF, WITH DIKE  
B08 POWER / CONTROL CABLE, SOLID WASTE  
B08 PROGRAMMABLE LOGIC CONTROLLER, THICKENER  
B08 PUMP, ME WASH  
B08 PUMP, RECYCLE  
B08 PUMP, SCRUBBER BLEED  
B08 RAKE DRIVE, THICKENER  
B08 REACTION TANK EQUIPMENT - DESULFURIZATION  
B08 RETAINING WALL, CONCRETE  
B08 RETURN LINE, THICKENER  
B08 RIP RAP, SCRUBBER DRAINAGE DITCH  
B08 ROAD, SOLID WASTE HAUL  
B08 SCRUBBER CONTROLS  
B08 SILOS, FGD & SOLID WASTE  
B08 SO2 ANALYZER

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### **312: Boiler Plant Equipment (Steam Production)**

B08 SOFTWARE, FGD  
B08 SOLID WASTE FILTRATE & SEAL WATER DRAINS  
B08 SOLID WASTE INSTRUMENT AIR  
B08 SOLID WASTE LIGHTING  
B08 SOLID WASTE PLATFORMS  
B08 SOLID WASTE POWER & CONTROL CABLES  
B08 SPRAY TOWER EQUIPMENT, DESULFURIZATION  
B08 STORAGE & FEED SYSTEM, BULK SULFUR  
B08 SUMP PUMP  
B08 SUPPORT STEEL, EQUIPMENT, SOLID WASTE TREATMENT & FGD  
B08 TANK, DEMISTER WASH  
B08 TANK, FGD & SW  
B08 TANK, SO<sub>2</sub>, DESULFURIZATION  
B08 THICKENER EQUIPMENT, DESULFURIZATION  
B08 TROLLEY, MANUAL  
B08 VALVE, FGD & SOLID WASTE  
B08 VALVE, FILTER DRUM  
B08 VALVE, MIST ELIMINATOR  
B08 VALVE, MODULE SLURRY FEED  
B08 VALVE, SCRUBBER  
B08 VALVE, THICKENER  
B08 VENTILATION SYSTEM, SLAKER TANK  
B08 VIDEO PROGRAMMING UNIT  
B08 WASH, HIGH PRESSURE, SCRUBBER  
B08 WEIGHT SCALES, FGD & SOLID WASTE  
B08 WELL, GROUNDWATER MONITORING

#### **312-C01**

##### **DEAERATOR ON FEED WATER SYSTEM**

C01 CAGE, DEAERATOR REGULATOR  
C01 DEAERATOR & TANK  
C01 VALVE, DEAERATOR RELIEF

#### **312-C02**

##### **ECONOMIZER ON FEED WATER SYSTEM**

C02 CHILLER SYSTEM, SAMPLE, W/ARTICHELL SYSTEM  
C02 DAMPER, ECONOMIZER PASS  
C02 DAMPER, GAS INLET  
C02 ECONOMIZER  
C02 ECONOMIZER, VALVES  
C02 FEEDWATER, WATER AND STEAM SAMPLING SYSTEM  
C02 VIBRATOR, HOPPERS, ECONOMIZER  
C02 WATER SAMPLE, ANALYSIS PANEL

#### **312-C03**

##### **HEAT EXCHANGER ON FEED WATER SYSTEM**

C03 HEAT EXCHANGER, PLATE

#### **312-C04**

##### **HEATER ON FEED WATER SYSTEM**

C04 FEEDWATER HEATER  
C04 FEEDWATER, EXT DRAINS COOLER  
C04 HEATER, FEEDWATER BUNDLE ASSBLY  
C04 HEATER, LEVEL CONTROLS  
C04 VALVE, CHECK  
C04 VALVE, SHELL, SIDE RELIEF

#### **312-C05**

##### **MEASURING AND RECORDING DEVICE**

C05 ANALYZER  
C05 ILLUMINATOR, DRUM LEVEL GAUGE GLASS  
C05 INTEGRATOR  
C05 METER, OXYGEN  
C05 MONITOR, FEEDWATER FLOW/DRUM LEVEL  
C05 PROBE, CONDUCTIVITY & METER  
C05 SOFTWARE, EDR AUDIT

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**312: Boiler Plant Equipment (Steam Production)**

C05 TESTER  
C05 THERMOMETER, DIAL

**312-C06  
PUMP, MAIN OR STAGE**

C06 ACCUMULATOR, BFP TURBINE  
C06 BOILER FEED PUMP SYSTEM  
C06 BOILER FEED PUMP, SUCTION CONDENSATE INJECTION SYS  
C06 BOILER FEED, DISCHARGE SYSTEM, W/PIPING  
C06 FAN, BFP MOTOR COOLING  
C06 FEEDWATER, CHEMICAL SYSTEM  
C06 HOIST, BOILER FEED PUMP  
C06 HYDRAZINE FEED SYSTEM ON CONDENSATE/FEEDWATER SYST  
C06 MOTOR, PUMP  
C06 PUMP, BOILER FEED, BASE PLATES  
C06 PUMP, FEEDWATER SYSTEM  
C06 PUMP, SUBMERSBLE  
C06 TRANSMITTER, LEVEL (OIL CONSOLE)  
C06 VALVE, FEEDWATER SYSTEM  
C06 VAPOR EXTRACTOR, W/MOTOR OIL CONSOLE

**312-C07  
REGULATOR, FEED WATER**

C07 FEEDWATER REGULATOR SYSTEM  
C07 NOZZLE, FEED FLOW

**312-C08  
TANK**

C08 TANK

**312-D01**

**COAL FUEL BIN OR BUNKER NOT IN STRUCTURES**

D01 BUNKER, COAL, LINING  
D01 BUNKER, ISOLATION GATE  
D01 BUNKER, SLIDE GATE  
D01 COAL SILO, FOUNDATION  
D01 COAL SILO, STRUCTURE  
D01 DUST COLLECTION, SILO, COAL HANDLING  
D01 SURGE BINS-COAL HANDLING  
D01 SWITCH, BUNKER LEVEL

**312-D04  
CAR DUMPER**

D04 CAR POSITIONER, COAL UNLOADING SYSTEM  
D04 HOIST, CAR DUMPER  
D04 HOIST, CAR POSITIONER  
D04 MOTOR, CAR DUMPER  
D04 PUMP, SUMP, DUMPER PIT  
D04 REDUCER, CAR DUMPER  
D04 ROTARY CAR DUMPER FOR COAL UNLOADING SYSTEM

**312-D05  
CHUTES OR SPOUTS, SYSTEM OF**

D05 CHUTE, COAL  
D05 CHUTE, TELESCOPIC- COAL UNLOADING SYSTEM  
D05 HOIST, ELECTRIC, TELESCOPING CHUTE  
D05 MOTORIZED SPLITTER GATE-COAL HANDLING  
D05 REDUCER, VALVE, COAL  
D05 TRANSFER CHUTE  
D05 VIBRATOR

**312-D06  
CONVEYOR, BELT, CABLEWAY - COAL EQUIPMENT**

D06 AIR/VACUUM/WATER PIPING FOR CONVEYOR  
D06 BACKSTOP, CONVEYOR  
D06 BELT CLEANER  
D06 BELT FEEDER DRIVE REDUCER

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### 312: Boiler Plant Equipment (Steam Production)

D06 BELT FEEDER MOTOR BLOWER  
D06 BOILER, HORIZONTAL LINER  
D06 BUNKER GATE, CONVEYOR SYSTEM  
D06 CAMERA, CONVEYOR VIEWING  
D06 CATCH DRIP PAN, CONVEYOR  
D06 COAL HANDLING STACKER-RECLAIMER RUNWAY  
D06 COAL UNLOADING SYSTEM, COAL TRUCK  
D06 CONVEYOR DRIVE REDUCER  
D06 CONVEYOR, DUST COLLECTOR  
D06 COUPLING, BELT CONVEYOR  
D06 ENCLOSURE, WEATHER, D TO E TRANSFER TOWER  
D06 FLOP GATE, TRANSFER TOWER  
D06 FREEZE PROTECTION SYSTEM  
D06 FIRE SUPPRESSION SYSTEM, FUEL CONVEYOR  
D06 FUEL HANDLING CONTROL SYSTEM  
D06 HOPPER, FEEDER  
D06 HOPPER, GATE  
D06 HOPPER, RECLAIM  
D06 HOPPER, RECLAIM, SUMP  
D06 HOPPER, TRUCK  
D06 HOPPER, TUNNEL  
D06 LIGHTING, COAL CONVEYOR, FIXTURES  
D06 LOAD ZONE, CONVEYOR  
D06 MOTOR, BELT CONVEYOR  
D06 PLOW, BELT  
D06 PUMP, CONVEYOR ELECTRIC / HYDRAULIC  
D06 PUMP, SUMP, RECLAIM PIT  
D06 REDUCER, TRIPPER FLOOR  
D06 REDUCER, TRIPPER FLOOR, CONE DRIVE  
D06 ROOF, TRIPPER ROOM  
D06 SPEED DRIVE, VARIABLE  
D06 STACK OUT, UNLOADING SYSTEM  
D06 STACKER, RECLAIMER, CONVEYOR  
D06 TRIPPER BUILDING  
D06 TRIPPER, COAL  
D06 TUNNEL, RECLAIM

#### 312-D07

##### CRANE - COAL EQUIPMENT

D07 BARGE UNLOADER WASHDOWN SYSTEM PIPING  
D07 BARGE UNLOADING TROLLEY  
D07 CRANE, BARGE UNLOADING SYSTEM  
D07 DEFLECTOR FOR COAL, BARGE  
D07 FLOW GATE, BARGE UNLOADER  
D07 HOIST, BARGE UNLOADING SYSTEM  
D07 HOPPER, BARGE UNLOADING  
D07 RADIO  
D07 REMOTE CONTROLLER, BARGE HAUL SYSTEM  
D07 TROLLEY DRIVE BRAKE  
D07 TROLLEY DRIVE REDUCER  
D07 VIBRATOR, BIN, BARGE UNLOADING SYSTEM  
D07 WALKWAY, COAL BARGE UNLOADER

#### 312-D08

##### CRUSHER - COAL EQUIPMENT

D08 AIR LINE  
D08 BIN, SURGE, SUPPORT STEEL, COAL CRUSHER  
D08 CHUTES AND FLOP GATES FOR COAL CRUSHER  
D08 COAL CRUSHER TOWER, COAL HANDLING  
D08 CONVEYOR, WALL & DRAINAGE  
D08 CRUSHER HOUSE  
D08 CRUSHER HOUSE ROOF  
D08 CRUSHER, COAL  
D08 CRUSHER, COAL BYPASS GRID

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### **312: Boiler Plant Equipment (Steam Production)**

D08 DUST COLLECTION SYSTEM AT CRUSHER BUILDING  
D08 FEEDER, VIBRATING, COAL CRUSHER EQUIPMENT  
D08 FLOP GATE, CRUSHER HOUSE  
D08 GATE, SLIDE, CRUSHER HOUSE  
D08 HOIST, CRUSHER TOWER  
D08 WASHDOWN SYSTEM /COAL CRUSHER EQUIP  
D08 WETTING SYSTEM, BARGE UNLOADER/CRUSHER TOWER

#### **312-D09**

#### **DUST COLLECTING UNIT - COAL EQUIPMENT**

D09 AIR CURTAIN  
D09 BRUSH CLEANER W/MOTOR, CONVEYOR COMPONENTS  
D09 COAL DUST SUPPRESSION SYSTEM  
D09 DRIVE MOTOR REDUCER  
D09 DUST COLLECTION, COAL HANDLING  
D09 DUST COLLECTOR, SILO, TRIPPER SYSTEM  
D09 FEEDER DRIVE  
D09 FREQUENCY DRIVE CONTROL  
D09 MOTOR, AIR CURTAIN FAN  
D09 TRUCK HOPPER, VENT FAN  
D09 VACUUM TUBING SYSTEM

#### **312-D10**

#### **ELECTRIC TROLLEY OR THIRD RAIL SYSTEM**

D10 BARGE SHIFTING CABLE HOIST  
D10 BRAKE, CLOSE DRIVE  
D10 HOIST, BARGE UNLOADING SYSTEM, CABLE SHIFTING  
D10 HOLD DRIVE BRAKE  
D10 HOLD DRIVE MOTOR  
D10 HOLD GEAR BOX, BARGE UNLOADER  
D10 MOTOR BRAKE, BARGE HAUL  
D10 REDUCER, BARGE HAUL  
D10 WINCH, BARGE HAUL SYSTEM

#### **312-D11**

#### **ELEVATOR - COAL EQUIPMENT**

#### **312-D12**

#### **GATES, CHUTES, HOPPERS, FOR ONE BOILER**

D12 BARGE UNLOADER, HOPPER HEATER  
D12 BARGE HAUL SYSTEM  
D12 GATE ACTUATOR,TRIPPER TOWER  
D12 GATES, HYDRAULIC SLIDE  
D12 HOPPER & CHUTE, COLLECTING  
D12 HOPPERS, FEED CONE

#### **312-D13**

#### **HOIST - COAL EQUIPMENT**

D13 CRANE, COAL HANDLING SERVICE  
D13 CRANE, JIB, SWING BRAKE  
D13 CRANE, JIB, SWING REDUCER  
D13 CRANE, JIB, TROLLEY MOTOR  
D13 HOIST, HOPPER  
D13 HOIST, JIB CRANE  
D13 HOIST, TOWER  
D13 REEVING WINCH BRAKE

#### **312-D18**

#### **SCREENING OR SIZING INSTALLATION**

#### **312-D19**

#### **SEPARATOR, MAGNETIC**

D19 MAGNET SHED  
D19 SEPARATOR, MAGNETIC

## 312: Boiler Plant Equipment (Steam Production)

### 312-D20

#### STRUCTURE, FUEL HANDLING

D20 BARGE UNLOADER CONVEYOR & TRANSFER TOWER FOUNDATIONS  
D20 BARGE UNLOADER SYSTEM-STRUCTURE, ROOF, DOORS  
D20 CELL, DOCK, BARGE UNLOADER PILINGs, FILL, CABLE  
D20 CIRCUIT BREAKER, AIR, COAL PILE DRAINAGE  
D20 COAL PILE BASE, COAL STORAGE AREA  
D20 COAL PILE DRAINAGE  
D20 COAL PILE EXTENSION & DRAINAGE  
D20 COAL PILE RUN-OFF SUMP PUMP  
D20 COAL SILO BAY BUILDING (PAINTING)  
D20 COAL SILOS  
D20 COAL YARD DRAINAGE BASIN  
D20 CONVEYOR BELT FOUNDATION & LADDER PADS  
D20 CULVERT, COAL STORAGE AREA  
D20 DIKE, SETTLING BASIN  
D20 DISCHARGE PIPELINE, COAL PILE DRAINAGE  
D20 DUST SUPPRESSION SYSTEM.WASTE HAUL ROAD  
D20 FENCE AT COAL HANDLING  
D20 FLOATING PUMP STRUCTURE W/PIPING  
D20 FOUNDATIONS, CAISSONS, STACKER-RECLAIMER  
D20 FOUNDATIONS, COAL ELECTRICAL EQUIPMENT HOUSE  
D20 FOUNDATIONS, COAL RECLAIM CONCRETE EQUIPMENT  
D20 FOUNDATIONS, COAL TRANSFER TOWER  
D20 FOUNDATIONS, COAL UNLOADING STACK-OUT CONVEYOR  
D20 FOUNDATIONS, CONTROL HOUSE BUILDING STEEL  
D20 FOUNDATIONS, FUEL OIL TANKS  
D20 FOUNDATIONS, TRANSFER TOWER CHUTES & FLOP GATES  
D20 GRAVEL & SAND, COAL DUST SUPPRESSION SYSTEM  
D20 LIGHTING, FGD  
D20 PARTITION WALL & FAN/DUST CONTROL IN DUMPER ROOM  
D20 POND, DEWATER  
D20 POND, EMERGENCY SLURRY  
D20 POND, SETTLING, PUMP STRUCTURE, COAL HDLG  
D20 SPILL CONTAINMENT  
D20 SPILLWAY, CONCRETE, COAL PILE RUN-OFF DITCH  
D20 STRUCTURE, TRANSFER  
D20 SUPPORT STRUCTURE FOR CONVEYOR  
D20 SUPPORT, CRUSHER TOWER  
D20 SUPPORTING FOUNDATIONS FOR COAL PILE DRAINAGE  
D20 TOWER, COAL TRANSFER, AREA-EXCAVATION, DITCHES, DIKES  
D20 TOWER, COAL TRANSFER, AREA-SITE PREP, EXCAVATE SPUR  
D20 TRAILER, W/TOWER  
D20 VALVE, CHECK, COAL PILE DRAINAGE

### 312-D21

#### COAL HANDLING SCALES

D21 ADAPTER/A  
D21 BELT SCALE,CONVEYOR  
D21 BUFFER, BLACK BOX, FOR COAL SCALES  
D21 COMPUTER COAL SCALES  
D21 INDICATOR,SCALE  
D21 OPERATING SYSTEM  
D21 SCALE PIT  
D21 TRUCK SCALE

### 312-D22

#### TRACK SYSTEM

D22 CAMERA, MONITORING CAR DUMPER  
D22 CONTROL SYSTEM, REMOTE SIDE RAIL CAR DUMPING  
D22 LOCOMOTIVE REMOTE CONTROL  
D22 LOCOMOTIVE, SWITCHER  
D22 MOTOR, TRAIN POSITIONER  
D22 RAILCAR, FLATBED



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### **312: Boiler Plant Equipment (Steam Production)**

D22 RAILCAR, GONDOLA  
D22 RAILCAR, ROTARY DUMP  
D22 RAILROAD TRACK-TIES, ROAD CROSSING, TRACKS, BALLASTS

#### **312-D23**

#### **TRACTOR (BULLDOZER)**

D23 DOZER  
D23 DOZER BLADE  
D23 EXCAVATOR  
D23 HVAC, A/C, DOZER  
D23 LOADER, CASE  
D23 LOGFORK W/COUNTERWEIGHTS  
D23 MOLD BOARD FOR TRACTOR  
D23 PAYLOADER  
D23 TANK, COAL HANDLING, SKID MOUNTED TANK  
D23 TRACTOR

#### **312-D24**

#### **TRESTLE**

D24 COAL HANDLING BRIDGE AND ABUTMENTS  
D24 HIGHWAY SPUR

#### **312-D25**

#### **COAL HANDLING MARINE EQUIPMENT**

D25 BOAT, JON  
D25 MOTOR  
D25 TRAILER

#### **312-D26**

#### **COAL HANDLING ELECTRICAL EQUIPMENT**

D26 BARGE HAULAGE SYSTEM ELECTRICAL EQUIPMENT  
D26 BARGE UNLOADER AC STATIC CONTROL  
D26 BARGE UNLOADER ELECTRICAL EQUIPMENT  
D26 BYTE BUCKET CASSETTE  
D26 CABLE, POWER/COAL HANDLING SYSTEM  
D26 CABLE, WIRE, CONDUIT, COAL HANDLING  
D26 CABLES, CONTROL, COAL HANDLING SYSTEM  
D26 CAR PULLER, ELECTRICAL  
D26 COAL ELECTRICAL EQUIPMENT HOUSE  
D26 COAL ELECTRICAL EQUIPMENT TRANSFORMER, FOUNDATION  
D26 COAL HANDLING CONTROL PANEL  
D26 COAL HANDLING ELECTRICAL EQUIPMENT  
D26 COAL HANDLING LIGHTING  
D26 COAL RECLAIM ELECTRICAL EQUIPMENT BUILDING  
D26 COMPUTER, COAL HANDLING  
D26 CONTROL, COAL UNLOADING SYSTEM  
D26 HVAC, UNIT  
D26 HYD POWER UNIT, COAL TRIPPER  
D26 MOTOR CONTROL CENTER, W/ LOCAL CONTROLS  
D26 MOTOR, BARGE UNLOADER FLOW GATE  
D26 MOTOR, BOOM CONVEYOR DRIVE, COAL  
D26 MOTOR, BOOM HOIST DRIVE  
D26 MOTOR, BUCKET WHEEL DRIVE, COAL  
D26 MOTOR, CAR DUMPER, COAL  
D26 MOTOR, CAR DUMPER, HYD UNIT, COAL  
D26 MOTOR, GANTRY DRIVE, COAL  
D26 MOTOR, SLEWING DRIVE, COAL  
D26 MOTOR, TRIPPER FLOOR, COAL  
D26 MULTIPLEXER PANEL @ CRUSHER HOUSE  
D26 PANEL, POWER AND CONTROL, COAL ELECTRICAL HOUSE  
D26 RECLAIM MOTOR CENTER  
D26 REMOTE DEVICES-COAL HANDLING  
D26 SERVICE INSTRUMENT  
D26 SWITCHGEAR HOUSE-COAL HANDLING  
D26 TRANSFORMER, STEP-DOWN, BARGE UNLOADER

### 312: Boiler Plant Equipment (Steam Production)

D26 UNLOADER DC COMPRESSOR  
D26 VENTILATING UNIT, MACHINERY ROOM

#### 312-D27

##### COAL SAMPLING SYSTEM

D27 CHAIN GUARD, ENCLOSED, W/TIGHTENER  
D27 CHUTE, STAINLESS STEEL TRANSITION  
D27 COAL SAMPLE RIFFLER  
D27 FOUNDATIONS, COAL SAMPLE SYSTEM EQUIPMENT  
D27 HOIST, SAMPLE TOWER  
D27 MOISTURE DETECTING UNIT  
D27 MOTOR, FIRED SAMPLING  
D27 PROBE, TEMPERATURE, CK TEMP COAL ON CARS/PILES  
D27 REDUCER, AS RECEIVED SAMPLING  
D27 SAMPLER, COAL FINENESS, CYCLONE & PROBE @ LAB  
D27 SAMPLER, COAL HANDLING, AS FIRED  
D27 SAMPLER, FUEL TRUCK  
D27 SAMPLER, SWING ARM BELT  
D27 SAMPLING, COAL HANDLING, AS RECEIVED  
D27 SPLITTER, COAL SAMPLER  
D27 TOWER, SAMPLE, COAL UNLOADING SYSTEM

#### 312-D29

##### COAL BARGE

D29 WINCH, BARGE COVER

#### 312-D30

##### WORK BOAT

D30 BOAT, TUG  
D30 RADIO, MARINE, W/ANTENNA  
D30 WINCH, TUGBOAT

#### 312-E01

##### AIR COMPRESSOR

#### 312-E02

##### AIR FILTER OR WASHER

#### 312-E03

##### PRIMARY AIR HEATER

E03 AIR HEATER  
E03 AIR MOTOR ASSEMBLY  
E03 VALVE, PLUG ASSEM, AIR PREHEATER

#### 312-E04

##### CHUTES, DUCTS, OR PIPES SYSTEM

E04 BLASTER, AIR

#### 312-E05

##### COAL FEEDER, RAW OR POWDERED

E05 COAL FEEDER  
E05 COAL FEEDER, ELECTRONIC LOAD CELL WEIGHING  
E05 COAL FEEDER, MOTOR  
E05 CONTROLS, COAL FEEDER  
E05 GATE, STOCK FEEDER  
E05 VALVE, FEEDER INLET ISOLATION

#### 312-E06

##### FEEDER BELT

E06 CLEANER, BRUSH  
E06 COAL FEEDER BELT  
E06 COUPLING, FEEDER BELT, COAL  
E06 MOTOR, FEEDER BELT  
E06 MOTOR, TRAILER DRIVE  
E06 REDUCER, FEEDER BELT  
E06 REDUCER, BOOM FEEDER BELT DRIVE, COAL

\*\* This Retirement Unit Listing is subject to change from time to time consistent with the Coordination Agreement. \*\*

### 312: Boiler Plant Equipment (Steam Production)

E06 REDUCER, BOOM HOIST DRIVE, COAL  
E06 REDUCER, BUCKET WHEEL DRIVE, COAL  
E06 REDUCER, GANTRY DRIVE, COAL  
E06 REDUCER, SLEWING DRIVE, COAL  
E06 REDUCER, TRAILER DRIVE, COAL

#### 312-E07

##### CRUSHER

E07 COAL CRUSHER ENCLOSURE  
E07 CRUSHER TOWER  
E07 CRUSHER, AS FIRED SAMPLING  
E07 CRUSHER, AS RECEIVED SAMPLING  
E07 FLOP GATE, COAL  
E07 MOTOR, CRUSHER  
E07 MOTOR, CRUSHER, AS FIRED  
E07 MOTOR, CRUSHER, AS RECEIVED

#### 312-E08

##### DRYER

E08 DRYER

#### 312-E09

##### FAN

E09 FAN  
E09 PRIMARY AIR FLOW, MEASURING ELEMENT  
E09 PRIMARY AIR FLOW, MONITOR

#### 312-E10

##### HOPPER OR BIN

E10 PYRITE, TANK  
E10 VALVE, TANK

#### 312-E11

##### PULVERIZER

E11 BALL MILL REMOTE CONTROL SYSTEM  
E11 CRANE, MILL MAINTENANCE  
E11 DAMPER, RATING  
E11 FAN, MILL SEAL AIR  
E11 MILL, GEARBOX  
E11 MOTOR, MILL  
E11 PIPING SYSTEM, COAL  
E11 PULVERIZER, MILL  
E11 PULVERIZER, RATING DAMPER  
E11 SADDLE  
E11 TABLE, GRINDING  
E11 UPPER SPRING RING

#### 312-E12

##### PUMP

E12 MOTOR, PUMP  
E12 PUMP, SUMP, PYRITES HOLDING TANK

#### 312-E16

##### WEIGHING MACHINE, AUTOMATIC

E16 BELT SCALE

#### 312-F01

##### HEATER

F01 HEATER, FUEL OIL

#### 312-F02

##### METER

F02 METER

#### 312-F03

##### PUMP

F03 MOTOR, PUMP  
F03 PUMP

\*\* This Retirement Unit Listing is subject to change from time to time consistent with the Coordination Agreement. \*\*

## 312: Boiler Plant Equipment (Steam Production)

### 312-F04

#### TANK

F04 GAUGE SYSTEM  
F04 PROBE, FUEL OIL TANK  
F04 TANK, FUEL OIL

### 312-G01

#### HOLDER OR TANK

G01 TANK  
G01 TANK, DIKING

### 312-G02

#### METER

G02 COMPUTER, ANALOG, PROPANE METER

### 312-G03

#### PRESSURE REGULATOR OR CONTROL DEVICE

G03 FUEL SAFETY SYSTEM W/PURGE PRELIGHT

### 312-G04

#### GAS LINES

G04 GAS LINE

### 312-G05

#### GAS PLANT

G05 PROPANE VAPORIZER

### 312-H02

#### CONVEYOR - ASH HANDLING EQUIPMENT

H02 CONVEYOR SYSTEM, BOTTOM ASH  
H02 CONVEYOR, ASH, SUBMERGED, DRAG CHAIN  
H02 TANK, BOTTOM ASH, SULPHURIC ACID

### 312-H03

#### CRANE OR HOIST - ASH HANDLING EQUIPMENT

H03 HOIST, FLY ASH SILO JIB CRANE

### 312-H04

#### ELECTRIC TROLLEY

### 312-H05

#### FAN - ASH HANDLING EQUIPMENT

H05 BLOWER, FLY ASH AERATION  
H05 BLOWER, FLY ASH PRESSURE  
H05 FAN, FLY ASH EXHAUST  
H05 FAN, VENT, FLY ASH  
H05 MOTOR, FLY ASH AERATION BLOWER

### 312-H07

#### PUMP - ASH HANDLING EQUIPMENT

H07 ASH HOPPER OVERFLOW SUMP PUMP  
H07 CLARIFIER, ASH HANDLING WATER SUPPLY  
H07 FLOATING PUMP STRUCTURE, ASH POND  
H07 MOTOR, PUMP  
H07 PUMP, ASH SLUICE  
H07 PUMP, GENERAL  
H07 PUMP, FOUNDATION  
H07 PUMP, WASTE WATER  
H07 THERMAL SUPPLY UNIT, BOTTOM ASH COOLER

### 312-H08

#### REMOVAL SYSTEM, VACUUM

H08 AIR DRYER, FLY ASH SYSTEM  
H08 ASH HANDLING SYSTEM CONTROLS  
H08 BREAKER, VACUUM, UNIT, FLY ASH  
H08 HYDRAULIC EDUCTOR  
H08 HYDRO VACTOR  
H08 PIPING SYSTEM, VACUUM TRUCK  
H08 TRUCK, VACUUM

### 312: Boiler Plant Equipment (Steam Production)

H08 VACUUM, CENTRAL, PIPING SYSTEM

#### 312-H09

##### SLUICeway OR PIPING SYSTEM

H09 ASH CONTROL SYSTEM  
H09 ASH HOPPER, WET SEAL SKIRT  
H09 ASH SCREEN  
H09 ASH, BOTTOM, HANDLING SYSTEM  
H09 DISCHARGE PIPELINE OVERFLOW SUMP PUMP TO ASH POND  
H09 FLY ASH HANDLING SYSTEM  
H09 FLYASH DISCHARGE LINE  
H09 FREEZE PROTECTION, WETBOTTOM  
H09 HEAT TRACE, CONDUIT, CABLES, & PANELS  
H09 HEATER, WETBOTTOM RADIANT  
H09 PIPING SYSTEM, ASH SLUICE  
H09 PIPING SYSTEM, BOTTOM ASH  
H09 PYRITE DISCHARGE LINE  
H09 SCREEN, STAINLESS STEEL DRIP  
H09 SLAG SCREEN  
H09 TRENCH, ASH LINE, CONCRETE  
H09 VALVE, ASH SLUICE  
H09 VALVE, ISOLATION, ASH RECYCLING  
H09 VALVE, WET BOTTOM

#### 312-H10

##### STORAGE BIN OR PIT

H10 ASH STORAGE STRUCTURE W/FOOTBRIDGE  
H10 FOUNDATIONS, BOTTOM ASH HOPPER AND PIT  
H10 GATE, ASH & HOUSING  
H10 HOPPER, FLY ASH  
H10 HOPPER, BOTTOM ASH  
H10 HOPPER, INTERNAL WATER JET  
H10 HOPPER, PYRITE  
H10 SILO, FLY ASH  
H10 TANK, FLY ASH SEPARATOR  
H10 TANK, ISOLATING VALVE HOLDING  
H10 TANK, PYRITE HOLDING  
H10 TROUGH, BOILER SEAL  
H10 VALVE, ISOLATING, PYRITE HOLDING TANK

#### 312-H11

##### SUMP DREDGE

H11 STRAINER

#### 312-H13

##### CLINKER GRINDER OR SLAG GRINDER

H13 ASH HOPPER GRINDER MOTOR REDUCER  
H13 FLUID POWER DRIVES  
H13 GRINDER, SLAG

#### 312-H14

##### ASH POND EQUIPMENT

H14 ASH POND OVERFLOW PIPING  
H14 ASH POND, DISCHARGE FACILITY  
H14 CABLE, CONTROL & INSTRUMENT  
H14 CABLE, POWER  
H14 CONDUIT, POWER  
H14 CONTROL FEED SYSTEM, PH, ASH POND W/ ENCLOSURE  
H14 CONTROL SYSTEM, SUPERVISORY  
H14 CURTAIN, TURBIDITY, FLOATING, ASH POND  
H14 FLOW MEASUREMENT SYSTEM  
H14 POND, ASH  
H14 POND, ASH, CONCRETE SUPPORTS, ASH LINES  
H14 POND, ASH, CULVERT  
H14 POND, ASH, DIKE  
H14 POND, ASH, DRAWDOWN STRUCTURE

### 312: Boiler Plant Equipment (Steam Production)

H14 POND, ASH, EMERGENCY OVERFLOW  
H14 POND, ASH, EXPANSION  
H14 POND, ASH, MANHOLES  
H14 POND, ASH, PUMP  
H14 POND, ASH, RIP RAP  
H14 POND, ASH, ROAD, GRAVEL  
H14 STRAINER, W/AUTOMATIC BACKWASH CONTROL  
H14 SUBSTATION, EQUIPMENT FOR ASH POND

#### 312-101

##### METER - PURIFICATION SYSTEM

I01 ADAPTER, MOD BUS W/CABLE & PROGRAMMER/TAPE LOADER  
I01 ANALYZER  
I01 COMPENSATOR, AUTOMATIC TEMPERATURE  
I01 CONDUCTIVITY CELL, SCREW  
I01 FLOW SWITCH CALIBRATOR, FLUID COMPONENTS  
I01 METER, FLOW  
I01 INDICATOR, TEMPERATURE  
I01 METER, DENSITY  
I01 METER, PH  
I01 PROBE, MAGNETIC, FLOW METER  
I01 RECORDER, CLARIFIER  
I01 RECORDER, SEQUENCE OF EVENTS

#### 312-102

##### PUMP - PURIFICATION SYSTEM

I02 CRANE, CLARIFIER BLDG GANTRY  
I02 PUMP, ACID FEED  
I02 PUMP, AMINE  
I02 PUMP, CAUSTIC  
I02 PUMP, CLARIFIER SLUDGE  
I02 PUMP, COAGULANT  
I02 PUMP, CONDENSATE  
I02 PUMP, DEMINERALIZER  
I02 PUMP, EVAPORATOR  
I02 PUMP, HYDRAZINE  
I02 PUMP, PH CORRECTION  
I02 PUMP, PHOSPHATE  
I02 PUMP, RECIRCULATION  
I02 PUMP, SAMPLE  
I02 PUMP, SERVICE WATER  
I02 PUMP, SODIUM HYDROXIDE  
I02 PUMP, SUMP  
I02 PUMP, TRANSFER  
I02 PUMP, TRASH  
I02 PUMP, VACUUM  
I02 PUMP, VACUUM, SEAL OIL  
I02 PUMP, WATER CENTRIFUGAL  
I02 PUMP, WATER, POTABLE  
I02 PUMP, WELL WATER BOOSTER

#### 312-103

##### TANK - PURIFICATION SYSTEM

I03 CLARIFIER, WASTE WATER SUPPLY  
I03 HEATER, CAUSTIC TANK  
I03 LIQUID ALUM SYSTEM, PIPING SYSTEM  
I03 MIXER, TANK  
I03 PUMP, ACID REGENERATION  
I03 RESERVOIR, WATER  
I03 TANK, ACID  
I03 TANK, ANION EXCHANGE  
I03 TANK, CATION EXCHANGE  
I03 TANK, CAUSTIC  
I03 TANK, COAGULANT  
I03 TANK, COAGULANT STORAGE

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**312: Boiler Plant Equipment (Steam Production)**

I03 TANK, CONDENSATE  
I03 TANK, CONDENSATE DRAIN  
I03 TANK, CONDENSATE STORAGE  
I03 TANK, DEGASIFIER & CLEARWELL  
I03 TANK, HYDRAZINE  
I03 TANK, MIXED BED  
I03 TANK, PHOSPHATE  
I03 TANK, POTABLE WATER  
I03 TANK, RO PLANT  
I03 TANK, SULFURIC ACID  
I03 TANK, WATER  
I03 UNIVERSALEVEL, DREXELBROOK, ACID/CAUSTIC  
I03 WASTE WATER CLARIFIER & FILTER WATER TANK

**312-I04**

**WATER SOFTENER OR PURIFICATION SYSTEM**

I04 AERATOR, ACID RETENTION  
I04 AGITATOR, NEUTRALIZATION PIT, W/MOTOR  
I04 ANALYZER, SODIUM, CONDENSATE SYSTEM  
I04 BLOWER, AIR, MIXED BED, W/MOTOR  
I04 CLARIFIER BUILDING  
I04 CLARIFIER, DEMINERALIZED WATER PIPING SYSTEM  
I04 CLARIFIERS, PRETREATMENT, FLASH MIX TANKS  
I04 CLEANING STATION, WATER PLANT  
I04 CONDUIT & CABLE TRAYS @ WATER PLANT  
I04 CONTROL, EVAPORATING  
I04 CROSSTIE LINE, DEIONIZED WATER  
I04 DCS CONTROL SYSTEM, WATER CONTROL DEMINERALIZER  
I04 DEMINERALIZER SYSTEM, MAKE UP  
I04 EVAPORATOR, FEEDWATER  
I04 FEED SYSTEM, POLYMER  
I04 FILTER SYSTEM, ACTIVATED CARBON  
I04 HEATER, CAUSTIC  
I04 HOIST, WATER TREATMENT BLDG CHLORINE  
I04 HYPOCHLORINATOR (WATER TREATMENT BLDG.)  
I04 LIQUID ALUM FEED SYSTEM FOR ALUM INJECT PUMP SYST  
I04 MAIN CONTROL PANEL @ WATER PLANT  
I04 METER, CONDUCTIVITY, RO WATER TREATMENT  
I04 MONITOR, PH, CONDENSATE  
I04 PIPE TRENCH @ WATER PLANT  
I04 PIPING SYSTEM, CHEMICAL FEED  
I04 PIPING SYSTEM, WASTEWATER POND  
I04 PLC SYSTEM  
I04 POND, WASTE WATER  
I04 POND, WASTE, LINER  
I04 PREVENTOR, PLANT BACKFLOW  
I04 PUMP, CHEMICAL FEED  
I04 REDUCER, CLARIFIER RAKE SPEED  
I04 REDUCER, CLARIFIER TURBINE SPEED  
I04 REVERSE OSMOSIS SYSTEM  
I04 RIVER WATER INTAKE BUILDING  
I04 REVERSE OSMOSIS PLANT CONTROLS  
I04 SOFTENER, DUAL, W/BRINE STATION  
I04 TURBIDIMETER, CLARIFIER  
I04 WALKWAY, CONCRETE, ACID RETENTION  
I04 WATER HEATER, ANION UNIT, CAUSTIC  
I04 WATER TREATMENT BUILDING  
I04 WATER TREATMENT CLARIFIER BUILDING

**312-I05**

**WELL**

I05 WELL, TEST, POTABLE WATER

**312-J01**

**AIR DUCT SYSTEM**

**\*\* This Retirement Unit Listing is subject to change from time to time consistent with the Coordination Agreement. \*\***

### **312: Boiler Plant Equipment (Steam Production)**

J01 BOILER, ROOF VENTILATOR, DRAFT  
J01 CONTROLLER, AIR FLOW  
J01 CONTROLLERS, SEAL AIR W/DRIVES  
J01 FAN DAMPER, SEAL AIR FAN  
J01 FAN, EXHAUST  
J01 TUNNEL VENT SYSTEM

#### **312-J02**

##### **BLOWER - VENTILATING EQUIPMENT**

J02 CLEANER, ELECTRONIC AIR  
J02 FAN, PRESSURIZATION  
J02 TRANSMITTER, AIR FLOW, W/DRIVES

#### **312-J03**

##### **COOLER - VENTILATING EQUIPMENT**

J03 COOLER @ STEAM COIL RACK  
J03 COOLER, EXTERNAL DRAIN  
J03 PUMP, CIRCULATION, CHILLED WATER  
J03 PUMP, COOLING WATER, CLOSED  
J03 PUMP, COOLING WATER, DIRECT

#### **312-K01**

##### **AUTOMATIC CONTROL INSTALLATION**

K01 ANALYZER, OXYGEN  
K01 BOILER, PRESSURE READOUT  
K01 CIRCUIT BREAKER, AC HIGH VOLTAGE  
K01 CONTROLLER, COAL AIR TEMP W/DRIVES  
K01 CONTROLLER, MILL W/DRIVES  
K01 CONTROLS, TRACK HOPPER FEED  
K01 FIRE PROTECTION  
K01 MOTOR CONTROL CENTER  
K01 PYRITE, SYSTEM CONTROLS  
K01 STEAM PRESS CONTROL SYSTEM, AUTOMATIC  
K01 SWITCHES  
K01 THERMAPROBE  
K01 TOTALIZER SYSTEM, GAS FLOW  
K01 TRANSFORMER

#### **312-K02**

##### **MASTER CONTROL INSTALLATION**

K02 ANALYZER, OXYGEN, PROBE  
K02 CABINET  
K02 COMPUTER  
K02 CONDUCTIVITY CELL  
K02 CONDUCTIVITY MONITOR  
K02 CONDUCTOR NT SOFTWARE KITS  
K02 CONTROL STATIONS  
K02 CONTROLLER, PRESSURE  
K02 DAS, EMISSIONS MONITOR  
K02 ELECTRIC SERVICE, UNDERGROUND, PH TRIM STATION  
K02 GENERATOR, DIESEL, CONTROL SYSTEM, CONTROLS  
K02 MODULATING DRIVE (BTG)  
K02 MODULATING OPERATOR (BTG)  
K02 PANEL, I/O CONNECTOR CONTROL  
K02 POSITION CONTROL  
K02 SWAMPING BOX (BTG)  
K02 TAPE DRIVE, MAGNETIC FOR EPA REPORT EMISSIONS MONI  
K02 TEMPERATURE PROCESSOR  
K02 TEMPERATURE SIGNAL GENERATOR  
K02 TRANSDUCERS & CONTROL VALVES  
K02 TRANSMITTER, PRESSURE  
K02 UNINTERRUPTIBLE POWER SUPPLY  
K02 WORKSTATION CONSOLE, CONTROL ROOM

#### **312-K03**

##### **PANEL SECTION OF SWITCH OR BOARD**



**\*\* This Retirement Unit Listing is subject to change from time to time consistent with the Coordination Agreement. \*\***

**312: Boiler Plant Equipment (Steam Production)**

K03 BOARD, INSTRUMENT GAUGE  
K03 BREAKER BOARD, LEAR SIEGLER, INSTACK MONITOR  
K03 CABINET  
K03 CONTROL BOARD, BTG  
K03 PANEL  
K03 SWITCHBOARD

**312-K04**

**RECORDING OR INDICATING DEVICE**

K04 ALARM ANNUNCIATOR, BTG BOARD  
K04 ALARM ANNUNCIATOR, PANALARM  
K04 ALARM, PANEL  
K04 AMPLIFIER  
K04 ANALYZER, PROBE  
K04 ANALYZERS  
K04 ANALYZER, SO2  
K04 ANNUNCIATOR, TERMINATION BAYS, CONTROL PANEL  
K04 BALCONIES & TEST PORTS  
K04 COMPUTER  
K04 CONTROL, DIGITAL, STACK EMISSIONS  
K04 CONTROLLER  
K04 DAC W/SPECTRAPAK DAHS, STACK EMISSIONS  
K04 DATA ACQUISITION SYSTEM  
K04 EMISSION MONITORING SYSTEM  
K04 INDICATOR, DRUM LEVEL  
K04 INFRARED THERMO TEMPERATURE PROBE  
K04 INVERTER  
K04 METER  
K04 MONITOR, CO2  
K04 MONITOR, EMISSION  
K04 MONITOR PROBE, STACK GAS  
K04 MONITOR, OPACITY  
K04 MONITOR, SO2  
K04 MONITOR, ULTRAFLOW  
K04 OPERATORS STATION, NT DISPLAY, WDPF  
K04 PRESSURE INDICATOR  
K04 PROGRAMMABLE LOGIC CONTROLLER  
K04 RACK, INSTRUMENT & CONTROL EQUIPMENT  
K04 RECORDER  
K04 SEQUENCE OF EVENTS SYSTEM  
K04 SOFTWARE, DB DOCUMENT  
K04 SOFTWARE, FOR BAILEY CONTROL  
K04 SPECTROPHOTOMETER  
K04 STACK EMISSIONS, DIGITAL CONTROLS  
K04 TESTING METER  
K04 THERMOCOUPLE  
K04 THERMOMETER  
K04 TRANSMATION  
K04 TRANSMISSOMETER  
K04 TRANSMITTER

**312-K05**

**AIR DRYER**

K05 AIR COMPRESSOR  
K05 AIR DRYER

**312-L02**

**HEADER OF ANY CLASS OF PIPING**

L02 COMPRESSED AIR PIPING  
L02 CONDENSATE PIPING  
L02 COOLING WATER PIPING  
L02 DEMINERALIZED WATER PIPING  
L02 STEAM DRAIN PIPING  
L02 EXHAUST PIPING  
L02 INSTRUMENT AIR PIPING

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### **312: Boiler Plant Equipment (Steam Production)**

L02 PIPING SYSTEM, BOILER FEED  
L02 PIPING SYSTEM, BOILER, DRAFT  
L02 PIPING SYSTEM, CHEMICAL FEED  
L02 PIPING SYSTEM, COLD REHEAT  
L02 PIPING SYSTEM, HOT REHEAT  
L02 PIPING SYSTEM, MAIN STEAM  
L02 PIPING SYSTEM, RELIEF VALVE VENTS  
L02 PIPING SYSTEM, SERVICE WATER  
L02 PIPING SYSTEM, WASTE WATER  
L02 PIPING SYSTEM, WET BOTTOM  
L02 PIPING SYSTEM, OIL SUPPLY TO BURNERS  
L02 POTABLE WATER PIPING  
L02 LUBE OIL, PIPING  
L02 ROOF, DRAIN PIPING SYSTEM  
L02 SERVICE AIR PIPING SYSTEM  
L02 STEAM BLOWDOWN, SILENCER  
L02 VENT PIPING SYSTEM

#### **312-L03**

##### **PIPING, 2" OR OVER, 2 OR MORE UNITS**

L03 AIR EXTRACTION PIPING SYSTEM  
L03 ASH SEAL PIPING SYSTEM  
L03 BOILER, VALVE, RELIEF, VENT PIPING, INSULATION  
L03 CENTRAL, VACUUM SUCTION HOSES  
L03 CONDENSATE PIPING SYSTEM  
L03 DEMINERALIZED PIPING SYSTEM  
L03 DRAIN PIPING SYSTEM  
L03 FIRE PROTECTION PIPING SYSTEM  
L03 HOOD, STEAM LINE  
L03 HOT REHEAT PIPING SYSTEM  
L03 IGNITION OIL PIPING SYSTEM  
L03 INSTRUMENT AIR PIPING SYSTEM  
L03 INSULATE PIPING BOILER PLANT PIPING  
L03 MAIN STEAM PIPING SYSTEM  
L03 PIPING SYSTEM, BLEED STEAM  
L03 PIPING SYSTEM, BOILER FEED  
L03 PIPING SYSTEM, CENTRAL VACUUM  
L03 PIPING SYSTEM, CERAMIC COAL  
L03 PIPING SYSTEM, CHEMICAL CLEANING  
L03 PIPING SYSTEM, CHEMICAL FEED SYSTEM  
L03 PIPING SYSTEM, COAL REHEAT  
L03 PIPING SYSTEM, HYDROGEN  
L03 PIPING SYSTEM, LUBE OIL  
L03 PIPING SYSTEM, OBSERVATION PORT  
L03 PIPING SYSTEM, SERVICE AIR  
L03 PIPING SYSTEM, STEAM, BOILER, AUX  
L03 PIPING SYSTEM, SULPHURIC ACID  
L03 POLISHER, CONDENSATE, WATER TREATMENT  
L03 POTABLE WATER, PIPING SYSTEM  
L03 SERVICE WATER, PIPING SYSTEM  
L03 WASTE WATER PIPING  
L03 WATER LINE, BOILER SLAG CONTROL

#### **312-L04**

##### **PIPING, 2" OR OVER, 1 OR MORE UNITS & HEADER**

L04 PIPING SYSTEM, CERAMIC COAL, CLASSIFIERS/BURNERS  
L04 PIPING SYSTEM, WET BOTTOM, ASH POND  
L04 VACUUM TRUCK, PORTABLE PIPING

#### **312-L05**

##### **TRAP, HIGH PRESSURE**

L05 TRAPS

#### **312-L06**

##### **SEPARATOR OR PURIFIER, STEAM**

**\*\* This Retirement Unit Listing is subject to change from time to time consistent with the Coordination Agreement. \*\***

**312: Boiler Plant Equipment (Steam Production)**

L06 SEPARATOR, VAPOR

**312-L07**

**RELATIVELY COSTLY VALVES**

L07 VALVE  
L07 VALVE, AIR COMPRESSOR  
L07 VALVE, AIR HEATER CROSS TIE  
L07 VALVE, AIR HEATER DRAIN LINE  
L07 VALVE, ASH HANDLING, ASSEMBLY  
L07 VALVE, ASH LINE, ASSY  
L07 VALVE, ASH OVERFLOW  
L07 VALVE, ASH REMOVAL, MATERIAL HANDLING  
L07 VALVE, ASH SEAL PIPING SYSTEM  
L07 VALVE, ASH SLUICE  
L07 VALVE, ASH SLUICE PUMP, OUTBOARD  
L07 VALVE, ASH SYSTEM  
L07 VALVE, AUX STEAM  
L07 VALVE, AUX WATER  
L07 VALVE, BLEED PUMP  
L07 VALVE, BLOWDOWN  
L07 VALVE, BOILER  
L07 VALVE, BOTTOM ASH  
L07 VALVE, CIRCULATING, WATER  
L07 VALVE, CLARIFIER  
L07 VALVE, CLARIFIER INLET CONTROL  
L07 VALVE, COAL  
L07 VALVE, COLD REHEAT  
L07 VALVE, CONDENSOR  
L07 VALVE, COOLING WATER SYSTEM  
L07 VALVE, CSI  
L07 VALVE, DEMINERALIZED  
L07 VALVE, DRAIN  
L07 VALVE, DRIP  
L07 VALVE, DRUM BLOCK  
L07 VALVE, DRUM, SAFETY  
L07 VALVE, DUST COLLECTOR  
L07 VALVE, ECONOMIZER  
L07 VALVE, EVAPORATING STEAM  
L07 VALVE, FEEDWATER  
L07 VALVE, FEEDWATER SUPERHEAT SPRAY  
L07 VALVE, FEEDWATER, REGULATING  
L07 VALVE, FIRE WATER DELUGE  
L07 VALVE, FLYASH  
L07 VALVE, HYDROVACTOR INLET  
L07 VALVE, IK BLOCK  
L07 VALVE, IR BLOCK  
L07 VALVE, KNIFEGATE  
L07 VALVE, LOW PRESSURE, STEAM HEADER, CROSS-TIE  
L07 VALVE, LUBE OIL COOLER  
L07 VALVE, MANUAL ISOLATION  
L07 VALVE, MILL  
L07 VALVE, PLANT DISCHARGE PUMP  
L07 VALVE, PRECIPITATOR  
L07 VALVE, PULVERIZER  
L07 VALVE, PYRITE  
L07 VALVE, PYRITE HOPPER  
L07 VALVE, PYRITE JET PUMP, WATER SUPPLY  
L07 VALVE, NON-RETURN/REVERSE CURRENT  
L07 VALVE, REACTION TANK  
L07 VALVE, RECLAIM, WATER SYSTEM  
L07 VALVE, RELIEF  
L07 VALVE, RELIEF, VENTS  
L07 VALVE, RIVER WATER  
L07 VALVE, ROOF DRAIN

**\*\* This Retirement Unit Listing is subject to change from time to time consistent with the Coordination Agreement. \*\***

### **312: Boiler Plant Equipment (Steam Production)**

L07 VALVE, SAFETY, MAIN STEAM  
L07 VALVE, SAFETY, PRESSURE  
L07 VALVE, SAFETY, REHEATER  
L07 VALVE, SAFETY, STEAM COIL  
L07 VALVE, SAFETY, SUPERHEATER  
L07 VALVE, SEAL AIR FAN, FLANGE  
L07 VALVE, SILO SUMP PUMP  
L07 VALVE, SOOTBLOWER  
L07 VALVE, STEAM SEAL DRUM  
L07 VALVE, STEAM SPRAY  
L07 VALVE, SUMP PUMP  
L07 VALVE, SUPERHEAT  
L07 VALVE, SUPERHEAT SPRAY  
L07 VALVE, WASTE WATER  
L07 VALVE, WATER TREATMENT  
L07 VALVE, WETBOTTOM

#### **312-L08**

##### **FREEZE PROTECTION FOR PIPING**

L08 FREEZE PROTECTION

#### **312-M02**

##### **PONDS, LANDFILL RUN-OFF**

M02 POND, ASH HANDLING SYSTEM, WASTE WATER, LANDFILL  
M02 TRIM SYSTEM, PH, @LAB, LANDFILL

#### **312-Q01**

##### **NEURAL NETWORK SYSTEM**

Q01 AIR REGISTER DRIVE, BURNER  
Q01 ALARM SYSTEM ANNUNCIATOR  
Q01 BURNER MANAGEMENT SYSTEM  
Q01 BURNER AIR MANAGEMENT, INDIVIDUAL  
Q01 COAL PIPE ORIFICE, FUEL FLOW MONITORING / BALANCING  
Q01 COMBUSTION CONTROL SYSTEM WITH LOAD DISPATCH  
Q01 COMPUTER CONTROL SYSTEM  
Q01 DATA ACQUISITION SYSTEM  
Q01 ECT SYSTEM, FUEL FLOW MONITORING AND BALANCING  
Q01 NEURAL NETWORK SYSTEM  
Q01 PI-ARCHIVING SYSTEM  
Q01 SAFEFLAME DFS SCANNER/ARCH  
Q01 SPARE PARTS

#### **312-R01**

##### **COAL REBURN NETWORK SYSTEM**

R01 ALARM SYSTEM ANNUNCIATOR  
R01 BASKETS, AIRHEATER COLDEND  
R01 BOOST AIR HOSE  
R01 BOOST AIR PIPING  
R01 BOOST AIR PIPING, DAMPER  
R01 BOOST AIR PIPING, DAMPER DRIVE  
R01 BRICK LINING, INTERNAL  
R01 CLEANING DEVICE, AIRHEATER HOTEND  
R01 COAL PIPING  
R01 COAL PIPING, ISOLATION VALVE  
R01 COMPUTER & SOFTWARE  
R01 DUCT MONITOR  
R01 FLOW TRANSMITTER  
R01 HARDWARE  
R01 HOTEND LAYER, AIRHEATER  
R01 INJECTOR  
R01 INJECTOR, COAL REBURN  
R01 INJECTOR, COAL REBURN, TUBE PANEL  
R01 INJECTOR, COAL REBURN, BOOST AIR HOSE  
R01 INJECTOR, EXPANSION JOINT  
R01 INJECTOR, INNER DRIVE

**\*\* This Retirement Unit Listing is subject to change from time to time consistent with the Coordination Agreement. \*\***

### **312: Boiler Plant Equipment (Steam Production)**

R01 INJECTOR, OUTER DRIVE  
R01 INJECTOR, TUBE PANEL  
R01 LAGGING & INSULATION  
R01 OFA DUCT  
R01 OFA DUCT DAMPER  
R01 OFA DUCT DAMPER DRIVE  
R01 OFA DUCT EXPANSION JOINT  
R01 OFA DUCT INSULATION  
R01 PROBE  
R01 SCANNER SYSTEM/ARCHITECTURE  
R01 STABILIZER RING  
R01 TRANSMITTER, TEMPERATURE  
R01 TRIMMING DAMPER

#### **312-S01**

##### **SCR**

S01 AC INPUTS / RELAY OUTPUTS, BASE UNIT, MICRO LOGIX, PLC CONTROL  
S01 AC POWER SUPPLY, LOGIX, PLC CONTROL  
S01 ANALYZER, NOX  
S01 ASSEMBLY, CATALYST, CART  
S01 ASSEMBLY, CATALYST, CART TRACK  
S01 ASSEMBLY, CATALYST, SEAL PLATE  
S01 ASSEMBLY, CROSS ARM, RAKE SOOTBLOWER  
S01 ASSEMBLY, FEED TUBE, RAKE SOOTBLOWER  
S01 ASSEMBLY, HOPPER MODULE  
S01 ASSEMBLY, REACTOR  
S01 ASSEMBLY, REACTOR, TUBE BUNDLE  
S01 ASSEMBLY, RECTIFIER MODULE  
S01 BOILER BYPASS, ECONOMIZER SECTION TUBE SURFACE  
S01 BOILER BYPASS, REHEATER SECTION TUBE SURFACE  
S01 CATALYST, REACTOR  
S01 COMPUTER, CEMS  
S01 CONTROL PANEL, E-STOP, PLC  
S01 CONTROL PANEL, E-STOP, REMOTE CONTROL, PLC  
S01 CONTROL PANEL, MAIN, PLC  
S01 CPU, LOGIX, PLC CONTROL  
S01 DAMPER, DOUBLE LOUVER, BYPASS  
S01 DAMPER, FAN INLET, ID FAN  
S01 DAMPER, FAN OUTLET, ID FAN  
S01 DAMPER, GUILLOTINE INLET  
S01 DAMPER, GUILLOTINE OUTLET  
S01 DESUPERHEATER, STEAM CONDITIONING  
S01 DRIVEN COUPLING REXNORD, ID FAN AND MOTOR  
S01 DUCT, BREECHING BYPASS  
S01 DUCT, BREECHING INLET  
S01 DUCT, BREECHING OUTLET  
S01 DUCT, ECONOMIZER OUTLET  
S01 DUCT, INLET INTERIOR, ELBOW CAP  
S01 DUCT, REACTOR, PRIMARY AIR  
S01 ELEMENT, COLD END, AIRHEATER, PRIMARY  
S01 ELEMENT, COLD END, AIRHEATER, SECONDARY  
S01 ELEMENT, HOT END, AIRHEATER, PRIMARY  
S01 ELEMENT, HOT END, AIRHEATER, SECONDARY  
S01 ETHERNET ADAPTER, PLC CONTROL  
S01 ETHERNET BRIDGE, SINGLE PORT, PLC CONTROL  
S01 ETHERNET HUB, DIN-RAIL MOUNTING, PLC CONTROL  
S01 ETHERNET INTERFACE, MICRO LOGIX, PLC CONTROL  
S01 EXPANSION JOINT, AIR HEATER INLET  
S01 EXPANSION JOINT, BYPASS  
S01 EXPANSION JOINT, ECONOMIZER INLET  
S01 EXPANSION JOINT, ECONOMIZER OUTLET  
S01 EXPANSION JOINT, METALLIC, DILUTION / SEAL AIR  
S01 EXPANSION JOINT, NON-METALLIC, DILUTION / SEAL AIR

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### **312: Boiler Plant Equipment (Steam Production)**

S01 EXPANSION JOINT, OUTLET  
S01 EXPANSION JOINT, P.A. DUCT  
S01 FAN ASSEMBLY, DILUTION / SEAL AIR  
S01 FLOW ELEMENT, HEADER, STEAM CONDITIONING  
S01 FLUE GAS DUCT, BREECHING, AIR HEATER  
S01 FOUNDATIONS, AMMONIA AREA  
S01 FOUNDATIONS, ID FAN  
S01 FOUNDATIONS, SCR / DUCT  
S01 HMI - CLIENT / SERVER SOFTWARE  
S01 HMI - MONITORS  
S01 HMI - OPERATE IT SERVERS  
S01 HMI - OPERATOR MONITORS  
S01 HMI - PERSONAL COMPUTERS  
S01 HMI - PROJECTION MONITORS  
S01 HOIST / TROLLEY, CATALYST  
S01 I/O PANEL, REMOTE CONTROL, PLC  
S01 IMPELLER, ID FAN AND MOTOR  
S01 INJECTION FLOW, CONTROL SKID  
S01 INJECTION FLOW, TRANSMITTER  
S01 INJECTION HEADER, PRESSURE TRANSMITTER  
S01 INPUT MODULE, 4 CHANNEL ANALOG, MICRO LOGIX, PLC CONTROL  
S01 INPUT MODULE, AC ISOLATION, LOGIX, PLC CONTROL  
S01 INPUT MODULE, ISOLATION, LOGIX, PLC CONTROL  
S01 INPUT MODULE, LOGIX, PLC CONTROL  
S01 INPUT MODULE, VAC, MICRO LOGIX, PLC CONTROL  
S01 INSTRUMENT AIR SYSTEM  
S01 LEAK DETECTOR, NH3  
S01 LEAK DETECTOR, TRUCK UNLOADING, NH3  
S01 LEVEL INDICATOR, NH3 STORAGE  
S01 MANIFOLD, TANK PRESSURE RELIEF, NH3 STORAGE  
S01 MONITOR, PLC CONTROL  
S01 MOTOR, ID FAN AND MOTOR  
S01 NET BRIDGE, SINGLE PORT, PLC CONTROL  
S01 NOX ANALYZER, TLI METAL BLDG.  
S01 OUTPUT MODULE, AC/DC RELAY, MICRO LOGIX, PLC CONTROL  
S01 OUTPUT MODULE, RELAY, LOGIX, PLC CONTROL  
S01 PANEL, TRUCK UNLOADING STATION, PLC CONTROL  
S01 PC, DESKTOP, PLC CONTROL  
S01 PC, DIN RAIL MOUNT INDUSTRIAL, PLC CONTROL  
S01 PIPE, LIQUID, RAILCAR UNLOADING, NH3 STORAGE  
S01 PIPE, VAPOR, RAILCAR UNLOADING, NH3 STORAGE  
S01 PIPING, DILUTION / SEAL AIR  
S01 POTABLE WATER SYSTEM  
S01 POWER SUPPLY, MICRO LOGIX, PLC CONTROL  
S01 PROBE, GAS ANALYZER, INLET, NOX  
S01 PROBE, GAS ANALYZER, OUTLET, NOX  
S01 PROCESSOR UNIT, MICRO LOGIX, PLC CONTROL  
S01 PUMP, MAGNETIC DRIVE, TEMPERATURE  
S01 PUMP, NH3  
S01 PUMP, SKID, NH3  
S01 PUMP, UPSTREAM, FILTER, NH3  
S01 REXA ACTUATOR, FAN INLET DAMPER, ID FAN  
S01 REXA ACTUATOR, FAN OUTLET DAMPER, ID FAN  
S01 ROTOR, ID FAN AND MOTOR  
S01 SCANNER, DEVICE NET, MICRO LOGIX, PLC CONTROL  
S01 SHAFT, ID FAN AND MOTOR  
S01 SKID, TRUCK UNLOADING, NH3  
S01 SLOT CHASSIS, LOGIX 13, PLC CONTROL  
S01 SLOT FILLER MODULE, PLC CONTROL  
S01 SOOTBLOWER PANEL, PLC CONTROL  
S01 SOOTBLOWER, RAKE  
S01 STEAM COIL, PREHEATER, DILUTION / SEAL AIR  
S01 STORAGE TANK, NH3 AMMONIA

**\*\* This Retirement Unit Listing is subject to change from time to time consistent with the Coordination Agreement. \*\***

**312: Boiler Plant Equipment (Steam Production)**

S01 STRUCTURAL STEEL, AMMONIA AREA  
S01 STRUCTURAL STEEL, SCR / DUCT  
S01 TERMINAL BLOCK, REMOVABLE, LOGIX, PLC CONTROL  
S01 TERMINATOR, LEFT END CAP, MICRO LOGIX, PLC CONTROL  
S01 TERMINATOR, RIGHT END CAP, MICRO LOGIX, PLC CONTROL  
S01 TOUCH SCREEN, FLAT PANEL, PLC CONTROL  
S01 TRANSMITTER, AIR HEADER, FLOW  
S01 TRANSMITTER, LEVEL, NH3 STORAGE  
S01 TRANSMITTER, PRESSURE, NH3 STORAGE  
S01 TRANSMITTER, PRESSURE, NH3 STORAGE TANK  
S01 TRANSMITTER, TEMPERATURE, NH3 STORAGE  
S01 VALVE, BALANCING  
S01 VALVE, CHECK, CONDENSATE OUTLET  
S01 VALVE, CHECK, LIQUID FILL, NH3 STORAGE  
S01 VALVE, DRAIN, PUMP SUPPLY, NH3 STORAGE  
S01 VALVE, EXCESS FLOW, AMMONIA TANK, NH3 STORAGE  
S01 VALVE, EXCESS FLOW, PUMP RETURN, NH3 STORAGE  
S01 VALVE, EXCESS FLOW, PUMP SUPPLY, NH3 STORAGE  
S01 VALVE, EXCESS FLOW, VAPOR BALANCE, NH3 STORAGE  
S01 VALVE, FAN OUTLET, DILUTION / SEAL AIR  
S01 VALVE, FILTER UPSTREAM CONTROL  
S01 VALVE, INJECTION CONTROL  
S01 VALVE, INJECTION LIQUID LINE, HYDRO.  
S01 VALVE, INLET ISOLATION, DILUTION / SEAL AIR  
S01 VALVE, INLET ISOLATION, STEAM CONDITIONING  
S01 VALVE, ISOLATION  
S01 VALVE, ISOLATION, CONDENSATE OUTLET  
S01 VALVE, ISOLATION, LIQUID FILL, NH3 STORAGE  
S01 VALVE, ISOLATION, LIQUID FILL, NH3 STORAGE TANK  
S01 VALVE, ISOLATION, NH3 STORAGE TANK  
S01 VALVE, ISOLATION, PUMP RETURN, NH3 STORAGE  
S01 VALVE, ISOLATION, PUMP RETURN, NH3 STORAGE TANK  
S01 VALVE, ISOLATION, PUMP SUPPLY, NH3 STORAGE  
S01 VALVE, ISOLATION, PUMP SUPPLY, NH3 STORAGE TANK  
S01 VALVE, ISOLATION, STEAM CONDITIONING  
S01 VALVE, ISOLATION, VAPOR BALANCE, NH3 STORAGE  
S01 VALVE, ISOLATION, VAPOR BALANCE, NH3 STORAGE TANK  
S01 VALVE, LIQUID LINE HYDRO. RELIEF, TRUCK UNLOADING, NH3  
S01 VALVE, LIQUID LINE ISOLATION, TRUCK UNLOADING, NH3  
S01 VALVE, LIQUID PIPE, HYDRO. RELIEF, NH3 STORAGE  
S01 VALVE, OUTLET ISOLATION, DILUTION / SEAL AIR  
S01 VALVE, POPPET, RAKE SOOTBLOWER  
S01 VALVE, PRESSURE RELIEF, NH3 STORAGE TANK  
S01 VALVE, PRESSURE RELIEF, STEAM CONDITIONING  
S01 VALVE, PUMP SUPPLY, DRAIN, NH3 STORAGE  
S01 VALVE, PUMP, DISCHARGE HYDRO.  
S01 VALVE, PUMP, NH3 SUCTION INTERCONNECTING  
S01 VALVE, PUMP, RETURN HYDRO.  
S01 VALVE, PUMP, SUCTION HYDRO.  
S01 VALVE, PUMP, SUCTION ISOLATION  
S01 VALVE, RELIEF, LIQUID FILL HYDRO., NH3 STORAGE  
S01 VALVE, RELIEF, LIQUID FILL, TANK, NH3 STORAGE  
S01 VALVE, RELIEF, PUMP RETURN HYDRO., NH3 STORAGE  
S01 VALVE, RELIEF, PUMP SUPPLY HYDRO., NH3 STORAGE  
S01 VALVE, RELIEF, TANK PRESSURE, NH3 STORAGE  
S01 VALVE, RETURN HYDRO., NH3 STORAGE  
S01 VALVE, STEAM INLET, ISOLATION  
S01 VALVE, TEMPERATURE CONTROL  
S01 VALVE, TEMPERATURE CONTROL, STEAM CONDITIONING  
S01 VALVE, VAPOR BALANCE, NH3 STORAGE TANK

**312-T01**

**ADVANCED OVER-FIRED AIR**

T01 AIR REGISTER DRIVE, BURNER

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### 312: Boiler Plant Equipment (Steam Production)

T01 BOX, DAMPER  
T01 BOX, DAMPER DRIVE  
T01 BOX, EXPANSION JOINT  
T01 CAMS SYSTEM AUTO / ACKNOWLEDGMENT PURGE & TRANSMITTER, OFA  
T01 COAL PIPE ORIFICE  
T01 CONTROL SYSTEM, MOD BUD INTERFACE  
T01 CONTROL SYSTEM, PCS  
T01 CONTROL SYSTEM, SOFTWARE  
T01 DAMPER DRIVE, POSITION TRANSMITTER, OFA  
T01 DATA ACQUISITION SYSTEM  
T01 DUCTWORK  
T01 ECT SYSTEM  
T01 EXPANSION JOINT, SIDEWALL INJECTOR  
T01 FAN  
T01 FAN, DRIVE MOTOR  
T01 FAN, DAMPER  
T01 FAN, DAMPER DRIVE  
T01 FAN, EXPANSION JOINT  
T01 FAN, ELECTRICAL FEED BREAKER  
T01 FLOW ELEMENT, OFA  
T01 FLOW MEASUREMENT SYSTEM  
T01 FOUNDATION  
T01 HMI - OPERATOR CONSOLE  
T01 HMI - OPERATOR MONITORS  
T01 HMI - PERSONAL COMPUTERS  
T01 HMI - SOFTWARE  
T01 IGNITION GAS BLEED  
T01 IGNITION GAS BLOCK  
T01 INJECTOR, TUBEWALL PENETRATIONS, FRONTWALL  
T01 INJECTOR, TUBEWALL PENETRATIONS, SIDEWALL  
T01 OVERFIRE AIR INJECTOR, FRONTWALL INJECTOR  
T01 OVERFIRE AIR INJECTOR, SIDEWALL INJECTOR  
T01 PROBE SIGNAL PROCESSOR, C.O. MONITORING GRID  
T01 PROBE, C.O. MONITORING GRID  
T01 PROBE, O2  
T01 SPRING SUPPORT, SIDEWALL INJECTOR  
T01 STRUCTURAL STEEL

#### 312-U01

#### REID NATURAL GAS CONVERSION

UO1 ELECTRICAL WIRING  
UO1 FLOW REGULATOR  
UO1 FLUE GAS RECIRCULATION DUCT  
UO1 GAS BURNERS, DBR  
UO1 GAS FLOW CONTROL VALVE, MAIN  
UO1 GAS FLOW ELEMENT  
UO1 GAS HOSE, FLEXIBLE  
UO1 GAS PIPE  
UO1 GAS PRESSURE REGULATOR VALVE, MAIN  
UO1 GAS STOP VALVE, MAIN  
UO1 GAS TRIFECTA VALVE ASSEMBLY  
UO1 JORDAN LINEAR DRIVES  
UO1 LOCAL INSTRUMENTATION  
UO1 NITROGEN BLANKET, GAS PIPE  
UO1 PIPE, STEEL, UNDERGROUND  
UO1 PLC MODS AND PROGRAMMING  
UO1 PRESSURE TRANSMITTER  
UO1 SPARK RODS  
UO1 TRANSMITTERS  
UO1 TUBING, STAINLESS  
UO1 VALVE, MANUAL STOP  
UO1 VALVE, PNEUMATIC GAS CHARGING  
UO1 VALVE, PNEUMATIC GAS VENT  
UO1 VALVE, PRESSURE REGULATOR, MAIN



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### **312: Boiler Plant Equipment (Steam Production)**

U01 VALVE, PRESSURE RELIEF  
U01 VENT PIPE

#### **312-V01 SCR - HMP&L**

V01 AC INPUTS / RELAY OUTPUTS, BASE UNIT, MICRO LOGIX, PLC CONTROL  
V01 AC POWER SUPPLY, LOGIX, PLC CONTROL  
V01 AIR PREHEATER  
V01 ANALYZER, NOX  
V01 ASSEMBLY, CATALYST, CART  
V01 ASSEMBLY, CATALYST, CART TRACK  
V01 ASSEMBLY, CATALYST, SEAL PLATE  
V01 ASSEMBLY, CROSS ARM, RAKE SOOTBLOWER  
V01 ASSEMBLY, FEED TUBE, RAKE SOOTBLOWER  
V01 ASSEMBLY, HOPPER MODULE  
V01 ASSEMBLY, REACTOR  
V01 ASSEMBLY, REACTOR, TUBE BUNDLE  
V01 ASSEMBLY, RECTIFIER MODULE  
V01 BOILER BYPASS, ECONOMIZER SECTION TUBE SURFACE  
V01 BOILER BYPASS, REHEATER SECTION TUBE SURFACE  
V01 CATALYST, REACTOR  
V01 COMPUTER, CEMS  
V01 CONTROL PANEL, E-STOP, PLC  
V01 CONTROL PANEL, E-STOP, REMOTE CONTROL, PLC  
V01 CONTROL PANEL, MAIN, PLC  
V01 CPU, LOGIX, PLC CONTROL  
V01 DAMPER, DOUBLE LOUVER, BYPASS  
V01 DAMPER, FAN INLET, ID FAN  
V01 DAMPER, FAN OUTLET, ID FAN  
V01 DAMPER, GUILLOTINE INLET  
V01 DAMPER, GUILLOTINE OUTLET  
V01 DESUPERHEATER, STEAM CONDITIONING  
V01 DRIVEN COUPLING REXNORD, ID FAN AND MOTOR  
V01 DUCT, BREECHING BYPASS  
V01 DUCT, BREECHING INLET  
V01 DUCT, BREECHING OUTLET  
V01 DUCT, ECONOMIZER OUTLET  
V01 DUCT, INLET INTERIOR, ELBOW CAP  
V01 DUCT, REACTOR, PRIMARY AIR  
V01 ELEMENT, COLD END, AIRHEATER, PRIMARY  
V01 ELEMENT, COLD END, AIRHEATER, SECONDARY  
V01 ELEMENT, HOT END, AIRHEATER, PRIMARY  
V01 ELEMENT, HOT END, AIRHEATER, SECONDARY  
V01 ETHERNET ADAPTER, PLC CONTROL  
V01 ETHERNET BRIDGE, SINGLE PORT, PLC CONTROL  
V01 ETHERNET HUB, DIN-RAIL MOUNTING, PLC CONTROL  
V01 ETHERNET INTERFACE, MICRO LOGIX, PLC CONTROL  
V01 EXPANSION JOINT, AIR HEATER INLET  
V01 EXPANSION JOINT, BYPASS  
V01 EXPANSION JOINT, ECONOMIZER INLET  
V01 EXPANSION JOINT, ECONOMIZER OUTLET  
V01 EXPANSION JOINT, METALLIC, DILUTION / SEAL AIR  
V01 EXPANSION JOINT, NON-METALLIC, DILUTION / SEAL AIR  
V01 EXPANSION JOINT, OUTLET  
V01 EXPANSION JOINT, P. A. DUCT  
V01 FAN ASSEMBLY, DILUTION / SEAL AIR  
V01 FLOW ELEMENT, HEADER, STEAM CONDITIONING  
V01 FLUE GAS DUCT, BREECHING, AIR HEATER  
V01 FOUNDATIONS, AMMONIA AREA  
V01 FOUNDATIONS, ID FAN  
V01 FOUNDATIONS, SCR / DUCT  
V01 HMI - CLIENT / SERVER SOFTWARE  
V01 HMI - MONITORS

### 312: Boiler Plant Equipment (Steam Production)

V01 HMI - OPERATE IT SERVERS  
V01 HMI - OPERATOR MONITORS  
V01 HMI - PERSONAL COMPUTERS  
V01 HMI - PROJECTION MONITORS  
V01 HOIST / TROLLEY, CATALYST  
V01 I/O PANEL, REMOTE CONTROL, PLC  
V01 IMPELLER, ID FAN AND MOTOR  
V01 INJECTION FLOW, CONTROL SKID  
V01 INJECTION FLOW, TRANSMITTER  
V01 INJECTION HEADER, PRESSURE TRANSMITTER  
V01 INPUT MODULE, 4 CHANNEL ANALOG, MICRO LOGIX, PLC CONTROL  
V01 INPUT MODULE, AC ISOLATION, LOGIX, PLC CONTROL  
V01 INPUT MODULE, ISOLATION, LOGIX, PLC CONTROL  
V01 INPUT MODULE, LOGIX, PLC CONTROL  
V01 INPUT MODULE, VAC, MICRO LOGIX, PLC CONTROL  
V01 INSTRUMENT AIR SYSTEM  
V01 LEAK DETECTOR, NH3  
V01 LEAK DETECTOR, TRUCK UNLOADING, NH3  
V01 LEVEL INDICATOR, NH3 STORAGE  
V01 MANIFOLD, TANK PRESSURE RELIEF, NH3 STORAGE  
V01 MONITOR, PLC CONTROL  
V01 MOTOR, ID FAN AND MOTOR  
V01 NET BRIDGE, SINGLE PORT, PLC CONTROL  
V01 NOX ANALYZER, TLI METAL BLDG.  
V01 OUTPUT MODULE, AC/DC RELAY, MICRO LOGIX, PLC CONTROL  
V01 OUTPUT MODULE, RELAY, LOGIX, PLC CONTROL  
V01 PANEL, TRUCK UNLOADING STATION, PLC CONTROL  
V01 PC, DESKTOP, PLC CONTROL  
V01 PC, DIN RAIL MOUNT INDUSTRIAL, PLC CONTROL  
V01 PIPE, LIQUID, RAILCAR UNLOADING, NH3 STORAGE  
V01 PIPE, VAPOR, RAILCAR UNLOADING, NH3 STORAGE  
V01 PIPING, DILUTION / SEAL AIR  
V01 POTABLE WATER SYSTEM  
V01 POWER SUPPLY, MICRO LOGIX, PLC CONTROL  
V01 PROBE, GAS ANALYZER, INLET, NOX  
V01 PROBE, GAS ANALYZER, OUTLET, NOX  
V01 PROCESSOR UNIT, MICRO LOGIX, PLC CONTROL  
V01 PUMP, MAGNETIC DRIVE, TEMPERATURE  
V01 PUMP, NH3  
V01 PUMP, SKID, NH3  
V01 PUMP, UPSTREAM, FILTER, NH3  
V01 REXA ACTUATOR, FAN INLET DAMPER, ID FAN  
V01 REXA ACTUATOR, FAN OUTLET DAMPER, ID FAN  
V01 ROTOR, ID FAN AND MOTOR  
V01 SCANNER, DEVICE NET, MICRO LOGIX, PLC CONTROL  
V01 SHAFT, ID FAN AND MOTOR  
V01 SKID, TRUCK UNLOADING, NH3  
V01 SLOT CHASSIS, LOGIX 13, PLC CONTROL  
V01 SLOT FILLER MODULE, PLC CONTROL  
V01 SOOTBLOWER PANEL, PLC CONTROL  
V01 SOOTBLOWER, RAKE  
V01 STEAM COIL, PREHEATER, DILUTION / SEAL AIR  
V01 STORAGE TANK, NH3 AMMONIA  
V01 STRUCTURAL STEEL, AMMONIA AREA  
V01 STRUCTURAL STEEL, SCR / DUCT  
V01 TERMINAL BLOCK, REMOVABLE, LOGIX, PLC CONTROL  
V01 TERMINATOR, LEFT END CAP, MICRO LOGIX, PLC CONTROL  
V01 TERMINATOR, RIGHT END CAP, MICRO LOGIX, PLC CONTROL  
V01 TOUCH SCREEN, FLAT PANEL, PLC CONTROL  
V01 TRANSMITTER, AIR HEADER, FLOW  
V01 TRANSMITTER, LEVEL, NH3 STORAGE  
V01 TRANSMITTER, PRESSURE, NH3 STORAGE  
V01 TRANSMITTER, PRESSURE, NH3 STORAGE TANK

**\*\* This Retirement Unit Listing is subject to change from time to time consistent with the Coordination Agreement. \*\***

**312: Boiler Plant Equipment (Steam Production)**

V01 TRANSMITTER, TEMPERATURE, NH3 STORAGE  
V01 VALVE, BALANCING  
V01 VALVE, CHECK, CONDENSATE OUTLET  
V01 VALVE, CHECK, LIQUID FILL, NH3 STORAGE  
V01 VALVE, DRAIN, PUMP SUPPLY, NH3 STORAGE  
V01 VALVE, EXCESS FLOW, AMMONIA TANK, NH3 STORAGE  
V01 VALVE, EXCESS FLOW, PUMP RETURN, NH3 STORAGE  
V01 VALVE, EXCESS FLOW, PUMP SUPPLY, NH3 STORAGE  
V01 VALVE, EXCESS FLOW, VAPOR BALANCE, NH3 STORAGE  
V01 VALVE, FAN OUTLET, DILUTION / SEAL AIR  
V01 VALVE, FILTER UPSTREAM CONTROL  
V01 VALVE, INJECTION CONTROL  
V01 VALVE, INJECTION LIQUID LINE, HYDRO.  
V01 VALVE, INLET ISOLATION, DILUTION / SEAL AIR  
V01 VALVE, INLET ISOLATION, STEAM CONDITIONING  
V01 VALVE, ISOLATION  
V01 VALVE, ISOLATION, CONDENSATE OUTLET  
V01 VALVE, ISOLATION, LIQUID FILL, NH3 STORAGE  
V01 VALVE, ISOLATION, LIQUID FILL, NH3 STORAGE TANK  
V01 VALVE, ISOLATION, NH3 STORAGE TANK  
V01 VALVE, ISOLATION, PUMP RETURN, NH3 STORAGE  
V01 VALVE, ISOLATION, PUMP RETURN, NH3 STORAGE TANK  
V01 VALVE, ISOLATION, PUMP SUPPLY, NH3 STORAGE  
V01 VALVE, ISOLATION, PUMP SUPPLY, NH3 STORAGE TANK  
V01 VALVE, ISOLATION, STEAM CONDITIONING  
V01 VALVE, ISOLATION, VAPOR BALANCE, NH3 STORAGE  
V01 VALVE, ISOLATION, VAPOR BALANCE, NH3 STORAGE TANK  
V01 VALVE, LIQUID LINE HYDRO. RELIEF, TRUCK UNLOADING, NH3  
V01 VALVE, LIQUID LINE ISOLATION, TRUCK UNLOADING, NH3  
V01 VALVE, LIQUID PIPE, HYDRO. RELIEF, NH3 STORAGE  
V01 VALVE, OUTLET ISOLATION, DILUTION / SEAL AIR  
V01 VALVE, POPPET, RAKE SOOTBLOWER  
V01 VALVE, PRESSURE RELIEF, NH3 STORAGE TANK  
V01 VALVE, PRESSURE RELIEF, STEAM CONDITIONING  
V01 VALVE, PUMP SUPPLY, DRAIN, NH3 STORAGE  
V01 VALVE, PUMP, DISCHARGE HYDRO.  
V01 VALVE, PUMP, NH3 SUCTION INTERCONNECTING  
V01 VALVE, PUMP, RETURN HYDRO.  
V01 VALVE, PUMP, SUCTION HYDRO.  
V01 VALVE, PUMP, SUCTION ISOLATION  
V01 VALVE, RELIEF, LIQUID FILL HYDRO., NH3 STORAGE  
V01 VALVE, RELIEF, LIQUID FILL, TANK, NH3 STORAGE  
V01 VALVE, RELIEF, PUMP RETURN HYDRO., NH3 STORAGE  
V01 VALVE, RELIEF, PUMP SUPPLY HYDRO., NH3 STORAGE  
V01 VALVE, RELIEF, TANK PRESSURE, NH3 STORAGE  
V01 VALVE, RETURN HYDRO., NH3 STORAGE  
V01 VALVE, STEAM INLET, ISOLATION  
V01 VALVE, TEMPERATURE CONTROL  
V01 VALVE, TEMPERATURE CONTROL, STEAM CONDITIONING  
V01 VALVE, VAPOR BALANCE, NH3 STORAGE TANK

**\*\* This Retirement Unit Listing is subject to change from time to time consistent with the Coordination Agreement. \*\***

### **314: Turbogenerator Units (Steam Production)**

#### **314-A01**

##### **EQUIPMENT, STARTING AND TURNING**

A01 PANEL, TURBINE START UP  
A01 TURNING GEAR, TURBINE

#### **314-A02**

##### **EXCITATION SYSTEM**

A02 EXCITER  
A02 GENERATOR EXCITATION SYSTEM  
A02 GENERATOR, VOLTAGE REGULATOR, CONTROL SYSTEM  
A02 MOTOR, TURNING GEAR TURBINE EXCHANGER END  
A02 VOLTAGE REGULATOR

#### **314-A03**

##### **FOUNDATION - TURBOGENERATOR INSTAL**

A03 FOUNDATION, CONCRETE, TURBINE MAT & PEDESTAL  
A03 FOUNDATION, EXCITER  
A03 FOUNDATION, GENERATOR  
A03 FOUNDATION, TURBINE

#### **314-A04**

##### **GENERATOR - TURBOGENERATOR INSTAL**

A04 CONDENSER, VACUUM PUMP  
A04 DRYER, HYDROGEN  
A04 GENERATOR, HYDROGEN COOLERS  
A04 GENERATOR, ROTOR  
A04 GENERATOR, ROTOR, WEDGING  
A04 GENERATOR, STATOR  
A04 GENERATOR, STATOR, WEDGING  
A04 RELAY, SYNCHRONIZED, CHECK, GENERATOR  
A04 TURBINE SEAL OIL UNIT

#### **314-A05**

##### **GOVERNOR CONTROL SYSTEM**

A05 CONTROL SYS, AUTOMATIC GENERATION  
A05 DCS TURBINE CONTROLS  
A05 ELECTRO HYDRAULIC CONTROL, PIPING SYSTEM  
A05 PRESSURE PUMP, ELECTRO-HYDRAULIC TURBINE

#### **314-A06**

##### **REMOTE CONTROL RHEOSTAT & FIELD SWITCH**

A06 COMPUTER  
A06 COMPUTER, DATA LOGGER  
A06 GENERATOR LOAD FREQUENCY CONTROL UNIT  
A06 GENERATOR, CURRENT TRANSFORMERS  
A06 SOFTWARE

#### **314-A08**

##### **TURBINE - TURBOGENERATOR INSTAL**

A08 COMPUTER, TURBINE MONITOR  
A08 ENCLOSURE, TURBINE  
A08 ENCLOSURE, TURBINE, HP  
A08 ENCLOSURE, TURBINE, LP  
A08 POWER SUPPLY, TURBINE SYSTEM  
A08 SOFTWARE  
A08 TURBINE  
A08 TURBINE, BEARINGS  
A08 TURBINE, BLADE RING  
A08 TURBINE, BLADE ROW  
A08 TURBINE, BUCKET  
A08 TURBINE, CONTROL STAGE BLADES  
A08 TURBINE, DIAPHRAGM  
A08 TURBINE, ROTOR  
A08 TURBINE, SEAL SET  
A08 TURBINE, SHELL  
A08 TURBINE, TRIP SYSTEM

### 314: Turbogenerator Units (Steam Production)

#### 314-A09

##### TURBINE STANDS AND TOOLS

A09 CYLINDERS, WALKING BEAMS  
A09 RACKS, REHEAT DIAPHRAGM  
A09 SLINGS, TURBINE OUTAGES  
A09 STAND, TURBINE

#### 314-B01

##### AIR EJECTOR APPARATUS FOR ONE CONDENSER

B01 CIRCULATING WATER ELECTRICAL SYSTEM, MAIN CONDENSER  
B01 EJECTOR, STARTING  
B01 EXHAUSTER, AIR

#### 314-B02

##### CONDENSER SHELL

B02 CONDENSER  
B02 CONDENSER SHELL

#### 314-B03

##### CONDENSER TUBES AND SHEETS

B03 GLAND AIR EXHAUSTER BLOWER  
B03 CONDENSER TUBE SHEETS  
B03 CONDENSER TUBES  
B03 CONDENSER, TURBINE  
B03 CONDENSER, TURBINE GLAND AIR EXHAUSTER  
B03 CONDENSER, TURBINE GLAND STEAM  
B03 CONDENSER, TURBINE, HOT WELL  
B03 SOFTWARE, PROGRAM CONTROL

#### 314-B04

##### CONDENSER TUBE PROTECTIVE SYSTEM

B04 ANALYZER, SILICA  
B04 CATHODIC PROTECTION SYSTEM  
B04 CHLORINATOR  
B04 CHLORINE PIPING  
B04 CONTROL, PH, ACID INJECTION SYSTEM, COOLING TOWER  
B04 HOIST, ELECTRIC CHLORINE  
B04 PIPING SYSTEM, CHLORINE  
B04 FLOWMETER  
B04 VACUUM, REGULATOR, CHLORINE

#### 314-B05

##### CONDENSER TUBE CLEANING SYSTEM

B05 TUBE CLEANING MACHINE, AIR POWERED  
B05 TUBE CLEANING MACHINE, CRIMPING TOOL

#### 314-B06

##### COOLING TOWER

B06 CIRCULATING WATER ELECTRICAL SYSTEM  
B06 CIRCULATING WATER, PIPING SYSTEM  
B06 CONTROL SYSTEM, BLOWDOWN, COOLING TOWER  
B06 COOLING TOWER  
B06 COOLING TOWER STRUCTURAL STEEL FOUNDATIONS  
B06 COOLING TOWER, CONCRETE PLACEMENT, FOUNDATION  
B06 COOLING TOWER, CONTROLS  
B06 COOLING TOWER, DECK  
B06 COOLING TOWER, DELUGE SYSTEM PIPING  
B06 COOLING TOWER, ELECTRICAL BUILDING  
B06 COOLING WATER, PIPING SYSTEM  
B06 FAN, COOLING TOWER  
B06 FIRE PROTECTION, COOLING TOWER  
B06 FLOWMETER, COOLING TOWER MAKEUP  
B06 FLOWMETER, COOLING TOWER BLOWDOWN  
B06 FLOWMETER, RIVER WATER CIRCULATION  
B06 GAUGE ASSEMBLY FOR COOLING TOWER CHEM TRTMT  
B06 GEAR REDUCER, COOLING TOWER FAN

**\*\* This Retirement Unit Listing is subject to change from time to time consistent with the Coordination Agreement. \*\***

### **314: Turbogenerator Units (Steam Production)**

B06 HEAT EXCHANGER, CLOSED COOLING WATER  
B06 REGULATOR, CHLORINATION  
B06 VALVE, MAKE-UP CROSSTIE, COOLING WATER TOWER  
B06 VALVE, MAKE-UP PUMP SUCTION

#### **314-B07**

#### **FAN - COOLING WATER SYSTEM**

#### **314-B08**

#### **INTAKE SCREEN AND MECHANISM**

B08 ALARM, SCREEN WASH DIFFERENTIAL W/INDICATORS  
B08 BAR SCREEN, INTAKE  
B08 COMPRESSOR, INTAKE STRUCTURE AIR  
B08 CONTROL SYSTEM  
B08 CONTROLLER, ADJUST FREQUENCYA/C  
B08 GATES, SLUICE, INTAKE STRUCTURE  
B08 HYDRAULIC UNIT FOR TRAVERSING TRASH RAKE  
B08 INTAKE TRASH BOOM  
B08 LUBRICATOR, MOBILE HIGH PRESSURE  
B08 MOTOR, TRAVELING WATER SCREENS  
B08 PIPING, INTAKE, WATER  
B08 REDUCER, TRAVELING WATER SCREENS  
B08 RIVER INTAKE STRUCTURE-FIXTURES, CONDUIT, WIRING  
B08 RIVER WATER INTAKE BUILDING ENCLOSURE, WALLS, DOORS  
B08 RIVER WATER INTAKE STRUCTURE-CONCRETE  
B08 RIVER WATER INTAKE STRUCTURE-EXCAVATION  
B08 RIVER WATER INTAKE STRUCTURE-PILINGS  
B08 RIVER WATER INTAKE STRUCTURE-RIP RAP  
B08 RIVER WATER INTAKE STRUCTURE-STEEL  
B08 SODIUM BROMIDE INJECTION SYS, RIVER CLARIFIER  
B08 SUPERVISORY CONTROL, REMOTE, INTAKE  
B08 TRAVELING WATER SCREENS  
B08 WASH SCREEN CHAIN BELT

#### **314-B09**

#### **PUMPS - COOLING WATER SYSTEM**

B09 CIRCULATING WATER PUMP  
B09 CIRCULATING WATER PUMP, MOTOR  
B09 CONDENSATE PUMP PIT  
B09 ELECTRIC WATER TREATMENT, MAGNET  
B09 FOUNDATION, CONCRETE, CIRCULATING WATER SYS  
B09 MOTOR, PUMP  
B09 PUMP, GENERAL

#### **314-B10**

#### **SPRAYING SYSTEM**

B10 FIRE PROTECTION

#### **314-B11**

#### **TANKS - COOLING WATER SYSTEM**

B11 COOLING TOWER TANK  
B11 HOPPER  
B11 TANK  
B11 TANK, CLOSED COOLING WATER CHEMICAL  
B11 TANK, CONDENSATE RETURN  
B11 TANK, COOLING WATER SURGE  
B11 TANK, ELECTRIC HOT WATER  
B11 TANK, MIX & STORAGE  
B11 TANK, RIVER WATER SERVICE BLDG DRAIN

#### **314-B12**

#### **VALVE, ATMOSPHERIC RELIEF**

B12 VALVE, COIL, AUTO TEMP CONTROL, WATER SAMPLER  
B12 VALVE, DECK, W/OPERATORS, CONDENSERS  
B12 VALVE, SEAL OIL REGULATING

### 314: Turbogenerator Units (Steam Production)

#### 314-D01

##### ACCUMULATOR - CENTRAL LUBRICATING SYSTEM

D01 ACCUMULATOR  
D01 FLUID SUPPLY SYSTEM, TURBINE  
D01 PIPING SYSTEM, TURBINE  
D01 TURBINE, HP & LP FEEDWATER GENERATOR COUPLINGS

#### 314-D02

##### COOLER - CENTRAL LUBRICATING SYSTEM

D02 COMPRESSOR, AIR AC  
D02 COOLERS, OIL  
D02 HEATER, LUBE OIL  
D02 LUBE OIL COOLER TUBESET  
D02 OIL COOLER ASSEMBLY, TURBINE  
D02 OIL VAPOR EXTRACTOR, TURBINE

#### 314-D03

##### PUMPS - CENTRAL LUBRICATING SYSTEM

D03 PUMP, BEARING LIFT, TURBINE  
D03 PUMP, BEARING OIL, TURBINE  
D03 PUMP, GEAR LUBE TRANSFER  
D03 PUMP, LUBE OIL FILTER  
D03 PUMP, LUBE OIL TRANSFER  
D03 PUMP, TURBINE, SEAL OIL BACKUP

#### 314-D04

##### PURIFIER OR FILTER - CENTRAL LUBRICATING SYSTEM

D04 CONDITIONER, LUBE OIL  
D04 FILTRATION SYSTEM, LUBE OIL, TURBINE  
D04 INDICATOR, LUBE OIL SIGHT FLOW  
D04 LUBE OIL & PURIFICATION, PIPING SYSTEM  
D04 TURBINE LUBE OIL PURIFICATION-CONTROLS

#### 314-D05

##### TANKS - CENTRAL LUBRICATING SYSTEM

D05 DEMISTER, OIL VAPOR  
D05 RESERVOIR, TURBINE OIL  
D05 TANK, AUX LUBE OIL TRANSFER SYSTEM  
D05 TANK, CLEAN LUBE OIL  
D05 TANK, DIRTY LUBE OIL  
D05 WELL, THERMAL, W/HEATING ELEMENTS

#### 314-E01

##### PANELS - INSTRUMENTS AND METERS

E01 BOARD, TURBINE INSTRUMENT  
E01 CONSOLE, ELECTRO HYDRAULIC CONTROL  
E01 CONTROL BOARDS, CABINETS, RACKS  
E01 PANEL, TURBINE SUPERVISORY INSTRUMENT  
E01 PANEL, TURBINE CONTROL POWER DISTRIBUTION

#### 314-E02

##### RECORDING AND INDICATING DEVICES

E02 ALARM SYSTEM, CHLORINE  
E02 ANALYZER, GAS, THERMAL CONDUCTIVITY  
E02 ANALYZER, HYDROGEN  
E02 ANALYZER, MOISTURE, HYDROGEN GAS GENERATOR  
E02 ANALYZER, TURBINE VIBRATION  
E02 ANNUNCIATOR  
E02 CONTROL BOARD, W/ANNUNCIATOR  
E02 CONTROL SYSTEM  
E02 DETECTOR, CURRENT / CONTROLLER  
E02 DETECTOR, LEAK  
E02 FREQUENCY DIGITAL DISPLAY & INTERFACE  
E02 INDICATOR, HYDROGEN PURITY  
E02 FLOW METER  
E02 MONITOR, DISPLAY

**314: Turbogenerator Units (Steam Production)**

E02 MONITOR, GENERATOR CONDITION  
E02 MONITOR, TURBINE HYDRO DEW PT  
E02 MONITORING SYSTEM, VIBRATION  
E02 PROBE, TEMP, BEARING  
E02 RECORDER, CHART  
E02 RECORDER, MICRO W/ALARM, CONDENSATE FLOW  
E02 RECORDER, TEMPERATURE, GENERATOR  
E02 RECORDER, VIDEO GRAPHIC  
E02 SAMPLE CELL  
E02 SCALE, ELECTRIC  
E02 SIMULATOR, TURBINE CONTROLS  
E02 SUPERVISORY, TURBINE  
E02 TACHOMETER, (OVERSPEED TURBINE CHECKS)  
E02 TERMINAL, TURBINE CONTROL  
E02 TRANSDUCER, FREQ DEVIATION  
E02 TRANSMITTER, CONDUCTIVITY & SENSOR  
E02 TRANSMITTER, PRESSURE  
E02 TYPEWRITER, TURBINE CONTROLS

**314-F02**

**PIPING BETWEEN ONE OR MORE UNITS & A HEADER**

F02 AIR VACUUM PIPE LINE SYSTEM  
F02 BLEED STEAM PIPING SYSTEM  
F02 CHLORINE PIPING SYSTEM  
F02 CIRCULATING WATER EFFLUENT LINE  
F02 CIRCULATING WATER INFLUENT LINE  
F02 CIRCULATING WATER PIPING SYS.-INSTRUMENT CONTROLS  
F02 CIRCULATING WATER PIPING SYSTEM  
F02 CONDENSATE, AUXILIARY, PIPING SYSTEM  
F02 CONDENSATE, PIPING SYSTEM  
F02 COOLING WATER PIPING SYS.-INSTRUMENT CONTROLS  
F02 COOLING WATER PIPING, CLOSED AND DIRECT  
F02 DRAIN LINE, BEARING  
F02 HYDROGEN PIPING SYSTEM  
F02 HYDROGEN SEAL OIL/FIRE PROTECTION, PIPING SYSTEM  
F02 LUBE OIL PIPING SYSTEM  
F02 PIPING SYSTEM, TURBINE PLANT  
F02 POTABLE WATER PIPING SYSTEM  
F02 RIVER WATER PIPING SYS.-INSTRUMENT CONTROLS  
F02 RIVER WATER PIPING SYSTEM  
F02 RIVER WATER, TURBINE, PIPING SYSTEM  
F02 SEAL OIL PIPING SYSTEM  
F02 STEAM, GLAND, PIPING SYSTEM  
F02 TURBINE MAIN STEAM PIPING LEADS-STEAM TEMP CONTROL  
F02 VENT AND DRAIN PIPING SYSTEM, TURBINE

**314-F03**

**PIPING BETWEEN TWO OR MORE UNITS**

F03 AIR EXTRACTION PIPING SYSTEM  
F03 BLEED SYSTEM PIPING SYSTEM  
F03 CARBON DIOXIDE PIPING SYSTEM  
F03 CHLORINE PIPING SYSTEM  
F03 CIRCULATING WATER PIPING SYSTEM  
F03 CONDENSATE SYSTEM W/VALVES, PIPING SYSTEM  
F03 CONDENSATE, AUXILIARY, PIPING SYSTEM  
F03 HYDROGEN SEAL OIL PIPING, PIPING SYSTEM  
F03 HYDROGEN SYSTEM PIPING SYSTEM  
F03 PIPING SYSTEM, CONDENSER SUMP PUMPS

**314-F04**

**STEAM SEPARATOR OR PURIFIER**

F04 TANK, VACUUM SYSTEM SEPARATOR

**314-F07**

**VALVES - OVER 2" AND COSTING \$1000 EACH**



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### 314: Turbogenerator Units (Steam Production)

F07 CONDENSOR, VALVE, ACCUATOR  
F07 VALVE  
F07 VALVE, AIR EXTRACTION PIPING SYSTEM  
F07 VALVE, AUXILIARY CIRCULATING WATER  
F07 VALVE, BY-PASS  
F07 VALVE, CHECK  
F07 VALVE, CHEST, STEAM TURBINE  
F07 VALVE, CIRCULATING WATER  
F07 VALVE, CLARIFIER INLET  
F07 VALVE, COMBINED REHEAT  
F07 VALVE, CONTROL  
F07 VALVE, CONTROL, HYDROGEN SEAL OIL COOLER  
F07 VALVE, COOLING TOWER MAKEUP, BUTTERFLY VALVE  
F07 VALVE, DISC, STEAM  
F07 VALVE, DUPLEX  
F07 VALVE, GLAND SYSTEM BYPASS  
F07 VALVE, GLAND SYSTEM SHUTOFF  
F07 VALVE, ISOLATION, RECIRCULATING LINE INTAKE  
F07 VALVE, MAKE-UP CLARIFIER  
F07 VALVE, PARTITION, W/OPERATOR  
F07 VALVE, PILOT  
F07 VALVE, REHEAT STOP  
F07 VALVE, SEQ, TURBINE  
F07 VALVE, SHUTOFF, GLAND SYS  
F07 VALVE, STEAM  
F07 VALVE, THROTTLE  
F07 VALVE, TURBOGENERATOR  
F07 VALVE, UNLOADER, TURBINE  
F07 VALVE, VACUUM BREAKER  
F07 VALVE, WATER REGULATOR

#### 314-G01

#### CRANE FOR TURBOGENERATOR UNIT

G01 CRANE, CIRCULATING WATER PUMP  
G01 CRANE, INTAKE, GANTRY  
G01 CRANE, TURBINE

#### 314-G02

#### HOIST

G02 BRAKE, AUXILIARY HOIST  
G02 BRAKE, BRIDGE DRIVE  
G02 BRAKE, MAIN HOIST  
G02 BRAKE, TROLLEY DRIVE  
G02 BRIDGE DRIVE, REDUCER/MOTOR  
G02 GEAR BOX, AUXILIARY HOIST  
G02 GEAR BOX, MAIN HOIST W/REULAND MOTOR  
G02 HOIST, CHLORINE DRUM  
G02 HOIST, RIVER WATER CHLORIN INTAKE  
G02 MOTOR, AUXILIARY HOIST  
G02 MOTOR, AUXILIARY HOIST INCHING  
G02 MOTOR, BRIDGE DRIVE  
G02 MOTOR, HOIST  
G02 MOTOR, HOIST INCHING  
G02 MOTOR, TROLLEY DRIVE  
G02 REDUCER, AUXILIARY  
G02 TROLLEY DRIVE REDUCER, W/MTR

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**315: Accessory Electric Equipment (Steam Production)**

**315-001**

**AIR DUCT SYSTEM**

001 ISOLATED PHASE BUS DUCT  
001 POWER DUCT BANK WIRING

**315-002**

**AUXILIARY GENERATOR SET**

002 FEED SYSTEM, POWER, AUXILIARY  
002 GENERATOR SET, DIESEL  
002 GENERATOR SWITCHGEAR, DIESEL  
002 GENERATOR, CONNECTOR  
002 PANEL, POWER  
002 PIPE HEATING EQUIPMENT  
002 RELAY, PROTECTIVE, AUX TRANSFORMER  
002 RELAY, PROTECTIVE, DIGITAL  
002 SUBSTATION  
002 UNINTERRUPTIBLE POWER SUPPLY, SOLID STATE CONTROL

**315-003**

**BATTERY CHARGING SET**

003 BATTERY CHARGER

**315-005**

**CONDENSER, SYNCHRONOUS**

005 COMPRESSOR, START-UP AIR

**315-006**

**CONTROL INSTALLATION, SYSTEM OPERATORS**

006 CONTROLLER, PROGRAMMABLE LOGIC (PLC)  
006 LOAD CENTER  
006 MOTOR CONTROL CENTER  
006 REMOTE CONTROLS FOR SWITCHGEAR & AUXILIARY EQUIP.

**315-007**

**CONVERTER, SYNCHRONOUS OR ROTARY**

007 INVERTER

**315-009**

**FAN OR BLOWER**

009 FAN

**315-010**

**FOUNDATION EQUIPMENT**

010 CONDUIT  
010 FOUNDATION, START UP TRANSFORMER  
010 FOUNDATION, STATION SERVICE TRANSFORMER

**315-014**

**GENERATOR VOLTAGE REGULATOR SYSTEM**

014 ENCLOSURE, REGULATOR, VOLTAGE  
014 MOTOR CONTROL CENTER  
014 POWER SUPPLY, VOLTAGE REGULATOR  
014 PROTECTIVE RELAYING SYSTEM ON GENERATOR  
014 REGULATOR, ELECTRIC, VOLTAGE  
014 RELAYING SYSTEM, PROTECTIVE, GENERATOR

**315-017**

**OIL CIRCUIT BREAKER**

017 CIRCUIT BREAKER, LINE POWER  
017 CIRCUIT BREAKER, TRIP

**315-018**

**PANELS DEVOTED TO A SINGLE PURPOSE**

018 BENCHBOARD, DUPLEX  
018 CABINET, FIRE PROTECTION CONTROL  
018 CABINET, POWER DISTRIBUTION  
018 CABINET, TEST  
018 MOTOR CONTROL CENTER

**315: Accessory Electric Equipment (Steam Production)**

018 PANEL  
018 PANEL, CONTROL  
018 PANEL, TRANSDUCER  
018 SWITCHBOARD, CONTROL

**315-019**

**REACTOR OR RESISTOR**

019 RESISTOR

**315-022**

**STORAGE BATTERY, STATION CONTROL**

022 BATTERIES, STATION SERVICE  
022 BATTERY, CONTROL  
022 CABINET, BATTERY CONTROL  
022 INVERTER  
022 PANEL, POWER  
022 POWER CENTER  
022 RACK, BATTERY

**315-023**

**DISCONNECTING SWITCHES**

023 BREAKER, MAIN AUX TRANSFER  
023 CIRCUIT BREAKER  
023 CIRCUIT BREAKER, AIR  
023 CIRCUIT BREAKER, POWER  
023 STARTER, MOTOR  
023 STARTER, SWITCH  
023 STATION BUS, ISOLATED PHASE BUS DUCT  
023 SWITCH, DISCONNECT  
023 SWITCH, HIGH SPEED TRANSFER  
023 SWITCH, INDOOR  
023 SWITCH, OUTDOOR  
023 SWITCHES, FIRE ALARM TEMPERATURE  
023 SWITCHGEAR

**315-024**

**TESTING EQUIPMENT**

024 GAUGE, DEAD WEIGHT  
024 MEGGER, BIDDLE  
024 METER, KWH  
024 MOTOR & PHASE ROTATION TESTER  
024 OHMMETER  
024 OSCILLOSCOPE  
024 SEMICONDUCTOR CURVE TRACER  
024 TESTER, HYPOTS, PORTABLE  
024 TESTING EQUIPMENT

**315-025**

**TRANSFORMER, NOT ACCESSORY TO A PANEL**

025 CCVT  
025 METER  
025 METER, START-UP WATTHOUR  
025 PANEL, RELAY, AUX TRANSFORMER  
025 RELAY  
025 RELAY, PROTECTIVE  
025 SPRINKLER SYSTEM, FIRE WALLS, TRANSFORMERS  
025 SUBSTATION, UNIT  
025 TRANSFORMER  
025 TRANSFORMER, DRY OUTDOOR  
025 TRANSFORMER, ELECTRIC MOTORS  
025 TRANSFORMER, OIL  
025 TRANSFORMER, PAD MOUNTED  
025 TRANSFORMER, SPARE POWER  
025 TRANSFORMER, START-UP  
025 TRANSFORMER, STATION AUXILIARY

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**315: Accessory Electric Equipment (Steam Production)**

**315-026**

**TRUCK SWITCH, WITH WIRING**

026 SWITCH, AUTO TRANSFER

**315-027**

**WIRING POWER, BUS, WIRES, CABLES**

027 6.9 KV FEED  
027 BREAKER, SWITCHGEAR  
027 BUS DUCT  
027 BUS WIRING POWER SYSTEM  
027 BUS, UNIT SUBSTATION  
027 CABLE  
027 CABLE TRAYS  
027 CABLE, CONTROL  
027 CABLE, INSTRUMENT  
027 CABLE, POWER  
027 CABLE, UNDERGROUND,W/TRENCH  
027 CONDUIT  
027 CONDUIT, CONTROL AND FITTINGS  
027 CONDUIT, POWER AND FITTINGS  
027 COMPUTER, NETWORK POWER SYSTEM  
027 DUCT BANKS  
027 DUCT, ISOLATED PHASE BUS  
027 DUCT,PHASE BUS,NON SEGREGATED  
027 EMERGENCY, AC POWER SYSTEM MODIFICATION  
027 GENERATOR, ISOLATED BUS  
027 GROUNDING SYSTEM  
027 JM RELAY  
027 MANHOLES  
027 PANEL, DISTRIBUTION  
027 SWITCH, GEAR  
027 SWITCH, GEAR-BUS

\*\* This Retirement Unit Listing is subject to change from time to time consistent with the Coordination Agreement. \*\*

**341: Structures and Improvements (Combustion Turbine)**

**341-002**  
**STRUCTURE**  
002 OIL RETENTION & WATER DRAINAGE SYSTEM

**341-004**  
**HVAC-AIR CONDITIONING SYSTEM**  
004 HVAC, BATTERY ROOM

**341-030**  
**FENCE**  
030 FENCE  
030 FENCE, GROUNDING

**341-035**  
**ROAD**  
035 ROAD PAVING

**341-039**  
**WALKS**  
039 SIDE WALK

**341-041**  
**YARD DRAINAGE SYSTEM**  
041 YARD DRAINAGE SYSTEM

**341-042**  
**YARD LIGHTING SYSTEM**  
042 LIGHT, SECURITY

**341-043**  
**FUEL OIL DIKE**  
043 DIKE, FUEL OIL

**341-044**  
**STAIRS & WALKWAYS**  
044 STAIRS, FUEL OIL DIKE  
044 WALKWAYS

**341-045**  
**ROCK SURFACE**  
045 DIKE, FUEL OIL CRUSHED ROCK  
045 FUEL OIL UNLOADING PUMP CRUSHED ROCK  
045 HOLDING POND CRUSHED ROCK  
045 RAILROAD CAR AREA, CRUSHED ROCK  
045 ROCK, CRUSHED, GAS TURBINE AREA  
045 TRUCK UNLOADING AREA CRUSHED ROCK

**341-046**  
**GUARD POSTS**  
046 GUARD POSTS

**341-047**  
**HOLDING PONDS**  
047 HOLDING POND

**341-048**  
**PAVEMENT**  
048 PAVEMENT AROUND TURBINE

**341-049**  
**SIDING**  
049 EXTERIOR SIDING

**341-050**  
**GRADING, LANDSCAPE, SEEDING, ETC.**  
050 SEEDING & STERILENT  
050 SITE GRADING

\*\* This Retirement Unit Listing is subject to change from time to time consistent with the Coordination Agreement. \*\*

**342: Fuel holders, producers, and accessories (Combustion Turbine)**

**342-A02**

**FOUNDATIONS, MAIN STORAGE TANK, SUPPORTS**

A02 FOUNDATION, FUEL OIL TANK

**342-A03**

**HVAC-HEATER, NOT A PART OF TANK**

A03 HEATER, FUEL FORWARDING UNIT

**342-A04**

**METER, FUEL OIL**

A04 METER, FUEL FORWARDING UNIT

A04 METER, FUEL OIL FLOW

**342-A05**

**PIPING SYSTEM, FUEL OIL, INCLUDING STRAINERS**

A05 FLOW DIVIDER, FUEL FORWARDING UNIT

A05 FUEL OIL PIPING SYSTEM

**342-A06**

**PUMP**

A06 PUMP, FUEL FORWARDING UNIT

A06 PUMP, FUEL OIL TANK

A06 PUMP, FUEL OIL, UNLOADING

A06 TANK, CONTAINMENT BASIN

A06 TANK, FUEL OIL

**342-A07**

**PURIFIER (FILTERS, CENTRIFUGES, ETC.)**

A07 FILTER, FUEL

A07 FILTER, FUEL, LOW PRESSURE

**342-A08**

**TANK, MAIN STORAGE, INCLUDING FIRE PROTECTION**

A08 LUBE OIL STORAGE SYSTEM

A08 TANK, FUEL OIL

**342-A09**

**FUEL OIL UNLOADING SYSTEM**

A09 FUEL OIL UNLOADING STATION

**342-F01**

**REID CT NATURAL GAS CONVERSION**

F01 CABLE

F01 CABLE, FIBER OPTIC

F01 FILTER, COALESCING

F01 FLOW REGULATOR

F01 HEAT TRACE

F01 LOCAL INSTRUMENTATION

F01 ODORIZER WITH CONTROLS

F01 PIPE, STEEL, UNDERGROUND

F01 PRESSURE TRANSMITTER

F01 PVC CONDUIT

F01 REMOTE COMMUNICATIONS

F01 STEAM GAS HEATER

F01 TRANSFORMER

F01 TUBING, STAINLESS

F01 VALVE, MANUAL STOP

F01 VALVE, PRESSURE RELIEF

**\*\* This Retirement Unit Listing is subject to change from time to time consistent with the Coordination Agreement. \*\***

**343: Prime Movers (Combustion Turbine)**

**343-A02**

**ENGINE**

A02 COMBUSTION CHAMBER  
A02 ENGINE

**343-A03**

**FOUNDATIONS**

A03 ENCLOSURE, ACCESSORY COMPARTMENT AND BASE  
A03 ENGINE COMPARTMENT FIRE PROTECTION  
A03 ENGINE FOUNDATION  
A03 ENGINE SKID AND ENCLOSURE  
A03 FAN, ACCESSORY COMPARTMENT VENT  
A03 FIRE PROTECTION, ACCESSORY-COMPARTMENT  
A03 SPACE HEATER,ACCESSORY COMPARTMENT  
A03 SPACE HEATER,ENGINE COMPARTMENT

**343-A05**

**GOVERNOR & CONTROL SYSTEM**

A05 ENCLOSURE, CONTROL CAB  
A05 GOVERNOR/CONTROL SYSTEM  
A05 HVAC, A/C, CONTROL CAB  
A05 SPACE HEATER,CONTROL CAB

**343-A07**

**SIGNAL & ALARM SYSTEM**

A07 SIGNAL AND ALARM SYSTEM

**343-B01**

**COOLER**

B01 COOLER, LUBRICANT

**343-B02**

**PIPING SYSTEM, OIL**

B02 LUBRICANT PIPING SYSTEM

**343-B03**

**PUMP**

B03 PUMP, AUXILIARY  
B03 PUMP, EMERGENCY  
B03 PUMP, MAIN SHAFT DRIVEN

**343-B04**

**PURIFIER OR FILTER**

B04 ELIMINATOR, MIST  
B04 FILTER, LUBE OIL PURIFIER

**343-B05**

**TANK**

B05 TANK, LUBE OIL

**343-C01**

**COOLING TOWER**

C01 COOLING TOWER FOUNDATION  
C01 COOLING TOWER FREEZE PROTECTION AND SILENCING  
C01 FAN, COOLING TOWER, WATER COOLING  
C01 TANK, COOLING TOWER SURGE

**343-C04**

**HEAT EXCHANGER**

C04 HEAT EXCHANGER,COOLING TOWER

**343-C07**

**PUMP**

C07 PUMP, COOLING WATER

**343-D01**

**COMPRESSOR**

D01 COMPRESSOR, STARTING SYSTEM

**343-D04**

**\*\* This Retirement Unit Listing is subject to change from time to time consistent with the Coordination Agreement. \*\***

### **343: Prime Movers (Combustion Turbine)**

#### **MOTOR TURNING GEAR & MECHANICS**

D04 CLUTCH  
D04 CONVERTER, TORQUE  
D04 GEAR, MOTOR STARTING TURNING  
D04 INPUT GEAR  
D04 MOTOR, CRANKING  
D04 OUTPUT GEAR  
D04 TURNING GEAR AND COUPLING

#### **343-E01**

#### **AIR DUCT SYSTEM**

E01 DUCT, EXHAUST  
E01 DUCTING, AIR INLET

#### **343-E02**

#### **AIR FILTER OR SCREEN**

E02 AIR COMPRESSOR, ATOMIZING  
E02 AIR INLET SILENCING  
E02 AIR SEPARATOR, ATOMIZING  
E02 SCREEN, AIR INLET, FILTER

#### **343-E03**

#### **PIPING SYSTEM, EXHAUST**

E03 DUCTING, EXHAUST  
E03 EXHAUST DUCT SILENCING

#### **343-E04**

#### **STACK**

E04 STACK, EXHAUST  
E04 STACK, INTAKE AIR SUPPLY

#### **343-F01**

#### **REID CT NATURAL GAS CONVERSION**

F01 DUAL FIRE BURNERS  
F01 ELECTRICAL WIRING  
F01 GAS FLOW ELEMENT  
F01 GAS HOSES, FLEXIBLE  
F01 GAS RING HEADER  
F01 HEATER, EXPLOSION PROOF  
F01 PIPE, STAINLESS STEEL  
F01 PLC MODS AND PROGRAMING  
F01 PURGE RING HEADER  
F01 TRANSMITTERS  
F01 TUBING, STAINLESS  
F01 VALVE, GAS REGULATOR, MAIN  
F01 VALVE, GAS STOP, MAIN  
F01 VALVE, PURGE AIR



**\*\* This Retirement Unit Listing is subject to change from time to time consistent with the Coordination Agreement. \*\***

**344: Generators (Combustion Turbine)**

**344-001**

**EXCITER, DIRECT-CONNECTED OR BELT-DRIVEN**

001 EXCITER ENCLOSURE  
001 HEATER, SPACE, EXCITER

**344-002**

**GENERATOR**

002 GENERATOR  
002 GENERATOR COOLING MEDIUM EQUIPMENT  
002 GENERATOR SKID ENCLOSURE  
002 SPACE HEATER

**344-005**

**RHEOSTAT, GENERATOR FIELD**

005 EXCITER RHEOSTAT

**345: Accessory Electric Equipment (Combustion Turbine)**

**345-003**

**BATTERY CHARGING SET**

003 BATTERY CHARGING SET

**345-006**

**CONTROL INSTALLATION, SYSTEM OPERATORS**

006 PANEL, REMOTE MASTER CONTROL

**345-011**

**FREQUENCY CHANGER**

011 FREQUENCY CHANGER

**345-012**

**FREQUENCY CONTROL SYSTEM**

012 FREQUENCY CONTROL SYSTEM

**345-013**

**FUSE EQUIPMENT, SET OF HIGH TENSION**

013 TOOL, TERMI-POINT REEL

**345-014**

**GENERATOR VOLTAGE REGULATOR SYSTEM**

014 CAPACITORS, SURGE

014 GENERATOR LEADS, CIRCUIT

014 REGULATOR, VOLTAGE

**345-015**

**INDUCTION REGULATOR**

015 REGULATOR, INDUCTION

**345-016**

**LIGHTNING ARRESTOR**

016 ARRESTOR, LIGHTNING

**345-018**

**PANELS DEVOTED TO A SINGLE PURPOSE**

018 MOTOR CONTROL COMPARTMENT

018 MOTOR CONTROL COMPARTMENT AIR CONDITIONING

018 MOTOR CONTROL COMPARTMENT FIRE PROTECTION

018 MOTOR CONTROL COMPARTMENT SPACE HEATER

**345-019**

**REACTOR OR RESISTOR**

019 REACTOR RESISTER

019 REACTOR, LINEAR

**345-020**

**RECTIFIER**

020 RECTIFIER ASSEMBLY

020 RECTIFIER

**345-022**

**STORAGE BATTERY, STATION CONTROL**

022 BATTERY ENCLOSURE

022 BATTERY, STORAGE

022 HEATER, BATTERY COMPARTMENT

**345-023**

**DISCONNECTING SWITCHES**

023 SWITCHES, SET

**345-025**

**TRANSFORMER, NOT ACCESSORY TO A PANEL**

025 TRANSFORMER, AUXILLIARY

025 TRANSFORMER, CRANKING MOTOR

025 TRANSFORMER, CURRENT, BANK

025 TRANSFORMER, GROUND

025 TRANSFORMER, POTENTIAL

025 TRANSFORMER, POWER, POTENTIAL

025 TRANSFORMER, SATURABLE, CURRENT

**\*\* This Retirement Unit Listing is subject to change from time to time consistent with the Coordination Agreement. \*\***

**345: Accessory Electric Equipment (Combustion Turbine)**

**345-027**

**WIRING POWER, BUS, WIRES, CABLES**

- 027 BUS COMPARTMENT
- 027 BUS SYSTEM
- 027 CABLE
- 027 POWER WIRING
- 027 SWITCHGEAR COMPARTMENT SPACE HEATER
- 027 SWITCHGEAR ENCLOSURE

**\*\* This Retirement Unit Listing is subject to change from time to time consistent with the Coordination Agreement. \*\***

**353: Station Equipment (Transmission Station)**

**353-035**

035	TRANSFORMER, STEP-UP
035	DELUGE SPRINKLER SYSTEM, TRANSFORMER

**Exhibit Blackburn Rebuttal-4**  
**Coordination Agreement dated as of July 1, 2009,**  
**between Big Rivers Electric Corporation and**  
**Century Aluminum of Kentucky General Partnership**

**COORDINATION AGREEMENT**

Dated as of July 1, 2009

by and between

**BIG RIVERS ELECTRIC CORPORATION**

and

**CENTURY ALUMINUM OF KENTUCKY GENERAL PARTNERSHIP**

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## COORDINATION AGREEMENT

This COORDINATION AGREEMENT ("Agreement") is made and entered into as of July 1, 2009, by and between BIG RIVERS ELECTRIC CORPORATION, a Kentucky rural electric cooperative ("Big Rivers"), and CENTURY ALUMINUM OF KENTUCKY GENERAL PARTNERSHIP, a Kentucky general partnership ("Century"). Big Rivers and Century are sometimes referred to herein collectively as the "Parties" and individually as a "Party."

### RECITALS

A. Kenergy Corp., a Kentucky retail rural electric cooperative, currently supplies and delivers to Century, the owner and operator of an aluminum reduction plant in Hawesville, Kentucky, electric energy and related services pursuant to an Agreement for Electric Service, dated July 15, 1998, between Green River Electric Corporation, Kenergy's predecessor-in-interest, and Southwire Company, Century's predecessor in interest (the "Existing Century Agreement").

B. Kenergy currently purchases certain electric energy and related services for resale to Century from Western Kentucky Energy Corp., an affiliate of E. ON U.S., LLC, formerly known as LG&E Energy Corp. (together with such affiliates and parent, collectively, "LG&E") under an Agreement for Electric Service, dated as of July 15, 1998 (the "Kenergy/LG&E Contract").

C. Kenergy also currently purchases additional electric energy and related services for resale to Century, to serve the energy requirements of Century not provided by LG&E, from third-party suppliers, including Big Rivers.

D. The Existing Century Agreement and the Kenergy/LG&E Contract were entered into in connection with the consummation of a series of transactions implementing the First Amended Plan of Reorganization of Big Rivers, as part of which, among other things (i) Big Rivers leased its generating facilities to LG&E and (ii) Big Rivers entered into a power purchase arrangement with LG&E whereby LG&E supplied Big Rivers with electric energy and related services for resale to its Members.

E. Big Rivers and LG&E have agreed to terminate and unwind existing transactions among them relating to the lease by Big Rivers of its interest in its generating facilities to LG&E and the sale by LG&E of electric energy and related services to Big Rivers.

F. In connection with and as a condition to such termination and unwind transactions, Big Rivers has agreed to supply electric energy and related services to Kenergy for resale to Century pursuant to a wholesale power sales agreement, dated as of the date hereof (the "Century Wholesale Agreement").

G. Kenergy has agreed to supply a similar amount of electric energy and related services to Century pursuant to a retail electric service agreement, dated as of the date hereof (the "Century Retail Agreement").

H. Big Rivers, Kenergy and Century have further agreed that Century will make payments due under the Century Retail Agreement to a depository bank under a certain Security and Lockbox Agreement to be executed among Big Rivers, Kenergy, Century and a depository bank selected by those parties (the "Lockbox Agreement") or, under arrangements relating to sales of Energy by Third Party Suppliers to Kenergy for resale to Century to the depository under other similar lockbox arrangements among Kenergy, Century and the Third Party Supplier.

I. As a further condition to the execution and delivery of the Century Wholesale Agreement by Big Rivers, and the execution and delivery of the Century Retail Agreement by Century, respectively, the Parties desire to enter into this Agreement to coordinate the performance of their respective obligations under such agreements.

### AGREEMENT

NOW, THEREFORE, in consideration of the premises and their mutual covenants set forth herein, and for other good and valuable consideration, receipt of which is hereby acknowledged, and intending to be legally bound hereby, the Parties hereto agree as follows:

1. Definitions; Rules of Interpretations. Capitalized terms used in this Agreement and not defined herein have the meanings assigned to those terms in the Century Retail Agreement. The rules of interpretation set forth in Section 1.2 of the Century Retail Agreement shall apply to this Agreement as though fully set forth herein.

2. Term and Survival of Obligations. This Agreement shall commence on the date first written above, provided that the obligations of the Parties under Section 3 and Section 5 shall not commence until the Effective Date. This Agreement shall continue in effect until the Century Retail Agreement expires or is terminated in accordance with its terms. Notwithstanding the foregoing, any provision of this Agreement providing for payment from one party to the other for assignment of the right to collect and enforce collection of amounts due, or related to remedies for default, damage claims, or payment of other amounts will survive termination or expiration of this Agreement to the extent necessary for its enforcement and the protection of the Party in whose favor such provision exists.

3. Covenants and Agreements.

3.1 Century Retail Agreement. Century shall (i) fully perform and discharge all of its obligations under the Century Retail Agreement unless excused in accordance with the terms thereof; (ii) not act or rely upon any written or oral waivers granted by Kenergy of Century's performance under or compliance with provisions of the Century Retail Agreement that could be reasonably expected to materially adversely affect Big Rivers' rights or interests under the Century Wholesale Agreement without the prior written consent of Big Rivers; (iii) not waive the performance and discharge by Kenergy of its material obligations under the Century Retail Agreement without the prior written consent of Big Rivers; (iv) not amend or modify the Century Retail Agreement without the prior written consent of Big Rivers (the addition, deletion, modification or amendment of supplemental tariffs contemplated by the Century Retail Agreement which has been approved by the KPSC is deemed not to be an amendment or modification of the Century Retail Agreement for the purposes of this Section 3.1); (v) not



terminate or repudiate the Century Retail Agreement (including by rejection or similar termination in a bankruptcy proceeding involving Century) other than in accordance with the provisions thereof without the prior written consent of Big Rivers; (vi) make payments pursuant to the Century Retail Agreement when due and in accordance therewith and the Lockbox Agreement for so long as such agreements exist; (vii) not take any action or support any action by others that in any manner would impede Century's ability to fulfill its obligations to Kenergy or Big Rivers under the Century Retail Agreement or this Agreement or act in any manner that could reasonably be expected to materially adversely affect its ability to perform or discharge its obligations under this Agreement; (viii) provide Big Rivers with a copy of all notices sent to Kenergy pursuant to the Century Retail Agreement; and (ix) not assign or transfer (by operation of law or otherwise) any rights or interests that it may have in the Century Retail Agreement except in accordance with Article 16 thereof; *provided*, that any transfer or assignment pursuant to Article 16 thereof which requires the consent or approval of Kenergy also shall require the consent of Big Rivers.

3.2 Century Wholesale Agreement. Big Rivers shall (i) fully perform and discharge all of its obligations under the Century Wholesale Agreement unless excused in accordance with the terms thereof; (ii) not act or rely upon any written or oral waivers granted by Kenergy of Big Rivers' performance under or compliance with provisions of the Century Wholesale Agreement that could be reasonably expected to materially adversely affect Century's rights or interests under the Century Retail Agreement without the prior written consent of Century; (iii) enforce the performance and discharge by Kenergy of its material obligations under the Century Wholesale Agreement and not waive the performance and discharge by Kenergy of its material obligations thereunder; (iv) not amend or modify the Century Wholesale Agreement without the prior written consent of Century (the addition, deletion, modification or amendment of supplemental tariffs contemplated by the Century Wholesale Agreement which has been approved by the KPSC is deemed not to be an amendment or modification of the Century Wholesale Agreement for the purposes of this Section 3.2); (v) not terminate or repudiate the Century Wholesale Agreement (including by rejection or similar termination in a bankruptcy proceeding involving Big Rivers) other than in accordance with the provisions thereof; (vi) not take any action or support any action by others that in any manner would impede Big Rivers' ability to fulfill its obligations to Kenergy or Century under the Century Wholesale Agreement or this Agreement or act in any manner that could reasonably be expected to materially adversely affect its ability to perform or discharge its obligations under this Agreement; (vii) provide Century with a copy of all notices sent to Kenergy pursuant to the Century Wholesale Agreement; and (viii) not assign or transfer (by operation of law or otherwise) any rights or interests that it may have in the Century Wholesale Agreement except in accordance with Article 16 thereof; *provided*, that any transfer or assignment pursuant to Article 16 thereof which requires the consent or approval of Kenergy also shall require the consent of Century.

### 3.3 Payments.

(a) Big Rivers shall pay Century upon the Effective Date an amount equal to \$139,423 less \$4,167 for each month after December 31, 2006 (calculated as of the 25th day of each month) (the "Assurances Agreement Payment") in lieu of amounts otherwise payable under Section 3(i) of the Assurances Agreement between Century and LG&E Energy

Marketing Inc., dated as of July 15, 1998. Big Rivers shall make the Assurances Agreement Payment to Century on the Effective Date; *provided*, that Big Rivers may credit all or any portion of the Assurances Agreement Payment against one or more invoices relating to the sale of electric energy or related services to Kenergy for resale to Century prior to the Effective Date.

(b) Big Rivers shall pay Century upon the Effective Date \$3,969,000.

(c) Upon the Effective Date, Big Rivers shall be obligated to pay Century within five (5) days of the Effective Date an amount equal to the difference between (i) the aggregate dollar amount charged by Big Rivers to Kenergy for Block A Energy, Block A-1 Energy, Block B Energy and Block C Energy as defined in the Agreement for Tier 3 Energy dated November 29, 2007 and the First Amendment thereto dated June 6, 2008 between Big Rivers and Kenergy for the benefit of Century (collectively, as extended, the "2008 Tier 3 Agreement"), for the period beginning at 12:01 AM on October 6, 2008 through midnight of the Effective Date (the "Payment Period") and (ii) the dollar amount calculated by multiplying the aggregate volume of Block A Energy, Block A-1 Energy, Block B Energy and Block C Energy delivered by Big Rivers to Kenergy for resale to Century pursuant to the 2008 Tier 3 Agreement during the Payment Period times the rate of \$43.11 per MWh. For example, if the volume of Block A Energy, Block A-1 Energy, Block B. Energy and Block C Energy delivered by Big Rivers during the Payment Period was 220,500 megawatt hours for an aggregate charge of \$11,025,000, the payment would be \$1,519,245 (\$11,025,000 less (220,500 x \$43.11 = \$9,505,755) = \$1,519,245).

#### 3.4 Budget.

(a) Big Rivers shall provide to Century for its review and evaluation (i) on or prior to the date 90 days prior to the end of each Fiscal Year, a copy of Big Rivers' then-current draft proposed annual capital and operating budget (the "Proposed Budget") for the following Fiscal Year, and (ii) any reasonably requested supporting information with respect to the Proposed Budget or expenditures in excess of the Budget.

(b) If requested by either Century or Alcan, Big Rivers and Century and, if the Alcan Retail Agreement is in effect, Alcan, shall jointly engage an independent expert (the "Independent Engineer") and shall agree on the scope of review required to evaluate the draft Proposed Budget. Big Rivers shall pay 50% and Century shall pay 50% of the fees and expenses of the Independent Engineer (or Century shall pay 25% if the Alcan Retail Agreement is in effect).

(c) Century shall have the opportunity to present the conclusions and recommendations of the Independent Engineer with respect to the Proposed Budget to the Coordinating Committee and to Big Rivers' Board of Directors as soon as reasonably practicable following the Independent Engineer's completion of the Proposed Budget evaluation.

(d) Big Rivers and Century will treat the reports, opinions and other work product of the Independent Engineer as confidential, proprietary business information that will not be publicly disclosed or offered as evidence in any regulatory or legal proceeding by Big Rivers, Kenergy or Century.

(e) On or prior to the last day of each Fiscal Year, Big Rivers shall provide Century copies of the final Budget for the following year. Big Rivers intends to use reasonable commercial efforts to keep its expenses each year within such year's Budget, but makes no representation that keeping its expenses within such year's Budget will be commercially feasible.

(f) Big Rivers shall provide Century notice if:

(i) Big Rivers (A) incurs or plans to incur \$4 million of capital expenditures in any Fiscal Year in excess of the capital expenditures in the Budget for such Fiscal Year, or (B) thereafter incurs or plans to incur an additional \$3 million of capital expenditures in excess of the capital expenditures in the Budget for such Fiscal Year; or

(ii) Big Rivers (A) incurs or plans to incur operating expenses in any Fiscal Year aggregating 2.5% in excess of Big Rivers' total operating expenses in the Budget for such Fiscal Year, or (B) thereafter, incurs or plans to incur an additional 1.25% of such total operating expenses in the Budget, excluding in each case expenses for fuel, environmental compliance or purchased power.

At the request of Century, the Coordinating Committee shall meet to discuss the causes of such capital expenditures or operating expenses in excess of the budgeted amounts and, after meeting with the Coordinating Committee, if further requested, Big Rivers shall permit Century to make one presentation to Big Rivers' Board with respect thereto.

3.5 Plan of Reorganization. The Parties acknowledge and agree that nothing in the Century Retail Agreement, the Century Wholesale Agreement, this Agreement or any document or agreement relating thereto may be construed to amend, affirm, waive or otherwise alter the terms of Schedule 5.4(a) of the Big Rivers' plan of reorganization, as modified June 1, 1998, or any document or agreement relating thereto regarding the obligation of Big Rivers to serve Kenergy for the benefit of Century; *provided*, that Century and Big Rivers disagree, notwithstanding the Unwind Transaction, as to the obligation of Big Rivers, in the absence of a new or amended contract, to serve Kenergy for the benefit of Century when the Existing Century Agreement terminates or when the Century Retail Agreement terminates. The Parties acknowledge that clarity on this issue is desired by both Parties so that necessary and appropriate capital planning and decision-making can be undertaken. The Parties agree to endeavor in good faith to resolve this disagreement prior to 2015.

3.6 Century Credit Support. Century shall (i) if the rating of the unenhanced, unsecured debt obligation of Century Parent with Standard & Poor's is not "A+" or higher (and in addition, if Century Parent has such a rating from Moody's, that rating with Moody's is not "A1" or higher), provide and maintain credit support in the form of a letter of credit from a bank rated "A+" or higher, or other credit support acceptable to Big Rivers and Kenergy, in an amount equal to the amounts estimated by Big Rivers to be due to Big Rivers and Kenergy with respect to Century's obligations under the Century Retail Agreement for a period of two months, and any amount which Big Rivers estimates reasonably could be due with respect to taxes relating to

any sale of Energy pursuant to Section 4.13.3 as Economic Sales, Section 10.1 as Surplus Sales, Section 10.2 as Undeliverable Energy Sales or Section 10.3 as Potline Reduction Sales, in each case, of the Century Retail Agreement (“Potential Tax Liability”); and (ii) cause Century Parent to guarantee to Big Rivers and Kenergy payment and performance of all obligations of Century under the Century Retail Agreement, including Potential Tax Liability, and all obligations of Century under the other documents entered into by Century and its Affiliates in connection with the New Transaction pursuant to a Guarantee Agreement executed by Century Parent in favor of Big Rivers and Kenergy which shall be satisfactory in form and substance to Big Rivers (the “Century Guarantee”). At the request of Big Rivers, Century will maintain the Century Guarantee until closure of all applicable tax years of Big Rivers. At the request of Century, Big Rivers will provide Century with information as to the amount and calculation of the estimated Potential Tax Liability and reasonably detailed documentation in support thereof.

3.7 Transmission Upgrade. As soon as reasonably practicable, Big Rivers will develop, finance and construct improvements to its transmission facilities to permit Big Rivers to transmit to its border all Base Fixed Energy.

3.8 Proceedings Affecting Rates.

(a) The Parties acknowledge and agree that

(i) Big Rivers shall have the right to seek KPSC approval for changes to the Non-Smelter Member Rates, and FERC approval of changes to the OATT, from time to time, but Big Rivers shall not seek an increase in its base rates to take effect before January 1, 2010, excluding any roll-in to Big Rivers’ base rates of costs that would otherwise be recovered by the Environmental Surcharge or the FAC, and

(ii) Big Rivers will not seek to implement a wholesale rate reduction other than the Rebate to its Members under the procedures available in KRS 278.455 without the consent of Century;

*provided* that this commitment by Big Rivers will have no effect on the availability to Big Rivers’ Members of the procedures in KRS 278.455 to flow-through any wholesale rate decrease to the Non-Smelter Ratepayers.

(b) Century shall have the right to intervene and participate in any proceeding that may affect rates at the KPSC or FERC or before any other Governmental Authority. Neither Big Rivers nor Century will support or seek, directly or indirectly, from any Governmental Authority, including the KPSC, any challenge to or change in the rate formula set forth in the Century Wholesale Agreement or the Alcan Retail Agreement or other terms and conditions set forth therein, including the relationship of the Large Industrial Rate to amounts payable by Century pursuant to the Century Retail Agreement, except that any Party may initiate or intervene in a proceeding to (i) clarify, interpret or enforce the Century Wholesale Agreement or the Century Retail Agreement, or (ii) challenge the applicable rate for Transmission Services should those services be unbundled for purposes of calculating the Large Industrial Rate. For the avoidance of doubt, Century’s intervention and participation in a regulatory proceeding

involving cost of service issues relating to the rates of the Non-Smelter Ratepayers shall not be considered a challenge to the rate formula.

(c) If *Commonwealth of Kentucky ex rel. Gregory D. Stumbo, Attorney General v. Public Service Comm'n and Union Light, Heat and Power Co.*, Franklin Circuit Court, C.A. No. 06-CI-269, or any Applicable Law relating thereto restricts the amounts recovered under the FAC, Appendix A, or the Environmental Surcharge Rider, then Kenergy, Century, Big Rivers and, if the Alcan Retail Agreement is then in effect, Alcan, shall negotiate in good faith to amend this Agreement (and other agreements entered into in connection herewith) to restore the relative rights and economic benefits thereunder. If such parties are unable to reach an agreement on such amendments, then this Section 3.8 shall not restrict Big Rivers from seeking KPSC approval for an increase to its base rates or an amendment to the FAC, Appendix A, or the Environmental Surcharge Rider.

(d) Nothing in this Agreement shall limit or expand the jurisdiction of the KPSC or the FERC over Big Rivers or the rates, terms and conditions of electric service to Century pursuant to the Century Retail Agreement or otherwise.

(e) Big Rivers will provide Century a copy of any filing with the KPSC or FERC that seeks a change in Big Rivers' tariff or relief authorized by KRS 278.020, KRS 278.030, KRS 278.212, KRS 278.218, KRS 278.300, KRS 278.183 or 807 KAR 5:056.

3.9 Communications; Request for Meetings. Big Rivers will establish with Century procedures for the regular dissemination of information relating to the operational and financial performance of Big Rivers. If Century believes Big Rivers has or may incur unreasonable costs or expenses, Century may request in writing a meeting with Big Rivers' management to discuss such costs or expenses. Such meeting will take place within ten Business Days of the request but shall not be held more frequently than once per fiscal quarter. Nothing in this Section shall obligate Big Rivers to take any action as a result of such meeting.

### 3.10 Depreciation Rates.

(a) Big Rivers shall not modify its depreciation rates without the approval of or consent or acceptance by the KPSC or, if the KPSC no longer has jurisdiction over Big Rivers, by any other Governmental Authority having jurisdiction over such modification. Big Rivers will provide Century reasonable notice of the implementation of such modification together with reasonably detailed documentation describing such modification and an opportunity to discuss such modification with Big Rivers' management prior to the filing of an application for approval of the modification of such depreciation rates with the KPSC or other Governmental Authority having jurisdiction.

(b) Big Rivers shall not initiate a request to a Governmental Authority or RUS for changes to its depreciation rates that would be projected to cause the weighted average depreciation rates for the period from the *Effective Date through December 31, 2016*, to exceed the weighted average depreciation rates for the same period set forth in the Model; *unless* (1) Big Rivers determines in good faith, based on discussions with a nationally recognized statistical rating organization and after consultation with Century, that it is necessary to make

such a modification to its depreciation rates in order to maintain an investment grade credit rating, (2) a Governmental Authority with jurisdiction or RUS directs Big Rivers to modify its depreciation rates, or (3) Big Rivers' independent auditors assert that they would not be able to deliver an unqualified audit opinion with respect to Big Rivers' financial statements as a result of Big Rivers' failure to seek or implement a modification of its depreciation rates. For purposes of this clause (b), Big Rivers' weighted average depreciation rates for the period from Effective Date through December 31, 2016, shall be the sum of its total depreciation expense for each year for that same period over the sum of the average gross depreciable plant for each year over that same period, with appropriate adjustments for partial years.

3.11 Audit Rights. Big Rivers will permit Century to audit, upon reasonable notice, at its own expense, at a mutually agreeable time, all information in the possession of Big Rivers relating to its service under the Century Wholesale Agreement to Kenergy for resale to Century, including scheduled deliveries, meter records, billing records, records related to payments to Big Rivers and such other documents related to payment for and determination of the amount of electric energy, Transmission Services and other related services supplied by Big Rivers and delivered to Kenergy for resale and delivery to Century. Big Rivers shall retain all documentation applicable to service to Kenergy under the Century Wholesale Agreement for a period of three years. Nothing in this Section 3.11 shall obligate Big Rivers to provide attorney-client privileged information.

3.12 Bylaw Amendments.

(a) Subject to Section 3.12(b) and (c), Big Rivers agrees not to amend its Bylaws after the adoption of the amendment set forth in Section 13.4 of the Century Wholesale Agreement in a manner that adversely affects the rights of Century to receive patronage capital or other distributions from Big Rivers through Kenergy without the prior consent of Century.

(b) Notwithstanding Section 3.12(a), nothing in this Section 3.12 shall restrict Big Rivers' ability to amend its Bylaws (i) without the consent of Century if Big Rivers gives notice to Century of the proposed Bylaw amendment, together with a copy of such proposed amendment, and Century does not object to the proposed amendment within 60 days after the notice is delivered, (ii) with the consent of Century during the Consent Period (as defined in Section 3.12(c)), or (iii) without the consent of Century following the Consent Period.

(c) The provisions of this Section 3.12 (and the obligations of the parties to notify the other Party of any change in its address pursuant to Section 7.4 hereof) shall survive for 10 years after the end of the Service Period (the "Consent Period") regardless of the termination or expiration of this Agreement.

3.13 Operation of System. Big Rivers shall operate its electric generation and transmission system for the mutual benefit of the Members and patrons consistent with Prudent Utility Practices, and will apply the same standards to operating decisions that may affect the Monthly Charge. Big Rivers will not use the payment obligation of Century under Section 4.7 (TIER Adjustment Charge) of the Century Retail Agreement as the substantive basis for making an operating decision.

### 3.14 Property Rights.

(a) Big Rivers' nonpatronage net earnings, after offset (if applicable) by any available tax loss carryforward amounts attributable to a deficit in nonpatronage net earnings from prior taxable years, shall, if positive, be retained by Big Rivers as a permanent source of equity and, if negative, shall be carried forward to be applied as an offset against future positive nonpatronage net earnings.

(b) Upon liquidation, the assets of Big Rivers shall be distributed in the following order: (i) all debts and obligations of Big Rivers shall be paid in accordance with lawful priorities, (ii) each Member's or other patron's capital account balance shall be paid without priority on a *pro rata* basis until all such capital accounts (as determined subsequent to adjusting such accounts by allocations of patronage net earnings for the year of liquidation exclusive of any gain arising from the liquidation) have been reduced to zero, and (iii) any remaining assets of Big Rivers shall be paid to the current and former Members or other patrons of Big Rivers based upon the amount of their historic patronage with Big Rivers measured by kilowatt-hours purchased from Big Rivers over the life of Big Rivers. The life of Big Rivers is defined to begin at the date Big Rivers was formed in 1961 and to continue uninterrupted through Big Rivers' bankruptcy reorganization to the date of liquidation.

(c) The provisions of this Section 3.14 shall survive the expiration or earlier termination of this Agreement.

3.15 Big Rivers Capitalization Policy. To the extent consistent with Accounting Principles, Applicable Law and guidance of applicable Governmental Authorities or RUS, Big Rivers shall capitalize expenditures for the replacement of the items related to Big Rivers' generation facilities identified in the list of the retirement units set forth in the Schedule 3.15.

3.16 Purchased Power Regulatory Account. Big Rivers will request KPSC to and, if the KPSC approves, shall (a) establish a regulatory account containing purchased power costs to be recovered by Big Rivers from the Members with respect to sales to their Non-Smelter Ratepayers in an amount equal to the sum of the Non-FAC Purchased Power Adjustment Factor in each month multiplied by the amount of Energy delivered in each month to the Members for such sales; and (b) establish the method of recovery of such amounts from Non-Smelter Ratepayers at each general rate adjustment case.

3.17 Model. It is understood and agreed that (i) all financial and production cost models ("Model") including the Model filed with the KPSC in connection with the application for approval of the Unwind Transaction and the New Transaction have been developed solely by Big Rivers to provide its best estimate of the future operations of Big Rivers after the Unwind Transaction is consummated, and (ii) Century by executing this Agreement and consummating the Unwind Transaction is not indicating its agreement or disagreement with the forecasted work plans, assumptions or specific expenditures embedded in the Model.

## 4. Coordinating Committee.

4.1 The parties have agreed to the establishment of a committee (“Coordinating Committee”), consisting of representatives of the Members’ chief executive officers, Century, Alcan, and Big Rivers management, organized for the purpose of reviewing, analyzing and discussing information relating to Big Rivers’ operational and financial performance. The Coordinating Committee shall meet at least once each calendar quarter.

4.2 If the Coordinating Committee does not exist or does not function with the subject matter of this Section 4, then Big Rivers shall have the same obligations as to the Smelters, jointly.

4.3 At a minimum of once a year and at such other times as the Parties may agree, the members of the Coordinating Committee will establish a meeting with Big Rivers’ board members. These meetings will be informal and the purpose of such meetings will be to discuss Big Rivers’ operating and financial performances and plans, and issues affecting the electric utility and smelting industry operations.

4.4 The information to be discussed by the Coordinating Committee shall include (i) analysis criteria and procedures for evaluating plans, procedures, expenditures and maintenance programs, (ii) budgets, (iii) operations and capital expenditures, (iv) fuel procurement or supply, (v) comparison of actual performance to the Budget and an explanation of variances to the Budget, (vi) load forecasts and integrated resource plans, (vii) depreciation studies, proposed changes in depreciation rates and associated proposed changes in electric rates, and (viii) other activities, such as the timing and terms of refinancing the RUS debt or whether to join an independent transmission system operator, that may impact Big Rivers’ operational and financial performance. Big Rivers shall provide the Coordinating Committee members any reasonably requested supporting information relating to the items discussed.

4.5 The activities of the Coordinating Committee shall be a standing report item on the agenda of the monthly meeting of the Big Rivers Board of Directors. From time to time, Century’s representatives may make a request to the chairman of the Big Rivers Board of Directors that they be allowed to participate with management in making such report.

## 5. Cure Rights.

5.1 Notwithstanding any provision contained in the Century Retail Agreement that affords Century the right to terminate the Century Retail Agreement upon any breach or default by Kenergy thereunder, Century shall provide Big Rivers a reasonable opportunity, exercisable in Big Rivers’ sole discretion, to cure any such breach or default by Kenergy prior to exercising such termination rights, which opportunity shall extend, at a minimum, for a period of not less than 10 Business Days after the later of (i) the date of expiration of the applicable period of time (if any) available for a cure by Kenergy under the Century Retail Agreement, and (ii) the date on which notice of the breach or default by Kenergy is delivered by Century to Big Rivers. Century hereby consents to any attempt by Big Rivers to cure any breaches or defaults by Century under the Century Retail Agreement that may hereafter occur, provided, that Big Rivers does not materially interfere with Century’s attempts (if any) to so cure such breaches or defaults.



5.2 Notwithstanding any provision contained in the Century Wholesale Agreement that affords Big Rivers the right to terminate the Century Wholesale Agreement upon any breach or default by Kenergy thereunder, Big Rivers shall provide Century a reasonable opportunity, exercisable in Century's sole discretion, to cure any such breach or default by Kenergy prior to exercising such termination rights, which opportunity shall extend, at a minimum, for a period of not less than ten Business Days after the later of (i) the date of expiration of the applicable period of time (if any) available for a cure by Kenergy under the Century Wholesale Agreement, and (ii) the date on which notice of the breach or default by Kenergy is delivered by Big Rivers to Century. Big Rivers hereby consents to any attempt by Century to cure any breaches or defaults by Big Rivers under the Century Wholesale Agreement that may hereafter occur, provided, that Century does not materially interfere with Big Rivers' attempts (if any) to so cure such breaches or defaults.

6. Representations and Warranties.

6.1 Big Rivers. Big Rivers hereby represents and warrants to Century as follows:

(a) Big Rivers is an electric generation and transmission cooperative corporation duly organized and validly existing and in good standing under the laws of the Commonwealth of Kentucky, and has the power and authority to execute and deliver this Agreement and the Century Wholesale Agreement, to perform its obligations hereunder and thereunder, and to carry on its business as it is now being conducted and as it is contemplated hereunder to be conducted during the term hereof.

(b) Subject to Section 6.1(c), this Agreement, the Century Wholesale Agreement and other agreements entered into by Big Rivers in connection therewith constitute Big Rivers' valid and binding obligation enforceable against it in accordance with their terms, except as enforceability may be affected by bankruptcy, insolvency or other similar laws affecting creditors' rights generally and by general equitable principles. The execution, delivery and performance of this Agreement and the Century Wholesale Agreement by Big Rivers have been duly and effectively authorized by all requisite corporate action.

(c) As of the Effective Date, all consents, approvals, authorizations, actions or orders, including without limitation, those which must be obtained from Governmental Authorities and the RUS, required for its authorization, execution and delivery of, and for the consummation of the transactions contemplated by, this Agreement and the Century Wholesale Agreement have been obtained other than as may be required under Applicable Law to be obtained, given, accomplished or renewed at any time or from time to time, and which are routine in nature or which cannot be obtained, or are not normally applied for, prior to the time they are required and which Big Rivers has no reason to believe will not be timely obtained.

(d) Subject to Section 6.1(c), its execution and delivery of this Agreement and the Century Wholesale Agreement, its consummation of the transactions contemplated by this Agreement and the Century Wholesale Agreement, and its fulfillment of and compliance with the terms and provisions hereof and thereof do not conflict with or violate any judicial or administrative order, award, judgment or decree applicable to it, or conflict with

any of the terms, conditions or provisions of its Articles of Incorporation or Bylaws or any material instrument, mortgage, agreement, contract or restriction to which it is a party, or by which any of its properties are bound, or require the approval, consent or authorization of any federal, state or local court, or any of its creditors, or of any other Person, or give any party with rights under any such instrument, agreement, contract, mortgage, judgment, award, order or other restriction the right to terminate, modify or otherwise change its rights or obligations thereunder which has not been obtained.

6.2 Century. Century hereby represents and warrants to Big Rivers as follows:

(a) Century is a general partnership duly organized and validly existing and in good standing under the laws of the Commonwealth of Kentucky and is authorized to do business in the Commonwealth of Kentucky, and has the power and authority to execute and deliver this Agreement, to perform its obligations hereunder, and to carry on its business as it is now being conducted and as it is contemplated hereunder to be conducted during the term hereof.

(b) This Agreement, the Century Retail Agreement and other agreements entered into by Century in connection therewith constitute Century's valid and binding obligation enforceable against it in accordance with their terms, except as enforceability may be affected by bankruptcy, insolvency or other similar laws affecting creditors' rights generally and by general equitable principles. The execution, delivery and performance of this Agreement and the Century Retail Agreement by Century have been duly and effectively authorized by all requisite partner action.

(c) All consents, approvals, authorizations, actions or orders, including without limitation, those which must be obtained from governmental agencies or authorities, required for its authorization, execution and delivery of, and for the consummation of the transactions contemplated by, this Agreement and the Century Wholesale Agreement have been obtained.

(d) Its execution and delivery of this Agreement and the Century Retail Agreement, its consummation of the transactions contemplated by this Agreement and the Century Retail Agreement, and its fulfillment of and compliance with the terms and provisions hereof and thereof do not conflict with or violate any judicial or administrative order, award, judgment or decree applicable to it, or conflict with any of the terms, conditions or provisions of its partnership agreement or any material instrument, mortgage, agreement, contract or restriction to which it is a party, or by which any of its properties are bound, or require the approval, consent or authorization of any federal, state or local court, or any of its creditors, or of any other Person, or give any party with rights under any such instrument, agreement, contract, mortgage, judgment, award, order or other restriction the right to terminate, modify or otherwise change its rights or obligations thereunder which has not been obtained.

7. Miscellaneous.

7.1 No Affect on Rights or Defenses. Nothing in this Agreement shall require performance by a Party of any of its obligations under the Century Retail Agreement or the Century Wholesale Agreement, as applicable, if it may assert, as a defense to its non-performance, any defenses or excuses to such performance that may be available to it under the provisions of the Century Retail Agreement or the Century Wholesale Agreement, or under Applicable Law.

7.2 Entire Agreement. This Agreement, the Century Retail Agreement, the Century Wholesale Agreement and the other agreements and documents denoted on Schedule 6.2.3 of the Century Retail Agreement constitute the entire agreement of the Parties hereto with respect to the subject matter hereof and supersede all prior agreements, whether oral or written. This Agreement may be amended only by a written document signed by each of the Parties hereto. Each Party acknowledges that it has not relied upon any representations, statements or warranties of the other Party in executing this Agreement except for those representations and warranties expressly set forth in the foregoing documents.

7.3 Waiver. The waiver by either Party of any breach of any term, covenant or condition contained herein will not be deemed a waiver of any other term, covenant or condition, nor will it be deemed a waiver of an subsequent breach of the same or any other term, covenant or condition contained herein.

7.4 Notices. A notice, consent, approval or other communication under this Agreement must be delivered in writing, addressed to the Person to whom it is to be delivered, and must be (a) personally delivered to that Person's address (which will include delivery by a nationally recognized overnight courier service), or (b) transmitted by facsimile to that Person's address, with a duplicate notice sent by a nationally recognized overnight courier service to that Person's address. A notice given to a Person in accordance with this Section will be deemed to have been delivered (i) if personally delivered to a Person's address, on the day of delivery if such day is a Business Day, or otherwise on the next Business Day, or (ii) if transmitted by facsimile to a Person's facsimile number and a correct and complete transmission report is received, or receipt is confirmed by telephone, on the day of transmission if a Business Day, otherwise on the next Business Day; *provided, however*, that such facsimile transmission will be followed on the same day with the sending to such Person of a duplicate notice by a nationally recognized overnight courier to that Person's address. For the purpose of this Section, the address of a Party is the address set out below or such other address which that Party may from time to time deliver by notice to the other Party in accordance with this Section:

If to Big Rivers:           Big Rivers Electric Corporation  
  201 Third Street  
  Henderson, Kentucky 42420  
  Attn: President and CEO  
  Fax: (270) 827-2558

If to Century:               Century Aluminum Company  
  P.O. Box 500

State Route 271 North  
Hawesville, Kentucky 42348  
Attn: Plant Manager  
Fax: (270) 852-2882

With copy to: Century Aluminum Company  
2511 Garden Road  
Building A, Suite 200  
Monterey, CA 93940  
Attn: General Counsel  
Fax: (831) 642-9328

7.5 Dispute Resolution. If a dispute arises between the Parties concerning the terms or conditions of this Agreement, the duties or obligations of the Parties under this Agreement, or the implementation, interpretation or breach of this Agreement, either Party may request in writing a meeting between an authorized representative of the other Party to discuss and attempt to reach a resolution of the dispute. Such meeting will take place within ten Business Days or such shorter or longer time as agreed upon by the Parties of the request. Nothing in this Section shall toll or extend the cure period with respect to the failure by a Party to perform its obligations under this Agreement. Absent such resolution, the Parties may pursue all rights and remedies that they may have at law, in equity or pursuant to this Agreement subject to the limitations set forth in this Agreement to resolve that dispute. Notwithstanding the provisions of this Section each Party may at all times seek injunctive relief, where its delay in doing so could result in irreparable injury.

7.6 Assignments and Transfers. No Party shall assign any of its rights or obligations under this Agreement, whether by operation of law or otherwise, without the prior written consent of the other Party, *provided, however*, that no prior consent shall be required with respect to an assignment to any person who is a permitted assignee of Century pursuant to the Century Retail Agreement or a permitted assignee of Big Rivers pursuant to the Century Wholesale Agreement. Either Party may, without the approval of the other Party, assign this Agreement as collateral security or grant one or more mortgages (including one or more deeds of trust or indentures) on or security interests in its interest under this Agreement in connection with the general financing of its assets or operations.

7.7 Governing Law. This Agreement shall be interpreted, governed by and construed under the laws of the Commonwealth of Kentucky, without regard to its conflicts of law rules.

7.8 Jurisdiction. The Parties hereby agree that the courts of the Commonwealth of Kentucky will have exclusive jurisdiction over each and every judicial action brought under or in relationship to this Agreement, *provided* that the subject matter of such dispute is not a matter reserved by law to the KPSC, or to the U.S. federal judicial system (in which event exclusive jurisdiction and venue will lie with the U.S. District Court for the Western District of Kentucky), and the Parties hereby agree to submit to the jurisdiction of Kentucky courts for such purpose. Venue in state court actions will be in the Henderson Circuit Court as the court in which venue will lie for the resolution of any related disputes under this Agreement.

Nothing in this paragraph prohibits a Party from referring to FERC or any other Governmental Authority any matter properly within its jurisdiction.

7.9 Good Faith Efforts. The Parties agree that each will in good faith take all reasonable actions within their reasonable control as are necessary to permit the other Party to fulfill its obligations under this Agreement, the Century Wholesale Agreement and the Century Retail Agreement; *provided* that no Party will be obligated to expend money or incur material economic loss in order to facilitate performance by the other Party. Where the consent, agreement, or approval of either Party must be obtained hereunder, such consent, agreement or approval may not be unreasonably withheld, conditioned, or delayed unless otherwise provided herein. Where either Party is required or permitted to act or fail to act based upon its opinion or judgment, such opinion or judgment may not be unreasonably exercised. Where notice to the other Party is required to be given herein, and no notice period is specified, reasonable notice shall be given.

7.10 Successors and Assigns. This Agreement shall be binding upon, and shall inure to the benefit of and be enforceable by, the Parties and their respective successors and permitted assigns.

7.11 Headings. The headings contained in this Agreement are solely for convenience and do not constitute a part of the agreement between the Parties, nor should such headings be used to aid in any manner in the construction of this Agreement.

7.12 Third-Party Beneficiaries. Nothing in this Agreement may be construed to create any duty to, or standard of care with reference to, or any liability to, or any benefit for, any person not a Party to this Agreement.

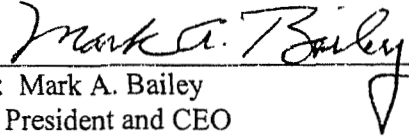
7.13 Kenergy Obligations Separate. Nothing contained in this Agreement shall obligate Century or Big Rivers for any obligations or liabilities of Kenergy, whether under or pursuant to the Century Retail Agreement, the Century Wholesale Agreement or otherwise.

7.14 No Power Sales Commitment. The Parties acknowledge that Big Rivers and Kenergy intend to enter into the Century Wholesale Agreement and Century and Kenergy intend to enter into the Century Retail Agreement which agreements contain the terms and conditions setting forth the wholesale sale of power by Big Rivers and the purchase of such power by Kenergy, and the corresponding retail sale of such power by Kenergy and the purchase of such power by Century. Nothing contained in this Agreement shall be deemed to be or create an agreement or commitment of Big Rivers to sell to Century, or an agreement of Century to purchase from Big Rivers, any electric energy or related services.

IN WITNESS WHEREOF, this Agreement is hereby executed as of the day and year first above written.

BIG RIVERS ELECTRIC CORPORATION

By:



Name: Mark A. Bailey

Title: President and CEO

CENTURY ALUMINUM OF KENTUCKY  
GENERAL PARTNERSHIP

By:

\_\_\_\_\_  
Name:

Title:

IN WITNESS WHEREOF, this Agreement is hereby executed as of the day and year first above written.

BIG RIVERS ELECTRIC CORPORATION

By:

\_\_\_\_\_  
Name:

Title:

CENTURY ALUMINUM OF KENTUCKY  
GENERAL PARTNERSHIP

By:

*Matt Powell*  
\_\_\_\_\_  
Name: *MATT POWELL*

Title: *Vice President*

**Schedule 3.15**

[Schedule 3.15 of the Century Coordination Agreement is identical to Schedule 3.15 of the Alcan Coordination Agreement. Big Rivers has not duplicated that schedule here.]





**COMMONWEALTH OF KENTUCKY**  
**BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY**

**In the Matter of:**

**APPLICATION OF BIG RIVERS            )**  
**ELECTRIC CORPORATION FOR A        )**        **Case No. 2011-00036**  
**GENERAL ADJUSTMENT IN RATES    )**  
**)**

**REBUTTAL TESTIMONY**  
  
**OF**  
  
**ALAN SPEN**  
**SENIOR DIRECTOR**  
**PUBLIC FINANCIAL MANAGEMENT, INC.**  
  
**ON BEHALF OF**  
  
**BIG RIVERS ELECTRIC CORPORATION**

**FILED: July 6, 2011**

**Case No. 2011-00036**  
**Exhibit 62**  
**Page 1 of 6**

1 **REBUTTAL TESTIMONY**  
2 **OF**  
3 **ALAN SPEN**  
4  
5

6 **Q. Please state your name, business address, and position.**

7 A. My name is Alan Spen. I am a Senior Director at Public Financial Management, Inc.  
8 (“PFM”). I am part of the firm’s Public Power Group. My primary responsibilities for  
9 PFM relate to our electric cooperative practice. My business address is 24 Hayes Hill  
10 Drive, Northport, New York 11768.

11 **Q. Did you submit direct testimony in this proceeding?**

12 A. Yes, in Exhibit 50 of the Application.

13 **Q. What is the purpose of your rebuttal testimony?**

14 A. The purpose of my rebuttal testimony is to react to the position of the Kentucky Industrial  
15 Utility Customers, Inc. (“KIUC”) on several issues. Specifically, I offer my opinion on  
16 the likely effect on Big Rivers Electric Corporation’s (“Big Rivers”) financial condition  
17 of the rate adjustments proposed by the KIUC witnesses.

18 **Q. What is the basis for your rebuttal testimony?**

19 A. I am relying on Big Rivers’ witnesses for financial data and analysis. I am providing my  
20 own opinion based on the facts presented by Big Rivers.

21 **Q. The KIUC witnesses suggest that Big Rivers will have sufficient equity under their**  
22 **proposal. Is equity to total capitalization an important metric for credit rating**  
23 **agencies in evaluating generation and transmission (“G&T”) cooperatives?**

24 A. Yes. As I stated in my direct testimony at page 10, “The primary financial measures used  
25 by the rating agencies are: Debt Service Coverage (“DSC”), Times Interest Earned Ratio

1 (“TIER”), Equity to Total Capitalization, and Financial Liquidity.” Equity is one of the  
2 four primary financial measures used by credit rating agencies in evaluating the  
3 creditworthiness of electric cooperatives.

4 **Q. The KIUC witnesses suggest that Big Rivers does not need any more equity than**  
5 **other G&T cooperatives. Do you agree?**

6 A. No. Big Rivers’ financials require more equity than a typical G&T cooperative. As I  
7 further stated at page 10 of my direct testimony, “In the case of Big Rivers, given its past  
8 financial difficulties, the high reliance on two larger smelters and PSC oversight, we  
9 believe that, among other things, Big Rivers needs to demonstrate a higher level of  
10 financial protection than other G&Ts....”

11 **Q. Is this need for Big Rivers to have a higher percentage of equity than other G&Ts**  
12 **reflected in Big Rivers’ credit ratings?**

13 A. Yes. The three ratings agencies -- Moody’s, Standard and Poor’s, and Fitch -- have all  
14 given Big Rivers investment grade ratings. However, two of the three investment grade  
15 ratings are at the lowest level. For Big Rivers, strong financial metrics, including healthy  
16 equity to total capitalization, is obviously a serious issue for the credit rating agencies, as  
17 reflected in its below average credit ratings.

18 **Q. In your direct testimony you stated, at page 9, that Big Rivers’ “lack of a longer-**  
19 **term positive track record and the continued risks associated with the heavy**  
20 **reliance on a limited number of major power customers with generally weak**  
21 **contractual commitments, likely makes it problematic for the rating agencies to**  
22 **adjust credit ratings upward in the very near term.” Is that still your opinion?**

1 A. Yes. Big Rivers will be unlikely to improve its credit ratings in the near future even if it  
2 maintains its current level of equity.

3 **Q. In your direct testimony, at page 10, you also opined that Big Rivers needs to**  
4 **demonstrate a “higher level of financial protection than other G&Ts. . . .” Is that**  
5 **still your view?**

6 A. Yes. Big Rivers has had a history of financial difficulties and is highly dependent on two  
7 industrial customers: the Smelters. Big Rivers requires a higher level of equity than  
8 other G&Ts in order to maintain its investment grade credit ratings.

9 **Q. Has your view that Big Rivers needs to demonstrate a higher level of financial**  
10 **protection than other G&Ts been confirmed since you filed your direct testimony in**  
11 **this proceeding?**

12 A. Yes. My evaluation and testimony, as well as the prior statements and credit ratings by  
13 the rating agencies, were confirmed as recently as June 2011 at the Forum of the National  
14 Rural Utilities Cooperative Finance Corporation in San Francisco. A representative of  
15 Standard and Poor’s, David Bodeck, used Big Rivers as an example of why under some  
16 circumstances a cooperative G&T “needs more financial cushion.” He noted that Big  
17 Rivers’ issues include its heavy concentration of aluminum smelter load, and added risk  
18 resulting from its regulation by the state public service commission.

19 **Q. The KIUC witnesses also suggest that the TIER adjustment mechanism under the**  
20 **Smelter Agreements should be set at the top of the bandwidth, rather than at the**  
21 **midpoint, as proposed by Big Rivers. Is the TIER adjustment mechanism**  
22 **important to the rating agencies?**

1 A. Yes. Level of TIER (including the flexibility to adjust financial coverage) is one of the  
2 four primary financial measures used by the credit rating agencies, as I stated earlier. Big  
3 Rivers' TIER Adjustment clause in its smelter-related contracts provides an automatic  
4 mechanism to keep its contract TIER at 1.24. I believe that mechanism provides TIER  
5 stability that favorably impresses the ratings agencies. If that benefit of the TIER  
6 Adjustment mechanism is rendered inoperable by assuring that it cannot supply TIER  
7 support, that takes away from the positive aspect of the mechanism, and exacerbates  
8 existing issues about regulation of Big Rivers' rates. I can assure you that the credit  
9 rating agencies are very sensitive to any circumstance that may affect a G&T  
10 cooperative's TIER and coverage results.

11 **Q. In your direct testimony, at page 14, you stated, "Without the full rate increase**  
12 **requested by Big Rivers, Big Rivers' financial ratios would decline, and it may lose**  
13 **one or more of its investment grade credit ratings. . . ." In your opinion, would the**  
14 **rate proposal by KIUC in this case be sufficient to preserve Big Rivers' investment**  
15 **grade credit rating?**

16 A. No. I strongly believe that Big Rivers needs the full amount of the rate relief it has  
17 requested in order to preserve its investment grade credit ratings. Given the high reliance  
18 on a few large industrial customers, the wide variation in amount and price of off-system  
19 sales and the short operating history of Big Rivers since the closing of the Unwind  
20 Transaction, ample rate relief is a necessity.

21 **Q. If Big Rivers does not maintain at least two investment grade ratings, would that**  
22 **likely have a negative effect on Big Rivers' ability to access the credit markets?**

1 A. Yes. The capital markets and investors place great weight on an issuer's creditworthiness  
2 and ratings.

3 **Q. Big Rivers has stated that it would have to defer generation plant maintenance**  
4 **outages to meet its Margins for Interest Ratio ("MFIR") if it receives less revenue**  
5 **than it has requested, as the KIUC witnesses have proposed. In fact, Big Rivers is**  
6 **already deferring generation plant maintenance outages in anticipation that**  
7 **deferring expenditures will be required to meet minimum MFIR requirements in its**  
8 **credit agreements. Could deferring maintenance to meet MFIR have an adverse**  
9 **effect on Big Rivers' credit ratings?**

10 A. In my opinion, regularly deferring generator maintenance expenditures to meet MFIR  
11 would definitely be a negative factor in the credit rating process. I do not believe the  
12 ratings agencies would look favorably on a G&T cooperative that must regularly defer  
13 scheduled maintenance on its generators just to achieve its minimum credit metrics.

14 **Q. Could deferring generation plant maintenance outages to meet MFIR have an**  
15 **adverse effect on Big Rivers' ability to refinance its existing debt?**

16 A. Yes. For the same reasons that credit ratings agencies would take a dim view of such  
17 practices, deferring maintenance on generation assets could definitely affect investor  
18 confidence in Big Rivers. I would expect that this maintenance deferral practice by Big  
19 Rivers will have to be disclosed to potential investors in Big Rivers' offering statement,  
20 and that it could impact Big Rivers' financing costs, and possibly limit the number of  
21 buyers willing to invest in Big Rivers' bonds.

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

23 A. Yes, it does.

**COMMONWEALTH OF KENTUCKY**  
**BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY**

**In the Matter of:**

<b>APPLICATION OF BIG RIVERS ELECTRIC CORPORATION FOR A GENERAL ADJUSTMENT IN RATES</b>	) ) ) ) )	<b>Case No. 2011-00036</b>
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**REBUTTAL TESTIMONY**  
  
**OF**  
  
**JOHN WOLFRAM  
SENIOR CONSULTANT  
THE PRIME GROUP, LLC**  
  
**ON BEHALF OF**  
  
**BIG RIVERS ELECTRIC CORPORATION**

**FILED:        July 6, 2011**



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**REBUTTAL TESTIMONY  
OF  
JOHN WOLFRAM**

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1 **REBUTTAL TESTIMONY**

2 **OF**  
3 **JOHN WOLFRAM**

4  
5 **I. INTRODUCTION**

6  
7 **Q. Please state your name and business address.**

8 A. My name is John Wolfram and my business address is The Prime Group, LLC, 6001  
9 Claymont Village Drive, Suite 8, Crestwood, Kentucky, 40014.

10 **Q. By whom are you employed?**

11 A. I am a Senior Consultant with The Prime Group, LLC, a firm located in Crestwood,  
12 Kentucky, providing consulting services in the areas of utility rate analysis, cost of  
13 service, rate design and other utility regulatory matters.

14 **Q. On whose behalf are your testifying?**

15 A. I am testifying on behalf of Big Rivers Electric Corporation (“Big Rivers”).

16 **Q. Did you submit direct testimony in this proceeding?**

17 A. Yes, as Big Rivers’ Application Exhibit 51.

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

19 A. The purpose of my rebuttal testimony is to update the Revenue Requirements for Big  
20 Rivers based upon the evidence in the record at this juncture and to rebut the testimony  
21 of Lane Kollen on behalf of the Kentucky Industrial Utility Customers, Inc. (“KIUC”)  
22 regarding Big Rivers’ proposed pro forma adjustments for levelized production O&M  
23 expenses and the amortization of the Midwest Independent Transmission System  
24 Operator, Inc. (“Midwest ISO”) case expenses.

25 **Q. Do you sponsor any exhibits to your testimony?**

1 A. Yes. I have prepared the following exhibits to my prepared testimony:

2 Exhibit Wolfram Rebuttal-1 – Reconciliation of Revenue Requirements

3 Exhibit Wolfram Rebuttal-2 – Updated Revenue Requirements Analysis

4

5 **II. UPDATED REVENUE REQUIREMENT**

6

7 **Q. Please describe Exhibit Wolfram Rebuttal-1 and its purpose.**

8 A. Exhibit Wolfram Rebuttal-1 is a reconciliation of the test year revenue requirements  
9 originally filed in this proceeding and the updated revenue requirement included in my  
10 testimony. The exhibit shows the originally-filed revenue deficiency, the particular pro  
11 forma adjustments that Big Rivers is proposing to revise, and the updated amount for  
12 the total test year revenue deficiency.

13 **Q. Please describe Exhibit Wolfram Rebuttal-2 and its purpose.**

14 A. Rebuttal Exhibit Wolfram-2 shows the Big Rivers electric revenue requirement for the  
15 twelve months ended October 31, 2010. This exhibit is an update to that originally  
16 filed in my direct testimony as Exhibit Wolfram-2, page 1 of 30. The exhibit shows the  
17 per books test year revenues and expenses, and then lists the pro forma adjustments to  
18 those test year levels. The exhibit shows the Adjusted Net Margin (Deficit) resulting  
19 from the total per books and adjustments on page 1. The calculation of the revenue  
20 deficiency is provided on page 2. This calculation has been revised to reflect changes  
21 in the calculation of Conventional TIER stemming from corrections to interest on long-  
22 term debt and interest income described by Mr. Hite in response to Item KIUC 2-27  
23 and in his rebuttal testimony.

1 **Q. How does Exhibit Wolfram Rebuttal-2 broadly compare to Exhibit Wolfram-2**  
2 **filed with Big Rivers' Application?**

3 A. Exhibit Wolfram Rebuttal-2 lists all of the pro forma adjustments that were originally  
4 proposed by Big Rivers in Exhibit Wolfram-2, with certain revisions stemming from  
5 the discovery and intervenor testimony to date in this proceeding. In other words, this  
6 exhibit shows the pro forma adjustments, revenue requirement, and revenue deficiency  
7 that Big Rivers considers to be correct based on the most recent available data in the  
8 case.

9 **Q. What is the updated revenue deficiency for Big Rivers in this case?**

10 A. The updated revenue deficiency for Big Rivers is \$39,200,924. This represents a  
11 decrease of \$752,002 from the revenue deficiency of \$39,952,927 originally included in  
12 Big Rivers' Application. The change is driven by updates to three of the pro forma  
13 adjustments proposed by Big Rivers.

14  
15 **III. PRO FORMA ADJUSTMENTS**

16  
17 **Q. For which pro forma adjustments do the amounts differ in this exhibit than the**  
18 **amounts originally filed by Big Rivers?**

19 A. The pro forma adjustments that differ from those in the original filing are:

20	Reference Schedule 2.07	Labor & Labor-Related Overheads
21	Reference Schedule 2.08	Interest on Construction Work In Progress
22	Reference Schedule 2.14	Midwest ISO Expenses

1 **Q. Are there other adjustments addressed by the KIUC that are not reflected in the**  
2 **updated revenue deficiency in Exhibit Wolfram Rebuttal-2?**

3 A. Yes. Big Rivers does not accept KIUC's position on any other proposed pro forma  
4 adjustments. Most of these are addressed in the rebuttal testimony of Mr. Hite, Mr.  
5 Berry, and Mr. Seelye. I address two in my testimony, as follows:

6 Reference Schedule 2.10 Levelized Production O&M Expenses

7 Reference Schedule 2.21 Midwest ISO Case Expenses

8

9 ***A. Reference Schedule 2.07 – Labor and Labor-related Overheads***

10 **Q. Please describe the proposed revision to Reference Schedule 2.07, the adjustment**  
11 **to Labor and Labor-related Overheads.**

12 A. The pro forma adjustment for Labor and Labor-related Overheads is revised to reflect  
13 the removal from the originally-proposed adjustment of the expenses associated with  
14 capitalized labor. This is described in the rebuttal testimony of Mr. Hite. The revision  
15 reduces the originally-proposed adjustment by \$174,679, which reduces the Big Rivers  
16 revenue deficiency by that same amount.

17

18 ***B. Reference Schedule 2.08 – Interest on Construction Work In Progress***

19 **Q. Please describe the proposed revision to Reference Schedule 2.08, the adjustment**  
20 **to interest capitalized on Construction Work in Progress.**

21 A. In its Application, Big Rivers sought current recovery of interest capitalized on  
22 Construction Work In Progress ("CWIP"). This was reflected in Reference Schedule  
23 2.08 as an increase in the revenue requirement (and thus in the revenue deficiency) of

1 \$515,767, which was the amount of interest capitalized in the test year. At this time,  
2 however, Big Rivers proposes to forego the increase in revenue requirement associated  
3 with Reference Schedule 2.08.

4 **Q. Does Big Rivers agree with Mr. Kollen’s position on whether the recovery of**  
5 **interest capitalized on CWIP is appropriate?**

6 A. From a regulatory standpoint, Big Rivers disagrees with the view that the recovery of  
7 interest capitalized on CWIP is inappropriate. Such recovery is permissible in  
8 Kentucky, and results in lower rates over time. Big Rivers maintains that it may seek  
9 such recovery in the future. The Commission has authorized the current recovery of  
10 interest on CWIP for other utilities in Kentucky, including for East Kentucky Power  
11 Company, Louisville Gas and Electric Company, and Kentucky Utilities Company. As  
12 a matter of policy in the Commonwealth, this is allowable.

13 However, from a practical standpoint, Big Rivers agrees at least in part with Mr.  
14 Kollen’s response to the Commission Staff’s Initial Information Request to the KIUC,  
15 Item No. 14(a). Mr. Kollen correctly states that the recovery of interest on CWIP  
16 “exerts greater financial pressure on the utility.” His statement on page 11 line 6 that  
17 “the interest expense that otherwise would have been capitalized instead will directly  
18 reduce the Company’s margins” is also correct.

19 **Q. Why does Big Rivers propose to forego the recovery of interest capitalized on**  
20 **CWIP at this time?**

21 A. Simply put, the use of Interest Charged to Construction – Credit is more advantageous  
22 for Big Rivers at this time than the CWIP approach from the standpoint of enhancing  
23 margins and improving Big Rivers’ MFIR.

1 **Q. Please summarize the effect of Big Rivers' current position on this issue.**

2 A. The revision eliminates the originally-proposed adjustment of \$515,767, which reduces  
3 the Big Rivers revenue deficiency by that same amount.

4

5 **C. Reference Schedule 2.14 – Midwest ISO Expenses**

6 **Q. Please explain the adjustment to operating expenses shown in Reference Schedule**  
7 **2.14 of Exhibit Wolfram Rebuttal-2.**

8 A. This adjustment reflects the expenses associated with Big Rivers' membership in the  
9 Midwest ISO. Big Rivers explained in response to Item KIUC 2-39 that \$61,556 of  
10 Midwest ISO costs were included in the original determination of test year expenses.  
11 These expenses are non-recurring and should not be included in the revenue deficiency  
12 determination.

13

14 **D. Reference Schedule 2.10 – Levelized Production O&M Expenses**

15 **Q. Please explain the adjustment to operating expenses shown in Reference Schedule**  
16 **2.10 of Exhibit Wolfram Rebuttal-2.**

17 A. This adjustment reflects normalized production non-labor operations and maintenance  
18 expenses, excluding planned outage expense, as described in the direct testimony of  
19 Mr. Berry.

20 **Q. Does Mr. Kollen take issue with this proposed pro forma adjustment?**

21 A. On page 16 of his direct testimony, Mr. Kollen states, "The Company's proposal to  
22 include specific incremental maintenance expenses in addition to the test year expense  
23 in and of itself provides a significant and reasonable increase in the maintenance

1 expense” but goes on to object to the inclusion of inflation-related expenses associated  
2 with maintenance for the 2012 – 2014 time period. Furthermore, in response to the  
3 Commission Staff’s Initial Information Request to the KIUC, Item No. 15, Mr. Kollen  
4 “recognizes that there is a balance between rigid adherence to the cost structure in the  
5 historical test year and the need to provide revenue sufficient to cover the present and  
6 ongoing cost structure of the utility.”

7 **Q. Do you agree with Mr. Kollen?**

8 A. Mr. Kollen is correct that the specific maintenance expenses are reasonable, and that  
9 the balance he describes is an appropriate ratemaking consideration. However, Big  
10 Rivers contends that it is reasonable to include the inflation-related expenses in the pro  
11 forma adjustment.

12 **Q. Why is the pro forma adjustment, including inflation, reasonable for Big Rivers in  
13 this instance?**

14 A. As Mr. Kollen recognizes, there is a need to provide Big Rivers with sufficient revenue  
15 to cover the present and ongoing cost structure of the utility. The ability to cover  
16 ongoing costs is the critical consideration here.

17 First, one should examine this pro forma adjustment from a perspective that  
18 acknowledges the unique state in which Big Rivers finds itself at the present time.  
19 Recall that prior to the Unwind Transaction, Big Rivers’ generating assets were  
20 operated by affiliates of E.ON U.S., LLC, pursuant to lease agreements established in  
21 1998. The Unwind Transaction closed on July 16, 2009, and at that time Big Rivers  
22 resumed full control of the generation assets. Approximately four months later,  
23 November 1, 2009, marked the beginning of the 12 month test year utilized in this rate



1 case; the test year ended on October 31, 2010 and the case was filed on March 1, 2011.  
2 Throughout 2010, Big Rivers deferred substantial amounts of generating plant  
3 maintenance, as described by Mr. Berry in this proceeding. In light of this unique  
4 sequence of events, Big Rivers simply does not have the historical records necessary to  
5 develop the pro forma adjustment for Non-Outage O&M expenses using historical  
6 costs.

7 From a practical standpoint, Big Rivers is in a distinctive but difficult position.  
8 The maintenance that was deferred must be performed. The risk of Big Rivers not  
9 achieving the requirements of its debt covenants is significant. The historical data for  
10 the amount of unit maintenance that is required and that is representative on a  
11 prospective basis is not available. The costs associated with maintenance are subject to  
12 inflation. Big Rivers contends that these circumstances are exceptional and that the  
13 proposed pro forma adjustment (including the effect of inflation, which is determined  
14 in a conventional manner using publicly-available data from an independent source) is  
15 necessary to allow Big Rivers to operate its generating plants in a safe and reliable  
16 manner. For these reasons, the pro forma adjustment to reflect normalized production  
17 non-labor operations and maintenance expenses, excluding planned outage expenses,  
18 should be approved as filed.

19  
20 *E. Reference Schedule 2.21 – Midwest ISO Case Expenses*

21 **Q. Please explain the adjustment to operating expenses shown in Reference Schedule**  
22 **2.21 of Exhibit Wolfram Rebuttal-2.**

1 A. This adjustment reflects the amortization of costs incurred by Big Rivers during the test  
2 year associated with the *Application of Big Rivers Electric Corporation for Approval to*  
3 *Transfer Functional Control of its Transmission System to Midwest Independent*  
4 *Transmission System Operator, Inc.*, in Case No. 2010-00043 and FERC Docket Nos.  
5 ER11-15-000 and ER11-16-000. The costs associated with these proceedings are  
6 amortized over a three year period. This adjustment was prepared by Mr. Hite and was  
7 discussed in his Direct Testimony.

8 **Q. Does Mr. Kollen take issue with the proposed pro forma adjustment to amortize**  
9 **the costs of the Midwest ISO Case proposed by Big Rivers in this case?**

10 A. Yes. On page 12 of his direct testimony, Mr. Kollen objects to this pro forma  
11 adjustment.

12 **Q. Do you agree with Mr. Kollen?**

13 A. No. The amortization of this expense is reasonable and appropriate.

14 **Q. Why is the amortization of this expense reasonable?**

15 A. It is reasonable because such treatment is consistent with the Commission's practice of  
16 amortizing rate case expenses and other prudently incurred but extraordinary expenses  
17 over a three year period. As noted in Big Rivers' response to Item PSC 2-26, in Case  
18 No. 90-158, the Commission allowed LG&E to amortize certain "downsizing costs,"  
19 which were included in test-year expenses. In its Order on Rehearing in Case No. 90-  
20 158, the Commission recognized the material nature of the costs, the future benefits of  
21 making the expenditure, and the matching of the benefits with the costs. (See Order on  
22 Rehearing, dated September 30, 1991, at 14.) The Commission determined that it was  
23 appropriate to amortize certain downsizing costs, consisting of severance payments

1           offset by the gain on the pension annuities, over a three year period. (Id., at 15.) The  
2           criteria used by the Commission to allow amortization of LG&E's downsizing  
3           expenses are equally applicable to the Midwest ISO expenditures incurred by Big  
4           Rivers, which Big Rivers is proposing to amortize over three years. First, the  
5           \$1,602,777 in expenditures incurred in connection with the Midwest ISO case are  
6           material. Second, joining Midwest ISO is expected to result in future benefits to Big  
7           Rivers and its members. Third, amortizing these costs over the period between rate  
8           cases will provide for a reasonable matching of benefits of joining the Midwest ISO  
9           with the cost of the Midwest ISO case.

10   **Q.    Why is the use of a three year amortization period reasonable?**

11    A.    As noted in response to PSC 2-26, the premise that, on average, utilities file general  
12           rate applications once every three years is equally applicable to the costs associated  
13           with the Midwest ISO proceeding. Like the costs incurred for general rate cases or  
14           LG&E's downsizing expenses, the costs associated with the Midwest ISO proceeding  
15           were prudently incurred, provide ongoing benefits, and should be eligible for recovery.  
16           The proposed amortization period would permit the recovery of these costs over a three  
17           year period, after which the costs could be entirely removed from base rates in the next  
18           general rate case (which, consistent with the premise described above, would take place  
19           at that time). The amortization period of three years would allow for the full recovery  
20           of the Midwest ISO case costs between this rate case and the next rate case filing three  
21           years later.

22

1 **IV. CONCLUSION**

2

3 **Q. Do you have any closing comments?**

4 A. Yes. The current rates for Big Rivers do not provide sufficient revenues for achieving  
5 its MFIR requirement and indeed even for recovering its costs. For the twelve months  
6 ended October 31, 2010, Big Rivers has an updated revenue deficiency of \$39,200,924.

7 The Commission should approve rates in this proceeding that permit Big Rivers to  
8 collect its revenue requirement, including this entire amount.

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

10 A. Yes, it does.

**BIG RIVERS ELECTRIC CORPORATION**  
**12 Months Ended October 31, 2010**

**Reconciliation of Revenue Requirement**

Line No.	Description	Reference Schedule (1)	Big Rivers Original Amount (2)	Big Rivers Updated Amount (3)	Variance (4)
1	Filed Revenue Deficiency		\$ 39,952,927	\$ 39,952,927	\$ -
2					
3	<b>Adjustments</b>				
4	To annualize revenue & expenses for new industrial customer	2.01	\$ 39,145	\$ 39,145	\$ -
5	To adjust mismatch in fuel cost recovery	2.02	2,225,346	2,225,346	-
6	To eliminate Environmental Surcharge	2.03	633,559	633,559	-
7	To reflect temperature normalized sales volumes	2.04	(126,318)	(126,318)	-
8	To adjust for Non-FAC PPA	2.05	(427,156)	(427,156)	-
9	To reflect annualized depreciation expenses	2.06	(6,252,651)	(6,252,651)	-
10	To reflect increases in labor and labor overhead expenses	2.07	(624,894)	(450,215)	174,679
11	To reflect current interest on construction (CWIP)	2.08	(515,767)	-	515,767
12	To eliminate RRI Domtar Cogen Backup revenue & expenses	2.09	971,257	971,257	-
13	To reflect levelized production O&M expenses	2.10	(5,660,678)	(5,660,678)	-
14	To reflect levelized planned outage expenses	2.11	(2,726,965)	(2,726,965)	-
15	To reflect going forward IT support services	2.12	(292,194)	(292,194)	-
16	To reflect amortization of rate case expenses	2.13	(281,719)	(281,719)	-
17	To reflect Midwest ISO related expenses	2.14	(5,415,000)	(5,353,444)	61,556
18	To annualize interest on long-term debt	2.15	(70,408)	(70,408)	-
19	To reflect leased property (Soaper Building Rent)	2.16	128,368	128,368	-
20	To adjust for costs related to LEM Dispatch	2.17	936,815	936,815	-
21	To adjust for costs related to APM	2.18	(205,090)	(205,090)	-
22	To eliminate WKEC Lease Expenses	2.19	(149,673)	(149,673)	-
23	To eliminate WKEC Unwind-related Expenses (Non-Labor)	2.19	(2,357,097)	(2,357,097)	-
24	To eliminate WKEC Unwind-related Expenses (Labor-related)	2.19	7,476,583	7,476,583	-
25	To eliminate costs for SFPC membership	2.20	180,775	180,775	-
26	To adjust for Midwest ISO Case-related expenses	2.21	771,118	771,118	-
27	To adjust for Smelter TIER Adjustment Charge	2.22	(7,128,947)	(7,128,947)	-
28	To eliminate advertising, lobbying, donation and econ dev	2.23	507,216	507,216	-
29	To reflect going forward level of income taxes	2.24	(183,084)	(183,084)	-
30	To reflect going forward level of Outside Services	2.25	1,000,000	1,000,000	-
31	To reflect commitment to Energy Efficiency Programs	2.26	(1,000,000)	(1,000,000)	-
32	Total		\$ (18,547,460)	\$ (17,795,458)	\$ 752,002
33					
34	Difference in Total Pro Forma Adjustments		\$ -	\$ 752,002	\$ 752,002
35					
36	<b>Revenue Deficiency</b>		<b>\$ 39,952,927</b>	<b>\$ 39,200,925</b>	<b>\$ (752,002)</b>

BIG RIVERS ELECTRIC CORPORATION  
12 Months Ended October 31, 2010

Calculation of Revenue Requirement  
Based on Revenues and Expenses  
Revised

Line No.	Description	Reference Schedule (1)	Witness (2)	Revenue (3)	Expense (4)	Margin (Deficit) (5)
1	<b>Total Per Books</b>					
2	Total Operating Revenues & Patronage Capital			\$ 522,923,675	\$	\$ 522,923,675
3	Total Cost of Electric Service				\$ 527,945,092	(\$ 527,945,092)
4	Interest Income			401,668		401,668
5	Other Non-Operating Income (Net)			1,703,337		1,703,337
6	Other Capital Credits/Patronage Dividends			22,965		22,965
7	Extraordinary Items			(6,794,566)		(6,794,566)
8	Total Per Books			\$ 516,257,079	\$ 527,945,092	(\$ 9,688,013)
9						
10	<b>Adjustments</b>					
11	To annualize revenue & expenses for new industrial customer	2.01	Wolfram	149,752	110,607	39,145
12	To adjust mismatch in fuel cost recovery	2.02	Wolfram	(107,815,177)	(110,040,523)	2,225,346
13	To eliminate Environmental Surcharge	2.03	Wolfram	(22,834,232)	(23,467,791)	633,559
14	To reflect temperature normalized sales volumes	2.04	Seelye	(421,610)	(295,293)	(126,318)
15	To adjust for Non-FAC PPA	2.05	Wolfram	7,785,109	8,212,265	(427,156)
16	To reflect annualized depreciation expenses	2.06	Hite		6,252,651	(6,252,651)
17	To reflect increases in labor and labor overhead expenses	2.07	Hite		450,215	(450,215)
18	To reflect current interest on construction (CWIP)	2.08	Hite		(2,086,416)	971,257
19	To eliminate RRI Dornier Cogen Backup revenue & expenses	2.09	Hite	(1,115,159)		(5,660,678)
20	To reflect levelized production O&M expenses	2.10	Berry		5,660,678	(2,726,965)
21	To reflect levelized planned outage expenses	2.11	Berry		2,726,965	(292,194)
22	To reflect going forward IT support services	2.12	Hite		292,194	(281,719)
23	To reflect amortization of rate case expenses	2.13	Hite		281,719	(5,353,444)
24	To reflect Midwest ISO related expenses	2.14	Wolfram		5,353,444	(70,408)
25	To annualize interest on long-term debt	2.15	Hite		70,408	128,368
26	To reflect leased property (Soaper Building Rent)	2.16	Hite		(128,368)	936,815
27	To adjust for costs related to LEM Dispatch	2.17	Wolfram		(936,815)	(205,090)
28	To adjust for costs related to APM	2.18	Wolfram		205,090	(149,673)
29	To eliminate WKEC Lease Expenses	2.19	Hite	(149,673)		(2,357,097)
30	To eliminate WKEC Unwind-related Expenses (Non-Labor)	2.19	Hite	(2,357,097)		7,476,583
31	To eliminate WKEC Unwind-related Expenses (Labor-related)	2.19	Hite			180,775
32	To eliminate costs for SFPC membership	2.20	Hite			771,118
33	To adjust for Midwest ISO Case-related expenses	2.21	Hite		(180,775)	(7,128,947)
34	To adjust for Smelter TIER Adjustment Charge	2.22	Seelye	(7,128,947)		507,216
35	To eliminate advertising, lobbying, donation and econ dev	2.23	Hite		(507,216)	(183,084)
36	To reflect going forward level of income taxes	2.24	Hite		183,084	1,000,000
37	To reflect going forward level of Outside Services	2.25	Blackburn		(1,000,000)	(1,000,000)
38	To reflect commitment to Energy Efficiency Programs	2.26	Blackburn		1,000,000	2,045,750
39	To reflect interest on Long Term Debt adjustment	NA	Hite		(2,045,750)	(271,105)
40	To reflect interest income adjustment	NA	Hite	(271,105)		(16,020,814)
41	Total			(126,681,557)	(110,660,744)	\$
42						
43	Adjusted Net Margin (Deficit)			\$ 391,575,522	\$ 417,284,348	\$ (25,708,827)

BIG RIVERS ELECTRIC CORPORATION  
12 Months Ended October 31, 2010

Calculation of Revenue Requirement  
Based on Revenues and Expenses  
*Revised*

Line No.	Description	Reference	Amount
1	Contract TIER Target		1.24
2	Interest on Long Term Debt	Updated Statement	\$ 45,647,368
2a	Interest on Long Term Debt Adjustment	Updated Statement	\$ 2,045,750
2b	Interest on Long Term Debt Adjusted	Line 2 + Line 2a	\$ 47,693,118
3	Adjusted Net Margin(Deficit) before Conventional TIER	Page 1, Line 43	\$ (25,708,827)
4	Interest Income on Transition Reserve	Acct 419,040 Updated	\$ -
5	Adjusted Net Margin(Deficit) before Contract TIER	Line 3 - Line 4 - Line 2a	\$ (27,754,576.66)
6	Margins Required for Contract TIER	Line 2b x (Line 1 - 1)	\$ 11,446,348
7	Margins Required for Conventional TIER	Line 2a + Line 4 + Line 6	\$ 13,492,098
8	Revenue Deficiency for Contract TIER	Line 6 - Line 5	<u>\$ 39,200,924</u>
9	Contract TIER	1 + (Line 6 / Line 2b)	1.24
10	Conventional TIER	1 + (Line 7 / Line 2)	1.30

**BIG RIVERS ELECTRIC CORPORATION**  
**12 Months Ended October 31, 2010**

**Labor & Labor Overheads Expenses**

1	Proforma Year	68,534,218
2	Historical Year	<u>68,084,003</u>
3	Proforma Adjustment	450,215

Description: The proforma amount for labor/labor overheads includes employees of record as of December 31, 2010, excluding those on long-term disability (LTD) for whom replacements have been hired. This results in a total of 606 employees, 249 non-bargaining and 357 bargaining. As appropriate, base labor includes step increases and contract increases for the bargaining employees, and qualification increases for non-bargaining employees. Shift premiums were appropriately included. Overtime pay was based upon the amount currently expected for 2011. The most current information available was used to determine labor overhead cost (FICA, FUTA, SUTA, workers compensation, retirement/401(k), life, LTD, dental and medical, post-employment and post-retirement costs, including the most recent premium rates available, and the most recent FAS 87 and 106 estimates. No incentive pay or bonus pay is included in the proforma amount.

*Updated to remove \$1,047,200 of capitalized labor*



**BIG RIVERS ELECTRIC CORPORATION  
12 Months Ended October 31, 2010**

**Interest on Construction Work In Progress**

1	Proforma Year	(515,767)
2	Historical Year	<u>(515,767)</u>
3	Proforma Adjustment	0

Description: To reflect current interest on construction work in progress (CWIP)

*Updated to forego recovery of current interest on CWIP*

**BIG RIVERS ELECTRIC CORPORATION**  
**12 Months Ended October 31, 2010**

**Midwest ISO (Member) Cost**

1	Proforma Year	5,353,444
2	Historical Year	<u>0</u>
3	Proforma Adjustment	5,353,444

Description: Big Rivers integration into Midwest ISO took place on December 1, 2010. Big Rivers is now subject to the Midwest ISO's charges assessed under the Midwest ISO Tariff Schedules 10, 16 and 17.

*Updated to remove \$61,556.38 of non-recurring test year expense*

**COMMONWEALTH OF KENTUCKY**  
**BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY**

**In the Matter of:**

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

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)  
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**Case No. 2011-00036**

**REBUTTAL TESTIMONY**  
  
**OF**  
  
**ROBERT W. BERRY**  
**VICE PRESIDENT, PRODUCTION**  
  
**ON BEHALF OF**  
  
**BIG RIVERS ELECTRIC CORPORATION**

**FILED: July 6, 2011**

**Case No. 2011-00036**  
**Exhibit 64**  
**Page 1 of 6**

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**REBUTTAL TESTIMONY  
OF  
ROBERT W. BERRY**

7 **Q. Please state your name, business address, and position.**

8 A. My name is Robert W. Berry. I am employed by Big Rivers Electric Corporation (“Big  
9 Rivers”), 201 Third Street, Henderson, Kentucky 42420, as its Vice President of  
10 Production.

11 **Q. Did you submit direct testimony in this proceeding?**

12 A. Yes, as Big Rivers’ Application Exhibit 52.

13 **Q. Did you sponsor any pro forma adjustments in your direct testimony?**

14 A. Yes. I sponsored the proposed pro forma adjustments to test year Planned Outage  
15 expense and test year Non-Outage O&M expense.

16 **Q. Are you familiar with the testimony filed on behalf of Kentucky Industrial Utility  
17 Customers, Inc. (“KIUC”)?**

18 A. Yes. I have reviewed KIUC’s testimony, which includes KIUC’s proposed changes to  
19 Big Rivers’ rate request.

20 **Q. Did KIUC propose any changes to the pro forma adjustments you sponsored?**

21 A. KIUC’s only proposed change to Big Rivers’ production-related pro forma adjustments is  
22 the suggestion in Lane Kollen’s testimony to remove some of the inflation from the Non-  
23 Outage O&M expense for the years 2012-2014.

24 **Q. What is the purpose of your rebuttal testimony?**

25 A. The purpose of my rebuttal testimony is to explain the consequences of KIUC’s overall  
26 rate adjustment proposal and to respond to Mr. Kollen’s suggestion to remove some of  
the inflation included in the Non-Outage O&M adjustment.

1 **Q. What would be the consequences if the Commission were to adopt KIUC's proposed**  
2 **revenue increase?**

3 A. As explained in the Mr. Blackburn's rebuttal testimony, KIUC has proposed significant  
4 reductions to the Big Rivers rate request that total approximately \$21.274 million  
5 (\$39.953 million requested by Big Rivers compared to \$18.679 million proposed by the  
6 KIUC) less in revenue than what is needed for Big Rivers to meet the required credit  
7 metrics and maintain credit ratings as required in its long-term credit agreements. Under  
8 the KIUC scenario, the only available option for Big Rivers to meet its financial  
9 obligations would require Big Rivers to reduce or defer expenses by deferring  
10 maintenance on its generation and other assets. Thus, even if Big Rivers receives the full  
11 amount of its requested adjustments relating to maintenance costs, if it does not receive  
12 the full rate increase it is seeking (including the inflation included in the production-  
13 related pro forma adjustments), the only option available to Big Rivers to meet its  
14 financial obligations would be to reduce or defer expenses, including plant maintenance  
15 and transmission expenses.

16 **Q. Please describe the impacts of the KIUC proposal on the Big Rivers plants.**

17 In 2010 and 2011 combined, Big Rivers' deferred scheduled outages deferred O&M  
18 expenses of approximately \$15.5 million and Capital expenses of approximately \$18.8  
19 million. While the level of spending in those years was adequate on a short-term basis  
20 due to the level of expenditures in prior years, from which Big Rivers has benefited, it is  
21 imprudent on a longer-term basis.

22 The industry standard for outage frequency is to perform unit scheduled  
23 maintenance outages every 18 to 24 months. The downturn in the economy and the

1 lower than expected off-system sales prices since the closing of the Unwind Transaction  
2 required Big Rivers to defer outages well beyond what would be prudent on a longer-  
3 term basis so that it could meet the Margins For Interest Ratio (“MFIR”) required in its  
4 loan covenants. As previously noted, if Big Rivers is not granted its entire pro forma  
5 adjustment, it will be forced to continue to defer the scheduled outages in anticipation  
6 that deferring such expenditures will be required to meet its minimum MFIR  
7 requirement. However, the previous outage deferrals have pushed an enormous amount  
8 of scheduled outages into 2012 and have caused the current outage frequency of the Big  
9 Rivers units to range from 28 to 53 months, as shown in Exhibit Berry Rebuttal-1. This  
10 has essentially eliminated the ability to defer additional scheduled outages. I am very  
11 familiar with the Big Rivers generating units, having over thirty years of experience in  
12 the system, including being Plant Manager at both the Coleman and Sebree stations and  
13 being Vice President of Production since 2009.

14 If Big Rivers continues to defer scheduled outages, the condition of the generating  
15 units will deteriorate, Big Rivers will experience increased forced outages, and repair  
16 costs will increase since they will be performed more on an emergency basis than on a  
17 planned basis. And since forced outages cannot be planned to take advantage of market  
18 conditions, Big Rivers’ purchased power costs will increase and its ability to generate off  
19 system sales will decrease. This will be devastating to Big Rivers’ financial condition  
20 since Big Rivers’ margins are derived exclusively from its off-system sales. Thus,  
21 continuing to defer maintenance activities will have an adverse impact on reliability and  
22 ultimately increase costs to Big Rivers in the long run.

1 **Q. You mentioned Mr. Kollen’s objection to the inclusion of some of the inflation in the**  
2 **pro forma adjustment for Non-Outage O&M expense. Please explain how you**  
3 **calculated that adjustment.**

4 A. The pro forma adjustment for Non-Outage O&M expense was calculated by averaging  
5 Big Rivers’ projected maintenance expenses for the years 2011 through 2014. Using that  
6 four-year period allows Big Rivers to have the necessary funds to complete the still-  
7 necessary maintenance projects it has deferred and to return to a level of maintenance  
8 expenses that will be prudent on a going-forward basis.

9 Those projected maintenance expenses included an inflation factor. The inflation  
10 factor was derived using the ten-year average Consumer Price Index (“CPI”) from 2000  
11 to 2010. The ten-year CPI was obtained from the web site Inflation Data.com found at  
12 URL <http://www.inflationdata.com/inflation/InflatioRate/CurrentInflation.asp>.

13 **Q. Is the inclusion of inflation in the calculation of the pro forma adjustment for Non-**  
14 **Outage O&M expense reasonable?**

15 A. The inclusion of inflation in the calculation of the adjustment is reasonable and  
16 necessary. Big Rivers is only requesting the funds necessary to operate the generating  
17 plants in a safe and reliable manner. If the inflation factor is removed from the Non-  
18 Outage O&M adjustment, then Big Rivers simply will not have the resources to absorb  
19 the increasing costs of goods and services contained in the CPI projections.

20 Additionally, Big Rivers does not have the historical records necessary to develop  
21 the pro forma adjustment for Non-Outage O&M expenses using historical costs because  
22 Big Rivers’ production facilities were operated by affiliates of E.ON U.S., LLC until  
23 mid-July 2009. Also, as I mention above, Big Rivers deferred substantial amounts of

1 maintenance in 2010, which makes test year maintenance non-representative of a typical  
2 year. Therefore, it is reasonable to use the projected maintenance expenses, including the  
3 inflation factor that is a necessary part of those expenses, as the basis for its pro forma  
4 adjustment.

5 **Q. Does this conclude your rebuttal testimony?**

6 **A. Yes.**



# BIG RIVERS ELECTRIC CORPORATION

## MONTHS BETWEEN MAJOR UNIT OUTAGES

Last Scheduled Outage				Next Scheduled Outage					
Unit	Net MW	Start	Finish	Outage Duration (Days)	Date	Outage Duration (Days)	Actual Months Between Outages	Prudent Outage Frequency (Months)	Difference Between Actual vs. Prudent Frequency
Coleman 1	150	April 22, 2008	June 12, 2008	51				36	
Coleman 2	150	October 2, 2010	October 30, 2010	28				36	
Coleman 3	155	May 24, 2009	June 25, 2009	32				36	
Coleman FGD		October 9, 2010	October 23, 2010	14				24	
Green 1	231	August 29, 2008	September 17, 2008	19				24	
Green 2	223	March 27, 2009	May 23, 2009	57				24	
Henderson 1	153	February 20, 2009	March 15, 2009	23				24	
Henderson 2	159	April 2, 2010	April 23, 2010	21				24	
Reid 1	65	November 1, 2008	November 22, 2008	21				24	
Wilson	417	October 3, 2009	December 2, 2009	60				24	

Note: This table does not include the 7 day mini outages performed which allowed Big Rivers to defer the major outages for at least one year

**COMMONWEALTH OF KENTUCKY**  
**BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY**

**In the Matter of:**

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

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**Case No. 2011-0036**

**REBUTTAL TESTIMONY**  
  
**OF**  
  
**TED J. KELLY**  
**PRINCIPAL, BURNS & McDONNELL**  
  
**ON BEHALF OF**  
  
**BIG RIVERS ELECTRIC CORPORATION**

**FILED: July 6, 2011**

**Case No. 2011-0036**  
**Exhibit 65**  
**Page 1 of 17**

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**REBUTTAL TESTIMONY  
OF  
TED J. KELLY**

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**REBUTTAL TESTIMONY  
OF  
TED J. KELLY**

5 **I. INTRODUCTION**

6  
7 **Q. Please state your name and business address.**

8 A. Ted J. Kelly; 9400 Ward Parkway; Kansas City, Missouri 64114.

9 **Q. Did you submit direct testimony in this proceeding?**

10 A. Yes, in Exhibit 54 of the Application.

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

12 A. I am testifying on behalf of Big Rivers Electric Corporation ("Big Rivers").

13 **Q. What is the purpose of your rebuttal testimony in this proceeding?**

14 A. The purpose of my testimony is to respond to and rebut the direct testimony of Charles  
15 W. King on behalf of Kentucky Industrial Utility Customers, Inc. ("KIUC").

16  
17 **II. SUMMARY**

18  
19 **Q. Please summarize your rebuttal testimony.**

20 A. In my rebuttal testimony, I respond to Mr. King's assertion that the depreciation rates  
21 proposed by Big Rivers and supported by the Burns & McDonnell ("B&M")  
22 Depreciation Study ("Depreciation Study") are too high and result in excessive  
23 depreciation expense. In response to Mr. King's assertion that the remaining useful  
24 lives used by B&M are arbitrary, I describe in greater detail the qualitative and  
25 quantitative factors relied upon in the Depreciation Study, to demonstrate that the  
26 Depreciation Study appropriately estimated the remaining useful lives for the three  
27 production plant accounts which account for virtually all of the difference between Mr.

1 King's analysis and the analysis presented in my direct testimony in this proceeding. I  
2 further explain the importance of engineering judgment and how that was employed in  
3 estimating the remaining useful lives of Big Rivers' production plant. Finally, I  
4 demonstrate how Mr. King's own remaining useful life estimates get closer to those in  
5 the Depreciation Study, if Mr. King's analysis is updated to reflect the years 2009 to  
6 2011. Finally, I conclude that the Commission should approve the proposed  
7 depreciation rates set forth in Table ES-1 of my direct testimony for prospective  
8 application by Big Rivers.

9  
10 **III. THE REMAINING USEFUL LIVES ESTIMATED IN THE DEPRECIATION**  
11 **STUDY ARE REASONABLE.**  
12

13 **Q. At page 3 of his direct testimony Mr. King states, "The depreciation rates**  
14 **proposed by B&M and adopted by Big Rivers are too high and result in excessive**  
15 **depreciation expense." Did Mr. King conduct an independent analysis to support**  
16 **his conclusions?**

17 A. No. Mr. King only relied on select information provided in the Depreciation Study, as  
18 well as subsequent data responses and workpapers, and then, as shown later in my  
19 rebuttal testimony, he incorrectly applied this information.

20 **Q. At page 3 of his direct testimony Mr. King characterizes the remaining lives used**  
21 **in B&M's analysis as arbitrary. Are the remaining lives used in B&M's analysis**  
22 **arbitrary?**

23 A. No. Arriving at the remaining lives used in B&M's analysis required the use of  
24 judgment, but as will be shown later in my rebuttal testimony they are not arbitrary. In  
25 fact, the very same remaining useful lives and corresponding depreciation rates were  
26 approved by the Rural Utilities Service.

1 **Q. At page 5 of his direct testimony Mr. King states, “Depreciation can no more be**  
2 **calculated with precision than can the required rate of return to equity investors.**  
3 **Both are developed from analyses that, while based on quantitative values, require**  
4 **considerable application of judgment.” Do you agree with Mr. King that**  
5 **depreciation analyses require the considerable application of judgment?**

6 A. Absolutely. Many factors, both quantifiable and subjective, factor into estimating the  
7 remaining service lives of production facilities. Mr. King is correct when he asserts  
8 that the Commission must necessarily exercise its own judgment in assessing the  
9 rationale that underlies depreciation rates.

10 **Q. At page 7 of his direct testimony Mr. King states, “B&M conducted a detailed**  
11 **engineering study of each of Big Rivers’ generating units. Based on this study,**  
12 **B&M estimated the remaining operating hours of each unit and, using historical**  
13 **operating experience, forecast the remaining life of each unit.” Is this correct?**

14 A. In part. There are numerous other factors and analyses that were also considered, as  
15 described more fully below.

16 **Q. Referring to pages 8 and 9, and Schedule 2 of Mr. King’s direct testimony, Mr.**  
17 **King states that workpapers from B&M show no less than twelve remaining lives**  
18 **for each plant, most of which do not match the remaining life spans in Table II-2**  
19 **or those that result from subtracting 2010 from the forecast plant retirement**  
20 **dates. Explain how these life spans were incorporated into determining the**  
21 **remaining useful life of each production facility that are then used to determine**  
22 **the remaining life for each plant account shown in Table ES-1.**

23 A. Referring to pages 8 and 9, and Schedule 2 of Mr. King’s direct testimony, he identifies  
24 three primary accounts (Account 311 –Structures, Account 312 –Boiler Plant and  
25 Account 314 –Turbine) for which he states that the remaining life selection “appears to  
26 be totally arbitrary and skewed toward the lower end of the remaining life spectrum.”

1 As stated previously, and as recognized by Mr. King, depreciation analyses require the  
2 use of considerable judgment. Many factors, both quantitative and qualitative, along  
3 with the substantial application of judgment went into determining the remaining useful  
4 lives of each production facility. The selection of the ultimate remaining lives used to  
5 calculate Big Rivers' final depreciation rates required judgment, but as shown below in  
6 my rebuttal exhibits and in Table 1 herein, the selection was clearly not arbitrary.

7 As I stated at page 10 of my direct testimony, the remaining life of each facility  
8 provided in the Engineering Assessment is a key component that was used in the  
9 calculation of the proposed depreciation rates. Certainly the Engineering Assessment  
10 in Part II of the Depreciation Study was a major consideration, but it was not the only  
11 qualitative factor or quantitative analysis relied on to determine the ultimate remaining  
12 useful lives of Big Rivers' production facilities.

13 **Q. In addition to the Engineering Assessment, what other qualitative factors were**  
14 **considered?**

15 A. Big Rivers provided maintenance reports, forced outage reports, two Investigation  
16 Reports and a Recommendation Form for the fire at the Wilson plant, plant operating  
17 statistics, major maintenance schedules, 2010 outages and descriptions, the prior 1998  
18 Depreciation Study and its Engineering Assessment, capital budgets, the 2010 to 2013  
19 Capital Plan, the 2010 Capital Budget, Capital Appropriations Summaries from 2006 to  
20 2009, plant O&M expenses for the Coleman, Sebree (net) and Wilson plants, Boiler  
21 Condition Assessments, various fuel agreements, organization charts, status of air  
22 permits, 2009 Title V Compliance Documentation including Air Inspection reports, and  
23 transmission and substation maintenance summaries.

24 **Q. Was all of this information made available to the Smelters and Mr. King during**  
25 **the development of the Depreciation Study?**

1 A. Yes. The involvement of the Smelters representatives is further discussed in the  
2 rebuttal testimony of Mr. Hite.

3 **Q. In addition to Table II-3 of the Depreciation Study, what other quantitative**  
4 **factors or analyses were considered?**

5 A. B&M considered multiple other scenarios involving different assumptions and  
6 conditions. The calculations, assumptions and judgment applied for the following six  
7 scenarios considered for Accounts 311 –Structures, Account 312 –Boiler Plant and  
8 Account 314 –Turbine are shown in Exhibits Kelly Rebuttal-1 through Kelly Rebuttal-  
9 6.

10 **Q. At page 8 of his direct testimony, Mr. King states that he examined B&M**  
11 **workpapers and found twelve remaining useful life scenarios. Did B&M consider**  
12 **twelve remaining useful life scenarios?**

13 A. No. The remaining useful life scenarios seriously considered for use in determining  
14 Big Rivers' final depreciation rates are shown in my rebuttal exhibits, i.e. Exhibits  
15 Kelly Rebuttal-1 through Kelly Rebuttal-6.

16 **Q. Please describe the assumptions and judgment that went into the Typical**  
17 **Operating Hours (Annual) Remaining Life Analysis 1 in Exhibit Kelly Rebuttal-1.**

18 A. Exhibit Kelly Rebuttal-1 is simply a restated version of Table II-3 of the Depreciation  
19 Study with the Plant Years in Service updated through the end of 2011 and includes the  
20 calculation of the weighted average remaining life for Accounts 311, 312, and 314.  
21 The assumptions and judgment applied in this table are as follows:

22 **Coleman:** Typical operating hours are assumed, the remaining life is extended 7.5  
23 years from the 1998 study, and the retirement of the facility is based on the first unit.

24 **Green:** Typical operating hours are assumed, the remaining life is extended 7.5 years  
25 from the 1998 study, and the retirement of the facility is based on the average  
26 retirement of both units to account for them being newer facilities.



1 **HMP&L:** Typical operating hours are assumed, the remaining life is extended 7.5  
2 years from the 1998 study, and the retirement of the facility is based on the first unit.

3 **Reid:** The remaining life is capped at 70 years due to the lack of availability of  
4 replacement parts.

5 **Wilson:** The calculated remaining life assuming typical operating hours is 58.5 years,  
6 but a maximum life of 65 years was used for Wilson. This was specifically based on  
7 comments made by Mr. King prior to the beginning of this rate case.

8 **All Plants:** The Date in Service was assumed to be mid-year instead of the beginning  
9 of the year.

10 **All Plants:** The Total Estimated Hours to Date include operating hours for 2009, 2010  
11 and 2011.

12 **Q. Please describe the assumptions and judgment that went into the Typical**  
13 **Operating Hours (Annual) Remaining Life Analysis 2 in Exhibit Kelly Rebuttal-2.**

14 A. Exhibit Kelly Rebuttal-2 is simply Exhibit Kelly Rebuttal-1 with a normal life  
15 assumption for the Wilson plant instead of the maximum life assumption of 65 years  
16 that was used in Exhibit Kelly Rebuttal-1. The assumptions and judgment applied in  
17 this table are as follows:

18 **Coleman:** Typical operating hours are assumed, the remaining life is extended 7.5  
19 years from the 1998 study, and the retirement of the facility is based on the first unit.

20 **Green:** Typical operating hours are assumed, the remaining life is extended 7.5 years  
21 from the 1998 study, and the retirement of the facility is based on the average of both  
22 units to account for their being newer facilities.

23 **HMPL:** Typical operating hours are assumed, the remaining life is extended 7.5 years  
24 from the 1998 study, and the retirement of the facility is based on the first unit.

25 **Reid:** The remaining life is capped at 70 years due to the lack of availability of  
26 replacement parts.

1           **Wilson:** The calculated Estimated Service Life of 58.5 years is used based on typical  
2           operating hours and a 7.5 year life extension from the 1998 study.

3           **All Plants:** The Date in Service was assumed to be mid-year instead of the beginning  
4           of the year.

5           **All Plants:** The Total Estimated Hours to Date include operating hours for 2009, 2010  
6           and 2011.

7   **Q.    Please describe the assumptions and judgment that went into the Typical**  
8           **Operating Hours (Annual) Remaining Life Analysis 3 in Exhibit Kelly Rebuttal-3.**

9    A.   Exhibit Kelly Rebuttal-3 is simply Exhibit Kelly Rebuttal-2 with a 5 year life extension  
10       from the 1998 study instead of the 7.5 year life extension used in the previous two  
11       tables. The assumptions and judgment applied in this table are as follows:

12       **Coleman:** Typical operating hours are assumed, the remaining life is extended 5 years  
13       from the 1998 study, and the retirement of the facility is based on the first unit.

14       **Green:** Typical operating hours are assumed, the remaining life is extended 5 years  
15       from the 1998 study, and the retirement of the facility is based on the average of both  
16       units to account for their being newer facilities.

17       **HMPL:** Typical operating hours are assumed, the remaining life is extended 5 years  
18       from the 1998 study, and the retirement of the facility is based on the first unit.

19       **Reid:** The remaining life is capped at 70 years due to the lack of availability of  
20       replacement parts.

21       **Wilson:** Typical operating hours are assumed and the remaining life is extended 5  
22       years from the 1998 study.

23       **All Plants:** The Date in Service was assumed to be mid-year instead of the beginning  
24       of the year.

25       **All Plants:** The Total Estimated Hours to Date include operating hours for 2009, 2010  
26       and 2011.

1 **Q. Please describe the assumptions and judgment that went into the Actual**  
2 **Operating Hours (Annual) Remaining Life Analysis 4 in Exhibit Kelly Rebuttal-4.**

3 A. Exhibit Kelly Rebuttal-4 is simply Table II-3 of the Depreciation Study based on the 5-  
4 year historical average of actual operating hours (instead of typical operating hours)  
5 and the Plant Years in Service updated through the end of 2011. The assumptions and  
6 judgment applied in this table are as follows:

7 **Coleman:** Actual operating hours are assumed, the remaining life is extended 7.5 years  
8 from the 1998 study, and the retirement of the facility is based on the first unit.

9 **Green:** Actual operating hours are assumed, the remaining life is extended 7.5 years  
10 from the 1998 study, and the retirement of the facility is based on the average of both  
11 units to account for their being newer facilities

12 **HMPL:** Actual operating hours are assumed, the remaining life is extended 7.5 years  
13 from the 1998 study, and the retirement of the facility is based on the first unit.

14 **Reid:** The remaining life is capped at 70 years due to the lack of availability of  
15 replacement parts.

16 **Wilson:** The calculated Estimated Service Life is 59.3 years, but a maximum life of 65  
17 years was used for Wilson. This was specifically based on comments made by Mr.  
18 King prior to the beginning of this rate case.

19 **All Plants:** The Date in Service was assumed to be mid-year instead of the beginning  
20 of the year.

21 **All Plants:** The Total Estimated Hours to Date include operating hours for 2009, 2010  
22 and 2011.

23 **Q. Please describe the assumptions and judgment that went into the Actual**  
24 **Operating Hours (Annual) Remaining Life Analysis 5 in Exhibit Kelly Rebuttal-5.**

25 A. Exhibit Kelly Rebuttal-5 is simply Exhibit Kelly Rebuttal-4 with a normal life  
26 assumption for the Wilson plant instead of the maximum life assumption for Wilson of

1 65 years that was used in Exhibit Kelly Rebuttal-4. The assumptions and judgment  
2 applied in this table are as follows:

3 **Coleman:** Actual operating hours are assumed, the remaining life is extended 7.5 years  
4 from the 1998 study, and the retirement of the facility is based on the first unit.

5 **Green:** Actual operating hours are assumed, the remaining life is extended 7.5 years  
6 from the 1998 study, and the retirement of the facility is based on the average of both  
7 units to account for them being newer facilities.

8 **HMPL:** Actual operating hours are assumed, the remaining life is extended 7.5 years  
9 from the 1998 study, and the retirement of the facility is based on the first unit.

10 **Reid:** The remaining life is capped at 70 years due to the lack of availability of  
11 replacement parts.

12 **Wilson:** The calculated Estimated Service Life of 59.3 years is used based on actual  
13 operating hours and a 7.5 year life extension from the 1998 study.

14 **All Plants:** The Date in Service was assumed to be mid-year instead of the beginning  
15 of the year.

16 **All Plants:** The Total Estimated Hours to Date include operating hours for 2009, 2010  
17 and 2011.

18 **Q. Please describe the assumptions and judgment that went into the Actual  
19 Operating Hours (Annual) Remaining Life Analysis 6 in Exhibit Kelly Rebuttal-6.**

20 A. Exhibit Kelly Rebuttal-6 is simply Exhibit Kelly Rebuttal-5 with a 5 year life extension  
21 from the 1998 study instead of the 7.5 year life extension used in the previous two  
22 tables. The assumptions and judgment applied in this table are as follows:

23 **Coleman:** Actual operating hours are assumed, the remaining life is extended 5 years  
24 from the 1998 study, and the retirement of the facility is based on the first unit.

1           **Green:** Actual operating hours are assumed, the remaining life is extended 5 years  
2           from the 1998 study, and the retirement of the facility is based on the average of both  
3           units to account for them being newer facilities.

4           **HMPL:** Actual operating hours are assumed, the remaining life is extended 5 years  
5           from the 1998 study, and the retirement of the facility is based on the first unit.

6           **Reid:** The remaining life is capped at 70 years due to the lack of availability of  
7           replacement parts.

8           **Wilson:** Actual operating hours are assumed and the remaining life is extended 5 years  
9           from the 1998 study.

10          **All Plants:** The Date in Service was assumed to be mid-year instead of the beginning  
11          of the year.

12          **All Plants:** The Total Estimated Hours to Date include operating hours for 2009, 2010  
13          and 2011.

14    **Q.    Based on all of the quantitative and qualitative analyses performed by B&M, what**  
15          **final remaining useful lives were determined for Accounts 311 –Structures,**  
16          **Account 312 –Boiler Plant and Account 314 –Turbine?**

17    A.    A summary of these six analyses is shown in Table 1 below. Each analysis corresponds  
18          to one of my rebuttal exhibits (e.g. Typical Operating Hours Remaining Life Analysis 1  
19          corresponds to Exhibit Kelly Rebuttal-1; Actual Operating Hours Remaining Life  
20          Analysis 1 corresponds to Exhibit Kelly Rebuttal-4). These analyses provide ample  
21          support for the remaining useful lives used to develop the depreciation rates for  
22          Account 311 –Structures, Account 312 –Boiler Plant and Account 314 –Turbine.

23  
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1

**Table 1: Summary of Quantitative Remaining Life Analysis**

	<u>Account 311</u>	<u>Account 312</u>	<u>Account 314</u>
Typical Operating Hours Remaining Life Analysis 1	33.8	34.2	33.6
Typical Operating Hours Remaining Life Analysis 2	30.3	30.6	30.2
Typical Operating Hours Remaining Life Analysis 3	27.8	28.1	27.8
<b>AVERAGE (years)</b>	<b>30.6</b>	<b>31.0</b>	<b>30.5</b>

	<u>Account 311</u>	<u>Account 312</u>	<u>Account 314</u>
Actual Operating Hours Remaining Life Analysis 1	31.6	32.3	31.3
Actual Operating Hours Remaining Life Analysis 2	28.6	29.1	28.4
Actual Operating Hours Remaining Life Analysis 3	26.2	26.6	26.0
<b>AVERAGE (years)</b>	<b>28.8</b>	<b>29.3</b>	<b>28.6</b>

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Based on all of the quantitative analyses summarized in Table 1 and the qualitative analyses described previously, B&M determined that a remaining useful life of between 28 and 30 years was reasonable for these accounts.

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**Q. Why then is the remaining useful life for Account 311 – Structures 30 years and Account 312 – Boiler Plant and Account 314 –Turbine 28 years as shown on Table ES-1 in the Depreciation Study?**

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**A.** It is both logical and an exercise of practical judgment to assume that Account 311- Structures will remain in place and useful the entire time while disassembly and decommissioning of the Account 312 - Boiler Plant and Account 314 - Turbine is occurring. For our study we assumed that disassembly and decommissioning would take approximately two years, so a remaining useful life of 28 years was used for Account 312 –Boiler Plant and Account 314 –Turbine.

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1 IV. **MR. KING'S ANALYSIS OF REMAINING USEFUL LIVES IS FLAWED**  
2 **BECAUSE IT RELIES UPON FAULTY ASSUMPTIONS AND INCOMPLETE**  
3 **DATA.**  
4

5 **Q. Page 2 of Mr. King's Schedule 2 shows the Estimated Remaining Unit Life for**  
6 **each facility. Mr. King then utilizes these Estimated Remaining Unit Lives in**  
7 **Schedule 4 to calculate his own Remaining Life Span for Accounts 311, 312, 314,**  
8 **315, 316 and the Reid Combustion Turbine. Are the Remaining Unit Lives**  
9 **calculated by Mr. King reasonable to consider?**

10 A. Yes, but not in isolation. In addition, they would need to be updated to include the  
11 years 2009 through 2011, and the Installation Date would need to be adjusted to a mid-  
12 year date instead of assuming that the each facility began operation on January 1 of the  
13 applicable year. This would decrease each of the Remaining Unit Lives by 2.5 years,  
14 and thus would correspond to the Remaining Unit Lives shown in Exhibit Kelly  
15 Rebuttal-1 of my rebuttal testimony. Table 2 below shows the effect of this change on  
16 Mr. King's Schedule 10. However, the Estimated Service Life for Wilson of 65 years  
17 shown in Exhibit Kelly Rebuttal-1 is the maximum life that could be considered  
18 reasonable.

19 **Q. What effect would it have on his annual depreciation expense of \$28.2 million if**  
20 **Mr. King's remaining lives were updated to include the years 2009 to 2011, and a**  
21 **mid-year Installation Date?**

22 A. Making these two small changes would increase Mr. King's annual depreciation  
23 expense by \$2.2 million to \$30.4 million, as shown below in Table 3.

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**Table 2: Mr. King Revised Schedule 10, Remaining Lives Updated through 2011**

Account	Net Salvage Factor (1)	Original Cost 4/30/2010 (2)	Accumulated Depreciation (3)	Total To Be Accrued (4)	Remaining Life (5)	Annual Accrual (6)	Rate (7)
<u>311 - Structures</u>	-4.50%	124,375,974	78,124,758	51,848,135	33.09	1,567,065	1.26%
<u>312 - Boiler Plant</u>	-5.03%	667,206,536	347,237,018	353,510,387	32.00	11,048,838	1.66%
<u>312 -Boiler Plant - Env Compl</u>	-1.96%	574,184,346	216,926,144	368,523,800	30.39	12,128,149	2.11%
<u>312 Short-lived Boiler Plant</u>	0.00%	4,077,693	376,213	3,701,480	4.70	787,549	19.31%
<u>314 - Turbine</u>	-8.17%	225,272,354	124,744,924	118,942,644	31.88	3,730,787	1.66%
<u>315 - Electric Equipment</u>	2.98%	60,355,721	35,350,377	23,204,131	32.96	704,093	1.17%
<u>316 - Misc. Equipment</u>	0.55%	3,014,912	42,128	2,956,346	23.50	125,802	4.17%

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**Table 3: Mr. King Revised Schedule 1 Depreciation Expense**

Account	Description	April 30, 2010 Plant Balance (1)	Depreciation Rate (2)	Annual Depreciation Expense		
				KIUC (3)	Existing BREC Rates (4)	Proposed BREC Rates (5)
	340 Land	475,968				
	311 Structures	124,375,974	1.26%	1,567,065	2,126,829	1,717,828
	312 Boiler Plant	667,206,536	1.66%	11,048,838	11,942,997	12,543,396
	312 A-K Boiler Plant - Env Compl	574,184,346	2.11%	12,128,149	10,852,084	13,074,185
	312 L-P Short-Life Production Plant -Environmental	3,208,938	19.31%	619,761	60,649	648,949
	312 V-Z Short-Life Production Plant -Other	868,755	19.31%	167,788	16,419	125,054
	314 Turbine	225,272,354	1.66%	3,730,787	3,739,521	4,309,293
	315 Electric Eqpt	60,355,721	1.17%	704,093	965,692	1,202,952
	316 Misc Eqpt	3,014,912	4.17%	125,802	55,173	113,919
	341 CT - Structures	154,233	1.17%	1,804	3,563	1,804
	342 CT - Fuel Holders & Access.	1,436,912	9.10%	130,751	33,336	130,751
	343 CT - Prime Movers	4,915,886	3.02%	148,408	121,422	148,408
	344 CT - Generators	1,102,964	0.50%	5,511	24,596	5,511
	345 CT - Access. Elec. Eqpt.	317,726	2.05%	6,510	7,085	6,510
	Subtotal	<u>1,666,891,222</u>		<u>30,385,269</u>	<u>29,949,367</u>	<u>34,028,559</u>

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**Difference from KUIC Recommendation****435,902 (3,643,290)**

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1 **Q. What effect would it have on his annual depreciation expense of \$28.2 million if**  
 2 **Mr. King's remaining lives were updated to the remaining lives used in the B&M**  
 3 **analysis for Accounts 311, 312, 314 and 315?**

4 **A.** If Mr. King's remaining lives were updated to the remaining lives used in my analysis  
 5 for Accounts 311, 312, 314 and 315, Mr. King's annual depreciation expense would be  
 6 \$34.027 million as shown below in Table 4 and Table 5, nearly identical to the \$34.029  
 7 million shown in my direct testimony in Table ES-1.

8  
 9 **Table 4: Mr. King Revised Schedule 10, Mr. Kelly Remaining Lives**

<u>Account</u>	<u>Net Salvage Factor</u>	<u>Original Cost 4/30/2010</u>	<u>Accumulated Depreciation</u>	<u>Total To Be Accrued</u>	<u>Remaining Life</u>	<u>Annual Accrual</u>	<u>Rate</u>
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<u>311 - Structures</u>	-4.50%	124,375,974	78,124,758	51,848,135	30.20	1,716,826	1.38%
<u>312 - Boiler Plant</u>	-5.03%	667,206,536	347,237,018	353,510,387	28.20	12,535,829	1.88%
<u>312 -Boiler Plant - Env Compl</u>	-1.96%	574,184,346	216,926,144	368,523,800	28.20	13,068,220	2.28%
<u>312 Short-lived Boiler Plant</u>	0.00%	4,077,693	376,213	3,701,480	4.70	787,549	19.31%
<u>314 - Turbine</u>	-8.17%	225,272,354	124,744,924	118,942,644	27.60	4,309,516	1.91%
<u>315 - Electric Equipment</u>	2.98%	60,355,721	35,350,377	23,204,131	19.30	1,202,287	1.99%
<u>316 - Misc. Equipment</u>	0.55%	3,014,912	42,128	2,956,346	26.00	113,706	3.77%

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1 **Table 5: Mr. King Revised Schedule 1 Depreciation Expense -Kelly Remaining Lives**

Account	Description	April 30, 2010	Depreciation Rate	Annual Depreciation Expense		
		Plant Balance		KIUC	Existing BREC Rates	Proposed BREC Rates
		(1)	(2)	(3)	(4)	(5)
	340 Land	475,968				
	311 Structures	124,375,974	1.38%	1,716,826	2,126,829	1,717,828
	312 Boiler Plant	667,206,536	1.88%	12,535,829	11,942,997	12,543,396
	312 A-K Boiler Plant - Env Compl	574,184,346	2.28%	13,068,220	10,852,084	13,074,185
	312 L-P Short-Life Production Plant -Environmental	3,208,938	19.31%	619,761	60,649	648,949
	312 V-Z Short-Life Production Plant -Other	868,755	19.31%	167,788	16,419	125,054
	314 Turbine	225,272,354	1.91%	4,309,516	3,739,521	4,309,293
	315 Electric Eqpt	60,355,721	1.99%	1,202,287	965,692	1,202,952
	316 Misc Eqpt	3,014,912	3.77%	113,706	55,173	113,919
	341 CT - Structures	154,233	1.17%	1,804	3,563	1,804
	342 CT - Fuel Holders & Access.	1,436,912	9.10%	130,751	33,336	130,751
	343 CT - Prime Movers	4,915,886	3.02%	148,408	121,422	148,408
	344 CT - Generators	1,102,964	0.50%	5,511	24,596	5,511
	345 CT - Access. Elec. Eqpt.	317,726	2.05%	6,510	7,085	6,510
	Subtotal	<u>1,666,891,222</u>		<u>34,026,917</u>	<u>29,949,367</u>	<u>34,028,559</u>

2 **Difference from KUIC Recommendation** **4,077,550 (1,643)**

3

4 **V. CONCLUSION**

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6 **Q. What is your final recommendation?**

7 A. I recommend that the Commission approve the proposed depreciation rates set forth in  
8 Table ES-1 of my direct testimony for prospective application by Big Rivers.

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

10 A. Yes.

**Exhibit Kelly Rebuttal - 1: Typical Operating Hours (Annual) Remaining Life Analysis 1: (Original Table II-3 Updated to 2012)**

Plant Name	Date in Service	Typical Lifetime Availability	Typical Operating Hours per Year	Plant Years in Service	Total Estimated Hours to Date (1/2012)	Calculated 7.5 Year Extension Typical		Estimated Service Life	Estimated Service Life
						Estimated Remaining Unit Life	7.5 Year Extension Typical Remaining Unit Life		
Coleman 1	1969.5	80%	7,008	42.5	297,840	22.1	22.1	64.6	65
Coleman 2	1970.5	80%	7,008	41.5	290,832	23.1	22.1	64.6	65
Coleman 3	1972.5	80%	7,008	39.5	276,816	25.1	22.1	64.6	65
Green 1	1979.5	85%	7,446	32.5	241,995	28.7	29.7	61.2	61
Green 2	1981.5	85%	7,446	30.5	227,103	30.7	29.7	61.2	61
HMP&L 1	1973.5	85%	7,446	38.5	286,671	22.7	22.7	61.2	61
HMP&L 2	1974.5	85%	7,446	37.5	279,225	23.7	22.7	61.2	61
Reid	1966.5	70%	6,132	45.5	279,006	27.2	23.5	72.7	70
Wilson	1986.5	90%	7,840	25.5	199,925	33.0	39.0	58.5	65

Account 311	Remaining Life	Book Value		Weighted Average
		Weights	Weights	
Coleman	22	15%	3.36	
Green	30	23%	6.69	
HMPL	23	1%	0.20	
Reid	24	3%	0.64	
Wilson	39	59%	22.88	
<b>Weighted Average Remaining Life:</b>				<b>33.77</b>

Account 312	Remaining Life	Book Value		Weighted Average
		Weights	Weights	
Coleman	22	11%	2.45	
Green	30	24%	7.19	
HMPL	23	3%	0.63	
Reid	24	1%	0.28	
Wilson	39	61%	23.71	
<b>Weighted Average Remaining Life:</b>				<b>34.25</b>

Account 314	Remaining Life	Book Value		Weighted Average
		Weights	Weights	
Coleman	22	14%	3.17	
Green	30	26%	7.58	
HMPL	23	2%	0.47	
Reid	24	2%	0.45	
Wilson	39	56%	21.90	
<b>Weighted Average Remaining Life:</b>				<b>33.57</b>

**Judgment Applied**

Coleman Typical operating hours assumed, life extended 7.5 years, retirement based on first unit  
 Green Typical operating hours assumed, life extended 7.5 years, retirement based on the average of both plants to account for newer plants  
 HMPL Typical operating hours assumed, life extended 7.5 years, retirement based on first unit  
 Reid Life capped at 70 years due to the lack of availability of replacement parts  
 Wilson The calculated life is 58.5 years, but a maximum life for Wilson of 65 years was considered based on comments by Mr. King  
 All Plants Date in Service was assumed to be mid-year  
 All Plants Total Estimated Hours to Date include operating hours for 2010 and 2011

**Exhibit Kelly Rebuttal - 2: Typical Operating Hours (Annual) Remaining Life Analysis 2: (Normal life assumption for Wilson)**

Plant Name	Date in Service	Typical Lifetime Availability	Typical Operating Hours per Year	Plant Years in Service	Total Estimated Hours to Date (1/2012)	Calculated 7.5 Year Extension		Estimated Service Life	Estimated Service Life
						Estimated Remaining Unit Life	Typical Remaining Unit Life		
Coleman 1	1969.5	80%	7,008	42.5	297,840	22.1	22.1	64.6	65
Coleman 2	1970.5	80%	7,008	41.5	290,832	23.1	22.1	64.6	65
Coleman 3	1972.5	80%	7,008	39.5	276,816	25.1	22.1	64.6	65
Green 1	1979.5	85%	7,446	32.5	241,995	28.7	29.7	61.2	61
Green 2	1981.5	85%	7,446	30.5	227,103	30.7	29.7	61.2	61
HMP&L 1	1973.5	85%	7,446	38.5	286,671	22.7	22.7	61.2	61
HMP&L 2	1974.5	85%	7,446	37.5	279,225	23.7	22.7	61.2	61
Reid	1966.5	70%	6,132	45.5	279,006	27.2	23.5	72.7	70
Wilson	1986.5	90%	7,840	25.5	199,925	33.0	33.0	58.5	59

Account 311	Remaining Life		Book Value		Account 312	Remaining Life		Book Value		Account 314	Remaining Life		Book Value	
	Life	Weights	Weights	Average		Remaining Life	Weights	Weights	Average		Life	Weights	Weights	Average
Coleman	22	15%	3.36		Coleman	22	11%	2.45		Coleman	22	14%	3.17	
Green	30	23%	6.69		Green	30	24%	7.19		Green	30	26%	7.58	
HMP&L	23	1%	0.20		HMP&L	23	3%	0.63		HMP&L	23	2%	0.47	
Reid	24	3%	0.64		Reid	24	1%	0.28		Reid	24	2%	0.45	
Wilson	33	59%	19.37		Wilson	33	61%	20.07		Wilson	33	56%	18.54	
<b>Weighted Average Remaining Life:</b>				<b>30.26</b>	<b>Weighted Average Remaining Life:</b>				<b>30.61</b>	<b>Weighted Average Remaining Life:</b>				<b>30.21</b>

**Judgment Applied**

Coleman Typical operating hours assumed, life extended 7.5 years, retirement based on first unit  
 Green Typical operating hours assumed, life extended 7.5 years, retirement based on the average of both plants to account for newer plants  
 HMP&L Typical operating hours assumed, life extended 7.5 years, retirement based on first unit  
 Reid Life capped at 70 years due to the lack of availability of replacement parts  
 Wilson Typical operating hours are assumed, life extended 7.5 years and the calculated service life of 58.5 years is used for Wilson, Mr. King's 65 year maximum life assumption is not used  
 All Plants Date in Service was assumed to be mid-year  
 All Plants Total Estimated Hours to Date include operating hours for 2010 and 2011

**Exhibit Kelly Rebuttal - 3: Typical Operating Hours (Annual) Remaining Life Analysis 3: (5 year life extension, Normal life assumption for Wilson)**

Plant Name	Date in Service	Typical Lifetime Availability	Typical Operating Hours per Year	Plant Years in Service	Total Estimated Hours to Date (1/2012)	Calculated 5 Year Extension		Estimated Service Life	Estimated Service Life
						Estimated Remaining Unit Life	Typical Estimated Remaining Unit Life		
Coleman 1	1969.5	80%	7,008	42.5	297,840	19.6	19.6	62.1	62
Coleman 2	1970.5	80%	7,008	41.5	290,832	20.6	19.6	62.1	62
Coleman 3	1972.5	80%	7,008	39.5	276,816	22.6	19.6	62.1	62
Green 1	1979.5	85%	7,446	32.5	241,995	26.2	27.2	58.7	59
Green 2	1981.5	85%	7,446	30.5	227,103	28.2	27.2	58.7	59
HMP&L 1	1973.5	85%	7,446	38.5	286,671	20.2	20.2	58.7	59
HMP&L 2	1974.5	85%	7,446	37.5	279,225	21.2	20.2	58.7	59
Reid	1966.5	70%	6,132	45.5	279,006	24.7	23.5	70.2	70
Wilson	1986.5	90%	7,840	25.5	199,925	30.5	30.5	56.0	56

Account	Remaining Life	Book Value Weights	Weighted Average	Account	Remaining Life	Book Value Weights	Weighted Average	Account	Remaining Life	Book Value Weights	Weighted Average
Coleman	20	15%	2.98	Coleman	20	11%	2.17	Coleman	20	14%	2.81
Green	27	23%	6.12	Green	27	24%	6.59	Green	27	26%	6.95
HMP&L	20	1%	0.18	HMP&L	20	3%	0.56	HMP&L	20	2%	0.42
Reid	24	3%	0.64	Reid	24	1%	0.28	Reid	24	2%	0.45
Wilson	31	59%	17.90	Wilson	31	61%	18.55	Wilson	31	56%	17.13
<b>Weighted Average Remaining Life: 27.83</b>				<b>Weighted Average Remaining Life: 28.14</b>				<b>Weighted Average Remaining Life: 27.76</b>			

**Judgment Applied**

Coleman Typical operating hours assumed, life extended 5 years, retirement based on first unit  
 Green Typical operating hours assumed, life extended 5 years, retirement based on the average of both plants to account for newer plants  
 HMP&L Typical operating hours assumed, life extended 5 years, retirement based on first unit  
 Reid Life capped at 70 years due to the lack of availability of replacement parts  
 Wilson Typical operating hours are assumed, life extended 5 years and the calculated service life of 56.0 years is used for Wilson, Mr. King's 65 year maximum life assumption is not used  
 All Plants Date in Service was assumed to be mid-year  
 All Plants Total Estimated Hours to Date include operating hours for 2010 and 2011

**Exhibit Kelly Rebuttal - 4: Actual Operating Hours (Annual) Remaining Life Analysis 1: (Original Table II-3 Updated to 2012)**

Plant Name	Date in Service	Actual Operating Hrs Based on 5 Yr Avg	Estimated Hours to Date (1/2012)	Calculated 7.5 Year Extension		7.5 Year Extension	
				Remaining Unit Life	Estimated Service Life	Estimated Remaining Unit Life	Estimated Service Life
Coleman 1	1969.5	7,648	325,032	17.3	59.8	15.1	57
Coleman 2	1970.5	8,154	338,409	15.1	56.6	15.1	57
Coleman 3	1972.5	7,843	309,817	19.0	58.5	15.1	57
Green 1	1979.5	8,225	267,323	23.6	56.1	25.1	56
Green 2	1981.5	8,056	245,721	26.6	57.1	25.1	56
HMP&L 1	1973.5	7,497	288,635	22.4	60.9	20.0	57
HMP&L 2	1974.5	8,005	300,169	20.0	57.5	20.0	57
Reid	1966.5	3,529	160,558	75.4	120.9	23.5	70
Wilson	1986.5	7,724	196,966	33.8	59.3	39.0	65

Account 311	Remaining Life	Book Value Weights	Weighted Average	Account 312		Remaining Life	Book Value Weights	Weighted Average	Account 314		Remaining Life	Book Value Weights	Weighted Average
				Coleman	Green				HMP	Reid			
Coleman	15	15%	2.29	15	11%	15	14%	1.67	Coleman	15	14%	2.16	
Green	25	23%	5.66	25	24%	25	26%	6.08	Green	25	26%	6.41	
HMP	20	1%	0.18	20	3%	20	2%	0.55	HMP	20	2%	0.41	
Reid	24	3%	0.64	24	1%	24	2%	0.28	Reid	24	2%	0.45	
Wilson	39	59%	22.88	39	61%	39	56%	23.71	Wilson	39	56%	21.90	
<b>Weighted Average Remaining Life: 31.64</b>				<b>Weighted Average Remaining Life: 32.29</b>				<b>Weighted Average Remaining Life: 31.34</b>					

**Judgment Applied**

Coleman Actual 5-year average operating hours assumed, life extended 7.5 years, retirement based on first unit  
 Green Actual 5-year average operating hours assumed, life extended 7.5 years, retirement based on the average of both plants to account for newer plants  
 HMP Actual 5-year average operating hours assumed, life extended 7.5 years, retirement based on first unit  
 Reid Life capped at 70 years due to the lack of availability of replacement parts  
 Wilson The calculated life is 59.3 years, but a maximum life for Wilson of 65 years was considered based on comments by Mr. King  
 All Plants Date in Service was assumed to be mid-year  
 All Plants Total Estimated Hours to Date include operating hours for 2010 and 2011

**Exhibit Kelly Rebuttal - 5: Average Operating Hours (Annual) Remaining Life Analysis 2: (Normal life assumption for Wilson)**

Plant Name	Date in Service	Actual Operating Hrs Based on 5 Yr. Avg	Plant Years in Service	Total Estimated Hours to Date (1/2012)	Calculated 7.5 Year Extension		7.5 Year Extension	
					Remaining	Estimated	Estimated Remaining	Estimated Service Life
Coleman 1	1969.5	7,648	42.5	325,032	17.3	59.8	15.1	57
Coleman 2	1970.5	8,154	41.5	338,409	15.1	56.6	15.1	57
Coleman 3	1972.5	7,843	39.5	309,817	19.0	58.5	15.1	57
Green 1	1979.5	8,225	32.5	267,323	23.6	56.1	25.1	56
Green 2	1981.5	8,056	30.5	245,721	26.6	57.1	25.1	56
HMP&L 1	1973.5	7,497	38.5	288,635	22.4	60.9	20.0	57
HMP&L 2	1974.5	8,005	37.5	300,169	20.0	57.5	20.0	57
Reid	1966.5	3,529	45.5	160,558	75.4	120.9	23.5	70
Wilson	1986.5	7,724	25.5	196,966	33.8	59.3	33.8	59

Account 311	Remaining Life	Book Value Weights	Weighted Average	Account 312		Weighted Average	Account 314		Weighted Average	
				Remaining Life	Book Value Weights		Remaining Life	Book Value Weights		
Coleman	15	15%	2.29	15	11%	1.67	15	14%	2.16	
Green	25	23%	5.66	25	24%	6.08	25	26%	6.41	
HMPL	20	1%	0.18	20	3%	0.55	20	2%	0.41	
Reid	24	3%	0.64	24	1%	0.28	24	2%	0.45	
Wilson	34	59%	19.82	34	61%	20.54	34	56%	18.97	
<b>Weighted Average Remaining Life:</b>			<b>28.59</b>	<b>Weighted Average Remaining Life:</b>			<b>29.12</b>	<b>Weighted Average Remaining Life:</b>		
							<b>28.41</b>			

**Judgment Applied**

Coleman Actual 5-year average operating hours assumed, life extended 7.5 years, retirement based on first unit  
 Green Actual 5-year average operating hours assumed, life extended 7.5 years, retirement based on the average of both plants to account for newer plants  
 HMPL Actual 5-year average operating hours assumed, life extended 7.5 years, retirement based on first unit  
 Reid Life capped at 70 years due to the lack of availability of replacement parts  
 Wilson Actual 5-year average operating hours assumed, life extended 7.5 years and the calculated service life of 59.3 years is used for Wilson, Mr. King's 65 year maximum life assumption is not used  
 All Plants Date in Service was assumed to be mid-year  
 All Plants Total Estimated Hours to Date include operating hours for 2010 and 2011

**Exhibit Kelly Rebuttal - 6: Average Operating Hours (Annual) Remaining Life Analysis 3: (5 year life extension, Normal life assumption for Wilson)**

Plant Name	Date in Service	Actual Operating Hrs Based on 5 Yr Avg	Total Estimated Hours to Date (1/2012)	Calculated 5 Year Extension		Estimated Remaining Service Life
				Remaining Unit Life	Estimated Unit Life	
Coleman 1	1969.5	7,648	325,032	14.8	57.3	54
Coleman 2	1970.5	8,154	338,409	12.6	54.1	54
Coleman 3	1972.5	7,843	309,817	16.5	56.0	54
Green 1	1979.5	8,225	267,323	21.1	53.6	54
Green 2	1981.5	8,056	245,721	24.1	54.6	54
HMP&L 1	1973.5	7,497	288,635	19.9	58.4	55
HMP&L 2	1974.5	8,005	300,169	17.5	55.0	55
Reid	1966.5	3,529	160,558	72.9	118.4	70
Wilson	1986.5	7,724	196,966	31.3	56.8	57

Account	Remaining Life	Book Value Weights	Weighted Average	Remaining Life		Weighted Average	
				Account 312	Account 314		
Coleman	13	15%	1.91	Coleman	13	1.39	
Green	23	23%	5.09	Green	23	5.48	
HMPL	17	1%	0.16	HMPL	17	0.48	
Reid	24	3%	0.64	Reid	24	0.28	
Wilson	31	59%	18.35	Wilson	31	19.02	
<b>Weighted Average Remaining Life: 26.15</b>				<b>Weighted Average Remaining Life: 26.65</b>			

Judgment Applied	Remaining Life	Book Value Weights	Weighted Average	Remaining Life		Weighted Average	
				Account 312	Account 314		
Coleman	13	11%	1.39	Coleman	13	1.80	
Green	23	24%	5.48	Green	23	5.78	
HMPL	17	3%	0.48	HMPL	17	0.36	
Reid	24	1%	0.28	Reid	24	0.45	
Wilson	31	61%	19.02	Wilson	31	17.56	
<b>Weighted Average Remaining Life: 26.15</b>				<b>Weighted Average Remaining Life: 25.96</b>			

Actual 5-year average operating hours assumed, life extended 5 years, retirement based on first unit  
 Actual 5-year average operating hours assumed, life extended 5 years, retirement based on the average of both plants to account for newer plants  
 Actual 5-year average operating hours assumed, life extended 5 years, retirement based on first unit  
 Life capped at 70 years due to the lack of availability of replacement parts  
 Actual 5-year average operating hours assumed, life extended 5 years and the calculated service life of 56.8 years is used for Wilson, Mr. King's 65 year maximum life assumption is not used  
 Date in Service was assumed to be mid-year  
 Total Estimated Hours to Date include operating hours for 2010 and 2011



**COMMONWEALTH OF KENTUCKY**  
**BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY**

**In the Matter of:**

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

)  
)  
)  
)  
**Case No. 2011-00036**

**REBUTTAL TESTIMONY**  
  
**OF**  
  
**MARK A. HITE**  
**VICE PRESIDENT, ACCOUNTING**  
  
**ON BEHALF OF**  
  
**BIG RIVERS ELECTRIC CORPORATION**

**FILED: July 6, 2011**

**Case No. 2011-00036**  
**Exhibit 66**  
**Page 1 of 30**

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**REBUTTAL TESTIMONY  
OF  
MARK. A. HITE**

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**REBUTTAL TESTIMONY  
OF  
MARK A. HITE**

5 **I. INTRODUCTION**

6 **Q. Please state your name, business address, and position.**

7 A. My name is Mark A. Hite. My business address is 201 Third Street, Henderson,  
8 Kentucky, 42420. I am employed by Big Rivers Electric Corporation ("Big Rivers" or  
9 "Company") as its Vice President of Accounting.

10 **Q. Did you submit direct testimony in this proceeding?**

11 A. Yes, as Big Rivers' Application Exhibit 55.

12 **Q. What is the purpose of your rebuttal testimony?**

13 A. The purpose of my rebuttal testimony is to rebut the position of the Kentucky Industrial  
14 Utility Customers, Inc. ("KIUC") on several topics. Specifically, I explain why (a) the  
15 KIUC proposal does not allow Big Rivers to meet its financial obligations and should  
16 be rejected, (b) the pro forma adjustments proposed by Lane Kollen and Charles W.  
17 King on behalf of the KIUC are inappropriate and should be rejected, and (c) the KIUC  
18 recommendation that the Commission should direct Big Rivers to adopt and implement  
19 a plan to refund patronage capital is misplaced and should be rejected.

20  
21 **II. IMPACT OF KIUC PROPOSAL ON BIG RIVERS' FINANCIALS**

22 **The KIUC Proposal Does Not Allow Big Rivers to Meet Its Financial Obligations**  
23 **and Should Be Rejected.**  
24

25 **Q. Did Big Rivers analyze the KIUC proposal to determine the financial impact of**  
26 **the KIUC proposal on Big Rivers?**

1 A. Yes. Big Rivers evaluated the KIUC proposal by making appropriate revisions to its  
2 multi-year financial forecasting model (through 2014) filed in response to Item KIUC  
3 1-43.

4 **Q. What does Big Rivers conclude about the KIUC proposal?**

5 A. The KIUC proposal does not allow Big Rivers to meet its financial obligations and  
6 should be rejected.

7 **Q. Please elaborate on the specifics of your analysis.**

8 A. KIUC proposed a base rate increase of \$18,679,000 compared to the \$39,953,965 base  
9 rate increase proposed by Big Rivers, or 46.75% of that proposed by Big Rivers. That  
10 adjustment was made to Big Rivers' multi-year financial forecast that was filed in  
11 response to KIUC 1-43. Second, the pro forma depreciation expense proposed by  
12 KIUC was incorporated. And third, Big Rivers continued to capitalize interest on  
13 qualifying construction projects. The two components of the KIUC proposal that do  
14 not impact the Big Rivers margin, namely KIUC's recommendations to utilize the  
15 Rural Economic Reserve to mitigate the rate increase on the Rural rate class and to  
16 adopt a patronage capital distribution policy, were also considered.

17 **Q. What is the impact on Big Rivers' financials under the KIUC proposal as  
18 modeled?**

19 A. Big Rivers' margin, Margins for Interest Ratio ("MFIR"), Times Interest Earned Ratio  
20 ("TIER") and cash flow each suffer greatly under the KIUC proposal. In fact, under  
21 the KIUC proposal modeled by Big Rivers, margins are forecasted to be negative in  
22 both 2012 and 2014, resulting in both MFIR and Conventional TIER being less than  
23 1.00. MFIR is less than the required 1.10 in 2011. Big Rivers' cash is reduced by

1 approximately \$17 million annually, requiring additional new borrowings. These are  
2 significantly adverse financial impacts on Big Rivers.

3 **Q. Does the KIUC proposal place Big Rivers' financial viability in jeopardy?**

4 A. Yes. The KIUC proposal does not provide Big Rivers with sufficient revenues to be  
5 financially viable. The KIUC proposal does not permit Big Rivers to achieve its MFIR  
6 and Conventional TIER requirements, which threatens Big Rivers' ability to comply  
7 with its debt covenants. The KIUC proposal prohibits positive margins for Big Rivers  
8 in two of the next three years. The KIUC proposal reduces Big Rivers' cash reserves  
9 and increases Big Rivers' need for additional borrowings. The KIUC proposal would  
10 likely result in Big Rivers losing its investment grade ratings, two of which are at the  
11 minimum level (BBB-). Big Rivers notes that the Commission, on page 38 of its  
12 March 6, 2009, Order conditionally approving Big Rivers' Unwind Transaction, Case  
13 No. 2007-00455, stated, "The Commission well recognizes that an investment grade  
14 credit rating for Big Rivers is a linchpin..." The most devastating short-term  
15 consequence of the KIUC proposal is that Big Rivers would likely default on its debt  
16 covenants in 2012 because it would be unable to make the required refinancing of a  
17 portion of its Rural Utilities Service ("RUS") debt by October of 2012. Simply put,  
18 the KIUC proposal places Big Rivers' financial viability in great jeopardy.

19 **Q. What would be the impact to Big Rivers' financial metrics as a result of adopting**  
20 **the KIUC proposal?**

21 A. The consequences would be devastating for Big Rivers. Big Rivers would not meet its  
22 MFIR and TIER requirements. Under the KIUC proposal, Big Rivers would likely lose  
23 its investment grade credit ratings at a time when several known refinancings are on the

1 horizon (\$60.0 million by October 1, 2012, \$58.8 million by June 1, 2013 and \$200.0  
2 million by January 1, 2016), and even more new borrowings would be necessary. If  
3 Big Rivers cannot meet the minimum 1.10 MFIR requirement necessary to secure  
4 Additional Obligations under its Indenture, Big Rivers will default under its credit  
5 agreements. The rates proposed by KIUC, which subject Big Rivers to this likely  
6 outcome, are fundamentally flawed, and certainly not fair, just and reasonable.

7 **Q. How do the impacts of the KIUC proposal on Big Rivers' financial metrics**  
8 **compare to the impacts of the Big Rivers rate proposal in this case?**

9 A. As noted above, the KIUC proposal has extremely negative effects on Big Rivers'  
10 financial metrics. The Big Rivers rate proposal, on the other hand, allows Big Rivers to  
11 achieve its MFIR and Conventional TIER requirements, thus enhancing Big Rivers'  
12 ability to comply with its debt covenants. The table below provides a straightforward  
13 comparison of the KIUC rate proposal vs. Big Rivers' rate proposal of certain financial  
14 metrics:

<b>KIUC Rate Proposal vs. Big Rivers Rate Proposal - Certain Financial Metrics (\$ in millions)</b>				
	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
<b>KIUC Proposal (Note 1)</b>				
Interest Expense on Long-Term Debt	45.87	46.62	51.23	51.03
Income Taxes	0.25	0.00	0.00	0.00
Margin	2.72	(2.95)	5.82	(2.77)
Patronage Rotation (25% of Margin, if positive)	(0.68)	0.00	(1.46)	0.00
Cash & Temporary Investments	38.32	21.86	6.87	(7.56)
MFIR	1.06	0.94	1.11	0.95
<b>Big Rivers Proposal</b>				
Interest Expense on Long-Term Debt	45.87	46.62	51.23	51.03
Income Taxes	0.25	0.00	0.00	0.00
Margin	6.03	7.26	14.83	7.26
Patronage Rotation	0.00	0.00	0.00	0.00
Cash & Temporary Investments	42.97	43.19	45.49	47.80
MFIR	1.14	1.16	1.29	1.14
<b>Difference - Favorable/(Unfavorable)</b>				
Interest Expense on Long-Term Debt	0.00	0.00	0.00	0.00
Income Taxes	0.00	0.00	0.00	0.00
Margin	(3.31)	(10.21)	(9.01)	(10.03)
Patronage Rotation	(0.68)	0.00	(1.46)	0.00
Cash & Temporary Investments	(4.65)	(21.34)	(38.62)	(55.36)
MFIR	(0.07)	(0.22)	(0.18)	(0.20)
Note 1 - This KIUC rate proposal does not reflect additional borrowing vs. Big Rivers' proposal, which would be required.				

1

2

**Q. What is the primary cause of the approximately \$40 million revenue**

3

**requirement deficiency in this proceeding vs. the October 2008 Unwind**

4

**Financial Model?**

5

**A.** As I explained at pages 9 and 10 of my direct testimony in this proceeding, the key

6

difference is that the off-system sales price has been and continues to be

7

significantly below what was forecast in the Unwind Model. As illustrated in the

8

table below, which compiles Big Rivers' wholesale market experience over the 22

9

month post-Unwind period August 2009 through May 2011, the off-system sales

10

revenue realized by Big Rivers was approximately \$84 million less than projected

11

in the Unwind Financial Model. This total is comprised of a \$72 million price

12

variance and a \$12 million volume variance. On an annualized basis, that equates

13

to approximately \$46 million.

14

Off-System Sales				
	Aug - Dec 2009	2010	YTD May 2011	Cumulative
<b>Actual</b>				
Gross MWh	456,493	2,174,160	1,385,056	4,015,709
Gross Rate- \$/MWh	31.38	37.90	33.96	35.80
Gross Revenue - \$	14,322,593	82,390,434	47,031,706	143,744,733
Smelter Surplus Sales MWh	166,932	769,442	214,655	1,151,029
Smelter Surplus Sales Rate- \$/MWh	32.63	38.40	37.45	37.38
Smelter Surplus Sales Credit - \$	5,447,492	29,542,922	8,038,253	43,028,667
Net MWh	289,561	1,404,718	1,170,401	2,864,680
Net Rate - \$/MWh	30.65	37.62	33.32	35.16
Net Revenue - \$	8,875,101	52,847,511	38,993,453	100,716,066
<b>October 2008 Unwind Model</b>				
MWh	644,986	1,832,907	574,447.21	3,052,340
Rate- \$/MWh	60.94	59.20	63.59	60.40
Revenue - \$	39,307,410	108,516,291	36,530,184	184,353,885
<b>Difference - Fav/(Unfav)</b>				
MWh	(355,424)	(428,190)	595,954	(187,660)
Rate- \$/MWh	(30.29)	(21.58)	(30.28)	(25.24)
Revenue - \$	(30,432,309)	(55,668,780)	2,463,269	(83,637,820)

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3

4 **Q What effect would a general increase in wholesale market prices have on the**  
5 **Smelters?**

6 A In the event the off-system sales market improves, and to the extent Big Rivers  
7 achieves margins that result in a Contract TIER in excess of 1.24, the additional  
8 margins would benefit the Smelters through a downward movement of the TIER  
9 Adjustment Charge within the TIER Adjustment bandwidth. Then, if total margins  
10 exceed the margins required to produce a Contract TIER of 1.24 by more than \$14.2  
11 million, all members would receive a rebate if approved by Big Rivers' Board of  
12 Directors and the Commission.

13 **Q. What do you conclude about the effects of the KIUC proposal on Big Rivers?**

14 A. It is clear from this data that the KIUC proposal is harmful to Big Rivers and should be  
15 rejected. The Big Rivers proposal should be approved by the Commission.

16



1    **III.    KIUC PRO FORMA ADJUSTMENTS**

2           **The Pro Forma Adjustments Proposed By Mr. Kollen and Mr. King Are**  
3           **Inappropriate And Should Be Rejected**  
4

5    **Q.    Mr. Kollen states on page 5 of his direct testimony that the Smelter TIER**  
6           **Adjustment should be set at the top of the bandwidth. Do you agree with this**  
7           **recommendation?**

8    A.    No. Mr. Kollen proposes to reduce Big Rivers' proposed \$39,952,926 base rate  
9           increase by \$7,128,947 to reflect the Smelters at the ceiling of the current bandwidth.  
10           The resulting \$32,823,979 base rate increase is forecast to be insufficient to sustain Big  
11           Rivers, not allowing Big Rivers to meet its MFIR and Conventional TIER requirements  
12           without continued cost-cutting/cost-deferral measures, including the deferral of  
13           necessary generating unit maintenance. In other words, lowering base rates by  
14           \$7,128,947 does not work for Big Rivers. This is further addressed in the rebuttal  
15           testimony of Mr. Seelye.

16   **Q.    Mr. Kollen states on page 7 of his direct testimony that the interest expense and**  
17           **TIER should be reduced to account for the actual prepayment of the RUS Series A**  
18           **note from the Transition Reserve. Do you agree with this recommendation?**

19    A.    No. In his testimony, beginning at page 7, line 9 and continuing through page 10 line  
20           2, Mr. Kollen states that the \$39,952,926 revenue requirement deficiency per Big  
21           Rivers' Application should be reduced by \$2,536,730 in connection with Big Rivers'  
22           April 1, 2011, use of the Transition Reserve funds to prepay the RUS 2009 Promissory  
23           Note Series A ( $\$35 \text{ million} \times 5.845\% = \$2,045,750$ , plus 1.24 TIER thereon =  
24           \$490,980). This is not appropriate.

1   **Q.    Why is Mr. Kollen's recommendation inappropriate?**

2    A.    The revenue requirement deficiency of \$39,952,926 proposed in this case by Big Rivers  
3       for establishing base rates is based on achieving a 1.24 "Contract" TIER, as defined in  
4       Section 4.7.5 of the Smelter Agreements. In accordance with those Smelter  
5       Agreements, and consistent with the Non-Smelter member tariffs, Big Rivers is  
6       required to return the amount of any margins in excess of a 1.24 Contract TIER first to  
7       the Smelters by reducing the TIER Adjustment Charge, as defined in Section 4.7 of the  
8       Smelter Agreements, potentially down to the floor of the TIER Adjustment Charge  
9       "bandwidth." And second, should any margins in excess of a 1.24 Contract TIER  
10      amount remain, to all members in the form of a rebate. Since the bandwidth for the  
11      TIER Adjustment Charge represents approximately \$14.2 million, the members would  
12      not receive a rebate until margins exceeded the margins required to produce a 1.24  
13      Contract TIER by approximately \$14.2 million. Section 4.7.5(f) of those Smelter  
14      Agreements states that the calculation of Contract TIER is to exclude any Big Rivers'  
15      margin impact derived from use of the Transition Reserve. That is precisely why Big  
16      Rivers' Application excluded the \$271,105 actual interest income on the Transition  
17      Reserve from the calculation of the 1.24 Contract TIER. That is also the reason Big  
18      Rivers' Application reflects a slightly higher "Conventional" TIER of 1.25.  
19      Specifically, Section 4.7.5(f) states the following:

20                   It shall be assumed that The Rural Economic Reserve, the Economic Reserve  
21                   and the Transition Reserve shall not generate any revenue or tax liability and  
22                   *the application of funds from the Rural Economic Reserve, the Economic*  
23                   *Reserve or the Transition Reserve shall not result in any change in the Net*  
24                   *Margins of Big Rivers.* (Emphasis added.)  
25

1 Similarly, Big Rivers' April 1, 2011, use of the Transition Reserve to prepay the RUS  
2 2009 Promissory Note Series A has no effect on the calculation of Contract TIER, as  
3 illustrated on Exhibit Hite Rebuttal-1 attached hereto. As shown on Exhibit Hite  
4 Rebuttal-1, the Contract TIER remains 1.24. However, understandably, the  
5 Conventional TIER increases from 1.25 to 1.30. As Big Rivers' Application  
6 determined its revenue requirement deficiency for the purpose of establishing base rates  
7 based upon achieving a 1.24 Contract TIER, no change in the \$39,952,926 revenue  
8 requirement deficiency is warranted as a result of the prepayment of the RUS 2009  
9 Promissory Note Series A with the Transition Reserve. Furthermore, Big Rivers  
10 contends that a Conventional TIER of 1.30 is very reasonable.

11 **Q. Please provide the basis for Big Rivers' contention that a 1.30 Conventional TIER**  
12 **is very reasonable.**

13 A. Exhibit LK-17 of Mr. Kollen's direct testimony includes the recent testimony of Mr.  
14 Dan Walker, dated May 27, 2010, *In the Matter of: General Adjustment of Electric*  
15 *Rates of East Kentucky Power Cooperative Inc.*, Case No. 2010-00167. Page 15 of  
16 Exhibit LK-17 shows that the 21 investment-grade-rated generation and transmission  
17 ("G&T") cooperatives listed have an average Conventional TIER of 1.51, much higher  
18 than Big Rivers' 1.30 TIER. Page 7 of Exhibit LK-17 shows that exhibit shows that  
19 only one of those 21 investment-grade-rated G&Ts, Hoosier Energy, has a lower long-  
20 term senior secured investment grade rating than Big Rivers.

21 Mr. Walker discusses the significance of the perceived risk or risk profile of the  
22 G&T in the credit assessment. Big Rivers' risk profile includes (a) being both  
23 Commission and RUS regulated, (b) having smelter load concentration and their credit

1 risk, (c) being long on energy and therefore subject to the wholesale market, (d) having  
2 several refinancings/new borrowings on the horizon, (e) a history of debt restructuring  
3 and bankruptcy, (f) the impact of proposed EPA requirements, and other  
4 considerations.

5 Of course, for Big Rivers the 1.24 Contract TIER was established by agreement  
6 with the Smelters after lengthy and complex negotiations in connection with the  
7 Unwind Transaction that closed July 16, 2009. The point is that publicly-available data  
8 demonstrates that a Conventional TIER of 1.30 for a G&T cooperative is reasonable.

9 **Q. Do you agree with Mr. Kollen's assertion that TIER is calculated net of interest**  
10 **charged to construction – credit, where he computed a 1.24 TIER on the \$515,767**  
11 **of interest charged to construction – credit, amounting to a \$123,784 reduction in**  
12 **Big Rivers' revenue requirement?**

13 A. No. Big Rivers, an RUS borrower, is subject to the definition of TIER provided in the  
14 RUS Uniform System of Accounts, in particular 7 CFR § 1710.2, Definitions and Rules  
15 of Construction. That definition generally defines TIER as  $(A+B)/A$ , where A equals  
16 Section A, Line 22 of RUS Form 12a; and B equals Section A, Line 36 of Form 12a.  
17 That is precisely how Big Rivers and other RUS G&T borrowers have historically  
18 computed Conventional TIER. Accordingly, Mr. Kollen's proposed adjustment to  
19 reduce Big Rivers' revenue requirement for a 1.24 TIER on interest charged to  
20 construction is incorrect and inconsistent with the RUS Uniform System of Accounts.

21 **Q. Mr. Kollen states on page 13 of his direct testimony that labor and labor overhead**  
22 **expenses should be reduced to exclude amounts that will be capitalized, reducing**

1           **labor and labor overheads by \$1,034,069, from \$68,708,897 to \$67,674,828. Do**  
2           **you agree with this recommendation?**

3       A.    I agree with the concept, but I disagree with Mr. Kollen's calculation. Mr. Kollen has  
4           selected the wrong number to adjust. As stated in Big Rivers' response to Item KIUC  
5           2-32b, total normalized labor and labor overheads results in a revised pro forma of  
6           \$69,581,418, versus. the original total pro forma of \$68,708,897, including any portion  
7           thereof that may be capitalized, as summarized in the table below:

	Pro forma Labor and Labor Overheads (in \$)		
	Normalized	Original	More/(Less)
Labor	48,843,642	48,097,245	746,397
Labor Overheads	25,125,393	24,843,411	281,982
	73,969,035	72,940,656	1,028,379
City's Share	(4,387,617)	(4,231,759)	(155,858)
Labor and Labor Overheads	<b>69,581,418</b>	<b>68,708,897</b>	<b>872,521</b>

8  
9           A more detailed comparative schedule of pro forma labor and labor overheads is  
10          attached hereto as Exhibit Hite Rebuttal-2. If such total amount were reduced by the  
11          test year capitalized percentage of 1.505%, the result is \$68,534,218 in pro forma labor  
12          and labor overheads expensed. Subtracting the \$68,084,003 test year labor and labor  
13          overheads expensed yields a \$450,215 pro forma adjustment to increase Big Rivers'  
14          revenue requirement. When compared to the original pro forma adjustment of  
15          \$624,894, per Exhibit Wolfram-2, Schedule 2.07, attached to the direct testimony of  
16          John Wolfram, the result is a \$174,679 reduction in Big Rivers' originally proposed  
17          \$39,952,926 revenue requirement deficiency. For additional clarification, please see  
18          the table below:

19  
20  
21

<b>Labor and Labor Overheads - in \$</b>			
	<b>Original</b>	<b>KIUC</b>	<b>Revised</b>
Pro forma (total)	68,708,897	68,708,897	69,581,418
Test Year capitalized percentage	0.000%	1.505%	1.505%
Capitalized amount	0	(1,034,069)	(1,047,200)
Pro forma (expensed)	68,708,897	67,674,828	68,534,218
Historical (expensed)	(68,084,003)	(68,084,003)	(68,084,003)
Pro forma adjustment	624,894	(409,175)	450,215

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**Q. Mr. Kollen states on page 17 of his direct testimony that inclusion of depreciation expense on estimated retirements is not appropriate. Do you agree with this recommendation?**

4

5

6

**A.** No. Big Rivers has not included depreciation expense on retirements in its \$42,532,089 pro forma depreciation expense. Mr. Kollen proposes to exclude depreciation expense on estimated retirements, based on the actual test year ratio of retirements to additions (Item KIUC 2-31; \$29,991,845/\$66,422,887), 45.15%, thereby reducing Big Rivers' pro forma depreciation expense by \$1,044,526, from \$42,532,089 to \$41,487,563, as discussed in his testimony beginning on page 17, line 13 and continuing through page 19, line 14. Mr. Kollen's recommendation is flawed for several reasons.

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First, note that the \$42,532,089 is per Exhibit Wolfram-2, Reference Schedule 2.06, attached to the direct testimony of John Wolfram. Big Rivers provided details of the various projects constituting the \$46,802,138 CWIP balance at October 31, 2011. Big Rivers estimates that an additional \$26 million will be required to complete these projects, very likely more than off-setting any associated retirements.

14

15

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18

Second, the 45.15% test year ratio of retirements to additions is itself an anomaly, relevant only to those projects. By way of explanation, Big Rivers

19

1 specifically notes the 2009 Wilson planned outage, the largest in Big Rivers' history,  
2 encompassed a significant portion of the post-Unwind 2009 utility plant additions and  
3 retirements activity. For the 10-year period ended 2009, the average retirements as a  
4 percentage of additions, adjusted for the Coleman scrubber, is 21.62%. To further  
5 illustrate Big Rivers' position, \$10,941,112 of the account 391.2 Computer Equipment  
6 CWIP of \$11,736,081 represents Oracle R12, for which there were no associated  
7 retirements, as the AS400 remains in service and continues to be used and useful. This  
8 alone eliminates \$545,285 or 52% of the \$1,044,526 reduction in pro forma  
9 depreciation expense proposed by Mr. Kollen.

10 Big Rivers contends that neither the costs to complete the October 31, 2010  
11 CWIP, nor the associated retirements, are "known and measureable" and Mr. Kollen's  
12 recommendation should therefore be rejected.

13 **Q. Mr. Kollen states on page 20 of his direct testimony that Transmission of**  
14 **Electricity by Others expense should be reduced to reflect post test year expense**  
15 **reductions. Do you agree with this recommendation?**

16 A. No. As Big Rivers stated in its response to Item KIUC 2-28, this cost is primarily in  
17 support of Big Rivers' off-system sales activities. Big Rivers has not proposed a pro  
18 forma adjustment for its off-system sales activities, so it is not appropriate to use one  
19 item of expense from those activities reflected in Big Rivers' financial forecast to make  
20 the test year adjustment proposed by Mr. Kollen.

21 **Q. Mr. Kollen states on page 21 of his direct testimony that the depreciation expense**  
22 **should be modified to reflect the recommendations of KIUC witness Mr. King. Do**  
23 **you agree with this recommendation?**

1 A. No. For the reasons described in the rebuttal testimony of Mr. Ted Kelly, the  
2 recommendation of Mr. Kollen regarding depreciation expense should be rejected by  
3 the Commission.

4 **Q. Were the Smelters involved in the development of the Depreciation Study filed by**  
5 **Big Rivers in this case?**

6 A. Yes, to a certain extent the Smelters participated in the development of the  
7 Depreciation Study prepared by Burns & McDonnell and filed by Big Rivers in this  
8 case. As the Commission knows, Big Rivers and each of the Smelters entered into a  
9 number of agreements in connection with the Unwind Transaction closing, including a  
10 Coordination Agreement. One purpose of the Coordination Agreement is to increase  
11 the exchange of information between Big Rivers and the Smelters. Among other  
12 things, the Coordination Agreement obligates Big Rivers to provide the Smelters  
13 certain notice concerning a new Depreciation Study, and to give them an opportunity to  
14 comment on the Depreciation Study. Big Rivers' president and CEO, Mark Bailey,  
15 decided to go even further by inviting the Smelters to participate in the internal working  
16 group on the Depreciation Study.

17 **Q. Did the Smelters accept the invitation to participate in the Depreciation Study**  
18 **working group?**

19 A. Yes. The Smelters participated in the activities of the working group, beginning with  
20 the selection of the consultant to conduct the Depreciation Study. In fact, it was at the  
21 urging of the Smelter representatives that Big Rivers passed over the low bidder for the  
22 Depreciation Study and engaged Burns & McDonnell for the project. I believe one or



1 more Smelter representatives participated in at least five in-person or telephonic  
2 meetings of the working group.

3 **Q Once Burns & McDonnell was engaged, did the Smelters' representatives**  
4 **participate in the development of the Depreciation Study?**

5 A. Yes. They sat in on meetings, asked questions, made comments, and participated in the  
6 initial property inspections. They were given access to the FTP (file transfer protocol)  
7 web site on which Burns & McDonnell posted all of the information used to develop  
8 the Depreciation Study. Big Rivers provided them quite a bit of information they  
9 requested, and answered several questions they posed. The Smelters were assisted by  
10 their own consultant, the firm of Snavelly King Majoros & O'Connor, Inc. The KIUC  
11 expert witness on depreciation in this case, Charles W. King, is a principal in that firm  
12 and was involved on behalf of the Smelters in the Big Rivers working group on the  
13 Depreciation Study.

14 **Q. Did the Smelters suggest any changes in the Depreciation Study that were**  
15 **accepted by Big Rivers and Burns & McDonnell?**

16 A. Yes. I believe we responded positively to each suggestion made by the Smelters and  
17 Mr. King. They asked several questions along the way, and discovered some errors in  
18 the calculations that were corrected. Among other things, we agreed to reflect a 65  
19 year estimated useful life for Wilson Station in the analysis at the request of Mr. King.  
20 The Smelters reviewed the explanations and revisions made to the Depreciation Study  
21 and notified Big Rivers on January 4, 2011 that they agreed to the revised Depreciation  
22 Study.

1 **Q. Mr. King criticizes the Burns & McDonnell Depreciation Study in his testimony**  
2 **filed in this case. During the course of the Smelters' participation in the**  
3 **Depreciation Study working group, did the Smelters or Mr. King raise the issues**  
4 **about the Depreciation Study that he complains about in his testimony?**

5 A. No.

6 **Q. From Big Rivers' standpoint, what is your reaction to Mr. King's suggestion that**  
7 **Big Rivers' current depreciation rates should be reduced to produce**  
8 **approximately \$1.56 million less depreciation than is produced by its existing**  
9 **depreciation rates?**

10 A. First, Mr. King's original Exhibit CWK-1 Schedule 1 contained errors in accounts 343,  
11 344 and 345, and was subsequently revised. Mr. King's corrected Exhibit CWK-1  
12 Schedule 1, the comparison to the April 30, 2010, plant in service balance is  
13 \$28,219,418 for KIUC vs. \$29,949,367 for Big Rivers, a decrease of \$1,729,949.  
14 Based on total plant in service at October 31, 2010, including CWIP, the comparisons  
15 are \$36,605,379 for KIUC versus \$37,056,978 for Big Rivers with pro forma  
16 depreciation expense calculated using Big Rivers' existing depreciation rates, a  
17 decrease of \$451,599, and \$36,605,379 for KIUC vs. \$42,532,089 for Big Rivers with  
18 pro forma depreciation expense calculated using Big Rivers' proposed (new)  
19 depreciation rates, a decrease of \$5,926,710.

20 Mr. King's suggestion is inconsistent with appropriate accounting practice, and  
21 is not in the best interest of Big Rivers. Big Rivers' current depreciation rates and  
22 estimated useful lives are such that early retirements of assets have accumulated \$68.8  
23 million in losses. That is a function of two things. One, when Western Kentucky

1 Energy Corp. (“WKEC”) was operating Big Rivers’ generating plants and assets,  
2 WKEC had a very liberal capitalization policy. That is, WKEC capitalized rather than  
3 expensed a much wider range of items than are normally capitalized by an electric  
4 cooperative that is a RUS borrower. The Smelters required in the Coordination  
5 Agreement, Section 3.15, that following the Unwind Transaction closing Big Rivers  
6 capitalize expenditures for the replacement of items related to Big Rivers’ generation  
7 facilities in accordance the WKEC practices, which is reflected in the list of retirement  
8 units attached as Schedule 3.15 to the Coordination Agreement. And second, the  
9 estimated group useful lives applicable to many retirement unit groups under the  
10 current Depreciation Study functioned acceptably until the large number of short-lived  
11 retirement units represented on Schedule 3.15 were added to the groups. The longer  
12 group lives became applicable to them, meaning that units of property are frequently  
13 retired early, resulting in a loss. The estimated useful lives under the existing  
14 Depreciation Study were developed when Big Rivers was still operating its generating  
15 units, prior to July 17, 1998, and the range of retirement units was much smaller. Since  
16 WKEC took over Big Rivers’ generating plants in 1998 and expanded the list of  
17 retirement units there has been no adjustment to the Big Rivers existing depreciation  
18 rates to correct the anomaly created by these circumstances.

19 **Q Do the depreciation rates proposed in the Depreciation Study correct this**  
20 **anomaly?**

21 A. Not entirely, but the new depreciation rates proposed in the Depreciation Study would  
22 definitely improve the situation, while the depreciation rates proposed by KIUC would  
23 make it worse.

1 **Q. What is your recommendation to the Commission with respect to the Big Rivers**  
2 **depreciation rates?**

3 A. We assume that the Commission recognized the need for a new Big Rivers  
4 Depreciation Study because the final order in the case approving the Unwind  
5 Transaction the Commission expressly requires that Big Rivers file a new Depreciation  
6 Study with its next general rate case and to do so within three years of the Unwind  
7 closing. Big Rivers' depreciation rates should be those developed in the Burns &  
8 McDonnell Depreciation Study, and presented to the Commission in the direct  
9 testimony of Mr. Kelly. As Mr. King, himself, points out in his testimony at page 5,  
10 depreciation rates cannot be calculated with precision, and the Commission must  
11 exercise its own judgment in assessing the rationale and data that underlie alternative  
12 depreciation rates. He says that "in this proceeding, the Commission must choose  
13 between two sets of depreciation rates that yield widely differing annual depreciation  
14 accruals." For the reasons outlined in Mr. Kelly's direct and rebuttal testimony, the  
15 Commission should approve the depreciation rates proposed by Big Rivers, which have  
16 been approved by the RUS.

17 **Q. While Big Rivers adamantly opposes any departure from the depreciation rates it**  
18 **has proposed, if the Commission does require any change to those depreciation**  
19 **rates, must Big Rivers seek any other approvals before it implements those**  
20 **adjusted rates?**

21 A. Yes. Section 4.22 of the Amended and Consolidated Loan Contract dated as of July 16,  
22 2009, between Big Rivers and the United States of America provides in Section 4.22  
23 that Big Rivers shall adopt as its depreciation rates only those rates that have been

1 previously approved for Big Rivers by the RUS. Big Rivers could not submit the  
2 depreciation rates proposed in this case until it had obtained RUS approval of those  
3 rates. We informed RUS representatives that KIUC was challenging Big Rivers' RUS-  
4 approved depreciation rates, and were told that if the Commission alters those rates,  
5 Big Rivers must submit the new rates to RUS for approval.

6 **Q. What process and standards would be applicable to that review by RUS?**

7 A. My understanding is that RUS would use the same process and standards it uses for any  
8 review of proposed depreciation rates, and that RUS requires that rates for electric  
9 service be based on approved depreciation rates.

10 **Q. On pages 22-23 of his testimony, Mr. Kollen compares Big Rivers' "equity ratio"  
11 to the "equity ratio" of other G&T cooperatives. Is his comparison appropriate?**

12 A. No. Mr. Kollen compares Big Rivers' ratio of *equity to total capitalization* (32.11%) to  
13 the ratio of *equity to total assets* of other G&T cooperatives, and leaves the impression  
14 that he is comparing comparable equity ratios. As of October 31, 2010, Big Rivers'  
15 equity ratio (equity to total assets) was 26.28%, and that is the ratio that is appropriately  
16 comparable to the equity to total asset ratios of other G&T cooperatives mentioned by  
17 Mr. Kollen.

18 As the ratings agency reports on Big Rivers and Mr. Spen point out, Big Rivers'  
19 credit risk profile requires that Big Rivers carry higher financial ratios than other G&T  
20 cooperatives to obtain investment grade credit ratings. And the principal risk it must  
21 overcome is the concentration of smelter load on its system. It must be remembered  
22 that, in spite of Big Rivers 32.11% equity to total capitalization and a 26.28% equity to  
23 total assets, its current senior secured long-term investment grade ratings are Baa1 by

1 Moody's, and only the minimum investment grade rating of BBB- by both Standard &  
2 Poor's and Fitch.

3  
4 **IV. PATRONAGE CAPITAL**

5 **The KIUC Recommendation That The Commission Should Direct Big Rivers to**  
6 **Adopt And Implement A Plan to Refund Patronage Capital Is Misplaced And**  
7 **Should Be Rejected**  
8

9 **Q. What is patronage capital?**

10 A. From an accounting standpoint, annual income remaining after deducting all expenses  
11 (i.e., net margin) is referred to as patronage capital. From a practical standpoint, it is a  
12 G&T cooperative's members' equity interest in the assets of the cooperative. It is the  
13 equity portion of the equity to total capitalization measure used by credit rating  
14 agencies in evaluating the creditworthiness of an electric cooperative.

15 **Q. What is the "allocation" of patronage capital?**

16 A. Periodically, patronage capital is allocated to the members of an electric cooperative.  
17 An allocation is an assignment on the books of the G&T of the equity interest of the  
18 cooperative's members to each member. An allocation of patronage capital is different  
19 from a distribution of patronage capital.

20 **Q. What is "distribution" or "retirement" of patronage capital?**

21 A. At the discretion of the board of directors of a G&T cooperative, patronage capital may  
22 be distributed or retired to members of the electric cooperatives, in cash, so long as the  
23 cooperative is able to meet its financial obligations and remain on a sound financial  
24 footing. Big Rivers has allocated its patronage capital, but has not made any patronage  
25 capital distributions or retirements in the recent past.

1 **Q. What is KIUC's proposal?**

2 A. KIUC witness Mr. Kollen proposes that Big Rivers distribute 25% of its net margins  
3 from the prior year to its members.

4 **Q. Is this proposal reasonable?**

5 A. No. Patronage capital should only be distributed if there is no adverse impact on the  
6 financial soundness of the electric cooperative. The KIUC proposal for patronage  
7 capital would hinder Big Rivers' cash flow, increase Big Rivers' need for borrowings,  
8 and jeopardize Big Rivers' investment grade credit ratings. Big Rivers is also of the  
9 opinion that under the KIUC rate proposal alone, it is highly unlikely there would be  
10 any margin to allocation 25% of. In reality, Big Rivers would continue cost-cutting,  
11 and cost-deferral measures to meet its minimum 1.10 MFIR requirement. Then, to  
12 make matter worse, KIUC advocates distributing 25% of the resulting margin.

13 **Q. Does Big Rivers have sufficient cash to make a distribution of patronage capital?**

14 A. No. The KIUC proposal effectively would require that Big Rivers borrow money to  
15 make a patronage capital distribution. Big Rivers already anticipates the need to  
16 borrow an additional \$52 million in 2012, in addition to its need to refinance existing  
17 debt. This additional borrowing will be necessary even if Big Rivers is granted its full  
18 rate adjustment request by the Commission. The KIUC proposal would require Big  
19 Rivers to borrow even more.

20 **Q. Would the increased borrowing required by the KIUC proposal affect Big Rivers'  
21 risk profile?**

22 A. Absolutely. As I stated, and as also discussed in the rebuttal testimony of Mr. Spen,  
23 equity to total capitalization is one of the primary measures used by credit rating

1 agencies in evaluating the creditworthiness of a electric G&T cooperative. Increased  
2 debt would definitely adversely impact Big Rivers' risk profile.

3 **Q. Does the Commission consider credit ratings to be an important factor in the**  
4 **financial viability of Big Rivers?**

5 A. Yes. The Commission has called investment grade credit ratings for Big Rivers a  
6 "linchpin" of the success of the Unwind Transaction in its March 6, 2009 Order  
7 conditionally approving the Unwind Transaction in Case No. 2007-00455 (at p. 38).

8 **Q. On page 31 of his direct testimony, Mr. Kollen states that a patronage capital**  
9 **distribution balances the need to mitigate the effect of the rate increase on**  
10 **ratepayers with the need to maintain and enhance Big Rivers' financial health.**  
11 **Do you agree?**

12 A. No. The KIUC position is unreasonable and inconsistent with the view of credit  
13 analysts. As Mr. Spen explains in his rebuttal testimony, credit analysts have  
14 recognized that serving the smelter load requires Big Rivers to have a higher equity  
15 percentage than typical G&T cooperatives. The additional equity is necessary in order  
16 to manage the risk associated with the potential loss of a large portion of Big Rivers'  
17 revenue in the event of the closure of one or both of the Smelter operations. If Big  
18 Rivers must borrow money to make the patronage capital retirements proposed by the  
19 KIUC, Big Rivers' equity will decline.

20 **Q. Is the KIUC proposal unreasonable for any other reasons?**

21 A. Yes. Patronage capital is not cash on deposit. It is the equity in the assets of the  
22 cooperative allocated to the cooperative's members. Big Rivers is already cash  
23 strapped. The KIUC proposal would exacerbate the cash flow problem even before



1 considering the patronage capital issue. KIUC's patronage distribution  
2 recommendation would make Big Rivers' cash reserve position even worse. KIUC's  
3 patronage capital recommendation would be harmful to Big Rivers, and the  
4 Commission should reject it.

5 **Q. Is it appropriate for KIUC to request the Commission to require Big Rivers to**  
6 **distribute patronage capital?**

7 A. No. Decisions regarding retirement of capital credits should be left to the discretion of  
8 Big Rivers' Board of Directors.

9 **Q. How should the Commission respond to Mr. Kollen's recommendation that the**  
10 **Commission should direct Big Rivers to adopt and implement a plan to refund**  
11 **patronage capital?**

12 A. The Commission should reject this recommendation. Big Rivers' bylaws give  
13 decision-making authority regarding patronage capital distributions to Big Rivers'  
14 board of directors, and it should decide when and how patronage capital is retired, or  
15 paid in cash to Big Rivers' members. Moreover, from a financial standpoint adoption  
16 and implementation of a patronage capital rotation policy is not appropriate at this time.  
17 Until the July 16, 2009, Unwind Transaction closing, Big Rivers had significant  
18 negative equity -- \$144,890,593 at June 30, 2009. Any meaningful discussion of Big  
19 Rivers' patronage allocations must recognize that Big Rivers is rather unique among  
20 electric G&T cooperatives. For income tax purposes, Big Rivers is non-exempt,  
21 meaning it is taxable and files an annual IRS Form 1120. Big Rivers allocates  
22 patronage capital on a federal income tax basis. Every dollar of patronage capital  
23 allocated (assigned on Big Rivers' books) to a member serves to minimize Big Rivers'

1 income tax liability. Big Rivers has cumulatively allocated \$1,000,398,087 in  
2 patronage capital (the greater of regular taxable patronage-sourced income or  
3 alternative minimum taxable patronage-sourced income) through tax year 2010, as a  
4 result of consummating a Sale-Leaseback Transaction of its Wilson and Green facilities  
5 in mid-2000, and operating under the LG&E Transaction beginning mid-1998. As  
6 these two transactions were terminated in mid-2008 and mid-2009, respectively, it is  
7 unlikely that Big Rivers will allocate patronage in the near future. Rather, member  
8 taxable losses are anticipated, as was the case pre-1998.

9 **Q. Does Mr. Kollen appropriately rely on the CFC Capital Credits Task Force**  
10 **Report in his direct testimony?**

11 A. No. Mr. Kollen includes the CFC Capital Credits Task Force Report, dated January  
12 2005, entitled "A Distribution Cooperative's Guide to Making Capital Credit  
13 Decisions" as Exhibit LK-13 to his testimony. Mr. Kollen recommends on page 32 of  
14 his testimony that Big Rivers, a G&T cooperative, adopt a patronage capital retirement  
15 plan that is "consistent" with a report that was expressly prepared for distribution  
16 cooperatives. The report does not purport to advise G&Ts on capital credit decisions,  
17 or consider the unique circumstances faced by Big Rivers that bear on such decisions.

18 **Q. In his direct testimony on page 32, Mr. Kollen asserts that his recommendation**  
19 **regarding capital credits is consistent with the annual retirement of patronage**  
20 **capital by other cooperatives, including "NRECA annual retirement of 50% of the**  
21 **margins from the prior year." See also Exhibit LK-20. Do you agree with this**  
22 **assertion?**

1 A. No. First, the "other cooperatives" to which Mr. Kollen alludes are distribution  
2 cooperatives and cooperatives subject to Subchapter T of the IRC, not G&T  
3 cooperatives like Big Rivers. Second, Mr. Kollen refers to the "NRECA" capital  
4 credits retirement policy of 50% per year which he says is reflected in his Exhibit LK-  
5 20. In fact, that exhibit contains an e-mail from Sheldon Peterson, president of the  
6 National Rural Utilities Cooperative Finance Corporation ("CFC"), not NRECA,  
7 announcing that CFC is reducing its annual capital credits retirements from 70% per  
8 year to 50% per year to improve CFC's financial profile. CFC, unlike Big Rivers, is  
9 classified as a Subchapter T cooperative, and is required to retire at least 20% of its  
10 annual patronage capital allocation. Big Rivers and CFC are not comparable.

11 **Q. Do Big Rivers' bylaws address the issue of patronage distributions?**

12 A. Yes. As mentioned earlier in my rebuttal testimony, under Big Rivers' bylaws  
13 patronage distribution policy is a matter for Big Rivers' board of directors, rather than  
14 this Commission or the Big Rivers' management team. Big Rivers' bylaws generally  
15 state that, subject to the limitations contained in the RUS Loan Contract and Big  
16 Rivers' Indenture, the board of directors may, recognizing their broad discretion,  
17 declare a patronage distribution when they conclude the financial condition of the  
18 Company warrants doing so.

19 **Q. Would you recommend that the Big Rivers Board of Directors consider adoption  
20 of the patronage capital distribution policy proposed by KIUC?**

21 A. No. Page 31 lines 9-17 of the direct testimony of Mr. Kollen and page 31 Table 3 of  
22 the direct testimony of Stephen J. Baron present what KIUC apparently considers an  
23 equitable patronage retirement plan for Big Rivers -- one they claim does not unduly

1 benefit the Rural ratepayers. However, the data in Table 3, reflecting what KIUC  
2 considers an “equitable” retirement of Big Rivers’ patronage capital, is one in which  
3 the Smelters are attributed 68.36% of such patronage distribution. Historically, the  
4 portion of Big Rivers’ patronage allocations to its three member distribution  
5 cooperatives and attributed to the Smelters is 13.49%, as shown in Big Rivers’ response  
6 to Item KIUC 2-26. The distribution of patronage capital attributable to the Smelters  
7 suggested by the KIUC is extreme and thus should be considered unreasonable by the  
8 Big Rivers Board of Directors.

9 **Q In his discussion of the creditor restrictions on Big Rivers’ ability to retire**  
10 **patronage capital, Mr. Kollen claims in his direct testimony on page 29 that Big**  
11 **Rivers states, in its response to Item KIUC 1-58, that it cannot retire patronage**  
12 **capital without RUS approval. Is his statement correct?**

13 A. No. Mr. Kollen is not correctly stating Big Rivers’ position, or Big Rivers’ response to  
14 Item KIUC 1-58. The KIUC data request asked for the total amount of patronage  
15 capital available for distribution at a certain point in time, not for a discussion of the  
16 limitations on retirement of patronage capital. The response correctly states that the  
17 amount of patronage capital available for distribution to the members as of December  
18 31, 2010, was \$39,594,091.04, and that if Big Rivers wanted to retire *that* amount, it  
19 would need the written approval of RUS. If Big Rivers wanted to retire *less than* that  
20 amount, whether or not RUS approval would be required would depend upon the  
21 limitations in the RUS Loan Contract.

22 **Q. Mr. Kollen also states, beginning on page 29 of his direct testimony, that on page x**  
23 **of the offering statement or prospectus for sale of Big Rivers’ 2010A pollution**

1 control bonds, under the heading “Limitations on Distributions to Members,” Big  
2 Rivers only mentions the Big Rivers Indenture limitations on retirement of  
3 patronage capital, and does not disclose the RUS Loan Contract limitations on  
4 retirement of patronage capital. Did Big Rivers make inadequate disclosures  
5 under its offering statement?

6 A. No. Mr. Kollen failed to note that the section of the offering statement from which he  
7 was quoting began on the previous page (page ix) and is titled “Our Mortgage  
8 Indenture.” So that section of the offering statement was only intended to describe the  
9 Indenture limitations on retirement of patronage capital. The Indenture was described  
10 in the offering statement because it was the document that would secure repayment of  
11 the bonds Big Rivers was selling. The RUS Loan Contract is not described in the  
12 Indenture.

13  
14 V. **CONCLUSION**

15  
16 Q. **Please summarize your rebuttal testimony.**

17 A. For the reasons described herein, the KIUC proposal does not allow Big Rivers to  
18 operate prudently and meet its financial obligations, and should therefore be rejected.  
19 The pro forma adjustments proposed by Mr. Kollen and Mr. King on behalf of the  
20 KIUC are inappropriate and should be rejected. The KIUC recommendation that the  
21 Commission should direct Big Rivers to adopt and implement a plan to refund  
22 patronage capital is misplaced and should be rejected. Finally, the KIUC

1 recommendation that the Rural Economic Reserve should be used to mitigate the Rural  
2 rate increase proposed by the KIUC should be rejected.

3 **Q. Does this conclude your rebuttal testimony?**

4 **A. Yes.**

	Original Proforma	Revised for Transition Reserve used to prepay RUS Series A Note	Change - Favorable/ (Unfavorable)
<b>Statement of Operations</b>			
1	Electric Energy Revenues	417,567,921	417,567,921
2	Income From Leased Property Net	0	0
3	Other Operating Revenue and Income	13,778,746	13,778,746
4	<b>TOTAL OPER. REVENUES &amp; PATRONAGE CAPITAL</b>	<b>431,346,667</b>	<b>431,346,667</b>
5	Operating Expense-Production-Excluding Fuel	30,307,204	30,307,204
6	Operating Expense-Production-Fuel	92,281,353	92,281,353
7	Operating Expense-Other Power Supply	109,321,573	109,321,573
8	Operating Expense-Transmission	13,530,009	13,530,009
11	Operating Expense-Customer Service and Information	1,596,199	1,596,199
12	Operating Expense-Sales	282,791	282,791
13	Operating Expense-Administrative and General	26,592,973	26,592,973
14	<b>TOTAL OPERATION EXPENSE</b>	<b>273,912,102</b>	<b>273,912,102</b>
15	Maintenance Expense-Production	52,046,252	52,046,252
16	Maintenance Expense-Transmission	5,614,605	5,614,605
18	Maintenance Expense-General Plant	208,845	208,845
19	<b>TOTAL MAINTENANCE EXPENSE</b>	<b>57,869,702</b>	<b>57,869,702</b>
20	Depreciation and Amortization Expense	40,307,760	40,307,760
21	Taxes	88,521	88,521
22	Interest on Long-Term Debt	47,693,118	45,647,368
23	Interest Charged to Construction - Credit	0	0
24	Other Interest Expense	149,903	149,903
26	Other Deductions	60,999	60,999
27	<b>TOTAL COST OF ELECTRIC SERVICE</b>	<b>420,082,105</b>	<b>418,036,355</b>
28	<b>OPERATING MARGINS</b>	<b>11,264,562</b>	<b>13,310,312</b>
29	Interest Income	401,668	130,563
30	Allowance For Funds Used During Construction	0	0
32	Other Non-Operating Income (Net)	28,258	28,258
34	Other Capital Credits and Patronage Dividends	22,965	22,965
35	Extraordinary Items	0	0
36	<b>NET PATRONAGE CAPITAL OR MARGIN</b>	<b>11,717,453</b>	<b>13,492,098</b>
37	Target Contract TIER	1.24	1.24
38	Margin for Contract TIER	11,446,348	11,446,348
39	Interest Income on Transition Reserve	271,105	n/a
40	Reduced Interest Expense on Long-Term Debt	n/a	(2,045,750)
52	Revenue Requirement Deficiency	39,952,926	39,952,926
53	Contract TIER	1.24	1.24
54	Conventional TIER	1.25	1.30
55	Contract TIER		
56	Margin	11,446,348	11,446,348
57	Interest on Long-Term Debt - Denominator	47,693,118	47,693,118
58	Numerator	59,139,466	59,139,466
59	Conventional TIER		
60	Margin	11,717,453	13,492,098
61	Interest on Long-Term Debt - Denominator	47,693,118	45,647,368
62	Numerator	59,410,571	59,139,466
63	Contract TIER Revenue Deficiency		
64	To Margin of "zero"	28,235,473	26,460,828
65	Contract TIER Margin	11,446,348	11,446,348
66	Margin impact from Transition Reserve	271,105	2,045,750
67		39,952,926	39,952,926

	Labor and Labor Overheads (in \$)									
	Revised Normalized Pro forma, per KIUC 2-32b			Original Pro forma, per Application			Difference - More/(Less)			Total
	Salaried	Bargaining	Total	Salaried	Bargaining	Total	Salaried	Bargaining	Total	
Headcount	249	357	606	249	357	606	0	0	0	0
Labor:										
Straight Time Labor	20,492,616	21,706,881	42,199,497	20,447,793	21,153,175	41,600,968	44,823	553,706	598,529	
Overtime Labor	978,308	5,522,525	6,500,833	973,116	5,379,849	6,352,965	5,192	142,676	147,868	
Shift Premium	1,040	142,272	143,312	1,040	142,272	143,312	0	0	0	
	21,471,964	27,371,678	48,843,642	21,421,949	26,675,296	48,097,245	50,015	696,382	746,397	
Labor Overheads:										
Workers Compensation	374,928	463,974	838,902	374,019	452,173	826,192	909	11,801	12,710	
FICA	1,551,896	2,093,952	3,645,848	1,548,936	2,040,647	3,589,583	2,960	53,305	56,265	
401(k)	737,739	781,461	1,519,200	726,456	736,821	1,463,277	11,283	44,640	55,923	
Defined Benefit/Defined Contribution	2,987,679	2,367,187	5,354,866	2,954,331	2,243,451	5,197,782	33,348	123,736	157,084	
Long-Term Disability	150,645	160,650	311,295	150,645	160,650	311,295	0	0	0	
Medical	4,081,857	5,905,851	9,987,708	4,081,857	5,905,851	9,987,708	0	0	0	
Dental	194,469	291,669	486,138	194,469	291,669	486,138	0	0	0	
Flexible Spending Account	84,660	121,380	206,040	84,660	121,380	206,040	0	0	0	
Life Insurance	124,749	138,516	263,265	124,749	138,516	263,265	0	0	0	
FUTA/SUTA	34,860	49,980	84,840	34,860	49,980	84,840	0	0	0	
Post-Retirement Medical	1,606,548	820,743	2,427,291	1,606,548	820,743	2,427,291	0	0	0	
	11,930,030	13,195,363	25,125,393	11,881,530	12,961,881	24,843,411	48,500	233,482	281,982	
City of Henderson's Share (HMP&L Station Two)	33,401,994	40,567,041	73,969,035	33,303,479	39,637,177	72,940,656	98,515	929,864	1,028,379	
	(1,582,250)	(2,805,367)	(4,387,617)	(1,546,152)	(2,685,607)	(4,231,759)	(36,098)	(119,760)	(155,856)	
Labor and Labor Overheads	31,819,744	37,761,674	69,581,418	31,757,327	36,951,570	68,708,897	62,417	810,104	872,521	



**COMMONWEALTH OF KENTUCKY**  
**BEFORE THE PUBLIC SERVICE COMMISSION**

**In the Matter of:**

**APPLICATION OF BIG RIVERS            )**  
**ELECTRIC CORPORATION FOR A        )**     **CASE NO. 2011-00036**  
**GENERAL ADJUSTMENT IN RATES    )**

**REBUTTAL TESTIMONY**  
  
**OF**  
  
**WILLIAM STEVEN SEELYE**  
**PRINCIPAL & SENIOR CONSULTANT**  
**THE PRIME GROUP, LLC**  
  
**ON BEHALF OF**  
  
**BIG RIVERS ELECTRIC CORPORATION**

**Filed: July 6, 2011**

**Case No. 2011-00036**  
**Exhibit 67**  
**Page 1 of 49**

**REBUTTAL TESTIMONY  
OF  
WILLIAM STEVEN SEELYE**

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**I. INTRODUCTION**

1 **Q. Please state your name and business address.**

2 A. My name is William Steven Seelye and my business address is The Prime Group,  
3 LLC, 6001 Claymont Village Dr., Suite 8, Crestwood, Kentucky, 40014.

4 **Q. Did you submit direct testimony in this proceeding?**

5 A. Yes, as Big Rivers' Application Exhibit 57.

6 **Q. On whose behalf are you testifying?**

7 A. I am testifying on behalf of Big Rivers Electric Corporation ("Big Rivers").

8 **Q. What is the purpose of your rebuttal testimony?**

9 A. The purpose of my testimony is to rebut testimony submitted by witnesses on behalf  
10 of Kentucky Industrial Utility Customers, Inc. ("KIUC"). Specifically, I will discuss  
11 the lack of relevance to this proceeding of the testimonies of KIUC witnesses Dr. Paul  
12 A. Coomes, Gene Strong, Dr. Mathew J. Morey, and Stephane Leblanc. I will rebut  
13 the testimony of KIUC witness Stephen J. Baron concerning the cost of service study,  
14 the allocation of the revenue increase, the Smelter TIER Adjustment, Large Industrial  
15 Customer Expansion Rate – Rate Schedule LICX, and KIUC's proposal to restructure  
16 the Rural Economic Reserve to offset the effect of KIUC's proposal to shift all of the  
17 revenue increase to Rural Delivery Service ("Rurals"). I will also rebut the testimony  
18 of KIUC witness Lane Kollen concerning the Smelter TIER Adjustment.

1

2 **II. LACK OF RELEVANCE OF THE TESTIMONIES OF COOMES, STRONG,**  
3 **MOREY AND LEBLANCQ.**

4

5 **Q What issues are addressed in the testimonies of Coomes, Strong, Morey and**  
6 **Leblanc?**

7 A. Dr. Coomes provides testimony and a report describing the economic importance of  
8 the two aluminum smelters ("Smelters") served by Big Rivers and the economic and  
9 fiscal impacts to the Commonwealth of Kentucky if the Smelters were to close their  
10 operations. Mr. Strong discusses the economic importance of the Smelters and the  
11 difficulty in replacing jobs if the Smelters were to close their operations. Dr. Morey  
12 describes the importance of the Smelters to Big Rivers and the impact on Big Rivers'  
13 financial margins if the Smelters were to close their operations. Mr. Leblanc  
14 discusses the economic uncertainties facing the Smelters.

15 **Q. Do the testimonies of Coomes, Strong, Morey and Leblanc have any relevance to**  
16 **the determination of revenue requirements in this proceeding?**

17 A. No. Regulated utilities in the United States are entitled to a reasonable opportunity to  
18 recover their prudently-incurred costs. See the landmark U.S. Supreme Court case,  
19 *Federal Power Commission et al. v Hope Natural Gas Co. ("Hope")*, 320 U.S. 591,  
20 603 (1944). While the viability of the Smelters is certainly important to the economy  
21 in western Kentucky and to Big Rivers' financial position, the financial viability of the  
22 Smelters is not relevant – either directly or indirectly – to the evaluation of Big

1 Rivers' revenue requirement in this rate case proceeding.

2 The KIUC has submitted several pieces of testimony in this proceeding  
3 directed at demonstrating the importance of the Smelters to the economy of western  
4 Kentucky and to the financial viability of Big Rivers. Although Big Rivers does not  
5 agree with a number of assumptions, observations and conclusions reached by  
6 witnesses Coomes, Strong, Morey and Leblanc, Big Rivers does not disagree with the  
7 basic points made by these witnesses. Unquestionably, the Smelters are important to  
8 western Kentucky, to the state, and to Big Rivers. But the importance of the Smelters  
9 does not represent a legitimate basis for reducing Big Rivers' revenue requirement in  
10 this rate case.

11 As the Supreme Court found in *Hope*, the economic impact of a utility's rates  
12 on the economy of a region is extraneous to the determination of a fair, just and  
13 reasonable rate. In *Hope*, West Virginia argued that "the [Federal Power]  
14 Commission in fixing a rate for natural gas produced in that State should consider the  
15 effect of the rate order on the economy of West Virginia" by allowing rates that would  
16 have permitted the utility to over-collect its costs. *Hope* at 608. The Supreme Court  
17 recognized that the Federal Power Commission's statutory mandate was to determine  
18 fair, just and reasonable rates, not to act as an economic development agency, and the  
19 Court further recognized that the economic issues of West Virginia were best dealt  
20 with by agencies and political initiatives created or designed for that purpose. The  
21 Court therefore rejected West Virginia's argument, suggesting that the protection of a

1 region of the country would require political remedies other than adjusting the level of  
2 a utility's rates. *Id.* at 613. The Hope decision is attached as Exhibit Seelye Rebuttal  
3 – 1. As Henry W. Fayne notes on page 23 of his direct testimony, in the case of the  
4 Smelters the long term solution to their issues must be developed on a statewide basis.

5 **Q. Would reducing Big Rivers' revenue requirement as proposed by the Smelters**  
6 **solve the Smelters' long-term competitive problems?**

7 A. No. As Mr. Leblanc points out, "Aluminum is produced and sold in a commodity  
8 market where the price is determined by global forces." (Direct Testimony of  
9 Stephane Leblanc at p. 4.) He goes on to say that, "At the time this testimony is filed,  
10 global forces are producing a relatively high market price for primary aluminum so  
11 that today the Sebree smelter has positive margins from operations. However, we  
12 know that those same global forces eventually will act in reverse and that the next  
13 downturn in aluminum prices will put the Sebree smelter at risk because of its high  
14 cost power supply." (*Id.*) Mr. Leblanc's testimony thus indicates that the Smelters are  
15 subject to the vagaries of the international market for aluminum, and their competitive  
16 position largely relates to having a plant located in the United States.

17 Ultimately, Big Rivers and its Rural members do not have the resources to  
18 solve the problems that the Smelters have in competing in the international aluminum  
19 market. Mr. Fayne concedes on pages 22-23 of his testimony "that the size of Big  
20 Rivers in relationship to the size of the Smelter load limits the extent to which a long  
21 term solution can be developed through the regulatory process." In this regard, Big

1 Rivers resembles other utilities that supplied aluminum smelters which have closed  
2 their operations in the United States. As Mr. Fayne observes, "In West Virginia, in  
3 2006, the Public Service Commission of West Virginia approved a Special Contract  
4 for the Ravenswood smelter which indexed the price paid for electricity to the LME  
5 [London Metals Exchange] ... nonetheless, the smelter was shut down in 2009."  
6 (Direct Testimony of Henry W. Fayne at pp. 18-19.)

7 Based on the testimony of Mr. Leblanc, at the time he wrote his direct  
8 testimony, the market price for aluminum was favorable. But next year – or next  
9 month, perhaps – this situation may reverse itself, and the Smelters may find  
10 themselves in a precarious financial position, fighting to survive in the global  
11 aluminum market. The situation is similar to the one in West Virginia referenced by  
12 Mr. Fayne, where utility efforts to reduce rates were fruitlessly undertaken to avoid a  
13 smelter shutdown, but the smelter closed its doors nonetheless. The point that must  
14 be understood is that the global competitive problems that the Smelters face cannot be  
15 solved by Big Rivers – or by the Commission in the context of this rate case  
16 proceeding.

17 **Q. But isn't the importance of the Smelters relevant to how the revenue increase is**  
18 **allocated to the classes of customers?**

19 **A.** Yes. Certainly, in developing the proposed allocation of the increase to the Rurals,  
20 Large Industrials and the Smelters, Big Rivers and its Board considered the  
21 importance of the Smelters on Big Rivers' financial situation and on the regional

1 economies of its members. Big Rivers' class cost of service study indicated that Big  
2 Rivers is earning a higher rate of return from the Smelters and from the Large  
3 Industrials than from the Rurals. The decision was made to take steps to reduce the  
4 disparity in the rates of return. Big Rivers' objective is to eliminate over time the  
5 difference between the rate of return for the Rurals and the rate of return for the Large  
6 Industrials. Because the Smelter rates are contractually tied to the Large Industrial  
7 rates, reducing the rate of return differential between the Rurals and the Large  
8 Industrials will also reduce the rate of return for the Smelters.

9 In developing rates to reduce the differences in the class rates of return, Big  
10 Rivers focused on reducing the differential between the Rurals and the Large  
11 Industrials. It is not Big Rivers' intention to eliminate the rate of return difference  
12 between the Large Industrials and the Smelters. Because of certain special contract  
13 rate provisions prescribed in the Smelter Agreements and agreed to by the Smelters  
14 (specifically, the TIER Adjustment Charge prescribed in Section 4.7.1, the Smelter  
15 Surcharge prescribed in Section 4.11 of the Smelter Agreements, and a \$0.25 per  
16 MWh premium (add) to the Large Industrial Rates prescribed in Section 1.1.20), the  
17 rate of return for the Smelters should always be higher than the rate of return for the  
18 Large Industrials during the term of the Smelter Agreements. Because of these  
19 special charge provisions that were written into the Smelter Agreements, the rate of  
20 return for the Smelters will remain higher than the Large Industrials, and thus it will  
21 not be possible to achieve rate of return parity between the Smelters and Rurals



1 without subsidizing the Large Industrial class of customers. These three special  
2 charge provisions, which were characterized as “subsidies” by the Smelters in the  
3 Unwind Transaction proceeding and which were agreed to by the Smelters, are built  
4 into the rates for the Smelters and should not be removed, as the Smelters are now  
5 proposing to do. Just to be clear, what the Smelters call “subsidies” is what Mr.  
6 Bailey calls “Smelter Unwind Commitments” in his rebuttal testimony. These  
7 Smelter Unwind Commitments will cause the rate of return for the Smelters to appear  
8 to be overstated, when it is not overstated.

9 In developing its proposed allocation of the revenue increase, and in  
10 identifying a reasonable strategy for moving the class rates of return closer together,  
11 Big Rivers and its Board gave full consideration to the importance of the Smelters.  
12 Rather than taking the aggressive approach of eliminating the rate of return  
13 differential between the Rurals and the Industrials all at once in this rate case  
14 proceeding, Big Rivers and its Board decided to take a more gradual approach to  
15 reduce the rate of return differential. Big Rivers' approach is consistent with the  
16 principle of gradualism that has been endorsed by the Commission for at least 30  
17 years. I discuss Big Rivers' recommendation at greater length in the section that  
18 follows.

19 **Q. Earlier, you indicated that Big Rivers does not agree with a number of**  
20 **assumptions, observations and conclusions reached by the KIUC regarding the**  
21 **impact of losing the smelters. Would you please elaborate?**

1 A. As I mentioned earlier, Big Rivers acknowledges that its margins could be adversely  
2 impacted if the Smelter operations are curtailed. However, KIUC's analysis is too  
3 narrowly constructed, does not consider numerous alternatives available to Big  
4 Rivers, and relies on flawed assumptions. For these reasons, the \$83 million  
5 difference in margins determined by Dr. Morey is overstated and should not be relied  
6 on by the Commission for the purpose of addressing the allocation of revenues among  
7 rate classes in this proceeding.

8 For example, Dr. Morey's analysis only compares one alternative to the sale of  
9 energy to the Smelters, namely that Big Rivers will sell the available energy into the  
10 Midwest ISO energy market. His assessment fails to consider numerous other  
11 options Big Rivers has at its disposal. In addition to selling energy into the Midwest  
12 ISO wholesale energy market, as discussed below, Big Rivers could, for example,  
13 pursue (i) sales to municipal power authorities, (ii) participation in capacity markets,  
14 (iii) disposition of assets, (iv) bilateral contracts, (v) adding members, or (vi) merging  
15 with one or more other generation and transmission ("G&T") cooperatives.

16 **Q. Please describe these options that Dr. Morey failed to consider.**

17 A. As indicated, Big Rivers could pursue sales to municipal utilities. Big Rivers already  
18 has contractual arrangements with Henderson Municipal Power & Light regarding  
19 Station Two. Other utilities with generation assets often enter into contractual  
20 arrangements with municipal utilities, for joint-owned units or for the long-term  
21 delivery of energy from defined assets. This is an option that Big Rivers could

1 explore further, but Dr. Morey makes no mention of this possibility in his assessment.

2 Big Rivers could also explore options to participate in capacity markets. Dr.  
3 Morey's assessment includes the value of Big Rivers' energy but does not assign any  
4 value to the capacity associated with Big Rivers' generating assets. Several regional  
5 transmission organizations ("RTOs"), including PJM, ISO New England, and the  
6 New York ISO, have forward capacity markets in place today. These markets  
7 compensate generating assets in auctions over various timeframes and varying  
8 commitment periods. At present, the Midwest ISO appears to be advancing a  
9 mandatory, forward-looking capacity market akin to the market structures used in the  
10 aforementioned eastern RTOs in an effort to satisfy FERC requirements related to  
11 locational resource adequacy and reliability. While no market for forward capacity  
12 exists in the Midwest ISO today, it is likely that some form of market for capacity that  
13 would compensate Big Rivers for the capacity of its generating assets will exist in the  
14 forecast 2012 - 2014 timeframe. In his assessment, Dr. Morey does not assign any  
15 value to the capacity provided by the Big Rivers generating assets.

16 If the Smelter operations were curtailed, and Big Rivers was unable to secure  
17 sufficient replacement load, Big Rivers could also explore the sale or lease of a  
18 portion of its portfolio of generating assets. Other utilities in Kentucky, including  
19 Louisville Gas & Electric Company ("LG&E") and Kentucky Utilities ("KU"), have  
20 entered into joint ownership agreements for generating assets. LG&E entered into a  
21 joint ownership agreement with Indiana Municipal Power Association ("IMPA") and

1 Illinois Municipal Electric Association (IMEA) to participate in the ownership of  
2 Trimble County Unit 1. IMPA and IMEA also recently participated in the ownership  
3 and operation of Trimble County Unit 2. Joint ownership and operation of power  
4 plants is common in the United States. Sale or lease of some of the Big Rivers  
5 generating assets would provide a degree of financial relief to Big Rivers which is not  
6 contemplated whatsoever in the assessment performed by Dr. Morey.

7 Big Rivers could seek to enter into bilateral contract(s) with any number of  
8 load-serving entities in the region. Bilateral contracts could take the form of unit  
9 power agreements, slice-of-the system contracts, agreements for the sale of fixed  
10 blocks of capacity and energy, and countless other contractual arrangements. Other  
11 parties would likely be interested in acquiring long-term access to this low cost  
12 power, perhaps on a long-term basis. Bilateral contracts are an alternative to  
13 participation in the region-wide Midwest ISO energy market -- one that Big Rivers  
14 would certainly explore if the Smelter operations were curtailed. Prior to entering  
15 into a joint ownership agreements with IMPA and IMEA for Trimble County Unit 1,  
16 LG&E entered into bilateral agreements (unit power agreements) to sell capacity from  
17 Trimble County Unit 1. In Indiana, Hoosier Energy has entered into a number of  
18 bilateral agreements with utilities as a way to deal with excess coal-fired capacity.  
19 Dr. Morey does not include the consideration of any bilateral contracts in his  
20 assessment.

1 Big Rivers could also explore the possibility of attracting additional  
2 distribution cooperatives as members of Big Rivers. With low cost power available,  
3 this alternative is not out of the question, particularly with Tennessee Valley  
4 Authority (“TVA”) rates increasing rapidly. Dr. Morey gives this option no  
5 consideration in his assessment.

6 Big Rivers could also pursue opportunities to merge with one or more other  
7 G&Ts. Other G&Ts in the United States have merged their operations in order to  
8 optimize the utilization of their production and transmission facilities. For example,  
9 in 2000 Tri-State Generation and Transmission Association, a G&T that provided  
10 service in Colorado and Wyoming, merged with Plains Electric Generation and  
11 Transmission Cooperative, which provided service in New Mexico.

12 Limiting his analysis to making energy sales into the MISO market to replace  
13 sales to the Smelters in the event of a curtailment, without consideration of these  
14 other alternatives, strongly suggests that Dr. Morey’s projection that Big Rivers would  
15 lose \$83 million of margins annually is overstated.

16 **Q. Are there other flaws and omissions in Dr. Morey’s analysis?**

17 A. Yes. The results from Dr. Morey’s simulation model indicating that Big Rivers’  
18 generating units are frequently “out of the market” do not comport with Big Rivers’  
19 actual experience since joining the Midwest ISO. On page 6 of his direct testimony,  
20 Dr. Morey says that his simulation of Big Rivers’ generation dispatch against hourly

1 market prices indicates that the 7,300 GWh of Smelter Capacity would only clear the  
2 market 57.5% of the time ( $4,200 \text{ GWh} \div 7,300 \text{ GWh} = 57.5\%$ ). This percentage  
3 from Dr. Morey's model is significantly lower than the percentage of Big Rivers'  
4 available generation that has *actually* cleared the market since Big Rivers joined the  
5 Midwest ISO. Big Rivers was integrated into the Midwest ISO on December 1, 2010.

6 Therefore, since December 1, 2010, the Midwest ISO has been dispatching all of Big  
7 Rivers generating resources. Certainly, Big Rivers' generating units are not  
8 dispatched by the Midwest ISO unless they "clear the market." From December 1,  
9 2010, to May 31, 2011, during which Big Rivers was a member of the Midwest ISO,  
10 Big Rivers had 6,868,479 MWh available to be dispatched by the Midwest ISO.  
11 During this same period, the Midwest ISO dispatched 6,326,024 MWh of Big Rivers  
12 generation. Thus, during the time frame when actual Midwest ISO dispatch data are  
13 available, Big Rivers' generating resources "cleared the market" 92.10% of the time,  
14 a percentage significantly higher than Dr. Morey's simulation results indicates,  
15 suggesting a serious flaw in his model. It is more reasonable to consider what has  
16 actually occurred since Big Rivers became a member of the Midwest ISO rather than  
17 to consider what might have happened using a simulation model.

18 Dr. Morey also failed to consider pending Environmental Protection Agency  
19 ("EPA") requirements and whether shutting down certain units might be more  
20 economical than installing pollution control equipment on Big Rivers' coal-fired  
21 generating facilities.

1 Dr. Morey further failed to consider that Big Rivers has access to wholesale  
2 markets other than the Midwest ISO. Big Rivers currently has multiple transmission  
3 interconnections with TVA, and a 100 MW firm transmission reservation across TVA  
4 to Southern Company. Big Rivers is also interconnected with the LG&E/KU system.  
5 Thus, Big Rivers has access to several markets other than the Midwest ISO for  
6 disposing of any excess power that would be made available by the closure of the  
7 Smelters.

8 In April 2011, Big Rivers requested the Midwest ISO to assess the transfer  
9 capability from the Big Rivers zone into the Midwest ISO, assuming the loss of the  
10 850 MW Smelter load. While Big Rivers has not received a formal written response,  
11 Big Rivers received a preliminary result by telephone on June 28, 2011, that the  
12 transfer capability under 2016 constrained summer peak load conditions is  
13 approximately 1,150 MW. Therefore, even under peak conditions, the transmission  
14 grid can accommodate the transfer of the entire 850 MW of capacity currently  
15 provided to the Smelters, and then some, should the Smelter operations cease. This  
16 means that Big Rivers could pursue the other options that Dr. Morey failed to analyze  
17 in his testimony for disposing of the capacity, as discussed above, which might  
18 require transmitting power into or through the Midwest ISO.

19 Furthermore, Dr. Morey failed to consider that the installation of a 345 kV  
20 transmission line by Vectren Energy, located in southern Indiana directly north of Big  
21 Rivers, could facilitate the establishment of bilateral agreements, the sale of

1 generation assets, or other alternatives unrelated to the Midwest ISO energy market.

2 The limited scope of the options considered by Dr. Morey and other flaws in  
3 his approach render his analysis not useful to either Big Rivers or the Commission in  
4 considering the potential financial impact on Big Rivers due to a curtailment or  
5 closure of the Smelters.

6 **Q. Are there fundamental inconsistencies between Dr. Morey's testimony and other**  
7 **KIUC witnesses in this proceeding?**

8 A. Yes. A key conclusion of Dr. Morey's is contradicted by Mr. Fayne's findings. On  
9 page 20 of his direct testimony, Mr. Fayne stated that absent the Unwind and the new  
10 Smelter Agreements, the Smelters would have been forced to buy power at market  
11 rates, which would not be viable and would have resulted in the curtailment of the  
12 Smelters. However, Dr. Morey indicated that market prices are so low that Big  
13 Rivers would be better off selling to the Smelters than selling into the market. If the  
14 Smelters would lose money by purchasing from the market instead of from Big  
15 Rivers, then it would not be possible that Big Rivers would lose money by selling into  
16 that same market instead of selling to the Smelters.

17 Dr. Morey's conclusion that market prices are so low that Big Rivers would be  
18 better off selling to the Smelters than selling into the market is also contradicted by  
19 Mr. Baron's testimony. Mr. Baron claims that requiring existing customers that add  
20 loads in excess of 5 MW to take service under LICX deters economic development.  
21 Under LICX, the Expansion Demand, Expansion Energy rates, or both, would



1 correspond to the actual costs of power purchased by Big Rivers from Third-Party  
2 Suppliers from which Big Rivers would procure the supply and delivery of the type  
3 and quantity of power required to serve the LICX customer. In other words, power  
4 under LICX is priced at the market. Mr. Baron is proposing to allow existing  
5 customers adding load to be served under Big Rivers' Large Industrial rate, the rate  
6 schedule to which the Smelters' rates are tied. Mr. Baron is thus claiming that the  
7 Large Industrial rate is lower than market prices. If the market price of power is less  
8 than the amount recovered from the Smelters, as claimed by Dr. Morey, then it is  
9 unclear why Mr. Baron believes that charging new loads in excess of 5 MW at market  
10 prices deters economic development.

11           Again, these contradictions in the testimonies of Dr. Morey, Mr. Fayne and  
12 Mr. Baron strongly suggest that Dr. Morey's analysis should not be given much if any  
13 weight in addressing the allocation of revenues in this proceeding.

14

15 **III. CLASS RATES OF RETURN**

16 **Q. Did Big Rivers' cost of service study indicate differences among the class rates of**  
17 **return?**

18 A. Yes. The following table summarizes the rates of return for each customer class from  
19 Big Rivers' cost of service study:

20

<b>Class Rates of Return</b>	
<b>Customer Class</b>	<b>Actual Adjusted Rate of Return</b>
Rurals	-1.48%
Large Industrials	1.65%
Smelters	3.14%
<b>Total System</b>	<b>1.60%</b>

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It should be noted that these rates of return are slightly different from those that were shown in my direct testimony. Big Rivers submitted a corrected cost of service study in response to Item 12 of the Commission Staff's Third Request for Information dated April 28, 2010. Specifically, there was an understatement of \$510,706 for Account No. 908 in the cost of service study, which was corrected in the version provided in the response to the Commission Staff's data request. As noted in the response, the effect on the class rates of return was negligible and did not affect Big Rivers' proposed allocation of the rate increase to each of the rate classes.

As can be seen from the above table, the rate of return for the Rurals is lower than the rates of return for the Large Industrials and the Smelters. As mentioned

1 earlier, the higher rate of return for the Smelters is to be fully expected due to the  
2 special contract rate provisions prescribed in the Smelter Agreements, particularly the  
3 TIER Adjustment Charge prescribed in Section 4.7.1, the Surcharge prescribed in  
4 Section 4.11, and the \$0.25 per Mwh premium to the Large Industrial rate prescribed  
5 in Section 1.1.20. These three charges were purposely included in the Smelter  
6 Agreements *as “subsidies”* and intended to be expressly used to “subsidize” the  
7 Rurals and Large Industrials for the term of the Smelter Agreements. The Smelters’  
8 proposal to eliminate these “subsidies” is thus an attempt to nullify the Smelter  
9 Agreements.

10 **Q. In the Unwind Proceeding, did the Smelters acknowledge that these charges**  
11 **were to represent permanent “subsidies” to be provided by the Smelters?**

12 A. They absolutely did. In a heading in their Brief submitted in the Unwind Proceeding,  
13 the Smelters asserted that the “Smelter Subsidies To The Members Are Substantial.”  
14 (Brief Submitted by Century Aluminum of Kentucky General Partnership and Alcan  
15 Primary Products Corporation submitted in Case No. 2007-00455 at 15.) The  
16 Smelters’ Brief in the Unwind Proceeding is attached as Exhibit Seelye Rebuttal – 2.

17 In their Brief, the Smelters offered the following explanation of the “subsidies”  
18 that were to be provided by the Smelters over the life of the Smelter Agreements:

19  
20 **Smelter Subsidies To The Members Are Substantial**

21 Extensive negotiations among the Smelters, Members, Big Rivers and  
22

1 E.ON have created a unique but complex contract structure in order to  
2 accommodate the interests of the parties. Much of that structure is  
3 devoted to preserving the value the Members have under the 1998  
4 transaction. Witness Blackburn calculates the value of the Smelter  
5 subsidies to the Members at \$327 million over the life of the contract.  
6 The payments that will be made by the Smelters to the Members and Big  
7 Rivers include the following:  
8

- 9 • The Smelters have agreed to pay a base rate that includes a  
10 \$0.25 per megawatt hour premium over the Large Industrial  
11 base rate.
- 12 • The Smelters have agreed, in addition to a premium over the  
13 base rate, to pay an additional charge that will guarantee Big  
14 Rivers a 1.24 TIER. This means that if Big Rivers' Net  
15 Margins produces a TIER of less than 1.24, the Smelters will  
16 pay an additional per megawatt hour charge, subject to the  
17 bandwidth, that will produce a 1.24 TIER. The bandwidth  
18 ranges from \$12.8 million per year in the early years to \$34.7  
19 million per year in the later years. For example, the Financial  
20 Model projects Net Margins in 2011 of only \$100,000 due to  
21 higher variable and non-variable fixed O&M costs in that year.  
22 Because a 1.24 TIER requires margins of \$13,200,000, the  
23 Smelters would pay Big Rivers an additional \$13,100,000. That  
24 amount is equal to \$1.79 per megawatt hour, an additional  
25 charge per megawatt hour that is within the bandwidth.
- 26 • The Smelters have agreed to pay two surcharges
  - 27 ✓ The first surcharge is a fixed \$0.70 per megawatt hour  
28 in 2009-11, the \$1.00 per megawatt hour in 2012-16,  
29 and \$1.40 per megawatt hour in 2017-23. The revenue  
30 generated by the surcharge for the benefit of the non-  
31 Smelter ratepayers ranges from \$5.1 million in the first  
32 three years to \$7.3 million in the middle years to \$10.2  
33 million in the final seven years.
  - 34 ✓ The second surcharge is comprised of a) a fixed \$0.60  
35 per MWh in all years, subject to a \$200,000 monthly  
36 credit for the first ninety-six months; and b) an  
37 additional \$0.60 per MWh contingent on actual fuel  
38 costs exceeding a baseline. The Financial Model shows  
39 this surcharge being worth over \$110 million to the  
40 Members.  
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(Id. at 15. Emphasis supplied.)

Certainly, the Smelters understood that the TIER Adjustment Charge, the Smelter Surcharges and the \$0.25 per Mwh premium represented “subsidies” deliberately included in the Smelter Agreements and intended to provide benefits to the Rurals over the term of the Smelter Agreements to preserve the value that the Rurals had under the 1998 E.ON Transaction. With their proposal to set the TIER Adjustment at the top of the bandwidth and with their proposal to eliminate all “subsidies” built into their rates, the Smelters are now proposing to wipe out and nullify the “subsidies” that the Smelters agreed to provide to Big Rivers and its members.

**Q. Are the rate of return differentials in Big Rivers’ cost of service study out of line from what you have seen from other cost of service studies?**

A. No. I have supervised the preparation of cost of service studies for over 100 utilities in the United States. While not desirable, differences in class rates of return are not uncommon. I generally advise utilities to take steps to gradually reduce differences in class rates of return. In this particular instance, the rate of return differences are not sizeable. Although all of the class rates of return are low, the inter-class differences are less than what I have seen for other utilities, including utilities in Kentucky.

**Q. Please summarize class rate of return differences from recent cost of service studies you have performed in Kentucky.**

A. In the recent cost of service study that I performed for LG&E (Case No. 2009-00549),

1 the class rates of return ranged from a high of 9.12% to a low of -0.19%. In LG&E's  
2 cost of service study, the Residential rate of return was 3.19%, the General Service  
3 rate of return was 9.12%, and the rate of return for Retail Transmission Service was  
4 2.91%.

5 In the recent cost of service study that I performed for KU (Case No. 2009-  
6 00548), the class rates of return ranged from a high of 13.11% to a low of 2.19%. In  
7 KU's cost of service study, the Residential rate of return was 2.33%, the General  
8 Service rate of return was 9.24% and the rate of return for Retail Transmission  
9 Service was 9.73%.

10 In the cost of service study that I performed for East Kentucky Power  
11 Cooperative ("EKPC") (Case No. 2008-00409), the class rates of return ranged from a  
12 high of 29.52% to a low of 0.50%. In EKPC's cost of service study, the rate of return  
13 for Rate E (which is similar to Big Rivers' Rural Rate) was 3.20%, the rate of return  
14 for one large special contract was 2.86%, and the rate of return for an another large  
15 special contract was 29.52%.

16 All three of these utilities have taken steps over the years to move toward  
17 equalizing the class rates of return; however, differences in class rates of return  
18 continue to exist.

1 **Q. Mr. Baron submitted testimony in KU's and LG&E's recent rate cases. Did he**  
2 **propose to eliminate all inter-class rate subsidies in those proceedings, as he is**  
3 **proposing in Big Rivers' rate case?**

4 A. No. In KU's recent rate case (Case No. 2009-00548), Mr. Baron proposed to reduce  
5 rate class subsidies by 25%. (Direct Testimony of Stephen J. Baron in Case Nos.  
6 2009-00549 and 2009-00548 at p. 25.) Mr. Baron stated that "even if the KIUC 25%  
7 subsidy reduction recommendation is adopted, the amount of subsidies that will  
8 continue to be paid will be substantial." (*Id.* at pp. 26-27.) In LG&E's recent rate  
9 case (Case No. 2009-00549), Mr. Baron proposed to "increase LG&E's large customer  
10 rates by 2.0 percentage points less than the overall percentage increase, with the  
11 remaining rate classes receiving a uniform percentage increase designed to recover the  
12 remaining increase." (*Id.* at 17.) Again, in the LG&E rate case, Mr. Baron's proposed  
13 revenue allocation did not result in equalized class rates of return.

14 **Q. Do you believe that Mr. Baron's proposal to eliminate all class rate of return**  
15 **differentials is reasonable?**

16 A. No. While I do believe that it is important for Big Rivers to take measurable steps  
17 toward equalizing the class rates of return, I do not believe that it is appropriate to  
18 eliminate all differentials in one dramatic step in this rate case. Although the viability  
19 of the Smelters is clearly important, I do not believe that the KIUC has made a  
20 compelling argument to support the abandonment of Commission's long-standing  
21 practice of taking gradual steps toward addressing differences in class rates of return.

1 The KIUC is proposing that all of the rate increase be borne by the Rurals (and then  
2 some) and that the Large Industrials and Smelters receive a rate reduction. In its  
3 allocation of the increase, Big Rivers proposed that the Large Industrials and Smelters  
4 receive a significantly lower percentage increase than the Rurals.

5 Specifically, under Big Rivers' proposal, the Rural rates would be increased by  
6 10.71% (without considering the effect of lowering the Non-FAC PPA Base), while  
7 the Large Industrial rates would be increased by 5.94% and the Smelter rates would  
8 be increased by 5.47%. (See Exhibit Seelye-6, page 1.) Big Rivers' proposal strikes a  
9 reasonable balance between narrowing the differential in the class rates of return and  
10 mitigating the burden on the Rurals.

11 For all intents and purposes, the KIUC's revenue allocation proposal is a plan  
12 to implement load retention rates for the two Smelters, and, consequently, also for the  
13 twenty industrial customers served under Big Rivers' Large Industrial rate, to which  
14 the Smelter rates are tied. Furthermore, the KIUC's revenue allocation scheme seems  
15 to be an attempt to circumvent certain elements of the Smelter Agreements – elements  
16 the Smelters agreed to and the Commission approved just two years ago.

17 **Q. Why do you conclude that the KIUC's revenue allocation proposal is essentially**  
18 **a plan to implement load retention rates for the two Smelters and the twenty**  
19 **industrial customers served under the Large Industrial rates?**

20 A. It is evident from reading the testimonies submitted by the KIUC. Mr. Baron states,  
21 "To the extent that eliminating subsidies from the Smelter rates can provide some



1 mitigation to the high electric rates facing the Kentucky smelters (relative to  
2 worldwide Smelter rates), this would produce economic benefits to the State."  
3 (Direct Testimony of Stephen J. Baron at p. 26.) Mr. Leblanc states that "what the  
4 KIUC is proposing in this proceeding is a path that will create a new balance:  
5 improving the smelter's position on the cost curve, increasing its chances of surviving,  
6 and protecting the rural ratepayers and Big Rivers against the impact of smelter  
7 closure." (Direct Testimony of Stephane Leblanc at p. 10.)

8 Mr. Fayne makes the case for load retention rates even more clearly when he  
9 states, "The KIUC proposal benefits the smelters because it essentially eliminates an  
10 increase in rates, thereby avoiding aggravating the risk of closure when the LME  
11 [London Metals Exchange] inevitably moves through a down cycle. More  
12 importantly, it avoids increasing the smelters' cost of electricity to a level that may be  
13 too high to mitigate over the long term. Avoiding the need for an increase in smelter  
14 rates now preserves the opportunity for developing a long term solution." (Direct  
15 Testimony of Henry W. Fayne at p. 11.) I am unaware of any other rate case in which  
16 the KIUC or any of its witnesses has proposed to eliminate all inter-class subsidies in  
17 a single rate case. The KIUC's proposal in this proceeding is thus demonstrably  
18 related to a load retention plan, an obvious – albeit unnamed, but thinly veiled – part  
19 of its "long term solution."

1 Q. Has the Commission articulated clear guidelines for the adoption of load  
2 retention rates?

3 A. Yes. Load retention rates were specifically addressed in the Commission's Order in  
4 Administrative Case No. 327, *An Investigation Into The Implementation of Economic*  
5 *Development Rates by Electric Utilities*. In its Order the Commission stated:

6

7 The Commission finds that EDRS used for the purpose of retaining  
8 existing load should be strictly limited and closely monitored. Any  
9 utility that files such an EDR contract will also be expected to file a  
10 sworn affidavit of the customer stating that, in the absence of a  
11 discounted rate, business operations will cease or be severely  
12 restricted. The utility must also demonstrate the financial hardship  
13 experienced by the existing customer seeking discounted rates in  
14 order to maintain its load on the utility's system. (Order in Case No.  
15 327, dated September 24, 1990, at pp. 20-21. Emphasis supplied.)  
16

17 In KIUC's testimony submitted in this proceeding, neither the Smelters nor the twenty  
18 industrial customers served under Big Rivers' industrial rates have presented sworn  
19 testimony or affidavits stating that "in the absence of a discounted rate, business  
20 operations will cease or be severely restricted." What the Smelters have said in the  
21 form of sworn testimony is that without special consideration in this rate case, the  
22 Smelters' risks will be higher and it will be "much harder to remain open when the  
23 next down cycle [in international aluminum prices] comes." (Direct Testimony of  
24 Stephane Leblanc at p. 6.) The existence of increased risks to the Smelters and the  
25 possibility of a curtailment in the next down cycle in aluminum prices do not satisfy

1 the Commission's guidelines for load retention rates.

2 **Q. How does the KIUC's proposal economically circumvent the Smelter**  
3 **Agreements?**

4 A. A number of the proposals that the KIUC has put forth in this proceeding  
5 economically nullify the clear understandings that Big Rivers had when it entered into  
6 these agreements. For example, any inter-class rate of return differences that now  
7 exist among Big Rivers' customer classes existed when the Smelters signed the  
8 agreements. It is a reasonable expectation on the part of Big Rivers that some portion  
9 of a general rate increase would be allocated to all customer classes and not just to the  
10 Rurals.

11 It was also understood when the Smelters signed the Smelter Agreements that  
12 certain provisions of the agreements specifically allowed Big Rivers to collect from  
13 the Smelters charges above and beyond Big Rivers' standard rate schedules. The  
14 Smelter Agreements included a number of charges that would not be paid by the  
15 Rurals or the Large Industrials, particularly the TIER Adjustment Charge prescribed  
16 in Section 4.7.1, the Surcharge prescribed in Section 4.11 of the Smelter Agreements,  
17 and the \$0.25 per MWh premium to the Large prescribed in Section 1.1.20 of the  
18 Smelter Agreements. These three provisions can properly be viewed as "subsidies" to  
19 be paid by the Smelters that were built into the Smelter Agreements – and which were  
20 approved by the Commission. During the test year, the Smelters paid \$14.229  
21 million in TIER Adjustment Charges pursuant to Section 4.7.1 of the Smelter

1 Agreements, \$11.466 million in Smelter Surcharges pursuant to Section 4.11 of the  
2 Smelter Agreements, and \$1.824 million from the \$0.25 per MWh premium provided  
3 pursuant to Section 1.1.20 of the Smelter Agreements. Together, these three built-in  
4 "subsidies," which were included as revenue in Big Rivers' cost of service study, total  
5 \$27.519 million for the test year, and exceed the \$18.369 million of "subsidies" that  
6 Mr. Baron claims that the Smelters provided during the test year. (Direct Testimony  
7 of Stephen J. Baron at p. 32.) Thus, the elimination of all of the "subsidies" that Mr.  
8 Baron claims that the smelters are providing would blatantly circumvent these three  
9 provisions of the agreements.

10 **Q. Does the KIUC's proposal to restructure the Rural Economic Reserve ("RER")**  
11 **also circumvent the Smelter Agreements?**

12 A. Yes. In an attempt to make its proposed allocation of the increase to the Rurals more  
13 palatable, the KIUC is also proposing to restructure the RER fund so that it could be  
14 used to offset the sizable rate increase to the Rurals proposed by Mr. Baron. With the  
15 KIUC's proposal to restructure the RER, the Rurals would be forced to give up the  
16 long-term benefit of the RER to provide short-term benefits to the Large Industrials  
17 and the Smelters, which may close their operations regardless of anything that results  
18 from this rate case. The RER was a fundamental element of the Unwind Transaction  
19 included in the Commission's Order approving the transaction. While Big Rivers is  
20 proposing minor adjustments to the RER to eliminate discontinuities as a result of  
21 transitioning from the Economic Reserve to the RER, the KIUC is proposing a

1 wholesale makeover of the mechanism. Using the RER to offset base rate increases  
2 contravenes the original purpose and design of the mechanism, which was to extend  
3 for an additional 24 months the credits to the Rurals that were to be provided under  
4 the Member Rate Stability Mechanism ("MRSM") to offset increases in fuel and  
5 environmental costs. The Smelters agreed to the conditions indentified in the  
6 Commission's Order approving the Unwind Transactions – including the structure of  
7 the RER – when they signed the Smelter Agreements. The RER should not be  
8 modified to accommodate the Smelters' proposal to burden the Rurals with the entire  
9 rate increase.

10 In addition, as will be discussed below, the KIUC is also trying to circumvent  
11 the TIER Adjustment Charge described in Section 4.7 of the Smelter Agreements.  
12

13 **IV. ALLOCATION METHODOLOGIES IN THE COST OF SERVICE STUDY**

14 **Q. Do you have any comments regarding Mr. Baron's proposal to use a 6 coincident  
15 peak ("CP") methodology to allocate production demand costs?**

16 **A.** Yes. There is nothing fundamentally inappropriate about the use of a 6 CP  
17 methodology to allocate production demand-related costs. Generally, both the 12 CP  
18 methodology proposed by Big Rivers and the 6 CP methodology are reasonable  
19 approaches. Both methodologies are within what I would characterize as a zone of  
20 reasonableness. I have used both methodologies in other cost of service studies.

21 Although he is proposing a 6 CP approach in this proceeding, it should be pointed out

1 that Mr. Baron has also recommended a 12 CP methodology in other proceedings.  
2 For example, Mr. Baron recommended the use of a 12 CP methodology for  
3 Monongahela Power Company and The Potomac Edison Power Company filed in  
4 Case No. 09-1352-E-42T in West Virginia and for Appalachian Power Company and  
5 Wheeling Power Company filed in Case No. 10-0699-E-42T in West Virginia. In  
6 testimony filed in the Appalachian Power Company and Wheeling Power Company  
7 proceeding, Mr. Baron stated, "Though I would generally support a 'minimum  
8 distribution system' methodology for classifying distribution costs between demand  
9 related and customer related costs, the Companies' filed 12 CP CCOSS appears to be  
10 a reasonable basis to assess the actual and relative rates of return produced by current  
11 rates for each rate class." (Case No. 10-0699-E-42T, Direct Testimony of Stephen J.  
12 Baron at p. 10.) The portions of Mr. Baron's testimonies in these proceedings in  
13 which he recommends the 12 CP methodology are attached as Exhibit Seelye  
14 Rebuttal – 3.

15 **Q. Why are you recommending a 12 CP methodology in this proceeding?**

16 A. Mr. Baron correctly points out that I proposed a 6 CP methodology in a recent EKPC  
17 rate case. It is important to note that because of the Smelters, Big Rivers' load does  
18 not vary from month to month to the extent that EKPC's load does. EKPC's load  
19 consists of a large percentage residential load, whereas, largely because of the  
20 Smelters, Big Rivers' load consists of a large percentage of industrial load. Because  
21 Big Rivers' load is relatively flat from month to month – particularly compared to

1 EKPC – I recommended the 12 CP methodology.

2 **Q. Would Big Rivers have proposed a different allocation of the revenue increase**  
3 **had the 6 CP methodology been used in the cost of service study?**

4 A. No. The bottom line is that the increase that Big Rivers would find reasonable to  
5 assign to the Rurals is what was proposed in this proceeding – and no more. Big  
6 Rivers proposed to increase base rates to the Rurals by 10.71% and proposed to  
7 increase base rates to the Large Industrials by 5.94% and to the Smelters by 5.47%. It  
8 would not have been reasonable for Big Rivers to have proposed a larger percentage  
9 increase to the Rurals, regardless of whether a 6 CP cost of service methodology had  
10 been used rather than the 12 CP methodology that was proposed by Big Rivers in this  
11 proceeding. From this perspective, the question of whether a 6 CP methodology is  
12 more appropriate than a 12 CP methodology becomes moot.

13

14 **V. SMEILTER TIER ADJUSTMENT**

15 **Q. Please describe the purpose of the TIER Adjustment Charge set forth in the**  
16 **Smelter Agreements.**

17 A. The TIER Adjustment Charge, which is described in Section 4.7 of the Smelter  
18 Agreements, is a mechanism by which the Smelters make additional payments that  
19 are intended to help Big Rivers achieve a 1.24 Contract TIER each fiscal year. Under  
20 the TIER Adjustment mechanism, the Smelters support Big Rivers' earnings by  
21 paying an amount above base rates in order to cover 100% of Big Rivers' cost

1 increases or revenue decreases (such as when wholesale market prices soften) or both,  
2 under certain circumstances and within certain limitations, in the form of a TIER  
3 Adjustment Charge. The primary purpose of the TIER Adjustment Charge, which can  
4 currently range from \$0 to \$14.2 million for the two Smelters, is to serve as a  
5 "reserve," "buffer," "safety net" or "flywheel" in the event that Big Rivers' base rate  
6 revenues are insufficient to provide a 1.24 Contract TIER. If Big Rivers is unable to  
7 meet its TIER requirement then it can charge the Smelters up to \$14.2 million  
8 annually to bring the Contract TIER up to 1.24. Thus, subject to the maximum TIER  
9 Adjustment Charge, the TIER Adjustment Charge allows Big Rivers to draw extra  
10 revenue from the Smelters if adverse conditions threaten Big Rivers' ability to achieve  
11 a 1.24 Contract TIER between rate cases. By establishing the TIER Adjustment at the  
12 middle of the bandwidth, Big Rivers is proposing to recover \$7.1 million of test-year  
13 TIER Adjustment revenues through TIER Adjustment Charges and the remaining  
14 \$7.1 million of test-year TIER Adjustment revenues through base rates. Doing this  
15 preserves the "buffer" that was intended to be provided by the TIER Adjustment  
16 mechanism.

17 **Q. Why is Big Rivers proposing to set the TIER Adjustment at the midpoint of the**  
18 **current bandwidth of \$14.2 million?**

19 A. Positioning the TIER Adjustment at \$7.1 million (i.e., at the middle of the bandwidth)  
20 for purposes of establishing revenue requirements restores the purpose of the TIER  
21 Adjustment, which, as contemplated in the Smelter Agreements, is to allow Big



1 Rivers to draw extra revenue from the Smelters if Big Rivers is unable to meet its  
2 1.24 Contract TIER requirements. A good case can be made, however, for setting the  
3 TIER Adjustment at the floor of the bandwidth to restore the entire “reserve” to meet  
4 its original purpose.

5 **Q. In the final Financial Model submitted to the Commission in the Unwind**  
6 **Proceeding (“Unwind Model”), what assumption was made with respect to**  
7 **establishing the TIER Adjustment Charge revenues in rate cases?**

8 A. In the Unwind Model, the TIER Adjustment Charge was reset to the floor of the  
9 bandwidth in the rate case that was assumed to occur in 2017. This is evident from  
10 the results of the model. In 2018, the year immediately following the rate case, the  
11 TIER Adjustment Charge was only 13 percent of the maximum level. The only way  
12 that this result could reasonably occur, given the assumptions of the model, is for the  
13 TIER Adjustment Charge to have been established at the floor of the bandwidth in the  
14 2017 rate case. Again, a good case can be made to establish the TIER Adjustment at  
15 the floor of the bandwidth, as was assumed in the Unwind Financial Model.

16 **Q. What would be the effect of KIUC's proposal to set the TIER Adjustment**  
17 **Charges in establishing revenue requirements at the top of the bandwidth?**

18 A. Setting the TIER Adjustment Charges at the top of the bandwidth, as proposed by the  
19 KIUC, rather than recovering a portion of these revenues through base rates, would  
20 remove the “buffer” that was contemplated in the Smelter Agreements and would thus  
21 nullify the benefit that the Smelters agreed to provide to Big Rivers and its members

1 in the Smelter Agreements. In developing its proposed revenue requirements in this  
2 proceeding, Big Rivers developed a level of costs based on pro forma test-year  
3 operating results that would be representative on a going forward basis, to the extent  
4 practicable using a historical test year. Strictly looking at the pro forma operating  
5 results, which the Company is required to do when using a historical test year, if the  
6 TIER Adjustment charges were left at the top of the bandwidth, then Big Rivers  
7 would not be able to collect TIER Adjustment Charges from the Smelters if its costs  
8 turn out to be higher or its revenues turn out to be lower than what was established in  
9 its revenue requirements. In other words, the KIUC is proposing to eliminate the  
10 "buffer" provided by the TIER Adjustment Charges. The KIUC motivation seems to  
11 be that if the TIER Adjustment Charge is at the top of the bandwidth during the test  
12 year, Big Rivers can never seek a base rate increase large enough to force the TIER  
13 Adjustment Charge below the top of the bandwidth. Again, this would nullify a key  
14 element of the Smelter Agreements approved by the Commission.

15 **Q. Are KIUC's arguments for setting the TIER Adjustment Charges at the top of**  
16 **the bandwidth valid?**

17 **A.** No. The Smelters' principal complaint is that under Big Rivers' proposal the TIER  
18 Adjustment Charges in the Smelter Agreements would function as they were intended  
19 to operate. The Smelter Agreements explicitly provide for a "buffer" through the  
20 Application of the TIER Adjustment Charge; now the KIUC wants to remove that  
21 buffer by adjusting revenue requirements down by the removal of the Big Rivers'

1 proposed adjustment to set the TIER Adjustment at the middle of the current  
2 bandwidth. By recovering half of the maximum TIER Adjustment Charges through  
3 base rates and the other half through the TIER Adjustment mechanism, Big Rivers  
4 will have, based on test year operating results, a \$7.1 million reserve to draw upon if  
5 it is unable to meet its 1.24 Contract TIER requirement. The KIUC is proposing to  
6 eliminate the “buffer.” Mr. Baron complains that "by setting rates in this case based  
7 on the mid-point of the TIER Adjustment, Big Rivers would effectively have an  
8 additional \$7.1 million 'credit card balance' at its disposal, with no Commission  
9 oversight." (Direct Testimony of Stephen J. Baron at p. 32.) Then, Mr. Baron  
10 contradicts himself by acknowledging that the "while the Agreement contemplated a  
11 measure of protection from the TIER Adjustment, this cushion should not be used to  
12 eliminate spending constraints on the Company." (*Id.*) If the Smelters did not  
13 believe that it was appropriate for Big Rivers to have an additional \$7.1 million  
14 reserve at its disposal, then why did the Smelters agree to include such a provision in  
15 the Smelter Agreements?

16 Although “reserve,” “buffer,” “safety net” or “flywheel” perhaps more  
17 accurately describe the TIER Adjustment Charges, Mr. Baron’s designation of the  
18 TIER Adjustment Charge as a “credit card balance” does not inaccurately describe  
19 what the Smelters agreed to provide when they signed the Smelter Agreement.  
20 Perhaps a better way to describe the TIER Adjustment Charge is to characterize it as a  
21 “credit card balance *to be funded by the Smelters.*” To object to Big Rivers’ proposal

1 to set the TIER Adjustment Charge at the middle of the bandwidth on the grounds  
2 that it would be a “credit card balance” underscores the fact that the Smelters are now  
3 trying to nullify their promise to provide such a “balance” to Big Rivers and its  
4 members.

5 **Q. Please explain why setting the TIER Adjustment Charges at the top of the**  
6 **bandwidth in the context of a rate case will nullify this provision of the Smelter**  
7 **Agreements.**

8 **A.** If the increase in base rates is determined with the Smelters at the ceiling of the TIER  
9 Adjustment bandwidth, then the “buffer” that was intended to be provided by the  
10 Smelters through the TIER Adjustment is eliminated. By setting the TIER  
11 Adjustment Charges at the top of the bandwidth, when rates are implemented there  
12 would be no opportunity for Big Rivers to draw on the TIER Adjustment to support  
13 its margins if costs are higher or revenues lower than what was determined in the rate  
14 case. If the TIER Adjustment is not reset at the middle – or perhaps even at the floor  
15 – of the bandwidth then there will not be a “buffer” in place once rates are  
16 implemented. By proposing to set the TIER Adjustment Charges at the current  
17 maximum level, the Smelters would take away the “subsidy” that they had agreed to  
18 provide when they signed the Smelter Agreements.

19 **Q. Is there a risk that Big Rivers will earn more than the 1.24 Contract TIER?**

20 **A.** No. If Big Rivers earns more than a 1.24 Contract TIER, then Section 4.9 of the  
21 Smelter Agreements and the Rebate Adjustment (RA) section of its tariff require Big

1 Rivers to rebate any margins in excess of the 1.24 Contract TIER to the Smelters and,  
2 if the TIER Adjustment Charge goes to zero, to Big Rivers' members, subject to  
3 Commission and Board approval. Therefore, from a TIER perspective, it is  
4 impossible for Big Rivers to over-earn. The Smelters' proposal to establish base rates  
5 with the Smelters at the ceiling of the current TIER Adjustment bandwidth provides  
6 an inadequate "buffer" to Big Rivers and is an attempt to squeeze Big Rivers' margins  
7 in order to keep rates to the Smelters as low as possible. By proposing an inadequate  
8 base rate revenue increase, by eliminating the "buffer" provided by the TIER  
9 Adjustment Charges, and burdening the Rurals with the entire increase, the Smelters'  
10 proposal would secure lower rates for the Smelters but would seriously jeopardize Big  
11 Rivers' ability to operate prudently and achieve the minimum 1.10 MFIR. Under the  
12 Smelters' proposal, Big Rivers would have no ability to collect an additional \$7.1  
13 million of revenue through the application of the TIER Adjustment if expenses end up  
14 being higher or revenues end up being lower than the levels included in revenue  
15 requirements in this proceeding. Almost certainly, the "buffer" provided by the TIER  
16 Adjustment Charge was considered by the Rating Agencies in assigning their ratings  
17 to Big Rivers. To remove the "buffer" now could adversely impact Big Rivers' credit  
18 rating.

19 **Q. Please provide an example to illustrate how the "buffer" provided by the TIER**  
20 **Adjustment is eliminated under the Smelters' proposal to set the TIER**  
21 **Adjustment Charges at the maximum level?**

1 A. To illustrate how the Smelters' proposal nullifies the TIER Adjustment provisions of  
2 the Smelter Agreements, I will use figures drawn directly from Big Rivers'  
3 recommendations in this proceeding. Specifically, I will use revenue and cost figures  
4 from Big Rivers' revised position in this proceeding, as shown in Exhibit Wolfram  
5 Rebuttal Exhibit -2.

6 Big Rivers' revised test year revenue requirement – or “cost of service” -- in  
7 this proceeding is \$430,776,446, determined as follows:

8

9	(1)	Expenses per Books	\$ 527,945,092
10	(2)	Pro-Forma Adjustments to Expenses	<u>(110,660,744)</u>
11	(3)	Net Operating Expenses	\$ 417,284,348
12	(4)	Interest on Long Term Debt Adjustment	2,045,750
13	(5)	Plus: 1.24 Contract TIER	<u>11,446,348</u>
14	(6)	Revenue Requirement	\$430,776,446

15

16 Big Rivers' pro forma test year revenue is \$391,575,522; therefore, the revenue  
17 deficiency is \$39,200,924. In determining pro-forma revenue in this proceeding, and  
18 the resulting increase in base rates, a pro forma adjustment was made to set the TIER  
19 Adjustment Charges at \$7,114,653 – i.e., at the middle of the current bandwidth rather  
20 than at the top of bandwidth – and to reflect the remaining \$7,114,653 in base rate  
21 revenues. This was done to reinstate the "buffer" that was intended to be provided by

1 the TIER Adjustment Charge.

2 In a rate case, base rates should be set at a level that will allow the utility to  
3 recover its costs on a going-forward basis, and achieve its financial loan covenants.  
4 Consequently, in setting rates in a rate case there is a fundamental premise that the  
5 revenue requirement reflects the utility's costs on a going forward basis. In this  
6 proceeding, a historical test year was utilized, with certain pro forma adjustments  
7 made to reflect known and measurable changes. Thus, if the Commission determines  
8 that Big Rivers' proposed revenue requirement of \$430,776,446 is reasonable, then a  
9 finding would be made by the Commission that Big Rivers' cost of service on a  
10 going-forward basis is \$430,776,446.

11 Once Big Rivers' rates have been in effect for a full year, then it would be  
12 anticipated, based on a finding of the Commission, that Big Rivers' cost of service for  
13 the first rate year would be \$430,776,446. Now, if Big Rivers' cost of service turns  
14 out to be exactly \$430,776,446, as anticipated by a Commission Order approving Big  
15 Rivers' revenue requirement, and its revenues turn out to be exactly \$430,776,446,  
16 then under Big Rivers' proposal to establish the TIER Adjustment Charges at the  
17 middle of the current bandwidth, Big Rivers would earn a Contract TIER of 1.24, Big  
18 Rivers' would bill the Smelters a TIER Adjustment Charge of \$7,114,653, and Big  
19 Rivers' would still have a "buffer" of \$7,114,653 that it could call upon if things turn  
20 out for the worse.

21 Under the Smelters' proposal, the TIER Adjustment Charge would be set to

1 the top of the current bandwidth and Big Rivers' base rates would be reduced by  
2 \$7,114,653. Now, if Big Rivers' cost of service turns out to be exactly \$430,776,446,  
3 then under the Smelters' proposal to set the TIER Adjustment Charge at the top of the  
4 bandwidth, Big Rivers would again earn a Contract TIER of 1.24, Big Rivers' would  
5 bill the Smelters TIER Adjustment Charges of \$14,257,894, but Big Rivers' would  
6 not have a "buffer" of \$7,114,653 that it could draw upon if things turn out worse  
7 than anticipated. The Smelter proposal preserves the ability of the TIER Adjustment  
8 Charge to go down if Big Rivers' revenues increase, but eliminates the opportunity  
9 for the TIER Adjustment Charge to increase if Big Rivers requires more revenue to  
10 achieve the target 1.24 Contract TIER.

11 **Q. But what would happen in your example if things did turn out for the worse?**

12 **A.** Obviously, neither Big Rivers nor the Commission has a crystal ball. All that Big  
13 Rivers and the Commission can do is make a reasonable determination of what Big  
14 Rivers' revenue requirement ought to be on a going forward basis. But if Big Rivers'  
15 cost of service, for instance, turns out to be higher than what is established in the rate  
16 case, or if the margins on Big Rivers' off-system sales deteriorate even further, then  
17 under its proposal to set the TIER Adjustment at middle of the current bandwidth, Big  
18 Rivers will have a "buffer" of \$7,114,653 to help Big Rivers survive any cost  
19 increases or further reductions in off-system sales margins. For example, if Big  
20 Rivers margins deteriorate by \$10 million due to unanticipated cost increases and  
21 further reductions in off-system sales margins, then under its proposal Big Rivers



1 would have a \$7.1 million reserve to off-set this adverse effect on margins. Having a  
2 “reserve” or “buffer” is exactly what was contemplated by the TIER Adjustment  
3 Charge that was agreed to by the Smelters when they signed the Smelter Agreements.  
4 The Smelters proposal to set the TIER Adjustment Charge at the ceiling of the  
5 current bandwidth for purposes of determining the revenue increase in this rate case  
6 would nullify this critical provision of the Smelter Agreements and would result in  
7 rates insufficient for Big Rivers to operate prudently and achieve its financial  
8 covenants.

9 **Q. What would happen in your example if things did turn out for the better?**

10 **A.** If the wholesale power market rebounds or if Big Rivers' operating expenses are  
11 lower than are reflected in the revenue requirements approved in this proceeding, thus  
12 causing Big Rivers to earn more than a 1.24 Contract TIER, then (a) the excess 1.24  
13 Contract TIER amount is first returned to the Smelters through a reduction in the  
14 TIER Adjustment, potentially down to the floor of the TIER Adjustment Charge  
15 bandwidth; then (b) the Board of Directors must decide whether or not to authorize a  
16 “rebate” of the remaining excess 1.24 Contract TIER amount to the members. Then,  
17 if (c) the Board of Directors approves the rebate, then all members will receive a  
18 rebate, subject to Commission approval; however, if (d) the Board of Directors does  
19 not approve the rebate, then the Smelters receive an Equity Development Credit for  
20 their pro rata share of the remaining excess 1.24 Contract TIER amount, and the  
21 remaining equity is retained by Big Rivers for its members. Thus, in no event would

1 the Smelters ever be required to contribute to a Contract TIER in excess of 1.24. The  
2 1.24 Contract TIER cap acts as a stopgap against over-earning; however, it precludes  
3 Big Rivers from "banking" earnings in a good year for a "rainy day" in some future  
4 year. Just as the TIER Adjustment Charge was an important contract element for Big  
5 Rivers, the TIER cap was an important contract element for the Smelters and was  
6 incorporated in order to prevent Big Rivers from charging higher rates than the  
7 Smelters felt were absolutely needed.

8 **Q. Mr. Baron suggests that the "buffer" provided by the TIER Adjustment**  
9 **Charges should be eliminated to provide "an incentive for Big Rivers to control**  
10 **its expenses." (Id. at 19.) Are increases in expenses the primary driver for this**  
11 **rate case?**

12 **A.** No. As discussed by Mr. Blackburn and Mr. Hite in their rebuttal testimonies, the  
13 primary driver for this rate case is the reduction in off-system sales margins, not  
14 increased operation and maintenance expenses. The reason that Big Rivers is filing  
15 this rate case earlier than was anticipated in the financial models supplied in the  
16 Unwind Proceeding is the deterioration in its margins on off-system sales. In 2010,  
17 Big Rivers' off-system sales revenues were approximately \$55.7 million lower than  
18 projected in the Unwind models. If the power market turns around, causing Big  
19 Rivers to meet its 1.24 Contract TIER, then the Smelters will not be required to pay  
20 TIER Adjustment Charges, and if Big Rivers achieves a Contract TIER greater than  
21 1.24 then the Smelters and Big Rivers' members both will receive rebates or other

1 benefits as described earlier in my testimony.

2 **Q. Are there also flaws in Mr. Kollen's analysis of the TIER Adjustment Charge?**

3 A. Yes. Mr. Kollen objects to the TIER Adjustment Charge being at the midpoint of the  
4 current bandwidth because "there is no evidence that the Company actually will  
5 reduce the TIER Adjustment Charge." (Direct Testimony of Lane Kollen at p. 6.)  
6 Based on an examination of the Company's budget for 2011, Mr. Kollen concludes  
7 that Big Rivers will charge rates at the top end of the bandwidth even after its  
8 proposed rates go into effect. A fundamental problem with Mr. Kollen's analysis is  
9 that he uses "forecasted" results when it suits him, but relies on "historical" test-year  
10 costs to establish revenue requirements in the case. Big Rivers did not propose rates  
11 based on a forecasted test year in this rate case. Except in the limited instances where  
12 historical costs are not available, as in the case of production maintenance and  
13 planned outage expenses in Big Rivers' rate case, it is inappropriate to rely on  
14 forecasted results for one component of revenue requirement – in this case the TIER  
15 Adjustment Charge – but rely on historical results for everything else. Using a  
16 historical test-year, if the TIER Adjustment Charges are set the top of the bandwidth,  
17 then the "reserve" or "buffer" contemplated by the TIER Adjustment Charge will be  
18 eliminated. In the case of production maintenance and planned outage expenses, Mr.  
19 Kollen proposes to remove the forward-looking impact of inflation on these  
20 legitimate and critically important expenditures. Yet, with respect to the TIER  
21 Adjustment Charges, he proposes to look at future results in a disingenuous attempt to

1           undo an element of the Smelter Agreements that was specifically agreed to by the  
2           Smelters when they signed the agreements and considered by the Rating Agencies  
3           when they assigned Big Rivers' credit ratings.

4           It is Mr. Kollen's contention that a revenue increase of \$18.679 million dollars  
5           will provide enough revenue to allow Big Rivers to earn a 1.24 Contract TIER. If Mr.  
6           Kollen is confident that, on a prospective basis, his proposed revenue requirement  
7           will provide a 1.24 Contract TIER, then he should not be concerned about the TIER  
8           Adjustment Charge being set in the middle of the bandwidth. If Big Rivers' revenue  
9           requirements, upon which rates are based, do indeed produce a Contract TIER of  
10          1.24, then the TIER Adjustment Charges actually billed to the Smelters will be  
11          exactly the \$7.1 million of TIER Adjustment Charge revenue proposed by Big Rivers  
12          in this case, and not any higher. Mr. Kollen's concern about the Smelters being forced  
13          to pay the maximum amount under the TIER Adjustment Charges underscores a  
14          fundamental contradiction in KIUC's position and exposes the fact that Mr. Kollen  
15          does not believe that his proposed revenue increase is adequate.

16          Obviously, the reason Mr. Kollen is concerned about prospective TIER  
17          Adjustment Charges is that he does not believe that his proposed revenue requirement  
18          resulting in his recommended revenue increase of \$18.679 million is sufficient to  
19          provide Big Rivers an opportunity to achieve a 1.24 Contract TIER on a going  
20          forward basis. In fact, based on his observations about Big Rivers continuing to  
21          assess the maximum TIER Adjustment Charges in 2011 and beyond, Mr. Kollen

1           apparently does not believe that even Big Rivers' proposed revenue increase of  
2           \$39.953 million is sufficient to provide for a 1.24 Contract TIER, because the  
3           financial forecast that alarms Mr. Kollen is based upon the assumption that Big Rivers  
4           receives the entire amount of the rate increase it seeks. If Mr. Kollen truly believed  
5           that his revenue requirements were sufficient to allow Big Rivers to earn a 1.24  
6           Contract TIER on a going forward basis, then accordingly the Smelters should not be  
7           at risk if the TIER Adjustment Charge in this rate case is established either at the  
8           middle or even at the bottom of the bandwidth.

9           By proposing to set Big Rivers' revenue requirement too low and by proposing  
10          to set the TIER Adjustment Charge at the ceiling of the current bandwidth, the  
11          KIUC's recommended base rate revenue increase would continue to expose Big  
12          Rivers to dangerously low earnings without any potential to collect an additional  
13          \$7,114,653 of revenues from the Smelters through the application of the TIER  
14          Adjustment Charges. Stated another way, KIUC's proposal would force Big Rivers to  
15          walk on a tightrope without the safety net provided by the TIER Adjustment Charge  
16          so that the Smelters would continue to enjoy more favorable rates.

17   **Q.    Should adjustments be made to the TIER Adjustment Charge in this proceeding**  
18   **if any of Mr. Kollen's other adjustments to revenue requirements are accepted?**

19   A.    Yes. Preserving the "buffer" provided in the Smelter Agreements by the TIER  
20   Adjustment Charge is critically important to this proceeding. Big Rivers filed a rate  
21   case using a historical test year with adjustments to reflect known and measurable

1 changes to test year operating results. As discussed in Mr. Blackburn's testimony,  
2 Big Rivers is concerned that any unforeseen cost increase or revenue decrease or both  
3 could jeopardize its ability to meet the MFIR provisions of its long-term debt  
4 agreements. Given Big Rivers' need for the full increase that was requested in this  
5 proceeding, it is Big Rivers' proposal that if the Commission accepts any of the  
6 KIUC's recommendations to lower Big Rivers' revenue requirement, then a  
7 corresponding adjustment should be made to lower the TIER Adjustment Revenues,  
8 up to a total reduction of \$14,229,306, which corresponds to setting the TIER  
9 Adjustment Revenues at the bottom of the bandwidth, leaving Big Rivers' proposed  
10 rates unchanged. As mentioned earlier, setting the TIER Adjustment Charge to either  
11 the middle or the bottom of the bandwidth will not result in overearning, because any  
12 margins above the 1.24 Contract TIER level would be returned to the Smelters and to  
13 the non-Smelters in the manner described earlier in my testimony.

14  
15 **VI. LARGE INDUSTRIAL CUSTOMER EXPANSION RATE – RATE**  
16 **SCHEDULE LICX**

17  
18 **Q. Does Mr. Baron take issue with the LICX tariff proposed by Big Rivers in this**  
19 **case?**

20 **A.** Yes. On pages 38-39 of his direct testimony, Mr. Baron states that while he does not  
21 object to the LICX tariff *per se*, he does not believe that it should be applicable to  
22 existing large industrial customers that may want to expand their usage of power from

1 Big Rivers. He states that the terms of the tariff deter economic development and the  
2 potential creation of new jobs in Kentucky, and he indicates that it is inappropriate to  
3 require existing customers that may want to expand their operations to take market  
4 prices rather than the standard Large Industrial Customer ("LIC") rate.

5 **Q. What does Mr. Baron recommend regarding the LICX tariff?**

6 A. Mr. Baron recommends that existing customers be permitted to take expansion  
7 service for an unlimited level of contractual load increases under the existing LIC  
8 rate. (Note that Big Rivers infers that by "existing" LIC rate, Mr. Baron is referring  
9 broadly to the rate for large industrial customers that the Commission approves in this  
10 proceeding, and not specifically to the Large Industrial rate effective on the date this  
11 testimony is filed.)

12 **Q. Do you agree with Mr. Baron that the LICX tariff should allow existing**  
13 **customers to take expansion service for 5 MW or more contractual load**  
14 **increases under the proposed LIC rate?**

15 A. No. If existing customers are allowed to take expansion service under the proposed  
16 LIC rate on an unlimited (unbounded) basis, Big Rivers bears a significant financial  
17 risk stemming from the cost to serve such expansion load. For a utility the size of Big  
18 Rivers, limiting the addition of new loads under the Large Industrial Customer (LIC)  
19 rate to increments of 5 MW is not unreasonable.

20 **Q. Mr. Baron claims that requiring existing customers that expand their loads by**  
21 **more than 5 MW deters economic development. Is he correct?**

1 A. No. Big Rivers is currently in serious negotiations to add a new large industrial  
2 customer under LICX. Therefore, requiring the addition of new loads of 5 MW or  
3 larger to take service under LICX obviously does not deter economic development.  
4 Mr. Baron has presented no studies showing that the requirement deters economic  
5 development. Also, as noted earlier in my testimony, Mr. Baron's claim that  
6 requiring existing customers that add 5 MW or more of load to take service under  
7 LICX, which is priced at market rates, contradicts the conclusion reached by Dr.  
8 Morey that Big Rivers is recovering greater margins -- through higher prices -- from  
9 the Smelters than Big Rivers could recover from the market.

10 **Q. Please explain the risk to Big Rivers under Mr. Baron's proposal for LICX.**

11 A. If Big Rivers must provide service to significant load additions, it may have to  
12 construct additional transmission facilities or acquire additional generation resources  
13 or enter into costly purchased power agreements. If the expansion load allowed under  
14 LIC rates is unlimited, Big Rivers might incur costs to meet the incremental demand  
15 that far exceed the revenues provided from that load under the LIC rate. Thus Big  
16 Rivers would be exposed to potentially unrecoverable costs for serving expansion  
17 load under the LIC rate if the allowance of expansion load is unbounded. Certainly,  
18 Big Rivers has an obligation to serve new customers and to meet expanded load  
19 requirements of existing customers, but offering to serve new load in excess of 5 MW  
20 under a market based rate does not shirk this responsibility. Furthermore, due to its  
21 size, Big Rivers' obligation to serve new loads at embedded cost rates cannot be



1 unbounded and should not place a significant burden on current customers.

2 **Q. Is a cap of this sort routinely employed by utilities to mitigate their cost exposure**  
3 **under certain rates related to large customers and/or large customer**  
4 **expansions?**

5 A. Yes. In Kentucky, LG&E and KU, which are much larger utilities than Big Rivers,  
6 place strict limits on the amount of load that can be added under a standard rate  
7 schedule. Under LG&E and KU's Retail Transmission Service (RTS), which is rate  
8 schedule under which LG&E largest customers are typically served, the following  
9 restriction is placed on the addition of loads by existing and new customers: "Service  
10 under this schedule will be limited to maximum new loads not exceeding 50,000  
11 kVA. Existing customers may increase loads to a maximum of 75,000 kVA by up to  
12 2,000 kVA per year or in greater increments with approval of Company's  
13 transmission operator."

14 **Q. Does this conclude your rebuttal testimony?**

15 A. Yes.

**Exhibit Seelye Rebuttal-1**



Supreme Court of the United States  
FEDERAL POWER COMMISSION et al.

v.  
HOPE NATURAL GAS CO.  
CITY OF CLEVELAND

v.  
SAME.

Nos. 34 and 35.

Argued Oct. 20, 21, 1943.

Decided Jan. 3, 1944.

Separate proceedings before the Federal Power Commission by such Commission, by the City of Cleveland and the City of Akron, and by Pennsylvania Public Utility Commission wherein the State of West Virginia and its Public Service Commission were permitted to intervene concerning rates charged by Hope Natural Gas Company which were consolidated for hearing. An order fixing rates was reversed and remanded with directions by the Circuit Court of Appeals, 134 F.2d 287, and Federal Power Commission, City of Akron and Pennsylvania Public Utility Commission in one case and the City of Cleveland in another bring certiorari.

Reversed.

Mr. Justice REED, Mr. Justice FRANKFURTER and Mr. Justice JACKSON, dissenting.

On Writs of Certiorari to the United States Circuit Court of Appeals for the Fourth Circuit.

West Headnotes

**[1] Public Utilities 317A ↪120**

317A Public Utilities  
317AII Regulation  
317Ak119 Regulation of Charges  
317Ak120 k. Nature and Extent in General.  
Most Cited Cases  
(Formerly 317Ak7.1, 317Ak7)

Rate-making is only one species of price-fixing which, like other applications of the police power, may reduce the value of the property regulated, but that does not render the regulation invalid.

**[2] Public Utilities 317A ↪123**

317A Public Utilities  
317AII Regulation  
317Ak119 Regulation of Charges  
317Ak123 k. Reasonableness of Charges in General. Most Cited Cases  
(Formerly 317Ak7.4, 317Ak7)

Rates cannot be made to depend upon fair value, which is the end product of the process of rate-making and not the starting point, when the value of the going enterprise depends on earnings under whatever rates may be anticipated.

**[3] Gas 190 ↪14.3(2)**

190 Gas  
190k14 Charges  
190k14.3 Administrative Regulation  
190k14.3(2) k. Federal Power Commission.  
Most Cited Cases  
(Formerly 190k14(1))

The rate-making function of the Federal Power Commission under the Natural Gas Act involves the making of pragmatic adjustments, and the Commission is not bound to the use of any single formula or combination of formulae in determining rates. Natural Gas Act, §§ 4(a), 5(a), 6, 15 U.S.C.A. §§ 717c(a), 717d(a), 717e.

**[4] Gas 190 ↪14.5(6)**

190 Gas  
190k14 Charges  
190k14.5 Judicial Review and Enforcement of Regulations  
190k14.5(6) k. Scope of Review and Trial De Novo. Most Cited Cases  
(Formerly 190k14(1))  
When order of Federal Power Commission fixing natural gas rates is challenged in the courts, the question

is whether order viewed in its entirety meets the requirements of the Natural Gas Act. Natural Gas Act, §§ 4(a), 5(a), 6, 19(b), 15 U.S.C.A. §§ 717c(a), 717d(a), 717e, 717r(b).

**[5] Gas 190 ↪14.4(1)**

190 Gas

190k14 Charges

190k14.4 Reasonableness of Charges

190k14.4(1) k. In General. Most Cited Cases

(Formerly 190k14(1))

Under the statutory standard that natural gas rates shall be “just and reasonable” it is the result reached and not the method employed that is controlling. Natural Gas Act §§ 4(a), 5(a), 15 U.S.C.A. §§ 717c(a), 717d(a).

**[6] Gas 190 ↪14.5(6)**

190 Gas

190k14 Charges

190k14.5 Judicial Review and Enforcement of Regulations

190k14.5(6) k. Scope of Review and Trial De Novo. Most Cited Cases

(Formerly 190k14(1))

If the total effect of natural gas rates fixed by Federal Power Commission cannot be said to be unjust and unreasonable, judicial inquiry under the Natural Gas Act is at an end. Natural Gas Act, §§ 4(a), 5(a), 6, 19(b), 15 U.S.C.A. §§ 717c(a), 717d(a), 717e, 717r(b).

**[7] Gas 190 ↪14.5(7)**

190 Gas

190k14 Charges

190k14.5 Judicial Review and Enforcement of Regulations

190k14.5(7) k. Presumptions. Most Cited Cases

(Formerly 190k14(1))

An order of the Federal Power Commission fixing rates for natural gas is the product of expert judgment, which carries a presumption of validity, and one who would upset the rate must make a convincing showing

that it is invalid because it is unjust and unreasonable in its consequences. Natural Gas Act, §§ 4(a), 5(a), 6, 19(b), 15 U.S.C.A. §§ 717c(a), 717d(a), 717e, 717r(b).

**[8] Gas 190 ↪14.4(1)**

190 Gas

190k14 Charges

190k14.4 Reasonableness of Charges

190k14.4(1) k. In General. Most Cited Cases (Formerly 190k14(1))

The fixing of just and reasonable rates for natural gas by the Federal Power Commission involves a balancing of the investor and the consumer interests. Natural Gas Act, §§ 4(a), 5(a), 15 U.S.C.A. §§ 717c(a), 717d(a).

**[9] Gas 190 ↪14.4(9)**

190 Gas

190k14 Charges

190k14.4 Reasonableness of Charges

190k14.4(9) k. Depreciation and Depletion. Most Cited Cases

(Formerly 190k14(1))

As respects rates for natural gas, from the investor or company point of view it is important that there be enough revenue not only for operating expenses but also for the capital costs of the business, which includes service on the debt and dividends on stock, and by such standard the return to the equity owner should be commensurate with the terms on investments in other enterprises having corresponding risks, and such returns should be sufficient to assure confidence in the financial integrity of the enterprise so as to maintain its credit and to attract capital. Natural Gas Act, §§ 4(a), 5(a), 15 U.S.C.A. §§ 717c(a), 717d(a).

**[10] Gas 190 ↪14.4(9)**

190 Gas

190k14 Charges

190k14.4 Reasonableness of Charges

190k14.4(9) k. Depreciation and Depletion. Most Cited Cases

(Formerly 190k14(1))

The fixing by the Federal Power Commission of a

rate of return that permitted a natural gas company to earn \$2,191,314 annually was supported by substantial evidence. Natural Gas Act, §§ 4(a), 5(a), 6, 19(b), 15 U.S.C.A. §§ 717c(a), 717d(a), 717e, 717r(b).

**[11] Gas 190 ↪14.4(9)**

190 Gas  
190k14 Charges  
190k14.4 Reasonableness of Charges  
190k14.4(9) k. Depreciation and Depletion.

**Most Cited Cases**

(Formerly 190k14(1))

Rates which enable a natural gas company to operate successfully, to maintain its financial integrity, to attract capital and to compensate its investors for the risks assumed cannot be condemned as invalid, even though they might produce only a meager return on the so-called "fair value" rate base. Natural Gas Act, §§ 4(a), 5(a), 6, 19(b), 15 U.S.C.A. §§ 717c(a), 717d(a), 717e, 717r(b).

**[12] Gas 190 ↪14.4(4)**

190 Gas  
190k14 Charges  
190k14.4 Reasonableness of Charges  
190k14.4(4) k. Method of Valuation. Most

**Cited Cases**

(Formerly 190k14(1))

A return of only 3 27/100 per cent. on alleged rate base computed on reproduction cost new to natural gas company earning an annual average return of about 9 per cent. on average investment and satisfied with existing gas rates suggests an inflation of the base on which the rate had been computed, and justified Federal Power Commission in rejecting reproduction cost as the measure of the rate base. Natural Gas Act, §§ 4(a), 5(a), 15 U.S.C.A. §§ 717c(a), 717d(a).

**[13] Gas 190 ↪14.4(9)**

190 Gas  
190k14 Charges  
190k14.4 Reasonableness of Charges  
190k14.4(9) k. Depreciation and Depletion.

**Most Cited Cases**

(Formerly 190k14(1))

There is no constitutional requirement that owner who engages in a wasting-asset business of limited life shall receive at the end more than he has put into it, and such rule is applicable to a natural gas company since the ultimate exhaustion of its supply of gas is inevitable. Natural Gas Act, §§ 4(a), 5(a), 6, 19(b), 15 U.S.C.A. §§ 717c(a), 717d(a), 717e, 717r(b).

**[14] Gas 190 ↪14.4(9)**

190 Gas  
190k14 Charges  
190k14.4 Reasonableness of Charges  
190k14.4(9) k. Depreciation and Depletion.

**Most Cited Cases**

(Formerly 190k14(1))

In fixing natural gas rate the basing of annual depreciation on cost is proper since by such procedure the utility is made whole and the integrity of its investment is maintained, and no more is required. Natural Gas Act, §§ 4(a), 5(a), 6, 19(b), 15 U.S.C.A. §§ 717c(a), 717d(a), 717e, 717r(b).

**[15] Gas 190 ↪14.3(4)**

190 Gas  
190k14 Charges  
190k14.3 Administrative Regulation  
190k14.3(4) k. Findings and Orders. Most

**Cited Cases**

(Formerly 190k14(1))

There are no constitutional requirements more exacting than the standards of the Natural Gas Act which are that gas rates shall be just and reasonable, and a rate order which conforms with the act is valid. Natural Gas Act, §§ 4(a), 5(a), 6, 19(b), 15 U.S.C.A. §§ 717c(a), 717d(a), 717e, 717r(b).

**[16] Commerce 83 ↪62.2**

83 Commerce  
83II Application to Particular Subjects and Methods of Regulation  
83II(B) Conduct of Business in General

83k62.2 k. Gas. Most Cited Cases

(Formerly 83k13)

The purpose of the Natural Gas Act was to provide through the exercise of the national power over interstate commerce an agency for regulating the wholesale distribution to public service companies of natural gas moving in interstate commerce not subject to certain types of state regulation, and the act was not intended to take any authority from state commissions or to usurp state regulatory authority. Natural Gas Act, § 1 et seq., 15 U.S.C.A. § 717 et seq.

**[17] Mines and Minerals 260 ↪92.5(3)**

260 Mines and Minerals

260III Operation of Mines, Quarries, and Wells

260III(A) Statutory and Official Regulations

260k92.5 Federal Law and Regulations

260k92.5(3) k. Oil and Gas. Most Cited

Cases

(Formerly 260k92.7, 260k92)

Under the Natural Gas Act, the Federal Power Commission has no authority over the production or gathering of natural gas. Natural Gas Act, § 1(b), 15 U.S.C.A. § 717(b).

**[18] Gas 190 ↪14.1(1)**

190 Gas

190k14 Charges

190k14.1 In General

190k14.1(1) k. In General; Amount and Regulation. Most Cited Cases

(Formerly 190k14(1))

The primary aim of the Natural Gas Act was to protect consumers against exploitation at the hands of natural gas companies and holding companies owning a majority of the pipe-line mileage which moved gas in interstate commerce and against which state commissions, independent producers and communities were growing quite helpless. Natural Gas Act, §§ 4, 6-10, 14, 15 U.S.C.A. §§ 717c, 717e-717i, 717m.

**[19] Gas 190 ↪14.1(1)**

190 Gas

190k14 Charges

190k14.1 In General

190k14.1(1) k. In General; Amount and Regulation. Most Cited Cases

(Formerly 190k14(1))

Apart from the express exemptions contained in § 7 of the Natural Gas Act considerations of conservation are material where abandonment or extensions of facilities or service by natural gas companies are involved, but exploitation of consumers by private operators through maintenance of high rates cannot be continued because of the indirect benefits derived therefrom by a state containing natural gas deposits. Natural Gas Act, §§ 4, 5, and § 7 as amended 15 U.S.C.A. §§ 717c, 717d, 717f.

**[20] Commerce 83 ↪62.2**

83 Commerce

83II Application to Particular Subjects and Methods of Regulation

83II(B) Conduct of Business in General

83k62.2 k. Gas. Most Cited Cases

(Formerly 83k13)

A limitation on the net earnings of a natural gas company from its interstate business is not a limitation on the power of the producing state, either to safeguard its tax revenues from such industry, or to protect the interests of those who sell their gas to the interstate operator, particularly where the return allowed the company by the Federal Power Commission was a net return after all such charges. Natural Gas Act, §§ 4, 5, and § 7, as amended, 15 U.S.C.A. §§ 717c, 717d, 717f.

**[21] Gas 190 ↪14.4(1)**

190 Gas

190k14 Charges

190k14.4 Reasonableness of Charges

190k14.4(1) k. In General. Most Cited Cases

(Formerly 190k14(1))

The Natural Gas Act granting Federal Power Commission power to fix “just and reasonable rates” does not include the power to fix rates which will disallow or discourage resales for industrial use. Natural Gas Act, §§ 4(a), 5(a), 15 U.S.C.A. §§ 717c(a), 717d(a).

**[22] Gas 190 ↪14.4(1)**

190 Gas

190k14 Charges

190k14.4 Reasonableness of Charges

190k14.4(1) k. In General. Most Cited Cases

(Formerly 190k14(1))

The wasting-asset nature of the natural gas industry does not require the maintenance of the level of rates so that natural gas companies can make a greater profit on each unit of gas sold. Natural Gas Act, §§ 4(a), 5(a), 15 U.S.C.A. §§ 717c(a), 717d(a).

**[23] Federal Courts 170B ↪452**

170B Federal Courts

170BVII Supreme Court

170BVII(B) Review of Decisions of Courts of Appeals

Cases

170Bk452 k. Certiorari in General. Most Cited Cases

(Formerly 106k383(1))

Where the Federal Power Commission made no findings as to any discrimination or unreasonable differences in rates, and its failure was not challenged in the petition to review, and had not been raised or argued by any party, the problem of discrimination was not open to review by the Supreme Court on certiorari. Natural Gas Act, § 4(b), 15 U.S.C.A. § 717c(b).

**[24] Constitutional Law 92 ↪2563**

92 Constitutional Law

92XX Separation of Powers

92XX(C) Judicial Powers and Functions

92XX(C)3 Encroachment on Executive

92k2561 Powers, Duties, and Acts Under Legislative Authority

92k2563 k. Judicial Encroachment on Executive Acts Taken Under Statutory Authority. Most Cited Cases

(Formerly 92k74, 15Ak226)

**Gas 190 ↪1**

190 Gas

190k1 k. Power to Control and Regulate. Most Cited

Cases

(Formerly 92k74)

Congress has entrusted the administration of the Natural Gas Act to the Federal Power Commission and not to the courts, and apart from the requirements of judicial review, it is not for the Supreme Court to advise the Commission how to discharge its functions. Natural Gas Act, §§ 1 et seq., 19(b), 15 U.S.C.A. §§ 717 et seq., 717r(b).

**[25] Gas 190 ↪14.5(3)**

190 Gas

190k14 Charges

190k14.5 Judicial Review and Enforcement of Regulations

190k14.5(3) k. Decisions Reviewable. Most Cited Cases

(Formerly 190k14(1))

Under the Natural Gas Act, where order sought to be reviewed does not of itself adversely affect complainant but only affects his rights adversely on the contingency of future administrative action, the order is not reviewable, and resort to the courts in such situation is either premature or wholly beyond the province of such courts. Natural Gas Act, § 19(b), 15 U.S.C.A. § 717r(b).

**[26] Gas 190 ↪14.5(4)**

190 Gas

190k14 Charges

190k14.5 Judicial Review and Enforcement of Regulations

190k14.5(4) k. Persons Entitled to Relief; Parties. Most Cited Cases

(Formerly 190k14(1))

Findings of the Federal Power Commission on lawfulness of past natural gas rates, which the Commission was without power to enforce, were not reviewable under the Natural Gas Act giving any "party aggrieved" by an order of the Commission the right of review. Natural Gas Act, § 19(b), 15 U.S.C.A. § 717r(b).

**\*\*283 \*592** Mr. Francis M. Shea, Asst. Atty. Gen., for petitioners Federal Power Com'n and others.

320 U.S. 591, 51 P.U.R.(NS) 193, 64 S.Ct. 281, 88 L.Ed. 333  
 (Cite as: 320 U.S. 591, 64 S.Ct. 281)

\*593 Mr. Spencer W. Reeder, of Cleveland, Ohio, for petitioner City of Cleveland.

Mr. William B. Cockley, of Cleveland, Ohio, for respondent.

Mr. M. M. Neeley, of Charleston, W. Va., for State of West Virginia, as amicus curiae by special leave of Court.

Mr. Justice DOUGLAS delivered the opinion of the Court.

The primary issue in these cases concerns the validity under the Natural Gas Act of 1938, 52 Stat. 821, 15 U.S.C. s 717 et seq., 15 U.S.C.A. s 717 et seq., of a rate order issued by the Federal Power Commission reducing the rates chargeable by Hope Natural Gas Co., 44 P.U.R.,N.S., 1. On a petition for review of the order made pursuant to s 19(b) of the Act, the \*594 Circuit Court of Appeals set it aside, one judge dissenting. 4 Cir., 134 F.2d 287. The cases \*\*284 are here on petitions for writs of certiorari which we granted because of the public importance of the questions presented. City of Cleveland v. Hope Natural Gas Co., 319 U.S. 735, 63 S.Ct. 1165.

Hope is a West Virginia corporation organized in 1898. It is a wholly owned subsidiary of Standard Oil Co. (N.J.). Since the date of its organization, it has been in the business of producing, purchasing and marketing natural gas in that state.<sup>FN1</sup> It sells some of that gas to local consumers in West Virginia. But the great bulk of it goes to five customer companies which receive it at the West Virginia line and distribute it in Ohio and in Pennsylvania.<sup>FN2</sup> In July, 1938, the cities of Cleveland and Akron filed complaints with the Commission charging that the rates collected by Hope from East Ohio

Gas Co. (an affiliate of Hope which distributes gas in Ohio) were excessive and unreasonable. Later in 1938 the Commission on its own motion instituted an investigation to determine the reasonableness of all of Hope's interstate rates. In March \*595 1939 the Public Utility Commission of Pennsylvania filed a complaint with the Commission charging that the rates collected by Hope from Peoples Natural Gas Co. (an affiliate of Hope distributing gas in Pennsylvania) and two non-affiliated companies were unreasonable. The City of Cleveland asked that the challenged rates be declared unlawful and that just and reasonable rates be determined from June 30, 1939 to the date of the Commission's order. The latter finding was requested in aid of state regulation and to afford the Public Utilities Commission of Ohio a proper basis for disposition of a fund collected by East Ohio under bond from Ohio consumers since June 30, 1939. The cases were consolidated and hearings were held.

FN1 Hope produces about one-third of its annual gas requirements and purchases the rest under some 300 contracts.

FN2 These five companies are the East Ohio Gas Co., the Peoples Natural Gas Co., the River Gas Co., the Fayette County Gas Co., and the Manufacturers Light & Heat Co. The first three of these companies are, like Hope, subsidiaries of Standard Oil Co. (N.J.). East Ohio and River distribute gas in Ohio, the other three in Pennsylvania. Hope's approximate sales in m.c.f. for 1940 may be classified as follows:

Local West Virginia	
sales	11,000,000
East Ohio	40,000,000
Peoples	10,000,000
River	400,000
Fayette	860,000



Manufacturers

2,000,000

Local West Virginia

Hope's natural gas is processed by Hope Construction & Refining Co., an affiliate, for the extraction of gasoline and butane. Domestic Coke Corp., another affiliate, sells coke-oven gas to Hope for boiler fuel.

On May 26, 1942, the Commission entered its order and made its findings. Its order required Hope to decrease its future interstate rates so as to reflect a reduction, on an annual basis of not less than \$3,609,857 in operating revenues. And it established 'just and reasonable' average rates per m.c.f. for each of the five customer companies.<sup>FN3</sup> In response to the prayer of the City of Cleveland the Commission also made findings as to the lawfulness of past rates, although concededly it had no authority under the Act to fix past rates or to award reparations. 44 P.U.R.,U.S., at page 34. It found that the rates collected by Hope from East Ohio were unjust, unreasonable, excessive and therefore unlawful, by \$830,892 during 1939, \$3,219,551 during 1940, and \$2,815,789 on an annual basis since 1940. It further found that just, reasonable, and lawful rates for gas sold by Hope to East Ohio for resale for ultimate public consumption were those required \*596 to produce \$11,528,608 for 1939, \$11,507,185 for 1940 and \$11,910,947 annually since 1940.

FN3 These required minimum reductions of 7¢ per m.c.f. from the 36.5¢ and 35.5¢ rates previously charged East Ohio and Peoples, respectively, and 3¢ per m.c.f. from the 31.5¢ rate previously charged Fayette and Manufacturers.

The Commission established an interstate rate base of \$33,712,526 which, it found, represented the 'actual legitimate cost' of the company's interstate property less depletion and depreciation and plus unoperated acreage, working capital and future net capital additions. The Commission, beginning with book cost, made \*\*285 certain adjustments not necessary to relate here and found the 'actual legitimate cost' of the plant in interstate service to be \$51,957,416, as of December 31,

1940. It deducted accrued depletion and depreciation, which it found to be \$22,328,016 on an 'economic-service-life' basis. And it added \$1,392,021 for future net capital additions, \$566,105 for useful unoperated acreage, and \$2,125,000 for working capital. It used 1940 as a test year to estimate future revenues and expenses. It allowed over \$16,000,000 as annual operating expenses-about \$1,300,000 for taxes, \$1,460,000 for depletion and depreciation, \$600,000 for exploration and development costs, \$8,500,000 for gas purchased. The Commission allowed a net increase of \$421,160 over 1940 operating expenses, which amount was to take care of future increase in wages, in West Virginia property taxes, and in exploration and development costs. The total amount of deductions allowed from interstate revenues was \$13,495,584.

Hope introduced evidence from which it estimated reproduction cost of the property at \$97,000,000. It also presented a so-called trended 'original cost' estimate which exceeded \$105,000,000. The latter was designed 'to indicate what the original cost of the property would have been if 1938 material and labor prices had prevailed throughout the whole period of the piece-meal construction of the company's property since 1898.' 44 P.U.R.,N.S., at pages 8, 9. Hope estimated by the 'percent condition' method accrued depreciation at about 35% of \*597 reproduction cost new. On that basis Hope contended for a rate base of \$66,000,000. The Commission refused to place any reliance on reproduction cost new, saying that it was 'not predicated upon facts' and was 'too conjectural and illusory to be given any weight in these proceedings.' Id., 44 P.U.R.,U.S., at page 8. It likewise refused to give any 'probative value' to trended 'original cost' since it was 'not founded in fact' but was 'basically erroneous' and produced 'irrational results.' Id., 44 P.U.R., N.S., at page 9. In determining the amount of accrued depletion and depreciation the Commission, following *Lindheimer v. Illinois Bell Telephone Co.*, 292 U.S. 151, 167-169, 54 S.Ct. 658, 664-666, 78 L.Ed. 1182; *Federal Power Commission v. Natural Gas Pipeline Co.*, 315 U.S. 575, 592, 593, 62 S.Ct. 736, 745, 746, 86 L.Ed. 1037, based its computation on 'actual legitimate cost'. It found that

Hope during the years when its business was not under regulation did not observe 'sound depreciation and depletion practices' but 'actually accumulated an excessive reserve'<sup>FN4</sup> of about \$46,000,000. *Id.*, 44 P.U.R.,N.S., at page 18. One member of the Commission thought that the entire amount of the reserve should be deducted from 'actual legitimate cost' in determining the rate base.<sup>FN5</sup> The majority of the \*598 Commission concluded, however, that where, as here, a business is brought under regulation for the first time and where incorrect depreciation and depletion practices have prevailed, the deduction of the reserve requirement (actual existing depreciation and depletion) rather than the excessive reserve should be made so as to \*\*286 lay 'a sound basis for future regulation and control of rates.' *Id.*, 44 P.U.R.,N.S., at page 18. As we have pointed out, it determined accrued depletion and depreciation to be \$22,328,016; and it allowed approximately \$1,460,000 as the annual operating expense for depletion and depreciation.<sup>FN6</sup>

FN4 The book reserve for interstate plant amounted at the end of 1938 to about \$18,000,000 more than the amount determined by the Commission as the proper reserve requirement. The Commission also noted that 'twice in the past the company has transferred amounts aggregating \$7,500,000 from the depreciation and depletion reserve to surplus. When these latter adjustments are taken into account, the excess becomes \$25,500,000, which has been exacted from the ratepayers over and above the amount required to cover the consumption of property in the service rendered and thus to keep the investment unimpaired.' 44 P.U.R.,N.S., at page 22.

FN5 That contention was based on the fact that 'every single dollar in the depreciation and depletion reserves' was taken 'from gross operating revenues whose only source was the amounts charged customers in the past for natural gas. It is, therefore, a fact that the depreciation and depletion reserves have been contributed by the customers and do not represent any

investment by Hope.' *Id.*, 44 P.U.R.,N.S., at page 40. And see *Railroad Commission v. Cumberland Tel. & T. Co.*, 212 U.S. 414, 424, 425, 29 S.Ct. 357, 361, 362, 53 L.Ed. 577; 2 Bonbright, *Valuation of Property* (1937), p. 1139.

FN6 The Commission noted that the case was 'free from the usual complexities involved in the estimate of gas reserves because the geologists for the company and the Commission presented estimates of the remaining recoverable gas reserves which were about one per cent apart.' 44 P.U.R.,N.S., at pages 19, 20.

The Commission utilized the 'straight-line-basis' for determining the depreciation and depletion reserve requirements. It used estimates of the average service lives of the property by classes based in part on an inspection of the physical condition of the property. And studies were made of Hope's retirement experience and maintenance policies over the years. The average service lives of the various classes of property were converted into depreciation rates and then applied to the cost of the property to ascertain the portion of the cost which had expired in rendering the service.

The record in the present case shows that Hope is on the lookout for new sources of supply of natural gas and is contemplating an extension of its pipe line into Louisiana for that purpose. The Commission recognized in fixing the rates of depreciation that much material may be used again when various present sources of gas supply are exhausted, thus giving that property more than scrap value at the end of its present use.

Hope's estimate of original cost was about \$69,735,000—approximately \$17,000,000 more than the amount found by the Commission. The item of \$17,000,000 was made up largely of expenditures which prior to December 31, 1938, were charged to operating expenses. Chief among those expenditures was some

\$12,600,000 expended \*599 in well-drilling prior to 1923. Most of that sum was expended by Hope for labor, use of drilling-rigs, hauling, and similar costs of well-drilling. Prior to 1923 Hope followed the general practice of the natural gas industry and charged the cost of drilling wells to operating expenses. Hope continued that practice until the Public Service Commission of West Virginia in 1923 required it to capitalize such expenditures, as does the Commission under its present Uniform System of Accounts.<sup>FN7</sup> The Commission refused to add such items to the rate base stating that 'No greater injustice to consumers could be done than to allow items as operating expenses and at a later date include them in the rate base, thereby placing multiple charges upon the consumers.' *Id.*, 44 P.U.R.,N.S., at page 12. For the same reason the Commission excluded from the rate base about \$1,600,000 of expenditures on properties which Hope acquired from other utilities, the latter having charged those payments to operating expenses. The Commission disallowed certain other overhead items amounting to over \$3,000,000 which also had been previously charged to operating expenses. And it refused to add some \$632,000 as interest during construction since no interest was in fact paid.

FN7 See Uniform System of Accounts prescribed for Natural Gas Companies effective January 1, 1940, Account No. 332.1.

Hope contended that it should be allowed a return of not less than 8%. The Commission found that an 8% return would be unreasonable but that 6 1/2% was a fair rate of return. That rate of return, applied to the rate base of \$33,712,526, would produce \$2,191,314 annually, as compared with the present income of not less than \$5,801,171.

The Circuit Court of Appeals set aside the order of the Commission for the following reasons. (1) It held that the rate base should reflect the 'present fair value' of the \*600 property, that the Commission in determining the 'value' should have considered reproduction cost and trended original cost, and that 'actual legitimate cost' (prudent investment) was not the proper measure of 'fair value' where price levels had changed since the investment. (2) It concluded that the well-drilling

costs and overhead items in the amount of some \$17,000,000 should have been included in the rate base. (3) It held that accrued depletion and depreciation and the annual allowance for that expense should be computed on the basis of 'present fair value' of the property not on the basis of 'actual legitimate cost'.

\*\*287 The Circuit Court of Appeals also held that the Commission had no power to make findings as to past rates in aid of state regulation. But it concluded that those findings were proper as a step in the process of fixing future rates. Viewed in that light, however, the findings were deemed to be invalidated by the same errors which vitiated the findings on which the rate order was based.

Order Reducing Rates. Congress has provided in s 4(a) of the Natural Gas Act that all natural gas rates subject to the jurisdiction of the Commission 'shall be just and reasonable, and any such rate or charge that is not just and reasonable is hereby declared to be unlawful.' Sec. 5(a) gives the Commission the power, after hearing, to determine the 'just and reasonable rate' to be thereafter observed and to fix the rate by order. Sec. 5(a) also empowers the Commission to order a 'decrease where existing rates are unjust \* \* \* unlawful, or are not the lowest reasonable rates.' And Congress has provided in s 19(b) that on review of these rate orders the 'finding of the Commission as to the facts, if supported by substantial evidence, shall be conclusive.' Congress, however, has provided no formula by which the 'just and reasonable' rate is to be determined. It has not filled in the \*601 details of the general prescription<sup>FN8</sup> of s 4(a) and s 5(a). It has not expressed in a specific rule the fixed principle of 'just and reasonable'.

FN8. Sec. 6 of the Act comes the closest to supplying any definite criteria for rate making. It provides in subsection (a) that, 'The Commission may investigate the ascertain the actual legitimate cost of the property of every natural-gas company, the depreciation therein, and, when found necessary for rate-making purposes, other facts which bear on the determination of such cost or depreciation and the fair value of such property.' Subsection (b)

provides that every natural-gas company on request shall file with the Commission a statement of the 'original cost' of its property and shall keep the Commission informed regarding the 'cost' of all additions, etc.

[1][2] When we sustained the constitutionality of the Natural Gas Act in the *Natural Gas Pipeline Co.* case, we stated that the 'authority of Congress to regulate the prices of commodities in interstate commerce is at least as great under the Fifth Amendment as is that of the states under the Fourteenth to regulate the prices of commodities in intrastate commerce.' 315 U.S. at page 582, 62 S.Ct. at page 741, 86 L.Ed. 1037. Rate-making is indeed but one species of price-fixing. *Munn v. Illinois*, 94 U.S. 113, 134, 24 L.Ed. 77. The fixing of prices, like other applications of the police power, may reduce the value of the property which is being regulated. But the fact that the value is reduced does not mean that the regulation is invalid. *Block v. Hirsh*, 256 U.S. 135, 155-157, 41 S.Ct. 458, 459, 460, 65 L.Ed. 865, 16 A.L.R. 165; *Nebbia v. New York*, 291 U.S. 502, 523-539, 54 S.Ct. 505, 509-517, 78 L.Ed. 940, 89 A.L.R. 1469, and cases cited. It does, however, indicate that 'fair value' is the end product of the process of rate-making not the starting point as the Circuit Court of Appeals held. The heart of the matter is that rates cannot be made to depend upon 'fair value' when the value of the going enterprise depends on earnings under whatever rates may be anticipated. <sup>FN9</sup>

FN9 We recently stated that the meaning of the word 'value' is to be gathered 'from the purpose for which a valuation is being made. Thus the question in a valuation for rate making is how much a utility will be allowed to earn. The basic question in a valuation for reorganization purposes is how much the enterprise in all probability can earn.' *Institutional Investors v. Chicago, M., St. P. & P.R. Co.*, 318 U.S. 523, 540, 63 S.Ct. 727, 738.

\*602 [3][4][5][6][7] We held in *Federal Power Commission v. Natural Gas Pipeline Co.*, *supra*, that the Commission was not bound to the use of any single formula or combination of formulae in determining rates.

Its rate-making function, moreover, involves the making of 'pragmatic adjustments.' *Id.*, 315 U.S. at page 586, 62 S.Ct. at page 743, 86 L.Ed. 1037. And when the Commission's order is challenged in the courts, the question is whether that order 'viewed in its entirety' meets the requirements of the Act. *Id.*, 315 U.S. at page 586, 62 S.Ct. at page 743, 86 L.Ed. 1037. Under the statutory standard of 'just and reasonable' it is the result reached not the method employed which is controlling. Cf. **\*\*288***Los Angeles Gas & Electric Corp. v. Railroad Commission*, 289 U.S. 287, 304, 305, 314, 53 S.Ct. 637, 643, 644, 647, 77 L.Ed. 1180; *West Ohio Gas Co. v. Public Utilities Commission (No. 1)*, 294 U.S. 63, 70, 55 S.Ct. 316, 320, 79 L.Ed. 761; *West v. Chesapeake & Potomac Tel. Co.*, 295 U.S. 662, 692, 693, 55 S.Ct. 894, 906, 907, 79 L.Ed. 1640 (dissenting opinion). It is not theory but the impact of the rate order which counts. If the total effect of the rate order cannot be said to be unjust and unreasonable, judicial inquiry under the Act is at an end. The fact that the method employed to reach that result may contain infirmities is not then important. Moreover, the Commission's order does not become suspect by reason of the fact that it is challenged. It is the product of expert judgment which carries a presumption of validity. And he who would upset the rate order under the Act carries the heavy burden of making a convincing showing that it is invalid because it is unjust and unreasonable in its consequences. Cf. *Railroad Commission v. Cumberland Tel. & T. Co.*, 212 U.S. 414, 29 S.Ct. 357, 53 L.Ed. 577; *Lindheimer v. Illinois Bell Tel. Co.*, *supra*, 292 U.S. at pages 164, 169, 54 S.Ct. at pages 663, 665, 78 L.Ed. 1182; *Railroad Commission v. Pacific Gas & E. Co.*, 302 U.S. 388, 401, 58 S.Ct. 334, 341, 82 L.Ed. 319.

\*603 [8][9] The rate-making process under the Act, i.e., the fixing of 'just and reasonable' rates, involves a balancing of the investor and the consumer interests. Thus we stated in the *Natural Gas Pipeline Co.* case that 'regulation does not insure that the business shall produce net revenues.' 315 U.S. at page 590, 62 S.Ct. at page 745, 86 L.Ed. 1037. But such considerations aside, the investor interest has a legitimate concern with the financial integrity of the company whose rates are being regulated. From the investor or company point of view

it is important that there be enough revenue not only for operating expenses but also for the capital costs of the business. These include service on the debt and dividends on the stock. Cf. *Chicago & Grand Trunk R. Co. v. Wellman*, 143 U.S. 339, 345, 346, 12 S.Ct. 400, 402, 36 L.Ed. 176. By that standard the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks. That return, moreover, should be sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and to attract capital. See *State of Missouri ex rel. South-western Bell Tel. Co. v. Public Service Commission*, 262 U.S. 276, 291, 43 S.Ct. 544, 547, 67 L.Ed. 981, 31 A.L.R. 807 (Mr. Justice Brandeis concurring). The conditions under which more or less might be allowed are not important here. Nor is it important to this case to determine the various permissible ways in which any rate base on which the return is computed might be arrived at. For we are of the view that the end result in this case cannot be condemned under the Act as unjust and unreasonable from the investor or company viewpoint.

We have already noted that Hope is a wholly owned subsidiary of the Standard Oil Co. (N.J.). It has no securities outstanding except stock. All of that stock has been owned by Standard since 1908. The par amount presently outstanding is approximately \$28,000,000 as compared with the rate base of \$33,712,526 established by \*604 the Commission. Of the total outstanding stock \$11,000,000 was issued in stock dividends. The balance, or about \$17,000,000, was issued for cash or other assets. During the four decades of its operations Hope has paid over \$97,000,000 in cash dividends. It had, moreover, accumulated by 1940 an earned surplus of about \$8,000,000. It had thus earned the total investment in the company nearly seven times. Down to 1940 it earned over 20% per year on the average annual amount of its capital stock issued for cash or other assets. On an average invested capital of some \$23,000,000 Hope's average earnings have been about 12% a year. And during this period it had accumulated in addition reserves for depletion and depreciation of about \$46,000,000. Furthermore, during 1939, 1940 and 1941, Hope paid dividends of 10% on its

stock. And in the year 1942, during about half of which the lower rates were in effect, it paid dividends of 7 1/2%. From 1939-1942 its earned surplus increased from \$5,250,000 to about \$13,700,000, i.e., to almost half the par value of its outstanding stock.

As we have noted, the Commission fixed a rate of return which permits Hope to earn \$2,191,314 annually. In determining that amount it stressed the importance of maintaining the financial integrity of the \*\*289 company. It considered the financial history of Hope and a vast array of data bearing on the natural gas industry, related businesses, and general economic conditions. It noted that the yields on better issues of bonds of natural gas companies sold in the last few years were 'close to 3 per cent', 44 P.U.R.,N.S., at page 33. It stated that the company was a 'seasoned enterprise whose risks have been minimized' by adequate provisions for depletion and depreciation (past and present) with 'concurrent high profits', by 'protected established markets, through affiliated distribution companies, in populous and industrialized areas', and by a supply of gas locally to meet all requirements,\*605 'except on certain peak days in the winter, which it is feasible to supplement in the future with gas from other sources.' Id., 44 P.U.R.,N.S., at page 33. The Commission concluded, 'The company's efficient management, established markets, financial record, affiliations, and its prospective business place it in a strong position to attract capital upon favorable terms when it is required.' Id., 44 P.U.R.,N.S., at page 33.

[10][11][12] In view of these various considerations we cannot say that an annual return of \$2,191,314 is not 'just and reasonable' within the meaning of the Act. Rates which enable the company to operate successfully, to maintain its financial integrity, to attract capital, and to compensate its investors for the risks assumed certainly cannot be condemned as invalid, even though they might produce only a meager return on the so-called 'fair value' rate base. In that connection it will be recalled that Hope contended for a rate base of \$66,000,000 computed on reproduction cost new. The Commission points out that if that rate base were accepted, Hope's average rate of return for the four-year period from 1937-1940 would amount to 3.27%. During

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that period Hope earned an annual average return of about 9% on the average investment. It asked for no rate increases. Its properties were well maintained and operated. As the Commission says such a modest rate of 3.27% suggests an 'inflation of the base on which the rate has been computed.' *Dayton Power & Light Co. v. Public Utilities Commission*, 292 U.S. 290, 312, 54 S.Ct. 647, 657, 78 L.Ed. 1267. Cf. *Lindheimer v. Illinois Bell Tel. Co.*, supra, 292 U.S. at page 164, 54 S.Ct. at page 663, 78 L.Ed. 1182. The incongruity between the actual operations and the return computed on the basis of reproduction cost suggests that the Commission was wholly justified in rejecting the latter as the measure of the rate base.

In view of this disposition of the controversy we need not stop to inquire whether the failure of the Commission to add the \$17,000,000 of well-drilling and other costs to \*606 the rate base was consistent with the prudent investment theory as developed and applied in particular cases.

[13][14][15] Only a word need be added respecting depletion and depreciation. We held in the *Natural Gas Pipeline Co.* case that there was no constitutional requirement 'that the owner who embarks in a wasting-asset business of limited life shall receive at the end more than he has put into it.' 315 U.S. at page 593, 62 S.Ct. at page 746, 86 L.Ed. 1037. The Circuit Court of Appeals did not think that that rule was applicable here because Hope was a utility required to continue its service to the public and not scheduled to end its business on a day certain as was stipulated to be true of the *Natural Gas Pipeline Co.* But that distinction is quite immaterial. The ultimate exhaustion of the supply is inevitable in the case of all natural gas companies. Moreover, this Court recognized in *Lindheimer v. Illinois Bell Tel. Co.*, supra, the propriety of basing annual depreciation on cost.<sup>FN10</sup> By such a procedure the \*\*290 utility is made whole and the integrity of its investment maintained.<sup>FN11</sup> No more is required.<sup>FN12</sup> We cannot approve the contrary holding \*607 of *United Railways & Electric Co. v. West*, 280 U.S. 234, 253, 254, 50 S.Ct. 123, 126, 127, 74 L.Ed. 390. Since there are no constitutional requirements more exacting than the standards

of the Act, a rate order which conforms to the latter does not run afoul of the former.

FN10 Chief Justice Hughes said in that case ( 292 U.S. at pages 168, 169, 54 S.Ct. at page 665, 78 L.Ed. 1182): 'If the predictions of service life were entirely accurate and retirements were made when and as these predictions were precisely fulfilled, the depreciation reserve would represent the consumption of capital, on a cost basis, according to the method which spreads that loss over the respective service periods. But if the amounts charged to operating expenses and credited to the account for depreciation reserve are excessive, to that extent subscribers for the telephone service are required to provide, in effect, capital contributions, not to make good losses incurred by the utility in the service rendered and thus to keep its investment unimpaired, but to secure additional plant and equipment upon which the utility expects a return.'

FN11 See Mr. Justice Brandeis (dissenting) in *United Railways & Electric Co. v. West*, 280 U.S. 234, 259-288, 50 S.Ct. 123, 128-138, 74 L.Ed. 390, for an extended analysis of the problem.

FN12 It should be noted that the Act provides no specific rule governing depletion and depreciation. Sec. 9(a) merely states that the Commission 'may from time to time ascertain and determine, and by order fix, the proper and adequate rates of depreciation and amortization of the several classes of property of each natural-gas company used or useful in the production, transportation, or sale of natural gas.'

The Position of West Virginia. The State of West Virginia, as well as its Public Service Commission, intervened in the proceedings before the Commission and participated in the hearings before it. They have also filed a brief amicus curiae here and have participated in the argument at the bar. Their contention is that the result achieved by the rate order 'brings consequences

which are unjust to West Virginia and its citizens' and which 'unfairly depress the value of gas, gas lands and gas leaseholds, unduly restrict development of their natural resources, and arbitrarily transfer their properties to the residents of other states without just compensation therefor.'

West Virginia points out that the Hope Natural Gas Co. holds a large number of leases on both producing and unoperated properties. The owner or grantor receives from the operator or grantee delay rentals as compensation for postponed drilling. When a producing well is successfully brought in, the gas lease customarily continues indefinitely for the life of the field. In that case the operator pays a stipulated gas-well rental or in some cases a gas royalty equivalent to one-eighth of the gas marketed.<sup>FN13</sup> Both the owner and operator have valuable property interests in the gas which are separately taxable under West Virginia law. The contention is that the reversionary interests in the leaseholds should be represented in the rate proceedings since it is their gas which is being sold in interstate <sup>\*608</sup> commerce. It is argued, moreover, that the owners of the reversionary interests should have the benefit of the 'discovery value' of the gas leaseholds, not the interstate consumers. Furthermore, West Virginia contends that the Commission in fixing a rate for natural gas produced in that State should consider the effect of the rate order on the economy of West Virginia. It is pointed out that gas is a wasting asset with a rapidly diminishing supply. As a result West Virginia's gas deposits are becoming increasingly valuable. Nevertheless the rate fixed by the Commission reduces that value. And that reduction, it is said, has severe repercussions on the economy of the State. It is argued in the first place that as a result of this rate reduction Hope's West Virginia property taxes may be decreased in view of the relevance which earnings have under West Virginia law in the assessment of property for tax purposes.<sup>FN14</sup> Secondly, it is pointed out that West Virginia has a production tax<sup>FN15</sup> on the 'value' of the gas exported from the State. And we are told that for purposes of that tax 'value' becomes under West Virginia law 'practically the substantial equivalent of market value.' Thus West Virginia argues that undervaluation of Hope's gas leaseholds will cost the State

many thousands of dollars in taxes. The effect, it is urged, is to impair West Virginia's tax structure for the benefit of Ohio and Pennsylvania consumers. West Virginia emphasizes, moreover, its deep interest in the conservation of its natural resources including its natural gas. It says that a reduction of the value of these leasehold values will jeopardize these conservation policies in three respects: (1) <sup>\*\*291</sup> exploratory development of new fields will be discouraged; (2) abandonment of lowyield high-cost marginal wells will be hastened; and (3) secondary recovery of oil will be hampered. <sup>\*609</sup> Furthermore, West Virginia contends that the reduced valuation will harm one of the great industries of the State and that harm to that industry must inevitably affect the welfare of the citizens of the State. It is also pointed out that West Virginia has a large interest in coal and oil as well as in gas and that these forms of fuel are competitive. When the price of gas is materially cheapened, consumers turn to that fuel in preference to the others. As a result this lowering of the price of natural gas will have the effect of depreciating the price of West Virginia coal and oil.

FN13 See Simonton, *The Nature of the Interest of the Grantee Under an Oil and Gas Lease* (1918), 25 W.Va.L.Quar. 295.

FN14 *West Penn Power Co. v. Board of Review*, 112 W.Va. 442, 164 S.E. 862.

FN15 W.Va.Rev.Code of 1943, ch. 11. Art. 13, ss 2a, 3a.

West Virginia insists that in neglecting this aspect of the problem the Commission failed to perform the function which Congress entrusted to it and that the case should be remanded to the Commission for a modification of its order.<sup>FN16</sup>

FN16 West Virginia suggests as a possible solution (1) that a 'going concern value' of the company's tangible assets be included in the rate base and (2) that the fair market value of gas delivered to customers be added to the outlay for operating expenses and taxes.

320 U.S. 591, 51 P.U.R.(NS) 193, 64 S.Ct. 281, 88 L.Ed. 333  
(Cite as: 320 U.S. 591, 64 S.Ct. 281)

We have considered these contentions at length in view of the earnestness with which they have been urged upon us. We have searched the legislative history of the Natural Gas Act for any indication that Congress entrusted to the Commission the various considerations which West Virginia has advanced here. And our conclusion is that Congress did not.

[16][17] We pointed out in *Illinois Natural Gas Co. v. Central Illinois Public Service Co.*, 314 U.S. 498, 506, 62 S.Ct. 384, 387, 86 L.Ed. 371, that the purpose of the Natural Gas Act was to provide, 'through the exercise of the national power over interstate commerce, an agency for regulating the wholesale distribution to public service companies of natural gas moving interstate, which this Court had declared to be interstate commerce not subject to certain types of state regulation.' As stated in the House Report the 'basic purpose' of this legislation was 'to occupy' the field in which such cases as \*610*State of Missouri v. Kansas Natural Gas Co.*, 265 U.S. 298, 44 S.Ct. 544, 68 L.Ed. 1027, and *Public Utilities Commission v. Attleboro Steam & Electric Co.*, 273 U.S. 83, 47 S.Ct. 294, 71 L.Ed. 549, had held the States might not act. H.Rep. No. 709, 75th Cong., 1st Sess., p. 2. In accomplishing that purpose the bill was designed to take 'no authority from State commissions' and was 'so drawn as to complement and in no manner usurp State regulatory authority.' *Id.*, p. 2. And the Federal Power Commission was given no authority over the 'production or gathering of natural gas.' s 1(b).

[18] The primary aim of this legislation was to protect consumers against exploitation at the hands of natural gas companies. Due to the hiatus in regulation which resulted from the *Kansas Natural Gas Co.* case and related decisions state commissions found it difficult or impossible to discover what it cost interstate pipe-line companies to deliver gas within the consuming states; and thus they were thwarted in local regulation. H.Rep., No. 709, *supra*, p. 3. Moreover, the investigations of the Federal Trade Commission had disclosed that the majority of the pipe-line mileage in the country used to transport natural gas, together with an increasing percentage of the natural gas supply for pipe-line

transportation, had been acquired by a handful of holding companies.<sup>FN17</sup> State commissions, independent producers, and communities having or seeking the service were growing quite helpless against these combinations.<sup>FN18</sup> These were the types of problems with which those participating in the hearings were pre-occupied.<sup>FN19</sup> Congress addressed itself to those specific evils.

FN17 S.Doc. 92, Pt. 84-A, ch. XII, Final Report, Federal Trade Commission to the Senate pursuant to S.Res.No. 83, 70th Cong., 1st Sess.

FN18 S.Doc. 92, Pt. 84-A, chs. XII, XIII, *op. cit.*, *supra*, note 17.

FN19 See Hearings on H.R. 11662, Subcommittee of House Committee on Interstate & Foreign Commerce, 74th Cong., 2d Sess.; Hearings on H.R. 4008, House Committee on Interstate & Foreign Commerce, 75th Cong., 1st Sess.

\*611 The Federal Power Commission was given \*\*292 broad powers of regulation. The fixing of 'just and reasonable' rates (s 4) with the powers attendant thereto<sup>FN20</sup> was the heart of the new regulatory system. Moreover, the Commission was given certain authority by s 7(a), on a finding that the action was necessary or desirable 'in the public interest,' to require natural gas companies to extend or improve their transportation facilities and to sell gas to any authorized local distributor. By s 7(b) it was given control over the abandonment of facilities or of service. And by s 7(c), as originally enacted, no natural gas company could undertake the construction or extension of any facilities for the transportation of natural gas to a market in which natural gas was already being served by another company, or sell any natural gas in such a market, without obtaining a certificate of public convenience and necessity from the Commission. In passing on such applications for certificates of convenience and necessity the Commission was told by s 7(c), as originally enacted, that it was 'the intention of Congress that natural gas shall be sold in interstate commerce for resale for ultimate public consumption for domestic, commercial, in-



dustrial, or any other use at the lowest possible reasonable rate consistent with the maintenance of adequate service in the public interest.' The latter provision was deleted from s 7(c) when that subsection was amended by the Act of February 7, 1942, 56 Stat. 83. By that amendment limited grandfather rights were granted companies desiring to extend their facilities and services over the routes or within the area which they were already serving. Moreover, s 7(c) was broadened so as to require certificates\*612 of public convenience and necessity not only where the extensions were being made to markets in which natural gas was already being sold by another company but in other situations as well.

FN20 The power to investigate and ascertain the 'actual legitimate cost' of property (s 6), the requirement as to books and records (s 8), control over rates of depreciation (s 9), the requirements for periodic and special reports (s 10), the broad powers of investigation (s 14) are among the chief powers supporting the rate making function.

[19] These provisions were plainly designed to protect the consumer interests against exploitation at the hands of private natural gas companies. When it comes to cases of abandonment or of extensions of facilities or service, we may assume that, apart from the express exemptions<sup>FN21</sup> contained in s 7, considerations of conservation are material to the issuance of certificates of public convenience and necessity. But the Commission was not asked here for a certificate of public convenience and necessity under s 7 for any proposed construction or extension. It was faced with a determination of the amount which a private operator should be allowed to earn from the sale of natural gas across state lines through an established distribution system. Secs. 4 and 5, not s 7, provide the standards for that determination. We cannot find in the words of the Act or in its history the slightest intimation or suggestion that the exploitation of consumers by private operators through the maintenance of high rates should be allowed to continue provided the producing states obtain indirect benefits from it. That apparently was the Commission's view of the matter, for the same arguments advanced here were

presented to the Commission and not adopted by it.

FN21 Apart from the grandfather clause contained in s 7(c), there is the provision of s 7(f) that a natural gas company may enlarge or extend its facilities with the 'service area' determined by the Commission without any further authorization.

We do not mean to suggest that Congress was unmindful of the interests of the producing states in their natural gas supplies when it drafted the Natural Gas Act. As we have said, the Act does not intrude on the domain traditionally reserved for control by state commissions; and the Federal Power Commission was given no authority over\*613 'the production or gathering of natural gas.' s 1(b). In addition, Congress recognized the legitimate interests of the States in the conservation of natural gas. By s 11 Congress instructed the Commission to make reports on compacts between two or more States dealing with the conservation, production and transportation of natural gas.<sup>FN22</sup> The Commission was also \*\*293 directed to recommend further legislation appropriate or necessary to carry out any proposed compact and 'to aid in the conservation of natural-gas resources within the United States and in the orderly, equitable, and economic production, transportation, and distribution of natural gas.' s 11(a). Thus Congress was quite aware of the interests<sup>FN23</sup> of the producing states in their natural gas supplies. But it left the protection of \*614 those interests to measures other than the maintenance of high rates to private companies. If the Commission is to be compelled to let the stockholders of natural gas companies have a feast so that the producing states may receive crumbs from that table, the present Act must be redesigned. Such a project raises questions of policy which go beyond our province.

FN22 See P.L. 117, approved July 7, 1943, 57 Stat. 383 containing an 'Interstate Compact to Conserve Oil and Gas' between Oklahoma, Texas, New Mexico, Illinois, Colorado, and Kansas.

FN23 As we have pointed out, s 7(c) was amended by the Act of February 7, 1942, 56

Stat. 83, so as to require certificates of public convenience and necessity not only where the extensions were being made to markets in which natural gas was already being sold by another company but to other situations as well. Considerations of conservation entered into the proposal to give the Act that broader scope. H.Rep.No. 1290, 77th Cong. 1st Sess., pp. 2, 3. And see Annual Report, Federal Power Commission (1940) pp. 79, 80; Baum, *The Federal Power Commission and State Utility Regulation* (1942), p. 261.

The bill amending s 7(c) originally contained a subsection (h) reading as follows: 'Nothing contained in this section shall be construed to affect the authority of a State within which natural gas is produced to authorize or require the construction or extension of facilities for the transportation and sale of such gas within such State: Provided, however, That the Commission, after a hearing upon complaint or upon its own motion, may by order forbid any intrastate construction or extension by any natural-gas company which it shall find will prevent such company from rendering adequate service to its customers in interstate or foreign commerce in territory already being served.' See Hearings on H.R. 5249, House Committee on Interstate & Foreign Commerce, 77th Cong., 1st Sess., pp. 7, 11, 21, 29, 32, 33. In explanation of its deletion the House Committee Report stated, pp. 4, 5: 'The increasingly important problems raised by the desire of several States to regulate the use of the natural gas produced therein in the interest of consumers within such States, as against the Federal power to regulate interstate commerce in the interest of both interstate and intrastate consumers, are deemed by the committee to warrant further intensive study and probably a more retailed and comprehensive plan for the handling thereof than that which would have been provided by the stricken subsection.'

[20] It is hardly necessary to add that a limitation on the net earnings of a natural gas company from its interstate business is not a limitation on the power of the producing state either to safeguard its tax revenues from that industry<sup>FN24</sup> or to protect the interests of those who sell their gas to the interstate operator.<sup>FN25</sup> The return which \*\*294 the Commission\*615 allowed was the net return after all such charges.

FN24 We have noted that in the annual operating expenses of some \$16,000,000 the Commission included West Virginia and federal taxes. And in the net increase of \$421,160 over 1940 operating expenses allowed by the Commission was some \$80,000 for increased West Virginia property taxes. The adequacy of these amounts has not been challenged here.

FN25 The Commission included in the aggregate annual operating expenses which it allowed some \$8,500,000 for gas purchased. It also allowed about \$1,400,000 for natural gas production and about \$600,000 for exploration and development.

It is suggested, however, that the Commission in ascertaining the cost of Hope's natural gas production plant proceeded contrary to s 1(b) which provides that the Act shall not apply to 'the production or gathering of natural gas'. But such valuation, like the provisions for operating expenses, is essential to the rate-making function as customarily performed in this country. Cf. Smith, *The Control of Power Rates in the United States and England* (1932), 159 *The Annals* 101. Indeed s 14(b) of the Act gives the Commission the power to 'determine the propriety and reasonableness of the inclusion in operating expenses, capital, or surplus of all delay rentals or other forms of rental or compensation for unoperated lands and leases.'

It is suggested that the Commission has failed to perform its duty under the Act in that it has not allowed a return for gas production that will be enough to induce private enterprise to perform completely and efficiently

its functions for the public. The Commission, however, was not oblivious of those matters. It considered them. It allowed, for example, delay rentals and exploration and development costs in operating expenses.<sup>FN26</sup> No serious attempt has been made here to show that they are inadequate. We certainly cannot say that they are, unless we are to substitute our opinions for the expert judgment of the administrators to whom Congress entrusted the decision. Moreover, if in light of experience they turn out to be inadequate for development of new sources of supply, the doors of the Commission are open for increased allowances. This is not an order for all time. The Act contains machinery for obtaining rate adjustments. s 4.

FN26 See note 25, supra.

[21][22] But it is said that the Commission placed too low a rate on gas for industrial purposes as compared with gas for domestic purposes and that industrial uses should be discouraged. It should be noted in the first place that the rates which the Commission has fixed are Hope's interstate wholesale rates to distributors not interstate rates to industrial users<sup>FN27</sup> and domestic consumers. We hardly \*616 can assume, in view of the history of the Act and its provisions, that the resales intrastate by the customer companies which distribute the gas to ultimate consumers in Ohio and Pennsylvania are subject to the rate-making powers of the Commission.<sup>FN28</sup> But in any event those rates are not in issue here. Moreover, we fail to find in the power to fix 'just and reasonable' rates the power to fix rates which will disallow or discourage resales for industrial use. The Committee Report stated that the Act provided 'for regulation along recognized and more or less standardized lines' and that there was 'nothing novel in its provisions'. H.Rep.No.709, supra, p. 3. Yet if we are now to tell the Commission to fix the rates so as to discourage particular uses, we would indeed be injecting into a rate case a 'novel' doctrine which has no express statutory sanction. The same would be true if we were to hold that the wasting-asset nature of the industry required the maintenance of the level of rates so that natural gas companies could make a greater profit on each unit of gas sold. Such theories of rate-making for this

industry may or may not be desirable. The difficulty is that s 4(a) and s 5(a) contain only the conventional standards of rate-making for natural gas companies.<sup>FN29</sup> The \*617 Act of February 7, 1942, by broadening s 7 gave the Commission some additional authority to deal with the conservation aspects of the problem.<sup>FN30</sup> But s 4(a) and s 5(a) were not changed. If the standard \*\*295 of 'just and reasonable' is to sanction the maintenance of high rates by a natural gas company because they restrict the use of natural gas for certain purposes, the Act must be further amended.

FN27 The Commission has expressed doubts over its power to fix rates on 'direct sales to industries' from interstate pipelines as distinguished from 'sales for resale to the industrial customers of distributing companies.' Annual Report, Federal Power Commission (1940), p. 11.

FN28. Sec. 1(b) of the Act provides: 'The provisions of this Act shall apply to the transportation of natural gas in interstate commerce, to the sale in interstate commerce of natural gas for resale for ultimate public consumption for domestic, commercial, industrial, or any other use, and to natural-gas companies engaged in such transportation or sale, but shall not apply to any other transportation or sale of natural gas or to the local distribution of natural gas or to the facilities used for such distribution or to the production or gathering of natural gas.' And see s 2(6), defining a 'natural-gas company', and H.Rep.No. 709, supra, pp. 2, 3.

FN29 The wasting-asset characteristic of the industry was recognized prior to the Act as requiring the inclusion of a depletion allowance among operating expenses. See *Columbus Gas & Fuel Co. v. Public Utilities Commission*, 292 U.S. 398, 404, 405, 54 S.Ct. 763, 766, 767, 78 L.Ed. 1327, 91 A.L.R. 1403. But no such theory of rate-making for natural gas companies as is now suggested emerged from the cases arising during the earlier period of regulation.

FN30 The Commission has been alert to the problems of conservation in its administration of the Act. It has indeed suggested that it might be wise to restrict the use of natural gas 'by functions rather than by areas.' Annual Report (1940) p. 79.

The Commission stated in that connection that natural gas was particularly adapted to certain industrial uses. But it added that the general use of such gas 'under boilers for the production of steam' is 'under most circumstances of very questionable social economy.' Ibid.

[23][24] It is finally suggested that the rates charged by Hope are discriminatory as against domestic users and in favor of industrial users. That charge is apparently based on s 4(b) of the Act which forbids natural gas companies from maintaining 'any unreasonable difference in rates, charges, service, facilities, or in any other respect, either as between localities or as between classes of service.' The power of the Commission to eliminate any such unreasonable differences or discriminations is plain. s 5(a). The Commission, however, made no findings under s 4(b). Its failure in that regard was not challenged in the petition to review. And it has not been raised or argued here by any party. Hence the problem of discrimination has no proper place in the present decision. It will be time enough to pass on that issue when it is presented to us. Congress has entrusted the administration of the Act to the Commission not to the courts. Apart from the requirements of judicial review it is not \*618 for us to advise the Commission how to discharge its functions.

Findings as to the Lawfulness of Past Rates. As we have noted, the Commission made certain findings as to the lawfulness of past rates which Hope had charged its interstate customers. Those findings were made on the complaint of the City of Cleveland and in aid of state regulation. It is conceded that under the Act the Commission has no power to make reparation orders. And its power to fix rates admittedly is limited to those 'to be thereafter observed and in force.' s 5(a). But the Commission maintains that it has the power to make findings as to the lawfulness of past rates even though it has no

power to fix those rates.<sup>FN31</sup> However that may be, we do not think that these findings were reviewable under s 19(b) of the Act. That section gives any party 'aggrieved by an order' of the Commission a review 'of such order' in the circuit court of appeals for the circuit where the natural gas company is located or has its principal place of business or in the United States Court of Appeals for the District of Columbia. We do not think that the findings in question fall within that category.

FN31 The argument is that s 4(a) makes 'unlawful' the charging of any rate that is not just and reasonable. And s 14(a) gives the Commission power to investigate any matter 'which it may find necessary or proper in order to determine whether any person has violated' any provision of the Act. Moreover, s 5(b) gives the Commission power to investigate and determine the cost of production or transportation of natural gas in cases where it has 'no authority to establish a rate governing the transportation or sale of such natural gas.' And s 17(c) directs the Commission to 'make available to the several State commissions such information and reports as may be of assistance in State regulation of natural-gas companies.' For a discussion of these points by the Commission see 44 P.U.R.,N.S., at pages 34, 35.

[25][26] The Court recently summarized the various types of administrative action or determination reviewable as orders under the Urgent Deficiencies Act of October 22, \*619 1913, 28 U.S.C. ss 45, 47a, 28 U.S.C.A. ss 45, 47a, and kindred statutory provisions. *Rochester Tel. Corp. v. United States*, 307 U.S. 125, 59 S.Ct. 754, 83 L.Ed. 1147. It was there pointed out that where 'the order sought to be reviewed does not of itself adversely affect complainant but only affects his rights adversely on the contingency of future administrative action', it is not reviewable. *Id.*, 307 U.S. at page 130, 59 S.Ct. at page 757, 83 L.Ed. 1147. The Court said, 'In view of traditional conceptions of federal judicial power, resort to the courts in these situations is either premature or wholly beyond their province.' \*\*296*Id.*, 307 U.S. at page 130, 59 S.Ct. at page 757, 83

L.Ed. 1147. And see *United States v. Los Angeles s.l.r. c/o.*, 273 U.S. 299, 309, 310, 47 S.Ct. 413, 414, 415, 71 L.Ed. 651; *Shannahan v. United States*, 303 U.S. 596, 58 S.Ct. 732, 82 L.Ed. 1039. These considerations are apposite here. The Commission has no authority to enforce these findings. They are 'the exercise solely of the function of investigation.' *United States v. Los Angeles & S.L.R. Co.*, supra, 273 U.S. at page 310, 47 S.Ct. at page 414, 71 L.Ed. 651. They are only a preliminary, interim step towards possible future action-action not by the Commission but by wholly independent agencies. The outcome of those proceedings may turn on factors other than these findings. These findings may never result in the respondent feeling the pinch of administrative action.

Reversed.

Mr. Justice ROBERTS took no part in the consideration or decision of this case.

Opinion of Mr. Justice BLACK and Mr. Justice MURPHY.

We agree with the Court's opinion and would add nothing to what has been said but for what is patently a wholly gratuitous assertion as to Constitutional law in the dissent of Mr. Justice FRANKFURTER. We refer to the statement that 'Congressional acquiescence to date in the doctrine of *Chicago, etc., R. Co. v. Minnesota*, supra (134 U.S. 418, 10 S.Ct. 462, 702, 33 L.Ed. 970), may fairly be claimed.' That was the case in which a majority of this Court was finally induced to expand the meaning \*620 of 'due process' so as to give courts power to block efforts of the state and national governments to regulate economic affairs. The present case does not afford a proper occasion to discuss the soundness of that doctrine because, as stated in Mr. Justice FRANKFURTER'S dissent, 'That issue is not here in controversy.' The salutary practice whereby courts do not discuss issues in the abstract applies with peculiar force to Constitutional questions. Since, however, the dissent adverts to a highly controversial due process doctrine and implies its acceptance by Congress, we feel compelled to say that we do not understand that Congress voluntarily has acquiesced in a Constitutional principle of government that courts, rather than legislat-

ive bodies, possess final authority over regulation of economic affairs. Even this Court has not always fully embraced that principle, and we wish to repeat that we have never acquiesced in it, and do not now. See *Federal Power Commission v. Natural Gas Pipeline Co.*, 315 U.S. 575, 599-601, 62 S.Ct. 736, 749, 750, 86 L.Ed. 1037.

Mr. Justice REED, dissenting.

This case involves the problem of rate making under the Natural Gas Act. Added importance arises from the obvious fact that the principles stated are generally applicable to all federal agencies which are entrusted with the determination of rates for utilities. Because my views differ somewhat from those of my brethren, it may be of some value to set them out in a summary form.

The Congress may fix utility rates in situations subject to federal control without regard to any standard except the constitutional standards of due process and for taking private property for public use without just compensation. *Wilson v. New*, 243 U.S. 332, 350, 37 S.Ct. 298, 302, 61 L.Ed. 755, L.R.A.1917E, 938, Ann.Cas.1918A, 1024. A Commission, however, does not have this freedom of action. Its powers are limited not only by the constitutional standards but also by the standards of the delegation. Here the standard added by the Natural Gas Act is that the rate be 'just \*621 and reasonable.'<sup>FN1</sup> Section 6<sup>FN2</sup> \*\*297 throws additional light on the meaning of these words.

FN1 Natural Gas Act, s 4(a), 52 Stat. 821, 822, 15 U.S.C. s 717c(a), 15 U.S.C.A. s 717c(a).

FN2 52 Stat. 821, 824, 15 U.S.C. s 717e, 15 U.S.C.A. s 717e:

'(a) The Commission may investigate and ascertain the actual legitimate cost of the property of every natural-gas company, the depreciation therein, and, when found necessary for rate-making purposes, other facts which bear on the determination of such cost or depreciation and the fair value of such property.

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‘(b) Every natural-gas company upon request shall file with the Commission an inventory of all or any part of its property and a statement of the original cost thereof, and shall keep the Commission informed regarding the cost of all additions, betterments, extensions, and new construction.’

When the phrase was used by Congress to describe allowable rates, it had relation to something ascertainable. The rates were not left to the whim of the Commission. The rates fixed would produce an annual return and that annual return was to be compared with a theoretical just and reasonable return, all risks considered, on the fair value of the property used and useful in the public service at the time of the determination.

Such an abstract test is not precise. The agency charged with its determination has a wide range before it could properly be said by a court that the agency had disregarded statutory standards or had confiscated the property of the utility for public use. Cf. *Chicago, M. & St. P.R. Co. v. Minnesota*, 134 U.S. 418, 461-466, 10 S.Ct. 462, 702, 703-705, 33 L.Ed. 970, dissent. This is as Congress intends. Rates are left to an experienced agency particularly competent by training to appraise the amount required.

The decision as to a reasonable return had not been a source of great difficulty, for borrowers and lenders reached such agreements daily in a multitude of situations; and although the determination of fair value had been troublesome, its essentials had been worked out in fairness to investor and consumer by the time of the enactment\*622 of this Act. Cf. *Los Angeles G. & E. Corp. v. Railroad Comm.*, 289 U.S. 287, 304 et seq., 53 S.Ct. 637, 643 et seq., 77 L.Ed. 1180. The results were well known to Congress and had that body desired to depart from the traditional concepts of fair value and earnings, it would have stated its intention plainly. *Helvering v. Griffiths*, 318 U.S. 371, 63 S.Ct. 636.

It was already clear that when rates are in dispute, ‘earnings produced by rates do not afford a standard for decision.’ 289 U.S. at page 305, 53 S.Ct. at page 644, 77 L.Ed. 1180. Historical cost, prudent investment and

reproduction cost<sup>FN3</sup> were all relevant factors in determining fair value. Indeed, disregarding the pioneer investor's risk, if prudent investment and reproduction cost were not distorted by changes in price levels or technology, each of them would produce the same result. The realization from the risk of an investment in a speculative field, such as natural gas utilities, should be reflected in the present fair value.<sup>FN4</sup> The amount of evidence to be admitted on any point was of course in the agency's reasonable discretion, and it was free to give its own weight to these or other factors and to determine from all the evidence its own judgment as to the necessary rates.

FN3 ‘Reproduction cost’ has been variously defined, but for rate making purposes the most useful sense seems to be, the minimum amount necessary to create at the time of the inquiry a modern plant capable of rendering equivalent service. See *I Bonbright, Valuation of Property* (1937) 152. Reproduction cost as the cost of building a replica of an obsolescent plant is not of real significance.

‘Prudent investment’ is not defined by the Court. It may mean the sum originally put in the enterprise, either with or without additional amounts from excess earnings reinvested in the business.

FN4 It is of no more than bookkeeping significance whether the Commission allows a rate of return commensurate with the risk of the original investment or the lower rate based on current risk and a capitalization reflecting the established earning power of a successful company and the probable cost of duplicating its services. Cf. *American T. & T. Co. v. United States*, 299 U.S. 232, 57 S.Ct. 170, 81 L.Ed. 142. But the latter is the traditional method.

\*623 I agree with the Court in not imposing a rule of prudent investment alone in determining the rate base. This leaves the Commission free, as I understand it, to use any available evidence for its finding of fair value, including both prudent investment and the cost of

installing at the present time an efficient system for furnishing the needed utility service.

My disagreement with the Court arises primarily from its view that it makes no \*\*298 difference how the Commission reached the rate fixed so long as the result is fair and reasonable. For me the statutory command to the Commission is more explicit. Entirely aside from the constitutional problem of whether the Congress could validly delegate its rate making power to the Commission, in toto and without standards, it did legislate in the light of the relation of fair and reasonable to fair value and reasonable return. The Commission must therefore make its findings in observance of that relationship.

The Federal Power Commission did not, as I construe their action, disregard its statutory duty. They heard the evidence relating to historical and reproduction cost and to the reasonable rate of return and they appraised its weight. The evidence of reproduction cost was rejected as unpersuasive, but from the other evidence they found a rate base, which is to me a determination of fair value. On that base the earnings allowed seem fair and reasonable. So far as the Commission went in appraising the property employed in the service, I find nothing in the result which indicates confiscation, unfairness or unreasonableness. Good administration of rate making agencies under this method would avoid undue delay and render revaluations unnecessary except after violent fluctuations of price levels. Rate making under this method has been subjected to criticism. But until Congress changes the standards for the agencies, these rate making bodies should continue the conventional theory of rate \*624 making. It will probably be simpler to improve present methods than to devise new ones.

But a major error, I think was committed in the disregard by the Commission of the investment in exploratory operations and other recognized capital costs. These were not considered by the Commission because they were charged to operating expenses by the company at a time when it was unregulated. Congress did not direct the Commission in rate making to deduct from the rate base capital investment which had been

recovered during the unregulated period through excess earnings. In my view this part of the investment should no more have been disregarded in the rate base than any other capital investment which previously had been recovered and paid out in dividends or placed to surplus. Even if prudent investment throughout the life of the property is accepted as the formula for figuring the rate base, it seems to me illogical to throw out the admittedly prudent cost of part of the property because the earnings in the unregulated period had been sufficient to return the prudent cost to the investors over and above a reasonable return. What would the answer be under the theory of the Commission and the Court, if the only prudent investment in this utility had been the seventeen million capital charges which are now disallowed?

For the reasons heretofore stated, I should affirm the action of the Circuit Court of Appeals in returning the proceeding to the Commission for further consideration and should direct the Commission to accept the disallowed capital investment in determining the fair value for rate making purposes.

Mr. Justice FRANKFURTER, dissenting.

My brother JACKSON has analyzed with particularity the economic and social aspects of natural gas as well as \*625 the difficulties which led to the enactment of the Natural Gas Act, especially those arising out of the abortive attempts of States to regulate natural gas utilities. The Natural Gas Act of 1938 should receive application in the light of this analysis, and Mr. Justice JACKSON has, I believe, drawn relevant inferences regarding the duty of the Federal Power Commission in fixing natural gas rates. His exposition seems to me unanswered, and I shall say only a few words to emphasize my basic agreement with him.

For our society the needs that are met by public utilities are as truly public services as the traditional governmental functions of police and justice. They are not less so when these services are rendered by private enterprise under governmental regulation. Who ultimately determines the ways of regulation, is the decisive aspect in the public supervision of privately-owned utilities. Foreshadowed nearly sixty years ago, Railroad Commission Cases (Stone v. Farmers' Loan & Trust

Co.), 116 U.S. 307, 331, 6 S.Ct. 334, 344, 388, 1191, 29 L.Ed. 636, it was decided more than fifty \*\*299 years ago that the final say under the Constitution lies with the judiciary and not the legislature. *Chicago, etc., R. Co. v. Minnesota*, 134 U.S. 418, 10 S.Ct. 462, 702, 33 L.Ed. 970.

While legal issues touching the proper distribution of governmental powers under the Constitution may always be raised, Congressional acquiescence to date in the doctrine of *Chicago, etc., R. Co. v. Minnesota*, supra, may fairly be claimed. But in any event that issue is not here in controversy. As pointed out in the opinions of my brethren, Congress has given only limited authority to the Federal Power Commission and made the exercise of that authority subject to judicial review. The Commission is authorized to fix rates chargeable for natural gas. But the rates that it can fix must be 'just and reasonable'. s 5 of the Natural Gas Act, 15 U.S.C. s 717d, 15 U.S.C.A. s 717d. Instead of making the Commission's rate determinations final, Congress\*626 specifically provided for court review of such orders. To be sure, 'the finding of the Commission as to the facts, if supported by substantial evidence' was made 'conclusive', s 19 of the Act, 15 U.S.C. s 717r; 15 U.S.C.A. s 717r. But obedience of the requirement of Congress that rates be 'just and reasonable' is not an issue of fact of which the Commission's own determination is conclusive. Otherwise, there would be nothing for a court to review except questions of compliance with the procedural provisions of the Natural Gas Act. Congress might have seen fit so to cast its legislation. But it has not done so. It has committed to the administration of the Federal Power Commission the duty of applying standards of fair dealing and of reasonableness relevant to the purposes expressed by the Natural Gas Act. The requirement that rates must be 'just and reasonable' means just and reasonable in relation to appropriate standards. Otherwise Congress would have directed the Commission to fix such rates as in the judgment of the Commission are just and reasonable; it would not have also provided that such determinations by the Commission are subject to court review.

To what sources then are the Commission and the

courts to go for ascertaining the standards relevant to the regulation of natural gas rates? It is at this point that Mr. Justice JACKSON'S analysis seems to me pertinent. There appear to be two alternatives. Either the fixing of natural gas rates must be left to the unguided discretion of the Commission so long as the rates it fixes do not reveal a glaringly had prophecy of the ability of a regulated utility to continue its service in the future. Or the Commission's rate orders must be founded on due consideration of all the elements of the public interest which the production and distribution of natural gas involve just because it is natural gas. These elements are reflected in the Natural Gas Act, if that Act be applied as an entirety. See, for \*627 instance, ss 4(a)(b)(c)(d), 6, and 11, 15 U.S.C. ss 717c(a)(b)(c)(d), 717e, and 717j, 15 U.S.C.A. ss 717c(a-d), 717e, 717j. Of course the statute is not concerned with abstract theories of ratemaking. But its very foundation is the 'public interest', and the public interest is a texture of multiple strands. It includes more than contemporary investors and contemporary consumers. The needs to be served are not restricted to immediacy, and social as well as economic costs must be counted.

It will not do to say that it must all be left to the skill of experts. Expertise is a rational process and a rational process implies expressed reasons for judgment. It will little advance the public interest to substitute for the hodge-podge of the rule in *Smyth v. Ames*, 169 U.S. 466, 18 S.Ct. 418, 42 L.Ed. 819, an encouragement of conscious obscurity or confusion in reaching a result, on the assumption that so long as the result appears harmless its basis is irrelevant. That may be an appropriate attitude when state action is challenged as unconstitutional. Cf. *Driscoll v. Edison Light & Power Co.*, 307 U.S. 104, 59 S.Ct. 715, 83 L.Ed. 1134. But it is not to be assumed that it was the design of Congress to make the accommodation of the conflicting interests exposed in Mr. Justice JACKSON'S opinion the occasion for a blind clash of forces or a partial assessment of relevant factors, either before the Commission or here.

The objection to the Commission's action is not that the rates it granted were too low but that the range of its vision was too narrow. And since the issues before the



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Commission involved no less than the **\*\*300** total public interest, the proceedings before it should not be judged by narrow conceptions of common law pleading. And so I conclude that the case should be returned to the Commission. In order to enable this Court to discharge its duty of reviewing the Commission's order, the Commission should set forth with explicitness the criteria by which it is guided **\*628** in determining that rates are 'just and reasonable', and it should determine the public interest that is in its keeping in the perspective of the considerations set forth by Mr. Justice JACKSON.

By Mr. Justice JACKSON.

Certainly the theory of the court below that ties rate-making to the fair-value-reproduction-cost formula should be overruled as in conflict with Federal Power Commission v. Natural Gas Pipeline Co.<sup>FN1</sup> But the case should, I think, be the occasion for reconsideration of our rate-making doctrine as applied to natural gas and should be returned to the Commission for further consideration in the light thereof.

FN1 315 U.S. 575, 62 S.Ct. 736, 86 L.Ed. 1037

The Commission appears to have understood the effect of the two opinions in the Pipeline case to be at least authority and perhaps direction to fix natural gas rates by exclusive application of the 'prudent investment' rate base theory. This has no warrant in the opinion of the Chief Justice for the Court, however, which released the Commission from subservience to 'any single formula or combination of formulas' provided its order, 'viewed in its entirety, produces no arbitrary result.' 315 U.S. at page 586, 62 S.Ct. at page 743, 86 L.Ed. 1037. The minority opinion I understood to advocate the 'prudent investment' theory as a sufficient guide in a natural gas case. The view was expressed in the court below that since this opinion was not expressly controverted it must have been approved.<sup>FN2</sup> I disclaim this imputed **\*629** approval with some particularity, because I attach importance at the very beginning of federal regulation of the natural gas industry to approaching it as the performance of economic functions,

not as the performance of legalistic rituals.

FN2 Judge Dobie, dissenting below, pointed out that the majority opinion in the Pipeline case 'contains no express discussion of the Prudent Investment Theory' and that the concurring opinion contained a clear one, and said, 'It is difficult for me to believe that the majority of the Supreme Court, believing otherwise, would leave such a statement unchallenged.' (134 F.2d 287, 312.) The fact that two other Justices had as matter of record in our books long opposed the reproduction cost theory of rate bases and had commented favorably on the prudent investment theory may have influenced that conclusion. See opinion of Mr. Justice Frankfurter in Driscoll v. Edison Light & Power Co., 307 U.S. 104, 122, 59 S.Ct. 715, 724, 83 L.Ed. 1134, and my brief as Solicitor General in that case. It should be noted, however, that these statements were made, not in a natural gas case, but in an electric power case—a very important distinction, as I shall try to make plain.

#### I.

Solutions of these cases must consider eccentricities of the industry which gives rise to them and also to the Act of Congress by which they are governed.

The heart of this problem is the elusive, exhaustible, and irreplaceable nature of natural gas itself. Given sufficient money, we can produce any desired amount of railroad, bus, or steamship transportation, or communications facilities, or capacity for generation of electric energy, or for the manufacture of gas of a kind. In the service of such utilities one customer has little concern with the amount taken by another, one's waste will not deprive another, a volume of service and be created equal to demand, and today's demands will not exhaust or lessen capacity to serve tomorrow. But the wealth of Midas and the wit of man cannot produce or reproduce a natural gas field. We cannot even reproduce the gas, for our manufactured product has only about half the heating value per unit of nature's own.<sup>FN3</sup>

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FN3 Natural gas from the Appalachian field averages about 1050 to 1150 B.T.U. content, while by-product manufactured gas is about 530 to 540. Moody's Manual of Public Utilities (1943) 1350; Youngberg, Natural Gas (1930) 7.

**\*\*301** Natural gas in some quantity is produced in twenty-four states. It is consumed in only thirty-five states, and is **\*630** available only to about 7,600,000 consumers.<sup>FN4</sup> Its availability has been more localized than that of any other utility service because it has depended more on the caprice of nature.

FN4 Sen.Rep. No. 1162, 75th Cong., 1st Sess., 2.

The supply of the Hope Company is drawn from that old and rich and vanishing field that flanks the Appalachian mountains. Its center of production is Pennsylvania and West Virginia, with a fringe of lesser production in New York, Ohio, Kentucky, Tennessee, and the north end of Alabama. Oil was discovered in commercial quantities at a depth of only 69 1/2 feet near Titusville, Pennsylvania, in 1859. Its value then was about \$16 per barrel.<sup>FN5</sup> The oil branch of the petroleum industry went forward at once, and with unprecedented speed. The area productive of oil and gas was roughed out by the drilling of over 19,000 'wildcat' wells, estimated to have cost over \$222,000,000. Of these, over 18,000 or 94.9 per cent, were 'dry holes.' About five per cent, or 990 wells, made discoveries of commercial importance,<sup>767</sup> of them resulting chiefly in oil and 223 in gas only.<sup>FN6</sup> Prospecting for many years was a search for oil, and to strike gas was a misfortune. Waste during this period and even later is appalling. Gas was regarded as having no commercial value until about 1882, in which year the total yield was valued only at about \$75,000.<sup>FN7</sup> Since then, contrary to oil, which has become cheaper gas in this field has pretty steadily advanced in price.

FN5 Arnold and Kemnitzer, Petroleum in the United States and Possessions (1931) 78.

FN6. Id. at 62-63.

FN7. Id. at 61.

While for many years natural gas had been distributed on a small scale for lighting,<sup>FN8</sup> its acceptance was slow, **\*631** facilities for its utilization were primitive, and not until 1885 did it take on the appearance of a substantial industry.<sup>FN9</sup> Soon monopoly of production or markets developed.<sup>FN10</sup> To get gas from the mountain country, where it was largely found, to centers of population, where it was in demand, required very large investment. By ownership of such facilities a few corporate systems, each including several companies, controlled access to markets. Their purchases became the dominating factor in giving a market value to gas produced by many small operators. Hope is the market for over 300 such operators. By 1928 natural gas in the Appalachian field commanded an average price of 21.1 cents per m.c.f. at points of production and was bringing 45.7 cents at points of consumption.<sup>FN11</sup> The companies which controlled markets, however, did not rely on gas purchases alone. They acquired and held in fee or leasehold great acreage in territory proved by 'wildcat' drilling. These large marketing system companies as well as many small independent owners and operators have carried on the commercial development of proved territory. The development risks appear from the estimate that up to 1928, 312,318 proved area wells had been sunk in the Appalachian field of which 48,962, or 15.7 per cent,<sup>FN12</sup> failed to produce oil or gas in commercial quantity.

FN8 At Fredonia, New York, in 1821, natural gas was conveyed from a shallow well to some thirty people. The lighthouse at Barcelona Harbor, near what is now Westfield, New York, was at about that time and for many years afterward lighted by gas that issued from a crevice. Report on Utility Corporations by Federal Trade Commission, Sen.Doc. 92, Pt. 84-A, 70th Cong., 1st Sess., 8-9.

FN9 In that year Pennsylvania enacted 'An Act to provide for the incorporation and regulation of natural gas companies.' Penn.Laws 1885, No. 32, 15 P.S. s 1981 et seq.

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FN10 See Steptoe and Hoffheimer's Memorandum for Governor Cornwell of West Virginia (1917) 25 West Virginia Law Quarterly 257; see also Report on Utility Corporations by Federal Trade Commission, Sen.Doc. No. 92, Pt. 84-A, 70th Cong., 1st Sess.

FN11 Arnold and Kemnitzer, Petroleum in the United States and Possessions (1931) 73.

FN12. Id. at 63.

\*632 With the source of supply thus tapped to serve centers of large demand, like Pittsburgh, Buffalo, Cleveland, Youngstown, Akron, and other industrial communities, the distribution of natural gas fast became big business. Its advantages as a \*\*302 fuel and its price commended it, and the business yielded a handsome return. All was merry and the goose hung high for consumers and gas companies alike until about the time of the first. World War. Almost unnoticed by the consuming public, the whole Appalachian field passed its peak of production and started to decline. Pennsylvania, which to 1928 had given off about 38 per cent of the natural gas from this field, had its peak in 1905; Ohio, which had produced 14 per cent, had its peak in 1915; and West Virginia, greatest producer of all, with 45 per cent to its credit, reached its peak in 1917.<sup>FN13</sup>

FN13. Id. at 64.

Western New York and Eastern Ohio, on the fringe of the field, had some production but relied heavily on imports from Pennsylvania and West Virginia. Pennsylvania, a producing and exporting state, was a heavy consumer and supplemented her production with imports from West Virginia. West Virginia was a consuming state, but the lion's share of her production was exported. Thus the interest of the states in the North Appalachian supply was in conflict.

Competition among localities to share in the failing supply and the helplessness of state and local authorities in the presence of state lines and corporate complexities is a part of the background of federal intervention in the industry.<sup>FN14</sup> West Virginia took the boldest measure.

It legislated a priority in its entire production in favor of its own inhabitants. That was frustrated by an injunction \*633 from this Court.<sup>FN15</sup> Throughout the region clashes in the courts and conflicting decisions evidenced public anxiety and confusion. It was held that the New York Public Service Commission did not have power to classify consumers and restrict their use of gas.<sup>FN16</sup> That Commission held that a company could not abandon a part of its territory and still serve the rest.<sup>FN17</sup> Some courts admonished the companies to take action to protect consumers.<sup>FN18</sup> Several courts held that companies, regardless of failing supply, must continue to take on customers, but such compulsory additions were finally held to be within the Public Service Commission's discretion.<sup>FN19</sup> There were attempts to throw up franchises and quit the service, and municipalities resorted to the courts with conflicting results.<sup>FN20</sup> Public service commissions of consuming states were handicapped, for they had no control of the supply.<sup>FN21</sup>

FN14 See Report on Utility Corporations by Federal Trade Commission, Sen.Doc. No. 92, Pt. 84-A, 70th Cong., 1st Sess.

FN15 Commonwealth of Pennsylvania v. West Virginia, 262 U.S. 553, 43 S.Ct. 658, 67 L.Ed. 1117, 32 A.L.R. 300. For conditions there which provoked this legislation, see 25 West Virginia Law Quarterly 257.

FN16 People ex rel. Pavilion Natural Gas Co. v. Public Service Commission, 188 App.Div. 36, 176 N.Y.S. 163.

FN17 Village of Falconer v. Pennsylvania Gas Company, 17 State Department Reports, N.Y., 407.

FN18 See, for example, Public Service Commission v. Iroquois Natural Gas Co., 108 Misc. 696, 178 N.Y.S. 24; Park Abbott Realty Co. v. Iroquois Natural Gas Co., 102 Misc. 266, 168 N.Y.S. 673; Public Service Commission v. Iroquois Natural Gas Co., 189 App.Div. 545, 179 N.Y.S. 230.

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FN19 *People ex rel. Pennsylvania Gas Co. v. Public Service Commission*, 196 App.Div. 514, 189 N.Y.S. 478.

FN20 *East Ohio Gas Co. v. Akron*, 81 Ohio St. 33, 90 N.E. 40, 26 L.R.A., N.S., 92, 18 Ann.Cas. 332; *Village of New-comerstown v. Consolidated Gas Co.*, 100 Ohio St. 494, 127 N.E. 414; *Gress v. Village of Ft. Laramie*, 100 Ohio St. 35, 125 N.E. 112, 8 A.L.R. 242; *City of Jamestown v. Pennsylvania Gas Co., D.C.*, 263 F. 437; *Id., D.C.*, 264 F. 1009. See, also, *United Fuel Gas Co. v. Railroad Commission*, 278 U.S. 300, 308, 49 S.Ct. 150, 152, 73 L.Ed. 390.

FN21 The New York Public Service Commission said: 'While the transportation of natural gas through pipe lines from one state to another state is interstate commerce \* \* \*, Congress has not taken over the regulation of that particular industry. Indeed, it has expressly excepted it from the operation of the Interstate Commerce Commissions Law (Interstate Commerce Commissions Law, section 1). It is quite clear, therefore, that this Commission can not require a Pennsylvania corporation producing gas in Pennsylvania to transport it and deliver it in the State of New York, and that the Interstate Commerce Commission is likewise powerless. If there exists such a power, and it seems that there does, it is a power vested in Congress and by it not yet exercised. There is no available source of supply for the Crystal City Company at present except through purchasing from the Porter Gas Company. It is possible that this Commission might fix a price at which the Potter Gas Company should sell if it sold at all, but as the Commission can not require it to supply gas in the State of New York, the exercise of such a power to fix the price, if such power exists, would merely say, sell at this price or keep out of the State.' *Lane v. Crystal City Gas Co.*, 8 New York Public Service Comm.Reports, Second District, 210, 212.

**\*\*303 \*634** Shortages during World War I occasioned the first intervention in the natural gas industry by the Federal Government. Under Proclamation of President Wilson the United States Fuel Administrator took control, stopped extensions, classified consumers and established a priority for domestic over industrial use.<sup>FN22</sup> After the war federal control was abandoned. Some cities once served with natural gas became dependent upon mixed gas of reduced heating value and relatively higher price.<sup>FN23</sup>

FN22 Proclamation by the President of September 16, 1918; Rules and Regulations of H. A. Garfield, Fuel Administrator, September 24, 1918.

FN23 For example, the Iroquois Gas Corporation which formerly served Buffalo, New York, with natural gas ranging from 1050 to 1150 b.t.u. per cu. ft., now mixes a by-product gas of between 530 and 540 b.t.u. in proportions to provide a mixed gas of about 900 b.t.u. per cu. ft. For space heating or water heating its charges range from 65 cents for the first m.c.f. per month to 55 cents for all above 25 m.c.f. per month. *Moody's Manual of Public Utilities* (1943) 1350.

Utilization of natural gas of highest social as well as economic return is domestic use for cooking and water heating, followed closely by use for space heating in homes. This is the true public utility aspect of the enterprise, and its preservation should be the first concern of regulation. Gas does the family cooking cheaper than any other fuel.<sup>FN24</sup> But its advantages do not end with dollars and cents cost. It is delivered without interruption at the meter as needed and is paid for after it is used. No money is tied up in a supply, and no space is used for storage. It requires no handling, creates no dust, and leaves no ash. It responds to thermostatic control. It ignites easily and immediately develops its maximum heating capacity. These incidental advantages make domestic life more liveable.

FN24 The United States Fuel Administration made the following cooking value comparis-

ons, based on tests made in the Department of Home Economics of Ohio State University:

Natural gas at 1.12 per M. is equivalent to coal at \$6.50 per ton.

Natural gas at 2.00 per M. is equivalent to gasoline at 27¢ per gal.

Natural gas at 2.20 per M. is equivalent to electricity at 3¢ per k.w.h.

Natural gas at 2.40 per M. is equivalent to coal oil at 15¢ per gal.

Use and Conservation of Natural Gas, issued by U.S. Fuel Administration (1918) 5.

Industrial use is induced less by these qualities than by low cost in competition with other fuels. Of the gas exported from West Virginia by the Hope Company a very substantial part is used by industries. This wholesale use speeds exhaustion of supply and displaces other fuels. Coal miners and the coal industry, a large part of whose costs are wages, have complained of unfair competition from low-priced industrial gas produced with relatively little labor cost.<sup>FN25</sup>

FN25 See Brief on Behalf of Legislation Imposing an Excise Tax on Natural Gas, submitted to N.R.A. by the United Mine Workers of America and the National Coal Association.

Gas rate structures generally have favored industrial users. In 1932, in Ohio, the average yield on gas for domestic consumption was 62.1 cents per m.c.f. and on industrial,\*<sup>636</sup> 38.7. In Pennsylvania, the figures were 62.9 against 31.7. West Virginia showed the least spread, domestic consumers paying 36.6 cents; and industrial, 27.7.<sup>FN26</sup> Although this spread is less than <sup>FN27</sup> it can hardly be said to be self-justifying. It certainly is a very great factor in hastening decline of the natural gas supply.

FN26 Brief of National Gas Association and United Mine Workers, supra, note 26, pp. 35, 36, compiled from Bureau of Mines Reports.

FN27 From the source quoted in the preceding note the spread elsewhere is shown to be:

State	Industrial	Domestic
Illinois	29.2	1.678
Louisiana	10.4	59.7
Oklahoma	11.2	41.5
Texas	13.1	59.7
Alabama	17.8	1.227
Georgia	22.9	1.043

About the time of World War I there were occasional and short-lived efforts by some hard-pressed companies to reverse this discrimination and adopt graduated rates, giving a low rate to quantities adequate for domestic use and graduating it upward to discourage industrial use.<sup>FN28</sup> \*<sup>637</sup> These rates met opposition from industrial sources, of course, and since diminished revenues from industrial sources tended to increase the

domestic price, they met little popular or commission favor. The fact is that neither the gas companies nor the consumers nor local regulatory bodies can be depended upon to conserve gas. Unless federal regulation will take account of conservation, its efforts seem, as in this case, actually to constitute a new threat to the life of the Appalachian supply.

FN28 In Corning, New York, rates were initi-

ated by the Crystal City Gas Company as follows: 70¢ for the first 5,000 cu. ft. per month; 80¢ from 5,000 to 12,000; \$1 for all over 12,000. The Public Service Commission rejected these rates and fixed a flat rate of 58¢ per m.c.f. *Lane v. Crystal City Gas Co.*, 8 New York Public Service Comm. Reports, Second District, 210.

The Pennsylvania Gas Company (National Fuel Gas Company group) also attempted a sliding scale rate for New York consumers, net per month as follows: First 5,000 feet, 35¢; second 5,000 feet, 45¢; third 5,000 feet, 50¢; all above 15,000, 55¢. This was eventually abandoned, however. The company's present scale in Pennsylvania appears to be reversed to the following net monthly rate; first 3 m.c.f., 75¢; next 4 m.c.f., 60¢; next 8 m.c.f., 55¢; over 15 m.c.f., 50¢. *Moody's Manual of Public Utilities* (1943) 1350. In New York it now serves a mixed gas.

For a study of effect of sliding scale rates in reducing consumption see 11 Proceedings of Natural Gas Association of America (1919) 287.

## II.

Congress in 1938 decided upon federal regulation of the industry. It did so after an exhaustive investigation of all aspects including failing supply and competition for the use of natural gas intensified by growing scarcity.<sup>FN29</sup> Pipelines from the Appalachian area to markets were in the control of a handful of holding company systems.<sup>FN30</sup> This created a highly concentrated control of the producers' market and of the consumers' supplies. While holding companies dominated both production and distribution they segregated those activities in separate subsidiaries,<sup>FN31</sup> the effect of which, if not the purpose, was to isolate some end of the business from the reach of any one state commission. The cost of natural gas to consumers moved steadily upwards over the years, out of proportion to prices of oil, which, except for the element of competition, is produced under somewhat comparable conditions. The public came to feel that the companies were

exploiting the growing scarcity of local gas. The problems of this region had much to do with creating the demand for federal regulation.

FN29 See Report on Utility Corporations by Federal Trade Commission, Sen. Doc. 92, Pt. 84-A, 70th Cong., 1st Sess.

FN30 Four holding company systems control over 55 per cent of all natural gas transmission lines in the United States. They are Columbia Gas and Electric Corporation, Cities Service Co., Electric Bond and Share Co., and Standard Oil Co. of New Jersey. Columbia alone controls nearly 25 per cent, and fifteen companies account for over 80 per cent of the total. Report on Utility Corporations by Federal Trade Commission, Sen. Doc. 92, Pt. 84-A, 70th Cong., 1st Sess., 28.

In 1915, so it was reported to the Governor of West Virginia, 87 per cent of the total gas production of that state was under control of eight companies. Steptoe and Hoffheimer, *Legislative Regulation of Natural Gas Supply in West Virginia*, 17 *West Virginia Law Quarterly* 257, 260. Of these, three were subsidiaries of the Columbia system and others were subsidiaries of larger systems. In view of inter-system sales and interlocking interests it may be doubted whether there is much real competition among these companies.

FN31 This pattern with its effects on local regulatory efforts will be observed in our decisions. See *United Fuel Gas Co. v. Railroad Commission*, 278 U.S. 300, 49 S.Ct. 150, 73 L.Ed. 390; *United Fuel Gas Co. v. Public Service Commission*, 278 U.S. 322, 49 S.Ct. 157, 73 L.Ed. 402; *Dayton Power & Light v. Public Utilities Commission*, 292 U.S. 290, 54 S.Ct. 647, 78 L.Ed. 1267; *Columbus Gas & Fuel Co. v. Public Utilities Commission*, 292 U.S. 398, 54 S.Ct. 763, 78 L.Ed. 1327, 91 A.L.R. 1403, and the present case.

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The Natural Gas Act declared the natural gas business to be 'affected with a public interest,' and its regulation 'necessary in the public interest.'<sup>FN32</sup> Originally, and at the time this proceeding was commenced and tried, it also declared 'the intention of Congress that natural gas shall be sold in interstate commerce for resale for ultimate public consumption for domestic, commercial, industrial, or any other use at the lowest possible reasonable rate consistent with the maintenance of adequate service in the public interest.'<sup>FN33</sup> While this was later dropped, there is nothing to indicate that it was not and is not still an accurate statement of purpose of the Act. Extension or improvement of facilities may be ordered when 'necessary or desirable in the public interest,' abandonment of facilities may be ordered when the supply is 'depleted to the extent that the continuance of service is unwarranted, or that the present or future public convenience or necessity \*639 permit' abandonment and certain extensions can only be made on finding of 'the present or future public convenience and necessity.'<sup>FN34</sup> The Commission is required to take account of the ultimate use of the gas. Thus it is given power to suspend new schedules as to rates, charges, and classification of services except where the schedules are for the sale of gas 'for resale for industrial use only,'<sup>FN35</sup> which gives the companies greater freedom to increase rates on industrial gas than on domestic gas. More particularly, the Act expressly forbids any undue preference or advantage to any person or 'any unreasonable difference in rates \* \* \* either as between localities or as between classes of service.'<sup>FN36</sup> And the power of the Commission expressly includes that to determine the 'just and reasonable rate, charge, classification, rule, regulation, practice, or contract to be thereafter observed and in force.'<sup>FN37</sup>

FN32 15 U.S.C. s 717(a), 15 U.S.C.A. s 717(a).  
 (Italics supplied throughout this paragraph.)

FN33 s 7(c), 52 Stat. 825, 15 U.S.C.A. s 717f(c).

FN34 15 U.S.C. s 717f, 15 U.S.C.A. s 717f.

FN35 Id., s 717c(e).

FN36 Id., s 717c(b).

FN37 Id., s 717d(a).

In view of the Court's opinion that the Commission in administering the Act may ignore discrimination, it is interesting that in reporting this Bill both the Senate and the House Committees on Interstate Commerce pointed out that in 1934, on a nationwide average the price of natural gas per m.c.f. was 74.6 cents for domestic use, 49.6 cents for commercial use, and 16.9 for industrial use.<sup>FN38</sup> I am not ready to think that supporters of a bill called attention to the striking fact that householders were being charged five times as much for their gas as industrial users only as a situation which the Bill would do nothing to remedy. On the other hand the Act gave to the Commission what the Court aptly describes as 'broad powers of regulation.'

FN38 Sen. Rep. No. 1162, 75th Cong., 1st Sess. 2.

#### \*640 III.

This proceeding was initiated by the Cities of Cleveland and Akron. They alleged that the price charged by Hope for natural gas 'for resale to domestic, commercial and small industrial consumers in Cleveland and elsewhere is excessive, unjust, unreasonable, greatly in excess of the price charged by Hope to nonaffiliated companies at wholesale for resale to domestic, commercial and small industrial consumers, and greatly in excess of the price charged by Hope to East Ohio for resale to certain favored industrial consumers in Ohio, and therefore is further unduly discriminatory between consumers and between classes of service' (italics supplied). The company answered admitting differences in prices to affiliated and nonaffiliated companies and justifying them by differences in conditions of delivery. \*\*306 As to the allegation that the contract price is 'greatly in excess of the price charged by Hope to East Ohio for resale to certain favored industrial consumers in Ohio,' Hope did not deny a price differential, but alleged that industrial gas was not sold to 'favored consumers' but was sold under contract and schedules filed with and approved by the Public Utilities Commission of Ohio, and that certain conditions of delivery made it

not 'unduly discriminatory.'

The record shows that in 1940 Hope delivered for industrial consumption 36,523,792 m.c.f. and for domestic and commercial consumption, 50,343,652 m.c.f. I find no separate figure for domestic consumption. It served 43,767 domestic consumers directly, 511,521 through the East Ohio Gas Company, and 154,043 through the Peoples Natural Gas Company, both affiliates owned by the same parent. Its special contracts for industrial consumption, so far as appear, are confined to about a dozen big industries.

\*641 Hope is responsible for discrimination as exists in favor of these few industrial consumers. It controls both the resale price and use of industrial gas by virtue of the very interstate sales contracts over which the Commission is exercising its jurisdiction.

Hope's contract with East Ohio Company is an example. Hope agrees to deliver, and the Ohio Company to take, '(a) all natural gas requisite for the supply of the domestic consumers of the Ohio Company; (b) such amounts of natural gas as may be requisite to fulfill contracts made with the consent and approval of the Hope Company by the Ohio Company, or companies which it supplies with natural gas, for the sale of gas upon special terms and conditions for manufacturing purposes.' The Ohio company is required to read domestic customers' meters once a month and meters of industrial customers daily and to furnish all meter readings to Hope. The Hope Company is to have access to meters of all consumers and to all of the Ohio Company's accounts. The domestic consumers of the Ohio Company are to be fully supplied in preference to consumers purchasing for manufacturing purposes and 'Hope Company can be required to supply gas to be used for manufacturing purposes only where the same is sold under special contracts which have first been submitted to and approved in writing by the Hope Company and which expressly provide that natural gas will be supplied thereunder only in so far as the same is not necessary to meet the requirements of domestic consumers supplied through pipe lines of the Ohio Company.' This basic contract was supplemented from time to time, chiefly as to price. The last amendment was in a

letter from Hope to East Ohio in 1937. It contained a special discount on industrial gas and a schedule of special industrial contracts, Hope reserving the right to make eliminations therefrom and agreeing that others might be added from time to time with its approval in writing. It said, 'It is believed that the price concessions contained in this letter, while not based on our costs, are under certain conditions, to our mutual advantage in maintaining and building up the volumes of gas sold by us (italics supplied).'<sup>FN39</sup>

FN39 The list of East Ohio Gas Company's special industrial contracts thus expressly under Hope's control and their demands are as follows:

\*\*307 The Commission took no note of the charges of discrimination and made no disposition of the issue tendered on this point. It ordered a flat reduction in the price per m.c.f. of all gas delivered by Hope in interstate commerce. It made no limitation, condition, or provision as to what classes of consumers should get the benefit of the reduction. While the cities have accepted and are defending the reduction, it is my view that the discrimination of which they have complained is perpetuated and increased by the order of the Commission and that it violates the Act in so doing.

The Commission's opinion aptly characterizes its entire objective by saying that 'bona fide investment figures now become all-important in the regulation of rates.' It should be noted that the all-importance of this theory is not the result of any instruction from Congress. When the Bill to regulate gas was first before Congress it contained\*643 the following: 'In determining just and reasonable rates the Commission shall fix such rate as will allow a fair return upon the actual legitimate prudent cost of the property used and useful for the service in question.' H.R. 5423, 74th Cong., 1st Sess. Title III, s 312(c). Congress rejected this language. See H.R. 5423, s 213 (211(c)), and H.R. Rep. No. 1318, 74th Cong., 1st Sess. 30.

The Commission contends nevertheless that the 'all important' formula for finding a rate base is that of prudent investment. But it excluded from the investment



base an amount actually and admittedly invested of some \$17,000,000. It did so because it says that the Company recouped these expenditures from customers before the days of regulation from earnings above a fair return. But it would not apply all of such 'excess earnings' to reduce the rate base as one of the Commissioners suggested. The reason for applying excess earnings to reduce the investment base roughly from \$69,000,000 to \$52,000,000 but refusing to apply them to reduce it from that to some \$18,000,000 is not found in a difference in the character of the earnings or in their reinvestment. The reason assigned is a difference in bookkeeping treatment many years before the Company was subject to regulation. The \$17,000,000, reinvested chiefly in well drilling, was treated on the books as expense. (The Commission now requires that drilling costs be carried to capital account.) The allowed rate base thus actually was determined by the Company's bookkeeping, not its investment. This attributes a significance to formal classification in account keeping that seems inconsistent with rational rate regulation.<sup>FN40</sup> Of \*644 course, the \*\*308 Commission would not and should not allow a rate base to be inflated by bookkeeping which had improperly capitalized expenses. I have doubts about resting public regulation upon any rule that is to be used or not depending on which side it favors.

FN40 To make a fetish of mere accounting is to shield from examination the deeper causes, forces, movements, and conditions which should govern rates. Even as a recording of current transactions, bookkeeping is hardly an exact science. As a representation of the condition and trend of a business, it uses symbols of certainty to express values that actually are in constant flux. It may be said that in commercial or investment banking or any business extending credit success depends on knowing what not to believe in accounting. Few concerns go into bankruptcy or reorganization whose books do not show them solvent and often even profitable. If one cannot rely on accountancy accurately to disclose past or current conditions of a business, the fallacy of using it as a sole guide

to future price policy ought to be apparent. However, our quest for certitude is so ardent that we pay an irrational reverence to a technique which uses symbols of certainty, even though experience again and again warns us that they are delusive. Few writers have ventured to challenge this American idolatry, but see Hamilton, Cost as a standard for Price, 4 Law and Contemporary Problems 321, 323-25. He observes that 'As the apostle would put it, accountancy is all things to all men. \* \* \* Its purpose determines the character of a system of accounts.' He analyzes the hypothetical character of accounting and says 'It was no eternal mold for pecuniary verities handed down from on high. It was-like logic or algebra, or the device of analogy in the law-an ingenious contrivance of the human mind to serve a limited and practical purpose.' 'Accountancy is far from being a pecuniary expression of all that is industrial reality. It is an instrument, highly selective in its application, in the service of the institution of money making.' As to capital account he observes 'In an enterprise in lusty competition with others of its kind, survival is the thing and the system of accounts has its focus in solvency. \* \* \* Accordingly depreciation, obsolescence, and other factors which carry no immediate threat are matters of lesser concern and the capital account is likely to be regarded as a secondary phenomenon. \* \* \* But in an enterprise, such as a public utility, where continued survival seems assured, solvency is likely to be taken for granted. \* \* \* A persistent and ingenious attention is likely to be directed not so much to securing the upkeep of the physical property as to making it certain that capitalization fails in not one whit to give full recognition to every item that should go into the account.'

\*645 The Company on the other hand, has not put its gas fields into its calculations on the present-value basis, although that, it contends, is the only lawful rule for finding a rate base. To do so would result in a rate

higher than it has charged or proposes as a matter of good business to charge.

The case before us demonstrates the lack of rational relationship between conventional rate-base formulas and natural gas production and the extremities to which regulating bodies are brought by the effort to rationalize them. The Commission and the Company each stands on a different theory, and neither ventures to carry its theory to logical conclusion as applied to gas fields.

#### IV.

This order is under judicial review not because we interpose constitutional theories between a State and the business it seeks to regulate, but because Congress put upon the federal courts a duty toward administration of a new federal regulatory Act. If we are to hold that a given rate is reasonable just because the Commission has said it was reasonable, review becomes a costly, time-consuming pageant of no practical value to anyone. If on the other hand we are to bring judgment of our own to the task, we should for the guidance of the regulators and the regulated reveal something of the philosophy, be it legal or economic or social, which guides us. We need not be slaves to a formula but unless we can point out a rational way of reaching our conclusions they can only be accepted as resting on intuition or predilection. I must admit that I possess no instinct jby which to know the 'reasonable' from the 'unreasonable' in prices and must seek some conscious design for decision.

The Court sustains this order as reasonable, but what makes it so or what could possibly make it otherwise, \*646 I cannot learn. It holds that: 'it is the result reached not the method employed which is controlling'; 'the fact that the method employed to reach that result may contain infirmities is not then important' and it is not 'important to this case to determine the various permissible ways in which any rate base on which the return is computed might be arrived at.' The Court does lean somewhat on considerations of capitalization and dividend history and requirements for dividends on outstanding stock. But I can give no real weight to that for it is generally and I think deservedly in discredit as any guide in rate cases.<sup>FN41</sup>

FN41 See 2 Bonbright, Valuation of Property (1937) 1112.

Our books already contain so much talk of methods of rationalizing rates that we must appear ambiguous if we announce results without our working methods. We are confronted with regulation of a unique type of enterprise which I think requires considered rejection of much conventional utility doctrine and adoption of concepts of 'just and reasonable' rates and practices and of the 'public interest' that will take account of the peculiarities of the business.

The Court rejects the suggestions of this opinion. It says that the Committees in reporting the bill which became the Act said it provided 'for regulation along recognized and more or less standardized lines' and that there was 'nothing novel in its provisions.' So saying it sustains a rate calculated on a novel variation of a rate base theory which itself had at the time of enactment of the legislation been recognized only in dissenting opinions. Our difference seems to be between unconscious innovation,<sup>FN42</sup> and the purposeful \*\*309 and deliberate innovation I \*647 would make to meet the necessities of regulating the industry before us.

FN42 Bonbright says, '\* \* \* the vice of traditional law lies, not in its adoption of excessively rigid concepts of value and rules of valuation, but rather in its tendency to permit shifts in meaning that are inept, or else that are ill-defined because the judges that make them will not openly admit that they are doing so.' Id., 1170.

Hope's business has two components of quite divergent character. One, while not a conventional common-carrier undertaking, is essentially a transportation enterprise consisting of conveying gas from where it is produced to point of delivery to the buyer. This is a relatively routine operation not differing substantially from many other utility operations. The service is produced by an investment in compression and transmission facilities. Its risks are those of investing in a tested means of conveying a discovered supply of gas to a known market. A rate base calculated on the prudent investment

formula would seem a reasonably satisfactory measure for fixing a return from that branch of the business whose service is roughly proportionate to the capital invested. But it has other consequences which must not be overlooked. It gives marketability and hence 'value' to gas owned by the company and gives the pipeline company a large power over the marketability and hence 'value' of the production of others.

The other part of the business—to reduce to possession an adequate supply of natural gas—is of opposite character, being more erratic and irregular and unpredictable in relation to investment than any phase of any other utility business. A thousand feet of gas captured and severed from real estate for delivery to consumers is recognized under our law as property of much the same nature as a ton of coal, a barrel of oil, or a yard of sand. The value to be allowed for it is the real battleground between the investor and consumer. It is from this part of the business that the chief difference between the parties as to a proper rate base arises.

It is necessary to a 'reasonable' price for gas that it be anchored to a rate base of any kind? Why did courts in the first place begin valuing 'rate bases' in order to 'value' something else? The method came into vogue \*648 in fixing rates for transportation service which the public obtained from common carriers. The public received none of the carriers' physical property but did make some use of it. The carriage was often a monopoly so there were no open market criteria as to reasonableness. The 'value' or 'cost' of what was put to use in the service by the carrier was not a remote or irrelevant consideration in making such rates. Moreover the difficulty of appraising an intangible service was thought to be simplified if it could be related to physical property which was visible and measurable and the items of which might have market value. The court hoped to reason from the known to the unknown. But gas fields turn this method topsy turvy. Gas itself is tangible, possessible, and does have a market and a price in the field. The value of the rate base is more elusive than that of gas. It consists of intangibles—leaseholds and freeholds—operated and unoperated—of little use in themselves except as rights to reach and capture gas. Their value lies

almost wholly in predictions of discovery, and of price of gas when captured, and bears little relation to cost of tools and supplies and labor to develop it. Gas is what Hope sells and it can be directly priced more reasonably and easily and accurately than the components of a rate base can be valued. Hence the reason for resort to a roundabout way of rate base price fixing does not exist in the case of gas in the field.

But if found, and by whatever method found, a rate base is little help in determining reasonableness of the price of gas. Appraisal of present value of these intangible rights to pursue fugitive gas depends on the value assigned to the gas when captured. The 'present fair value' rate base, generally in ill repute,<sup>FN43</sup> is not even \*\*310 urged by the gas company for valuing its fields.

FN43 'The attempt to regulate rates by reference to a periodic or occasional reappraisal of the properties has now been tested long enough to confirm the worst fears of its critics. Unless its place is taken by some more promising scheme of rate control, the days of private ownership under government regulation may be numbered.' 2 Bonbright, Valuation of Property (1937) 1190.

\*649 The prudent investment theory has relative merits in fixing rates for a utility which creates its service merely by its investment. The amount and quality of service rendered by the usual utility will, at least roughly, be measured by the amount of capital it puts into the enterprise. But it has no rational application where there is no such relationship between investment and capacity to serve. There is no such relationship between investment and amount of gas produced. Let us assume that Doe and Roe each produces in West Virginia for delivery to Cleveland the same quantity of natural gas per day. Doe, however, through luck or foresight or whatever it takes, gets his gas from investing \$50,000 in leases and drilling. Roe drilled poorer territory, got smaller wells, and has invested \$250,000. Does anybody imagine that Roe can get or ought to get for his gas five times as much as Doe because he has spent five times as much? The service one renders to society in the gas business is measured

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by what he gets out of the ground, not by what he puts into it, and there is little more relation between the investment and the results than in a game of poker.

Two-thirds of the gas Hope handles it buys from about 340 independent producers. It is obvious that the principle of rate-making applied to Hope's own gas cannot be applied, and has not been applied, to the bulk of the gas Hope delivers. It is not probable that the investment of any two of these producers will bear the same ratio to their investments. The gas, however, all goes to the same use, has the same utilization value and the same ultimate price.

To regulate such an enterprise by indiscriminately transplanting any body of rate doctrine conceived and \*650 adapted to the ordinary utility business can serve the 'public interest' as the Natural Gas Act requires, if at all, only by accident. Mr. Justice Brandeis, the pioneer juristic advocate of the prudent investment theory for man-made utilities, never, so far as I am able to discover, proposed its application to a natural gas case. On the other hand, dissenting in *Commonwealth of Pennsylvania v. West Virginia*, he reviewed the problems of gas supply and said, 'In no other field of public service regulation is the controlling body confronted with factors so baffling as in the natural gas industry, and in none is continuous supervision and control required in so high a degree.' 262 U.S. 553, 621, 43 S.Ct. 658, 674, 67 L.Ed. 1117, 32 A.L.R. 300. If natural gas rates are intelligently to be regulated we must fit our legal principles to the economy of the industry and not try to fit the industry to our books.

As our decisions stand the Commission was justified in believing that it was required to proceed by the rate base method even as to gas in the field. For this reason the Court may not merely wash its hands of the method and rationale of rate making. The fact is that this Court, with no discussion of its fitness, simply transferred the rate base method to the natural gas industry. It happened in *Newark Natural Gas & Fuel Co. v. City of Newark, Ohio*, 1917, 242 U.S. 405, 37 S.Ct. 156, 157, 61 L.Ed. 393, Ann.Cas.1917B, 1025, in which the company wanted 25 cents per m.c.f., and under the Fourteenth Amendment challenged the reduction to 18

cents by ordinance. This Court sustained the reduction because the court below 'gave careful consideration to the questions of the value of the property \* \* \* at the time of the inquiry,' and whether the rate 'would be sufficient to provide a fair return on the value of the property.' The Court said this method was 'based upon principles thoroughly established by repeated decisions of this court,' citing many cases, not one of which involved natural gas or a comparable wasting natural resource. Then came issues as to state power to \*651 regulate as affected by the commerce clause. *Public Utilities Commission v. Landon*, 1919, 249 U.S. 236, 39 S.Ct. 268, 63 L.Ed. 577; *Pennsylvania Gas Co. v. Public Service Commission*, 1920, 252 U.S. 23, 40 S.Ct. 279, 64 L.Ed. 434. These questions settled, the Court again was called upon in natural gas cases to consider state rate-making claimed to be invalid under the Fourteenth Amendment. *United Fuel Gas Co. v. Railroad Commission of Kentucky*, 1929, 278 U.S. 300, 49 S.Ct. 150, 73 L.Ed. 390; *United Fuel Gas Company v. Public Service Commission of West Virginia*, 1929, 278 U.S. 322, 49 S.Ct. 157, 73 L.Ed. 402. Then, as now, the differences were 'due \*\*311 chiefly to the difference in value ascribed by each to the gas rights and leaseholds.' 278 U.S. 300, 311, 49 S.Ct. 150, 153, 73 L.Ed. 390. No one seems to have questioned that the rate base method must be pursued and the controversy was at what rate base must be used. Later the 'value' of gas in the field was questioned in determining the amount a regulated company should be allowed to pay an affiliate therefor—a state determination also reviewed under the Fourteenth Amendment. *Dayton Power & Light Co. v. Public Utilities Commission of Ohio*, 1934, 292 U.S. 290, 54 S.Ct. 647, 78 L.Ed. 1267; *Columbus Gas & Fuel Co. v. Public Utilities Commission of Ohio*, 1934, 292 U.S. 398, 54 S.Ct. 763, 78 L.Ed. 1327, 91 A.L.R. 1403. In both cases, one of which sustained, and one of which struck down a fixed rate the Court assumed the rate base method, as the legal way of testing reasonableness of natural gas prices fixed by public authority, without examining its real relevancy to the inquiry.

Under the weight of such precedents we cannot expect the Commission to initiate economically intelligent methods of fixing gas prices. But the Court now faces a

new plan of federal regulation based on the power to fix the price at which gas shall be allowed to move in interstate commerce. I should now consider whether these rules devised under the Fourteenth Amendment are the exclusive tests of a just and reasonable rate under the federal statute, inviting reargument directed to that point \*652 if necessary. As I see it now I would be prepared to hold that these rules do not apply to a natural gas case arising under the Natural Gas Act.

Such a holding would leave the Commission to fix the price of gas in the field as one would fix maximum prices of oil or milk or coal, or any other commodity. Such a price is not calculated to produce a fair return on the synthetic value of a rate base of any individual producer, and would not undertake to assure a fair return to any producer. The emphasis would shift from the producer to the product, which would be regulated with an eye to average or typical producing conditions in the field.

Such a price fixing process on economic lines would offer little temptation to the judiciary to become back seat drivers of the price fixing machine. The unfortunate effect of judicial intervention in this field is to divert the attention of those engaged in the process from what is economically wise to what is legally permissible. It is probable that price reductions would reach economically unwise and self-defeating limits before they would reach constitutional ones. Any constitutional problems growing out of price fixing are quite different than those that have heretofore been considered to inhere in rate making. A producer would have difficulty showing the invalidity of such a fixed price so long as he voluntarily continued to sell his product in interstate commerce. Should he withdraw and other authority be invoked to compel him to part with his property, a different problem would be presented.

Allowance in a rate to compensate for gas removed from gas lands, whether fixed as of point of production or as of point of delivery, probably best can be measured by a functional test applied to the whole industry. For good or ill we depend upon private enterprise to exploit these natural resources for public consumption. The function which an allowance for gas in the field

should perform \*653 for society in such circumstances is to be enough and no more than enough to induce private enterprise completely and efficiently to utilize gas resources, to acquire for public service any available gas or gas rights and to deliver gas at a rate and for uses which will be in the future as well as in the present public interest.

The Court fears that 'if we are now to tell the Commission to fix the rates so as to discourage particular uses, we would indeed be injecting into a rate case a 'novel' doctrine \* \* \*.' With due deference I suggest that there is nothing novel in the idea that any change in price of a service or commodity reacts to encourage or discourage its use. The question is not whether such consequences will or will not follow; the question is whether effects must be suffered blindly or may be intelligently selected, whether price control shall have targets at which it deliberately aims or shall be handled like a gun in the hands of one who does not know it is loaded.

We should recognize 'price' for what it is—a tool, a means, an expedient. In public\*\*312 hands it has much the same economic effects as in private hands. Hope knew that a concession in industrial price would tend to build up its volume of sales. It used price as an expedient to that end. The Commission makes another cut in that same price but the Court thinks we should ignore the effect that it will have on exhaustion of supply. The fact is that in natural gas regulation price must be used to reconcile the private property right society has permitted to vest in an important natural resource with the claims of society upon it—price must draw a balance between wealth and welfare.

To carry this into techniques of inquiry is the task of the Commissioner rather than of the judge, and it certainly is no task to be solved by mere bookkeeping but requires the best economic talent available. There would doubtless be inquiry into the price gas is bringing in the \*654 field, how far that price is established by arms' length bargaining and how far it may be influenced by agreements in restraint of trade or monopolistic influences. What must Hope really pay to get and to replace gas it delivers under this order? If it should get more

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or less than that for its own, how much and why? How far are such prices influenced by pipe line access to markets and if the consumers pay returns on the pipe lines how far should the increment they cause go to gas producers? East Ohio is itself a producer in Ohio.<sup>FN44</sup>

What do Ohio authorities require Ohio consumers to pay for gas in the field? Perhaps these are reasons why the Federal Government should put West Virginia gas at lower or at higher rates. If so what are they? Should East Ohio be required to exploit its half million acres of unoperated reserve in Ohio before West Virginia resources shall be supplied on a devalued basis of which that State complains and for which she threatens measures of self keep? What is gas worth in terms of other fuels it displaces?

FN44 East Ohio itself owns natural gas rights in 550,600 acres, 518,526 of which are reserved and 32,074 operated, by 375 wells. Moody's Manual of Public Utilities (1943) 5.

A price cannot be fixed without considering its effect on the production of gas. Is it an incentive to continue to exploit vast unoperated reserves? Is it conducive to deep drilling tests the result of which we may know only after trial? Will it induce bringing gas from afar to supplement or even to substitute for Appalachian gas?<sup>FN45</sup> Can it be had from distant fields as cheap or cheaper? If so, that competitive potentiality is certainly a relevant consideration. Wise regulation must also consider, as a private buyer would, what alternatives the producer has \*655 if the price is not acceptable. Hope has intrastate business and domestic and industrial customers. What can it do by way of diverting its supply to intrastate sales? What can it do by way of disposing of its operated or reserve acreage to industrial concerns or other buyers? What can West Virginia do by way of conservation laws, severance or other taxation, if the regulated rate offends? It must be borne in mind that while West Virginia was prohibited from giving her own inhabitants a priority that discriminated against interstate commerce, we have never yet held that a good faith conservation act, applicable to her own, as well as to others, is not valid. In considering alternatives, it must be noted that federal regulation is very incomplete,

expressly excluding regulation of 'production or gathering of natural gas,' and that the only present way to get the gas seems to be to call it forth by price inducements. It is plain that there is a downward economic limit on a safe and wise price.

FN45 Hope has asked a certificate of convenience and necessity to lay 1140 miles of 22-inch pipeline from Hugoton gas fields in southwest Kansas to West Virginia to carry 285 million cu. ft. of natural gas per day. The cost was estimated at \$51,000,000. Moody's Manual of Public Utilities (1943) 1760.

But there is nothing in the law which compels a commission to fix a price at that 'value' which a company might give to its product by taking advantage of scarcity, or monopoly of supply. The very purpose of fixing maximum prices is to take away from the seller his opportunity to get all that otherwise the market would award him for his goods. This is a constitutional use of the power to fix maximum prices, **\*313**Block v. Hirsh, 256 U.S. 135, 41 S.Ct. 458, 65 L.Ed. 865, 16 A.L.R. 165; Marcus Brown Holding Co. v. Feldman, 256 U.S. 170, 41 S.Ct. 465, 65 L.Ed. 877; International Harvester Co. v. Kentucky, 234 U.S. 216, 34 S.Ct. 853, 58 L.Ed. 1284; Highland v. Russell Car & Snow Plow Co., 279 U.S. 253, 49 S.Ct. 314, 73 L.Ed. 688, just as the fixing of minimum prices of goods in interstate commerce is constitutional although it takes away from the buyer the advantage in bargaining which market conditions would give him. United States v. Darby, 312 U.S. 100, 657, 61 S.Ct. 451, 85 L.Ed. 609, 132 A.L.R. 1430; Mulford v. Smith, 307 U.S. 38, 59 S.Ct. 648, 83 L.Ed. 1092; United States v. Rock Royal Co-operative, Inc., 307 U.S. 533, 59 S.Ct. 993, 83 L.Ed. 1446; Sunshine Anthracite Coal Co. v. Adkins, 310 U.S. 381, 60 S.Ct. 907, 84 L.Ed. 1263. The Commission has power to fix \*656 a price that will be both maximum and minimum and it has the incidental right, and I think the duty, to choose the economic consequences it will promote or retard in production and also more importantly in consumption, to which I now turn.

If we assume that the reduction in company revenues is warranted we then come to the question of trans-

lating the allowed return into rates for consumers or classes of consumers. Here the Commission fixed a single rate for all gas delivered irrespective of its use despite the fact that Hope has established what amounts to two rates—a high one for domestic use and a lower one for industrial contracts.<sup>FN46</sup> The Commission can fix two prices for interstate gas as readily as one—a price for resale to domestic users and another for resale to industrial users. This is the pattern Hope itself has established in the very contracts over which the Commission is expressly given jurisdiction. Certainly the Act is broad enough to permit two prices to be fixed instead of one, if the concept of the ‘public interest’ is not unduly narrowed.

FN46 I find little information as to the rates for industries in the record and none at all in such usual sources as Moody's Manual.

The Commission's concept of the public interest in natural gas cases which is carried today into the Court's opinion was first announced in the opinion of the minority in the Pipeline case. It enumerated only two ‘phases of the public interest: (1) the investor interest; (2) the consumer interest,’ which it emphasized to the exclusion of all others. 315 U.S. 575, 606, 62 S.Ct. 736, 753, 86 L.Ed. 1037. This will do well enough in dealing with railroads or utilities supplying manufactured gas, electric, power, a communications service or transportation, where utilization of facilities does not impair their future usefulness. Limitation of supply, however, brings into a natural gas case another phase of the public interest that to my mind overrides both the owner \*657 and the consumer of that interest. Both producers and industrial consumers have served their immediate private interests at the expense of the long-range public interest. The public interest, of course, requires stopping unjust enrichment of the owner. But it also requires stopping unjust impoverishment of future generations. The public interest in the use by Hope's half million domestic consumers is quite a different one from the public interest in use by a baker's dozen of industries.

Prudent price fixing it seems to me must at the very threshold determine whether any part of an allowed re-

turn shall be permitted to be realized from sales of gas for resale for industrial use. Such use does tend to level out daily and seasonal peaks of domestic demand and to some extent permits a lower charge for domestic service. But is that a wise way of making gas cheaper when, in comparison with any substitute, gas is already a cheap fuel? The interstate sales contracts provide that at times when demand is so great that there is not enough gas to go around domestic users shall first be served. Should the operation of this preference await the day of actual shortage? Since the propriety of a preference seems conceded, should it not operate to prevent the coming of a shortage as well as to mitigate its effects? Should industrial use jeopardize tomorrow's service to householders any more than today's? If, however, it is decided to cheapen domestic use by resort to industrial sales, should they be limited to the few uses \*\*314 for which gas has special values or extend also to those who use it only because it is cheaper than competitive fuels?<sup>FN47</sup> And how much cheaper should industrial\*658 gas sell than domestic gas, and how much advantage should it have over competitive fuels? If industrial gas is to contribute at all to lowering domestic rates, should it not be made to contribute the very maximum of which it is capable, that is, should not its price be the highest at which the desired volume of sales can be realized?

FN47 The Federal Power Commission has touched upon the problem of conservation in connection with an application for a certificate permitting construction of a 1500-mile pipeline from southern Texas to New York City and says: ‘The Natural Gas Act as presently drafted does not enable the Commission to treat fully the serious implications of such a problem. The question should be raised as to whether the proposed use of natural gas would not result in displacing a less valuable fuel and create hardships in the industry already supplying the market, while at the same time rapidly depleting the country's natural-gas reserves. Although, for a period of perhaps 20 years, the natural gas could be so priced as to appear to offer an apparent saving in fuel costs, this would mean

simply that social costs which must eventually be paid had been ignored.

'Careful study of the entire problem may lead to the conclusion that use of natural gas should be restricted by functions rather than by areas. Thus, it is especially adapted to space and water heating in urban homes and other buildings and to the various industrial heat processes which require concentration of heat, flexibility of control, and uniformity of results. Industrial uses to which it appears particularly adapted include the treating and annealing of metals, the operation of kilns in the ceramic, cement, and lime industries, the manufacture of glass in its various forms, and use as a raw material in the chemical industry. General use of natural gas under boilers for the production of steam is, however, under most circumstances of very questionable social economy.' Twentieth Annual Report of the Federal Power Commission (1940) 79.

If I were to answer I should say that the household rate should be the lowest that can be fixed under commercial conditions that will conserve the supply for that use. The lowest probable rate for that purpose is not likely to speed exhaustion much, for it still will be high enough to induce economy, and use for that purpose has more nearly reached the saturation point. On the other hand the demand for industrial gas at present rates already appears to be increasing. To lower further the industrial rate is merely further to subsidize industrial consumption and speed depletion. The impact of the flat reduction \*659 of rates ordered here admittedly will be to increase the industrial advantages of gas over competing fuels and to increase its use. I think this is not, and there is no finding by the Commission that it is, in the public interest.

There is no justification in this record for the present discrimination against domestic users of gas in favor of industrial users. It is one of the evils against which the Natural Gas Act was aimed by Congress and one of the evils complained of here by Cleveland and Akron. If Hope's revenues should be cut by some

\$3,600,000 the whole reduction is owing to domestic users. If it be considered wise to raise part of Hope's revenues by industrial purpose sales, the utmost possible revenue should be raised from the least consumption of gas. If competitive relationships to other fuels will permit, the industrial price should be substantially advanced, not for the benefit of the Company, but the increased revenues from the advance should be applied to reduce domestic rates. For in my opinion the 'public interest' requires that the great volume of gas now being put to uneconomic industrial use should either be saved for its more important future domestic use or the present domestic user should have the full benefit of its exchange value in reducing his present rates.

Of course the Commission's power directly to regulate does not extend to the fixing of rates at which the local company shall sell to consumers. Nor is such power required to accomplish the purpose. As already pointed out, the very contract the Commission is altering classifies the gas according to the purposes for which it is to be resold and provides differentials between the two classifications. It would only be necessary for the Commission to order \*\*315 that all gas supplied under paragraph (a) of Hope's contract with the East Ohio Company shall be \*660 at a stated price fixed to give to domestic service the entire reduction herein and any further reductions that may prove possible by increasing industrial rates. It might further provide that gas delivered under paragraph (b) of the contract for industrial purposes to those industrial customers Hope has approved in writing shall be at such other figure as might be found consistent with the public interest as herein defined. It is too late in the day to contend that the authority of a regulatory commission does not extend to a consideration of public interests which it may not directly regulate and a conditioning of its orders for their protection. *Interstate Commerce Commission v. Railway Labor Executives Ass'n*, 315 U.S. 373, 62 S.Ct. 717, 86 L.Ed. 904; *United States v. Lowden*, 308 U.S. 225, 60 S.Ct. 248, 84 L.Ed. 208.

Whether the Commission will assert its apparently broad statutory authorization over prices and discriminations is, of course, its own affair, not ours. It is entitled



to its own notion of the 'public interest' and its judgment of policy must prevail. However, where there is ground for thinking that views of this Court may have constrained the Commission to accept the rate-base method of decision and a particular single formula as 'all important' for a rate base, it is appropriate to make clear the reasons why I, at least, would not be so understood. The Commission is free to face up realistically to the nature and peculiarity of the resources in its control, to foster their duration in fixing price, and to consider future interests in addition to those of investors and present consumers. If we return this case it may accept or decline the proffered freedom. This problem presents the Commission an unprecedented opportunity if it will boldly make sound economic considerations, instead of legal and accounting theories, the foundation of federal policy. I would return the case to the Commission and thereby be clearly quit of what now may appear to be some responsibility for perpetrating a shortsighted pattern of natural gas regulation.

U.S. 1944.

Federal Power Commission v. Hope Natural Gas Co.

320 U.S. 591, 51 P.U.R.(NS) 193, 64 S.Ct. 281, 88 L.Ed. 333

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# **Exhibit Seelye Rebuttal-2**

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DEC 31 2008

PUBLIC SERVICE  
COMMISSION

VIA OVERNIGHT MAIL

December 30, 2008

Stephanie Stumbo Executive Director,  
Kentucky Public Service Commission  
211 Sower Boulevard  
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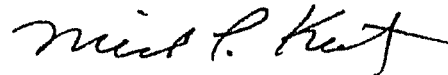
Re: Case No. 2007-00455

Dear Ms. Stumbo:

Please find enclosed the original and twelve (12) copies of the sworn BRIEF OF ALCAN PRIMARY PRODUCTS CORPORATION AND CENTURY ALUMINUM OF KENTUCKY GENERAL PARTNERSHIP in the above-referenced matter.

By copy of this letter, all parties listed on the attached Certificate of Service been served. Please place these documents of file.

Very Truly Yours,



Michael L. Kurtz, Esq.  
BOEHM, KURTZ & LOWRY

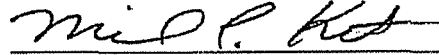
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Attachment

cc: David C. Brown, Esq.  
Certificate of Service

**CERTIFICATE OF SERVICE**

I hereby certify that a copy of the foregoing was served by mailing a true and correct copy, by regular U.S. mail (unless otherwise noted) to all parties on the 30<sup>th</sup> day of December, 2008.



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**COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY**

<b>THE APPLICATIONS OF BIG RIVERS ELECTRIC CORPORATION FOR (I) APPROVAL OF WHOLESAL</b>	:	
<b>SALE TARIFF ADDITIONS FOR BIG RIVERS ELECTRIC CORPORATION, (II)</b>	:	
<b>APPROVAL OF TRANSACTIONS, (III) APPROVAL TO ISSUE EVIDENCES OF INDEBTEDNESS, AND (IV) APPROVAL OF AMENDMENTS TO CONTRACTS; AND OF E.ON U.S., LLC, WESTERN KENTUCKY ENERGY CORP. AND LG&amp;E ENERGY MARKETING) INC. FOR APPROVAL OF TRANSACTIONS</b>	:	<b>Case No. 2007-00455</b>

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**BRIEF SUBMITTED BY CENTURY ALUMINUM OF KENTUCKY  
GENERAL PARTNERSHIP AND  
ALCAN PRIMARY PRODUCTS CORPORATION**

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Century Aluminum of Kentucky General Partnership (“Century”) and Alcan Primary Products Corporation (“Alcan”), backed by their respective parent organizations, Century Aluminum Company and Rio Tinto Alcan, strongly support the Unwind Transaction and urge the Commission to approve the Joint Application, as amended, because it is required by the public interest.

**INTRODUCTION**

The Commission is well aware that without the Unwind, Century and Alcan have limited prospects for operating their Smelters beyond 2010-11 because they would lose a competitively priced source of energy which primarily determines whether a smelter can compete in the

worldwide aluminum market.<sup>1</sup> Professor Paul Coomes of the University of Louisville School of Business explains that a Smelter shutdown has dire economic consequences beyond the loss of Smelter jobs themselves:

“Shutting down the smelting operations would jeopardize the viability of related business activities, both upstream and downstream. Among the supporting industries that would be affected are river barges (that bring in alumina), electricity producers, and the various vendors to the smelting plants. Downstream, the Smelters supply raw aluminum to rolling and extruding mills in the region, which are clustered to support wiring plants, auto parts plants, can factories, and other heavy aluminum users in the region.”<sup>2</sup>

Professor Coomes projects that a shutdown of the Smelters would mean not only a loss of the 1,400 direct Smelters jobs but over 5,000 total jobs and a total of \$193,000,000 in annual payroll and \$16,700,000 in annual tax revenue to state and local government.<sup>3</sup> The economy of the Commonwealth is in no shape to allow this to happen. While the Unwind may entail some risks, those risks pale in comparison to losing the aluminum industry of Western Kentucky.

This brief does not undertake to review the entire record or to comment on the variety of regulatory issues that may need to be addressed in the Commission’s final Order. Suffice it to say the Smelters support Big Rivers and E.ON in all regulatory approvals requested and required to close the transaction. Instead, the Smelters believe it would be most helpful to the Commission to focus this Brief on four core issues:

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<sup>1</sup> Fayne Direct Testimony at p 4; Coomes Direct Testimony Ex 2 at p 1; Hale Direct Testimony at p 2; Authier Direct Testimony at p 2

<sup>2</sup> Coomes Direct Testimony Ex 2 at p 1-2

<sup>3</sup> Coomes Direct Testimony at p 4

1. The Commission must be assured that the Unwind is consistent with the public interest, and that is clearly so from a variety of perspectives.
2. It is important for the Commission to understand how the Smelter contracts help produce rates for Rural customers that will be lower than if the Unwind does not occur.
3. The supplemental testimony of Witness Brevitz deserves little weight because it contains erroneous assumptions leading to erroneous conclusions and because it fails to consider the rate implications if the Unwind does not occur.
4. While the Smelters must take steps to manage their businesses responsibly, they would not enter into this transaction unless they intend to operate in Kentucky for the long term; and this transaction provides them reasonable prospects for doing so.

**I. THE UNWIND TRANSACTION IS THE BEST SOLUTION FOR ALL CONSTITUENTS AND THE COMMONWEALTH OF KENTUCKY AND IS THEREFORE CONSISTENT WITH THE PUBLIC INTEREST**

The legal standard governing the Commission's decision in this case is whether the Unwind transaction is consistent with the public interest. The most relevant statute is KRS 278.218 which concerns the transfer of ownership or control of utility assets. KRS 278.218(1) provides in pertinent part:

“No person shall acquire or transfer ownership of or control, or the right to control, any assets that are owned by a utility . . . without prior approval of the commission . . . .”

In this case the “utility” is Big Rivers which has ownership of the assets and the “Person” transferring control of those assets is Western Kentucky Electric Corp. (“WKE”); hence the transaction is jurisdictional. The legal standard that guides the Commission is KRS 278.218(2):

“(2) The commission shall grant its approval if the transaction is for a proper purpose and is consistent with the public interest.”

If the Commission steps back from the details of the Unwind and looks at the basic building blocks, it can readily see that the transaction is straightforward in design and offers advantages and protections to each of the parties.

- The generating units will be returned to Big Rivers early and in good condition, in 2009 rather than in 2023 when their condition will be uncertain at best.
- The aluminum Smelters will terminate their current contracts with WKE, execute new long-term contracts with Big Rivers/Kenergy, and thus be able to operate and support thousands of jobs beyond 2010-11.
- The employees of WKE who man the units will become employees of Big Rivers. Cash and non-cash compensation, indemnities and post-closing service contracts from E.ON will provide Big Rivers with the resources to operate the units effectively and efficiently upon Closing.
- E.ON will pay Big Rivers total compensation of at least \$755.9 million and the 1.24 TIER provided by the Smelters will re-establish Big Rivers as a financially healthy G&T cooperative for the first time in over twenty-five years, with an equity ratio of 26% and the capacity to refinance its pollution control bonds and incur additional debt when and as needed. This new financial health will allow Big Rivers to better promote economic development in Western Kentucky.
- The exposure of the Rural customers to fuel and environmental costs will be mitigated by two factors: (i) \$327 million in subsidies provided by the Smelters; and (ii) the Economic Reserve of \$157 million.
- Cash paid by E.ON to the Smelters will compensate them for giving up the value of their current contracts through 2010-11 and provide them with multi-year protection against rising fuel costs to allow them to operate well beyond 2010-11 and in turn provide subsidies to the non-Smelter customers.



This is the essence of the Unwind. Although the transaction is complex in its details, the overall picture shows that all parties, including the Commonwealth of Kentucky, are winners

**A. The Public Interest Requires Maintaining the Viability of the Aluminum Industry in Western Kentucky.**

The specter of Western Kentucky's loss of the aluminum smelting industry was first brought to the Commission's attention in 2005 in Administrative Case No. 2005-00090 when the Smelters filed comments pointing out that Kentucky's generation resource planning was unprepared for meeting the Smelter load after 2010-11.<sup>4</sup> The Smelters noted that the wholesale power market had failed to evolve as anticipated when the Lease Agreement was approved in 1998 and offered several options that could be explored. The Smelters appeared in this Administrative Case because the Commission previously recognized the importance of maintaining the aluminum smelting industry. In its April 30, 1998 Order conditionally approving the Lease Agreement, the Commission stated:

“We truly believe that Big Rivers and the Smelters are vital to the economy of western Kentucky and their fortunes have been intertwined for many years. Even though our decisions today sever most of their existing ties, the Smelters' ability to purchase reasonably priced power at fixed costs from LEM is the result of the availability of valuable generating assets on the Big Rivers system.”<sup>5</sup>

In the 2005 Administrative Case the Commission was not asked nor was it in a position to take specific steps to resolve the issue. The Commission clearly signaled, however, its belief that something needed to be done.

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<sup>4</sup> June 8, 2005 Comments of Alcan Primary Products Corporation and Century Aluminum of Kentucky, LLC, Case No 2005-00090

“The issues raised by Alcan and Century are both serious and complex. It is true that competitive energy markets have not evolved as Alcan and Century expected. It appears that the discussion in this case of how the smelter loads will be served beyond the expiration dates of their existing contracts has merely scratched the surface of the issues that could impact how this matter may be resolved. We believe that this issue will require further detailed review by numerous parties, including the Commission, the smelters, Big Rivers, Kenergy, LG&E Energy as lessee of Big Rivers’ generation, and representative of the state and local governments.”<sup>6</sup>

The numerous parties have now done exactly what the Commission envisioned. Everyone recognizes that if Kenergy were required to purchase 100% of the power needed to serve the Smelter load from the wholesale market, in all probability one or both Smelters could not operate economically and would have to close. Closure, as testified to by Professor Coomes, would have a devastating impact on Western Kentucky. As contemplated by the Commission, the Smelters have worked with Big Rivers, Kenergy, Jackson Purchase, Meade County and E.ON for over four years to keep that catastrophe from happening. The parties now need the Commission’s affirmation that the solution, agreed upon by all the transaction parties, is in the public interest. While there may be other ways to retain the aluminum industry presence in Western Kentucky, none has surfaced. The Unwind transaction is the surest way to preserve Smelter operations.

It is true that without the Unwind Big Rivers could sell excess power to the Smelters after 2010-11. Though an incomplete solution, it is a path the Smelters would pursue if there is no Unwind. Big Rivers has modeled the impact on Member rates if it sold only part of its excess

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<sup>5</sup> Application of Big Rivers Electric Corporation and Others for Approval of Transaction, PSC Case No 97-204 Order April 30, 1008 at pp 41-42

<sup>6</sup> Kentucky’s Electric Infrastructure: Present and Future – An Assessment Conducted By The Kentucky Public Service Commission August 22, 2005, p 59, attached as Appendix A to the Order in Administrative Case No 2005 - 00090 dated September 15, 2005

power to the Smelters (200 MW) at the Large Industrial Rate.<sup>7</sup> There are several negatives to that approach. For example, 200 MW would be insufficient to keep both Smelters open, or even one operating at full load. Additionally, a sale of 200 MW at the Large Industrial Rate would result in non-Smelter rates being higher than they would be under the Unwind.<sup>8</sup> Under that approach Big Rivers would have only limited ability to support the Smelters with excess power and that support would create pressure on Member rates well beyond the projected rates under the Unwind.

The Commission should also consider the relatively nominal marginal cost to the Members to enable the aluminum industry to survive and continue to benefit the economy of Western Kentucky. Even before considering a 20% to 25% rate increase discussed below, Big Rivers Redirect Exhibit 4 compares the impact on Member rates of the Unwind versus a no-Unwind scenario in which all excess power is sold off-system rather than to the Smelters (the “arbitrage” case). For the six-year period, 2009 through 2014, the average increase to the Members under the Unwind is \$5.51 per MWh (14.79%). The arbitrage or “best case” scenario for the Members necessarily involves the shutdown of the Smelters, and still reflects an increase in the lesser amount of \$3.57 per MWh (9.6%) or approximately \$4.7 million per year. The choice, therefore, is between shutting down the Smelters and suffering the loss of 5,000 direct and indirect jobs, \$193,000,000 in annual payroll and \$16,700,000 in tax revenue to state and local government in order to “save” \$4.7 million for the Members. Based on the amount of sales to the Rural customers, allowing the Smelters the opportunity to continue operations means an

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<sup>7</sup> Amended Application October 9, 2008, Exhibit 100

<sup>8</sup> Id.

addition of only \$2.00<sup>9</sup> to the monthly bill of the average customer who already enjoys some of the lowest electric rates in the nation.

The incremental cost to Rural ratepayers to help save the aluminum industry and also avoid the market pricing risk inherent in the arbitrage case is minimal. This is why the Members believe the Unwind is in the best interest of ratepayers/owners: to preserve the aluminum industry, to give customers a good price for the electricity they buy, and to avoid continuing legal battles (see Section E, page 15 below).<sup>10</sup> The Boards of Directors of the three Member cooperatives that own Big Rivers are duly elected to represent the interests of the ratepayer/owners, and they voted 25-1 in favor of the Unwind.<sup>11</sup> They believe the Unwind “is in the best interest of our customers.”<sup>12</sup>

In addition to the Smelters and other transaction parties, the Commonwealth of Kentucky also has a large stake in preserving the aluminum industry. State officials devote their life’s work to developing economic engines like the Smelters, and opportunities like this come few and far between. The matter before this Commission is a compelling example of the importance of business retention. It would take years and a considerable amount of good fortune or luck for the Commonwealth to replace the jobs, payroll, income and property tax revenue generated by the Smelters and the upstream and downstream businesses they spawn. We are witnessing today in Frankfort the numbing effects of too little state revenue when compared to the rising costs of education, healthcare, mine safety, retirement funding and many other pressures on the Commonwealth’s General Fund. Preserving the jobs and tax revenues that result from the

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<sup>9</sup> TE Vol II at 51

<sup>10</sup> Supplemental Testimony of Burns E Mercer, p 4

<sup>11</sup> TE, Vol I at 237

<sup>12</sup> TE Vol I at 239

Smelter presence are of utmost concern to the Commonwealth, especially during this recessionary period, and thus in the public interest. Indeed, the Commonwealth's interest in the Unwind is confirmed by the General Assembly's amendment of KRS 279.120 in 2006 to allow for the contingency of Big Rivers exporting the Smelter power without disturbing its legal status as a Kentucky cooperative.

Finally, the Unwind reestablishes jurisdictional control over the generating capacity lost in 1998 which was the price paid for Big Rivers to emerge from bankruptcy. Bringing that capacity back into a healthy Big Rivers with borrowing capacity is the only way Western Kentucky can hope to create economic development because otherwise Big Rivers will have no ability to develop electric infrastructure and keep pace with the rest of the state.<sup>13</sup> Mr. Thompson was candid that if there is no Unwind, WKE will market the power previously sold to the Smelters and seek the maximum price for it in the marketplace. That is not likely to be to the Smelters<sup>14</sup> or, for that matter, any other customer in Kentucky to whom cost based rates are available.

**B. The Unwind Transaction Will Place Big Rivers In a Financially Strong Position which is Consistent with the Public Interest**

Overnight the Unwind will convert Big Rivers from a cash-strapped, transmission company with virtually no borrowing capacity, a negative equity and limited credit capacity to sell off-system, into a financially healthy generation and transmission utility with deep reserves. This will be the first time Big Rivers has attained this level of financial security since the late 1970's. It will position Big Rivers for the future and is in the public interest.

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<sup>13</sup> TE Vol I at 200

At closing E.ON will pay Big Rivers cash and non-cash compensation valued between \$755.9 million<sup>15</sup> and \$842.3 million,<sup>16</sup> depending on how certain asset values are calculated. If Big Rivers can survive without the Unwind, it would resume control of the generating units anyway. But the choice is, should Big Rivers take the units back now in good condition, with a healthy balance sheet and no future liability to WKE, or take them back in 2023 in uncertain condition, owing WKE a Residual Value Payment of \$377 million<sup>17</sup> and owing RUS approximately \$250 million on the ARVP Note.<sup>18</sup> The rather easy answer is to unwind the 1998 Lease Agreement now and reconstitute Big Rivers as a financially sound utility.

It is unlikely that, without the Unwind, Big Rivers can survive and reposition itself to take the units back in 2023 when the Lease Agreement expires. The facts brought out at the hearing are these:

- The June 19, 2008 downgrade of Ambac required Big Rivers to buy out the Bank of America and Philip Morris Capital Corporation leveraged leases at a cost of \$129.4 million before any further participation by E.ON.<sup>19</sup> These payments leave Big Rivers with only about \$12.1 million in cash<sup>20</sup> and a \$15 million line of credit which Mr. Core described as a “drop in the bucket.”<sup>21</sup> Big Rivers now faces immediate capital demands for its share of capital improvements required by the 1998 Lease Agreement, including the likelihood of significant costs imposed by environmental mandates, and a \$13 million note payment to PMCC at the end of 2009.
- Due to the subsequent Ambac downgrade, Big Rivers is paying a penalty interest rate of 18% on \$83.3 million of pollution control bonds. To extract itself from this penalty interest rate, it must refinance the pollution control bond issue after

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<sup>14</sup> TE Vol I at 202-03

<sup>15</sup> Exhibit CWB-15

<sup>16</sup> Revised Exhibit PWT-3

<sup>17</sup> TE Vol II at 140, 147

<sup>18</sup> Big Rivers Response to AG Item 43; TE Vol II at 147

<sup>19</sup> Blackburn Third Supplemental Direct Testimony at p. 10

<sup>20</sup> Exhibit CWB-17

<sup>21</sup> Big Rivers Response to AG Item 43

the Unwind closes. Without the Unwind, refinancing is not feasible.<sup>22</sup> The interest rate differential of 13% between the penalty rate and the 5% rate contained in the financial model<sup>23</sup> increases interest expense by \$10.8 million annually which will diminish the margins Big Rivers could hope to make from off-system sales.

- Big Rivers is unable to meet its capital demands by borrowing from RUS, and, because of its negative net worth, is unable to access the capital markets.<sup>24</sup>
- Big Rivers is unable to fully capitalize on off-system sales with counterparties requiring collateral or other credit resources that Big Rivers cannot offer.<sup>25</sup>

It is fortuitous for Big Rivers that the Unwind transaction can repair the damage caused by Ambac's diminished credit standing. With the Unwind, Big Rivers will receive \$61 million from E.ON representing half of the PMCC buyout cost,<sup>26</sup> it will operate under an Indenture and be able to access the capital markets without existing RUS restrictions, and it will have a 26% equity ratio that will allow it to once again satisfy its capital, operating and public interest obligations with greater facility than would be otherwise possible.

**C. The Unwind Transaction is the Low Cost Solution for Non-Smelter Ratepayers And Is In the Public Interest**

While the Financial Model projects Member rates to increase under the Unwind compared to rates now in effect, the increase will be substantially less than the 20% to 25% increase that by Big Rivers will seek if the Unwind does not take place. Witness Mark Bailey testified that if there is not an Order approving the Unwind by late January, Big Rivers will be forced to file for a rate increase of this magnitude<sup>27</sup> No such rate increase would be required by

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<sup>22</sup> TE Vol II at 84-85.

<sup>23</sup> Financial Model, Section XIII, line 121.

<sup>24</sup> TE Vol II at 24

<sup>25</sup> TE Vol II at 124

<sup>26</sup> Blackburn Third Supplemental Direct Testimony at p 10

<sup>27</sup> TE Vol I at 103

the Unwind.<sup>28</sup> On the other hand, under the Unwind, Rural rates are projected to go up by only 14.79% on average over six years.<sup>29</sup> The Smelters do not take a position on whether such a rate increase would be warranted, but make the obvious point that a 20% to 25% rate increase can be avoided by approving the Unwind and that, generally speaking, lower electric utility rates are more consistent with the public interest than higher rates.

Big Rivers also provided the Commission with information that if it sells 200 megawatts of excess energy to the Smelters at the Large Industrial Rate after 2010-11, Rural rates for the six year period 2009-14 would be 6.9% higher on average than under the Unwind.<sup>30</sup> In fact, the 6.9% (\$2.57 per megawatt hour) differential is understated if Big Rivers were required to sell all its excess capacity to the Smelters in order to preserve as many jobs and as much of the aluminum industry as possible.

Taking into account both no-Unwind factors – the immediate across the board 20% to 25% rate increase and the likelihood of cost-based sales to the Smelters after 2010-11 – it is clear the projected rates to Big Rivers’ non-Smelter customers will be lower with the Unwind than without the Unwind.

**D. Big Rivers Financial Risk Will Be Mitigated By The Upgrade To Its Transmission System So It Can Fully Participate in the Wholesale Power Market When and As Needed**

As part of the Unwind structure, Big Rivers has received a Certificate of Convenience and Necessity in KPSC Case No. 2007-00177 to construct a thirteen-mile transmission line in Ohio County to connect the switchyard at Plant Wilson to its existing 161 kV transmission line

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<sup>28</sup> Big Rivers does not forecast a base rate case under the Unwind until 2017 Exhibit 79 at p 3, line 12

<sup>29</sup> Big Rivers Redirect Exhibit 4

<sup>30</sup> Big Rivers Redirect Exhibit 4



in southern Ohio County. This new transmission facility will provide the capability for Big Rivers to export all 850 megawatts of the Smelter load if smelting production went away.<sup>31</sup> The ability of Big Rivers to fund the cost of the new facility is a direct by-product of the Unwind because it provides Big Rivers with the financial resources to support the project.

The electric utility environment has changed in ten years so the risk to Big Rivers of marketing excess power resulting from Smelter closure has been significantly mitigated since 1998 when Big Rivers last operated its power plants. Since 1998, organized wholesale power markets have developed.<sup>32</sup> The entire Smelter load is less than 1% (0.77%) of the wholesale power transactions in the two major markets (MISO and TVA) to which Big Rivers is interconnected and those markets could absorb the capacity without materially affecting price.<sup>33</sup> Prior to 1998 Big Rivers could not physically export the 850 MW Smelter load, but it is no longer restricted in light of the Phase 2 transmission upgrade.<sup>34</sup> Finally, the Kentucky General Assembly's act to amend KRS 279.120 will allow Big Rivers to remarket the power that otherwise would have been sold to the smelters without jeopardizing its cooperative status.<sup>35</sup>

#### **E. Public Interest Favors A Solution That Avoids Litigation**

The Unwind resolves important contractual and policy disagreements that now exist or are likely to arise among Big Rivers, Kenergy, E ON and the Smelters. With no Unwind there will be disputes between E.ON and Big Rivers over interpretation of the 1998 Lease Agreement and related documents. For example, if there is a carbon tax, Big Rivers faces the same relative

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<sup>31</sup> Blackburn Third Supplemental Direct Testimony at p 58

<sup>32</sup> TE Vol II at 134

<sup>33</sup> Blackburn Third Supplemental Direct Testimony at p 61.

<sup>34</sup> TE Vol II at 135

<sup>35</sup> TE Vol II at 135-6

global warming exposure with or without the Unwind, but Big Rivers' interpretation of the Lease Agreement reduces that exposure if there is a cap and trade system.<sup>36</sup> E.ON has a different view. Mr. Thompson testified there will be disputes on this issue, and accordingly they "will not make it good" for Big Rivers and the Members.<sup>37</sup> Moreover, responding to questions from Vice-Chairman Gardner, Mr. Thompson testified that without the Unwind legal disputes between E.ON and Big Rivers are possible with respect to generating plant conditions and transmission rights, as well as environmental issues.<sup>38</sup>

The Smelters and Big Rivers have differing views on Kenergy's right to access Big Rivers' excess power so Kenergy can fulfill its statutory obligation to serve the Smelters with the lowest cost power.<sup>39</sup> That dispute is rendered moot by the Unwind until 2023, but as part of the Unwind, Big Rivers and the Smelters will undertake to resolve the matter by 2015. Failure to approve the Unwind would place the Commission and the courts of Kentucky squarely in the middle of a critical issue necessary to preserve the Western Kentucky economy. For all practical purposes, the Commission's approval of the Unwind makes the issue go away.

As discussed above, a general base rate case in early 2009 seeking a 20% to 25% rate increase is another major piece of litigation that will be avoided by the Unwind.

For these reasons, the Smelters urge the Commission to approve the Unwind transaction, as filed. The parties have reached agreement after four years of arduous negotiations and that agreement clearly serves the public interest.

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<sup>36</sup> TE Vol. I at 253, 263

<sup>37</sup> TE Vol. I at 201, 226

<sup>38</sup> TE Vol. I at 227-28

<sup>39</sup> TE Vol. II at 55

**II. THE SMELTER CONTRACTS DELICATELY BALANCE THE INTERESTS OF BIG RIVERS, THE MEMBERS AND SMELTERS, PROVIDING SUBSIDIES TO THE MEMBERS WHILE MAINTAINING A COST STRUCTURE UNDER WHICH THE SMELTERS CAN OPERATE**

**A. Smelter Subsidies To The Members Are Substantial**

Extensive negotiations among the Smelters, Members, Big Rivers and E.ON have created a unique but complex contract structure in order to accommodate the interests of the parties. Much of that structure is devoted to preserving the value the Members have under the 1998 transaction. Witness Blackburn calculates the value of the Smelter subsidies to the Members at \$327 million over the life of the contract.<sup>40</sup> The payments that will be made by the Smelters to the Members and Big Rivers include the following:

- The Smelters have agreed to pay a base rate that includes a \$0.25 per megawatt hour premium over the Large Industrial base rate.
- The Smelters have agreed, in addition to a premium over the base rate, to pay an additional charge that will guarantee Big Rivers a 1.24 TIER. This means that if Big Rivers' Net Margin produces a TIER of less than 1.24, the Smelters will pay an additional per megawatt hour charge, subject to the bandwidth, that will produce a 1.24 TIER. The bandwidth ranges from \$12.8 million per year in the early years to \$34.7 million per year in the later years.<sup>41</sup> For example, the Financial Model projects Net Margins in 2011 of only \$100,000 due to higher variable and non-variable fixed O&M costs in that year. Because a 1.24 TIER requires margins of \$13,200,000, the Smelters would pay Big Rivers an

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<sup>40</sup> Blackburn Direct Testimony at p. 12

<sup>41</sup> TE Vol II at 76

additional \$13,100,000.<sup>42</sup> That amount is equal to \$1.79 per megawatt hour, an additional charge per megawatt hour that is within the bandwidth.<sup>43</sup>

- The Smelters have agreed to pay two surcharges
  - ✓ The first surcharge is a fixed \$0.70 per megawatt hour in 2009-11, \$1.00 per megawatt hour in 2012-16, and \$1.40 per megawatt hour in 2017-23. The revenue generated by the surcharge for the benefit of the non-Smelter ratepayers ranges from \$5.1 million in the first three years to \$7.3 million in the middle years to \$10.2 million in the final seven years.
  - ✓ The second surcharge is comprised of a) a fixed \$0.60 per MWh in all years, subject to a \$200,000 monthly credit for the first ninety-six months; and b) an additional \$0.60 per MWh contingent on actual fuel costs exceeding a baseline. The Financial Model shows this surcharge being worth over \$110 million to the Members.<sup>44</sup>
- The Smelters have agreed to permit Big Rivers to take \$75 million of its own funds and create the Economic Reserve for the purpose of mitigating future rate increases to all of the Members' retail customers except the Smelters (the additional E.ON contribution bringing the Economic Reserve to \$157 million) and another \$35 million to create the Transitional Reserve. This \$110 million would otherwise be available to Big Rivers to reduce its debt which would reduce

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<sup>42</sup> While final calculation of the TIER Adjustment Charge is made at the end of each year, the Smelters pay the estimated Tier Adjustment Charge each month, with the monthly amount recalculated on a quarterly basis (cite).

<sup>43</sup> Exhibit 79 at p. 4, line 89

interest expense which would in turn reduce the Smelters' Tier Adjustment Charge. In essence, the Smelters have agreed to pay the interest cost on the amount of the two reserves plus up to an additional 24% of that cost.

In exchange for these subsidies above and beyond what any other customer pays, the Smelters sought the right to take reasonable steps to manage their businesses if Big Rivers' cost profile dramatically changes or if the cyclical price of aluminum should fall to depressed levels or if a plant suffers physical damage. In any of these cases it would be fundamentally unfair to expect the Smelters to be locked into continuing operations without the ability to manage around those developments. For that reason Big Rivers and the Members agreed to certain well defined exceptions to the Smelters' general commitment.

These Smelters' contractual rights, as set forth in the Retail Agreements, are at three levels. Level One allows the Smelters, in a variety of scenarios, to curtail (not terminate) their operations temporarily in order to avoid operating losses that would otherwise jeopardize the life of the remaining plant. The most notable provision is Potline Reduction Sales pursuant to Section 10.3 of the Retail Agreement. This provision permits each Smelter to curtail 115 megawatts, essentially one potline,<sup>44</sup> for up to forty-eight months and to direct Kenergy and Big Rivers to sell the curtailed power. The curtailing Smelter would receive the Net Proceeds from those sales to mitigate the cost of operating the remaining potlines and thereby prevent a total closure of the Smelter. Similarly, pursuant to Section 10.2 of the Retail Agreement, if a Smelter under certain defined circumstances experiences damage to the Smelter that prevents normal

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<sup>44</sup> TE Vol II at 75

<sup>45</sup> 20% of Century's production and 33% of Alcan's

smelting operations, the Smelter's power will be sold off-system and the Smelter will receive the Net Proceeds for as long as nine months until plant operations can be restored.

Level Two allows a Smelter to shut down more than one potline, even total operations, but not terminate the Agreement. In such event the Smelter directs Kenergy and Big Rivers to sell the unused power as Surplus Sales pursuant to Section 10.1 of the Agreement and receives a portion of Net Proceeds equal to the contract price of power. Net Proceeds above the contract price are retained by Big Rivers. The purpose of Level Two is to protect the Smelter against a prolonged slump in the economy but without excusing the Smelter from paying the contract price to Big Rivers.

Level Three is the remedy of last resort. If either a curtailment or a temporary cessation of Smelter operations cannot overcome the economic reality of permanent closure, a Smelter may terminate the Retail Agreement but only on one year's notice and not before January 1, 2011.

The Staff has expressed concern that since the Smelters did not agree to a longer lock-in period, the Smelters could exit the Big Rivers' system earlier rather than later and leave Big Rivers as a merchant operator. The Smelters cannot commit to a longer lock-in period. Any attempt to force this change on the Smelters would jeopardize the transaction. Instead, the operating presumption should be that the Smelters will remain in Kentucky long-term for the following reasons:

- Just as Big Rivers maintained positions that were essentially non-negotiable, the right to terminate on one year's notice but no sooner than January 1, 2011 was a core principle for the Smelters throughout the negotiations. The principle is based on need for flexibility so the Smelters can manage their businesses in a changing world and because of the significant subsidies they are making to the system. In

prior years a Smelter could agree to a long-term take-or-pay contract, but at fixed rates. Big Rivers has not been in a position to offer fixed rates or rates based strictly on cost, and the Smelters are not in a position to guarantee rates with these premiums beyond the agreed period.

- The Smelters have a long history of operating in Kentucky and that history includes making operating adjustments when prudently dictated by business conditions. Alcan, for example, was a two line operation from 1994 to 2000.
- Big Rivers is located near plentiful supplies of Illinois basin coal and should be the lowest cost producer of power compared to coal-fired generation serving other Smelters.
- The Smelters have huge investments in their plants and are continuing to make capital improvements that will increase the efficiency of smelting operations.<sup>46</sup> Companies do not lightly make decisions to write off huge investments. Physically, the life of a smelter is fifty to seventy years, and managements know how to live though changing economic conditions and the cyclical nature of commodity prices.<sup>47</sup> The fifth potline at Century is the last smelter facility built in the United States.<sup>48</sup>
- A complete termination of the Retail Agreement and a permanent shut-down of a Smelter is a very expensive proposition.
- Finally, the Smelters' ultimate fate lies as much in the hands of Big Rivers and this Commission as with themselves. Big Rivers has both the power and the responsibility to control its operating and capital costs, to manage budgets in a way so that higher than expected expenses in one area can be offset by expense reductions in others. The Smelters have confidence in Mark Bailey as CEO not to operate Big Rivers with a blank check but to operate judiciously so the Smelters

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<sup>46</sup> TE Vol I at 156-7

<sup>47</sup> TE Vol I at 151

<sup>48</sup> Id

can survive for the long term. The Commission's continuing jurisdiction over the Big Rivers' cost of service provides another level of electric rate protection.

Big Rivers and the Members are not rate-disadvantaged by the closure of a Smelter. With completion of the new transmission facility, Big Rivers will have the capability to export all 850 megawatts if one or both Smelters were to close. While an element of market pricing risk would be involved, the market price of wholesale power is currently projected to be higher at all times than Smelter rates.<sup>49</sup> Additionally, the closure of one Smelter would tend to drive down costs to the remaining Smelter through lower TIER Adjustment charges resulting from more off-system sales. Therefore, if one Smelter were forced to close the likelihood of the other continuing to operate would improve. Finally, based on Big Rivers positive off-system sales history in recent years, the margins it will earn under the Unwind, even with the Smelter subsidies, are actually limited because it can never earn more than a 1.24 TIER. If both Smelters are forced to terminate and go away, so does the 1.24 TIER, and Big Rivers' more robust Net Margins resulting from greater off-system sales should result in lower rates for the Members.

### **III. THE ATTORNEY GENERAL'S TESTIMONY HAS LITTLE VALUE WHEN THE ENTIRE CIRCUMSTANCES OF THE UNWIND ARE CONSIDERED**

The Attorney General witness, David Brevitz, filed direct testimony on April 3, 2008, making a "provisional" recommendation approving the Unwind, then filed supplemental testimony on November 21, 2008 stating that he could not recommend the Commission approve the transaction.<sup>50</sup> On cross-examination Mr. Brevitz stated he did not oppose the transaction.<sup>51</sup>

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<sup>49</sup> Exhibit CWB-19

<sup>50</sup> Brevitz Supplemental Direct Testimony at 4

<sup>51</sup> TE Vol II at 279



Mr. Brevitz listed three primary reasons why he was not able to recommend approval of the Unwind.<sup>52</sup> Each is addressed below.

First, he argued that Rural customers would suffer rate increases substantially greater than those projected at the time his original testimony was filed. The Table on page five of his supplemental testimony purported to show the percentage increases resulting from Unwind, comparing the rates projected in the October 2008 Unwind Financial Model with the “current rates.” As the smelters pointed out on cross-examination, however, Mr. Brevitz had based his analysis on an erroneous assumption that “current rates” include the MRDA credit that expired in August 2008. By failing to recognize that the MRDA credit had expired, Mr. Brevitz understated the current rates and thus overstated the percentage increases resulting from the Unwind. Mr. Brevitz stubbornly refused to concede this obvious computational error.

More importantly, Mr. Brevitz looked at the Unwind in a vacuum and did not compare rural rates in the Unwind to the rural rates in any no-Unwind scenario. Big Rivers Redirect Exhibit 4 shows that the Unwind results in lower rates for the Rural customers if it is assumed that 200 MW of Big Rivers surplus power is sold to the Smelters in an effort to avoid economic calamity in Western Kentucky. Even in the “arbitrage” scenario where all of Big Rivers excess power is sold off-system (at the expense of 5,000 jobs) residential customers only “save” about \$2 per month.<sup>53</sup> Mr. Brevitz’ flawed analysis cannot be the basis for valid public policy of the Commonwealth.

Second, Mr. Brevitz cited the lack of consent by the City of Henderson. The Applicants have represented to the Commission on numerous occasions that the Station Two Agreements

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<sup>52</sup> Brevitz Supplemental Direct Testimony at p. 4

filed as Exhibit 87 to the Amended Application of October 9, 2008 are in the form that the Applicants are willing to execute and that they hope and believe the City of Henderson will ultimately agree to execute, but that any modification of those agreements resulting from negotiations with the City of Henderson would be resubmitted to the Commission so that both the Commission and the Attorney General could consider the impact of such modifications. The concept could not be clearer. The Smelters urge the Commission to approve the Unwind conditioned upon the resolution of issues with the City of Henderson and the Applicants' re-filing representations

The Smelters join Big Rivers and the Members in their concern that a resolution of the City's issues not affect Big Rivers' October 9, 2008 financial projections. In that regard, the Smelters will be adamant that the City of Henderson closing condition as set forth in the Termination Agreement, and any other closing condition of a material nature contained in the Termination Agreement, not be waived or modified at closing without Smelter concurrence. As the financial underwriters of the Big Rivers system, the Smelters are relying on the protections contained in the Termination Agreement as much as Big Rivers.

Third, Mr Brevitz cited the fact that the Application is incomplete since many closing conditions still exist. This is a classic "chicken and egg" problem. Without Commission approval, the transaction cannot close, but in order for the other closing conditions to be satisfied, the Commission must act first. The simple answer is this. The Commission should approve the Unwind contingent on all of the closing conditions being satisfied. This transaction should not die because of the Commission's failure to act

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<sup>53</sup> TE Vol II at 51

We also note a fundamental inconsistency between Mr. Brevitz' position of neither supporting nor opposing the Unwind and the legal position of the Attorney General. In its April 17, 2008 response to Staff Item 1, the Attorney General described in compelling detail the dire consequences that would result if the Unwind does not occur.

“In this proceeding, the record is replete with evidence that . . . there are grave concerns about BREC's ongoing financial viability in the event one or both smelters leave the Commonwealth; . . . and, most importantly, that without the unwind transaction "the worst that can happen is BREC is obliterated through bankruptcy due to its inability to respond to some unanticipated financial and/or legal event." Thus, there is evidence of a clear threat to the continuation of utility service at reasonable rates. . . . Without these contracts (or mechanisms / treatments, as variously referred to), it is highly doubtful that BREC could once again become a viable utility.”

Mr. Brevitz' testimony in refusing to consider the consequences if there is no Unwind is at odds with the Attorney General's fear that a second bankruptcy may be imminent for Big Rivers if the Unwind is not supported.

#### **IV. THE SMELTERS INTEND TO DO BUSINESS IN KENTUCKY FOR THE LONG TERM**

There is nothing guaranteed in this world, and that is universally true for businesses producing a worldwide commodity such as aluminum. That reality prompted Witness Henry Fayne to testify that the Smelters are “cautiously optimistic” that Big Rivers' rates will be affordable for the long term<sup>54</sup> The caution is driven by experience but, on the other hand, the Smelters continue to believe they can sustain operations for the long term and would not otherwise enter into this transaction notwithstanding the current market price of aluminum. As Mr. Fayne stated on cross-examination:

“The important issue here is to recognize that aluminum is cyclical. These companies have all survived circumstances in the ‘80’s or ‘90’s where the aluminum price bottomed out where they struggled through a brief period of time. This is an issue of long-term outlook and what the expectation is around the outlook around aluminum, which is the only reason that we could support going forward with this transaction, and both companies have looked at this transaction under the current circumstances and with the long-term outlook and believe they have a reasonable opportunity to continue to survive.”<sup>55</sup>

The same pressures that are causing a recession in the global economy should also impact the cost profile of Big Rivers by reducing the cost of raw materials such as fuel and reagent as well as steel and labor which comprise the significant portion of its capital expenditures. The Smelters also have contract alternatives, as described on pages 17-18 above, that give them an opportunity to mitigate costs by causing Big Rivers and Kenergy to sell certain of the Smelters’ energy into the wholesale market. Big Rivers and the Smelters have also introduced the concept of a Coordinating Committee which, with representatives of the Members, will review annual operating and capital budgets, criteria for evaluating maintenance programs, depreciation studies, the timing and terms of refinancing debt, fuel procurement, load forecasts and other activities.<sup>56</sup> The Members and Smelters have a common interest in maintaining costs as low as possible consistent with reliability, and the Smelters have high expectations that Big Rivers will carry out its commitment to making the Coordinating Committee a useful and important interface between the Smelters and the Big Rivers Board of Directors.

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<sup>54</sup> Fayne Supplemental Testimony, p. 3

<sup>55</sup> TE Vol II at 174. As the Commission may be aware, Century Aluminum, in response to the significant decline in aluminum prices, announced its plans to reduce production at its Ravenswood Plant in West Virginia effective December 20, 2008 and issued a WARN notice indicating that it might shut down the plant in 60 days. The Company is working with State officials and its various suppliers to try to find a solution to permit continued operations. The Company believes that the long term fundamentals of the aluminum market would support the operation of the Ravenswood Plant over the long term. The Ravenswood Plant is an older, smaller, less efficient, and higher-cost facility than the Hawesville Plant.

<sup>56</sup> Coordination Agreement, section 4

## CONCLUSION

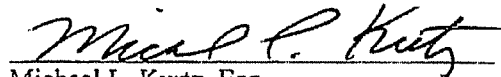
The Unwind is both a delicate and sensible balance among Big Rivers, the Smelters and the Members and is made possible by significant funding from E.ON.<sup>57</sup> E.ON is making these funds available to avoid future losses under the status quo. Fortunately, Big Rivers will be spared these losses once it resumes control of the units because of the Smelter subsidies, the willingness of the rural customers to pay marginally higher rates to avoid future risk, the willingness of the Smelters to pay higher rates to secure their future, the benefit of the new transmission facility and the E.ON funds themselves. This is an opportunity of enormous upside and almost no downside.

The Smelters therefore urge the Commission to strongly endorse the Unwind which will move it closer to reality. The Commission's strong endorsement will send a signal to the rating agencies that the Commission stands behind the restructured Big Rivers and will help resolve remaining issues and contingencies that are necessary to close the transaction.

Respectively Submitted,



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<sup>57</sup> Confidential TE at 7

**CERTIFICATE OF SERVICE**

I hereby certify that a true copy of the foregoing Post-Hearing Brief was served via U.S. mail, first-class, postage prepaid, this 3<sup>rd</sup> day of December, 2008, upon the following persons:

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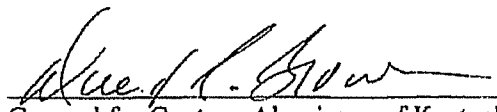
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# Exhibit Seelye Rebuttal-3

**PUBLIC SERVICE COMMISSION  
OF WEST VIRGINIA  
CHARLESTON**

**CASE NO. 10-0699-E-42T**

**APPALACHIAN POWER COMPANY AND  
WHEELING POWER COMPANY, both dba  
AMERICAN ELECTRIC POWER**

**Rule 42T Application to Increase Electric Rates and Charges**

**DIRECT TESTIMONY  
AND EXHIBITS  
OF  
STEPHEN J. BARON**

**ON BEHALF OF  
THE WEST VIRGINIA ENERGY USERS GROUP**

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

**NOVEMBER 2010**



- 1           •     **The Companies' proposal to implement a TRAC should be rejected.**  
2           **There has been no evidence presented by the Companies to support an**  
3           **automatic adjustment clause to recover PJM transmission costs. Absent**  
4           **a showing of the need for such a rider, transmission costs should**  
5           **continue to be recovered through base rate proceedings, at which time all**  
6           **of the Companies' revenues can be evaluated.**  
7  
8           •     **The Companies' proposal to recover from West Virginia ratepayers**  
9           **100% of the costs associated with the Mountaineer CCS project is not**  
10          **reasonable. These costs are associated with a demonstration project that**  
11          **is designed to provide information that would potentially benefit the**  
12          **entire AEP system. WVEUG recommends that these costs be disallowed**  
13          **in this rate case. In the alternative, the Mountaineer CCS costs should**  
14          **be allocated among all of the AEP Companies (both AEP-East and AEP-**  
15          **West Companies), and only APCo West Virginia's share of this amount**  
16          **should be recoverable in this rate case.**  
17

18           **II.     ALLOCATION OF THE REVENUE INCREASE TO RATE CLASSES**  
19

20          **Q.     Have you reviewed the Companies' revised class cost of service study filed in**  
21           **this case?**

22          **A.     Yes. The Companies have filed a 12 CP class cost of service study ("CCOSS") to**  
23           **support its proposed allocation of the authorized revenue increase in this case. As**  
24           **discussed by the Companies' witness Larry Foust, production and transmission plant**  
25           **and expenses are allocated based on the class contribution to the 12 monthly**  
26           **coincident demands of the system. For distribution plant and expenses, costs are**  
27           **classified as either demand or customer related. Primary demand costs are allocated**  
28           **on the contribution to 12 CP demand on the primary system, while secondary**  
29           **facilities are allocated based on class maximum demand and the sum of individual**  
30           **class demands.**

1       **Q.    Do you believe that the Companies' CCOSS is a reasonable basis to support an**  
2       **allocation of the authorized revenue increase in this case?**

3       A.    Yes, as it relates to a base revenue requirement increase.  Though I would generally  
4       support a "minimum distribution system" methodology for classifying distribution  
5       costs between demand related and customer related costs, the Companies' filed 12 CP  
6       CCOSS appears to be a reasonable basis to assess the actual and relative rates of  
7       return produced by current rates for each rate class.  Based on my experience, had the  
8       Companies used a minimum distribution system classification methodology (as  
9       discussed in the NARUC Electric Utility Cost Allocation Manual), the results of the  
10      class cost of service study would likely show lower relative rates of return at present  
11      rates for residential and small commercial customers and higher relative rates of  
12      return for large industrial customers, when compared to the results shown in the  
13      Companies' study.  Nonetheless, the Companies' 12 CP CCOSS is reasonable and  
14      can be relied on in this case to allocate the authorized increase to rate classes and  
15      reduce current class rate subsidies.

16  
17      **Q.    What does the Companies' CCOSS show with regard to class rates of return**  
18      **and relative rates of return?**

19      A.    Table 1 below summarizes the cost of service results developed by Mr. Foust.  The  
20      key conclusion from this table is that the residential class, which comprises 43% of  
21      the Companies' West Virginia retail revenues, is currently earning a rate of return on  
22      investment of 1.51%.  The average rate of return of all retail customers currently is  
23      3.27% under the Companies' analysis.  The result is that the residential class has a

**PUBLIC SERVICE COMMISSION  
OF WEST VIRGINIA  
CHARLESTON**

**CASE NO. 09-1352-E-42T**

**MONONGAHELA POWER COMPANY  
AND THE POTOMAC EDISON COMPANY,  
DBA ALLEGHENY POWER**

**Rule 42T Tariff Filing to Increase Electric Rates and Charges**

**DIRECT TESTIMONY  
AND EXHIBITS  
OF  
STEPHEN J. BARON**

**ON BEHALF OF  
THE WEST VIRGINIA ENERGY USERS GROUP**

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

**MARCH 2010**



1 Q. Have you made a correction to the Companies' cost of service study to properly  
2 match the energy and demand allocation factors with the adjusted revenues for  
3 Rate Schedule P/LP?

4 A. Yes. Baron Exhibit\_\_ (SJB-2) shows the development of adjusted energy and demand  
5 allocation factors that reflect the assumed 17% energy reduction and 9.6% demand  
6 reduction assumed by the Companies in their \$3.3 million revenue adjustment to Rate  
7 Schedule P/LP. Page 1 of 2 of the exhibit is a copy of "Mon Power workpaper WP-7,"  
8 which develops the \$3.3 million revenue adjustment. Page 2 of 2 shows the adjusted  
9 Rate Schedule P/LP kWh energy and kW demand and the revised energy and demand  
10 allocation factors that should be used in the class cost of service study.

11

12 Q. Have you revised the Companies' class cost of service study to correct the  
13 mismatch?

14 A. Yes. Baron Exhibit\_\_ (SJB-3) summarizes the corrected class cost of service study that  
15 corrects the mismatch between Rate Schedule P/LP revenues and allocation factors.  
16 No other changes have been made to the Companies' study except for the corrected  
17 energy and demand allocation factors. Table 1 summarizes the corrected rate schedule  
18 rates of return and indexed rates of return. For comparison, I have also included the  
19 results of the Companies' filed "going-forward" study. As can be seen, the indexed rate  
20 of return for Rate Schedule P/LP is now 0.93, compared to the Companies' filed study  
21 that showed an indexed rate of return of 0.54. This is a significant correction. Based