

BEFORE THE COMMONWEALTH OF KENTUCKY

PUBLIC SERVICE COMMISSION

In the Matter of:

Big Rivers Electric Corporation Notice of)
Changes in Rates and Tariffs For Wholesale)
Electric Service and a Financial Workout Plan)

CASE NO. 9613

Consolidated with

National-Southwire Aluminum Company,)
Complainant)
v.)
Big Rivers Electric Corporation,)
Defendant)

CASE NO. 9437

TESTIMONY AND EXHIBITS

OF

LANE KOLLEN

October 1986

Kennedy and Associates
Atlanta, Georgia

1 KENTUCKY PUBLIC SERVICE COMMISSION

2 CASE NOS. 9613 AND 9437

3 TESTIMONY OF LANE KOLLEN

4

5

6 Q. Please state your name and address.

7

8 A. Lane Kollen, Suite A-1220, 1150 Hammond Drive, Atlanta, Georgia 30328.

9

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

11

12 A. I am a utility rate and planning consultant holding the position of Manager,
13 Financial Consulting with the firm of Kennedy and Associates.

14

15 Q. Would you please describe your education and professional experience?

16

17 A. Yes. I received my Bachelor of Business Administration with honors in
18 Accounting from the University of Toledo. I also received a Master of Business
19 Administration from the University of Toledo. I am a Certified Management
20 Accountant (CMA) and a Certified Public Accountant (CPA).

21

22 I began my professional career with The Toledo Edison Company in 1976 in the
23 Budget and Accounting Reports Section of the Accounting Division. I assisted
24 in preparing the company's operating budgets, management financial and
25 operating reports, and financial reports to the SEC (10-K, 10-Q), the FERC
26 (Form 1 and others), state regulatory agencies, shareholders (quarterly and
27 annual reports) and others.

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In 1978, I was promoted to the Tax Department where I conducted tax research, prepared schedules supporting federal, state and local tax returns, developed tax, plant and depreciation related support for the company's rate cases, responded to tax related audit requests, and prepared tax, plant and depreciation related schedules for management reports, budgets, and forecasts. I also performed extensive depreciation analysis with the consulting firm of Gilbert and Associates.

In late 1979, I was promoted to the Auditing Department where I assisted in and conducted numerous audits, primarily operational in nature. I was involved in audits of nuclear and coal plant construction and operating records.

In 1980, I transferred to the Corporate Planning Department and was later promoted to Financial Planning Supervisor. In this capacity, I was responsible for computer modeling and the financial and economic evaluation of the company's strategic plans. I was responsible for the preparation of the capital budget, various forecast filings with regulatory agencies, and assistance in rate and other strategy formulation. I utilized the strategic planning model PROSCREEN II and other computer systems to evaluate capacity swaps, sales, sale/leasebacks, cancellations, write-offs, unit power sales, and long term system sales, among other strategic options.

In 1983, I joined the consulting group at Energy Management Associates. I

1 specialized in utility finance, financial modeling and utility accounting
2 issues. I also directed consulting and software projects utilizing PROSCREEN
3 II and other proprietary software products to support utility rate case
4 filings, budgets, internal management and external reporting, and strategic and
5 financial analyses. I have worked directly with electric cooperative
6 management and modeled and prepared financial analyses of several electric
7 cooperatives.

8
9 In early 1986, I joined Kennedy and Associates where I specialize in revenue
10 requirements analyses, taxes, evaluation of rate and financial impacts of
11 traditional and non-traditional ratemaking and other utility strategic and
12 financial issues. I have presented testimony before the Louisiana Public
13 Service Commission concerning the financial condition of Gulf States Utilities.

14
15 I have developed and presented papers on utility rate and tax issues at Energy
16 Management Associates and ELCON industry conferences. Most recently, I
17 presented a paper at the 1986 ELCON Annual Seminar entitled "The Effect of the
18 1986 Tax Act on Utility Consumers".

19
20 **Q. Would you please summarize your testimony?**

21
22 **A.** Yes. There are three areas which I will discuss. First, I will identify and
23 exclude from the Company's test year the costs of service related to the Wilson
24 Plant. According to Mr. Falkenberg's testimony, the Wilson Plant does not meet

1 the regulatory standard of "used and useful" and should, therefore, be excluded
2 from recognition in rates.

3
4 Second, I will discuss the further impact on revenue requirements of the
5 assignment of MEAM and City of Cleveland, Ohio sales to the Existing System.
6 Mr. Falkenberg also supports this adjustment in his testimony.

7
8 Third, I will discuss the accounting and ratemaking implications of the
9 Company's proposed Workout and Deferral Plan.

10
11 **Q. Would you please summarize your conclusions?**

12
13 **A.** Yes. My conclusions parallel the summary of my testimony just presented.

14
15 First, I have concluded that the exclusion of the Wilson Plant and off-system
16 sales from test year revenue requirements would result in a non-fuel rate
17 reduction of \$27.1 million from calendar year 1985 levels.

18
19 Second, I have concluded that the non-fuel revenue requirement is further
20 reduced by \$9.1 million for a total of \$36.2 million as a result of off-system
21 sales to MEAM and the City of Cleveland which can be made from the Existing
22 System despite the exclusion of the Wilson Plant from the system.

23
24 Third, I have concluded that the interest deferral mechanism as proposed under

1 the Workout Plan is undesirable because it places the entire Company on a
2 guaranteed cost recovery mechanism similar in most respects to a fuel
3 adjustment clause. The BREC rate request cannot be justified on the basis of
4 the financial Workout Plan as it has been explained by the Company.

5
6 **Q. Have you prepared exhibits detailing your calculations leading to your first**
7 **conclusion that non-fuel rates could be reduced by \$ 27.1 million from calendar**
8 **year 1985 levels by excluding the Wilson Plant from recovery?**

9
10 **A. Yes. My first conclusion is supported by Exhibits LK-1, LK-3, LK-4, LK-5, LK-6**
11 **and LK-7. The first exhibit, Exhibit LK-1 incorporates all adjustments I have**
12 **made to the BREC Exhibit 5 pages 1 through 3 proforma amounts before their**
13 **proposed rate increase and before the deferrals proposed under their Workout**
14 **Plan. Exhibits LK-3, LK-4, LK-5 and LK-6 were prepared in support of specific**
15 **adjustments on Exhibit LK-1 and will be identified and described as**
16 **appropriate.**

17
18 **Q. Please identify the adjustments you have made to exclude the Wilson Plant from**
19 **the Company's proforma revenue requirements.**

20
21 **A. On Exhibit LK-1, I have made adjustments to the following cost of service**
22 **items:**

- 1
- 2 - Fuel Adjustment Clause Revenues
- 3 - Sales to Other Utilities Revenues
- 4 - Purchased Power Expense
- 5 - Fuel Expense
- 6 - Lime and Limestone Expense
- 7 - Other Operating and Maintenance Expense
- 8 - Property Insurance Expense
- 9 - Property Taxes Expense
- 10 - Interest Expense
- 11 - Depreciation Expense

12

13 I have also made adjustments to the following revenue and margin items to
14 provide for a TIER of 1.07, the level allowed in the last BREC case, Docket No.
15 9163.

- 16
- 17 - Demand Revenues
- 18 - Energy Revenues
- 19 - Operating Margins
- 20 - Net Margins

21

22 **Q. Please explain your adjustments on Exhibit LK-1 for the three items "Fuel**
23 **Adjustment Clause" Member Revenues, "Purchased Power" expense and "Fuel**
24 **expense".**

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A. On Exhibit LK-1 I have adjusted purchased power expense and fuel expense to agree with the amounts produced by Kennedy and Associates' production cost model under the assumptions of no Wilson Plant and no off-system sales. The production cost results are provided in Falkenberg Exhibit 7b. The fuel prices and variable O&M data input assumptions are identified on Exhibit LK-3. Fuel prices were developed utilizing the proforma fuel costs and generation presented by the Company in their Exhibit 5, Entry 5, page 1. Mr. Falkenberg of our firm has described the data, other assumptions and modeling techniques in his testimony.

In both Exhibits LK-1 and LK-2, the "Fuel Adjustment Clause" revenues reflect the adjustments made to fuel and purchased energy expense.

Q. On Exhibit LK-1, you have excluded all off-system sales. What purpose does this serve?

A. Exhibit LK-1 supports the first conclusion that I identified earlier in my testimony which states that on the basis of the Existing System (without recovery of the Wilson Plant related costs) there would be a rate reduction even without taking into account off-system sales. This is why off-system sales are excluded on this exhibit.

1 Q. How did you develop your adjustment to "Lime and Limestone" expenses?

2
3 A. I simply added the amounts provided by the Company on Exhibit 5 Entry 9 for the
4 Wilson Plant as follows.

5
6 Limestone \$1,469,201
7 Dolomitic Lime 233,160
8 High Calcium Lime 564,066
9 _____
10 Total \$2,266,427

11
12 Q. What was the basis for your adjustment to Other Operating and Maintenance
13 Expenses?

14
15 A. In Exhibit LK-1, the first adjustment to this expense category was for
16 \$4,674,227, the Company's amount of proformed operation and maintenance for the
17 Wilson Plant. The derivation of the second adjustment is detailed in Exhibit
18 LK-4 and reflects Wilson payroll and benefits costs net of capitalized amounts.
19 The third adjustment reflects changes in variable O&M as a result of our
20 modeling of the Existing System without the Wilson Plant.

21
22 Variable O&M costs were determined by taking the variable portion of O&M costs
23 presented by the Company in their Exhibit 9 page 1, subtracting out lime and
24 limestone costs specifically attributed to the Green and Wilson Plants and

1 subtracting out variable O&M specifically attributable to the Wilson Plant.

2 This remaining variable O&M was then allocated to all generating plants except
3 Wilson on the basis of the Company's proforma generation from their Exhibit 5,
4 Entry 5, page 1. O&M calculations are detailed in Exhibits LK-3, page 3 of 4
5 and LK-5.

6
7 **Q. Please explain your adjustment for property insurance.**

8
9 **A.** This adjustment is to exclude Wilson related property insurance expenses from
10 the test period. The calculation on Exhibit LK-6 is based on an allocated
11 share of the Company's proformed cost of the following three relevant types of
12 insurance as found on BREC Exhibit 5, Entry 17, page 2:

- 13
14 . Property - Fire, Extended Coverage, Vandalism
15 . Special Multi Peril including General Liability
16 . Boiler and Machinery

17
18 **Q. How did you calculate your adjustments for property taxes and depreciation**
19 **expense?**

20
21 **A.** These adjustments reflect exclusion of Wilson Plant related costs. The
22 property tax amount was provided by the Company as Item 7 in response to the
23 Attorney General's Second Data Request.

1 The depreciation expense was developed by the Company in Exhibit 5, Entry 13,
2 page 5.

3
4 **Q. The last of your adjustments on Exhibit LK-1 is for interest on the Wilson**
5 **Plant investment. Please explain how you derived this amount.**

6
7 **A.** The amount of interest on the Wilson Plant investment is detailed on Exhibit
8 LK-6. First, a June 30, 1986 balance of the Wilson Plant and associated 345 KV
9 transmission line investment was developed based on the December 31, 1985
10 balance provided by the Company in their Exhibit 5, Entry 13, page 5. The
11 hypothetical value of a Reid to Coleman 161 KV line was excluded from the
12 Wilson Plant investment. This value was provided by the Company as Item 3 in
13 response to the Attorney General's Second Data Request and represents the value
14 of this 161 KV line which was allowed by the Commission in Docket number 9163.

15
16 Second, a weighted average interest rate to be applied to the Wilson investment
17 was calculated. Only the debt issues related to the Wilson investment were
18 included. Inclusion or exclusion was based on the dates of the debt issues, if
19 non-specific in nature. In general, I assumed that the most recent debt issues
20 supported the Wilson investment.

21
22 Third, the weighted average interest rate was used to calculate an additional
23 half year of capitalized interest which was then used to adjust the December
24 31, 1985 Wilson balance to a June 30, 1986 balance. The weighted average

1 interest rate was then applied to obtain the interest expense associated with
2 the Wilson Plant but excluding the value for a 161 KV line.

3
4 **Q. BREC computes Wilson interest to be \$83 million. Why do your calculations show**
5 **\$90 million in interest attributable to the Wilson unit?**

6
7 **A.** BREC's calculation inappropriately assigns many low cost debt issues to Wilson.
8 Some of these loans carry interest rates as low as 2% and were issued long
9 before Wilson construction began. My calculation conservatively estimates the
10 cost of funds attributable to Wilson construction.

11
12 **Q. Have you developed rate tariffs reflecting the exclusion of the Wilson Plant**
13 **and the exclusion of all off-system sales?**

14
15 **A.** Yes. On Exhibit LK-8A, I develop an energy rate and a demand rate that
16 reflects revenue reductions of \$27.1 million in non-fuel rates and \$8.6 million
17 in fuel rates as indicated on Exhibit LK-1. I have utilized the pro-forma
18 billing units provided by BREC in their Exhibit 4 page 1 and 2.

19
20 **INCLUSION OF MEAM AND CITY OF CLEVELAND SALES**

21
22 **Q. How does Exhibit LK-2 differ from Exhibit LK-1?**

23
24 **A.** Exhibit LK-2 simply takes the final results from Exhibit LK-1 reflecting the

1 exclusion of Wilson items with no off-system sales and incorporates adjustments
2 to reflect sales to MEAM and the City of Cleveland. It also reflects non-fuel
3 revenue adjustments to provide a TIER of 1.07, the last TIER allowed by the
4 Kentucky Commission for Big Rivers.

5
6 Mr. Falkenberg of our firm has testified to the production cost methodology
7 employed. I utilized the production cost model results to adjust "Purchased
8 Power" expense, "Fuel" expense and "Fuel Adjustment Clause" revenue. The
9 production cost model results are provided in Falkenberg Exhibit 7a. Finally,
10 I determined the net margin to generate a 1.07 TIER. I then determined the net
11 change in non-fuel related revenue that was necessary to generate this margin.
12 The breakdown between demand and energy revenue required was developed on
13 Exhibit LK-8B.

14
15 Q. On Exhibit LK-2, you have included off-system sales to MEAM and to the City of
16 Cleveland, Ohio from the Existing System. How did you derive the revenues for
17 these "Sales to Other Utilities" and the associated "Fuel" and "Other Purchased
18 Power" expenses?

19
20 A. The revenue projections for MEAM and City of Cleveland sales were developed by
21 BREC on their Exhibit 5 Entry 4 page 2. The revenue from MEAM was projected at
22 \$15,698,101 for the test period. The revenue from the City of Cleveland was
23 projected at \$5,846,257. The Existing System is sufficient to supply the
24 energy and capacity for these sales as Mr. Falkenberg explains in his

1 testimony.

2
3 On Exhibit LK-2, I have adjusted purchased power expense and fuel expense from
4 Exhibit LK-1 to agree with the amounts produced by Kennedy and Associates
5 production cost model with the assumptions of no Wilson Plant but including the
6 Company's scheduled MEAM and City of Cleveland off-system sales. The net
7 effect of this adjustment is to reduce test year revenue requirements by \$9.1
8 million since the MEAM and City of Cleveland sales increase energy costs by
9 \$12.5 million while generating revenues of \$21.5 million.

10
11 **Q. What can be concluded from Exhibit LK-2?**

12
13 **A.** Revenue requirements excluding Wilson related items and including the sales to
14 MEAM and the City of Cleveland indicate an overcollection of \$36.2 million in
15 non-fuel revenues and \$8.6 million in fuel revenues if existing rate schedules
16 remain in effect. Rates will be in excess of BREC's cost of service and margin
17 requirements if not reduced by this amount.

18
19 **Q. Have you developed rate tariffs reflecting the exclusion of the Wilson Plant**
20 **and the inclusion of off-system sales to MEAM and the City of Cleveland?**

21
22 **A.** Yes. On Exhibit LK-8B, I develop an energy rate and a demand rate that
23 reflects the non-fuel revenue reduction of \$36.2 million and the fuel revenue
24 reduction of \$8.6 million as indicated on Exhibit LK-2. I have utilized the

1 pro-forma billing units provided by BREC in their Exhibit 4 page 1 of 2.

2
3 **Q. Please describe Exhibits LK-9A and LK-9B.**

4
5 A. Exhibit LK-9B summarizes the distribution of revenues for BREC customers under
6 current rates, Kennedy and Associates' proposed rates and BREC's proposed
7 rates. BREC proposes an average increase in rates of 3.6% (-1.7% for NSA, 8.0%
8 for ALCAN and 6.3% for non-aluminum loads). Kennedy and Associates proposes an
9 average reduction in rates of 21.4% (-22.2% for NSA, -19.7% for ALCAN and
10 -22.1% for the remaining sales). These calculations are shown using the
11 billing unit and tariff assumptions contained in BREC Exhibit 4 page 1 of 2.

12
13 Exhibit LK-9A summarizes the revenues associated with the assumptions contained
14 in Exhibit LK-1. Exhibit LK-9B summarizes the revenues associated with the
15 assumptions of LK-2, the case we recommend. These two exhibits correspond to
16 Exhibits LK-8A and LK-8B and simply provide a greater level of detail than the
17 prior two exhibits.

18
19 **ACCOUNTING AND RATE IMPLICATIONS OF PROPOSED WORKOUT PLAN**

20
21 **Q. Please explain the accounting mechanisms proposed by the Company as part of**
22 **their proposed Workout Plan.**

23
24 A. The Company has developed its rate filing and proposed rates to create a

1 projected Net Margin of \$9 million and a TIER of 1.1296. Since the proposed
2 rates do not provide sufficient revenue to generate this level of Margin, BREC
3 has proposed an accounting entry which defers a portion of the interest costs
4 of the Wilson Plant. This accounting entry is very similar to capitalizing
5 interest costs during construction. Recovery of interest costs is delayed and
6 a regulatory asset is created with the expectation that these deferred costs
7 will be recovered through future rate increases.

8
9 **Q. Isn't it possible and indeed likely, that the Company will be able to manage or**
10 **control the amount of interest deferred under this accounting mechanism in**
11 **order to achieve their desired TIER or margin?**

12
13 **A. Yes. If the allowed TIER is considered a given by the Company, they could and**
14 **likely would, under their proposed interest deferral mechanism calculate the**
15 **level of interest deferral in each accounting period necessary to assure the**
16 **attainment of the allowed TIER. The amount of interest deferrral then becomes**
17 **a balancing mechanism, in essence ensuring that increases or decreases in other**
18 **costs from test period levels are absorbed for deferral and future rate relief.**
19 **Adoption of this interest deferral mechanism, because of its interrelationship**
20 **with all of BREC's costs, would place the entire Company on something**
21 **comparable to a fuel recovery mechanism. This is an all win/no lose situation**
22 **for BREC.**

23
24 **Q. Would there be future rate increase requests associated with the proposed**

1 **deferral of interest?**

2

3 A. Certainly. The deferral of interest under the proposed mechanism would create
4 an asset (deferred debit) that the Company would seek to recover through rates
5 in the future. Of course, the Commission could control the timing of the
6 associated rate increases, but the amount of the deferral would be under the
7 control of BREC management as previously discussed. Ultimately, the Company
8 would expect the Commission to raise rates to recover all amounts deferred.

9

10 **Q. Has the Company provided a projection of future rate increases resulting from**
11 **their proposed Workout Plan?**

12

13 A. Not to my knowledge. This underscores the need for caution as a result of the
14 open-ended nature of the interest deferral accounting mechanism. The Company's
15 proposed increase in this docket clearly foreshadows future increases.

16

17 **Q. Please summarize your opposition to the Company's interest deferral accounting**
18 **and rate proposal.**

19

20 A. First, if BREC's proposed deferral mechanism is approved, BREC is guaranteed to
21 always recover it's allowed TIER. This would be analogous to allowing an IOU
22 to book AFUDC whenever it failed to earn its allowed return. Such an approach
23 removes all incentives for a utility to properly manage its costs.

24

1 Second, the acceptance of this proposal by the Commission in this docket may
2 cause it to effectively accept and decide sight unseen a series of future BREC
3 rate increases, the magnitude and timing of which are unknown.

4

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

6

7 **A. Yes, it does.**

Lane Kollen

Lane Kollen

State of Georgia
County of Fulton

Subscribed and sworn to before me, a notary public in and for the State and County
aforesaid.

My commission expires

MY COMMISSION EXPIRES SEPT. 12, 1988

This 21st day of Oct. 1986

Barbara J. Trojanowski
Notary Public

BEFORE THE COMMONWEALTH OF KENTUCKY

PUBLIC SERVICE COMMISSION

In the Matter of:

Big Rivers Electric Corporation Notice of)
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Electric Service and a Financial Workout Plan)

CASE NO. 9613

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Defendant)

CASE NO. 9437

EXHIBITS

OF

LANE KOLLEN

October 1986

Kennedy and Associates
Atlanta, Georgia

KOLLEN EXHIBIT LK-1, PAGE 1 OF 2
 BIG RIVERS ELECTRIC CORPORATION
 PRO FORMA INCOME STATEMENT EXCLUDING WILSON
 TWELVE MONTHS ENDED DECEMBER 31, 1985

ITEM	1985 Actual	BREC		K&A	
		Pro Forma Adjustments	BREC Pro Forma	Adjustments	Pro Forma
Electric Energy Revenues:					
Members:					
Demand	\$77,370,888	\$6,304,425	\$83,675,313		\$83,675,313
Energy	29,354,944	154,702	29,509,646		29,509,646
Base Fuel + Fuel Adjust	101,427,111	453,038	101,880,149	(1) (9,069,399)	92,810,750
Power Factor Penalty	50,369		50,369		50,369
Panama Surcharge	92,872	(92,872)	0		0
Capital. Power from Wilson	(267,610)	267,610	0		0
Total Member Revenue	208,028,574	7,086,903	215,115,477	(9,069,399)	206,046,078
Nonmembers:					
Sales To Other Utilities	72,259,518	19,640,062 (504,905)	91,394,675	(2) (91,394,675)	0
Revenue Capitalized - Wilson Plant	(44,317,542)	44,317,542	0		0
Total Nonmember Revenue	27,941,976	63,452,699	91,394,675	(91,394,675)	0
Other Operating Revenue	53,170		53,170		53,170
Total Operating Revenue	236,023,720	70,539,602	306,563,322	(100,464,074)	206,099,248
Cost Of Electric Service:					
Purchased Power:					
HMP&L Station Two	34,394,594	(430,738)	33,963,856	(3) (1,557,856)	32,406,000
Other Utilities	5,214,884	(569,084)	4,645,800	(4) 144,200	4,790,000
Dispatching	182,750		182,750		182,750
Total Purchased Power	39,792,228	(999,822)	38,792,406	(1,413,656)	37,378,750
Fuel	94,695,192	18,928,735	113,623,927	(5) (54,987,927)	58,636,000
O&M Incl Lime & Limestone	37,772,951	16,793,404	54,566,355	(6) (27,852,262)	26,714,093
Wheeling	103,955	1,008,145	1,112,100		1,112,100
Property Insurance	622,234	1,006,941	1,629,175	(7) (652,493)	976,682

KOLLEN EXHIBIT LK-1, PAGE 2 OF 2
 BIG RIVERS ELECTRIC CORPORATION
 PRO FORMA INCOME STATEMENT EXCLUDING WILSON
 TWELVE MONTHS ENDED DECEMBER 31, 1985

	1985 Actual	BREC Pro Forma Adjustments	BREC Pro Forma	K&A Adjustments	K&A Pro Forma
Regulatory Commission Fees	324,640		324,640		324,640
Property Taxes	2,353,021	1,557,546	3,910,567	(8) (1,495,770)	2,414,797
Interest	39,645,857	76,721,096	116,366,953	(9) (90,866,046)	25,500,907
Depreciation	17,957,417	6,172,363	24,129,780	(10) (5,933,757)	18,196,023
Amortization	250,924	369,728	620,652		620,652
Other Deductions	36,583	(11,458)	25,125		25,125
Total Cost Of Electric Service	233,555,002	121,546,678	355,101,680	(103,201,919)	171,899,761
Operating Margins	2,468,718	(51,007,076)	(48,538,358)	82,737,845	34,199,487
Interest Income	1,040,972		1,040,972		1,040,972
Other Capital Credits And Patronage Allocations	9,633	(9,305)	328		328
Net Margins	3,519,323	(51,016,381)	(47,497,058)	82,737,845	35,240,787
Non-Fuel Revenue Reduction					33,455,724
Net Margin After Reduction					1,785,063
Allowed TIER					1.07
Fuel Revenues Collected	101,427,111		101,880,149		92,810,750
Non-Fuel Revenues Collected	106,869,073		113,235,328		79,779,604
Total Revenues Collected	208,296,184		215,115,477		172,590,354

KOLLEN EXHIBIT LK-2, PAGE 1 OF 2
 BIG RIVERS ELECTRIC CORPORATION
 PRO FORMA INCOME STATEMENT EXCLUDING WILSON AND
 INCLUDING MEAM AND CLEVELAND SALES
 TWELVE MONTHS ENDED DECEMBER 31, 1985

ITEM	K&A Pro Forma Exhibit LK-1	Adjustments MEAM/Cleveland Sales	K&A Pro Forma with Sales
<u>Electric Energy Revenues:</u>			
Members:			
Demand	\$83,675,313		83,675,313
Energy	29,509,646		29,509,646
Base Fuel + Fuel Adjust	92,810,750		92,810,750
Power Factor Penalty	50,369		50,369
Panama Surcharge	0		0
Capital. Power from Wilson	0		0
Total Member Revenue	206,046,078	0	206,046,078
Nonmembers:			
Sales To Other Utilities	0	21,544,358	21,544,358
Revenue Capitalized - Wilson Plant	0		
Total Nonmember Revenue	0	21,544,358	21,544,358
Other Operating Revenue	53,170		53,170
Total Operating Revenue	206,099,248	21,544,358	227,643,606
<u>Cost Of Electric Service:</u>			
Purchased Power:			
HMP&L Station Two	32,406,000	83,000	32,489,000
Other Utilities	4,790,000	317,000	5,107,000
Dispatching	182,750	0	182,750
Total Purchased Power	37,378,750	400,000	37,778,750
Fuel	58,636,000	8,631,000	67,267,000
O&M Incl Lime & Limestone	26,714,093	3,445,000	30,159,093
Wheeling	1,112,100	0	1,112,100
Property Insurance	976,682	0	976,682
Regulatory Commission Fees	324,640	0	324,640

KOLLEN EXHIBIT LK-2, PAGE 2 OF 2
 BIG RIVERS ELECTRIC CORPORATION
 PRO FORMA INCOME STATEMENT EXCLUDING WILSON AND
 INCLUDING MEAM AND CLEVELAND SALES
 TWELVE MONTHS ENDED DECEMBER 31, 1985

	K&A Pro Forma Exhibit LK-1	Adjustments MEAM/Cleveland Sales	K&A Pro Forma with Sales
Property Taxes	2,414,789	0	2,414,789
Interest	25,500,907	0	25,500,907
Depreciation	18,196,023	0	18,196,023
Amortization	620,652	0	620,652
Other Deductions	25,125	0	25,125
Total Cost Of Electric Service	171,899,761	12,476,000	184,375,761
Operating Margins	34,199,487	9,068,358	43,267,845
Interest Income	1,040,972	0	1,040,972
Other Capital Credits And Patronage Allocations	328	0	328
Net Margins	35,240,787	9,068,358	44,309,145
Non-Fuel Revenue Reduction	33,455,724	9,068,358	42,524,082
Net Margin After Reduction	1,785,063		1,785,063
Allowed TIER	1.07		1.07
Fuel Revenues Collected	92,810,750		92,810,750
Non-Fuel Revenues Collected	79,779,604		70,711,246
Total Revenues Collected	172,590,354		163,521,996

KOLLEN EXHIBIT LK-3, PAGE 1 OF 4
 BIG RIVERS ELECTRIC CORPORATION
 PRODUCTION COSTS WITHOUT WILSON AND WITHOUT OFF-SYSTEM SALES

Unit	GWh Generation	Variable Cost (\$/MWh)	Fuel Cost (\$/MWh)	Var Cost (K\$)	Fuel Cost (K\$)	Total Prod Cost (K\$)
=====	=====	=====	=====	=====	=====	=====
Sepa	267				1,443	1,443
Coleman 3	1,141	3.1	12.96	3,538	14,792	18,330
Coleman 2	1,105	3.1	12.96	3,424	14,315	17,739
Coleman 1	1,087	3.1	12.96	3,369	14,084	17,453
HMPL 2s	(266)	3.1	13.01	(825)	(3,460)	(4,285)
HMPL 2	1,143	3.1	13.01	3,545	14,876	18,421
HMPL 1	1,134	3.1	13.01	3,516	14,754	18,270
Green 2	1,059	5.02	11.44	5,315	12,112	17,427
Green 1	240	5.02	11.44	1,205	2,746	3,951
Reid 1	17	3.1	15.64	51	260	311
Reid GT	11			0	327	327
Grid	7			0	128	128
Alum	0					0
System Trans	0			0	0	0
=====	=====	=====	=====	=====	=====	=====
Totals Without Purchases	6667			16,902	58,636	75,538
=====						=====
HMP&L Purchases				6,236	26,170	32,406
=====						=====
Sepa Energy				0	1,443	1,443
Sepa Demand						3,204
Grid						128
Expected Unserved Energy						15
-----						-----
Total Other Purch Power						4,790
=====						=====
Total Fuel, PP, Var O&M						\$112,734
						=====

KOLLEN EXHIBIT LK-3, PAGE 2 OF 4
 BIG RIVERS ELECTRIC CORPORATION
 PRODUCTION COSTS WITHOUT WILSON WITH MEAM AND CLEVELAND OFF-SYSTEM SALES

Unit	GWh Generation	Variable Cost (\$/MWh)	Fuel Cost (\$/MWh)	Var Cost (K\$)	Fuel Cost (K\$)	Total Prod Cost (K\$)
=====	=====	=====	=====	=====	=====	=====
Sepa	267		5.4		1,442	1442
Coleman 3	1,141	3.1	12.96	3,537	14,785	18,322
Coleman 2	1,104	3.1	12.96	3,423	14,308	17,731
Coleman 1	1,086	3.1	12.96	3,367	14,078	17,445
HMPL 2s	(266)	3.1	13.01	(824)	(3,459)	(4,283)
HMPL 2	1,143	3.1	13.01	3,543	14,870	18,413
HMPL 1	1,140	3.1	13.01	3,533	14,826	18,359
Green 2	1,450	5.02	11.44	7,277	16,589	23,866
Green 1	519	5.02	11.44	2,606	5,940	8,546
Reid 1	44	3.1	15.64	135	681	816
Reid GT	30				886	886
Grid	21				401	401
Alum	3				56	56
System Trans	(736)				0	0
=====	=====	=====	=====	=====	=====	=====
Totals without Purchases	7,948			20,347	67,267	87,614
=====						=====
HMP&L Purchases				6,252	26,237	32,489
=====						=====
Sepa Energy						1,442
Sepa Demand						3,204
Grid						401
Alum						56
Expected Unserv Energy						4
-----						-----
Total Other Purch Power						5,107
=====						=====
Total Fuel, FP, Var O&M						\$125,210
=====						=====

KOLLEN EXHIBIT LK-3, PAGE 3 OF 4
 BIG RIVERS ELECTRIC CORPORATION
 VARIABLE O&M FOR DISPATCH

Total Energy Related O&M	\$37,909,834
Wilson Energy Related Expenses	3,775,567
Wilson Lime And Limestone	2,266,427
Green Lime And Limestone	6,413,399

Non Wilson Related O&M Excl Lime & Limestone	\$25,454,441
Non Wilson MWh	8,223,696

System Var O&M Excl Lime & Limestone (\$/Mwh)	\$3.10
	=====
Green Lime And Limestone	\$6,413,399
Green MWh	3,336,091

Green Limestone (\$/MWh)	\$1.92
System Var O&M Excl Lime & Limestone (\$/MWh)	\$3.10

Green Variable O&M Cost (\$/Mwh)	\$5.02
	=====

KOLLEN EXHIBIT LK-3, PAGE 4 OF 4
 BIG RIVERS ELECTRIC CORPORATION
 1985 BREC UNIT DISPATCH COST

Unit	Pro Forma Cost	Pro Forma Generation	Pro Forma Fuel Cost (\$/MWh)	Variable O&M (\$/MWh)	Pro Forma Disp Cost (\$/MWh)
=====	=====	=====	=====	=====	=====
Reid	\$1,101,758	70,440	\$15.64	\$3.10	\$18.74
Coleman	\$37,541,240	2,896,545	\$12.96	\$3.10	\$16.06
Green	\$38,166,985	3,336,091	\$11.44	\$5.02	\$16.46
HMP&L	\$24,990,983	1,920,620	\$13.01	\$3.10	\$16.11
Wilson	\$36,813,944	3,006,343	\$12.25	\$2.01	\$14.26

KOLLEN EXHIBIT LK-4
BIG RIVERS ELECTRIC CORPORATION
WILSON DIRECT LABOR AND OVERHEADS EXPENSE

Net BREC Overheads Expense	\$5,451,644
Add: Construction & HMP&L Overheads	260,838

Total Overheads	5,712,482
Net BREC Direct Labor Expense	24,598,387
Add: Construction & HMP&L Direct Labor	1,188,263

Total Direct Labor	25,786,650
Ratio Of Total Overheads To Total Direct Labor	22.153%
Wilson Direct Labor before Construction Reduct	5,248,860
Wilson Overheads before Construction Reduction	1,162,773
Less: Wilson Construction Reduction	(865,865)

Net Wilson Direct Labor & Overheads Expense	\$5,545,768
	=====

KOLLEN EXHIBIT LK-5
 BIG RIVERS ELECTRIC CORPORATION
 PROFORMED OPERATING & MAINTENANCE EXPENSE

	Total O&M			Variable O&M
BREC Exhibit 5	54,566,355		BREC Exhibit 9	37,909,834
Wilson O&M	(4,674,227)			
Wilson Lime & Limestone	(2,266,427)		Wilson Lime & Limestone	(2,266,427)
Wilson Payroll Tax OH & Direct Labor	(5,545,768)		Other Wilson Variable Costs - Exhibit 9	(3,375,567)
	=====			=====
BREC Total O&M Excluding Wilson	42,079,933		BREC Variable O&M Excluding Wilson	32,267,840

Fixed O&M = Total O&M - Variable O&M
 42,079,933 - 32,267,840 = 9,812,093

Wilson Fixed O&M =
 12,486,422 - 5,641,994 = 6,844,428

No Sale O&M =
 9,812,093 + 16,902,000 = 26,714,093

With Sale O&M =
 9,812,093 + 20,347,000 = 30,159,093

KOLLEN EXHIBIT LK-6
BIG RIVERS ELECTRIC CORPORATION
WILSON INSURANCE COSTS

Property Insurance	\$290,364
Special Multi Peril Including Gen'l Liability	270,856
Boiler And Machinery	433,156

Total	\$994,376
Total Company Plant Investment	\$1,421,146,865
Wilson Plant Investment	932,533,052
Ratio Of Wilson To Total Company Plant Investment	65.62%

Wilson Insurance Expense	\$652,493
	=====

KOLLEN EXHIBIT LK-7
BIG RIVERS ELECTRIC CORPORATION
INTEREST ON THE WILSON PLANT

Note	Amount	Cumulative Amount	Rate	Cumulative Weighted Rate
REA Guaranteed (Loan L-8)	166,491,270	166,491,270	8.870%	8.870%
REA Guaranteed (Loan N-8)	6,451,252	172,942,522	9.875%	8.907%
REA Guaranteed (Loan R-8)	172,305,407	345,247,929	9.006%	8.957%
REA Guaranteed (Loan T-8)	16,667,536	361,915,465	8.909%	8.954%
REA Guaranteed (Loan U-8)	15,811,000	377,726,465	9.370%	8.972%
REA Guaranteed (Loan V-8)	565,646,000	943,372,465	10.223%	9.722%
	943,372,465			
Pollution Control (1983)	58,800,000	1,002,172,465	6.566%	9.537%
Pollution Control (1985)	83,300,000	1,085,472,465	6.588%	9.311%
	1,085,472,465			9.311%

Kennedy And Associates Pro Forma Interest Expense Adjustment

Outstanding Cost Of Wilson Plant at 12/31/85:	939,433,052
Less Cost Of 161 KVa Line	6,900,000
Excludable Wilson Investment at 12/31/85	932,533,052
Composite Interest Rate	9.311%
One Half Year Interest During Construction	43,412,068
Excludable Wilson Investment at 6/30/86:	\$975,945,120
Composite Interest Rate	9.311%
Annualized Wilson Interest	\$90,866,046

KOLLEN EXHIBIT LK-BA
 RATE TARRIFS
 WITHOUT WILSON WITHOUT MEAM & CLEVELAND OFF-SYSTEM SALES

	AMOUNTS	BILLING UNITS	RATE TARRIFS
	-----	-----	-----
ENERGY RELATED EXPENSES:			
Fuel	\$58,636,000		
Variable Operating & Maintenance	16,982,000		
Less: Fuel & Var O&M for Off-System Sales	0		
Energy Related Purchased Power Incl HMP&L	33,992,000		

TOTAL ENERGY RELATED EXPENSES	\$109,530,000	6,788,671	15.8540 MILLS/KWH
CAPACITY RELATED EXPENSES:			
Total Capacity Related Expenses	\$62,369,761		
Add: Operating Margin Requirement	1,785,863		
Less: Off-System Sales Contribution to Demand	0		
Other Operating Revenue	(53,170)		
Interest Income	(1,048,972)		
Other Capital Credits	(328)		

TOTAL CAPACITY RELATED EXPENSES	\$63,060,354	13,351,599	4.7231 \$/KW
TOTAL REVENUES TO BE RECOVERED	\$172,590,354		
	=====		

KOLLEN EXHIBIT LK-88
 RATE TARIFFS
 WITHOUT WILSON WITH MEAM & CLEVELAND OFF-SYSTEM SALES

	AMOUNTS	BILLING UNITS	RATE TARIFFS
ENERGY RELATED EXPENSES:			
Fuel	\$67,267,000		
Variable Operating & Maintenance	20,347,000		
Less: Fuel & Var O&M for Off-System Sales	(12,476,000)		
Energy Related Purchased Power Incl HMP&L	34,392,000		
TOTAL ENERGY RELATED EXPENSES	\$109,530,000	6,908,671	15.8540 MILLS/KWH
CAPACITY RELATED EXPENSES:			
Total Capacity Related Expenses	\$62,369,761		
Add: Operating Margin Requirement	1,785,063		
Less: Off-System Sales Contribution to Demand	(9,068,358)		
Other Operating Revenue	(53,170)		
Interest Income	(1,040,972)		
Other Capital Credits	(328)		
TOTAL CAPACITY RELATED EXPENSES	\$53,991,976	13,351,599	4.0439 \$/KW
TOTAL REVENUES TO BE RECOVERED	\$163,521,976		

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Kollen Exhibit LK-9a
 Distribution of BREC Revenues
 Present vs. Proposed Rates
 Without MEAM and City of Cleveland Sales

	BREC Current Rates		K&A Proposed Rates			BREC Proposed Rates		
	Demand Revenues	Energy Revenues	Demand Revenues	Energy Revenues	% Diff	Demand Revenues	Energy Revenues	% Diff
	(\$/kW)	(\$/mWh)	(\$/kW)	(\$/mWh)		(\$/kW)	(\$/mWh)	
	6.25	18.930	4.7231	15.854		\$7.50	16.7270	
NSA - kW	4140	25878	19556			31054		
NSA - kWh	3000	56790		47562			50181	
NSA - Total		82668		67118	-18.81%		81235	-1.73%
ALCAN - kW	4380	23638	20687			32850		
ALCAN - kWh	1965	37196		31152			32867	
ALCAN - Total		60833		51839	-14.79%		65717	8.03%
Other - kW	4831	27855	22818			36233		
Other - kWh	1944	36796		30817			32513	
Other - Total		64652		53634	-17.04%		68747	6.33%
System - kW	13352	77371	63061			100137		
System - kWh	6909	130782		109530			115561	
System - Total		208153		172591	-17.08%		215698	3.62%

Sources and Notes :

1. Excludes the surcharge and penalty revenues
2. Billing Units Based on BREC Exhibit 4

Kollen Exhibit LK-9b
 Distribution of BREC Revenues
 Present vs. Proposed Rates
 With MEAM and City of Cleveland Sales

	BRE C Current Rates		K&A Proposed Rates			BRE C Proposed Rates		
	Demand Revenues	Energy Revenues	Demand Revenues	Energy Revenues	% Diff	Demand Revenues	Energy Revenues	% Diff
	(\$/kW)	(\$/mWh)	(\$/kW)	(\$/mWh)		(\$/kW)	(\$/mWh)	
	6.25	18.930	4.0439	15.854		\$7.50	16.7270	
NSA - kW	4140	25878	16744			31054		
NSA - kWh	3000	56790		47562			50181	
NSA - Total		82668		64306	-22.21%		81235	-1.73%
ALCAN - kW	4380	23638	17712			32850		
ALCAN - kWh	1965	37196		31152			32867	
ALCAN - Total		60833		48864	-19.68%		65717	8.03%
Other - kW	4831	27855	19536			36233		
Other - kWh	1944	36796		30817			32513	
Other - Total		64652		50353	-22.12%		68747	6.33%
System - kW	13352	77371	53993			100137		
System - kWh	6909	130782		109530			115561	
System - Total		208153		163523	-21.44%		215698	3.62%

Sources and Notes :

1. Excludes the surcharge and penalty revenues
2. Billing Units Based on BRE C Exhibit 4