# CASE NUMBER:

99-354

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

| | | |
|---|---|---|
| BIG RIVERS ELECTRIC CORPORATION'S PURCHASE AND SALES TARIFFS FOR COGENERATORS AND SMALL POWER PRODUCERS | ) ) ) ) | CASE NO. 99-354 |

# O R D E R

This matter arises upon the joint motion of Kenergy Corp. and Meade County Rural Electric Cooperative Corporation (hereinafter referred to as "Petitioners"), filed October 8, 1999, for full intervention. It appears to the Commission that Petitioners have a special interest which is not otherwise adequately represented, and that such intervention is likely to present issues and develop facts that will assist the Commission in fully considering the matter without unduly complicating or disrupting the proceedings. The Commission also recognizes that a procedural schedule was established in this proceeding by Order dated September 28, 1999. The Commission, being otherwise sufficiently advised, finds that Petitioners should be granted full rights of a party in this proceeding accepting the procedural schedule as it now stands.

IT IS HEREBY ORDERED that:

1. The joint motion of Petitioners to intervene is granted.

2. Each Petitioner shall be entitled to the full rights of a party and shall be served with the Commission's Orders and with filed testimony, exhibits, pleadings, correspondence, and all other documents submitted by parties after the date of this Order.

3. Should any Petitioner file documents of any kind with the Commission in the course of these proceedings, said petitioner shall also serve a copy of said documents on all other parties of record.

Done at Frankfort, Kentucky, this 22nd day of October, 1999.

By the Commission

ATTEST:

Executive Director

Big Rivers Electric Corporation

201 Third Street
P.O. Box 24
Henderson, KY 42419-0024
502-827-2561
www.bigrivers.com



October 15, 1999

Ms. Helen Helton
Executive Director
Public Service Commission
730 Schenkel Lane
Frankfort, KY 40601

RE: Big Rivers Electric Corporation
PSC Case No. 99-354

Dear Ms. Helton:

Enclosed are an original and eight copies of the response of Big Rivers Electric Corporation to the data requests contained in the Commission's Order dated October 8, 1999, and the requests of Willamette Industries, Inc. dated October 7, 1999.

I certify that I have served a copy of this letter and attachments on each of the individuals shown on the enclosed service list.

Sincerely,

BIG RIVERS ELECTRIC CORPORATION

David A. Spainhoward

David A. Spainhoward
Vice President
Contract Administration and Regulatory Affairs

pm
Enclosures

c: Service List
Mr. Burns Mercer
Mr. Kelly Nuckols
Mr. Dean Stanley
Frank N. King, Esq.
David Denton, Esq.
Elizabeth Blackford, Esq.

SERVICE LIST
CASE NO. 99-354

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Portland, OR 97201

**Counsel for Willamette Industries, Inc.**

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

**In the Matter of:**

| | | |
|---|---|---|
| **Big Rivers Electric Corporation's Purchase and Sales Tariffs for Cogenerators and Small Power Producers** | **)<br>)<br>)** | **Case No. 99-354** |

# BIG RIVERS ELECTRIC CORPORATION RESPONSE TO THE COMMISSION'S INITIAL REQUEST FOR INFORMATION OCTOBER 8, 1999

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**Items 1-7**

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**October 18, 1999**

BIG RIVERS ELECTRIC CORPORATION
RESPONSE TO THE COMMISSION'S
INITIAL REQUEST FOR INFORMATION OF OCTOBER 8, 1999

CASE NO. 99-354

**Item 1)** Section d(1) of Rate Schedule 8 states that Big Rivers has no avoided capacity costs and, therefore, the capacity purchase rate is zero. This is discussed further at pages 2-3 of the transmittal letter.

a. Explain why it is appropriate for Big Rivers to treat 100 percent of the purchase price under its contract with LG&E Energy Marketing ("LEM") as energy costs when Mr. Frank Graves testified on behalf of Big Rivers in Case No. 97-204 (Case No. 97-204, The Application of Big Rivers Corporation, Louisville Gas and Electric Company, Western Kentucky Energy Corp., Western Kentucky Leasing Corp., and LG&E Station Two, Inc. for Approval of Wholesale Rate Adjustment for Big Rivers Electric Corporation and for Approval of Transaction.) that its post-restructuring variable costs were somewhat artificial due to the "all-energy" nature of the purchase terms of the contract with LEM.

b. Mr. Graves stated that an "artificially large portion of Big Rivers' post-restructuring revenue requirement appears to be variable. Had the deal been struck with a two-part charge to Big Rivers, splitting the demand and energy terms that correspond to fixed and variable plant costs, then Big Rivers would have faced much lower variable costs." Given this testimony, explain why some portion of the energy charges paid to LEM should not be considered to be fixed (capacity) costs for purposes of developing Big Rivers' avoided costs.

c. Mr. Graves also testified that even with the terms of the LEM contract being what they were, that Big Rivers' variable costs were only $15.37 per Megawatt-hour, net of the take-or-pay obligation included in the contract. Explain why this testimony has not been relied upon by Big Rivers in developing its avoided costs.

**Response)** a., b., and c. There is a maximum annual take-or-pay penalty for Big Rivers' failure to take delivery of the minimum power purchase obligation pursuant to the Power Purchase Agreement. Because Big Rivers considers the likelihood of its inability to take delivery of both the minimum hourly and annual power purchase obligation remote, the entire Base Power cost is considered an energy cost. Should Big Rivers choose to replace Base Power with lower-cost third-party energy because it is economic to do so after considering the penalty, if any, such penalty is believed to be a variable cost (energy). The LG&E transaction could have been structured differently, to include a capacity and an energy charge, but it was not. The LEM energy charge <u>is</u> Big Rivers' avoided cost, as described in Rate Schedule 8d.(2)(i). Big Rivers does not pay a capacity charge to LEM, although, as Mr. Graves pointed out, there is a fixed cost component in the LEM price. Mr. Graves' testimony concerning this point is therefore immaterial.

**Witness)** Mark A. Hite

BIG RIVERS ELECTRIC CORPORATION
RESPONSE TO THE COMMISSION'S
INITIAL REQUEST FOR INFORMATION OF OCTOBER 8, 1999

CASE NO. 99-354

**Item 2)** For the period of time that Big Rivers has been purchasing power from LEM provide the approximate fuel cost component of the energy charges that Big Rivers has incurred. If Big Rivers doesn't possess the requested information or cannot obtain the information from LEM, provide Big Rivers' best estimate of the fuel cost component based on its knowledge of: (1) the quality of coal that the Big Rivers' generating units are designed to burn; (2) the operating characteristics of the units; and (3) Big Rivers' knowledge of the prices currently being paid for high sulfur coal by utilities with generating plants in the same region in which Big Rivers operates, including, but not limited to, Tennessee Valley Authority, Owensboro Municipal Utilities, Southern Indiana Gas and Electric Company, and AEP-Indiana.

**Response)** Big Rivers does not possess the requested information but did request the information from Western Kentucky Energy. The response of Western Kentucky Energy to this request is attached. Big Rivers no longer has a fuels department, no longer has a need to gather the information on a continuing basis, and does not have the resources to track fuel cost related information. Consequently, Big Rivers has no information or knowledge concerning the prices currently being paid for high sulfur coal by utilities with generating plants in the same regions in which Big Rivers' generating plants are operated.

**Witness)** David A. Spainhoward

Western Kentucky Energy Corp.
P. O. Box 1518
Henderson, KY 42420
502-844-6000
502-844-6048 FAX

October 14, 1999

David Spainhoward
Big Rivers Electric Corporation
P.O. Box 24
201 Third Street
Henderson, KY 42419

Dear David:

I have reviewed your attached request from the Kentucky Public Service Commission concerning the fuel cost component of the energy provided to Big Rivers. I must decline to provide that information.

As you know, WKE has EWG status. Therefore, we choose to withhold fuel cost information based on the proprietary nature of this information as it pertains to the market competitiveness of the electrical generation industry.

Please feel free to contact me at 270.844.6029 should you want to discuss this matter further.

Sincerely,

Robert F Toeme

Robert F. Toeme
Contract Manager

Attachment
Copy: Deborah D. Dewey; VP Power Operations, WKE
Greg Cantrell; Director Non-Utility Fuel, LG&E Energy Corp.
Bob Erhler; Senior Counsel, LG&E Energy Corp.

A SUBSIDIARY OF LG&E ENERGY.

3

BIG RIVERS ELECTRIC CORPORATION
RESPONSE TO THE COMMISSION'S
INITIAL REQUEST FOR INFORMATION OF OCTOBER 8, 1999

CASE NO. 99-354

**Item 3)** In Case No. 99-360 (Case No. 99-360, The Tariff Filing of Big Rivers Electric Corporation To Revise the Large Industrial Customer Rate Schedule.) presently pending before the Commission, Big Rivers has proposed Expansion Demand and Expansion Energy Rates based on the market cost of power purchased from third-party power suppliers to serve new and expanded loads. Explain why the costs incurred under these power purchase arrangements could not reasonably be recognized as Big Rivers' avoided costs.

**Response)** Pursuant to 807 KAR 5:051, " 'Avoided costs', means incremental costs to an electricity utility of energy or capacity or both which, if not for the purchase from the qualifying facility, the utility would generate itself or purchase from another source" emphasis added. So long as the Big Rivers load is less than or equal to the "maximum hourly purchase amount" as defined in the Power Purchase Agreement (PPA), then Big Rivers will replace energy, otherwise purchased from the qualifying facility at the lesser of the PPA Base Rate or the market price. Big Rivers' current avoided costs are clearly not more than the price it would pay under the PPA, because that is the highest price Big Rivers would pay to meet its load under the PPA, so long as its load does not exceed the maximum hourly purchase amount. Under Section 8(d)(1)-Capacity Purchase Rates, Rate Schedule 8 provides that Big Rivers will determine avoided capacity costs, energy costs, or both for power requirements in excess of those available under the PPA and from SEPA if and when it becomes necessary to procure such additional supplies.

**Witness)** Jack Gaines

4

BIG RIVERS ELECTRIC CORPORATION
RESPONSE TO THE COMMISSION'S
INITIAL REQUEST FOR INFORMATION OF OCTOBER 8, 1999

CASE NO. 99-354

**Item 4)** Explain why an On-peak Maintenance Service rate charged at 110 percent of the price at the time of scheduling of a block of energy obtainable in the futures market is a fair, just, and reasonable rate.

**Response)** The On-peak Maintenance Service rate is charged at the time of scheduling of a block of energy obtainable in the futures market to discourage the scheduling of maintenance during high-cost peak periods. With the 110 percent, Big Rivers is simply attempting to cover its costs of administrative and general expenses, debt service, compensation for the element of risk, and a contribution to TIER to ensure its other ratepayers are not adversely affected.

**Witness)** Jack Gaines

5

**Item 5)** On page six of its transmittal letter, Big Rivers claims that interruptible unscheduled back-up and interruptible scheduled maintenance power will not be made available "given uncertainties involved in such a transaction." Describe these uncertainties and why they prevent Big Rivers from filing a formal tariff for such power.

**Response)** The statement in Big Rivers' submittal letter referred to by the Commission went on to say that Big Rivers would not make interruptible unscheduled back-up and interruptible scheduled maintenance power available "on a formal tariff basis". The reason for this is recognized in the regulation's definition of interruptible service; 807 KAR 5:054, Section 1, paragraph 5, defines interruptible power as "electric energy or capacity supplied by an electric utility subject to interruption by the electric utility under specified conditions". It is not that Big Rivers would not make interruptible service available but would not make it available under this tariff. Big Rivers would be willing to make interruptible service available for a cogenerator or small power producer under "specified conditions" which would fall within the terms of a special contract. Under the PPA, interruption does not create value because PPA power costs the same to Big Rivers whether Big Rivers interrupts a customer or not. If Big Rivers could recognize an economic opportunity to interrupt and arbitrage, Big Rivers would be willing to provide interruptible service. The uncertainties are, therefore, created by the market. We do not believe that one size fits all in this respect and Big Rivers has received no request for this type of interruptible service.

**Witness)** Jack Gaines

BIG RIVERS ELECTRIC CORPORATION
RESPONSE TO THE COMMISSION'S
INITIAL REQUEST FOR INFORMATION OF OCTOBER 8, 1999

CASE NO. 99-354

**Item 6)** Explain why the proposed Excess Demand charge is fair, just, and reasonable.

**Response)** The proposed Excess Demand charge is fair, just, and reasonable. The pricing features were designed to recover Big Rivers' market exposure, both from purchases and lost sales opportunities, and to discourage the use of unscheduled Excess Demand. Excess Demand could have severe financial consequences to Big Rivers and ultimately to its members and their customers. Excess Demand would only occur if a customer incorrectly designates its needs and creates added cost for Big Rivers. Big Rivers would hope that no customer would require the Excess Demand charge.

**Witness)** Jack Gaines

7

BIG RIVERS ELECTRIC CORPORATION
RESPONSE TO THE COMMISSION'S
INITIAL REQUEST FOR INFORMATION OF OCTOBER 8, 1999

CASE NO. 99-354

**Item 7)** Provide a detailed explanation why Supplemental, Unscheduled, and Maintenance charges are "equivalent to the approved rural rates" and not the large customer rates.

**Response)** The Supplemental, Unscheduled, and Maintenance charges are equivalent to the approved rural rates and not the large customer rates because the rural demand rate is lower and more indicative of Big Rivers' fixed cost per KW of billing demand, for this type of service. Additionally, it provides the customer with a lower fixed cost and more incentive to construct the QF. The 20.4 mill energy charge provides an incentive for the customer to restart a QF after an outage while the large industrial customer rate would provide a disincentive as discussed in response to Willamette's initial request for information Item 3.

**Witness)** Jack Gaines

COMMONWEALTH OF KENTUCKY
BEFORE THE
PUBLIC SERVICE COMMISSION OF KENTUCKY

In the Matter of:

| | | |
|---|---|---|
| Big Rivers Electric Corporation's Purchase and Sales Tariffs for Cogenerators and Small Power Producers | ) ) ) | Case No. 99-354 |

# BIG RIVERS ELECTRIC CORPORATION RESPONSE TO WILLAMETTE INDUSTRIES, INC.'S INITIAL REQUEST FOR INFORMATION OF OCTOBER 7, 1999

Items 1-21

October 18, 1999

1

BIG RIVERS ELECTRIC CORPORATION
RESPONSE TO WILLAMETTE INDUSTRIES, INC.'S
INITIAL REQUEST FOR INFORMATION OF OCTOBER 7, 1999

CASE NO. 99-354

**Item 1)** Please provide all workpapers prepared in connection with BREC's proposed Rate Schedule 9.

**Response)** Big Rivers and its consultant determined that utilizing the rates for sales through its Rural Delivery Points best represent the demand and energy charges for Supplementary Demand, Supplementary Energy, Unscheduled Backup Demand, and Maintenance Service in connection with Rate Schedule 9. Those rates were found to be fair, just and reasonable and were approved by the Kentucky Public Service Commission (Commission) in Case 97-204. An explanation of why these rates are appropriate is contained in the submittal letter to the Commission dated July 30, 1999, beginning with page 8.

Once Big Rivers and its consultant determined these rates were appropriate, no further workpapers were required. Attached is a copy of 807 KAR 5:054 Small power production and cogeneration. Section 6, paragraph 5, of this regulation states in part "Rates for sale which are based on accurate data and consistent system costing principles shall not be considered to discriminate against any qualifying facility to the extent that such rates apply to the utility's other customers with similar load or cost-related characteristics." The rates submitted on Rate Schedule 9 are accurate, approved by the Commission for wholesale rates to Big Rivers' member cooperatives, non-discriminatory and should be approved by the Commission in this case.

**Witness)** Jack Gaines

of the building nearest the point at which underground systems enter the property to be served, depending upon whether the utility or the customer owns the underground service lateral.

2. If established utility practice dictates service termination at the customer's property line, the utility shall credit the applicant fifty (50) dollars or the equivalent cost of an overhead service line to the applicant's meter base, whichever is greater.

3. Where established utility practice does not dictate service termination at the customer property line, the utility shall include in its underground plan the furnishing, installation, ownership, and maintenance of the service lateral to the meter base providing the applicant installs in the building adequate electric service entrance capacity to the satisfaction of the utility to assure that the underground service conductors will be adequate to handle present and future load requirements of the building. In this instance the utility will determine the size and type of service lateral conductors and appurtenances to be used in any installation.

4. If, by mutual agreement of the parties, service terminates at some other point on the building or property, the applicant shall pay the full cost of any additional extension required in excess of that provided for in paragraph (g)1, 2 and 3 of this subsection.

(h) When an existing utility-owned supply circuit or service lateral requires replacement or reinforcement due to added loads, etc., the utility at its expense will replace or reinforce it.

(i) Nothing in this administrative regulation shall be construed to prevent any utility from assuming any part of the cost differential of providing underground distribution systems within subdivisions, provided the utility demonstrates to the commission that such practice will not result in increased rates to the general body of rate payers.

(j) The utility shall not be obligated to install any facility within a subdivision until satisfactory arrangements for payment of charges have been completed by the applicant.

(6) Cooperation by applicant. Charges specified in these rules are based on the premise that each applicant will cooperate with the utility in an effort to keep the cost of construction and installation of the underground electric distribution system as low as possible and make satisfactory arrangements for payment of the above charges prior to installation of the facilities.

(7) Construction. All electrical facilities shall be installed and constructed to comply with applicable codes, rules and administrative regulations of the commission.

Section 22. Deviations from Rules. In special cases for good cause shown the commission may permit deviations from these rules. (8 Ky.R. 814; eff. 4-7-82; Am. 16 Ky.R. 2046; 2430; eff. 6-10-90; 17 Ky.R. 2507; eff. 4-4-91.)

**807 KAR 5:046. Prohibition of master metering.**

RELATES TO: KRS Chapter 278

STATUTORY AUTHORITY: KRS 278.010(4)(a), 278.040(3), 278.280(2)

NECESSITY, FUNCTION, AND CONFORMITY: KRS 278.280(2) provides that the commission shall prescribe rules for the performance of any service by any utility. This administrative regulation requires electric utilities to meter new buildings individually pursuant to the federal standard established by Section 113(b)(1) of the Public Utility Regulatory Policies Act of 1978.

Section 1. Definitions. (1) "Dwelling unit" means a structure or that part of a structure which is used or intended to be used as a home, residence or a sleeping place by one (1) or more persons maintaining a common household.

(2) "Multidwelling unit building" means a structure with two (2) or more dwelling units.

(3) "High rise building" means a building with more than four (4) stories.

Section 2. Individual Meters Required. An individual electric meter to record the retail sales of electricity shall be installed for each newly constructed dwelling unit in a nontransient multidwelling unit residential building, a mobile home park, or a commercial building for which the building permit application is made after May 31, 1981.

Section 3. Exclusions. Individual unit metering will not be required for:

(1) Transient multidwelling buildings including, but not limited to hotels, motels, campgrounds, hospitals, nursing homes, convalescent homes, college dormitories, fraternities, sororities, boatdocks, and mobile homes without a permanent foundation and which is not connected to sanitation facilities.

(2) Commercial unit spaces where the commercial unit space requirements are subject to alteration with a change in tenants as evidenced by temporary versus permanent type of wall construction.

(3) Electricity used in central heating, ventilating, and air conditioning systems.

(4) Electricity used in high rise buildings.

Section 4. Complaints. Applicants for electric service who desire master metering of electricity in a building for which master metering is prohibited may make a formal complaint to the commission as provided in 807 KAR 5:001, Section 11. The applicant shall have the burden of proving that the costs of purchasing and installing separate meters in the building are greater than the long-run benefits of individual metering to the consumers of the electricity at the building. (8 Ky.R. 821; eff. 4-7-82.)

**807 KAR 5:051. Electric consumer information.**

RELATES TO: KRS Chapter 278

STATUTORY AUTHORITY: KRS 278.040, 278.280(2)

NECESSITY, FUNCTION, AND CONFORMITY: KRS 278.280(2) provides that the Commission shall prescribe rules for the performance of any service or the furnishing of any commodity by any utility. This administrative regulation requires electric utilities to provide certain information to their consumers pursuant to the federal standard established by Section 113(b)(3) of the Public Utility Regulatory Policies Act of 1978.

Section 1. General. The purpose of this administrative regulation is to require retail electric utilities to provide their consumers with information concerning changes in rate schedules.

Section 2. Rate Schedule Information. Each electric utility shall transmit to each of its consumers a clear and concise explanation of any proposed change in the rate schedule applicable to the consumer.

(1) When an electric utility proposes a change in a rate schedule, the statement explaining it shall be transmitted to each consumer to which the change applies within thirty (30) days after the utility applies for that change or within sixty (60) days in the case of an electric utility which uses a bimonthly billing system.

(2) The statement explaining a proposed rate change may be included with the regular bill. (8 Ky.R. 822; eff. 4-7-82.)

**807 KAR 5:054. Small power production and cogeneration.**

RELATES TO: KRS Chapter 278, Title 18 CFR Part 292.203, 292.204, 292.205, 292.206

STATUTORY AUTHORITY: KRS 278.040(3), Title 18 CFR Part 292.203, 292.204, 292.205, 292.206

NECESSITY, FUNCTION, AND CONFORMITY: Under Title II of the Public Utility Regulatory Policies Act of 1978, the Federal Energy Regulatory Commission (FERC) was required to adopt rules to encourage cogeneration and small power production by requiring electric utilities to sell electricity to qualifying cogeneration and small power production facilities and purchase electricity from such facilities. Section 210(f) of this Act requires the state regulatory authority with jurisdiction over electric utilities to implement the FERC rules. As the state regulatory authority for Kentucky, the Public Service Commission proposes to implement those rules.

Section 1. Definitions. (1) "Avoided costs" means incremental costs to an electric utility of electric energy or capacity or both which, if

Item 1
Page 2 of 4

not for the purchase from the qualifying facility, the utility would generate itself or purchase from another source.

(2) "Back-up power" means electric energy or capacity supplied by an electric utility to replace energy ordinarily generated by a facility's own generation equipment during an unscheduled outage of the facility.

(3) "Cogeneration facility" means equipment used to produce electricity and another form of useful energy which is used for industrial purposes or commercial heating or cooling purposes through sequential use of input energy and which facility meets criteria at Title 18 CFR Part 292.203(b) and 292.205, as published in the Federal Register on March 20, 1980 (45 F.R. 17959).

(4) "Interconnection costs" means the reasonable costs of connection, switching, metering, transmission, distribution, safety provisions and administrative costs incurred by the electric utility directly related to installation and maintenance of physical facilities necessary to permit interconnected operations with a qualifying facility, to the extent those costs are in excess of corresponding costs which the utility would have incurred if it had not engaged in interconnected operations but instead had generated an equivalent amount of electric energy itself or purchased an equivalent amount of electric energy or capacity or both from other sources. Interconnection costs do not include any costs included in calculation of avoided costs.

(5) "Interruptible power" means electric energy or capacity supplied by an electric utility subject to interruption by the electric utility under specified conditions.

(6) "Maintenance power" means electric energy or capacity supplied by an electric utility during scheduled outages of the qualifying facility.

(7) "Purchase" means purchase of electric energy or capacity or both from a qualifying facility by an electric utility.

(8) "Qualifying facility" means a cogeneration facility as defined in this administrative regulation, construction of which was commenced on or after November 9, 1978, or a small power production facility as defined in this administrative regulation, construction or substantial renovation of which was begun on or after November 9, 1978, neither of which is owned in equity interest greater than fifty (50) percent by a person primarily engaged in generation of electric power other than as described in these rules.

(9) "Sale" means sale of electric energy or capacity or both by an electric utility to a qualifying facility.

(10) "Small power production facility" means an arrangement of equipment for the production of electricity with capacity no greater than eighty (80) megawatts, which equipment is located within a one (1) mile radius or, if hydroelectric facilities, on the same impoundment of water, and which equipment is powered at least seventy-five (75) percent by biomass, waste, renewable resources, or any combination thereof and not more than twenty-five (25) percent by coal or oil or natural gas or any combination thereof and which meets criteria at Title 18 CFR Part 292.204 as published in the Federal Register on March 20, 1980 (45 F.R. 17959).

(11) "Supplementary power" means electric energy or capacity supplied by an electric utility, regularly used by a qualifying facility in addition to that which the facility generates itself.

(12) "System emergency" means a condition on a utility's system which may result in imminent significant disruption of service to customers or may imminently endanger life or property.

Section 2. General. This administrative regulation sets forth the manner in which the Public Service Commission will discharge duties conferred upon it by Title II of the Public Utility Regulatory Policies Act of 1978.

Section 3. Applicability. This administrative regulation shall apply to any electric utility, subject to the jurisdiction of the commission, which purchases from or sells to any qualifying facility.

Section 4. Criteria for Qualifying Facility. (1) Criteria for qualification of small power production facilities and cogeneration facilities constructed on or after November 9, 1978, are the same as those adopted by the Federal Energy Regulatory Commission including Title 18 CFR Parts 292.203, 292.204, 292.205, and 292.206 as published in the Federal Register March 20, 1980 (45 F.R. 17959).

(2) The qualifying status of small power production facilities and cogeneration facilities, the construction of which was commenced prior to November 9, 1978, but which were not selling power to the interconnected utility under an existing contract as of November 9, 1978, will be determined under this administrative regulation on a case-by-case basis.

(3) Small power production facilities and cogeneration facilities constructed prior to November 9, 1978, but which were selling power to their interconnected utility under an existing contract on that date will not be considered qualifying facilities. Upon expiration of the power sales contract between a small power production or cogeneration facility and the electric utility, the commission will determine the qualifying status of the facility under this administrative regulation on a case-by-case basis.

Section 5. (1)(a) All electric utilities with annual retail sales greater than 500 million kilowatt hours shall provide data to the commission from which avoided costs may be derived not later than June 30, 1982, and not less often than every two (2) years thereafter unless otherwise determined by the commission.

(b) In the case of a utility required to purchase all of its electricity from a wholesale supplier by contract, the utility shall file the contracts under which its capacity and energy are purchased, in addition to data provided by the supplying utility required by subsection (2) of this section.

(2) Each electric utility as described in subsection (1) of this section shall file with the commission and shall maintain for public inspection the following data:

(a) Estimated avoided cost on the electric utility's system, solely with respect to the energy component, for various levels of purchases from qualifying facilities. Such levels of purchases shall be stated in blocks of not more than 100 megawatts for systems with peak demand of 1,000 megawatts or more, and in blocks equivalent to not more than ten (10) percent of system peak demands for systems with peak demand of less than 1,000 megawatts. Avoided costs shall be stated on a cents per kilowatt-hour basis during daily, seasonal peak and off-peak periods, by year, for the current calendar year, and each of the next five (5) years.

(b) The electric utility's plan for addition of capacity by amount and type, for purchases of firm energy and capacity, and for capacity retirements for each year during the succeeding ten (10) years.

(c) Estimated capacity costs at completion of planned capacity additions and planned capacity firm purchases, on the basis of dollars per kilowatt, and the associated energy cost of each unit, expressed in cents per kilowatt-hour. These costs shall be expressed separately for each individual unit and individual planned firm purchases.

(3)(a) Any data submitted by an electric utility beginning with the scheduled June 30, 1982, data shall be subject to review by the commission.

(b) The electric utility has the burden of proof to justify the data it supplies.

Section 6. Electric Utility Obligations. (1) Each electric utility shall purchase any energy and capacity which is made available from a qualifying facility except as provided in subsections (2) and (3) of this section.

(2) The qualifying facility's right to sell power to the utility shall be curtailed in periods when purchases from qualifying facilities will result in costs greater than those which the utility would incur if it generated an equivalent amount of energy instead of purchasing that energy.

(3) During any system emergency, an electric utility may discontinue:

(a) Purchases from a qualifying facility if such purchases would contribute to such emergency; or

(b) Sales to a qualifying facility if discontinuance is nondiscriminatory.

(4) Any utility which invokes subsection (2) of this section shall provide adequate notice to the qualifying facility. In addition, the commission may require the utility to furnish documentation within ten (10) working days after suspension occurs. If the utility fails to provide adequate notice or incorrectly identifies such a period, it will be required to reimburse the qualifying facility for energy or capacity or both available for delivery on a legally enforceable basis as if that period

had not occurred.

(5) Rates for sale. An electric utility shall sell power to a qualifying facility upon request except as provided in subsection (3)(b) of this section. Rates for sale shall be just and reasonable, in the public interest and nondiscriminatory. Rates for sale which are based on accurate data and consistent system costing principles shall not be considered to discriminate against any qualifying facility to the extent that such rates apply to the utility's other customers with similar load or cost-related characteristics. If a utility provides back-up or supplementary power to a qualifying facility, then costs associated with that capacity reservation are properly recoverable from the qualifying facility.

(6) Obligation to interconnect.

(a) An electric utility is required to make any interconnection with a qualifying facility that is necessary for purchase and sale. Owners of qualifying facilities shall be required to pay for any additional interconnection costs to the extent that those costs are in excess of costs that the electric utility would have incurred if the qualifying facility's output had not been purchased. Payment shall be over a reasonable period of time, and terms of payment shall be a part of the contract between the electric utility and the qualifying facility.

(b) Each electric utility shall offer to operate in parallel with a qualifying facility, provided that the qualifying facility complies with applicable standards established in accordance with Section 7(6) of this administrative regulation.

Section 7. Purchase of Output from Qualifying Facilities. (1) Qualifying facilities shall be permitted the option of either:

(a) Using output of the qualifying facility to supply their power requirements and selling their surplus; or

(b) Simultaneously selling their entire output to the interconnecting utility while purchasing their own requirements from that utility.

(2) Rates for purchase of output of qualifying facility with design capacity of 100 kilowatts or less. Each electric utility shall prepare standard rates for purchases from qualifying facilities with a design capacity of 100 kilowatts or less. These rates shall be just and reasonable to the electric customer of the utility, in the public interest and nondiscriminatory. These rates shall be based on avoided costs after consideration of the factors listed in subsection (5)(a) of this section and shall be subdivided into an energy component and a capacity component.

(a) Rates for power offered on an "as available" basis shall be based on the purchasing utility's avoided energy costs estimated at time of delivery.

(b) Rates for power offered on all legally enforceable obligations shall be based at the option of the qualifying facility on either avoided costs at the time of delivery or avoided costs at the time the legally enforceable obligation is incurred. The capacity component shall be based on supply characteristics of qualifying facilities, and the aggregate capacity value of all 100 kilowatts or less facilities which supply power on a legally enforceable basis.

(3) Electric utilities shall design and offer a standard contract to qualifying facilities with a design capacity of 100 kilowatts or less. This contract shall be subject to commission approval.

(4) Rates for purchase of output of qualifying facility with design capacity over 100 kilowatts. Each electric utility shall provide a standard rate schedule for qualifying facilities with design capacity over 100 kilowatts. The rate schedule shall be based on avoided costs which shall be subdivided into an energy component and a capacity component. These rates shall be used only as the basis for negotiating a final purchase rate with qualifying facilities after proper consideration has been given to factors affecting purchase rates listed in subsection (5)(a) of this section. Negotiated rates shall be just and reasonable to the electric customer of the utility, in the public interest and nondiscriminatory. If the electric utility and qualifying facility cannot agree on the purchase rate, then the commission shall determine the rate after a hearing.

(a) Rates for power offered on an "as available" basis shall be based on the purchasing utility's avoided costs estimated at time of delivery.

(b) Rates for energy or capacity or both offered on a legally enforceable basis shall be based at the option of the qualifying facility on either avoided costs at the time of delivery or avoided costs at the time the legally enforceable obligation is incurred.

(5) Factors affecting rates for purchase for all qualifying facilities. In determining the final purchase rate, the following factors shall be taken into account:

(a) Availability of capacity or energy from a qualifying facility during the system daily and seasonal peak. The utility should consider for each qualifying facility the ability to dispatch, reliability, terms of contract, duration of obligation, termination requirements, ability to coordinate scheduled outages, usefulness of energy and capacity during system emergencies, individual and aggregate value of energy and capacity, and shorter construction lead times associated with cogeneration and small power production.

(b) Ability of the electric utility to avoid costs due to deferral, cancellation, or downsizing of capacity additions, and reduction of fossil fuel use.

(c) Savings or costs resulting from line losses that would not have existed in the absence of purchases from a qualifying facility.

(6) Utility safety and system protection requirements. The qualifying facility shall provide adequate equipment to insure the safety and reliability of interconnected operations. This equipment shall be designed to protect interconnect operations between the qualifying facility and the electric utility grid. If the electric utility and qualifying facility cannot agree, then the qualifying facility may apply to the commission for a determination of adequate system protection.

(7) Additional services to be provided to qualifying facilities. Upon request by a qualifying facility each electric utility shall provide supplementary power, back-up power, maintenance power, and interruptible power. The commission may waive this requirement if the electric utility demonstrates that compliance with it would impair its ability to render adequate service to its other customers or would be unduly burdensome.

(8) Wheeling. The electric utility may wheel power to another utility if the qualifying facility approves. This provision shall not eliminate the responsibility of the interconnected electric utility to purchase power from the qualifying facility if the qualifying facility does not approve the wheeling transaction. The electric utility which agrees to purchase power shall pay to the qualifying facility its avoided cost connected with the transmission of this power adjusted for line losses.

(9) This administrative regulation is not intended to restrict voluntary agreements between qualifying facilities and electric utilities. All contracts between qualifying facilities and electric utilities shall be provided to the commission for its review.

(10) Disputes. The commission's inquiry and determination shall be limited to those parts of a proposed contract which are in dispute. (8 Ky.R. 216; Am. 837; eff. 4-7-82; 16 Ky.R. 1478; 1945; eff. 3-8-90.)

**807 KAR 5:056. Fuel adjustment clause.**

RELATES TO: KRS Chapter 278

STATUTORY AUTHORITY: KRS 278.030(1)

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

Section 1. Fuel Adjustment Clause. Fuel adjustment clauses which are not in conformity with the principles set out below are not in the public interest and may result in suspension of those parts of such rate schedules:

(1) The fuel clause shall provide for periodic adjustment per KWH of sales equal to the difference between the fuel costs per KWH sale in the base period and in the current period according to the following formula:

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

Where F is the expense of fossil fuel in the base (b) and current (m) periods; and S is sales in the base (b) and current (m) periods, all as defined below.

2

**Item 2)** Please provide a full and complete copy of BREC's most recent fully allocated class cost of service study and explain the use to which this study was put.

**Response)** As Willamette is aware, several cost analyses were provided in Case 97-204. However, it is important to note that the Commission developed Big Rivers' large industrial customer rates that it found to be fair, just, and reasonable. Big Rivers has not developed a post-restructuring fully allocated class cost of service study.

**Witness)** Mark A. Hite

3

BIG RIVERS ELECTRIC CORPORATION
RESPONSE TO WILLAMETTE INDUSTRIES, INC.'S
INITIAL REQUEST FOR INFORMATION OF OCTOBER 7, 1999

CASE NO. 99-354

**Item 3)** Please explain the cost basis for each rate included in BREC's proposed Rate Schedule 9.

**Response)** It is Big Rivers' position that the rates for sales through its Rural Delivery Points (Rural Rates) best represent the cost-based demand and energy charges for sales to its Member Cooperatives. The Rural Rates were recently adjudicated with the benefit of filed cost of service studies and fully developed regulatory record and have been found by the Public Service Commission to be fair, just and reasonable for the recovery of Big Rivers' costs. Furthermore, the Rural Rate demand and energy charges of $7.37 and 20.4 mills per kWh are better suited to the types of sales anticipated for Rate Schedule 9 than are the $10.15 demand charge and 13.715 mill per kWh energy charge of the Big Rivers' Large Industrial Customer Rate Schedule 7. The reasons why the Rural Rate demand and energy charges are better suited than the Rate Schedule 7 demand and energy charges are set forth in the Transmittal Letter at page 8. The following summarizes and expands upon those reasons:

a. The Rural Rates are fair, just and reasonable.

b. Because it is lower and more indicative of Big Rivers' fixed cost per kW of billing demand, the $7.37 demand charge is more reasonable than the $10.15 Rate Schedule 7 demand charge for Unscheduled Back-up Demand.

c. The 20.4 mill energy charge more accurately recovers Big Rivers' average variable energy costs under the Power Purchase Agreement (PPA). Big Rivers' cost for energy under the PPA is 18.917 mills per kWh through December 31, 2000, plus losses (19.260 mills grossed up for 1.78 percent transmission losses). By comparison, the Rate Schedule 7 energy charge is 13.715 mills per kWh. Because it is relatively low, the 13.715 mill energy charge would pose a disincentive to a customer to restart a QF after an outage while exposing Big Rivers to a situation requiring it to purchase energy at 18.917 mills (plus losses) and then selling it for 13.715 mills. Incrementally, Big Rivers would lose 5.545 mills on each backup kWh sold for each hour the generator was not restarted.

1. Supplemental Service – The rates are fair, just and reasonable for the recovery of costs for the reasons stated above.

2. Unscheduled Back-up Service – Unscheduled backup demand represents power which must be reserved for the customer by Big Rivers from its power supply and transmission resources. Big Rivers' power supply resources are limited in each hour by the PPA. To the extent that Big Rivers' load is less than its maximum hourly limit per the PPA, Big Rivers can engage in off-system sales transactions at times when market prices exceed the Base Power Rate in the PPA. However, Big Rivers cannot make off-system firm sales of any reserved power because it must be available for the customer at all times. Therefore, reserving power for a certain Member Cooperative load has effectively the same cost impact on Big Rivers as does actually delivering the power. Therefore, the demand rate for firm service of $7.37 is fair, just and reasonable. The energy rate of 20.4 mills per kWh is fair, just and reasonable for the reasons stated above.

3. Maintenance Service - The weekly demand charge for both On-peak (1) and Off-peak Maintenance Demand is one fourth of the $7.37 firm demand charge (Note: Rate Schedule 9 has $1.835 per kW but the correct number should be $1.8435 per kW). Because maintenance demand also reflects reserved power, and because the $7.37 per kW is a 12-month average demand rate which assigns costs across all 12 months, it is reasonable to use the $7.37 firm rate as the basis for both the On-peak and Off-peak demand charges. The energy charge is 20.4 mills for On-peak (1) and Off-peak and is fair, just and reasonable for the recovery of costs for the reasons stated above. The rationale behind On-peak (2) is that On-peak maintenance service should not be encouraged. If maintenance service is scheduled on peak, it could cost Big Rivers far more in lost off system sales opportunity than the revenues it would generate. On-peak

(2) is to discourage the scheduling of maintenance during high cost peak periods or, in the alternative, to provide a better means for Big Rivers to recover costs.

4. Excess Demand – The primary purpose of the pricing features for excess demand is to discourage a customer from intentionally understating its Maximum Unscheduled Capacity to avoid Unscheduled Back-up Demand charges. Furthermore, if Big Rivers has not reserved the capacity, an unscheduled use of Excess Demand could have severe financial consequences to Big Rivers. Thus, the pricing features are designed to recover Big Rivers' market exposure, both from purchases and lost sales opportunities, and to discourage the use of unscheduled Excess Demand.

**Witness)** Jack Gaines

BIG RIVERS ELECTRIC CORPORATION
RESPONSE TO WILLAMETTE INDUSTRIES, INC.'S
INITIAL REQUEST FOR INFORMATION OF OCTOBER 7, 1999

CASE NO. 99-354

**Item 4)** Please provide the following information about BREC's system-wide peak demand.

a. Please identify BREC's monthly system-wide peak demands for the previous five years;

b. For each peak demand identified in response to question 4.a., please identify when the peak occurred;

c. Please furnish a chart or graph showing daily system-wide peaks for the 1998 calendar year and when those peaks occurred;

d. Does BREC anticipate any change in the pattern of system-wide peaks? Please explain your answer.

**Response)** a. and b. The attached listing provides the monthly system-wide peak demands and the day and hour of those occurrences for 1995, 1996, 1997, 1998, and year-to-date 1999. The two aluminum smelters, ALCAN and Southwire, are included in the system-wide demand data through the Big Rivers/LG&E Parties' 25-year lease transaction closing July 1998. The smelters are excluded from August 1998 through the current date.

c. See attached chart of Big Rivers Daily Peaks – 1998 and listing of Big Rivers' Daily Peaks Hour of Occurrence.

d. No. As shown in the attached graph of response 4 c., the magnitude of Big Rivers' load changed in 1998, but the pattern remained essentially the same.

**Witness)** David Crockett and C. William Blackburn

## YEAR: 1995

| MONTH | PEAK DEMAND | DAY (HOUR) |
|---|---|---|
| January | 1062 MW | 5 (7:00) |
| February | 1063 MW | 8 (19:00) |
| March | 1025 MW | 8 (19:00) |
| April | 956 MW | 5 (8:00) |
| May | 984 MW | 14 (20:00) |
| June | 1088 MW | 9 (18:00) |
| July | 1123 MW | 12 (18:00) |
| August | 1166 MW | 18 (16:00) |
| September | 1058 MW | 6 (16:00) |
| October | 957 MW | 2 (20:00) |
| November | 1006 MW | 15 (20:00) |
| December | 1080 MW | 9 (19:00) |

**YEAR: 1996**

| MONTH | PEAK DEMAND | DAY (HOUR) |
| --- | --- | --- |
| January | 1111 MW | 19 (8:00) |
| February | 1154 MW | 3 (9:00) |
| March | 1109 MW | 8 (8:00) |
| April | 1003 MW | 4 (19:00) |
| May | 1091 MW | 24 (16:00) |
| June | 1127 MW | 22 (18:00) |
| July | 1168 MW | 19 (17:00) |
| August | 1134 MW | 21 (18:00) |
| September | 1078 MW | 11 (17:00) |
| October | 967 MW | 1 (20:00) |
| November | 1050 MW | 26 (19:00) |
| December | 1130 MW | 20 (7:00) |

**YEAR: 1997**

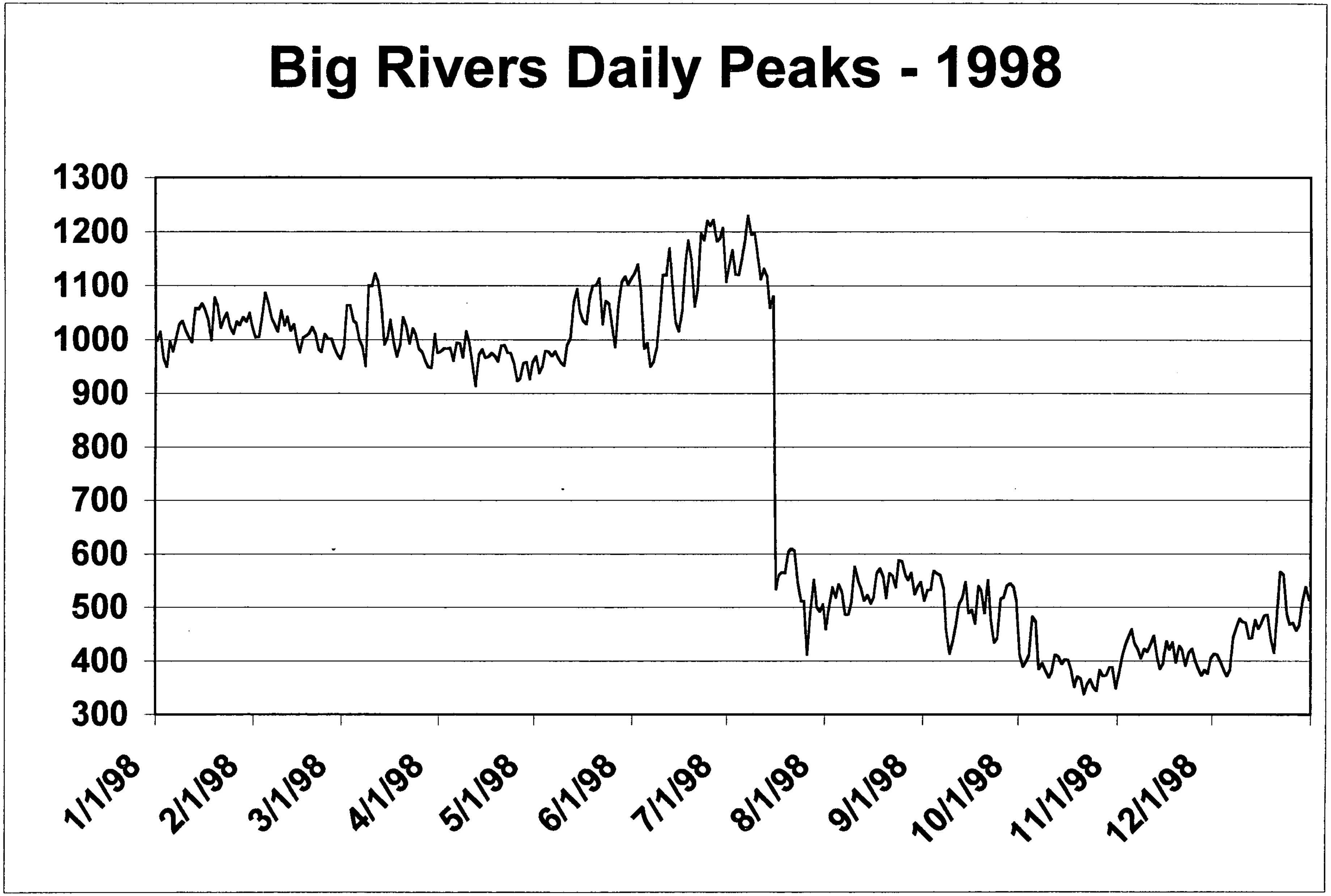
| MONTH | PEAK DEMAND | DAY (HOUR) |
|---|---|---|
| January | 1156 MW | 13 (19:00) |
| February | 1078 MW | 13 (19:00) |
| March | 1025 MW | 5 (20:00) |
| April | 1004 MW | 10 (8:00) |
| May | 984 MW | 29 (21:00) |
| June | 1119 MW | 19 (17:00) |
| July | 1182 MW | 28 (14:00) |
| August | 1159 MW | 4 (15:00) |
| September | 1195 MW | 2 (17:00) |
| October | 1029 MW | 27 (19:00) |
| November | 1079 MW | 17 (7:00) |
| December | 1096 MW | 8 (18:00) |

**YEAR: 1998**

| MONTH | PEAK DEMAND | DAY (HOUR) |
|---|---|---|
| January | 1078 MW | 19 (20:00) |
| February | 1088 MW | 4 (19:00) |
| March | 1123 MW | 11 (19:00) |
| April | 1016 MW | 9 (21:00) |
| May | 1117 MW | 29 (14:00) |
| June | 1222 MW | 26 (16:00) |
| July | 1237 MW | 21 (17:00) |
| August | 600 MW | 24 (18:00) |
| September | 580 MW | 4 (16:00) |
| October | 493 MW | 5 (20:00) |
| November | 468 MW | 5 (19:00) |
| December | 496 MW | 22 (15:00) |

## YEAR: 1999

| MONTH | PEAK DEMAND | DAY (HOUR) |
|---|---|---|
| January | 578 MW | 4 (20:00) |
| February | 500 MW | 22 (7:00) |
| March | 495 MW | 10 (19:00) |
| April | 434 MW | 15 (21:00) |
| May | 467 MW | 17 (16:00) |
| June | 589 MW | 10 (18:00) |
| July | 664 MW | 29 (16:00) |
| August | 617 MW | 13 (17:00) |
| September | 593 MW | 4 (17:00) |



Big Rivers Daily Peaks - 1998
1300
1200
1100
1000
900
800
700
600
500
400
300
1/1/98
2/1/98
3/1/98
4/1/98
5/1/98
6/1/98
7/1/98
8/1/98
9/1/98
10/1/98
11/1/98
12/1/98

**Big Rivers' Daily Peaks**
**Hour of Occurrence**

| Date | Hour | Date | Hour | Date | Hour | Date | Hour | Date | Hour | Date | Hour |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1/1/98 | 1 | 3/1/98 | 21 | 5/1/98 | 21 | 7/1/98 | 17 | 9/1/98 | 17 | 11/1/98 | 18 |
| 1/2/98 | 18 | 3/2/98 | 20 | 5/2/98 | 13 | 7/2/98 | 16 | 9/2/98 | 17 | 11/2/98 | 19 |
| 1/3/98 | 10 | 3/3/98 | 19 | 5/3/98 | 21 | 7/3/98 | 18 | 9/3/98 | 17 | 11/3/98 | 20 |
| 1/4/98 | 19 | 3/4/98 | 8 | 5/4/98 | 21 | 7/4/98 | 17 | 9/4/98 | 16 | 11/4/98 | 19 |
| 1/5/98 | 18 | 3/5/98 | 21 | 5/5/98 | 21 | 7/5/98 | 17 | 9/5/98 | 17 | 11/5/98 | 19 |
| 1/6/98 | 19 | 3/6/98 | 8 | 5/6/98 | 21 | 7/6/98 | 18 | 9/6/98 | 17 | 11/6/98 | 21 |
| 1/7/98 | 18 | 3/7/98 | 11 | 5/7/98 | 22 | 7/7/98 | 16 | 9/7/98 | 17 | 11/7/98 | 8 |
| 1/8/98 | 20 | 3/8/98 | 19 | 5/8/98 | 18 | 7/8/98 | 18 | 9/8/98 | 17 | 11/8/98 | 18 |
| 1/9/98 | 8 | 3/9/98 | 20 | 5/9/98 | 21 | 7/9/98 | 17 | 9/9/98 | 21 | 11/9/98 | 18 |
| 1/10/98 | 11 | 3/10/98 | 21 | 5/10/98 | 21 | 7/10/98 | 15 | 9/10/98 | 18 | 11/10/98 | 20 |
| 1/11/98 | 19 | 3/11/98 | 19 | 5/11/98 | 21 | 7/11/98 | 18 | 9/11/98 | 17 | 11/11/98 | 21 |
| 1/12/98 | 8 | 3/12/98 | 7 | 5/12/98 | 21 | 7/12/98 | 18 | 9/12/98 | 17 | 11/12/98 | 7 |
| 1/13/98 | 20 | 3/13/98 | 8 | 5/13/98 | 18 | 7/13/98 | 15 | 9/13/98 | 17 | 11/13/98 | 20 |
| 1/14/98 | 7 | 3/14/98 | 21 | 5/14/98 | 18 | 7/14/98 | 18 | 9/14/98 | 17 | 11/14/98 | 18 |
| 1/15/98 | 19 | 3/15/98 | 20 | 5/15/98 | 17 | 7/15/98 | 20 | 9/15/98 | 20 | 11/15/98 | 20 |
| 1/16/98 | 18 | 3/16/98 | 20 | 5/16/98 | 18 | 7/16/98 | 17 | 9/16/98 | 17 | 11/16/98 | 7 |
| 1/17/98 | 11 | 3/17/98 | 20 | 5/17/98 | 18 | 7/17/98 | 17 | 9/17/98 | 20 | 11/17/98 | 7 |
| 1/18/98 | 10 | 3/18/98 | 20 | 5/18/98 | 18 | 7/18/98 | 18 | 9/18/98 | 16 | 11/18/98 | 7 |
| 1/19/98 | 20 | 3/19/98 | 20 | 5/19/98 | 19 | 7/19/98 | 17 | 9/19/98 | 17 | 11/19/98 | 20 |
| 1/20/98 | 8 | 3/20/98 | 20 | 5/20/98 | 15 | 7/20/98 | 17 | 9/20/98 | 14 | 11/20/98 | 20 |
| 1/21/98 | 19 | 3/21/98 | 10 | 5/21/98 | 16 | 7/21/98 | 17 | 9/21/98 | 17 | 11/21/98 | 8 |
| 1/22/98 | 19 | 3/22/98 | 21 | 5/22/98 | 18 | 7/22/98 | 17 | 9/22/98 | 17 | 11/22/98 | 9 |
| 1/23/98 | 19 | 3/23/98 | 7 | 5/23/98 | 17 | 7/23/98 | 18 | 9/23/98 | 17 | 11/23/98 | 19 |
| 1/24/98 | 18 | 3/24/98 | 20 | 5/24/98 | 17 | 7/24/98 | 17 | 9/24/98 | 20 | 11/24/98 | 7 |
| 1/25/98 | 9 | 3/25/98 | 20 | 5/25/98 | 21 | 7/25/98 | 17 | 9/25/98 | 17 | 11/25/98 | 7 |
| 1/26/98 | 8 | 3/26/98 | 20 | 5/26/98 | 21 | 7/26/98 | 21 | 9/26/98 | 17 | 11/26/98 | 9 |
| 1/27/98 | 7 | 3/27/98 | 20 | 5/27/98 | 18 | 7/27/98 | 18 | 9/27/98 | 17 | 11/27/98 | 18 |
| 1/28/98 | 8 | 3/28/98 | 20 | 5/28/98 | 17 | 7/28/98 | 18 | 9/28/98 | 17 | 11/28/98 | 18 |
| 1/29/98 | 21 | 3/29/98 | 20 | 5/29/98 | 14 | 7/29/98 | 18 | 9/29/98 | 17 | 11/29/98 | 18 |
| 1/30/98 | 8 | 3/30/98 | 20 | 5/30/98 | 18 | 7/30/98 | 17 | 9/30/98 | 17 | 11/30/98 | 19 |
| 1/31/98 | 9 | 3/31/98 | 20 | 5/31/98 | 19 | 7/31/98 | 17 | 10/1/98 | 20 | 12/1/98 | 21 |
| 2/1/98 | 9 | 4/1/98 | 20 | 6/1/98 | 18 | 8/1/98 | 17 | 10/2/98 | 20 | 12/2/98 | 7 |
| 2/2/98 | 20 | 4/2/98 | 20 | 6/2/98 | 15 | 8/2/98 | 18 | 10/3/98 | 20 | 12/3/98 | 20 |
| 2/3/98 | 19 | 4/3/98 | 19 | 6/3/98 | 16 | 8/3/98 | 18 | 10/4/98 | 18 | 12/4/98 | 18 |
| 2/4/98 | 19 | 4/4/98 | 20 | 6/4/98 | 21 | 8/4/98 | 19 | 10/5/98 | 20 | 12/5/98 | 18 |
| 2/5/98 | 19 | 4/5/98 | 8 | 6/5/98 | 11 | 8/5/98 | 17 | 10/6/98 | 20 | 12/6/98 | 18 |
| 2/6/98 | 19 | 4/6/98 | 21 | 6/6/98 | 17 | 8/6/98 | 16 | 10/7/98 | 20 | 12/7/98 | 19 |
| 2/7/98 | 10 | 4/7/98 | 21 | 6/7/98 | 21 | 8/7/98 | 15 | 10/8/98 | 21 | 12/8/98 | 19 |
| 2/8/98 | 9 | 4/8/98 | 21 | 6/8/98 | 21 | 8/8/98 | 15 | 10/9/98 | 20 | 12/9/98 | 7 |
| 2/9/98 | 7 | 4/9/98 | 21 | 6/9/98 | 21 | 8/9/98 | 17 | 10/10/98 | 20 | 12/10/98 | 18 |
| 2/10/98 | 18 | 4/10/98 | 9 | 6/10/98 | 15 | 8/10/98 | 17 | 10/11/98 | 20 | 12/11/98 | 7 |
| 2/11/98 | 20 | 4/11/98 | 9 | 6/11/98 | 17 | 8/11/98 | 15 | 10/12/98 | 20 | 12/12/98 | 18 |
| 2/12/98 | 18 | 4/12/98 | 9 | 6/12/98 | 17 | 8/12/98 | 16 | 10/13/98 | 20 | 12/13/98 | 21 |
| 2/13/98 | 8 | 4/13/98 | 21 | 6/13/98 | 18 | 8/13/98 | 17 | 10/14/98 | 20 | 12/14/98 | 20 |
| 2/14/98 | 8 | 4/14/98 | 21 | 6/14/98 | 18 | 8/14/98 | 17 | 10/15/98 | 20 | 12/15/98 | 7 |
| 2/15/98 | 10 | 4/15/98 | 16 | 6/15/98 | 12 | 8/15/98 | 17 | 10/16/98 | 17 | 12/16/98 | 20 |
| 2/16/98 | 19 | 4/16/98 | 21 | 6/16/98 | 18 | 8/16/98 | 17 | 10/17/98 | 19 | 12/17/98 | 21 |
| 2/17/98 | 19 | 4/17/98 | 10 | 6/17/98 | 18 | 8/17/98 | 18 | 10/18/98 | 20 | 12/18/98 | 7 |
| 2/18/98 | 19 | 4/18/98 | 10 | 6/18/98 | 16 | 8/18/98 | 17 | 10/19/98 | 20 | 12/19/98 | 18 |
| 2/19/98 | 19 | 4/19/98 | 21 | 6/19/98 | 17 | 8/19/98 | 17 | 10/20/98 | 20 | 12/20/98 | 18 |
| 2/20/98 | 19 | 4/20/98 | 7 | 6/20/98 | 15 | 8/20/98 | 18 | 10/21/98 | 21 | 12/21/98 | 21 |
| 2/21/98 | 9 | 4/21/98 | 21 | 6/21/98 | 18 | 8/21/98 | 17 | 10/22/98 | 21 | 12/22/98 | 20 |
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| 2/27/98 | 19 | 4/27/98 | 20 | 6/27/98 | 16 | 8/27/98 | 17 | 10/28/98 | 19 | 12/28/98 | 19 |
| 2/28/98 | 9 | 4/28/98 | 21 | 6/28/98 | 18 | 8/28/98 | 17 | 10/29/98 | 19 | 12/29/98 | 21 |
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| | | 4/30/98 | 21 | 6/30/98 | 17 | 8/30/98 | 17 | 10/31/98 | 18 | 12/31/98 | 18 |
| | | | | | | 8/31/98 | 15 | | | | |

5

BIG RIVERS ELECTRIC CORPORATION
RESPONSE TO WILLAMETTE INDUSTRIES, INC.'S
INITIAL REQUEST FOR INFORMATION OF OCTOBER 7, 1999

CASE NO. 99-354

**Item 5)** Please identify the level of BREC's capacity reserves for the past five years.

**Response)** As Willamette is aware, Big Rivers entered into a 25-year lease arrangement with LG&E Energy Corp. and certain of its affiliates (LEC) in July 1998. The lease provides for LEC to lease and operate all of Big Rivers' generating plants for 25 years. Big Rivers' capacity reserves prior to this transaction are irrelevant. Since the transaction, all of the purchases by Big Rivers under the Power Purchase Agreement are hourly energy purchases. Big Rivers no longer has its own generation it can call on for capacity reserves.

**Witness)** C. William Blackburn

6

**Item 6)** What is BREC's projected system-wide load growth for the next five years? What is the basis for that projection? Please furnish all studies, analyses, workpapers or other documentation on which BREC's projection of future load growth is based.

**Response)** Big Rivers is in the process of completing and obtaining approvals for its 1999 Power Requirements Study (PRS). A copy of Big Rivers' 1997 PRS is attached. In response to this request, we are supplying adjusted data from the 1997 PRS. The following data is adjusted solely to reflect the removal of the aluminum smelter load, which Big Rivers served in 1997, but will not be serving for the next five years.

| YEAR | DEMAND (MW) | ENERGY (GWH) |
|---|---|---|
| | Adj. 1997 PRS | Adj. 1997 PRS |
| 2000 | 681 | 3,729 |
| 2001 | 704 | 3,787 |
| 2002 | 714 | 3,832 |
| 2003 | 725 | 3,890 |
| 2004 | 738 | 3,949 |

**Witness)** C. William Blackburn

BIG RIVERS ELECTRIC CORPORATION
Kentucky 62 Big Rivers

1997 POWER REQUIREMENTS STUDY
1997-2016

July 1997

Prepared By

Big Rivers Electric Corporation
Henderson, Kentucky

GDS ASSOCIATES, INC.
Marietta, Georgia

# Big Rivers Electric Corporation

Kentucky 62 Big Rivers

## 1997 Power Requirements Study

1997 - 2016

July, 1997

**Prepared by:**

Big Rivers Electric Corporation
Henderson, Kentucky

GDS Associates, Inc.
Marietta, Georgia

## Table of Contents

## Tables

## Figures

## Appendix

## ACKNOWLEDGEMENTS

A number of people have contributed to the development of this Power Requirements Study (PRS). David Poe, and Karen Brown with Meade County, Don Schaefer with Jackson Purchase, Steve Thompson and Jerry Ford with Green River and John Newland with Henderson Union, along with David Schultz and Bill Yeary of Big Rivers Electric Corporation, were keys to the success of this project and provided valuable direction and insight. John Hutts of GDS Associates, Inc. (GDS) was the technical consultant on the project. Special thanks go to GDS staffers Keith Pickard, Jake Thomas and Brenda Shadix for updating the data bases, preparing the graphs and typing the report.

## 1. Executive Summary

The 1997 Power Requirements Study (PRS) presents the analyses and results associated with the Big Rivers Electric Corporation load forecast completed in July 1997. The forecast contains annual projections of consumers, demand, and energy for years 1997 to 2016. Projections are based on an analysis of historical events that occurred over the most recent twenty-seven years, 1970 - 1996 and represent the aggregate forecast of Big Rivers' four member system cooperatives: Green River Electric Corporation (Kentucky 33 Daviess), Henderson Union Electric Cooperative Corporation (Kentucky 55 Henderson), Jackson Purchase Electric Cooperative Corporation (Kentucky 20 McCracken), and Meade County Rural Electric Cooperative Corporation (Kentucky 18 Meade). In addition to the base case forecast, low-range and high-range projections have been developed to address uncertainties regarding the future.

The methods employed and the procedures followed in the current forecast are the same as those associated with the prior load forecast, referred to in this document as the 1995 Power Requirements Study (PRS). The econometric models were updated as were the assumptions regarding economic growth in the service area. An evaluation of the models developed in the 1995 PRS is presented in Section 10. Weather normalized energy sales and peak demand for 1996 are presented in Section 9.

**Projected Growth** - Total native system requirements under the base case are projected to change at the following annual compound rates: energy sales, 1.8%; summer CP demand, 1.8%; and consumers, 2.0%. Rural system requirements, represented as total system requirements net of C/I large customers under special contract, are projected to increase at the following rates: energy sales, 2.8%; summer CP demand, 2.5%; and consumers, 2.0%. Growth is based on weather normalized values for 1996-2016. Projected rural system requirements are higher than those presented in the 1995 PRS. Forecast results are summarized in tabular and graphic form on pages 3 through 8. A more detailed breakdown of the forecast is presented by consumer classification in Section 2 of the Appendix.

**Key Assumptions** - The forecast is based upon changes in factors known to influence energy consumption (e.g. population, income, weather conditions, price of electricity, and local economic developments). A number of assumptions were formulated that focused on changes in these factors over the next fifteen years. The base case forecast is based on the following assumptions:

- Changes in economic conditions and demographics for each member system are assumed to change at rates presented in Table 1.1.

**Table 1.1**
**Economic/Demographic Indicators**
**Average Annual Compound Growth per Year**
**1996 - 2016**

| Variable | Kentucky 33 | Kentucky 55 | Kentucky 20 | Kentucky 18 |
|---|---|---|---|---|
| Total Population | 1.7% | 1.2% | 1.5% | 1.3% |
| Real Per Capita Income | 1.2% | 1.2% | 1.3% | 1.2% |
| Real Personal Income | 2.9% | 2.4% | 2.7% | 2.4% |
| Total Employment | 1.7% | 1.3% | 1.8% | 1.0% |

- The average wholesale power cost for demand and energy requirements purchased from Big Rivers Electric Corporation, adjusted for inflation (1996 dollars), will fluctuate between 34.1 and 38.1 mills/kWh over the forecast horizon.

- Weather conditions, as measured by heating and cooling degree days, will be equal to the thirty year normal amounts computed using data spanning the 1961 to 1990 period.

**Enhancements to the Forecasting System** - Two enhancements have been made to the forecasting system that distinguish this forecast from prior studies. One, the short-term forecasting models have been revised to specify rural system energy and demand requirements rather than total system net of C/I large requirements. This revision provides for a better transition between the short-term and long-term forecasts. Two, rural system peak demand has been analyzed and projected on a coincident peak basis rather than a noncoincident basis. Coincident peak demand is the appropriate basis for the Cooperative's financial planning function.

**Table 1.2**
**Historical/Projected Power Requirements**
**Actual vs. Projected Values**

| | 1991 | 1996 | 2001 | 2006 | 2016 |
|---|---|---|---|---|---|
| **Green River** | | | | | |
| Total Purchases (MWh) | 4,233,843 | 4,436,934 | 5,098,150 | 5,208,861 | 5,663,035 |
| Total System NCP (MW) | 562.9 | 595.6 | 677.9 | 703.8 | 790.7 |
| Total System Consumers | 25,810 | 28,520 | 32,009 | 35,399 | 41,913 |
| Rural System Sales (MWh) | 450,352 | 523,271 | 612,135 | 716,536 | 962,261 |
| Rural System CP (MW) | 111.3 | 123.5 | 151.7 | 177.5 | 238.4 |
| **Henderson Union** | | | | | |
| Total Purchases (MWh) | 3,336,387 | 2,719,371 | 3,648,939 | 3,676,270 | 3,754,985 |
| Total System NCP (MW) | 444.2 | 364.6 | 490.8 | 497.3 | 515.7 |
| Total System Consumers | 16,258 | 17,616 | 19,084 | 20,548 | 23,536 |
| Rural System Sales (MWh) | 277,100 | 309,389 | 360,063 | 395,648 | 468,793 |
| Rural System CP (MW) | 66.2 | 77.0 | 90.2 | 99.0 | 117.4 |
| **Jackson Purchase** | | | | | |
| Total Purchases (MWh) | 482,325 | 572,452 | 657,402 | 751,201 | 976,670 |
| Total System NCP (MW) | 115.1 | 128.8 | 153.1 | 175.2 | 228.3 |
| Total System Consumers | 21,250 | 24,088 | 27,019 | 29,751 | 35,164 |
| Rural System Sales (MWh) | 406,450 | 483,119 | 565,578 | 653,682 | 865,463 |
| Rural System CP (MW) | 103.8 | 117.8 | 141.8 | 163.9 | 217.0 |
| **Meade County** | | | | | |
| Total Purchases (MWh) | 261,885 | 317,204 | 371,893 | 421,440 | 529,456 |
| Total System CP (MW) | 58.5 | 75.5 | 84.8 | 96.1 | 120.7 |
| Total System Consumers | 18,883 | 21,324 | 24,028 | 26,633 | 31,949 |
| **Big Rivers** | | | | | |
| Total Requirements (MWh) | 8,484,123 | 8,210,164 | 9,975,903 | 10,263,033 | 11,147,087 |
| Total Native Sales (MWh) | 8,314,440 | 8,045,961 | 9,776,385 | 10,057,773 | 10,924,145 |
| Total System NCP (MW) | 1,215.0 | 1,182.2 | 1,449.2 | 1,518.3 | 1,709.8 |
| Total System CP (MW) | 1,168.0 | 1,167.0 | 1,425.4 | 1,483.9 | 1,649.7 |
| Total System Consumers | 82,201 | 91,548 | 102,139 | 112,330 | 132,562 |
| Rural System Sales (MWh) | 1,375,019 | 1,610,679 | 1,881,569 | 2,155,460 | 2,785,979 |
| Rural System CP (MW) | 339.9 | 382.2(w) | 469.5 | 530.2 | 670.0 |

Notes: 1. Member system demand and energy amounts exclude Big Rivers transmission losses.
2. NCP Demand amounts represent the sum of all points of delivery in the Big Rivers peak month.
3. (w) Designates winter season peak. All peak demands in forecast period represent summer peaks.

**Table 1.3**
**Historical/Projected Power Requirements**
**Average Compound Growth per Year**

| | 1986 - 1991 | 1991 - 1996 | 1996 - 2001 | 2001 - 2006 | 2006 - 2016 |
|---|---|---|---|---|---|
| **Green River** | | | | | |
| Total Purchases (MWh) | 1.8% | 0.9% | 2.8% | 0.4% | 0.8% |
| Total System NCP (MW) | na | 1.1% | 2.7% | 0.8% | 1.2% |
| Total System Consumers | 1.3% | 2.0% | 2.3% | 2.0% | 1.7% |
| Rural System Sales (MWh) | 2.7% | 3.0% | 3.1% | 3.2% | 3.0% |
| Rural System CP (MW) | na | 2.1% | 4.1% | 3.2% | 3.0% |
| **Henderson-Union** | | | | | |
| Total Purchases (MWh) | 14.2% | -4.0% | 6.0% | 0.1% | 0.2% |
| Total System NCP (MW) | na | -3.9% | 5.9% | 0.3% | 0.4% |
| Total System Consumers | 1.1% | 1.6% | 1.6% | 1.5% | 1.4% |
| Rural System Sales (MWh) | 2.3% | 2.2% | 3.0% | 1.9% | 1.7% |
| Rural System CP (MW) | na | 3.0% | 4.0% | 1.9% | 1.7% |
| **Jackson Purchase** | | | | | |
| Total Purchases (MWh) | 3.8% | 3.5% | 2.7% | 2.7% | 2.7% |
| Total System NCP (MW) | na | 2.3% | 2.4% | 2.7% | 2.7% |
| Total System Consumers | 1.8% | 2.5% | 2.3% | 1.9% | 1.7% |
| Rural System Sales (MWh) | 3.0% | 3.5% | 3.1% | 2.9% | 2.9% |
| Rural System CP (MW) | na | 2.6% | 2.6% | 2.9% | 2.8% |
| **Meade County** | | | | | |
| Total Purchases (MWh) | 3.2% | 3.9% | 3.2% | 2.5% | 2.3% |
| Total System CP (MW) | na | 5.2% | 3.0% | 2.5% | 2.3% |
| Total System Consumers | 2.0% | 2.5% | 2.4% | 2.1% | 1.8% |
| **Big Rivers** | | | | | |
| Total Requirements (MWH) | 6.0% | -0.7% | 4.0% | 0.6% | 0.8% |
| Total Native Sales (MWH) | 6.0% | -0.7% | 4.0% | 0.6% | 0.8% |
| Total System NCP (MW) | 1.6% | -0.5% | 3.6% | 0.9% | 1.2% |
| Total System CP (MW) | 3.3% | 0.0% | 3.5% | 0.8% | 1.1% |
| Total System Consumers | 1.6% | 2.2% | 2.2% | 1.9% | 1.7% |
| Rural System Sales (MWH) | 2.8% | 3.2% | 3.1% | 2.8% | 2.6% |
| Rural System CP (MW) | 0.1% | 2.4% | 2.6% | 2.5% | 2.4% |

Notes: 1. Growth from 1996-2001 based on weather normalized values for 1996

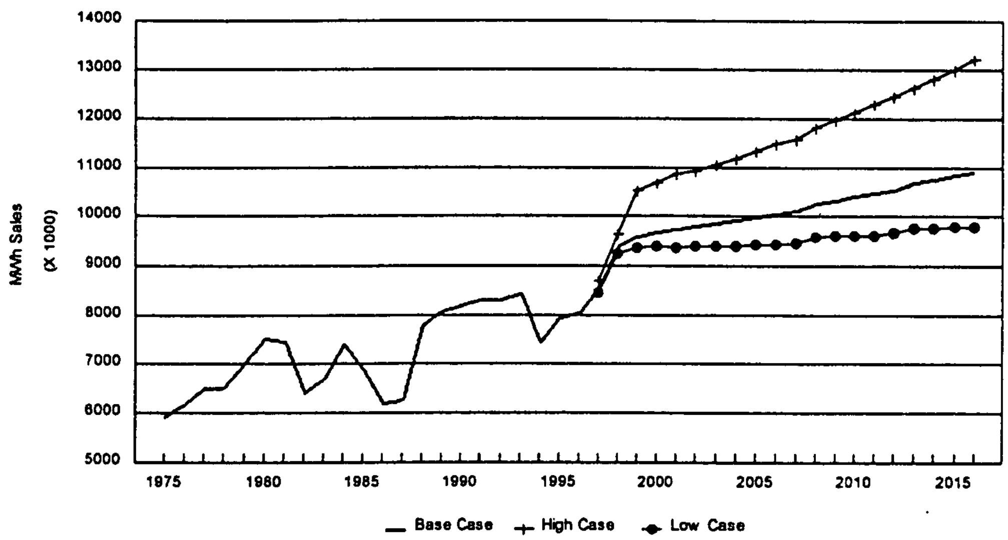
**Table 1.4**
**Total System CP Demand and Energy Requirements**
**(Including Off-System)**
**Base Case**

| | OFF-SYSTEM FIRM DEMAND (MW) | | | | PRS BASE CASE | |
|---|---|---|---|---|---|---|
| | OPC | HOOSIER | HMP&L | OFF-SYSTEM SUBTOTAL | 1997 PRS SYSTEM LOAD | TOTAL DEMAND OFFSYS + PRS |
| 1997 | 103 | 130 | 15 | 248 | 1,317 | 1,565 |
| 1998 | 103 | 150 | 15 | 268 | 1,362 | 1,630 |
| 1999 | 103 | 170 | 15 | 288 | 1,376 | 1,664 |
| 2000 | 103 | | 15 | 118 | 1,402 | 1,520 |
| 2001 | 103 | | | 103 | 1,425 | 1,528 |
| 2002 | 103 | | | 103 | 1,435 | 1,538 |
| 2003 | | | | | 1,446 | 1,446 |
| 2004 | | | | | 1,459 | 1,459 |
| 2005 | | | | | 1,471 | 1,471 |
| 2006 | | | | | 1,484 | 1,484 |
| 2011 | | | | | 1,565 | 1,565 |
| 2016 | | | | | 1,650 | 1,650 |

| | OFF-SYSTEM FIRM ENERGY (GWh) | | | | PRS BASE CASE | |
|---|---|---|---|---|---|---|
| | OPC | HOOSIER | HMP&L | OFF-SYSTEM SUBTOTAL | 1997 PRS SYSTEM LOAD | TOTAL ENERGY OFFSYS + PRS |
| 1997 | 586 | 104 | 99 | 789 | 8,747 | 9,537 |
| 1998 | 586 | 120 | 99 | 805 | 9,620 | 10,426 |
| 1999 | 586 | 136 | 99 | 821 | 9,827 | 10,649 |
| 2000 | 586 | | 99 | 685 | 9,918 | 10,603 |
| 2001 | 586 | | | 586 | 9,976 | 10,562 |
| 2002 | 586 | | | 586 | 10,021 | 10,607 |
| 2003 | | | | | 10,079 | 10,079 |
| 2004 | | | | | 10,138 | 10,138 |
| 2005 | | | | | 10,200 | 10,200 |
| 2006 | | | | | 10,263 | 10,263 |
| 2011 | | | | | 10,704 | 10,704 |
| 2016 | | | | | 11,147 | 11,147 |

**Figure 1.1**
**Total Native System Sales (MWH)**

**Total System**




**Rural System**

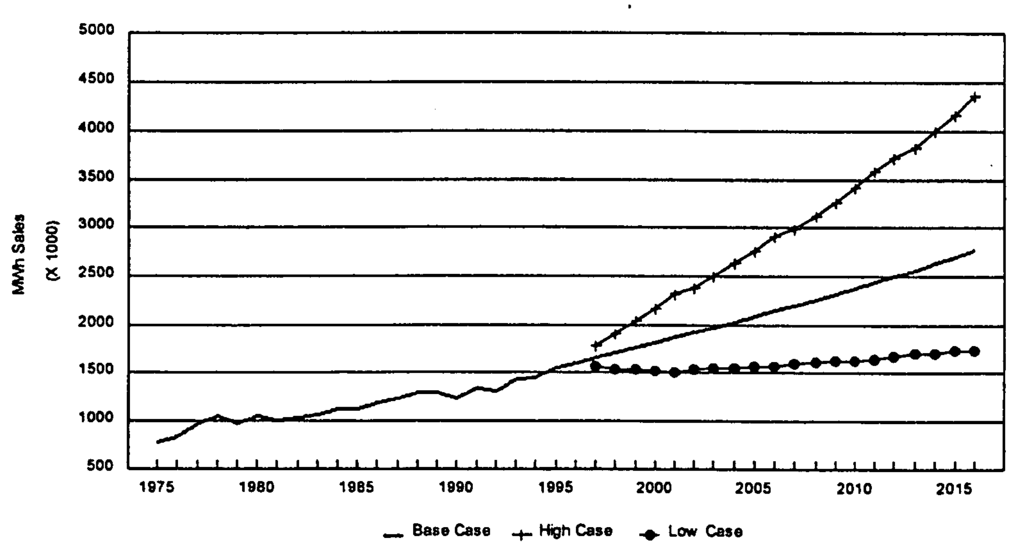
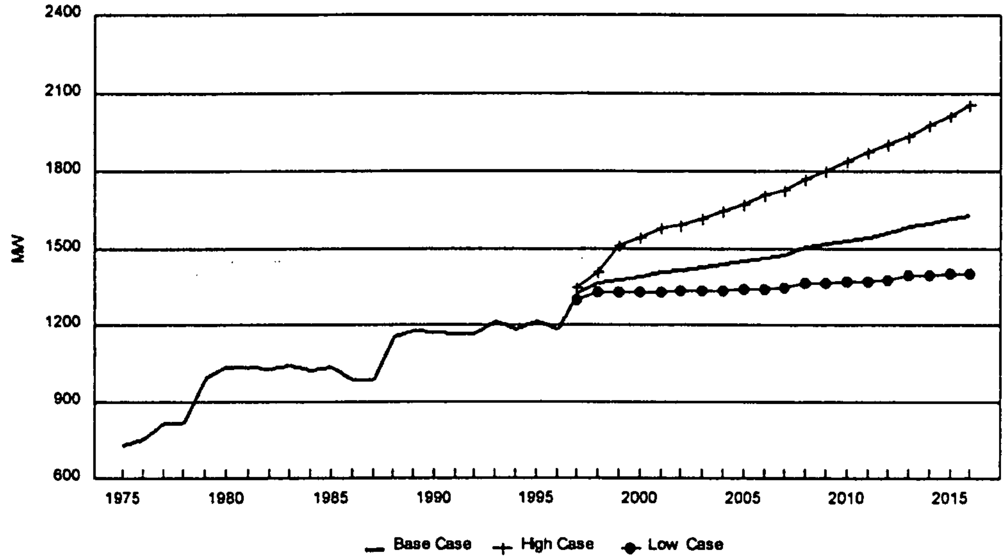


**Figure 1.2**
**CP Demand (MW) Requirements**

**Total System**




**Rural System**

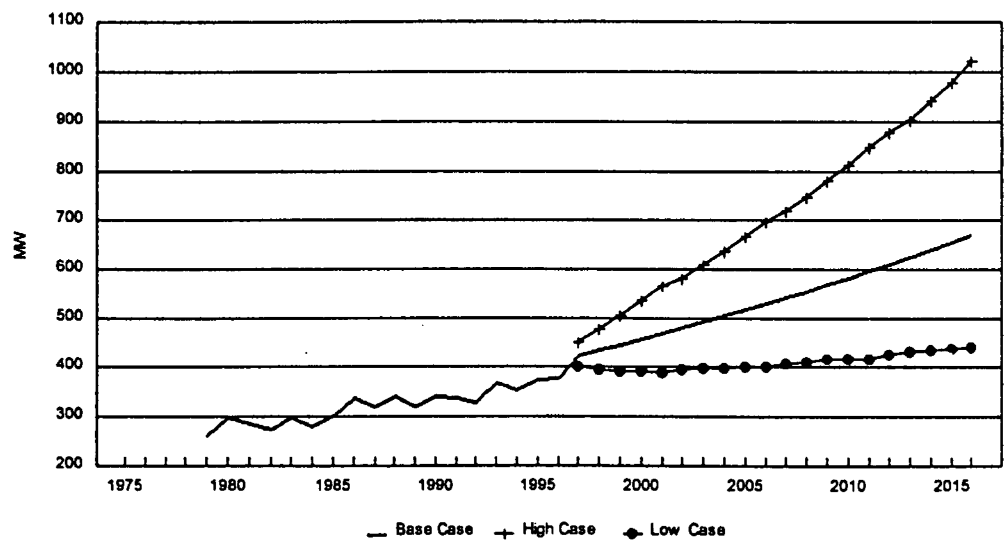
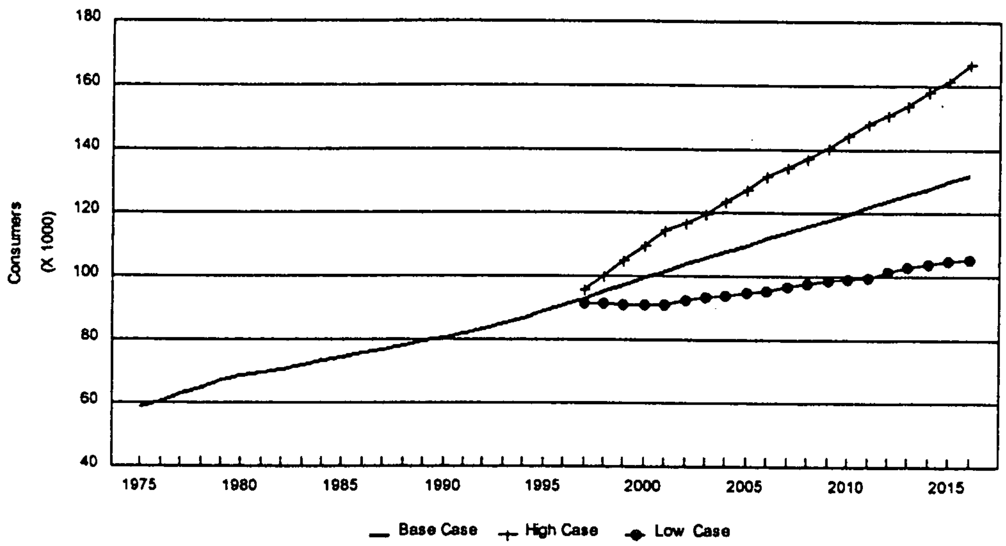


**Figure 1.3**
**Number of Consumers**



## 2. Introduction

**Participants** - The 1997 Power Requirements Study for Big Rivers Electric Corporation was conducted by representatives from Big Rivers, Big Rivers' member system cooperatives, the Rural Utilities Service (RUS) and GDS Associates, Inc. System data was provided by the member systems and by Big Rivers. Big Rivers and GDS Associates collected demographic, economic and meteorological data. GDS Associates specified the forecasting models, developed the forecast, and prepared the final PRS Update report. Representatives from GDS, Big Rivers, and the member systems formulated the forecast assumptions. RUS representatives assisted in the evaluation of the forecast assumptions and the resulting load projections.

**Purpose** - The purpose of the long-term load forecast is to provide reliable load projections for the Corporation's resource, transmission, and financial planning functions. The Power Requirements Study documents the procedures, methodologies and results associated with the forecasting process, and the PRS is filed biennially with the Rural Utilities Service.

**Scope** - The 1997 PRS was conducted during April, May, June, and July 1997. All analyses completed were based on data covering the 1970-2016 period. The historical period includes years 1970 to 1996. The forecast period extends to year 2016. The final forecast of system requirements includes the following:

Short-term forecast (monthly projections for 1997 - 1999)

- Total system consumers
- Total system energy sales
- Total system peak demand

Long-term forecast (annual projections for 1997 - 2016)

- Number of consumers by RUS consumer classification
- Energy sales by RUS consumer classification
- Individual projections of annual energy consumption and average demand for large commercial accounts with service capacity greater than 1,000 kVA (not listed individually in this document)
- System losses
- Total system energy requirements
- Seasonal peak demand requirements

Three sets of projections have been developed for the forecast, a base case, which is based upon expected economic conditions and normal weather, and a set of high-range and low-range projections, both of which consider deviations from expected economic conditions and extreme weather conditions.

The Power Requirements Study was completed in accordance with procedures documented in Big Rivers Electric Corporation's Power Requirements Study Workplan, which was approved by its Board of Directors in December, 1996 and approved thereafter by RUS. This report provides a complete description of the procedures followed, the methodologies employed, and the assumptions made in developing the forecast.

## 3. Cooperative Background

**General** - Big Rivers is a generation and transmission cooperative providing wholesale electric service to four member cooperatives (Green River - KY33, Henderson Union - KY55, Jackson Purchase - KY20, and Meade County - KY18) that, in turn, provide retail service to customers in western and northwestern Kentucky. The area spans from Meade County on the east to Ballard County on the west. For a discussion of the counties served by each member cooperative, refer to the individual member system PRS reports.

Most counties in the region have direct access to a navigable river. Transportation is also facilitated by an excellent highway system, which includes such "principal arterials" as: Interstate 24, the Audubon Parkway, the William H. Natcher Parkway, the Pennyrile Parkway, the Western Kentucky Parkway, and U.S. 60. Interstate 65, which connects Chicago, Illinois to the north with Mobile, Alabama to the south, runs just outside the system's eastern border. Population centers near or within the service area include: Louisville, Kentucky; Evansville, Indiana; Owensboro, Kentucky; Madisonville, Kentucky, and Paducah, Kentucky. All four member cooperatives have made territorial agreements with municipal utilities in their immediate areas, as a supplementary measure to provisions of the Territorial Integrity Statute. Such actions should protect the cooperatives from any losses in service area due to annexation.

**System Characteristics** - The residential classification comprises the great majority of total system accounts for each of the member cooperatives. Sales for Jackson Purchase and Meade County are predominately residential. A more detailed breakdown of the number of consumers and energy sales by customer classification is presented in the member cooperative PRS reports. Big Rivers' rural system has peaked during summer months in each of the last ten years, excluding 1985, 1989, and 1994 when extremely cold temperatures were recorded. Rural system peak demand is represented as the aggregate NCP on all member cooperative points of delivery, net of Big Rivers C/I large accounts, in a given month.

Total member system consumers have increased at an average compound rate of 2.0% per year from 1976 through 1996. Average growth in recent years, 1991-1996, was 2.2% per year. Total system sales to member cooperatives increased at a rate of 1.3% per year from 1976 to 1996 and -0.7% per year from 1991 to 1996. Rural system sales increased at a rate of 3.3% per year from 1976 to 1996 and 3.2% over the last five years. Growth rates in rural system requirements are summarized in five year increments in Table 3.1.

**Table 3.1**
**Average System Growth Rate**
**Rural System Requirements**

| Time Period | Consumers | kWh Sales | Summer CP |
|---|---|---|---|
| 1976-1981 | 2.8% | 3.9% | |
| 1981-1986 | 1.6% | 3.3% | 3.2% |
| 1986-1991 | 1.6% | 2.8% | 0.1% |
| 1991-1996 | 2.2% | 3.2% | 2.3% |

**Class Proportions** - For purposes of developing the forecast and preparing the Power Requirements Study, five separate consumer classifications were analyzed at the member cooperative level:

- Residential
- Commercial/Industrial Small
- Commercial/Industrial Large
- Public Street & Highway Lighting
- Irrigation

Table 3.2 lists, for the aggregate of all four member cooperatives, the contribution of consumers and total member system energy sales in 1996 to total amounts for each consumer classification. A review of the information presented in the table indicates that the residential class accounts for the vast majority of total system consumers while the C/I large class accounts for the majority of energy sales.

**Table 3.2**
**Class Proportions**
**Number of Consumers and kWh Sales**

| Customer Class | Consumers 1996 | kWh 1996 |
|---|---|---|
| Residential | 90.3% | 14.4% |
| C/I Small | 9.5% | 5.8% |
| C/I Large | 0.0% | 79.7% |
| Irrigation | 0.0% | 0.0% |
| Public Street Lights | 0.2% | 0.0% |

**Alternative Fuels** - Electricity, natural gas, and propane are the primary heating fuels available within the service area. Wood is used by some consumers as a supplemental heating source. Timber is readily available in western Kentucky. The use of woodstoves as a heating source is not expected to have significant impact on usage levels or peak demand as use of woodstoves has decreased in recent years.

The real price of electricity has fluctuated over the historical period. Price increases following the Arab oil embargo and increases during the 1980s had a negative impact on energy usage, forcing most consumers to initiate energy conservation practices. Real price has exhibited a decreasing trend in recent years.

**Power Supply** - Big Rivers provides power to its member cooperatives through seventy-one (71) rural and twenty-five (25) dedicated metering points. The tariff under which Big Rivers bills its member systems became effective January 1, 1991 upon approval by the Kentucky Public Service Commission.

A global settlement of Big Rivers' financial difficulties is expected in late 1997. This settlement will result in rate reductions and the opportunity for Big Rivers' member cooperatives to purchase a portion of their individual industrial load requirements from generation sources other than those owned by Big Rivers in accordance with their Amended All Requirements Power Contracts.

**Climatic Conditions** - The service area's climate approximates that of Evansville, Indiana. Since 1970, Evansville extreme temperatures average 1°F in January and 97°F in July, the typical extreme heating and cooling months. The coldest temperature recorded since 1970 was -21°F in January 1977, while the hottest temperature recorded during the same period was 102°F, most recently in July 1995. The mean annual rainfall is 46 to 50 inches, and precipitation in the form of snowfall averages 10 inches or approximately 1 inch of moisture. Weather data for the 1980-1996 period is summarized in Table 3.3.

**Table 3.3**
**Heating and Cooling Degree Days**

| Year | Heating Degree Days | Cooling Degree Days | Maximum Temperature | Minimum Temperature |
|---|---|---|---|---|
| 1980 | 5095 | 1726 | 101 | -3 |
| 1981 | 4548 | 1389 | 96 | 2 |
| 1982 | 4399 | 1349 | 97 | -18 |
| 1983 | 4640 | 1664 | 102 | -7 |
| 1984 | 4622 | 1365 | 95 | -15 |
| 1985 | 4785 | 1445 | 98 | -16 |
| 1986 | 4386 | 1576 | 97 | -2 |
| 1987 | 4290 | 1623 | 100 | 5 |
| 1988 | 4822 | 1500 | 102 | 1 |
| 1989 | 4830 | 1396 | 96 | -15 |
| 1990 | 3856 | 1380 | 100 | 4 |
| 1991 | 4253 | 1757 | 98 | 9 |
| 1992 | 4217 | 1240 | 95 | 5 |
| 1993 | 4652 | 1613 | 99 | 1 |
| 1994 | 4180 | 1489 | 98 | -17 |
| 1995 | 4314 | 1773 | 102 | 3 |
| 1996 | 5068 | 1224 | 96 | -7 |
| **30 yr. Normal** | 4708 | 1376 | | |

**Household Characteristics** - Prior end-use surveys were conducted every two years to collect data which characterizes the residential classification, including appliance stock and local area demographics. Those surveys were conducted in 1988, 1989, 1991, 1993 and 1995. The 1988 survey was conducted during February 1988 by Henderson Community College; the 1989 survey was conducted during September 1989 by NRECA/AHP Research; the 1991 End-Use Saturation and Market Research Survey was conducted during July and August 1991 by The Preston Group, Inc. of Lexington, Kentucky. The 1993 and 1995 End-Use Saturation and Market Research Surveys were conducted during the spring of 1993 and 1995 by the Preston Group. Results of the 1995 survey are shown in Table 3.4.

Beginning in January 1995, the two year rotation method of end-use surveying was changed to a monthly end-use/customer satisfaction survey. This method provides the ability to better determine whether external factors are influencing customer satisfaction levels, and to identify trends that may be overlooked with a two-year approach. Quarterly reports are prepared which show the results of the monthly surveys. In addition, the data from the four quarterly reports will be combined to produce the end-use saturation and customer satisfaction year end report.

**Table 3.4**
**Residential Consumer Survey Results**
**1995**

| Housing Characteristics | KY18 | KY20 | KY33 | KY55 |
|---|---|---|---|---|
| Single Family Home | 79% | 83% | 86% | 83% |
| Mobile Homes | 19% | 13% | 12% | 15% |
| Condo/Apt/Duplex | 2% | 3% | 2% | 1% |
| Other | 0% | 0% | 0% | 1% |
| Central Electric A/C | 54% | 75% | 78% | 68% |
| Window Unit A/C | 39% | 33% | 25% | 33% |
| Primary Heating Source | | | | |
| Electric | 38% | 34% | 33% | 32% |
| Gas | 19% | 33% | 43% | 21% |
| Propane | 22% | 24% | 9% | 33% |
| Wood/Oil/Other | 20% | 9% | 11% | 13% |
| Electric Water Heater | 76% | 67% | 57% | 76% |
| Refrigerator * | 110% | 105% | 110% | 108% |
| Separate Freezer | 66% | 69% | 66% | 79% |
| Color Television | 96% | 99% | 99% | 99% |
| Dishwasher | 38% | 60% | 62% | 50% |
| Clothes Dryer | 83% | 88% | 89% | 87% |
| Clothes Washer | 89% | 96% | 97% | 94% |
| Electric Range | 77% | 81% | 82% | 77% |
| Microwave Oven | 94% | 97% | 96% | 95% |
| Water Pump | 59% | 35% | 20% | 35% |

* Refrigerator percentage combines manual defrost and frost-free amounts.

**Strategic Alternatives** - Big Rivers through its Special Financial Planning Committee is continuing to work with its constituents to reach a consensus on the resolution of its financial difficulties. The issues associated with this process have not been factored into this forecast.

## 4. PRS Database

The development of the forecast presented in this report was based upon review and use of an extensive collection of data. This section identifies the data collected and used throughout the study, sources from which the data were collected, and computations that were conducted. Four classes of data were collected for this study: (i) system data, (ii) price data, (iii) economic/demographic data, and (iv) meteorological data. The data elements collected under each category, as well as the source and time period, are presented in Table 4.1.

**Table 4.1**
**Power Requirements Study Database**

| Class of Data | Source | Data Element | Units | Time Period |
|---|---|---|---|---|
| System | REA Form 7 | Number of Consumers by REA Classification | Meters | 1970 - 1996 |
| | | Energy Sales by REA Classification | kWh | 1970 - 1996 |
| | | Revenue by REA Classification | $ | 1970 - 1996 |
| | | Purchases | kWh | 1970 - 1996 |
| | | Power Cost | $ | 1970 - 1996 |
| | | Peak Demand | NCP or CP | 1970 - 1996 |
| | | System Own Use | kWh | 1970 - 1996 |
| | | Miles of Line | Miles | 1970 - 1996 |
| Price | Bureau of Labor Statistics | Producer Price Index 1982=100, Not Seasonally Adjusted | Index | 1948.01 - 1996.12 |
| | | Consumer Price Index 1982-1984 avg.=100, Seasonally Adjusted | Index | 1948.01 - 1996.12 |
| | | Personal Consumption Expenditures Index, 1992=100, Seasonally Adjusted | Index | 1959.1 - 1996.4 |
| Economic and Demographic | Woods & Poole Economics, Inc. | Total Personal Income | Real $ (1,000,000) | 1970 - 2016 |
| | | Retail Sales | Real $ (1,000,000) | 1970 - 2016 |
| | | Farm Earnings | Real $ (1,000,000) | 1970 - 2016 |

| Class of Data | Source | Data Element | Units | Time Period |
|---|---|---|---|---|
| Economic and Demographic | Woods & Poole Economics, Inc. | Mining Earnings | Real $ (1,000,000) | 1970 - 2016 |
| | | Service Earnings | Real $ (1,000,000) | 1970 - 2016 |
| | | Total Earnings | Real $ (1,000,000) | 1970 - 2016 |
| | | Total Population | (x100) | 1970 - 2016 |
| | | Households | (x100) | 1970 - 2016 |
| | | Total Employment | (x100) | 1970 - 2016 |
| | NPA Data Services, Inc. | Total Personal Income | Real $ (millions) | 1970,1980,1990,1993 1995,2000,2005,2015 2025 |
| | | Earnings/Job | Real $ | 1970,1980,1990,1993 1995,2000,2005,2015 2025 |
| | | Population | (x1,000) | 1970,1980,1990,1993 1995,2000,2005,2015 2025 |
| | | Number of Households | (x1,000) | 1970,1980,1990,1993 1995,2000,2005,2015 2025 |
| | | Total Employment | (x1,000) | 1970,1980,1990,1993 1995,2000,2005,2015 2025 |
| | University of Louisville | Total Population | (actual/proj) | 1980,1990,1995,2000 2010,2020 |
| Natural Gas Prices | Gas Research Institute | Real Price of Residential and Commercial Gas | ($/million BTU) | 1990-1993, 1995, 2000, 2010 |
| | Energy Inform. Administration | | | 1992, 1993, 2000, 2005, 2010 |
| Meteorological | National Oceanic and Atmospheric Administration | Heating and Cooling Degree Days | Base of 65°F | 1970.01 - 1996.12 |
| | | Average High and Low Temperatures | Degrees F | 1970.01 - 1996.12 |
| | | Extreme High and Low Temperatures | Degrees F | 1970.01 - 1996.12 |

**Weighting Factors** - Economic and demographic data were collected for each county in which the Big Rivers member systems provide electric service. Weighting factors were developed to estimate member cooperative market share of county population, income, and other economic indicators.

The number of residential customers served by county and the total number of households located within each county were used to develop county weighting factors. The number of residential consumers recorded during the 1985 to 1991 period was employed. These weighting factors represent Big Rivers market shares for each county served. The number of residential consumers by county prior to 1985 was estimated by multiplying total system consumers in each year prior to 1985 by the ratio of residential to total system consumers computed for 1985. County weights were computed using the formula presented in Equation 4.1.

$$CTYWGT_{it} = RCON_{it} \div HHOLD_{it} \qquad (4.1)$$

$CTYWGT_{it}$ = weight for county$_i$ in year$_t$
$RCON_{it}$ = number of residential consumers in county$_i$ in year$_t$
$HHOLD_{it}$ = number of households in county$_i$ in year$_t$

Using Jackson Purchase data for 1990 as an example, county weights are computed in Table 4.2. Note that residential consumers actually identify a residential meter; as a result, it is possible to show more consumers than households for a county. County weights for the forecast horizon were based on trends established over the historical period.

**Table 4.2**
**Development of County Weights**
**for 1990**

| County | Residential Consumers | Number of Households | County Weight |
|---|---|---|---|
| Ballard | 2,162 | 3,200 | 67.6% |
| Carlisle | 399 | 2,100 | 19.0% |
| Graves | 1,712 | 13,400 | 12.8% |
| Livingston | 4,572 | 3,600 | 100.0% |
| Marshall | 3,534 | 10,800 | 32.7% |
| McCracken | 8,731 | 25,700 | 34.0% |

Weighted service area amounts for each economic and demographic variable collected were computed using the computed county weights and the county level data. For illustration purposes, Equation 4.2 presents the formula used to compute service area population.

$$TOTPOP_t = WGT_{1t} \bullet CTYPOP_{1t} + WGT_{2t} \bullet CTYPOP_{2t} + WGT_{3t} \bullet CTYPOP_{3t} + \ldots WGT_{it} \bullet CTYPOP_{it} \quad (4.2)$$

$TOTPOP_t$ = weighted member Cooperative population in $year_t$
$WGT_{it}$ = weight representing the ratio of residential consumers in $county_i$, $year_t$ to the total number of households in $county_i$, $year_t$
$CTYPOP_{it}$ = total population for $county_i$, $year_t$

Using Jackson Purchase data again for 1990 as an example, Table 4.3 presents the information utilized in computing weighted cooperative population.

**Table 4.3**
**Development of Weighted Population**
**for 1990**

| County | County Weight | County Population | Weighted Population |
|---|---|---|---|
| Ballard | 67.6% | 7,900 | 5,340 |
| Carlisle | 19.0% | 5,200 | 988 |
| Graves | 12.8% | 33,700 | 4,314 |
| Livingston | 100.0% | 9,100 | 9,100 |
| Marshall | 32.7% | 27,300 | 8,927 |
| McCracken | 34.0% | 63,000 | 21,420 |
| Total | | 146,200 | 50,089 |

**Historical Data Estimates** - The historical values for population, total employment, and total personal income used in the modeling process were collected from Woods & Poole Econometrics, Inc. Per capita income was computed from personal income and population values. Population is based on census data for 1970, 1980 and 1990 with all interim years and years 1991-1994 based on estimates developed by the Department of Commerce, Bureau of Economic Analysis (BEA). Employment and total personal income amounts for 1970 through 1994 are final estimated values based upon quarterly surveys conducted by BEA. All data values for years 1995-2016 are projections.

## 5. Economic Outlook

The information presented in this section summarizes the economic outlook developed by independent sources. Discussion is drawn from information collected from the Bureau of Economic Analysis (BEA), Woods & Poole Economics, Inc., NPA Data Services, Inc., the University of Louisville, the Energy Information Administration (EIA), and the Gas Research Institute (GRI).

**Local Level** - The economy of western Kentucky depends primarily upon agriculture, manufacturing, services, and wholesale and retail trade. Coal mining and related operations are located throughout the state. Data used to represent economic activity for the service area was computed using county level information (see Section 4). Table 5.1 presents historical growth rates for the key economic and demographic variables used in developing the forecast.

**Table 5.1**
**Economic Activity Summary**
**Average Compound Growth per Year**

| Area | Period | Population | Employment | Per Capita Income |
|---|---|---|---|---|
| United States | 1981-1986 | 0.9% | 2.0% | 2.0% |
| | 1986-1991 | 1.0% | 1.7% | 0.7% |
| | 1991-1996 | 1.0% | 1.6% | 1.6% |
| Kentucky | 1981-1986 | 0.1% | 1.1% | 1.0% |
| | 1986-1991 | 0.1% | 2.1% | 1.6% |
| | 1991-1996 | 0.9% | 2.3% | 2.0% |
| Big Rivers Service Area | 1981-1986 | 2.2% | 2.2% | 0.2% |
| | 1986-1991 | 0.5% | 2.2% | 1.1% |
| | 1991-1996 | 1.9% | 3.3% | 1.9% |

Source: Woods & Poole Economics, Inc.

A time series for natural gas prices at the state level has been developed. Both residential and commercial natural gas prices were considered in the development of the current forecast. The real price of natural gas in Kentucky has demonstrated a decline in recent years. The outlook for prices in Kentucky is a leveling of prices in real dollars. Historical and projected gas prices were collected from the Gas Research Institute and the Energy Information Administration.

**National Level** - Based on projections made by the WEFA Group, Data Resources, Inc., EIA (Energy Information Administration, *1997 Energy Outlook*, December 1996, page 6) and GRI, real Gross Domestic Product is expected to increase at average compound rates between 1.9% and 2.2% from 1995-2015. Recent outlooks show personal income growing in real terms at 2.1%. Inflation, as measured by the personal consumption expenditures index, is projected to increase at an average rate of 3.7% over the next fifteen years. Projected long-term economic growth rates are presented in Table 5.2.

**Table 5.2**
**Economic Outlook**
**Long-Term Projected Growth Rates**

| | Real Personal Income | Employment | Gross Product | Population |
|---|---|---|---|---|
| United States | | | | |
| Bureau of Economic Analysis | 1.7% | 0.8% | 1.7% | 0.6% |
| Data Resources, Inc. | na | na | 1.9% | na |
| Energy Information Admin. | 2.1% | 1.6% | 1.9% | 1.0% |
| Gas Research Institute | 2.0% | na | 2.0% | na |
| NPA Data Services, Inc. | 2.1% | 1.2% | na | 0.9% |
| Woods & Poole Economics | 2.0% | 1.0% | na | 0.8% |
| Kentucky | | | | |
| Bureau of Economic Analysis | 1.9% | 1.0% | na | 0.9% |
| NPA Data Services, Inc. | 2.1% | 1.0% | na | 0.7% |
| Woods & Poole Economics | 1.7% | 0.9% | na | 0.5% |
| Big Rivers Service Area | | | | |
| NPA Data Services, Inc. | 2.7% | 1.5% | na | 1.2% |
| Woods & Poole Economics | 2.3% | 1.4% | na | 1.0% |
| University of Louisville | na | na | na | 0.7% |

1. Data Resources, Inc., *Energy Information Administration, Annual Energy Outlook, 1997,* December 1996.
2. Bureau of Economic Analysis (BEA), U.S. Department of Commerce, *Regional Projections to 2045,* Volume 1: States, July 1995
3. Energy Information Administration, *Annual Energy Outlook, 1997,* December 1996.
4. Gas Research Institute, *Baseline Projection Data Book,* 1994 Edition.
5. Woods & Poole Economics, Inc., *1997 State Profile, Kentucky,* January 1997. County level data has been weighted using Cooperative market shares.
6. University of Louisville, College of Urban and Public Affairs, Population Studies Program, April 1997. County level data has been weighted using Cooperative market shares.
7. NPA Data Services, Inc., *Key Indicators of County Growth: 1970-2010,* 1996 Edition. County level data has been weighted using Cooperative market shares.

## 6. Energy Efficiency and Demand-Side Management

Big Rivers and its four member cooperatives retained a consultant to perform a demand-side management (DSM) strategic study to evaluate how DSM should be undertaken by the five companies. The consultant evaluated each company, analyzing its DSM planning and program efforts individually as well as with the five companies working together in a coordinated centralized approach. The study was completed in May, 1995. The coordinated centralized approach was recommended by the consultant as the least-cost approach for implementing DSM at Big Rivers and its four distribution cooperative members. It was decided that Big Rivers and the distribution cooperative members would not act on the study until the long-range solution to Big Rivers' financial problems are resolved. The marketing programs currently in progress will not be modified at this time as a result of the DSM Strategic study.

## 7. Forecast Assumptions

The theoretical assumptions made in the 1995 PRS regarding model specification and functional form remain basically the same for the 1997 forecast. Assumptions regarding economic growth have been revised to reflect the most recent information available. Tables 7.1 - 7.11 have been updated to present the data and growth rates upon which this year's forecast is based.

**Base Case Forecast** - Annual projections for each exogenous variable included in the residential and C/I small models are presented in Tables 7.1 - 7.4. The base case forecast is based upon the following assumptions regarding demographic and economic growth over the forecast horizon.

- Weighted population within the Big Rivers service area is projected to increase at an average compound rate of 1.5% per year from 1996 to 2016. Growth rates are based on long-term population growth projected by the University of Louisville, Woods & Poole Economics, and population growth in 1995 and 1996.

- Weighted real per capita income within the service area is projected to increase at an average compound rate of 1.2% per year from 1996 to 2016. Weighted total personal income is expected to increase at an average rate of 2.8% per year over the same period. Projected total personal income amounts are based on projections obtained from Woods & Poole Economics, Inc. Per capita income projections were computed using total income and population amounts.

- Weighted total employment within the service area is projected to increase at an average compound rate of 1.6% per year from 1996 to 2016. Projections are based upon forecasts obtained from Woods & Poole Economics, Inc.

- The prices of real natural gas to residential and to commercial customers in the state of Kentucky are expected to remain almost constant from 1996 until 2000. From 2000-2015, residential and commercial prices are projected to decrease at average compound rates of 0.8% and 0.8% respectively per year. The projections of gas price used in this forecast are based upon forecasts prepared by the Gas Research Institute.

- Heating and cooling degree days are assumed to remain constant at the thirty year normal values calculated for the 1961 to 1990 period (cooling degree days equal 1376; heating degree days equal 4708). It is understood that weather conditions will fluctuate throughout the forecast period; however, it is appropriate to generate the base case projections on normal weather conditions.

- Inflation, as measured by the Consumer Price Index (CPI, 1982-84=1), is assumed to increase by an average compound rate of 3.7% per year from 1996 through 2016. The Personal Consumption Expenditures (PCE, 1987=1), used to deflate personal and per capita income, is assumed to increase by an average compound rate of 3.7%

per year from 1996 through 2016. The Producer Price Index (PPI, 1982=1), used to deflate wholesale power cost, is assumed to increase by an average compound rate of 2.5% per year from 1996 through 2016.

- Real wholesale power cost, expressed in 1996 dollars, is expected to fluctuate between 34.1 and 38.1 mills/kWh throughout the forecast period. Projections are based on internal analysis conducted at Big Rivers Electric Corporation and deflated using the Producer Price Index.

**Table 7.1**
**Model Input Data (Residential and C/I Small Models)**
**Meade County Rural Electric Cooperative Corporation**

| Year | POP | PCAP | EMP | INC | CDD | HDD | WHPC | RNGP | CNGP |
|---|---|---|---|---|---|---|---|---|---|
| 1980 | 36,860 | 10,510 | 9,830 | 387 | 1,726 | 5,095 | 28.68 | 5.13 | 4.94 |
| 1981 | 37,320 | 11,184 | 9,920 | 417 | 1,389 | 4,548 | 33.39 | 5.40 | 5.26 |
| 1982 | 37,900 | 11,290 | 9,930 | 428 | 1,349 | 4,399 | 35.06 | 6.54 | 6.42 |
| 1983 | 38,570 | 10,746 | 10,410 | 414 | 1,664 | 4,640 | 34.17 | 7.38 | 7.18 |
| 1984 | 39,230 | 11,925 | 10,590 | 468 | 1,365 | 4,622 | 32.91 | 6.96 | 6.74 |
| 1985 | 40,090 | 11,598 | 10,810 | 465 | 1,445 | 4,785 | 32.99 | 6.79 | 6.53 |
| 1986 | 40,940 | 11,707 | 11,130 | 479 | 1,576 | 4,386 | 32.58 | 6.09 | 5.83 |
| 1987 | 41,480 | 11,814 | 11,370 | 490 | 1,623 | 4,290 | 33.92 | 5.40 | 5.07 |
| 1988 | 41,010 | 11,898 | 11,260 | 488 | 1,500 | 4,822 | 36.77 | 5.12 | 4.82 |
| 1989 | 41,380 | 12,309 | 11,730 | 509 | 1,396 | 4,830 | 38.68 | 5.09 | 4.74 |
| 1990 | 41,600 | 12,455 | 11,920 | 518 | 1,380 | 3,856 | 37.83 | 5.10 | 4.68 |
| 1991 | 41,830 | 12,649 | 12,120 | 529 | 1,757 | 4,253 | 39.11 | 4.80 | 4.38 |
| 1992 | 42,330 | 13,112 | 12,290 | 555 | 1,240 | 4,217 | 38.99 | 4.74 | 4.22 |
| 1993 | 43,230 | 12,746 | 12,570 | 551 | 1,613 | 4,652 | 36.97 | 4.88 | 4.48 |
| 1994 | 44,380 | 12,919 | 12,900 | 573 | 1,489 | 4,180 | 36.79 | 5.53 | 5.00 |
| 1995 | 45,590 | 12,900 | 13,070 | 588 | 1,773 | 4,314 | 33.90 | 5.48 | 4.98 |
| 1996 | 46,300 | 13,059 | 13,280 | 605 | 1,224 | 5,068 | 32.71 | 5.49 | 5.00 |
| 1997 | 46,995 | 13,209 | 13,453 | 621 | 1,376 | 4,708 | 31.96 | 5.45 | 4.96 |
| 1998 | 47,699 | 13,352 | 13,628 | 637 | 1,376 | 4,708 | 31.23 | 5.41 | 4.93 |
| 1999 | 48,415 | 13,496 | 13,805 | 653 | 1,376 | 4,708 | 30.51 | 5.37 | 4.89 |
| 2000 | 49,141 | 13,643 | 13,984 | 670 | 1,376 | 4,708 | 29.81 | 5.33 | 4.85 |
| 2001 | 49,878 | 13,791 | 14,166 | 688 | 1,376 | 4,708 | 29.12 | 5.29 | 4.82 |
| 2002 | 50,527 | 13,954 | 14,308 | 705 | 1,376 | 4,708 | 29.15 | 5.25 | 4.78 |
| 2003 | 51,184 | 14,119 | 14,451 | 723 | 1,376 | 4,708 | 29.18 | 5.21 | 4.74 |
| 2004 | 51,849 | 14,286 | 14,595 | 741 | 1,376 | 4,708 | 29.21 | 5.17 | 4.71 |
| 2005 | 52,523 | 14,456 | 14,741 | 759 | 1,376 | 4,708 | 29.24 | 5.13 | 4.67 |
| 2006 | 53,206 | 14,627 | 14,889 | 778 | 1,376 | 4,708 | 29.27 | 5.09 | 4.64 |
| 2007 | 53,844 | 14,800 | 15,023 | 797 | 1,376 | 4,708 | 29.30 | 5.05 | 4.60 |
| 2008 | 54,490 | 14,976 | 15,158 | 816 | 1,376 | 4,708 | 29.33 | 5.01 | 4.57 |
| 2009 | 55,144 | 15,153 | 15,294 | 836 | 1,376 | 4,708 | 29.36 | 4.98 | 4.53 |
| 2010 | 55,806 | 15,333 | 15,432 | 856 | 1,376 | 4,708 | 29.38 | 4.94 | 4.50 |
| 2011 | 56,476 | 15,515 | 15,571 | 876 | 1,376 | 4,708 | 29.41 | 4.90 | 4.47 |
| 2012 | 57,097 | 15,699 | 15,695 | 896 | 1,376 | 4,708 | 29.44 | 4.87 | 4.43 |
| 2013 | 57,725 | 15,885 | 15,821 | 917 | 1,376 | 4,708 | 29.47 | 4.83 | 4.40 |
| 2014 | 58,360 | 16,074 | 15,947 | 938 | 1,376 | 4,708 | 29.50 | 4.79 | 4.37 |
| 2015 | 59,002 | 16,265 | 16,075 | 960 | 1,376 | 4,708 | 29.53 | 4.76 | 4.33 |
| 2016 | 59,651 | 16,458 | 16,204 | 982 | 1,376 | 4,708 | 29.56 | 4.72 | 4.30 |

| | | |
|---|---|---|
| POP | = | Total population |
| PCAP | = | Real Per capita income |
| EMP | = | Total employment |
| INC | = | Real Total personal income (x1,000,000) |
| CDD | = | Cooling degree days |
| HDD | = | Heating degree days |
| WHPC | = | Real wholesale power cost (1982 dollars) |
| RNGP | = | Real price of residential natural gas ($/million BTU) |
| CNGP | = | Real price of commercial natural gas ($/million BTU) |

**Table 7.2**
**Model Input Data (Residential and C/I Small Models)**
**Jackson Purchase Electric Cooperative Corporation**

| Year | POP | PCAP | EMP | INC | CDD | HDD | WHPC | RNGP | CNGP |
|---|---|---|---|---|---|---|---|---|---|
| 1980 | 43,960 | 14,664 | 20,200 | 645 | 1,726 | 5,095 | 29.09 | 5.13 | 4.94 |
| 1981 | 44,820 | 14,917 | 20,160 | 669 | 1,389 | 4,548 | 31.23 | 5.40 | 5.26 |
| 1982 | 46,010 | 14,610 | 19,850 | 672 | 1,349 | 4,399 | 37.89 | 6.54 | 6.42 |
| 1983 | 47,090 | 14,111 | 20,290 | 665 | 1,664 | 4,640 | 37.59 | 7.38 | 7.18 |
| 1984 | 47,810 | 15,273 | 21,070 | 730 | 1,365 | 4,622 | 32.97 | 6.96 | 6.74 |
| 1985 | 48,650 | 15,137 | 21,700 | 736 | 1,445 | 4,785 | 33.27 | 6.79 | 6.53 |
| 1986 | 48,560 | 15,465 | 22,170 | 751 | 1,576 | 4,386 | 33.03 | 6.09 | 5.83 |
| 1987 | 48,950 | 15,571 | 22,910 | 762 | 1,623 | 4,290 | 34.19 | 5.40 | 5.07 |
| 1988 | 49,260 | 15,807 | 23,320 | 779 | 1,500 | 4,822 | 37.88 | 5.12 | 4.82 |
| 1989 | 49,630 | 16,381 | 24,250 | 813 | 1,396 | 4,830 | 39.32 | 5.09 | 4.74 |
| 1990 | 49,980 | 16,702 | 25,160 | 835 | 1,380 | 3,856 | 38.27 | 5.10 | 4.68 |
| 1991 | 50,630 | 16,726 | 25,190 | 847 | 1,757 | 4,253 | 39.85 | 4.80 | 4.38 |
| 1992 | 50,870 | 17,337 | 25,840 | 882 | 1,240 | 4,217 | 40.22 | 4.74 | 4.22 |
| 1993 | 52,000 | 17,487 | 27,010 | 909 | 1,613 | 4,652 | 37.23 | 4.88 | 4.48 |
| 1994 | 53,470 | 18,024 | 28,340 | 964 | 1,489 | 4,180 | 37.33 | 5.53 | 5.00 |
| 1995 | 54,810 | 18,626 | 29,720 | 1,021 | 1,773 | 4,314 | 39.20 | 5.48 | 4.98 |
| 1996 | 56,180 | 18,885 | 30,730 | 1,061 | 1,224 | 5,068 | 33.41 | 5.49 | 5.00 |
| 1997 | 57,191 | 19,090 | 31,406 | 1,092 | 1,376 | 4,708 | 32.64 | 5.45 | 4.96 |
| 1998 | 58,221 | 19,296 | 32,097 | 1,123 | 1,376 | 4,708 | 31.89 | 5.41 | 4.93 |
| 1999 | 59,269 | 19,505 | 32,803 | 1,156 | 1,376 | 4,708 | 31.16 | 5.37 | 4.89 |
| 2000 | 60,335 | 19,715 | 33,525 | 1,190 | 1,376 | 4,708 | 30.44 | 5.33 | 4.85 |
| 2001 | 61,422 | 19,928 | 34,262 | 1,224 | 1,376 | 4,708 | 30.47 | 5.29 | 4.82 |
| 2002 | 62,343 | 20,184 | 34,913 | 1,258 | 1,376 | 4,708 | 30.50 | 5.25 | 4.78 |
| 2003 | 63,278 | 20,442 | 35,577 | 1,294 | 1,376 | 4,708 | 30.53 | 5.21 | 4.74 |
| 2004 | 64,227 | 20,704 | 36,253 | 1,330 | 1,376 | 4,708 | 30.56 | 5.17 | 4.71 |
| 2005 | 65,191 | 20,969 | 36,941 | 1,367 | 1,376 | 4,708 | 30.59 | 5.13 | 4.67 |
| 2006 | 66,168 | 21,238 | 37,643 | 1,405 | 1,376 | 4,708 | 30.62 | 5.09 | 4.64 |
| 2007 | 67,029 | 21,531 | 38,283 | 1,443 | 1,376 | 4,708 | 30.65 | 5.05 | 4.60 |
| 2008 | 67,900 | 21,829 | 38,934 | 1,482 | 1,376 | 4,708 | 30.68 | 5.01 | 4.57 |
| 2009 | 68,783 | 22,130 | 39,596 | 1,522 | 1,376 | 4,708 | 30.72 | 4.98 | 4.53 |
| 2010 | 69,677 | 22,436 | 40,269 | 1,563 | 1,376 | 4,708 | 30.75 | 4.94 | 4.50 |
| 2011 | 70,583 | 22,746 | 40,954 | 1,605 | 1,376 | 4,708 | 30.78 | 4.90 | 4.47 |
| 2012 | 71,500 | 23,038 | 41,609 | 1,647 | 1,376 | 4,708 | 30.81 | 4.87 | 4.43 |
| 2013 | 72,430 | 23,334 | 42,275 | 1,690 | 1,376 | 4,708 | 30.84 | 4.83 | 4.40 |
| 2014 | 73,371 | 23,633 | 42,951 | 1,734 | 1,376 | 4,708 | 30.87 | 4.79 | 4.37 |
| 2015 | 74,325 | 23,937 | 43,638 | 1,779 | 1,376 | 4,708 | 30.90 | 4.76 | 4.33 |
| 2016 | 75,291 | 24,244 | 44,336 | 1,825 | 1,376 | 4,708 | 30.93 | 4.72 | 4.30 |

POP = Total population
PCAP = Real Per capita income
EMP = Total employment
INC = Real Total personal income (x1,000,000)
CDD = Cooling degree days
HDD = Heating degree days
WHPC = Real wholesale power cost (1982 dollars)
RNGP = Real price of residential natural gas ($/million BTU)
CNGP = Real price of commercial natural gas ($/million BTU)

**Table 7.3**
**Model Input Data (Residential and C/I Small Models)**
**Green River Electric Cooperative**

| Year | POP | PCAP | EMP | INC | CDD | HDD | WHPC | RNGP | CNGP |
|---|---|---|---|---|---|---|---|---|---|
| 1980 | 53,180 | 14,664 | 25,500 | 780 | 1,726 | 5,095 | 28.26 | 5.13 | 4.94 |
| 1981 | 55,140 | 15,053 | 26,070 | 830 | 1,389 | 4,548 | 32.04 | 5.40 | 5.26 |
| 1982 | 57,680 | 14,757 | 26,380 | 851 | 1,349 | 4,399 | 34.31 | 6.54 | 6.42 |
| 1983 | 60,070 | 14,155 | 27,580 | 850 | 1,664 | 4,640 | 33.28 | 7.38 | 7.18 |
| 1984 | 61,950 | 15,208 | 28,680 | 942 | 1,365 | 4,622 | 31.97 | 6.96 | 6.74 |
| 1985 | 63,690 | 14,954 | 29,630 | 952 | 1,445 | 4,785 | 32.54 | 6.79 | 6.53 |
| 1986 | 63,830 | 15,016 | 30,050 | 958 | 1,576 | 4,386 | 32.34 | 6.09 | 5.83 |
| 1987 | 64,150 | 14,958 | 30,830 | 960 | 1,623 | 4,290 | 32.81 | 5.40 | 5.07 |
| 1988 | 64,110 | 15,101 | 31,290 | 968 | 1,500 | 4,822 | 37.31 | 5.12 | 4.82 |
| 1989 | 64,160 | 15,650 | 32,030 | 1,004 | 1,396 | 4,830 | 39.25 | 5.09 | 4.74 |
| 1990 | 64,930 | 15,819 | 33,040 | 1,027 | 1,380 | 3,856 | 38.51 | 5.10 | 4.68 |
| 1991 | 65,500 | 15,740 | 33,330 | 1,031 | 1,757 | 4,253 | 39.95 | 4.80 | 4.38 |
| 1992 | 66,280 | 16,093 | 33,710 | 1,067 | 1,240 | 4,217 | 40.13 | 4.74 | 4.22 |
| 1993 | 67,750 | 16,058 | 35,300 | 1,088 | 1,613 | 4,652 | 37.99 | 4.88 | 4.48 |
| 1994 | 69,420 | 16,556 | 37,110 | 1,149 | 1,489 | 4,180 | 37.66 | 5.53 | 5.00 |
| 1995 | 70,980 | 16,883 | 38,420 | 1,198 | 1,773 | 4,314 | 35.04 | 5.48 | 4.98 |
| 1996 | 72,400 | 17,102 | 39,340 | 1,238 | 1,224 | 5,068 | 33.54 | 5.49 | 5.00 |
| 1997 | 73,848 | 17,301 | 40,127 | 1,278 | 1,376 | 4,708 | 32.77 | 5.45 | 4.96 |
| 1998 | 75,325 | 17,504 | 40,929 | 1,318 | 1,376 | 4,708 | 32.02 | 5.41 | 4.93 |
| 1999 | 76,831 | 17,710 | 41,748 | 1,361 | 1,376 | 4,708 | 31.28 | 5.37 | 4.89 |
| 2000 | 78,368 | 17,918 | 42,583 | 1,404 | 1,376 | 4,708 | 30.56 | 5.33 | 4.85 |
| 2001 | 79,935 | 18,129 | 43,435 | 1,449 | 1,376 | 4,708 | 29.86 | 5.29 | 4.82 |
| 2002 | 81,374 | 18,343 | 44,216 | 1,493 | 1,376 | 4,708 | 29.89 | 5.25 | 4.78 |
| 2003 | 82,839 | 18,559 | 45,012 | 1,537 | 1,376 | 4,708 | 29.92 | 5.21 | 4.74 |
| 2004 | 84,330 | 18,778 | 45,822 | 1,584 | 1,376 | 4,708 | 29.95 | 5.17 | 4.71 |
| 2005 | 85,848 | 18,999 | 46,647 | 1,631 | 1,376 | 4,708 | 29.98 | 5.13 | 4.67 |
| 2006 | 87,393 | 19,223 | 47,487 | 1,680 | 1,376 | 4,708 | 30.01 | 5.09 | 4.64 |
| 2007 | 88,792 | 19,450 | 48,247 | 1,727 | 1,376 | 4,708 | 30.04 | 5.05 | 4.60 |
| 2008 | 90,212 | 19,680 | 49,019 | 1,775 | 1,376 | 4,708 | 30.07 | 5.01 | 4.57 |
| 2009 | 91,656 | 19,912 | 49,803 | 1,825 | 1,376 | 4,708 | 30.10 | 4.98 | 4.53 |
| 2010 | 93,122 | 20,148 | 50,600 | 1,876 | 1,376 | 4,708 | 30.13 | 4.94 | 4.50 |
| 2011 | 94,612 | 20,386 | 51,409 | 1,929 | 1,376 | 4,708 | 30.16 | 4.90 | 4.47 |
| 2012 | 95,937 | 20,627 | 52,129 | 1,979 | 1,376 | 4,708 | 30.19 | 4.87 | 4.43 |
| 2013 | 97,280 | 20,871 | 52,859 | 2,030 | 1,376 | 4,708 | 30.22 | 4.83 | 4.40 |
| 2014 | 98,642 | 21,118 | 53,599 | 2,083 | 1,376 | 4,708 | 30.25 | 4.79 | 4.37 |
| 2015 | 100,023 | 21,368 | 54,349 | 2,137 | 1,376 | 4,708 | 30.28 | 4.76 | 4.33 |
| 2016 | 101,423 | 21,621 | 55,110 | 2,193 | 1,376 | 4,708 | 30.31 | 4.72 | 4.30 |

POP = Total population
PCAP = Real Per capita income
EMP = Total employment
INC = Real Total personal income (x1,000,000)
CDD = Cooling degree days
HDD = Heating degree days
WHPC = Real wholesale power cost (1982 dollars)
RNGP = Real price of residential natural gas ($/million BTU)
CNGP = Real price of commercial natural gas ($/million BTU)

**Table 7.4**
**Model Input Data (Residential and C/I Small Models)**
**Henderson Union Electric Cooperative Corp.**

| Year | POP | PCAP | EMP | INC | CDD | HDD | WHPC | RNGP | CNGP |
|---|---|---|---|---|---|---|---|---|---|
| 1980 | 37,220 | 15,006 | 16,340 | 558 | 1,726 | 5,095 | 35.24 | 5.13 | 4.94 |
| 1981 | 38,190 | 15,269 | 16,610 | 583 | 1,389 | 4,548 | 34.99 | 5.40 | 5.26 |
| 1982 | 39,410 | 15,131 | 16,830 | 596 | 1,349 | 4,399 | 29.73 | 6.54 | 6.42 |
| 1983 | 40,530 | 13,685 | 17,180 | 555 | 1,664 | 4,640 | 28.69 | 7.38 | 7.18 |
| 1984 | 41,410 | 15,250 | 18,050 | 631 | 1,365 | 4,622 | 26.99 | 6.96 | 6.74 |
| 1985 | 42,350 | 14,913 | 18,270 | 632 | 1,445 | 4,785 | 27.67 | 6.79 | 6.53 |
| 1986 | 42,390 | 14,937 | 17,810 | 633 | 1,576 | 4,386 | 27.04 | 6.09 | 5.83 |
| 1987 | 42,610 | 14,760 | 18,210 | 629 | 1,623 | 4,290 | 28.03 | 5.40 | 5.07 |
| 1988 | 42,710 | 14,968 | 19,170 | 639 | 1,500 | 4,822 | 30.55 | 5.12 | 4.82 |
| 1989 | 42,520 | 15,401 | 19,550 | 655 | 1,396 | 4,830 | 32.17 | 5.09 | 4.74 |
| 1990 | 42,690 | 15,436 | 19,900 | 659 | 1,380 | 3,856 | 31.02 | 5.10 | 4.68 |
| 1991 | 43,130 | 15,237 | 19,940 | 657 | 1,757 | 4,253 | 32.53 | 4.80 | 4.38 |
| 1992 | 43,520 | 15,792 | 20,380 | 687 | 1,240 | 4,217 | 32.39 | 4.74 | 4.22 |
| 1993 | 44,130 | 15,684 | 20,880 | 692 | 1,613 | 4,652 | 31.54 | 4.88 | 4.48 |
| 1994 | 44,990 | 16,331 | 22,240 | 735 | 1,489 | 4,180 | 31.34 | 5.53 | 5.00 |
| 1995 | 45,550 | 16,824 | 22,770 | 766 | 1,773 | 4,314 | 25.45 | 5.48 | 4.98 |
| 1996 | 45,910 | 17,068 | 23,070 | 784 | 1,224 | 5,068 | 23.54 | 5.49 | 5.00 |
| 1997 | 46,507 | 17,313 | 23,393 | 805 | 1,376 | 4,708 | 23.00 | 5.45 | 4.96 |
| 1998 | 47,111 | 17,552 | 23,720 | 827 | 1,376 | 4,708 | 22.47 | 5.41 | 4.93 |
| 1999 | 47,724 | 17,795 | 24,053 | 849 | 1,376 | 4,708 | 21.95 | 5.37 | 4.89 |
| 2000 | 48,344 | 18,041 | 24,389 | 872 | 1,376 | 4,708 | 21.45 | 5.33 | 4.85 |
| 2001 | 48,973 | 18,290 | 24,731 | 896 | 1,376 | 4,708 | 20.95 | 5.29 | 4.82 |
| 2002 | 49,560 | 18,525 | 25,052 | 918 | 1,376 | 4,708 | 20.97 | 5.25 | 4.78 |
| 2003 | 50,155 | 18,763 | 25,378 | 941 | 1,376 | 4,708 | 20.99 | 5.21 | 4.74 |
| 2004 | 50,757 | 19,004 | 25,708 | 965 | 1,376 | 4,708 | 21.02 | 5.17 | 4.71 |
| 2005 | 51,366 | 19,248 | 26,042 | 989 | 1,376 | 4,708 | 21.04 | 5.13 | 4.67 |
| 2006 | 51,982 | 19,495 | 26,381 | 1,013 | 1,376 | 4,708 | 21.06 | 5.09 | 4.64 |
| 2007 | 52,554 | 19,727 | 26,697 | 1,037 | 1,376 | 4,708 | 21.08 | 5.05 | 4.60 |
| 2008 | 53,132 | 19,961 | 27,018 | 1,061 | 1,376 | 4,708 | 21.10 | 5.01 | 4.57 |
| 2009 | 53,717 | 20,198 | 27,342 | 1,085 | 1,376 | 4,708 | 21.12 | 4.98 | 4.53 |
| 2010 | 54,308 | 20,438 | 27,670 | 1,110 | 1,376 | 4,708 | 21.14 | 4.94 | 4.50 |
| 2011 | 54,905 | 20,680 | 28,002 | 1,135 | 1,376 | 4,708 | 21.16 | 4.90 | 4.47 |
| 2012 | 55,509 | 20,885 | 28,338 | 1,159 | 1,376 | 4,708 | 21.18 | 4.87 | 4.43 |
| 2013 | 56,120 | 21,091 | 28,678 | 1,184 | 1,376 | 4,708 | 21.21 | 4.83 | 4.40 |
| 2014 | 56,737 | 21,300 | 29,022 | 1,208 | 1,376 | 4,708 | 21.23 | 4.79 | 4.37 |
| 2015 | 57,361 | 21,511 | 29,370 | 1,234 | 1,376 | 4,708 | 21.25 | 4.76 | 4.33 |
| 2016 | 57,992 | 21,723 | 29,723 | 1,260 | 1,376 | 4,708 | 21.27 | 4.72 | 4.30 |

| | | |
|---|---|---|
| POP | = | Total population |
| PCAP | = | Real Per capita income |
| EMP | = | Total employment |
| INC | = | Real Total personal income (x1,000,000) |
| CDD | = | Cooling degree days |
| HDD | = | Heating degree days |
| WHPC | = | Real wholesale power cost (1982 dollars) |
| RNGP | = | Real price of residential natural gas ($/million BTU) |
| CNGP | = | Real price of commercial natural gas ($/million BTU) |

**Table 7.5**
**Alternative Forecast Scenarios for Population**
**(Average Annual Percent Growth)**

| Years | 5-Yr Hist | 10-Yr Hist | U of L | NPA | W&P | BEA |
|---|---|---|---|---|---|---|
| 1995-2000 | 1.9% | 1.2% | 0.9% | 1.4% | 1.0% | 0.6% |
| 2000-2005 | 1.9% | 1.2% | 0.7% | 1.1% | 1.0% | 0.6% |
| 2005-2010 | 1.9% | 1.2% | 0.7% | 1.1% | 1.0% | 0.6% |
| 2010-2015 | 1.9% | 1.2% | 0.6% | 1.1% | 1.0% | 0.7% |

1. 5-Yr Hist = average compound growth per year for the 1991-1996 period.
2. 10-Yr Hist = average compound growth per year for the 1986-1996 period.
3. U of L = University of Louisville, College of Urban and Public Affairs, Population Studies Program, 1996 Edition. County level data has been weighted using Cooperative market shares.
4. NPA = NPA Data Services, Inc., ***Key Indicators of County Growth: 1970-2025,*** 1996 Edition. County level data has been weighted using Cooperative market shares.
5. W&P = Woods & Poole Economics, Inc., ***1997 State Profile, Kentucky***, May 1996. County level data has been weighted using Cooperative market shares.
6. BEA = U.S. Department of Commerce, Bureau of Economic Analysis, ***Regional Projections to 2045,*** Volume 1: States, July 1995.

**Table 7.6**
**Alternative Forecast Scenarios for Real Total Personal Income**
**(Average Annual Percent Growth)**

| Years | 5-Yr Hist | 10-Yr Hist | NPA | W&P | BEA |
|---|---|---|---|---|---|
| 1995-2000 | 3.8% | 2.7% | 3.1% | 2.5% | 1.8% |
| 2000-2005 | 3.8% | 2.7% | 2.6% | 2.2% | 1.8% |
| 2005-2010 | 3.8% | 2.7% | 2.5% | 2.2% | 1.7% |
| 2010-2015 | 3.8% | 2.7% | 2.5% | 2.1% | 1.6% |

1. 5-Yr Hist = average compound growth per year for the 1991-1996 period.
2. 10-Yr Hist = average compound growth per year for the 1986-1996 period.
3. NPA = NPA Data Services, Inc., ***Key Indicators of County Growth: 1970-2025,*** 1996 Edition. County level data has been weighted using Cooperative market shares.
4. W&P = Woods & Poole Economics, Inc., ***1997 State Profile, Kentucky***, December 1996. County level data has been weighted using Cooperative market shares.
5. BEA = U.S. Department of Commerce, Bureau of Economic Analysis, ***Regional Projections to 2045,*** Volume 1: States, July 1995.

**Table 7.7**
**Alternative Forecast Scenarios for Employment**
**(Average Annual Percent Growth)**

| Years | 5-Yr Hist | 10-Yr Hist | NPA | W&P | BEA |
|---|---|---|---|---|---|
| 1995-2000 | 3.3% | 2.7% | 1.8% | 1.6% | 1.0% |
| 2000-2005 | 3.3% | 2.7% | 1.5% | 1.5% | 0.9% |
| 2005-2010 | 3.3% | 2.7% | 1.2% | 1.4% | 0.7% |
| 2010-2015 | 3.3% | 2.7% | 1.2% | 1.3% | 0.5% |

1. 5-Yr Hist = average compound growth per year for the 1991-1996 period.
2. 10-Yr Hist = average compound growth per year for the 1986-1996 period.
3. NPA = NPA Data Services, Inc., ***Key Indicators of County Growth: 1970-2025,*** 1996 Edition. County level data has been weighted using Cooperative market shares.
4. W&P = Woods & Poole Economics, Inc., ***1997 State Profile, Kentucky***, December 1996. County level data has been weighted using Cooperative market shares.
5. BEA = U.S. Department of Commerce, Bureau of Economic Analysis, ***Regional Projections to 2045***, Volume 1: States, July 1995.

**Table 7.8**
**Alternative Forecast Scenarios for Real Per Capita Income (PCAP)**
**(Average Annual Percent Growth)**

| Years | 5-Yr Hist | 10-Yr Hist | NPA | W&P | BEA |
|---|---|---|---|---|---|
| 1995-2000 | 1.9% | 1.5% | 1.7% | 1.5% | 1.1% |
| 2000-2005 | 1.9% | 1.5% | 1.5% | 1.2% | 1.2% |
| 2005-2010 | 1.9% | 1.5% | 1.4% | 1.2% | 1.0% |
| 2010-2015 | 1.9% | 1.5% | 1.4% | 1.1% | 0.9% |

1. 5-Yr Hist = average compound growth per year for the 1991-1996 period.
2. 10-Yr Hist = average compound growth per year for the 1986-1996 period.
3. NPA = NPA Data Services, Inc., ***Key Indicators of County Growth: 1970-2025,*** 1996 Edition. County level data has been weighted using Cooperative market shares.
4. W&P = Woods & Poole Economics, Inc., ***1997 State Profile, Kentucky***, December 1996. County level data has been weighted using Cooperative market shares.
5. BEA = U.S. Department of Commerce, Bureau of Economic Analysis, ***Regional Projections to 2045,*** Volume 1: States, July 1995.

**Table 7.9**
**Alternative Forecast Scenarios for Residential Natural Gas Price**
**(Average Annual Percent Growth)**

| Years | 5-Yr Hist | 10-Yr Hist | EIA | GRI |
|---|---|---|---|---|
| 1995-2000 | 2.7% | -1.0% | -1.3% | 0.2% |
| 2000-2005 | 2.7% | -1.0% | -0.5% | -1.1% |
| 2005-2010 | 2.7% | -1.0% | -0.8% | -1.1% |
| 2010-2015 | 2.7% | -1.0% | -0.3% | -1.0% |

1. 5-Yr Hist = average compound growth per year for the 1991-1996 period.
2. 10-Yr Hist = average compound growth per year for the 1986-1996 period.
3. EIA = Department of Energy, Energy Information Administration, ***Annual Energy Outlook,*** 1997.
4. GRI = Gas Research Institute, ***Baseline Projection Data Book, GRI Baseline Projections of U.S. Energy Supply and Demand to 2015***, 1996 Edition, Volume 1.

**Table 7.10**
**Alternative Forecast Scenarios for Commercial Natural Gas Price**
**(Average Annual Percent Growth)**

| Years | 5-Yr Hist | 10-Yr Hist | EIA | GRI |
|---|---|---|---|---|
| 1995-2000 | 2.7% | -1.5% | -1.1% | -0.3% |
| 2000-2005 | 2.7% | -1.5% | -0.2% | -1.1% |
| 2005-2010 | 2.7% | -1.5% | -0.6% | -1.1% |
| 2010-2015 | 2.7% | -1.5% | -0.1% | -1.1% |

1. 5-Yr Hist = average compound growth per year for the 1991-1996 period.
2. 10-Yr Hist = average compound growth per year for the 1986-1996 period.
3. EIA = Department of Energy, Energy Information Administration, ***Annual Energy Outlook***, 1997.
4. GRI = Gas Research Institute, ***Baseline Projection Data Book, GRI Baseline Projections of U.S. Energy Supply and Demand to 2015***, 1996 Edition, Volume 1.

**Table 7.11**
**Real Wholesale Power Cost Projections**

| Year | 1989 PRS Power Cost 1989 Dollars | 1991 UDS Power Cost 1990 Dollars | 1992 PRS Revised Power Cost 1991 Dollars | 1993 UDS Power Cost 1992 Dollars | 1995 PRS Power Cost 1994 Dollars | 1997 PRS Power Cost 1996 Dollars |
|---|---|---|---|---|---|---|
| 1990 | 41.15 | 41.76 | | | | |
| 1991 | 43.94 | 41.58 | 44.55 | | | |
| 1992 | 43.45 | 41.55 | 41.45 | 43.95 | | |
| 1993 | 43.28 | 41.13 | 41.70 | 42.82 | 42.58 | |
| 1994 | 43.35 | 39.65 | 41.74 | 41.98 | 43.23 | |
| 1995 | 43.43 | 39.86 | 40.64 | 42.89 | 43.55 | 41.85 |
| 1996 | 42.80 | 39.16 | 40.24 | 41.70 | 42.04 | 39.80 |
| 1997 | 42.50 | 39.31 | 38.51 | 41.15 | 41.99 | 38.14 |
| 1998 | 42.93 | 39.69 | 38.94 | 40.70 | 42.60 | 34.72 |
| 1999 | 43.03 | 39.99 | 39.18 | 39.91 | 42.72 | 34.05 |
| 2000 | 43.09 | 40.24 | 39.41 | 39.93 | 43.36 | 34.05 |
| 2001 | 43.16 | 40.41 | 39.62 | 40.14 | 43.32 | 35.48 |
| 2002 | 43.25 | 40.51 | 39.76 | 40.40 | 43.40 | 35.51 |
| 2003 | 42.54 | 40.36 | 39.73 | 40.24 | 42.89 | 35.54 |
| 2004 | 42.17 | 40.18 | 39.86 | 40.25 | 42.93 | 35.56 |
| 2005 | 41.83 | 40.00 | 39.26 | 39.00 | 41.26 | 35.59 |
| 2006 | 41.89 | 40.05 | 39.29 | 39.07 | 41.34 | 35.61 |
| 2007 | | | | 39.16 | 41.36 | 35.64 |
| 2008 | | | | | 41.44 | 35.67 |
| 2009 | | | | | 41.52 | 35.70 |
| 2010 | | | | | | 35.73 |
| 2011 | | | | | | 35.75 |
| 2012 | | | | | | 35.78 |
| 2013 | | | | | | 35.80 |
| 2014 | | | | | | 35.83 |
| 2015 | | | | | | 35.85 |
| 2016 | | | | | | 35.87 |

Actual

Power cost amounts reflect member's costs in mills/kWh, excluding the smelters, and, after 2000, the market priced other industrial sales.

**Table 7.12**
**Economic Outlook Summary**
**Base Case and Range Forecasts**

| | Low Range | Base Case | High Range |
|---|---|---|---|
| Population | 0.4% | 1.5% | 2.6% |
| Employment | 0.0% | 1.6% | 3.3% |
| Total Personal Income | -0.3% | 2.8% | 5.9% |
| Wholesale Power Cost | -2.5% | -0.5% | 1.5% |

**Range Forecast** - This study contains a 90% bandwidth forecast that addresses future uncertainty. The upper band represents projections based upon a more optimistic view of the economy than that of the base case and incorporates extreme weather conditions. The lower band represents projections based upon a more pessimistic view of the economy than that of the base case and incorporates mild weather conditions.

The assumptions made for the bandwidth forecast regarding the model input variables identified above were formulated individually for each member system. Probability distributions were developed for each model input variable. Section 11, Range Forecasts, provides a description of how the high and low range forecasts were developed. In developing the probability distributions, historical data for the most recent ten years was used to estimate the standard deviation for each input variable. The statistics for each member system are presented in the member system 1997 PRS reports.

## 8. Short-Term Forecast

A short-term forecast of system requirements was developed to provide input into the annual operating budget. The forecast includes projections of total system energy sales to the member systems, total system consumers, and CP demand. Projections have been prepared on a monthly basis for years 1997-2000. The short-term forecast for these years is presented in tabular form in Section 1 of the Appendix.

An econometric model was developed to project rural system energy requirements. Monthly projections for all non-rural requirements were developed individually by member system management and added to the model projections. The rural system energy model is expressed in linear form and specifies a relationship between net monthly sales, total system consumers, cooling degree days, and heating degree days. Binary variables are included for the months of July, August and September to differentiate these months from other months. The sample upon which the model was estimated includes months 1992.01 through 1996.12, a period which growth over the next three years is expected to track. The model is presented as equation 8.1.

$$RMWH_{tm} = -124{,}170 + 2.4188(TOTCON_{tm}) + 146.002(CDD_{tm}) \qquad (8.1)$$

$$+ 68.324(HDD_{tm}) + 11{,}077(M7) + 12{,}672(M8) + 3{,}160(M9)$$

| | |
|---|---|
| $RMWH_{tm}$ | = rural system energy sales (MWh) in $month_m$, $year_t$ |
| $TOTCON_{tm}$ | = total system consumers in $month_m$, $year_t$ |
| $CDD_{tm}$ | = cooling degree days in $month_m$, $year_t$ |
| $HDD_{tm}$ | = heating degree days in $month_m$, $year_t$ |
| M7 | = binary variable equal to 1 in month 7, 0 otherwise |
| M8 | = binary variable equal to 1 in month 8, 0 otherwise |
| M9 | = binary variable equal to 1 in month 9, 0 otherwise |

Changes in the explanatory variables account for over 96% of the variation in net monthly sales. With the exception of one dummy variable, M9, all coefficients are significant at the 95% confidence level. The Durbin-Watson statistic indicates that there is no evidence of first-order autocorrelation. The standard error of regression, expressed as a percentage of the mean value of RMWH is 3.4%.

Projections of total system consumers for the 1997-2000 period are based upon the long-term forecast of consumers by customer classification. The procedures used to project long-term number of consumers by class are discussed in Section 9. The projections of total system consumers for years 1997-2000 were broken down by month based on monthly percentages computed using historical data for 1996.

Projections of short-term CP demand are separated into two components: rural system CP and non-rural CP. An econometric model was developed to project rural system CP, while non-rural CP projections were developed by cooperative management. The rural system CP demand model specifies a relationship between monthly CP demand, total system consumers, minimum temperature during the winter months, cooling degree days, and heating degree days. For this particular analysis the winter period includes all months from October through May. The model is presented as equation 8.2.

$$RCP_{tm} = -211{,}841 + 5.413(TOTCON_{tm}) - 1{,}530.343(WINMIN_{tm}) + 220.640(CDD_{tm}) + 71.864(HDD_{tm}) \quad (8.2)$$

$RCP_{tm}$ = rural coincident peak demand in $month_m$, $year_t$
$TOTCON_{tm}$ = total system consumers in $month_m$, $year_t$
$WINMIN_{tm}$ = minimum temperature in $month_m$, $year_t$
$CDD_{tm}$ = cooling degree days in $month_m$, $year_t$
$HDD_{tm}$ = heating degree days in $month_m$, $year_t$

Changes in the explanatory variables account for over 89% of the variation in net monthly peak demand. All coefficients are significant at the 99% confidence level. The Durbin-Watson statistic indicates that there is no evidence of first-order autocorrelation. The standard error of regression, expressed as a percentage of the mean value of the dependent variable RCP, is 5.8%.

**Table 8.1**
**Comparison of Short-Term and Long-Term Forecasts**

| 1997 | Short-Term Forecast | Long-Term Forecast | Difference |
|---|---|---|---|
| Native Sales (MWh) | 8,572,245 | 8,582,736 | 0.1% |
| Rural CP Demand (kW) | 415,485 | 423,583 | 1.9% |
| CP Demand (kW) | 1,317,434 | 1,339,422 | 1.7% |
| **1998** | | | |
| Native Sales (MWh) | 9,427,654 | 9,430,154 | 0.0% |
| Rural CP Demand (kW) | 426,694 | 434,485 | 1.8% |
| CP Demand (kW) | 1,361,508 | 1,383,124 | 1.6% |
| **1999** | | | |
| Native Sales (MWh) | 9,630,503 | 9,625,335 | -0.1% |
| Rural CP Demand (kW) | 438,142 | 445,727 | 1.7% |
| CP Demand (kW) | 1,376,121 | 1,397,316 | 1.5% |
| **2000** | | | |
| Native Sales (MWh) | 9,725,974 | 9,713,985 | -0.1% |
| Rural CP Demand (kW) | 449,823 | 457,409 | 1.7% |
| CP Demand (kW) | 1,391,717 | 1,412,698 | 1.5% |

Note: CP demand values include transmission losses of 2% and exclude off-system firm demand

**Short-Term/Long-Term Forecast Reconciliation** - The short- and long-term forecasts were produced using different model specifications; therefore, results from both analyses must be reconciled between the short- and long-term horizons. For the official forecast, the short-term forecast results were used for 1997-1999. The short- and long-term results were averaged for 2000, and the long-term results were used for 2001-2016.

## 9. Long-Term Forecast

This section of the report presents the forecasting models developed for each of the member cooperatives, which provided the basis for development of the Big Rivers forecast. Projections of base case total system energy requirements were developed using a "bottom-up" approach, in which projections of consumers and energy requirements were developed by customer classification and then aggregated to generate a total system forecast. Total system energy requirements are projected to increase at an average compound rate of 1.8% per year. The long-term base case forecast is presented in Section 2 of the Appendix. The bandwidth forecasts are presented in Sections 3 and 4 of the Appendix. Four individual scenario forecasts, based upon specific combinations of weather and economic conditions, are presented in Section 6 of the Appendix.

Econometric models were developed to analyze historical growth and to make projections of residential requirements and C/I small requirements. The modeling process consisted of updating the models specified in the 1995 PRS. Several revisions were made to the models before estimating the coefficients for each regression equation. Informed judgement was used to project C/I large requirements. Linear trends were used to project energy sales for all other classifications and system own use. Summer and winter peak demand projections are based upon equations incorporating energy requirements and load factor. This section presents the models developed and judgements made during the forecasting process.

**Model Sampling Periods** - The sample periods used for estimating the forecasting models were based on two criteria: (i) selection of a historical period that the forecast horizon is expected to best track, and (ii) use of a sufficient number of observations to provide reliable coefficients. The sampling periods include observations from 1970-1996 for the residential and C/I small consumer models, 1986-1996 for the residential energy model, and 1976-1996 for the C/I small energy model. Regarding the residential class, it is assumed that average consumption per customer will continue to increase at rates lower than those prior to 1986; therefore, the 1986-1996 sample period best fits the two criteria identified above.

**Residential Model** - The residential model consists of three sub-models: (i) a consumer model, (ii) an average monthly usage per consumer model, and (iii) a real average price model. Projections for all three of these components were developed using the model; projections of total residential energy sales were computed from the consumer and average monthly usage forecasts. A summary of the model coefficients, associated t-statistics, $R^2$ value, and the standard error of regression for each equation is presented in Table 9.1 at the end of this section.

The residential energy model is a pooled cross-sectional model and includes data for all four member system cooperatives of Big Rivers Electric Corporation. The pooled model was utilized, rather than an individual cooperative model, in order to increase the number of observations upon which the coefficients were estimated. Review of average usage values for each of the four Big Rivers systems indicates consistent change from year to year. Use of data for all four systems adds stability to the estimated coefficients. The coefficients are the same for each system; therefore, it is assumed that all of the explanatory variables affect each of the four systems similarly. The model includes indicator variables to differentiate the four systems.

**Residential Consumers** - It is assumed that population growth within and around the Big Rivers service area creates a pool of potential residential consumers. As population increases over the long run, some percentage of new residents will become cooperative members. This percentage, or market share, increases or decreases from year to year depending on which areas population growth occurs. The market share increases when the majority of population growth occurs within the rural areas. On the other hand, the market share decreases when the majority of population growth occurs in the metropolitan and urban areas, or those areas served by municipalities or public utility companies. Market share data was developed and used to weight county population data (see Section 4, PRS Database).

Economic conditions affect residential consumer growth. Real per capita income impacts the household formation rate. As income increases, household formations will increase; thus, the number of consumers increase. Low interest rates stimulate growth in housing starts. Increases in employment opportunities indicate a growing economy and population shifts into that particular area.

The consumer models are expressed in log-linear form and specify a relationship between number of consumers and total population. The time period upon which the coefficients are estimated includes years 1971 through 1996. The residential consumer forecasting models are presented as Equations 9.1 - 9.4. The regression output is provided in Section 5 of the Appendix.

| | | |
|---|---|---|
| Meade County | $\ln RCON_t = -7.4639 + 1.6172(\ln TOTPOP_t)$ | (9.1) |
| Jackson Purchase | $\ln RCON_t = -3.7215 + 1.2550(\ln TOTPOP_t)$ | (9.2) |
| Green River: | $\ln RCON_t = -2.3655 + 1.1149(\ln TOTPOP_t)$ | (9.3) |
| Henderson Union: | $\ln RCON_t = -3.4974 + 1.2285(\ln TOTPOP_t)$ | (9.4) |

$RCON_t$ = average number of residential consumers in $year_t$
$TOTPOP_t$ = total service area population in $year_t$

Review of the member system models shows that changes in population account for at least 96% of the annual change in number of customers. The standard error of regression for each model indicates that the models estimate actual historical consumer amounts with a high degree of accuracy. The population coefficient for each model is statistically significant at the 99% confidence level. The Durbin-Watson statistics indicate first degree autocorrelation in the model residuals; however, the linear relationship between the number of residential consumers and population is extremely high, and the projections are reasonable.

**Average Residential Usage** - Analysis of residential energy sales was conducted on an annual basis using average monthly usage per consumer values. Several assumptions were made regarding development of the residential average usage model:

- Increased operating efficiencies of major electrical appliances will have more of a negative impact on energy usage in future years as the number of high efficient appliance stock increases.
- While the saturation levels of electric heating and air conditioning systems have increased over time, the rate of increase decreases as a maximum saturation level is approached. Average usage levels out as maximum saturation is approached.
- Increases in the price of electricity have a negative impact on electricity use; increases in the price of electricity substitutes have a positive impact on usage.
- Recessionary economic conditions at the national level during the late 1970s and early 1980s and the depressed economic conditions at the local level during the early 1990s had a negative impact on energy usage levels. Conservation measures have increased as a result of recessionary economic conditions.
- Over the historical period, increases in the ownership of electrical appliances, coupled with increases in the number of all-electric consumers (electric heating, cooling, and water heating), have been the primary factor causing long-term increases in average usage levels. In the forecast period, it is assumed that usage will continue to increase due primarily to the higher usage levels of new customers relative to the class average; however, future growth in usage is expected to be low and similar to recent years.
- Weather conditions impact energy usage on an annual basis. Extreme weather conditions have a positive impact on usage levels.
- Real income measures consumer ability to purchase electric goods and services. Growth in disposable income has a positive impact on energy use; however, it is assumed that the relationship between income and energy use is not constant. As income increases, usage levels tend to level at very high income levels.

The desired specification for the average usage model would quantify the relationship among kWh usage, real per capita income for the service area, the real price of electricity, the real price of electricity substitutes, heating and cooling degree days, and electric heating and cooling system saturation levels. Income is an indicator of economic conditions and measures consumer purchasing power. Price of electricity captures the effects of consumer conservation and is used to compute price elasticity of demand for electricity. Price of electricity substitutes measures the demand for electricity and for electricity substitutes. Heating and cooling degree days account for changes in kWh usage due to fluctuations in weather conditions. Preferably, heating and cooling degree days would be weighted by appliance saturation levels to more accurately account for weather impacts over time (i.e., the impact of 2,000 heating degree days in 1990 would be greater than that of 2,000 heating degree days in 1970 because there were more electric heating systems in use in 1990).

The average usage per consumer model is specified in log-linear form and quantifies a relationship between energy use, real per capita income, real price of electricity (mills/kWh), cooling degree days, heating degree days, and average usage from the prior year. While end-use survey information is available for three recent years, saturation time series have not been developed. Two stage least squares techniques were used to estimate the usage and price equations. Both variables, average usage and average price, are considered endogenous as each impacts the other within the marketplace. In order to model the causal relationship between average use and price, the two equations were solved simultaneously.

The residential average usage model is presented as Equation 9.5. With the exception of price, all variables are significant at the 99% confidence level. Changes in the explanatory variables account for over 98% of the variation in annual average use. The standard error of regression is 1.8%, indicating that the model estimates historical usage levels with a high degree of accuracy. The model residuals, plotted over time, appear random. The regression output is presented in Section 5 of the Appendix.

$$\ln RUSE_t = -1.6014 + 0.2918(\ln PCAP_t) - 0.0749(\ln RRP_t) \qquad (9.5)$$

$$+ 0.1915(\ln CDD_t) + 0.3063(\ln HDD_t) + 0.2875(\ln RUSE_{t-1})$$

$$+ 0.1220(D20) + 0.1409(D33) + 0.0951(D55)$$

$RUSE_t$ = average residential use (kWh/cons./mo.) in $year_t$
$PCAP_t$ = real per capita income for the service area in $year_t$
$RRP_t$ = real price of electricity (mills/kWh) in $year_t$
$CDD_t$ = cooling degree days (Evansville, Indiana) in $year_t$
$HDD_t$ = heating degree days (Evansville, Indiana) in $year_t$
D20 = binary variable =1 for Jackson Purchase, 0 otherwise
D33 = binary variable =1 for Green River, 0 otherwise
D55 = binary variable =1 for Henderson Union, 0 otherwise

**Average Residential Price** - The model developed to project average price is expressed in log-linear form and specifies a relationship between price, average residential usage and real wholesale power cost. The model, presented as Equation 9.6, was estimated using two stage least squares and was solved simultaneously with Equation 9.5 in projecting both price and average usage amounts.

$$\ln RRP_t = 7.4423 - 0.7503(\ln RUSE_t) + 0.4195(\ln RWHPC_t) + 0.2392(D33) \qquad (9.6)$$

$$+ 0.2671(D20) + 0.2392(D33) + 0.2884(D55)$$

| | |
|---|---|
| $RRP_t$ | = real average residential price in $year_t$ |
| $RUSE_t$ | = average residential usage in $year_t$ |
| $RWHPC_t$ | = real wholesale power cost in $year_t$ |
| D20 | = binary variable =1 for Jackson Purchase, 0 otherwise |
| D33 | = binary variable =1 for Green River, 0 otherwise |
| D55 | = binary variable =1 for Henderson Union, 0 otherwise |

**Commercial/Industrial (C/I Small) Model** - Like the residential model, the C/I small model contains three sub-models: (i) a consumer model, (ii) a total energy sales model, and (iii) a price model. A pooled cross-sectional energy model was developed in order to maximize the number of observations used to estimate the model coefficients. A summary of the model coefficients, associated t-statistics, $R^2$ value, and standard error of regression, expressed as a percentage, for each equation is presented in Table 9.2 at the end of this section.

**C/I Small Consumers** - It is assumed that growth in customers for this class is tied predominately to employment growth within the service area. The models developed to project the number of C/I small consumers are expressed in log-linear form and specify a relationship between consumers and employment. Data for the 1971-1996 period was used in estimating the model coefficients.

The C/I small consumer forecasting models are presented as Equations 9.7 - 9.10. The regression output is provided in Section 5 of the Appendix.

| | | |
|---|---|---|
| Meade County | $\ln SCON_t = -4.4511 + 1.2424(\ln TOTEMP_t)$ | (9.7) |
| Jackson Purchase | $\ln SCON_t = -5.5232 + 1.2755(\ln TOTEMP_t)$ | (9.8) |
| Green River: | $\ln SCON_t = -7.0836 + 1.4632(\ln TOTEMP_t)$ | (9.9) |
| Henderson Union: | $\ln SCON_t = -5.6756 + 1.2877(\ln TOTEMP_t)$ | (9.10) |

| | |
|---|---|
| $SCON_t$ | = average number of C/I small consumers in $year_t$ |
| $TOTEMP_t$ | = service area employment in $year_t$ |

The models account for over 90% of the annual change in number of customers. The standard error of regression ranges from 3.1% to 9.3%. The coefficient for each parameter in all four models are statistically significant at the 99% confidence level.

**C/I Small Energy Sales** - The analysis of C/I small energy sales and development of the forecasting model was based on the following conclusions and assumptions:

- The commercial class consists of a heterogeneous group of accounts. Factors which significantly influence kWh sales for one type of account may have no impact on other accounts.

- The impact of weather conditions on kWh sales for the commercial classification is considerably less than that on sales for the residential classification.

- Economic conditions impact commercial growth and energy sales; however, the impacts vary depending upon the type of account.

- Increases in the price of electricity have a negative impact on electricity use; increases in the price of electricity substitutes have a positive impact on electricity use.

Two C/I small energy sales models were developed, one (Equation 9.11) to project sales for Jackson Purchase, and Green River, and a second (Equation 9.12) to project sales for Meade County and Henderson Union. Both equations are pooled, cross sectional models, are specified in log-linear form, and quantify a relationship between energy sales, price of electricity, weighted cooling degree days, weighted heating degree days, and sales from the prior year. Degree days are weighted by total income. The first model was estimated using data for all four systems, while the second model was estimated using data for Meade County and Henderson Union. Equation 9.11 projects Meade County and Henderson Union class sales unreasonably high; therefore, Equation 9.12 was developed. Two stage least squares techniques were used in estimating the energy sales and price equations. Like the residential model, energy sales and average price are considered endogenous as each impacts the other within the marketplace; as a result, the two equations were solved simultaneously.

The C/I small energy sales model are presented as Equations 9.11 and 9.12. Changes in the explanatory variables account for over 98% and 90% of the variation in annual energy sales in the respective models. The standard errors of regression are 6.7% and 4.8% respectively, which are very reasonable when considering the heterogeneity of the C/I small class. The residuals indicate that there is no evidence of first-order autocorrelation in either model. The regression output is presented in Section 5 of the Appendix.

$$\ln SCMWH_t = -1.2149 - 0.0473(\ln RCP_t) + 0.1176(\ln COOL_t) + 0.1137(\ln HEAT_t) + 0.8312(\ln SCMWH_{t-1}) - 0.0092(D20) - 0.0087(D33) - 0.0488(D55) + 0.3940(D5575) \qquad (9.11)$$

$$\ln SCMWH_t = 0.0628 - 0.0788(\ln RCP_t) + 0.2455(\ln COOL_t) + 0.3095(\ln HEAT_t) + 0.2948(\ln SCMWH_{t-1}) - 0.0460(D55) \qquad (9.12)$$

| | |
|---|---|
| $SCMWH_t$ | = C/I small energy sales in $year_t$ |
| $RCP_t$ | = real price of electricity (mills/kWh) in $year_t$ |
| $COOL_t$ | = weighted cooling degree days (Evansville, Indiana) in $year_t$ |
| $HEAT_t$ | = weighted heating degree days (Evansville, Indiana) in $year_t$ |
| D20 | = binary variable =1 for Jackson Purchase, 0 otherwise |
| D33 | = binary variable =1 for Green River, 0 otherwise |
| D55 | = binary variable =1 for Henderson Union, 0 otherwise |
| D5575 | = binary variable =1 for Henderson Union in 1975, 0 otherwise |

**Average C/I Small Price** - The models developed to project average price are expressed in log-linear form and specify a relationship between price, C/I small MWh energy sales and real wholesale power cost. The models, presented as Equations 9.13 and 9.14, were estimated using two stage least squares and was solved simultaneously with Equations 9.11 and 9.12, respectively, in projecting both price and average usage amounts.

$$\ln RCP_t = 6.1914 - 0.4143(\ln SCMWH_t) + 0.6385(\ln RWHPC_t) \qquad (9.14)$$

$$+ 0.0979(D20) + 0.2933(D33) + 0.1543(D55)$$

$$\ln RCP_t = 9.0199 - 0.6482(\ln SCMWH_t) + 0.5427(\ln RWHPC_t) \qquad (9.15)$$

$$+ 0.2293(D55) + .3589(DUM55)$$

| | |
|---|---|
| $RCP_t$ | = real average C/I Small price in $year_t$ |
| $SCMWH_t$ | = C/I Small mWh energy sales in $year_t$ |
| $RWHPC_t$ | = real wholesale power cost in $year_t$ |
| DUM55 | = binary variable =1 for Henderson Union in 1988, 0 otherwise |
| D20 | = binary variable =1 for Jackson Purchase, 0 otherwise |
| D33 | = binary variable =1 for Green River, 0 otherwise |
| D55 | = binary variable =1 for Henderson Union, 0 otherwise |

**Commercial/Industrial (C/I) Large Energy Sales** - The number of consumers and energy sales for this consumer classification were based on informed judgement. Projections were developed by member system management, and are based upon input received from representatives at the individual accounts.

**Public Street and Highway Lighting** - It is assumed that growth in customers and energy requirements for this classification will be similar to that measured during the 1986 to 1996 period. Projections for years 1997-2016 are based on average growth computed for this period.

**Member System Own Use** - It is assumed that growth in system own use for each system will be similar to that measured during recent years. Projections from 1997 through 2016 are based on recent consumption levels.

**Transmission Losses** -Transmission losses are assumed at 2% per year for the 1997-2016 period.

**Member System Distribution Losses** - Projections of total member system purchases, or Big Rivers sales, include distribution losses. Loss factors were developed individually for each member system and were applied to projected member rural system sales in generating total member system purchases. The rural system loss factors were based upon the average of the most recent five years. Losses for Henderson Union were trended down during the 1997-2000 to reflect system improvements that are expected to reduce distribution losses.

**System Peak Demand** - Coincident (CP) and noncoincident (NCP) demands were analyzed and projected individually for the summer and winter seasons rather than for one annual amount. Under normal weather conditions, the system is expected to be summer peaking throughout the forecast period.

Econometric models were developed to measure changes in both summer and winter season CP and NCP peak demands for the rural system. Both models are expressed in linear form and specify a relationship between monthly peak demand, annual rural system energy sales, cooling degree days, and heating degree days. Binary variables were also included for the months of June through September to distinguish the summer season from other months and for December 1989 and January 1994 to account for extremely low temperatures. The NCP model is presented as Equation 9.15 while the CP model is presented as Equation 9.16.

$$\begin{aligned} RNCP_{tm} = {} & -97.6617 + 0.2231(RGWH_{tm}) + 0.2352(CDD_{tm}) \\ & + 0.1121(HDD_{tm}) + 23.3070(DUM1) \\ & + 35.5553(M6) + 38.4546(M7) + 51.3480(M8) + 52.5486(M9) \\ & + 44.0850(EXT89) \end{aligned} \tag{9.15}$$

| | |
|---|---|
| $RNCP_{tm}$ | = peak demand (rural NCP) in $year_t$, $month_m$ |
| $RGWH_{tm}$ | = annual energy sales (rural GWH) |
| $CDD_{tm}$ | = cooling degree days (Evansville, Indiana) in $year_t$, $month_t$ |
| $HDD_{tm}$ | = heating degree days (Evansville, Indiana) in $year_t$, $month_t$ |
| DUM1 | = indicator variable equal to 1 prior to 1987 |
| M6 | = indicator variable equal to 1 in June, 0 otherwise |
| M7 | = indicator variable equal to 1 in July, 0 otherwise |
| M8 | = indicator variable equal to 1 in August, 0 otherwise |
| M9 | = indicator variable equal to 1 in September, 0 otherwise |
| EXT89 | = indicator variable equal to 1 in December 1989, 0 otherwise |

Over 90% of the variation in rural NCP demand is accounted for by changes in rural energy sales, cooling degree days, heating degree days, and the indicator variables. All coefficients, with the exception of EXT89, are significant at the 99% confidence level. The standard error of regression, expressed as a percent of the mean of the dependent variable RNCP is 5.8%. The Durbin-Watson statistic indicates that the test for positive first-order autocorrelation is inconclusive. The regressoin output is presented in Section 5 of the Appendix.

$$\begin{aligned} RCP_{tm} = {} & -124.9231 + 0.2217(RGWH_{tm}) + 0.2653(CDD_{tm}) \\ & + 0.1238(HDD_{tm}) + 20.4909(DUM1) \\ & + 39.7269(M6) + 42.1620(M7) + 51.9260(M8) + 49.3270(M9) \end{aligned} \tag{9.16}$$

| | |
|---|---|
| $RCP_{tm}$ | = peak demand (rural CP) in $year_t$, $month_m$ |
| $RGWH_{tm}$ | = annual energy sales (rural GWH) |
| $CDD_{tm}$ | = cooling degree days (Evansville, Indiana) in $year_t$, $month_t$ |
| $HDD_{tm}$ | = heating degree days (Evansville, Indiana) in $year_t$, $month_t$ |
| DUM1 | = indicator variable equal to 1 prior to 1987 |
| M6 | = indicator variable equal to 1 in June, 0 otherwise |
| M7 | = indicator variable equal to 1 in July, 0 otherwise |
| M8 | = indicator variable equal to 1 in August, 0 otherwise |
| M9 | = indicator variable equal to 1 in September, 0 otherwise |

Over 83% of the variation in rural CP demand is accounted for by changes in rural energy sales, cooling degree days, heating degree days, and the indicator variables. All coefficients are significant at the 95% confidence level. The standard error of regression, expressed as a percent of the mean of the dependent variable RCP is 8.9%. The Durbin-Watson statistic indicates that the test for positive first-order autocorrelation is inconclusive. The regressoin output is presented in Section 5 of the Appendix.

Projections of rural system CP and NCP demand were combined with projections of demand for Big Rivers' C/I large accounts to generate projections of total system CP and NCP demand. Comparison of CP and NCP demand projections indicate that the coincidence factor, the ratio of CP to NCP demand (supplemental requirements included), is projected to fall within the 98-99% range over the next 20 years.

**Post Modeling Adjustments to the Forecast** - The residential and C/I small models were developed using system data from historical years. It is assumed that the historical data implicitly account for energy conservation and DSM programs that have already been implemented. While explicit post modeling adjustments are appropriate to account for the impacts of future DSM programs, no new programs are planned at this time. Therefore, no post modeling adjustments have been made to the energy sales and demand forecasts. In addition, the forecast includes no impacts directly associated with potential industry deregulation impacts.

**Table 9.1**
**Residential Energy and Price Model**

| Variable Description | Variable Name | Average Use LRUSE | Avg. Price LRRP |
|---|---|---|---|
| **ENDOGENOUS** | | | |
| Average Use | LRUSE | | -0.7503 (-4.2) |
| Average Real Price | LRRP | -0.0749 (-1.1) | |
| **EXOGENOUS** | | | |
| Constant | C | -1.6014 (-1.3) | 7.4423 (5.7) |
| Lagged Average Use | LRUSE(-1) | 0.2875 (2.7) | |
| Real Per Capita Income | LPCAP | 0.2918 (3.2) | |
| Heating Degree Days | LWTHDD | 0.3063 (7.0) | |
| Cooling Degree Days | LWTCDD | 0.1915 (6.9) | |
| Real Average Wh. Power Cost | LRWHPC | | 0.4195 (5.9) |
| Population | LTOTPOP | | |
| Indicator - KY20 | D20 | 0.1220 (3.8) | 0.2671 (4.9) |
| Indicator - KY33 | D33 | 0.1409 (4.8) | 0.2392 (4.4) |
| Indicator - KY55 | D55 | 0.0951 (3.9) | 0.2884 (7.1) |
| R-SQUARED | | 0.98 | 0.72 |
| Standard Error | | 1.8% | 3.6% |

**Table 9.2**
**Residential Consumer Model**

| Variable Description | Variable Name | KY18 | KY20 | KY33 | KY55 |
|---|---|---|---|---|---|
| Constant | C | -7.4639<br>(-24.5) | -3.7215<br>(-12.2) | -2.3655<br>(-5.3) | -3.4974<br>(-8.7) |
| Population | TOTPOP | 1.6172<br>(55.9) | 1.2550<br>(44.3) | 1.1149<br>(27.4) | 1.2285<br>(32.2) |
| | | | | | |
| R_SQUARE | | .99 | .99 | .97 | .98 |
| Standard Error | | 1.8% | 1.9% | 3.0% | 2.5% |

**Table 9.3**
**C/I Small Model (Equations 9.11 and 9.13)**

| Variable Description | Variable Name | MWh Sales LSCMWH | Avg. Price LRCP |
|---|---|---|---|
| **ENDOGENOUS** | | | |
| MWh Sales | LSCMWH | | -0.4143 (-13.3) |
| Real Average Price | LRCP | -0.0473 (-1.0) | |
| **EXOGENOUS** | | | |
| Constant | C | -1.2149 (-2.7) | 6.1914 (25.7) |
| Real Total Personal Income | LTOTINC | | |
| Cooling Degree Days | LCOOL | 0.1176 (2.7) | |
| Heating Degree Days | LHEAT | 0.1137 (2.0) | |
| Lagged MWh Sales | LSCMWH(-1) | 0.8312 (20.5) | |
| Real Wholesale Power Cost | LRWHPC | | 0.6385 (17.7) |
| Employment | TOTEMP | | |
| Indicator - KY20 | D20 | -0.0092 (-0.4) | 0.0979 (4.6) |
| Indicator - KY55 for 1975 | D5575 | 0.3940 (5.5) | |
| Indicator - KY33 | D33 | -0.0087 (-0.3) | 0.2933 (9.4) |
| Indicator - KY55 | D55 | -0.0488 (-2.4) | 0.1543 (7.7) |
| Indicator - KY55 for 1988 | DUM55 | | 0.4201 (14.9) |
| R_SQUARE | | .98 | .92 |
| Standard Error | | 6.7% | 5.5% |

**Table 9.4**
**C/I Small Model (Equations 9.12 and 9.14)**

| Variable Description | Variable Name | MWh Sales LSCMWH | Avg. Price LRCP |
|---|---|---|---|
| **ENDOGENOUS** | | | |
| MWh Sales | LSCMWH | | -0.6482 (-5.8) |
| Real Average Price | LRCP | -0.0788 (-1.6) | |
| **EXOGENOUS** | | | |
| Constant | C | 0.0628 (0.1) | 9.0199 (8.6) |
| Real Total Personal Income | LTOTINC | | |
| Weighted Cooling Degree Days | LCOOL | 0.2455 (5.2) | |
| Weighted Heating Degree Days | LHEAT | 0.3095 (3.9) | |
| Lagged MWh Sales | LSCMWH(-1) | 0.2948 (3.4) | |
| Real Wholesale Power Cost | LRWHPC | | 0.5427 (6.7) |
| Employment | TOTEMP | | |
| Indicator - KY20 | D20 | | |
| Indicator - KY55 for 1975 | D5575 | | |
| Indicator - KY33 | D33 | | |
| Indicator - KY55 | D55 | -0.0460 (-1.7) | 0.2293 (6.6) |
| Indicator - KY55 for 1988 | DUM55 | | 0.3589 (9.6) |
| R_SQUARE | | .90 | .94 |
| Standard Error | | 4.8% | 5.5% |

**Table 9.5**
**C/I Small Consumer Model**

| Variable Description | Variable Name | KY18 | KY20 | KY33 | KY55 |
|---|---|---|---|---|---|
| Constant | C | -4.4511 (-10.5) | -5.5232 (-10.0) | -7.0836 (-7.5) | -5.6756 (-6.5) |
| Employment | TOTEMP | 1.2424 (27.1) | 1.2755 (22.9) | 1.4632 (15.9) | 1.2877 (14.3) |
| | | | | | |
| R_SQUARE | | .97 | .95 | .91 | .89 |
| Standard Error | | 3.1% | 5.6% | 9.3% | 8.5% |

**Weather Normalization -** The projections of energy and demand presented in this report are based upon normal weather. To compute average growth from 1996, the base historical year, it was necessary to weather normalize energy and demand amounts for that year. Normalized values of average residential usage, C/I small energy sales, and NCP demand for 1996 were computed by applying the difference in model estimates using actual weather and model estimates using normal weather to actual consumption and demand amounts. In addition to computing normalized growth in system requirements from 1996, the normalization process also provides the means of estimating the impacts of abnormal weather conditions in 1996. Growth rates referenced in the Executive Summary are based on normalized values for 1996. Table 9.6 presents actual 1996 values of energy and demand requirements and associated normalized estimates.

**Table 9.6**
**Weather Normalized Estimates**
**for 1996**

| | Actual 1996 | Weather Normalized 1996 | Difference Due to Abnormal Weather | Weather Normalized 2016 |
|---|---|---|---|---|
| Residential Sales (MWh) | 1,144,623 | 1,146,945 | -2,322 | 1,849,414 |
| C/I Small Sales (MWh) | 463,285 | 466,249 | -2,964 | 932,458 |
| Rural System Sales (MWh) | 1,610,632 | 1,615,965 | -5,333 | 2,785,979 |
| Rural CP (kW) - Summer | 380,236 | 412,714 | -32,478 | 669,967 |
| Rural CP (kW) - Winter | 382,214 | 389,699 | -7,485 | 652,168 |
| Total System CP (kW) | 1,167,000 | 1,199,478 | -32,478 | 1,649,681 |

Table 9.7 presents weather sensitive rural system seasonal CP demand for the 1990-1996 period. Summer and winter seasons are presented on a calendar year basis. The amount of weather sensitive load for each year was computed as the difference between model estimates based on actual weather and model estimates based on normal weather. The amounts in columns (a) - (d) were computed using the rural system CP demand model, Equation 9.16. The amounts in columns (e) and (f) were computed as the difference between the actual weather and normal weather model estimates. The normalized estimates are based on normal degree days and temperatures recorded during the peak month.

Annual rural system energy sales (GWh) is one of the input variables in Equation 9.16. This variable functions as a long-term trending component in the model and was not adjusted for weather when normalizing monthly CP demand.

The weather normalized estimates presented in Table 9.8 are based on the assumption that only rural system requirements are weather sensitive; as a result, the differences between actual and normalized rural system requirements were applied to actual total system requirements to generate normalized total system requirements. Values in columns (a) and (c) are actual CP demands recorded for years 1990-1996. Columns (b) and (d) indicate the month of peak in each calendar year. Columns (e) and (f) are the normalized estimates and were computed by subtracting the weather sensitive estimates from Table 9.7, columns (e) and (f) from the actual amounts in Table 9.8.

Values in Table 9.9, column (a), represent actual total system energy requirements for 1990-1996 and are equal to total member system purchases from Big Rivers plus Big Rivers transmission losses. Column (b) presents the weather normalized amounts, which are equal to actual energy requirements, less actual rural system sales, plus weather normalized rural system sales.

**Table 9.7**
**Rural CP Demand (kW)**

| | Model Estimates | | | | Weather Sensitive CP | |
|---|---|---|---|---|---|---|
| | Actual Weather | | Normal Weather | | | |
| | Summer | Winter | Summer | Winter | Summer | Winter |
| | (a) | (b) | (c) | (d) | (e) | (f) |
| 1990 | 309,206 | 266,861 | 323,002 | 300,405 | (13,796) | (33,544) |
| 1991 | 340,122 | 266,793 | 338,530 | 315,933 | 1,592 | (49,141) |
| 1992 | 330,320 | 284,435 | 330,055 | 307,458 | 265 | (23,023) |
| 1993 | 394,127 | 312,214 | 360,433 | 337,837 | 33,694 | (25,623) |
| 1994 | 362,835 | 345,631 | 360,182 | 337,585 | 2,653 | 8,046 |
| 1995 | 424,115 | 333,233 | 387,502 | 355,142 | 36,612 | (21,909) |
| 1996 | 359,466 | 361,863 | 390,772 | 368,176 | (31,306) | (6,313) |

Notes: 1. Columns (a) and (b) are model estimates
1. Column (e) = column (a) less column (c).
2. Column (f) = column (b) less column (d).

**Table 9.8**
**Total System CP Demand (kW)**

| | Actual | | | | Weather Normalized | |
|---|---|---|---|---|---|---|
| | Summer | Month | Winter | Month | Summer | Winter |
| | (a) | (b) | (c) | (d) | (e) | (f) |
| 1990 | 1,174,000 | Aug. | 1,089,000 | Dec. | 1,187,796 | 1,122,544 |
| 1991 | 1,168,000 | Jul. | 1,140,000 | Feb. | 1,166,408 | 1,189,141 |
| 1992 | 1,166,000 | Jul. | 1,149,000 | Jan. | 1,165,735 | 1,172,023 |
| 1993 | 1,217,000 | Jul. | 1,137,000 | Feb. | 1,183,306 | 1,162,623 |
| 1994 | 1,055,000 | Jul. | 1,190,000 | Jan. | 1,052,347 | 1,181,954 |
| 1995 | 1,166,000 | Aug. | 1,063,000 | Feb. | 1,129,388 | 1,084,909 |
| 1996 | 1,167,000 | Jul. | 1,154,000 | Feb. | 1,198,306 | 1,160,313 |

Notes: 1. Actual amounts based on Big Rivers EEI data.
2. Weather normalized estimates, columns (e) and (f), equal to actual amounts, columns (a) and (c), less weather sensitive amounts from Table 9.7.

**Table 9.9**
**Total System Energy Requirements (GWh)**

| | Actual | Normalized |
|---|---|---|
| | Annual | Annual |
| | (a) | (b) |
| 1990 | 8191.5 | 8,261.8 |
| 1991 | 8314.4 | 8,291.1 |
| 1992 | 8326.3 | 8,393.7 |
| 1993 | 8445.1 | 8,408.0 |
| 1994 | 7454.2 | 7,481.2 |
| 1995 | 7961.4 | 7,925.7 |
| 1996 | 8046.0 | 8,041.7 |

Notes: 1. Actual amounts based on 1995 PRS, Appendix, Section 2.
2. Normalized amounts = actual values - actual rural system sales + normalized rural system sales

## 10. 1995 Forecast Evaluation

An evaluation of the projections presented in the 1995 PRS was conducted. The models developed in that study were evaluated for theoretical consistency, statistical validity and estimating accuracy. Results of the evaluation are presented below.

**Theoretical Consistency** - The econometric models developed in 1995 were evaluated with respect to specification, functional form and sample period. A conclusion was made that the residential and C/I Small energy models performed well in estimating 1995 and 1996 values; however, the coefficients for both models are somewhat unstable in that they change considerably when the models are re-estimated including data for 1996. With respect to specification, a more completely specified model would include electric heating and air conditioning saturation levels. In addition, models based on quarterly data may provide more stable coefficients. No changes are recommended regarding the log-linear functional form specified. It was recommended that the sample period upon which the residential energy model is estimated be adjusted by dropping the observation for 1981 and adding the observation for 1996. This adjustment represents a "rolling" sample that addresses the changing nature of the residential class.

The residential energy use per consumer model developed in the 1995 PRS was respecified. Cooling and heating degree days were weighted by the number of residential consumers to reflect changes in the impacts of degree days on energy use over time. In addition, the price of alternative fuels was excluded from the model as it was statistically insignificant and carried the wrong sign. Population and employment remain the best indicators of residential and C/I Small consumer growth in the service area; therefore, these factors should continue to drive the consumer models.

**Statistical Validity** - Several conclusions were made following a review of statistics associated with the models developed in the 1995 PRS. The R-square values were high which indicate that the primary influential factors are being captured. The standard errors of regression for the models are very low in most instances, indicating that the models estimate historical values with a relatively high degree of precision. The model residuals indicate that there were no severe autocorrelation problems. Finally, most models exhibit parameters with t-statistics above 2.0; however, parameters contained in several models are not statistically significant at the 90% confidence level.

**Forecasting Accuracy** - The models developed in the 1995 PRS were evaluated for forecasting accuracy. The evaluation was conducted by comparing actual system requirements booked in 1995 and 1996 to modeled amounts. The forecasted values for 1995 and 1996 were adjusted for actual weather conditions so that they could be appropriately compared to actual amounts. Table 10.1 presents the comparison of the actual and projected system requirements for 1995 and 1996. Much of the forecasting error associated with total member system purchases (long-term) in 1995 is due to supplemental energy that is included in the actual value but excluded from the forecasted amount.

**Table 10.1**
**Econometric Model Evaluation**

| Class | Model | Units | 1995 Units Forecast* | Actual | Error (%) |
|---|---|---|---|---|---|
| Residential | Consumers | (# of meters) | 81,320 | 80,808 | 0.6% |
| | Average Use | (kWh/Cons/Mo) | 1,163 | 1,136 | 2.3% |
| | Sales | (MWh) | 1,134,891 | 1,101,490 | 2.9% |
| C/I Small | Consumers | (# of meters) | 8,466 | 8,406 | 0.7% |
| | Sales | (MWh) | 403,833 | 406,251 | -0.6% |
| System | Summer Demand - Rural | (NCP) | 427,598 | 414,874 | 3.0% |
| | Winter Demand - Rural | (NCP) | 369,772 | 352,150 | 4.8% |
| | Rural Energy | (MWh) | 1,584,775 | 1,551,884 | 2.1% |
| | Purchases (Sht-term)** | (MWh) | 1,623,727 | 1,622,781 | 0.1% |
| | Demand (Sht-term)*** | (NCP) | 5,821,261 | 5,954,686 | -2.3% |

| Class | Model | Units | 1996 Units Forecast* | Actual | Error (%) |
|---|---|---|---|---|---|
| Residential | Consumers | (# of meters) | 83,246 | 82,659 | 0.7% |
| | Average Use | (kWh/Cons/Mo) | 1,101 | 1,154 | -4.8% |
| | Sales | (MWh) | 1,100,080 | 1,144,623 | -4.0% |
| C/I Small | Consumers | (# of meters) | 8,661 | 8,689 | -0.3% |
| | Sales | (MWh) | 412,777 | 417,870 | -1.2% |
| System | Summer Demand - Rural | (NCP) | 389,587 | 394,421 | -1.2% |
| | Winter Demand - Rural | (NCP) | 397,811 | 401,387 | -0.9% |
| | Rural Energy | (MWh) | 1,564,377 | 1,610,679 | -3.0% |
| | Purchases (Sht-term)** | (MWh) | 1,655,582 | 1,674,390 | -1.1% |
| | Demand (Sht-term)*** | (NCP) | 6,028,419 | 6,211,311 | -3.0% |

* 1995 PRS forecast values corrected for actual weather and revised economic outlook
** Net of C/I Large
*** Twelve month total

## 11. Range Forecasts

The base case forecast is the expected or the most likely scenario of future power requirements; however, it must be recognized that actual requirements will deviate to some degree from the forecast. Economic conditions will vary throughout the forecast horizon as will weather conditions and prices. There is a level of uncertainty associated with every forecast that stems in part from volatility in the variables utilized in developing the forecast. To address the level of uncertainty associated with the base case projections prepared for this forecast, a set of high and low range projections were developed. The range projections evaluate possible outcomes for the key explanatory variables incorporated in the forecasting models presented in Section 9. The range forecasts do not address the probabilities associated with the estimated values of the model coefficients.

Risk analysis was employed in developing range projections individually for the residential and C/I small classifications, as well as for system peak demand. This process involved generating a distribution of possible outcomes for the components being forecasted based upon probability distributions for each of the explanatory variables contained in the residential, C/I small, and peak demand models. The purpose of the process was to evaluate the possible outcomes of residential and C/I small energy requirements, and rural system peak demand, giving consideration to the volatility of the explanatory variables. Range projections for the C/I large class were made subjectively.

The software package @Risk was utilized in developing 90% bandwidth forecasts for the residential and C/I small classifications. Probability distributions for each of the independent variables included in the respective residential and C/I small models were developed based upon historical change. The statistics associated with the historic values of the key explanatory variables are presented in each member system's PRS. The statistics were computed using data for the 1982-1996 period.

The statistics were used to develop probability distributions for each explanatory variable. Annual changes in population, per capita income, employment, total personal income, cooling degree days, and heating degree days are assumed to be normally distributed. Growth rates for total personal income, population, and employment were distributed using a normal distribution with means equal to the growth rates projected in the base case and standard deviations equal to those computed for the 1982-1996 period. Degree days were distributed using a normal distribution with means equal to the thirty year normal values and standard deviations equal to those computed for the 1982-1996 period. The variability of annual change in real wholesale power cost was extremely high; therefore, annual changes in power cost were normally distributed with a mean value equal to base case growth and a standard deviation equal to 2%.

Given the probability distributions for each of the explanatory variables, @Risk was used to perform a simulation. The models were iterated, or recalculated, five hundred times. In each iteration, values from the probability distributions were selected using a Latin Hypercube sampling technique. This process was used to generate a distribution of possible outcomes for the output variables: (i) residential consumers, (ii) average residential usage,

(iii) C/I small consumers, and (iv) C/I small energy sales. The low range for each output variable was set at the 5% level, the level at which 95% of all outcomes generated in the simulation fell above. Similarly, the high range for each component being forecasted was set at the 95% level, the level at which 95% of all outcomes generated fell below. Using this approach, the bandwidth forecast for these two classifications captures the range in which 90% of all possible outcomes could fall. The high and low ranges for the output variables were input into the total system model to compute the high and low range projections of total rural system demand and energy requirements as well as total system demand and energy requirements.

In addition to the base case and bandwidth forecasts, four scenarios were generated based on the following items: (i) base case economics, severe weather, (ii) base case economics, mild weather, (iii) optimistic economics, normal weather, and (iv) pessimistic economics, normal weather. The high and low range bandwidth forecasts are presented in Appendix 3 and Appendix 4. Results from the four scenarios are presented in Section 6 of the Appendix.

## 12. Load Forecast Methodology

The primary methodologies employed in developing the load forecast included econometrics, linear trend, and expert opinion. Econometrics has been the primary forecasting methodology employed by the Cooperative since development of the 1986 Power Requirements Study. Econometrics was employed in developing long-term consumer and energy projections for the residential and C/I small classifications, and short-term projections of rural system purchases. Expert opinion was utilized in projecting requirements for the C/I Large classification. Linear trends were used to project public street and highway lighting and own use requirements. System losses and seasonal load factors were based on historical averages. Rural system peak demand was based on equations incorporating rural system purchases and average load factors.

Econometric models have the advantage of explicitly tracking the underlying causes of trends and patterns in historical data. They provide information which allow Cooperative management to estimate the impacts of certain factors on energy use. The methodology has proven very useful for simulation and "what-if" study. In addition, econometric models can be used to identify sources of forecasting error. On the other hand, econometric models require considerable amounts of data, and when used for forecasting, force the assumption that relationships developed during historical period will remain the same throughout the forecast horizon. In this study, econometric models have been developed to project residential and commercial requirements as these two consumer classifications account for the overwhelming majority of rural system requirements, the primary growth sector. This methodology is discussed in greater detail below.

Linear regression applies the same mathematical concepts as econometrics; however, in the context of this study refers to a relationship between only two variables. An advantage of linear regression is that forecasts can be quickly generated and the process requires considerable less data than does econometrics. The disadvantage to linear regression is that one or more influential factors are omitted from the analysis. Linear regression is used to project load and energy requirements for those consumer classifications that (i) account for a small portion of the total system or (ii) have exhibited inconsistent growth patterns for reasons that cannot be adequately explained.

Expert opinion is used when other techniques are ineffective. This approach is utilized to project industrial requirements. Projections are made individually for each account and are based upon information collected from the account's management. The advantages of this method include simplicity and expert input. The major disadvantage is that forecasts based on expert opinion can be biased by one person's opinion.

**Econometrics** - Econometrics is a forecasting technique in which the relationship between a variable of interest and one or more influential factors is quantified. Econometrics is based on an area of statistical theory known as regression analysis. Regression analysis is a statistical technique for modeling and testing the relationship between two or more variables. The general form of an econometric model can be expressed as:

$$y_t = \beta_0 + \beta_1(x_{t1}) + \beta_2(x_{t2}) + \beta_3(x_{t3}) + \ldots\beta_k(x_{tn}) + e_t$$

where:

| | |
|---|---|
| $t$ | = time element |
| $y_t$ | = the dependent variable |
| $x_1, x_2, \ldots x_n$ | = the set of independent variables |
| $\beta_0, \beta_1, \ldots \beta_k$ | = the set of parameter coefficients |
| $e_t$ | = modeling error |

**Model Specification** - In the context of this report, model specification refers to the process of defining: (i) the explanatory variables to incorporate in the model and (ii) the form of the model. Explanatory variables, also referred to as independent or exogenous variables, represent factors which are hypothesized to influence a change in the dependent, or endogenous variables. Definition of the explanatory variables should be based upon sound economic principles and assumptions. For example, it is reasonable to assume that local economic conditions produce significant impacts on energy consumption. Variables such as a gross state product and per capita income are often used as explanatory variables to represent, or indicate, the level of economic activity.

In the utility industry, an econometric model is usually developed using some combination of economic, demographic, price, and meteorological variables. It is desirable to also include specific information in the econometric model concerning the end-users, or consumers, of electricity; this information may be in the form of appliance saturation levels or indicators of consumer attitudes toward conservation. Inclusion of these types of explanatory variables in a model enables the forecaster to identify the major factors influencing periodic changes in a variable such as peak demand or energy sales. Inclusion of these variables also makes possible a better estimation of the impact these factors have on changes in consumption.

The residential and C/I small energy models developed for this forecast include a lag of the dependent variable. Lagged dependent variables are often defined as explanatory variables. Such models are commonly referred to as adaptive expectation or Koyck distributed lag models. L.M. Koyck demonstrated in 1954 that this specification is equivalent to an infinite geometric lag model. Under such a specification, the assumption is made that the impacts of the explanatory variables included in the model are significant over a period of years, with the current year weighted the heaviest, the previous year weighted less, and so on until the earliest year has no impact.

Econometric models can be specified in linear or log-linear form. When the model is specified in linear form, the assumption is made that elasticities are not constant, and that a unit change in a given explanatory variable will influence a change in the dependent variable equal to the unit change in the explanatory variable times the corresponding coefficient.

When the model variables are expressed in natural log form, it is assumed that elasticities are constant and that a percentage change in a given explanatory variable influences a constant percentage change in the dependent variable based upon the coefficient of the given explanatory variable. A second assumption made when specifying a log-linear model is that changes in the dependent variable are greater at lower levels of the explanatory variables than at higher levels. With respect to energy consumption, this assumption applies primarily to increases in income. Consumption increases rapidly when income increases from lower levels as consumers purchase electric goods and services; however, once income reaches a certain level, most high use electric end-uses have been purchased. As a result, additional increases in income tend to have less impact on consumption than the same level of increase from a lower level of income.

**Model Estimation**: After the hypothesized relationship or model is specified, historical data are used to estimate the model parameters, $\beta_0$, $\beta_1$, $\beta_2$,... $\beta_k$ and quantify the empirical relationship that exists between the variable of interest and the chosen set of explanatory variables. Investigation of the relationship between the dependent variable, y, and an independent variable, x, leads to one of three conclusions: (i) a change in variable x impacts no change in variable y, and a change in variable y impacts no change in variable x, (ii) a change in variable x impacts a change in variable y, while a change in variable y impacts no change in variable x, and (iii) a change in variable x impacts a change in variable y, and a change in variable y impacts a change in variable x. Under conclusion (i), no relationship exists and the explanatory variable should be omitted from further analysis. Under conclusion (ii) variable x is said to be exogenous; its value is determined outside of the marketplace. Under conclusion (iii), both variables x and y are said to be endogenous; both are determined within the marketplace.

The appropriate regression technique to employ in estimating the model depends upon the relationship between the dependent and independent variables. When all explanatory variables are exogenous, ordinary least squares is appropriate. When one or more of the explanatory variables are endogenous, two-stage least squares is appropriate.

**Ordinary Least Squares (OLS)** - Regression analysis is a statistical procedure that quantifies the relationship between two or more variables. Based upon available input data, a regression equation provides a means of estimating values of a dependent variable. The difference between the actual value of the dependent variables and its regression based estimated value is the error term, generally referred to as the residual. Ordinary least squares is the technique employed which minimizes the sum of the squared errors. A tentative least square model, for example, for residential usage, might be expressed as:

$$RUSE_t = \beta_0 + \beta_1(PCAP_t) - \beta_2(RRPE_t) + \beta_3(CDD_t) + \beta_4(HDD_t) + e_t$$

| | | |
|---|---|---|
| $RUSE_t$ | = | residential energy use in $year_t$ |
| $PCAP_t$ | = | per capita income in $year_t$ |
| $RRPE_t$ | = | price of electricity in $year_t$ |
| $CDD_t$ | = | number of cooling degree days in $year_t$ |
| $HDD_t$ | = | number of heating degree days in $year_t$ |
| $e_t$ | = | represents the unexplained error in $year_t$ |

**Two Stage Least Squares (TSLS):** The purpose of two stage least squares, as opposed to ordinary least squares, is to estimate two or more equations simultaneously. This technique is used when there are two or more endogenous variables contained in the modeling process. When such a condition exists, use of ordinary least squares to estimate each equation independently results in a biased set of model coefficients. The two stage least squares technique allows each equation to be estimated independently; however, the equations are solved simultaneously to estimate values of each endogenous variable.

The first stage of the TSLS estimation process involves estimating values of the endogenous variables by regressing each endogenous variable on all exogenous variables included in the model. The second stage of the TSLS estimation process involves regressing the dependent variables on the estimated endogenous variables generated in the first stage and all exogenous variables.

**Model Validation** - In this study, the model validation process involved evaluation of the models for theoretical consistency, statistical validity, and estimating accuracy. From a theoretical standpoint, the model should be consistent with economic theory and specify a relationship which addresses those factors known to influence energy usage. For models that address customer growth, it is appropriate to include a demographic variable such as population, number of households, or employment to explain growth in the number of consumers. For models that address changes in energy sales, more types of variables are needed. An economic variable such as income explains customers' ability to purchase electric goods and services. Weather variables explain changes in consumption due to weather conditions. Price of electricity and price of electricity substitutes measure consumer conservation. Appliance saturation levels measure change in consumption due to changes in end-use equipment. Lagged dependent variables account for the lagged effect of all explanatory variables from previous periods.

The coefficients for each parameter included in the models were tested to insure the proper sign (+ or -). The number of customers increases with population or some other demographic variable; therefore, the sign of demographic variables in the customer model should be positive. There is a direct relationship between energy consumption and income; as income increases, consumption will increase as well. The sign on the income variable in the energy consumption model should be positive. The sign on the price of natural gas, or some other electricity substitute should be positive. Energy consumption increases as weather conditions, as measured by degree days, become more extreme; the sign of both the heating and cooling degree day variables should be positive.

There is an indirect relationship between the two endogenous variables energy consumption and price of electricity. As price increases, consumers tend to conserve, and consumption decreases. As energy consumption increases, the average price falls. With respect to the two stage least squares method of estimating the model coefficients in this study, the sign of average price in the energy consumption models should be negative as should be the sign of energy consumption usage in the price models.

The statistical validity of each model is based on two criteria. One, each model was examined to determine the statistical significance of each explanatory variable. Two, tests were performed to identify problems resulting from autocorrelation and/or multicollinearity. Analysis of model residuals were performed to determine whether mathematical transformations of the endogenous/exogenous variables were required.

Each model was evaluated with respect to its estimating accuracy. The standard error of regression, a statistic generated during the regression analysis, was used to measure accuracy. Tentative models that initially had low degrees of accuracy were tested using alternative specifications.

**Model Building Process**: The development of forecasts using econometric modeling is a multi-step process. A substantial portion of the effort involved in effective model building is the collection of reliable data for both the historical and projected periods. It is critical, in building models which explain changes in load growth, that the appropriate influential factors be considered, and that the correct explanatory variables be collected to quantify those influential factors.

There are many factors that influence consumers to change their usage levels of electricity. A partial list would include changes in the economy, new industry in an area, key industry leaving an area, population shifts, temperature, unemployment levels, attitudes toward conservation, precipitation amounts, improved appliance efficiencies, political events, inflation, and increases in the price of electricity. The relationship between these factors and energy usage is further complicated since most of these factors are interrelated; for example, when inflation is rampant, increases in the price of electricity may not significantly lower usage by the consumer.

After all necessary data are collected, the model building process begins. During this process, numerous models containing various combinations of candidate explanatory variables are estimated and tested. Each tentative model is examined to see if the explanatory variables included in that particular model specification contribute significantly to the "explanation" of the variable of interest. For those models that pass this preliminary examination, the appropriate regression diagnostic tools are used to test the validity of the underlying statistical assumptions. Included in this examination are tests for autocorrelation and multicollinearity.

The tentative models are tested, not only for statistical reliability, but also for reasonableness of practical interpretation. For example, the model should not show that the effect of extremely cold winter weather has been a reduction in usage. The potential performance of a tentative model for forecasting purposes is also investigated. A model that contained only one explanatory variable (one which measured only weather effects, for example) might not be a good predictive model.

If a tentative model is found to have significant statistical problems, or if the model is simply found to be misspecified, the model is discarded, and a new tentative model is specified. Analysis of the residuals (actual minus estimated values) from the discarded model are helpful in the reformulation of the model and might indicate whether some mathematical transformation of the existing set of explanatory variables is required. This process of specification, estimating, and reformulation continues until a model is found which is statistically sound and which has a sound practical interpretation as well.

**Final Model Selection**: If a model is found to be a good representation of the proposed relationship, and if it is also determined to be statistically sound, it can be used to estimate values of the variable of interest in future time periods. It is important to note that the forecaster makes the assumption that the modeled relationship between the response and explanatory variables remains the same in the forecast period as it was measured in the historical period. Forecasts are calculated by inserting projected values of the explanatory variables into the estimated model equation. Different forecast scenarios can also be considered by incorporating different values of forecasted explanatory variables. Managerial judgment, based on practical estimations of future trends, can then be used to select the most appropriate and reasonable forecast.

**Linear Regression** - Linear regression analysis considers a simple regression model which specifies the relationship between a dependent variable, y, and, in the context of this report, one explanatory variable, x. The assumption regarding linear regression with respect to load forecasting is that a given variable of interest can be forecasted based on its relationship to one variable. Linear regression analysis is very useful for forecasting purposes when the variable of interest has demonstrated consistent growth in the measured period and is expected to continue the same growth in the forecast period.

Linear regression is commonly used to trend variables over time. Incorporating time as the explanatory variable in a simple linear regression equation is the simplest means of developing a time series equation. Using this approach as a means of forecasting, one assumes that time is an adequate measure of the factors which influence change, and that time will continue to represent those factors that impact the response variable in future years. This approach is commonly used when explanatory data series are not available.

# APPENDIX

## Section 1
## Short-Term Forecast

**Big Rivers Electric Corporation**
Short-Term Demand and Energy Projections: Base Case
Calendar Year 1997

| Line No. (a) | Item (b) | Jan (c) | Feb (d) | Mar (e) | Apr (f) | May (g) | Jun (h) | Jul (i) | Aug (j) | Sep (k) | Oct (l) | Nov (m) | Dec (n) | Total (o) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | kWh (Rural) | 174,476,883 | 159,522,183 | 141,569,747 | 121,132,936 | 128,101,507 | 144,711,976 | 173,937,385 | 165,925,754 | 132,798,149 | 126,524,765 | 143,853,489 | 169,004,536 | 1,781,559,311 |
| 2 | kWh (NonRural) | 545,427,085 | 511,452,077 | 545,427,085 | 535,302,082 | 546,627,085 | 535,302,082 | 546,627,085 | 546,627,085 | 614,711,082 | 624,836,085 | 613,511,082 | 624,836,085 | 6,790,686,000 |
| 3 | kWh - Total | 719,903,968 | 670,974,260 | 686,996,832 | 656,435,018 | 674,728,592 | 680,014,058 | 720,564,470 | 712,552,839 | 747,509,231 | 751,360,850 | 757,364,571 | 793,840,621 | 8,572,245,311 |
| 4 | CP Demand kW (Rural) | 362,414 | 382,899 | 322,231 | 239,261 | 331,737 | 378,562 | 415,485 | 385,470 | 327,819 | 245,856 | 277,974 | 374,736 | 4,044,444 |
| 5 | NCP Demand kW (Rural) | 380,858 | 404,549 | 342,361 | 260,527 | 362,244 | 399,970 | 434,775 | 405,347 | 346,313 | 272,709 | 298,831 | 399,777 | 4,308,260 |
| 6 | CP/NCP factor (Rural) | 95.2% | 94.6% | 94.1% | 91.8% | 91.6% | 94.6% | 95.6% | 95.1% | 94.7% | 90.2% | 93.0% | 93.7% | 93.7% |
| 7 | NCP Demand kW (NonRural) | 895,000 | 895,000 | 895,000 | 895,000 | 898,000 | 898,000 | 898,000 | 898,000 | 898,000 | 895,000 | 895,000 | 895,000 | 10,755,000 |
| 8 | Total NCP | 1,275,858 | 1,299,549 | 1,237,361 | 1,155,527 | 1,260,244 | 1,297,970 | 1,332,775 | 1,303,347 | 1,244,313 | 1,167,709 | 1,193,831 | 1,294,777 | 15,063,260 |
| 9 | CP/NCP factor (Non Rural) | 96.4% | 96.1% | 96.6% | 95.9% | 96.6% | 97.2% | 97.6% | 97.4% | 96.7% | 95.9% | 95.3% | 96.4% | 96.5% |
| 10 | CP Demand (Non Rural) | 862,771 | 860,354 | 864,719 | 858,577 | 867,583 | 872,618 | 876,117 | 874,310 | 868,744 | 858,214 | 852,811 | 862,506 | 10,379,324 |
| 11 | Total CP (with 2% trans. loss) | 1,249,689 | 1,268,118 | 1,210,689 | 1,119,795 | 1,223,307 | 1,276,203 | 1,317,434 | 1,284,976 | 1,220,494 | 1,126,151 | 1,153,401 | 1,261,988 | 14,712,244 |

Calendar Year 1998

| Line No. (a) | Item (b) | Jan (c) | Feb (d) | Mar (e) | Apr (f) | May (g) | Jun (h) | Jul (i) | Aug (j) | Sep (k) | Oct (l) | Nov (m) | Dec (n) | Total (o) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | kWh (Rural) | 179,446,985 | 164,501,802 | 146,548,492 | 126,116,849 | 133,089,199 | 149,709,860 | 178,946,168 | 170,951,522 | 137,849,555 | 131,587,990 | 148,930,643 | 174,094,747 | 1,841,773,812 |
| 2 | kWh (NonRural) | 638,378,189 | 603,296,074 | 638,378,189 | 627,884,151 | 639,578,189 | 627,884,151 | 639,578,189 | 639,578,189 | 627,884,151 | 638,378,189 | 626,684,151 | 638,378,189 | 7,585,880,000 |
| 3 | kWh - Total | 817,825,174 | 767,797,876 | 784,926,681 | 754,001,000 | 772,667,388 | 777,594,011 | 818,524,357 | 810,529,711 | 765,733,706 | 769,966,179 | 775,614,794 | 812,472,936 | 9,427,653,812 |
| 4 | CP Demand kW (Rural) | 373,536 | 394,042 | 333,373 | 250,414 | 342,899 | 389,746 | 426,694 | 396,717 | 339,123 | 257,187 | 289,336 | 386,127 | 4,179,195 |
| 5 | NCP Demand kW (Rural) | 392,546 | 416,323 | 354,198 | 272,671 | 374,432 | 411,787 | 446,505 | 417,173 | 358,255 | 285,277 | 311,045 | 411,930 | 4,452,143 |
| 6 | CP/NCP factor (Rural) | 95.2% | 94.6% | 94.1% | 91.8% | 91.6% | 94.6% | 95.6% | 95.1% | 94.7% | 90.2% | 93.0% | 93.7% | 93.7% |
| 7 | NCP Demand kW (NonRural) | 927,800 | 927,800 | 927,800 | 927,800 | 930,800 | 930,800 | 930,800 | 930,800 | 930,800 | 927,800 | 927,800 | 927,800 | 11,148,600 |
| 8 | Total NCP | 1,320,346 | 1,344,123 | 1,281,998 | 1,200,471 | 1,305,232 | 1,342,587 | 1,377,305 | 1,347,973 | 1,289,055 | 1,213,077 | 1,238,845 | 1,339,730 | 15,600,743 |
| 9 | CP/NCP factor (Non Rural) | 96.4% | 96.1% | 96.6% | 95.9% | 96.6% | 97.2% | 97.6% | 97.4% | 96.7% | 95.9% | 95.3% | 96.4% | 96.5% |
| 10 | CP Demand (Non Rural) | 894,390 | 891,884 | 896,409 | 890,042 | 899,272 | 904,491 | 908,117 | 906,245 | 900,475 | 889,666 | 884,065 | 894,116 | 10,759,172 |
| 11 | Total CP (with 2% trans. loss) | 1,293,285 | 1,311,645 | 1,254,377 | 1,163,266 | 1,267,014 | 1,320,122 | 1,361,508 | 1,329,021 | 1,264,391 | 1,169,790 | 1,196,869 | 1,305,848 | 15,237,135 |



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**Big Rivers Electric Corporation**
**Short-Term Demand and Energy Projections: Base Case**
**Calendar Year 1999**

| Line No. (a) | Item (b) | Jan (c) | Feb (d) | Mar (e) | Apr (f) | May (g) | Jun (h) | Jul (i) | Aug (j) | Sep (k) | Oct (l) | Nov (m) | Dec (n) | Total (o) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | kWh (Rural) | 184,523,151 | 169,587,673 | 151,633,468 | 131,207,102 | 138,183,303 | 154,814,388 | 184,061,831 | 176,084,531 | 143,008,761 | 136,759,268 | 154,116,135 | 179,293,589 | 1,903,273,200 |
| 2 | kWh (NonRural) | 643,335,833 | 643,335,833 | 643,335,833 | 644,535,833 | 644,535,833 | 644,535,833 | 644,535,833 | 644,535,833 | 644,535,833 | 643,335,833 | 643,335,833 | 643,335,833 | 7,727,230,000 |
| 3 | kWh - Total | 827,858,984 | 812,923,507 | 794,969,301 | 775,742,935 | 782,719,137 | 799,350,221 | 828,597,664 | 820,620,364 | 787,544,595 | 780,095,101 | 797,451,968 | 822,629,422 | 9,630,503,199 |
| 4 | CP Demand kW (Rural) | 384,896 | 405,424 | 344,752 | 261,805 | 354,299 | 401,169 | 438,142 | 408,204 | 350,669 | 268,759 | 300,940 | 397,762 | 4,316,821 |
| 5 | NCP Demand kW (Rural) | 404,484 | 428,348 | 366,288 | 285,075 | 386,881 | 423,856 | 458,484 | 429,253 | 370,452 | 298,113 | 323,520 | 424,341 | 4,599,096 |
| 6 | CP/NCP factor (Rural) | 95.2% | 94.6% | 94.1% | 91.8% | 91.6% | 94.6% | 95.6% | 95.1% | 94.7% | 90.2% | 93.0% | 93.7% | 93.7% |
| 7 | NCP Demand kW (NonRural) | 930,750 | 930,750 | 930,750 | 930,750 | 933,750 | 933,750 | 933,750 | 933,750 | 933,750 | 930,750 | 930,750 | 930,750 | 11,184,000 |
| 8 | Total NCP | 1,335,234 | 1,359,098 | 1,297,038 | 1,215,825 | 1,320,631 | 1,357,606 | 1,392,234 | 1,363,003 | 1,304,202 | 1,228,863 | 1,254,270 | 1,355,091 | 15,783,096 |
| 9 | CP/NCP factor (Non Rural) | 96.4% | 96.1% | 96.6% | 95.9% | 96.6% | 97.2% | 97.6% | 97.4% | 96.7% | 95.9% | 95.3% | 96.4% | 96.5% |
| 10 | CP Demand (Non Rural) | 897,234 | 894,720 | 899,259 | 892,872 | 902,122 | 907,358 | 910,996 | 909,117 | 903,329 | 892,494 | 886,876 | 896,958 | 10,793,336 |
| 11 | Total CP (with 2% trans. loss) | 1,307,772 | 1,326,147 | 1,268,892 | 1,177,771 | 1,281,549 | 1,334,697 | 1,376,121 | 1,343,667 | 1,279,078 | 1,184,479 | 1,211,572 | 1,320,614 | 15,412,360 |

**Calendar Year 2000**

| Line No. (a) | Item (b) | Jan (c) | Feb (d) | Mar (e) | Apr (f) | May (g) | Jun (h) | Jul (i) | Aug (j) | Sep (k) | Oct (l) | Nov (m) | Dec (n) | Total (o) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | kWh (Rural) | 189,702,360 | 174,776,776 | 156,821,660 | 136,400,669 | 143,380,795 | 160,022,528 | 189,281,340 | 181,321,737 | 148,272,716 | 142,035,541 | 159,406,903 | 184,598,007 | 1,966,021,030 |
| 2 | kWh (NonRural) | 646,062,750 | 646,062,750 | 646,062,750 | 647,262,750 | 647,262,750 | 647,262,750 | 647,262,750 | 647,262,750 | 647,262,750 | 646,062,750 | 646,062,750 | 646,062,750 | 7,759,953,000 |
| 3 | kWh - Total | 835,765,110 | 820,839,526 | 802,884,410 | 783,663,419 | 790,643,545 | 807,285,278 | 836,544,090 | 828,584,487 | 795,535,466 | 788,098,291 | 805,469,653 | 830,660,757 | 9,725,974,030 |
| 4 | CP Demand kW (Rural) | 396,486 | 417,036 | 356,363 | 273,428 | 365,930 | 412,824 | 449,823 | 419,924 | 362,449 | 280,567 | 312,780 | 409,632 | 4,457,241 |
| 5 | NCP Demand kW (Rural) | 416,664 | 440,617 | 378,624 | 297,730 | 399,581 | 436,170 | 470,707 | 441,577 | 382,896 | 311,211 | 336,249 | 437,005 | 4,749,031 |
| 6 | CP/NCP factor (Rural) | 95.2% | 94.6% | 94.1% | 91.8% | 91.6% | 94.6% | 95.6% | 95.1% | 94.7% | 90.2% | 93.0% | 93.7% | 93.7% |
| 7 | NCP Demand kW (NonRural) | 934,450 | 934,450 | 934,450 | 934,450 | 937,450 | 937,450 | 937,450 | 937,450 | 937,450 | 934,450 | 934,450 | 934,450 | 11,228,400 |
| 8 | Total NCP | 1,351,114 | 1,375,067 | 1,313,074 | 1,232,180 | 1,337,031 | 1,373,620 | 1,408,157 | 1,379,027 | 1,320,346 | 1,245,661 | 1,270,699 | 1,371,455 | 15,977,431 |
| 9 | CP/NCP factor (Non Rural) | 96.4% | 96.1% | 96.6% | 95.9% | 96.6% | 97.2% | 97.6% | 97.4% | 96.7% | 95.9% | 95.3% | 96.4% | 96.5% |
| 10 | CP Demand (Non Rural) | 900,801 | 898,277 | 902,834 | 896,422 | 905,697 | 910,953 | 914,605 | 912,719 | 906,909 | 896,042 | 890,401 | 900,524 | 10,836,184 |
| 11 | Total CP (with 2% trans. loss) | 1,323,233 | 1,341,619 | 1,284,380 | 1,193,246 | 1,297,059 | 1,350,253 | 1,391,717 | 1,359,296 | 1,294,745 | 1,200,141 | 1,227,245 | 1,336,359 | 15,599,294 |

Notes:
1. Line (1): based on Equation 8.1
2. Line (2): input from Cooperative management
3. Line (3): Line (1) + Line (2)
4. Line (4): based on Equation 8.2
5. Line (5): Line (4) + Line (6)
6. Line (6): based on historical monthly CP to NCP relationships (1991-1996)
7. Line (7): input from Cooperative management
8. Line (8): Line (5) + Line (7)
9. Line (9): based on historical monthly CP to NCP relationships (1991-1996)
10. Line (10): Line (7) * Line (9)
11. Line (11): [Line (4) + Line (10)] * 1.02

**Big Rivers Electric Corporation**
Short-Term Demand and Energy Projections: High Range
Calendar Year 1997

| Line No. (a) | Item (b) | Jan (c) | Feb (d) | Mar (e) | Apr (f) | May (g) | Jun (h) | Jul (i) | Aug (j) | Sep (k) | Oct (l) | Nov (m) | Dec (n) | Total (o) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | kWh (Rural) | 199,783,093 | 190,029,956 | 159,395,463 | 127,067,649 | 132,796,279 | 156,021,943 | 192,996,738 | 205,151,070 | 137,919,579 | 136,247,662 | 142,894,579 | 170,244,251 | 1,950,548,261 |
| 2 | kWh (NonRural) | 545,427,085 | 511,452,077 | 545,427,085 | 535,302,082 | 546,627,085 | 535,302,082 | 546,627,085 | 546,627,085 | 614,711,082 | 624,836,085 | 613,511,082 | 624,836,085 | 6,790,686,000 |
| 3 | kWh - Total | 745,210,178 | 701,482,033 | 704,822,548 | 662,369,731 | 679,423,364 | 691,324,025 | 739,623,823 | 751,778,155 | 752,630,662 | 761,083,747 | 756,405,661 | 795,080,336 | 8,741,234,261 |
| 4 | CP Demand kW (Rural) | 434,929 | 428,758 | 339,647 | 242,525 | 335,743 | 399,416 | 444,529 | 448,531 | 340,083 | 257,980 | 296,975 | 385,352 | 4,354,469 |
| 5 | NCP Demand kW (Rural) | 457,064 | 453,002 | 360,865 | 264,081 | 366,619 | 422,003 | 465,167 | 471,660 | 359,268 | 286,157 | 319,258 | 411,103 | 4,636,246 |
| 6 | CP/NCP factor (Rural) | 95.2% | 94.6% | 94.1% | 91.8% | 91.6% | 94.6% | 95.6% | 95.1% | 94.7% | 90.2% | 93.0% | 93.7% | 93.7% |
| 7 | NCP Demand kW (NonRural) | 895,000 | 895,000 | 895,000 | 895,000 | 898,000 | 898,000 | 898,000 | 898,000 | 898,000 | 895,000 | 895,000 | 895,000 | 10,755,000 |
| 8 | Total NCP | 1,352,064 | 1,348,002 | 1,255,865 | 1,159,081 | 1,264,619 | 1,320,003 | 1,363,167 | 1,369,660 | 1,257,268 | 1,181,157 | 1,214,258 | 1,306,103 | 15,391,246 |
| 9 | CP/NCP factor (Non Rural) | 96.4% | 96.1% | 96.6% | 95.9% | 96.6% | 97.2% | 97.6% | 97.4% | 96.7% | 95.9% | 95.3% | 96.4% | 96.5% |
| 10 | CP Demand (Non Rural) | 862,771 | 860,354 | 864,719 | 858,577 | 867,583 | 872,618 | 876,117 | 874,310 | 868,744 | 858,214 | 852,811 | 862,506 | 10,379,324 |
| 11 | Total CP (with 2% trans. loss) | 1,323,654 | 1,314,895 | 1,228,453 | 1,123,124 | 1,227,393 | 1,297,475 | 1,347,058 | 1,349,298 | 1,233,003 | 1,138,518 | 1,172,782 | 1,272,816 | 15,028,470 |

Calendar Year 1998

| Line No. (a) | Item (b) | Jan (c) | Feb (d) | Mar (e) | Apr (f) | May (g) | Jun (h) | Jul (i) | Aug (j) | Sep (k) | Oct (l) | Nov (m) | Dec (n) | Total (o) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | kWh (Rural) | 210,241,362 | 200,507,278 | 169,869,842 | 137,553,380 | 143,289,777 | 166,536,871 | 203,534,596 | 215,724,754 | 148,546,654 | 146,898,901 | 153,574,747 | 180,950,595 | 2,077,228,757 |
| 2 | kWh (NonRural) | 638,378,189 | 603,296,074 | 638,378,189 | 627,884,151 | 639,578,189 | 627,884,151 | 639,578,189 | 639,578,189 | 627,884,151 | 638,378,189 | 626,684,151 | 638,378,189 | 7,585,880,000 |
| 3 | kWh - Total | 848,619,551 | 803,803,352 | 808,248,032 | 765,437,531 | 782,867,966 | 794,421,022 | 843,112,785 | 855,302,943 | 776,430,804 | 785,277,090 | 780,258,898 | 819,328,784 | 9,663,108,757 |
| 4 | CP Demand kW (Rural) | 458,333 | 452,205 | 363,087 | 265,990 | 359,226 | 422,946 | 468,111 | 472,194 | 363,865 | 281,816 | 320,876 | 409,311 | 4,637,961 |
| 5 | NCP Demand kW (Rural) | 481,659 | 477,775 | 385,769 | 289,632 | 392,261 | 446,865 | 489,844 | 496,542 | 384,392 | 312,596 | 344,952 | 436,663 | 4,938,949 |
| 6 | CP/NCP factor (Rural) | 95.2% | 94.6% | 94.1% | 91.8% | 91.6% | 94.6% | 95.6% | 95.1% | 94.7% | 90.2% | 93.0% | 93.7% | 93.7% |
| 7 | NCP Demand kW (NonRural) | 927,800 | 927,800 | 927,800 | 927,800 | 930,800 | 930,800 | 930,800 | 930,800 | 930,800 | 927,800 | 927,800 | 927,800 | 11,148,600 |
| 8 | Total NCP | 1,409,459 | 1,405,575 | 1,313,569 | 1,217,432 | 1,323,061 | 1,377,665 | 1,420,644 | 1,427,342 | 1,315,192 | 1,240,396 | 1,272,752 | 1,364,463 | 16,087,549 |
| 9 | CP/NCP factor (Non Rural) | 96.4% | 96.1% | 96.6% | 95.9% | 96.6% | 97.2% | 97.6% | 97.4% | 96.7% | 95.9% | 95.3% | 96.4% | 96.5% |
| 10 | CP Demand (Non Rural) | 894,390 | 891,884 | 896,409 | 890,042 | 899,272 | 904,491 | 908,117 | 906,245 | 900,475 | 889,666 | 884,065 | 894,116 | 10,759,172 |
| 11 | Total CP (with 2% trans. loss) | 1,379,778 | 1,370,971 | 1,284,686 | 1,179,153 | 1,283,668 | 1,353,986 | 1,403,753 | 1,406,007 | 1,289,627 | 1,194,911 | 1,229,039 | 1,329,496 | 15,705,076 |

Item 6
Page 81 of 188



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**Big Rivers Electric Corporation**
Short-Term Demand and Energy Projections: High Range
Calendar Year 1999

| Line No. (a) | Item (b) | Jan (c) | Feb (d) | Mar (e) | Apr (f) | May (g) | Jun (h) | Jul (i) | Aug (j) | Sep (k) | Oct (l) | Nov (m) | Dec (n) | Total (o) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | kWh (Rural) | 221,173,907 | 211,459,709 | 180,819,174 | 148,514,575 | 154,259,084 | 177,528,595 | 214,550,301 | 226,777,918 | 159,655,638 | 158,033,126 | 164,739,204 | 192,142,420 | 2,209,653,652 |
| 2 | kWh (NonRural) | 694,445,833 | 694,445,833 | 694,445,833 | 695,645,833 | 695,645,833 | 695,645,833 | 695,645,833 | 695,645,833 | 695,645,833 | 694,445,833 | 694,445,833 | 694,445,833 | 8,340,550,000 |
| 3 | kWh - Total | 915,619,740 | 905,905,542 | 875,265,008 | 844,160,409 | 849,904,918 | 873,174,428 | 910,196,134 | 922,423,751 | 855,301,471 | 852,478,960 | 859,185,037 | 886,588,253 | 10,550,203,651 |
| 4 | CP Demand kW (Rural) | 482,799 | 476,715 | 387,590 | 290,520 | 383,774 | 447,544 | 492,762 | 496,929 | 388,725 | 306,733 | 345,860 | 434,357 | 4,934,307 |
| 5 | NCP Demand kW (Rural) | 507,369 | 503,670 | 411,803 | 316,341 | 419,066 | 472,854 | 515,640 | 522,553 | 410,654 | 340,234 | 371,811 | 463,382 | 5,255,378 |
| 6 | CP/NCP factor (Rural) | 95.2% | 94.6% | 94.1% | 91.8% | 91.6% | 94.6% | 95.6% | 95.1% | 94.7% | 90.2% | 93.0% | 93.7% | 93.7% |
| 7 | NCP Demand kW (NonRural) | 1,000,750 | 1,000,750 | 1,000,750 | 1,000,750 | 1,003,750 | 1,003,750 | 1,003,750 | 1,003,750 | 1,003,750 | 1,000,750 | 1,000,750 | 1,000,750 | 12,024,000 |
| 8 | Total NCP | 1,508,119 | 1,504,420 | 1,412,553 | 1,317,091 | 1,422,816 | 1,476,604 | 1,519,390 | 1,526,303 | 1,414,404 | 1,340,984 | 1,372,561 | 1,464,132 | 17,279,378 |
| 9 | CP/NCP factor (Non Rural) | 96.4% | 96.1% | 96.6% | 95.9% | 96.6% | 97.2% | 97.6% | 97.4% | 96.7% | 95.9% | 95.3% | 96.4% | 96.5% |
| 10 | CP Demand (Non Rural) | 964,713 | 962,011 | 966,891 | 960,023 | 969,751 | 975,379 | 979,290 | 977,270 | 971,049 | 959,617 | 953,576 | 964,417 | 11,603,987 |
| 11 | Total CP (with 2% trans. loss) | 1,476,462 | 1,467,500 | 1,381,571 | 1,275,554 | 1,380,596 | 1,451,382 | 1,501,493 | 1,503,683 | 1,386,969 | 1,291,677 | 1,325,425 | 1,426,750 | 16,869,061 |

Calendar Year 2000

| Line No. (a) | Item (b) | Jan (c) | Feb (d) | Mar (e) | Apr (f) | May (g) | Jun (h) | Jul (i) | Aug (j) | Sep (k) | Oct (l) | Nov (m) | Dec (n) | Total (o) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | kWh (Rural) | 232,596,148 | 222,902,706 | 192,258,918 | 159,966,699 | 165,719,680 | 189,012,628 | 226,059,409 | 238,326,175 | 171,262,238 | 169,666,079 | 176,403,738 | 203,835,581 | 2,348,010,000 |
| 2 | kWh (NonRural) | 697,172,750 | 697,172,750 | 697,172,750 | 698,372,750 | 698,372,750 | 698,372,750 | 698,372,750 | 698,372,750 | 698,372,750 | 697,172,750 | 697,172,750 | 697,172,750 | 8,373,273,000 |
| 3 | kWh - Total | 929,768,898 | 920,075,456 | 889,431,668 | 858,339,449 | 864,092,430 | 887,385,378 | 924,432,159 | 936,698,925 | 869,634,988 | 866,838,829 | 873,576,488 | 901,008,331 | 10,721,283,000 |
| 4 | CP Demand kW (Rural) | 508,360 | 502,323 | 413,191 | 316,148 | 409,421 | 473,244 | 518,518 | 522,772 | 414,699 | 332,765 | 371,964 | 460,525 | 5,243,928 |
| 5 | NCP Demand kW (Rural) | 534,231 | 530,726 | 439,002 | 344,247 | 447,072 | 500,006 | 542,591 | 549,729 | 438,094 | 369,110 | 399,873 | 491,298 | 5,585,980 |
| 6 | CP/NCP factor (Rural) | 95.2% | 94.6% | 94.1% | 91.8% | 91.6% | 94.6% | 95.6% | 95.1% | 94.7% | 90.2% | 93.0% | 93.7% | 93.7% |
| 7 | NCP Demand kW (NonRural) | 1,004,450 | 1,004,450 | 1,004,450 | 1,004,450 | 1,007,450 | 1,007,450 | 1,007,450 | 1,007,450 | 1,007,450 | 1,004,450 | 1,004,450 | 1,004,450 | 12,068,400 |
| 8 | Total NCP | 1,538,681 | 1,535,176 | 1,443,452 | 1,348,697 | 1,454,522 | 1,507,456 | 1,550,041 | 1,557,179 | 1,445,544 | 1,373,560 | 1,404,323 | 1,495,748 | 17,654,380 |
| 9 | CP/NCP factor (Non Rural) | 96.4% | 96.1% | 96.6% | 95.9% | 96.6% | 97.2% | 97.6% | 97.4% | 96.7% | 95.9% | 95.3% | 96.4% | 96.5% |
| 10 | CP Demand (Non Rural) | 968,280 | 965,567 | 970,465 | 963,573 | 973,326 | 978,975 | 982,900 | 980,873 | 974,628 | 963,165 | 957,102 | 967,983 | 11,646,836 |
| 11 | Total CP (with 2% trans. loss) | 1,506,173 | 1,497,248 | 1,411,329 | 1,305,315 | 1,410,402 | 1,481,263 | 1,531,446 | 1,533,718 | 1,417,113 | 1,321,849 | 1,355,647 | 1,457,077 | 17,228,579 |

Notes:
1. Line (1): based on Equation 8.1
2. Line (2): input from Cooperative management
3. Line (3): Line (1) + Line (2)
4. Line (4): based on Equation 8.2
5. Line (5): Line (4) + Line (6)
6. Line (6): based on historical monthly CP to NC? relationships (1991-1996)
7. Line (7): input from Cooperative management
8. Line (8): Line (5) + Line (7)
9. Line (9): based on historical monthly CP to NCP relationships (1991-1996)
10. Line (10): Line (7) * Line (9)
11. Line (11): [Line (4) + Line (10)] * 1.02

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**Big Rivers Electric Corporation**
Short-Term Demand and Energy Projections: Low Range
Calendar Year 1997

| Line No. (a) | Item (b) | Jan (c) | Feb (d) | Mar (e) | Apr (f) | May (g) | Jun (h) | Jul (i) | Aug (j) | Sep (k) | Oct (l) | Nov (m) | Dec (n) | Total (o) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | kWh (Rural) | 143,666,836 | 136,970,225 | 129,870,985 | 127,286,819 | 108,594,330 | 135,264,690 | 163,590,549 | 150,528,722 | 118,757,278 | 120,759,745 | 129,537,490 | 157,135,864 | 1,621,963,533 |
| 2 | kWh (NonRural) | 545,427,085 | 511,452,077 | 545,427,085 | 535,302,082 | 546,627,085 | 535,302,082 | 546,627,085 | 546,627,085 | 614,711,082 | 624,836,085 | 613,511,082 | 624,836,085 | 6,790,686,000 |
| 3 | kWh - Total | 689,093,921 | 648,422,301 | 675,298,070 | 662,588,902 | 655,221,415 | 670,566,772 | 710,217,634 | 697,155,806 | 733,468,360 | 745,595,830 | 743,048,572 | 781,971,949 | 8,412,649,533 |
| 4 | CP Demand kW (Rural) | 305,489 | 326,998 | 299,575 | 239,053 | 297,478 | 360,024 | 392,458 | 358,359 | 302,707 | 234,051 | 248,982 | 362,077 | 3,727,250 |
| 5 | NCP Demand kW (Rural) | 321,036 | 345,487 | 318,289 | 260,300 | 324,835 | 380,383 | 410,679 | 376,838 | 319,784 | 259,614 | 267,663 | 386,272 | 3,971,181 |
| 6 | CP/NCP factor (Rural) | 95.2% | 94.6% | 94.1% | 91.8% | 91.6% | 94.6% | 95.6% | 95.1% | 94.7% | 90.2% | 93.0% | 93.7% | 93.7% |
| 7 | NCP Demand kW (NonRural) | 895,000 | 895,000 | 895,000 | 895,000 | 898,000 | 898,000 | 898,000 | 898,000 | 898,000 | 895,000 | 895,000 | 895,000 | 10,755,000 |
| 8 | Total NCP | 1,216,036 | 1,240,487 | 1,213,289 | 1,155,300 | 1,222,835 | 1,278,383 | 1,308,679 | 1,274,838 | 1,217,784 | 1,154,614 | 1,162,663 | 1,281,272 | 14,726,181 |
| 9 | CP/NCP factor (Non Rural) | 96.4% | 96.1% | 96.6% | 95.9% | 96.6% | 97.2% | 97.6% | 97.4% | 96.7% | 95.9% | 95.3% | 96.4% | 96.5% |
| 10 | CP Demand (Non Rural) | 862,771 | 860,354 | 864,719 | 858,577 | 867,583 | 872,618 | 876,117 | 874,310 | 868,744 | 858,214 | 852,811 | 862,506 | 10,379,324 |
| 11 | Total CP (with 2% trans. loss) | 1,191,626 | 1,211,099 | 1,187,580 | 1,119,582 | 1,188,363 | 1,257,295 | 1,293,946 | 1,257,323 | 1,194,880 | 1,114,110 | 1,123,828 | 1,249,075 | 14,388,706 |

Calendar Year 1998

| Line No. (a) | Item (b) | Jan (c) | Feb (d) | Mar (e) | Apr (f) | May (g) | Jun (h) | Jul (i) | Aug (j) | Sep (k) | Oct (l) | Nov (m) | Dec (n) | Total (o) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | kWh (Rural) | 143,367,641 | 136,671,351 | 129,573,193 | 126,988,252 | 108,295,702 | 134,965,488 | 163,290,713 | 150,227,792 | 118,455,358 | 120,457,765 | 129,235,020 | 156,833,872 | 1,618,362,148 |
| 2 | kWh (NonRural) | 638,378,189 | 603,296,074 | 638,378,189 | 627,884,151 | 639,578,189 | 627,884,151 | 639,578,189 | 639,578,189 | 627,884,151 | 638,378,189 | 626,684,151 | 638,378,189 | 7,585,880,000 |
| 3 | kWh - Total | 781,745,830 | 739,967,425 | 767,951,382 | 754,872,402 | 747,873,891 | 762,849,638 | 802,868,902 | 789,805,982 | 746,339,509 | 758,835,954 | 755,919,171 | 795,212,061 | 9,204,242,148 |
| 4 | CP Demand kW (Rural) | 304,820 | 326,329 | 298,909 | 238,384 | 296,810 | 359,354 | 391,787 | 357,686 | 302,031 | 233,375 | 248,305 | 361,401 | 3,719,191 |
| 5 | NCP Demand kW (Rural) | 320,333 | 344,781 | 317,581 | 259,572 | 324,105 | 379,676 | 409,977 | 376,130 | 319,070 | 258,864 | 266,936 | 385,551 | 3,962,575 |
| 6 | CP/NCP factor (Rural) | 95.2% | 94.6% | 94.1% | 91.8% | 91.6% | 94.6% | 95.6% | 95.1% | 94.7% | 90.2% | 93.0% | 93.7% | 93.7% |
| 7 | NCP Demand kW (NonRural) | 927,800 | 927,800 | 927,800 | 927,800 | 930,800 | 930,800 | 930,800 | 930,800 | 930,800 | 927,800 | 927,800 | 927,800 | 11,148,600 |
| 8 | Total NCP | 1,248,133 | 1,272,581 | 1,245,381 | 1,187,372 | 1,254,905 | 1,310,476 | 1,340,777 | 1,306,930 | 1,249,870 | 1,186,664 | 1,194,736 | 1,313,351 | 15,111,175 |
| 9 | CP/NCP factor (Non Rural) | 96.4% | 96.1% | 96.6% | 95.9% | 96.6% | 97.2% | 97.6% | 97.4% | 96.7% | 95.9% | 95.3% | 96.4% | 96.5% |
| 10 | CP Demand (Non Rural) | 894,390 | 891,884 | 896,409 | 890,042 | 899,272 | 904,491 | 908,117 | 906,245 | 900,475 | 889,666 | 884,065 | 894,116 | 10,759,172 |
| 11 | Total CP (with 2% trans. loss) | 1,223,194 | 1,242,577 | 1,219,224 | 1,150,995 | 1,220,004 | 1,289,122 | 1,325,902 | 1,289,209 | 1,226,557 | 1,145,501 | 1,155,017 | 1,280,627 | 14,767,930 |

Item 6
Page 83 of 188



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**Big Rivers Electric Corporation**
Short-Term Demand and Energy Projections: Low Range
Calendar Year 1999

| Line No. (a) | Item (b) | Jan (c) | Feb (d) | Mar (e) | Apr (f) | May (g) | Jun (h) | Jul (i) | Aug (j) | Sep (k) | Oct (l) | Nov (m) | Dec (n) | Total (o) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | kWh (Rural) | 143,084,783 | 136,388,839 | 129,291,747 | 126,706,052 | 108,013,455 | 134,682,696 | 163,007,323 | 149,943,368 | 118,170,016 | 120,172,392 | 128,949,204 | 156,548,557 | 1,614,958,433 |
| 2 | kWh (NonRural) | 643,335,833 | 643,335,833 | 643,335,833 | 644,535,833 | 644,535,833 | 644,535,833 | 644,535,833 | 644,535,833 | 644,535,833 | 643,335,833 | 643,335,833 | 643,335,833 | 7,727,230,000 |
| 3 | kWh - Total | 786,420,617 | 779,724,672 | 772,627,580 | 771,241,885 | 752,549,289 | 779,218,529 | 807,543,156 | 794,479,201 | 762,705,850 | 763,508,226 | 772,285,038 | 799,884,391 | 9,342,188,433 |
| 4 | CP Demand kW (Rural) | 304,187 | 325,696 | 298,279 | 237,753 | 296,179 | 358,721 | 391,153 | 357,049 | 301,393 | 232,736 | 247,665 | 360,762 | 3,711,574 |
| 5 | NCP Demand kW (Rural) | 319,667 | 344,113 | 316,912 | 258,885 | 323,416 | 379,007 | 409,313 | 375,460 | 318,396 | 258,156 | 266,248 | 384,870 | 3,954,442 |
| 6 | CP/NCP factor (Rural) | 95.2% | 94.6% | 94.1% | 91.8% | 91.6% | 94.6% | 95.6% | 95.1% | 94.7% | 90.2% | 93.0% | 93.7% | 93.7% |
| 7 | NCP Demand kW (NonRural) | 930,750 | 930,750 | 930,750 | 930,750 | 933,750 | 933,750 | 933,750 | 933,750 | 933,750 | 930,750 | 930,750 | 930,750 | 11,184,000 |
| 8 | Total NCP | 1,250,417 | 1,274,863 | 1,247,662 | 1,189,635 | 1,257,166 | 1,312,757 | 1,343,063 | 1,309,210 | 1,252,146 | 1,188,906 | 1,196,998 | 1,315,620 | 15,138,442 |
| 9 | CP/NCP factor (Non Rural) | 96.4% | 96.1% | 96.6% | 95.9% | 96.6% | 97.2% | 97.6% | 97.4% | 96.7% | 95.9% | 95.3% | 96.4% | 96.5% |
| 10 | CP Demand (Non Rural) | 897,234 | 894,720 | 899,259 | 892,872 | 902,122 | 907,358 | 910,996 | 909,117 | 903,329 | 892,494 | 886,876 | 896,958 | 10,793,336 |
| 11 | Total CP (with 2% trans. loss) | 1,225,449 | 1,244,825 | 1,221,489 | 1,153,237 | 1,222,267 | 1,291,401 | 1,328,191 | 1,291,490 | 1,228,817 | 1,147,735 | 1,157,232 | 1,282,875 | 14,795,007 |

Calendar Year 2000

| Line No. (a) | Item (b) | Jan (c) | Feb (d) | Mar (e) | Apr (f) | May (g) | Jun (h) | Jul (i) | Aug (j) | Sep (k) | Oct (l) | Nov (m) | Dec (n) | Total (o) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | kWh (Rural) | 142,805,350 | 136,109,752 | 129,013,726 | 126,427,291 | 107,734,644 | 134,403,348 | 162,727,377 | 149,662,390 | 117,888,136 | 119,890,497 | 128,666,865 | 156,266,717 | 1,611,596,094 |
| 2 | kWh (NonRural) | 646,062,750 | 646,062,750 | 646,062,750 | 647,262,750 | 647,262,750 | 647,262,750 | 647,262,750 | 647,262,750 | 647,262,750 | 646,062,750 | 646,062,750 | 646,062,750 | 7,759,953,000 |
| 3 | kWh - Total | 788,868,100 | 782,172,502 | 775,076,476 | 773,690,041 | 754,997,394 | 781,666,098 | 809,990,127 | 796,925,140 | 765,150,886 | 765,953,247 | 774,729,615 | 802,329,467 | 9,371,549,094 |
| 4 | CP Demand kW (Rural) | 303,562 | 325,072 | 297,657 | 237,129 | 295,555 | 358,096 | 390,526 | 356,420 | 300,762 | 232,105 | 247,033 | 360,132 | 3,704,049 |
| 5 | NCP Demand kW (Rural) | 319,010 | 343,453 | 316,251 | 258,205 | 322,734 | 378,347 | 408,657 | 374,799 | 317,729 | 257,456 | 265,569 | 384,197 | 3,946,408 |
| 6 | CP/NCP factor (Rural) | 95.2% | 94.6% | 94.1% | 91.8% | 91.6% | 94.6% | 95.6% | 95.1% | 94.7% | 90.2% | 93.0% | 93.7% | 93.7% |
| 7 | NCP Demand kW (NonRural) | 934,450 | 934,450 | 934,450 | 934,450 | 937,450 | 937,450 | 937,450 | 937,450 | 937,450 | 934,450 | 934,450 | 934,450 | 11,228,400 |
| 8 | Total NCP | 1,253,460 | 1,277,903 | 1,250,701 | 1,192,655 | 1,260,184 | 1,315,797 | 1,346,107 | 1,312,249 | 1,255,179 | 1,191,906 | 1,200,019 | 1,318,647 | 15,174,808 |
| 9 | CP/NCP factor (Non Rural) | 96.4% | 96.1% | 96.6% | 95.9% | 96.6% | 97.2% | 97.6% | 97.4% | 96.7% | 95.9% | 95.3% | 96.4% | 96.5% |
| 10 | CP Demand (Non Rural) | 900,801 | 898,277 | 902,834 | 896,422 | 905,697 | 910,953 | 914,605 | 912,719 | 906,909 | 896,042 | 890,401 | 900,524 | 10,836,184 |
| 11 | Total CP (with 2% trans. loss) | 1,228,449 | 1,247,816 | 1,224,501 | 1,156,222 | 1,225,277 | 1,294,430 | 1,331,234 | 1,294,523 | 1,231,824 | 1,150,711 | 1,160,183 | 1,285,869 | 14,831,038 |

Notes:
1. Line (1): based on Equation 8.1
2. Line (2): input from Cooperative management
3. Line (3): Line (1) + Line (2)
4. Line (4): based on Equation 8.2
5. Line (5): Line (4) + Line (6)
6. Line (6): based on historical monthly CP to NCP relationships (1991-1996)
7. Line (7): input from Cooperative management
8. Line (8): Line (5) + Line (7)
9. Line (9): based on historical monthly CP to NCP relationships (1991-1996)
10. Line (10): Line (7) * Line (9)
11. Line (11): [Line (4) + Line (10)] * 1.02

Item 6
Page 84 of 188



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**Section 2**
**Long-Term Forecast-Base Case**

## Big Rivers Electric Corporation
## 1997 Load Forecast - Base Case
## Total System Requirements

| Year | Consumers | Percent Change | Sales (MWh) | Percent Change | Own Use (MWh) | Losses (%) | Member MWh Purchases | Total MWh Requirements | Percent Change |
|---|---|---|---|---|---|---|---|---|---|
| 1972 | 52,831 | | 3,792,968 | | 3,102 | 9.7% | 3,862,045 | 3,939,286 | |
| 1973 | 54,920 | 4.0% | 5,033,988 | 32.7% | 2,811 | 8.9% | 5,102,148 | 5,204,191 | 32.1% |
| 1974 | 56,975 | 3.7% | 5,918,096 | 17.6% | 2,651 | 8.7% | 5,986,239 | 6,105,964 | 17.3% |
| 1975 | 58,878 | 3.3% | 5,863,245 | -0.9% | 2,546 | 8.5% | 5,939,400 | 6,058,188 | -0.8% |
| 1976 | 61,040 | 3.7% | 6,103,980 | 4.1% | 2,860 | 9.1% | 6,190,692 | 6,314,506 | 4.2% |
| 1977 | 63,441 | 3.9% | 6,432,738 | 5.4% | 2,801 | 7.4% | 6,514,107 | 6,644,389 | 5.2% |
| 1978 | 65,205 | 2.8% | 6,436,336 | 0.1% | 3,042 | 7.6% | 6,527,678 | 6,658,231 | 0.2% |
| 1979 | 67,573 | 3.6% | 6,929,271 | 7.7% | 2,909 | 9.0% | 7,029,485 | 7,170,074 | 7.7% |
| 1980 | 68,948 | 2.0% | 7,454,859 | 7.6% | 2,754 | 6.2% | 7,528,564 | 7,679,135 | 7.1% |
| 1981 | 70,106 | 1.7% | 7,401,040 | -0.7% | 2,810 | 6.9% | 7,479,670 | 7,629,264 | -0.6% |
| 1982 | 70,894 | 1.1% | 6,342,743 | -14.3% | 2,932 | 7.2% | 6,426,261 | 6,554,786 | -14.1% |
| 1983 | 72,269 | 1.9% | 6,604,043 | 4.1% | 2,816 | 8.5% | 6,707,235 | 6,841,380 | 4.4% |
| 1984 | 73,660 | 1.9% | 7,329,994 | 11.0% | 3,042 | 5.5% | 7,398,951 | 7,546,930 | 10.3% |
| 1985 | 74,913 | 1.7% | 6,796,406 | -7.3% | 2,864 | 8.0% | 6,899,093 | 7,037,074 | -6.8% |
| 1986 | 76,008 | 1.5% | 6,125,886 | -9.9% | 2,982 | 6.7% | 6,215,491 | 6,339,799 | -9.9% |
| 1987 | 77,384 | 1.8% | 6,180,027 | 0.9% | 3,079 | 6.5% | 6,270,519 | 6,395,929 | 0.9% |
| 1988 | 78,603 | 1.6% | 7,713,154 | 24.8% | 3,196 | 7.0% | 7,813,146 | 7,969,409 | 24.6% |
| 1989 | 79,853 | 1.6% | 7,951,178 | 3.1% | 3,255 | 8.4% | 8,072,761 | 8,234,217 | 3.3% |
| 1990 | 81,050 | 1.5% | 8,113,961 | 2.0% | 3,133 | 5.4% | 8,191,465 | 8,355,294 | 1.5% |
| 1991 | 82,201 | 1.4% | 8,208,490 | 1.2% | 3,136 | 7.0% | 8,314,440 | 8,484,123 | 1.5% |
| 1992 | 83,737 | 1.9% | 8,222,493 | 0.2% | 3,362 | 7.0% | 8,326,337 | 8,496,262 | 0.1% |
| 1993 | 85,501 | 2.1% | 8,336,903 | 1.4% | 3,089 | 6.7% | 8,445,130 | 8,617,480 | 1.4% |
| 1994 | 87,257 | 2.1% | 7,355,595 | -11.8% | 3,227 | 6.1% | 7,454,220 | 7,606,347 | -11.7% |
| 1995 | 89,395 | 2.4% | 7,849,136 | 6.7% | 3,334 | 6.6% | 7,961,435 | 8,123,913 | 6.8% |
| 1996 | 91,548 | 2.4% | 7,931,120 | 1.0% | 3,598 | 6.5% | 8,045,961 | 8,210,164 | 1.1% |
| 1997 | 93,578 | 2.2% | 8,457,651 | 6.6% | 3,630 | 6.4% | 8,572,245 | 8,747,189 | 6.5% |
| 1998 | 95,653 | 2.2% | 9,301,625 | 10.0% | 3,658 | 6.3% | 9,427,654 | 9,620,055 | 10.0% |
| 1999 | 97,771 | 2.2% | 9,501,762 | 2.2% | 3,687 | 6.3% | 9,630,503 | 9,827,044 | 2.2% |
| 2000 | 99,932 | 2.2% | 9,590,043 | 0.9% | 3,715 | 6.3% | 9,719,979 | 9,918,346 | 0.9% |
| 2001 | 102,139 | 2.2% | 9,646,176 | 0.6% | 3,744 | 6.3% | 9,776,385 | 9,975,903 | 0.6% |
| 2002 | 104,104 | 1.9% | 9,687,669 | 0.4% | 3,773 | 6.3% | 9,820,995 | 10,021,423 | 0.5% |
| 2003 | 106,105 | 1.9% | 9,740,722 | 0.5% | 3,801 | 6.3% | 9,877,237 | 10,078,813 | 0.6% |
| 2004 | 108,142 | 1.9% | 9,795,372 | 0.6% | 3,830 | 6.3% | 9,935,570 | 10,138,337 | 0.6% |
| 2005 | 110,217 | 1.9% | 9,851,729 | 0.6% | 3,858 | 6.3% | 9,995,723 | 10,199,717 | 0.6% |
| 2006 | 112,330 | 1.9% | 9,909,867 | 0.6% | 3,887 | 6.3% | 10,057,773 | 10,263,033 | 0.6% |
| 2007 | 114,270 | 1.7% | 9,966,603 | 0.6% | 3,915 | 6.3% | 10,118,323 | 10,324,819 | 0.6% |
| 2008 | 116,242 | 1.7% | 10,136,602 | 1.7% | 3,944 | 6.3% | 10,292,239 | 10,502,285 | 1.7% |
| 2009 | 118,247 | 1.7% | 10,196,564 | 0.6% | 3,973 | 6.3% | 10,356,226 | 10,567,578 | 0.6% |
| 2010 | 120,284 | 1.7% | 10,258,245 | 0.6% | 4,001 | 6.3% | 10,422,046 | 10,634,741 | 0.6% |
| 2011 | 122,355 | 1.7% | 10,321,711 | 0.6% | 4,030 | 6.3% | 10,489,767 | 10,703,844 | 0.6% |
| 2012 | 124,334 | 1.6% | 10,384,573 | 0.6% | 4,058 | 6.3% | 10,556,841 | 10,772,287 | 0.6% |
| 2013 | 126,344 | 1.6% | 10,530,809 | 1.4% | 4,087 | 6.3% | 10,707,384 | 10,925,902 | 1.4% |
| 2014 | 128,385 | 1.6% | 10,596,773 | 0.6% | 4,116 | 6.3% | 10,777,761 | 10,997,716 | 0.7% |
| 2015 | 130,457 | 1.6% | 10,664,470 | 0.6% | 4,144 | 6.3% | 10,849,987 | 11,071,415 | 0.7% |
| 2016 | 132,562 | 1.6% | 10,733,982 | 0.7% | 4,173 | 6.3% | 10,924,145 | 11,147,087 | 0.7% |

Notes:
1. Years 1997-1999 based on short-term forecast
2. Year 2000 based on the average values for the short-term and long-term forecasts
3. Years 2001-2016 based on the long-term forecast
4. Losses represent distribution losses on rural system energy requirements
5. 1972-1996 respresents actual values, 1997-2016 represents weather normalized values

**Big Rivers Electric Corporation**
**1997 Load Forecast - Base Case**
**Total System Requirements**

| Year | Summer Peak (kW) | Percent Change | Load Factor | Winter Peak (kW) | Percent Change | Load Factor |
|---|---|---|---|---|---|---|
| 1972 | 497,000 | | 90.5% | 472,000 | | 93.4% |
| 1973 | 707,000 | 42.3% | 84.0% | 508,000 | 7.6% | 114.7% |
| 1974 | 737,000 | 4.2% | 94.6% | 722,000 | 42.1% | 94.6% |
| 1975 | 722,000 | -2.0% | 95.8% | 731,000 | 1.2% | 92.8% |
| 1976 | 759,000 | 5.1% | 95.0% | 748,000 | 2.3% | 94.5% |
| 1977 | 801,000 | 5.5% | 94.7% | 820,000 | 9.6% | 90.7% |
| 1978 | 802,000 | 0.1% | 94.8% | 819,000 | -0.1% | 91.0% |
| 1979 | 994,000 | 23.9% | 82.3% | 974,000 | 18.9% | 82.4% |
| 1980 | 1,039,000 | 4.5% | 84.4% | 1,007,000 | 3.4% | 85.3% |
| 1981 | 1,034,000 | -0.5% | 84.2% | 1,037,000 | 3.0% | 82.3% |
| 1982 | 890,000 | -13.9% | 84.1% | 1,034,000 | -0.3% | 70.9% |
| 1983 | 966,000 | 8.5% | 80.8% | 1,046,000 | 1.2% | 73.2% |
| 1984 | 1,027,000 | 6.3% | 83.9% | 979,000 | -6.4% | 86.3% |
| 1985 | 965,000 | -6.0% | 83.2% | 1,042,000 | 6.4% | 75.6% |
| 1986 | 890,000 | -7.8% | 81.3% | 993,000 | -4.7% | 71.5% |
| 1987 | 990,000 | 11.2% | 73.8% | 920,000 | -7.4% | 77.8% |
| 1988 | 1,157,000 | 16.9% | 78.6% | 1,063,000 | 15.5% | 83.9% |
| 1989 | 1,142,000 | -1.3% | 82.3% | 1,177,000 | 10.7% | 78.3% |
| 1990 | 1,174,000 | 2.8% | 81.2% | 1,089,000 | -7.5% | 85.9% |
| 1991 | 1,168,000 | -0.5% | 82.9% | 1,140,000 | 4.7% | 83.3% |
| 1992 | 1,166,000 | -0.2% | 83.2% | 1,149,000 | 0.8% | 82.7% |
| 1993 | 1,217,000 | 4.4% | 80.8% | 1,137,000 | -1.0% | 84.8% |
| 1994 | 1,055,000 | -13.3% | 82.3% | 1,189,000 | 4.6% | 71.6% |
| 1995 | 1,166,000 | 10.5% | 79.5% | 1,063,000 | -10.6% | 85.5% |
| 1996 | 1,167,000 | 0.1% | 80.3% | 1,154,000 | 8.6% | 79.6% |
| 1997 | 1,317,434 | 12.9% | 74.6% | 1,268,118 | 9.9% | 76.7% |
| 1998 | 1,361,507 | 3.3% | 79.4% | 1,311,645 | 3.4% | 81.5% |
| 1999 | 1,376,121 | 1.1% | 80.2% | 1,326,147 | 1.1% | 82.3% |
| 2000 | 1,402,207 | 1.9% | 80.1% | 1,359,530 | 2.5% | 82.1% |
| 2001 | 1,425,386 | 1.7% | 79.9% | 1,390,129 | 2.3% | 81.9% |
| 2002 | 1,434,646 | 0.6% | 79.7% | 1,399,388 | 0.7% | 81.7% |
| 2003 | 1,446,407 | 0.8% | 79.5% | 1,411,149 | 0.8% | 81.5% |
| 2004 | 1,458,522 | 0.8% | 79.4% | 1,423,264 | 0.9% | 81.3% |
| 2005 | 1,471,016 | 0.9% | 79.2% | 1,435,758 | 0.9% | 81.1% |
| 2006 | 1,483,904 | 0.9% | 79.0% | 1,448,646 | 0.9% | 80.9% |
| 2007 | 1,496,482 | 0.8% | 78.8% | 1,461,224 | 0.9% | 80.7% |
| 2008 | 1,524,408 | 1.9% | 78.6% | 1,489,150 | 1.9% | 80.5% |
| 2009 | 1,537,701 | 0.9% | 78.5% | 1,502,443 | 0.9% | 80.3% |
| 2010 | 1,551,374 | 0.9% | 78.3% | 1,516,117 | 0.9% | 80.1% |
| 2011 | 1,565,444 | 0.9% | 78.1% | 1,530,186 | 0.9% | 79.9% |
| 2012 | 1,579,380 | 0.9% | 77.9% | 1,544,122 | 0.9% | 79.6% |
| 2013 | 1,604,640 | 1.6% | 77.7% | 1,569,383 | 1.6% | 79.5% |
| 2014 | 1,619,264 | 0.9% | 77.5% | 1,584,006 | 0.9% | 79.3% |
| 2015 | 1,634,271 | 0.9% | 77.3% | 1,599,014 | 0.9% | 79.0% |
| 2016 | 1,649,681 | 0.9% | 77.1% | 1,614,423 | 1.0% | 78.8% |

Notes:
1. Years 1997-1999 based on short-term forecast
2. Year 2000 based on the average values for the short-term and long-term forecasts
3. Years 2001-2016 based on the long-term forecast
4. 1972-1996 respresents actual values, 1997-2016 represents weather normalized values
5. Peak amounts represent the total Big Rivers 60-minute CP demand value

## Big Rivers Electric Corporation

## 1997 Load Forecast - Base Case

## Residential Classification

| Year | Consumers | Percent Change | Sales (MWh) | Percent Change | Average Use (kWh/Cust/Mo) | Percent Change |
|---|---|---|---|---|---|---|
| 1972 | 48,646 | | 426,199 | | 730 | |
| 1973 | 50,636 | 4.1% | 475,060 | 11.5% | 782 | 7.1% |
| 1974 | 52,494 | 3.7% | 495,221 | 4.2% | 786 | 0.6% |
| 1975 | 54,230 | 3.3% | 565,706 | 14.2% | 869 | 10.6% |
| 1976 | 56,193 | 3.6% | 603,393 | 6.7% | 895 | 2.9% |
| 1977 | 58,226 | 3.6% | 706,616 | 17.1% | 1,011 | 13.0% |
| 1978 | 59,761 | 2.6% | 756,149 | 7.0% | 1,054 | 4.3% |
| 1979 | 61,858 | 3.5% | 735,825 | -2.7% | 991 | -6.0% |
| 1980 | 63,049 | 1.9% | 795,980 | 8.2% | 1,052 | 6.1% |
| 1981 | 63,941 | 1.4% | 745,835 | -6.3% | 972 | -7.6% |
| 1982 | 64,502 | 0.9% | 756,931 | 1.5% | 978 | 0.6% |
| 1983 | 65,519 | 1.6% | 781,501 | 3.2% | 994 | 1.6% |
| 1984 | 66,607 | 1.7% | 819,670 | 4.9% | 1,026 | 3.2% |
| 1985 | 67,754 | 1.7% | 819,928 | 0.0% | 1,008 | -1.7% |
| 1986 | 68,718 | 1.4% | 871,530 | 6.3% | 1,057 | 4.8% |
| 1987 | 69,946 | 1.8% | 909,195 | 4.3% | 1,083 | 2.5% |
| 1988 | 71,032 | 1.6% | 931,639 | 2.5% | 1,093 | 0.9% |
| 1989 | 72,171 | 1.6% | 925,721 | -0.6% | 1,069 | -2.2% |
| 1990 | 73,156 | 1.4% | 930,785 | 0.5% | 1,060 | -0.8% |
| 1991 | 74,176 | 1.4% | 991,459 | 6.5% | 1,114 | 5.1% |
| 1992 | 75,668 | 2.0% | 945,487 | -4.6% | 1,041 | -6.5% |
| 1993 | 77,266 | 2.1% | 1,052,301 | 11.3% | 1,135 | 9.0% |
| 1994 | 78,879 | 2.1% | 1,040,652 | -1.1% | 1,099 | -3.1% |
| 1995 | 80,808 | 2.4% | 1,101,490 | 5.8% | 1,136 | 3.3% |
| 1996 | 82,659 | 2.3% | 1,144,623 | 3.9% | 1,154 | 1.6% |
| 1997 | 84,457 | 2.2% | 1,180,057 | 3.1% | 1,164 | 0.9% |
| 1998 | 86,295 | 2.2% | 1,214,250 | 2.9% | 1,173 | 0.7% |
| 1999 | 88,173 | 2.2% | 1,248,689 | 2.8% | 1,180 | 0.6% |
| 2000 | 90,093 | 2.2% | 1,283,875 | 2.8% | 1,188 | 0.6% |
| 2001 | 92,055 | 2.2% | 1,319,683 | 2.8% | 1,195 | 0.6% |
| 2002 | 93,810 | 1.9% | 1,352,259 | 2.5% | 1,201 | 0.6% |
| 2003 | 95,599 | 1.9% | 1,385,437 | 2.5% | 1,208 | 0.5% |
| 2004 | 97,423 | 1.9% | 1,419,369 | 2.4% | 1,214 | 0.5% |
| 2005 | 99,281 | 1.9% | 1,454,116 | 2.4% | 1,221 | 0.5% |
| 2006 | 101,175 | 1.9% | 1,489,713 | 2.4% | 1,227 | 0.5% |
| 2007 | 102,906 | 1.7% | 1,523,234 | 2.3% | 1,234 | 0.5% |
| 2008 | 104,666 | 1.7% | 1,557,529 | 2.3% | 1,240 | 0.5% |
| 2009 | 106,457 | 1.7% | 1,592,605 | 2.3% | 1,247 | 0.5% |
| 2010 | 108,279 | 1.7% | 1,628,478 | 2.3% | 1,253 | 0.5% |
| 2011 | 110,132 | 1.7% | 1,665,164 | 2.3% | 1,260 | 0.5% |
| 2012 | 111,898 | 1.6% | 1,700,581 | 2.1% | 1,266 | 0.5% |
| 2013 | 113,693 | 1.6% | 1,736,650 | 2.1% | 1,273 | 0.5% |
| 2014 | 115,516 | 1.6% | 1,773,456 | 2.1% | 1,279 | 0.5% |
| 2015 | 117,369 | 1.6% | 1,811,036 | 2.1% | 1,286 | 0.5% |
| 2016 | 119,252 | 1.6% | 1,849,414 | 2.1% | 1,292 | 0.5% |

Notes: 1. Years 1997-2016 based on the long-term forecast
2. 1972-1996 respresents actual values, 1997-2016 represents weather normalized values

## Big Rivers Electric Corporation
## 1997 Load Forecast - Base Case
## C/I Small Classification

| Year | Consumers | Percent Change | Sales (MWh) | Percent Change | Average Use (kWh/Cust/Mo) | Percent Change |
|---|---|---|---|---|---|---|
| 1972 | 4,111 | | 188,145 | | 3,814 | |
| 1973 | 4,207 | 2.3% | 188,997 | 0.5% | 3,744 | -1.8% |
| 1974 | 4,402 | 4.6% | 190,553 | 0.8% | 3,607 | -3.6% |
| 1975 | 4,565 | 3.7% | 221,820 | 16.4% | 4,049 | 12.3% |
| 1976 | 4,762 | 4.3% | 235,573 | 6.2% | 4,122 | 1.8% |
| 1977 | 5,131 | 7.7% | 280,660 | 19.1% | 4,558 | 10.6% |
| 1978 | 5,352 | 4.3% | 309,797 | 10.4% | 4,824 | 5.8% |
| 1979 | 5,617 | 5.0% | 250,462 | -19.2% | 3,716 | -23.0% |
| 1980 | 5,801 | 3.3% | 266,633 | 6.5% | 3,830 | 3.1% |
| 1981 | 6,062 | 4.5% | 272,242 | 2.1% | 3,742 | -2.3% |
| 1982 | 6,277 | 3.5% | 283,508 | 4.1% | 3,764 | 0.6% |
| 1983 | 6,622 | 5.5% | 292,126 | 3.0% | 3,676 | -2.3% |
| 1984 | 6,918 | 4.5% | 313,999 | 7.5% | 3,782 | 2.9% |
| 1985 | 7,021 | 1.5% | 321,458 | 2.4% | 3,815 | 0.9% |
| 1986 | 7,151 | 1.9% | 325,914 | 1.4% | 3,798 | -0.5% |
| 1987 | 7,296 | 2.0% | 338,858 | 4.0% | 3,870 | 1.9% |
| 1988 | 7,424 | 1.8% | 351,822 | 3.8% | 3,949 | 2.0% |
| 1989 | 7,526 | 1.4% | 355,923 | 1.2% | 3,941 | -0.2% |
| 1990 | 7,730 | 2.7% | 371,964 | 4.5% | 4,010 | 1.7% |
| 1991 | 7,854 | 1.6% | 381,198 | 2.5% | 4,045 | 0.9% |
| 1992 | 7,898 | 0.6% | 388,913 | 2.0% | 4,103 | 1.5% |
| 1993 | 8,060 | 2.1% | 419,026 | 7.7% | 4,332 | 5.6% |
| 1994 | 8,198 | 1.7% | 429,433 | 2.5% | 4,365 | 0.8% |
| 1995 | 8,406 | 2.5% | 447,653 | 4.2% | 4,438 | 1.7% |
| 1996 | 8,689 | 3.4% | 463,285 | 3.5% | 4,443 | 0.1% |
| 1997 | 8,919 | 2.6% | 491,697 | 6.1% | 4,594 | 3.4% |
| 1998 | 9,152 | 2.6% | 506,614 | 3.0% | 4,613 | 0.4% |
| 1999 | 9,387 | 2.6% | 522,816 | 3.2% | 4,641 | 0.6% |
| 2000 | 9,626 | 2.5% | 540,256 | 3.3% | 4,677 | 0.8% |
| 2001 | 9,866 | 2.5% | 558,798 | 3.4% | 4,720 | 0.9% |
| 2002 | 10,072 | 2.1% | 577,848 | 3.4% | 4,781 | 1.3% |
| 2003 | 10,280 | 2.1% | 597,655 | 3.4% | 4,845 | 1.3% |
| 2004 | 10,491 | 2.1% | 618,305 | 3.5% | 4,911 | 1.4% |
| 2005 | 10,703 | 2.0% | 639,847 | 3.5% | 4,982 | 1.4% |
| 2006 | 10,918 | 2.0% | 662,320 | 3.5% | 5,055 | 1.5% |
| 2007 | 11,124 | 1.9% | 685,467 | 3.5% | 5,135 | 1.6% |
| 2008 | 11,331 | 1.9% | 709,413 | 3.5% | 5,217 | 1.6% |
| 2009 | 11,541 | 1.9% | 734,230 | 3.5% | 5,302 | 1.6% |
| 2010 | 11,752 | 1.8% | 759,971 | 3.5% | 5,389 | 1.6% |
| 2011 | 11,966 | 1.8% | 786,683 | 3.5% | 5,479 | 1.7% |
| 2012 | 12,175 | 1.7% | 814,061 | 3.5% | 5,572 | 1.7% |
| 2013 | 12,387 | 1.7% | 842,253 | 3.5% | 5,666 | 1.7% |
| 2014 | 12,600 | 1.7% | 871,343 | 3.5% | 5,763 | 1.7% |
| 2015 | 12,815 | 1.7% | 901,392 | 3.4% | 5,862 | 1.7% |
| 2016 | 13,032 | 1.7% | 932,458 | 3.4% | 5,963 | 1.7% |

Notes:
1. Years 1997-2016 based on the long-term forecast
2. 1972-1996 respresents actual values, 1997-2016 represents weather normalized values

Big Rivers Electric Corporation

1997 Load Forecast - Base Case

C/I Large Classification

| Year | Consumers | Percent Change | Sales (MWh) | Percent Change |
|---|---|---|---|---|
| 1972 | 9 | | 3,177,303 | |
| 1973 | 10 | 11.1% | 4,368,418 | 37.5% |
| 1974 | 10 | 0.0% | 5,230,483 | 19.7% |
| 1975 | 11 | 10.0% | 5,073,573 | -3.0% |
| 1976 | 16 | 45.5% | 5,262,762 | 3.7% |
| 1977 | 17 | 6.3% | 5,443,274 | 3.4% |
| 1978 | 15 | -11.8% | 5,368,154 | -1.4% |
| 1979 | 17 | 13.3% | 5,940,734 | 10.7% |
| 1980 | 18 | 5.9% | 6,390,170 | 7.6% |
| 1981 | 19 | 5.6% | 6,380,899 | -0.1% |
| 1982 | 22 | 15.8% | 5,300,242 | -16.9% |
| 1983 | 23 | 4.5% | 5,528,519 | 4.3% |
| 1984 | 25 | 8.7% | 6,194,365 | 12.0% |
| 1985 | 27 | 8.0% | 5,653,054 | -8.7% |
| 1986 | 33 | 22.2% | 4,926,411 | -12.9% |
| 1987 | 34 | 3.0% | 4,929,857 | 0.1% |
| 1988 | 36 | 5.9% | 6,427,497 | 30.4% |
| 1989 | 40 | 11.1% | 6,667,299 | 3.7% |
| 1990 | 40 | 0.0% | 6,808,988 | 2.1% |
| 1991 | 41 | 2.5% | 6,833,471 | 0.4% |
| 1992 | 38 | -7.3% | 6,885,705 | 0.8% |
| 1993 | 37 | -2.6% | 6,863,080 | -0.3% |
| 1994 | 37 | 0.0% | 5,882,908 | -14.3% |
| 1995 | 35 | -5.4% | 6,297,252 | 7.0% |
| 1996 | 38 | 8.6% | 6,320,441 | 0.4% |
| 1997 | 36 | -5.3% | 6,790,687 | 7.4% |
| 1998 | 36 | 0.0% | 7,585,880 | 11.7% |
| 1999 | 36 | 0.0% | 7,727,230 | 1.9% |
| 2000 | 36 | 0.0% | 7,759,953 | 0.4% |
| 2001 | 36 | 0.0% | 7,764,607 | 0.1% |
| 2002 | 35 | -2.8% | 7,754,407 | -0.1% |
| 2003 | 35 | 0.0% | 7,754,407 | 0.0% |
| 2004 | 35 | 0.0% | 7,754,407 | 0.0% |
| 2005 | 35 | 0.0% | 7,754,407 | 0.0% |
| 2006 | 35 | 0.0% | 7,754,407 | 0.0% |
| 2007 | 35 | 0.0% | 7,754,407 | 0.0% |
| 2008 | 35 | 0.0% | 7,866,097 | 1.4% |
| 2009 | 35 | 0.0% | 7,866,097 | 0.0% |
| 2010 | 35 | 0.0% | 7,866,097 | 0.0% |
| 2011 | 35 | 0.0% | 7,866,097 | 0.0% |
| 2012 | 35 | 0.0% | 7,866,097 | 0.0% |
| 2013 | 35 | 0.0% | 7,948,003 | 1.0% |
| 2014 | 35 | 0.0% | 7,948,003 | 0.0% |
| 2015 | 35 | 0.0% | 7,948,003 | 0.0% |
| 2016 | 35 | 0.0% | 7,948,003 | 0.0% |

Notes:
1. Years 1997-2016 based on the long-term forecast
2. 1972-1996 respresents actual values, 1997-2016 represents weather normalized values

**Big Rivers Electric Corporation**
**1997 Load Forecast - Base Case**
**Public Street Lighting Classification**

| Year | Consumers | Percent Change | Sales (MWh) | Percent Change |
|---|---|---|---|---|
| 1972 | 65 | | 1,321 | |
| 1973 | 67 | 3.1% | 1,512 | 14.5% |
| 1974 | 69 | 3.0% | 1,839 | 21.6% |
| 1975 | 72 | 4.3% | 2,145 | 16.7% |
| 1976 | 69 | -4.2% | 2,252 | 5.0% |
| 1977 | 68 | -1.4% | 2,188 | -2.8% |
| 1978 | 71 | 4.4% | 2,204 | 0.7% |
| 1979 | 76 | 7.0% | 2,210 | 0.3% |
| 1980 | 74 | -2.6% | 2,032 | -8.0% |
| 1981 | 76 | 2.7% | 1,985 | -2.3% |
| 1982 | 84 | 10.5% | 1,999 | 0.7% |
| 1983 | 93 | 10.7% | 1,833 | -8.3% |
| 1984 | 98 | 5.4% | 1,887 | 2.9% |
| 1985 | 99 | 1.0% | 1,927 | 2.2% |
| 1986 | 96 | -3.0% | 1,981 | 2.8% |
| 1987 | 101 | 5.2% | 2,048 | 3.4% |
| 1988 | 104 | 3.0% | 2,110 | 3.0% |
| 1989 | 109 | 4.8% | 2,154 | 2.1% |
| 1990 | 116 | 6.4% | 2,177 | 1.1% |
| 1991 | 121 | 4.3% | 2,276 | 4.5% |
| 1992 | 124 | 2.5% | 2,275 | -0.1% |
| 1993 | 129 | 4.0% | 2,417 | 6.2% |
| 1994 | 134 | 3.9% | 2,509 | 3.8% |
| 1995 | 136 | 1.5% | 2,641 | 5.3% |
| 1996 | 152 | 11.8% | 2,661 | 0.8% |
| 1997 | 156 | 2.6% | 2,729 | 2.6% |
| 1998 | 160 | 2.6% | 2,797 | 2.5% |
| 1999 | 164 | 2.5% | 2,865 | 2.4% |
| 2000 | 168 | 2.4% | 2,933 | 2.4% |
| 2001 | 172 | 2.4% | 3,001 | 2.3% |
| 2002 | 176 | 2.3% | 3,069 | 2.3% |
| 2003 | 180 | 2.3% | 3,137 | 2.2% |
| 2004 | 184 | 2.2% | 3,205 | 2.2% |
| 2005 | 188 | 2.2% | 3,273 | 2.1% |
| 2006 | 192 | 2.1% | 3,341 | 2.1% |
| 2007 | 196 | 2.1% | 3,409 | 2.0% |
| 2008 | 200 | 2.0% | 3,477 | 2.0% |
| 2009 | 204 | 2.0% | 3,545 | 2.0% |
| 2010 | 208 | 2.0% | 3,612 | 1.9% |
| 2011 | 212 | 1.9% | 3,680 | 1.9% |
| 2012 | 216 | 1.9% | 3,748 | 1.8% |
| 2013 | 220 | 1.9% | 3,816 | 1.8% |
| 2014 | 224 | 1.8% | 3,884 | 1.8% |
| 2015 | 228 | 1.8% | 3,952 | 1.7% |
| 2016 | 232 | 1.8% | 4,020 | 1.7% |

Notes:
1. Years 1997-2016 based on the long-term forecast
2. 1972-1996 respresents actual values, 1997-2016 represents weather normalized values

## Big Rivers Electric Corporation
## 1997 Load Forecast - Base Case
## Irrigation Classification

| Year | Consumers | Percent Change | Sales (MWh) | Percent Change |
|---|---|---|---|---|
| 1972 | 0 | | 0 | |
| 1973 | 0 | 0.0% | 0 | 0.0% |
| 1974 | 0 | 0.0% | 0 | 0.0% |
| 1975 | 0 | 0.0% | 0 | 0.0% |
| 1976 | 0 | 0.0% | 0 | 0.0% |
| 1977 | 0 | 0.0% | 0 | 0.0% |
| 1978 | 6 | 0.0% | 33 | 0.0% |
| 1979 | 6 | 0.0% | 40 | 23.3% |
| 1980 | 7 | 16.7% | 42 | 5.1% |
| 1981 | 8 | 14.3% | 79 | 85.5% |
| 1982 | 9 | 12.5% | 63 | -20.0% |
| 1983 | 12 | 33.3% | 65 | 3.1% |
| 1984 | 12 | 0.0% | 74 | 13.4% |
| 1985 | 12 | 0.0% | 39 | -46.5% |
| 1986 | 9 | -25.0% | 50 | 26.3% |
| 1987 | 8 | -11.1% | 68 | 36.9% |
| 1988 | 7 | -12.5% | 85 | 24.6% |
| 1989 | 7 | 0.0% | 82 | -3.9% |
| 1990 | 8 | 14.3% | 48 | -41.3% |
| 1991 | 9 | 12.5% | 86 | 79.1% |
| 1992 | 9 | 0.0% | 114 | 32.5% |
| 1993 | 9 | 0.0% | 78 | -31.2% |
| 1994 | 9 | 0.0% | 93 | 19.3% |
| 1995 | 10 | 11.1% | 100 | 7.2% |
| 1996 | 10 | 0.0% | 110 | 10.0% |
| 1997 | 10 | 0.0% | 86 | -21.5% |
| 1998 | 10 | 0.0% | 86 | 0.0% |
| 1999 | 10 | 0.0% | 86 | 0.0% |
| 2000 | 10 | 0.0% | 86 | 0.0% |
| 2001 | 10 | 0.0% | 86 | 0.0% |
| 2002 | 10 | 0.0% | 86 | 0.0% |
| 2003 | 10 | 0.0% | 86 | 0.0% |
| 2004 | 10 | 0.0% | 86 | 0.0% |
| 2005 | 10 | 0.0% | 86 | 0.0% |
| 2006 | 10 | 0.0% | 86 | 0.0% |
| 2007 | 10 | 0.0% | 86 | 0.0% |
| 2008 | 10 | 0.0% | 86 | 0.0% |
| 2009 | 10 | 0.0% | 86 | 0.0% |
| 2010 | 10 | 0.0% | 86 | 0.0% |
| 2011 | 10 | 0.0% | 86 | 0.0% |
| 2012 | 10 | 0.0% | 86 | 0.0% |
| 2013 | 10 | 0.0% | 86 | 0.0% |
| 2014 | 10 | 0.0% | 86 | 0.0% |
| 2015 | 10 | 0.0% | 86 | 0.0% |
| 2016 | 10 | 0.0% | 86 | 0.0% |

Notes:
1. Years 1997-2016 based on the long-term forecast
2. 1972-1996 respresents actual values, 1997-2016 represents weather normalized values

| Year | | Residential Consumers (Historical) | Residential Consumers (Model) | C/I Small Consumers (Historical) | C/I Small Consumers (Model) | C/I Large Consumers (Hist/FC) | Pb St Lgt Consumers (Hist/FC) | Irrigation Consumers (Hist/FC) |
|---|---|---|---|---|---|---|---|---|
| 1976-1981 | | 2.6% | 2.1% | 4.9% | 2.3% | 3.5% | 1.9% | na |
| 1981-1986 | | 1.5% | 2.8% | 3.4% | 3.2% | 11.7% | 5.0% | 2.4% |
| 1986-1991 | | 1.5% | 0.7% | 1.9% | 2.9% | 4.4% | 4.6% | 0.4% |
| 1991-1996 | | 2.2% | 2.5% | 2.0% | 4.4% | -1.5% | 4.8% | 1.8% |
| 1976-1996 | | 1.9% | 2.0% | 3.1% | 3.2% | 4.4% | 4.0% | na |
| 1986-1996 | | 1.9% | 1.6% | 2.0% | 3.7% | 1.4% | 4.7% | 1.1% |
| 1996-2001 | | na | 2.2% | na | 2.6% | -1.1% | 2.5% | 0.0% |
| 2001-2006 | | na | 1.9% | na | 2.0% | -0.6% | 2.2% | 0.0% |
| 2006-2011 | | na | 1.7% | na | 1.8% | 0.0% | 2.0% | 0.0% |
| 2011-2016 | | na | 1.6% | na | 1.7% | 0.0% | 1.8% | 0.0% |
| 1996-2016 | | na | 1.9% | na | 2.2% | -0.5% | 2.2% | 0.0% |
| 1972 | KY62 | 48646 | | 4111 | | 9 | 65 | 0 |
| 1973 | KY62 | 50636 | 50877 | 4207 | 4616 | 10 | 67 | 0 |
| 1974 | KY62 | 52494 | 52557 | 4402 | 4891 | 10 | 69 | 0 |
| 1975 | KY62 | 54230 | 53993 | 4565 | 4734 | 11 | 72 | 0 |
| 1976 | KY62 | 56193 | 55752 | 4762 | 5060 | 16 | 69 | 0 |
| 1977 | KY62 | 58226 | 57489 | 5131 | 5344 | 17 | 68 | 0 |
| 1978 | KY62 | 59761 | 58883 | 5352 | 5705 | 15 | 71 | 6 |
| 1979 | KY62 | 61858 | 59539 | 5617 | 5694 | 17 | 76 | 6 |
| 1980 | KY62 | 63049 | 60080 | 5801 | 5566 | 18 | 74 | 7 |
| 1981 | KY62 | 63941 | 61880 | 6062 | 5672 | 19 | 76 | 8 |
| 1982 | KY62 | 64502 | 64238 | 6277 | 5707 | 22 | 84 | 9 |
| 1983 | KY62 | 65519 | 66517 | 6622 | 5998 | 23 | 93 | 12 |
| 1984 | KY62 | 66607 | 68343 | 6918 | 6303 | 25 | 98 | 12 |
| 1985 | KY62 | 67754 | 70337 | 7021 | 6536 | 27 | 99 | 12 |
| 1986 | KY62 | 68718 | 70914 | 7151 | 6645 | 33 | 96 | 9 |
| 1987 | KY62 | 69946 | 71665 | 7296 | 6882 | 34 | 101 | 8 |
| 1988 | KY62 | 71032 | 71533 | 7424 | 7039 | 36 | 104 | 7 |
| 1989 | KY62 | 72171 | 71890 | 7526 | 7320 | 40 | 109 | 7 |
| 1990 | KY62 | 73156 | 72562 | 7730 | 7601 | 40 | 116 | 8 |
| 1991 | KY62 | 74176 | 73426 | 7854 | 7679 | 41 | 121 | 9 |
| 1992 | KY62 | 75668 | 74332 | 7898 | 7849 | 38 | 124 | 9 |
| 1993 | KY62 | 77266 | 76292 | 8060 | 8273 | 37 | 129 | 9 |
| 1994 | KY62 | 78879 | 78785 | 8198 | 8826 | 37 | 134 | 9 |
| 1995 | KY62 | 80808 | 81106 | 8406 | 9224 | 35 | 136 | 10 |
| 1996 | KY62 | 82659 | 82969 | 8689 | 9517 | 38 | 152 | 10 |
| 1997 | KY62 | | 84457 | | 8919 | 36 | 156 | 10 |
| 1998 | KY62 | | 86295 | | 9152 | 36 | 160 | 10 |
| 1999 | KY62 | | 88173 | | 9387 | 36 | 164 | 10 |
| 2000 | KY62 | | 90093 | | 9626 | 36 | 168 | 10 |
| 2001 | KY62 | | 92055 | | 9866 | 36 | 172 | 10 |
| 2002 | KY62 | | 93810 | | 10072 | 35 | 176 | 10 |
| 2003 | KY62 | | 95599 | | 10280 | 35 | 180 | 10 |
| 2004 | KY62 | | 97423 | | 10491 | 35 | 184 | 10 |
| 2005 | KY62 | | 99281 | | 10703 | 35 | 188 | 10 |
| 2006 | KY62 | | 101175 | | 10918 | 35 | 192 | 10 |
| 2007 | KY62 | | 102906 | | 11124 | 35 | 196 | 10 |
| 2008 | KY62 | | 104666 | | 11331 | 35 | 200 | 10 |
| 2009 | KY62 | | 106457 | | 11541 | 35 | 204 | 10 |
| 2010 | KY62 | | 108279 | | 11752 | 35 | 208 | 10 |
| 2011 | KY62 | | 110132 | | 11966 | 35 | 212 | 10 |
| 2012 | KY62 | | 111898 | | 12175 | 35 | 216 | 10 |
| 2013 | KY62 | | 113693 | | 12387 | 35 | 220 | 10 |
| 2014 | KY62 | | 115516 | | 12600 | 35 | 224 | 10 |
| 2015 | KY62 | | 117369 | | 12815 | 35 | 228 | 10 |
| 2016 | KY62 | | 119252 | | 13032 | 35 | 232 | 10 |
| Normalized 1996 | KY62 | 82659 | 82969 | 8689 | 9517 | 38 | 152 | 10 |

| Year | | Total Consumers (Hist/FC) | Residential kWh/Cons/Mo (Historical) | Residential kWh/Cons/Mo (Model) | Residential Energy (MWh) (Historical) | Residential Energy (MWh) (Model) | C/I Small Energy (MWh) (Historical) | C/I Small Energy (MWh) (Model) |
|---|---|---|---|---|---|---|---|---|
| 1976-1981 | | 2.8% | 1.7% | 2.0% | 4.3% | 4.2% | 2.9% | 2.8% |
| 1981-1986 | | 1.6% | 1.7% | 0.1% | 3.2% | 2.9% | 3.7% | 4.2% |
| 1986-1991 | | 1.6% | 1.1% | 0.8% | 2.6% | 1.5% | 3.2% | 2.9% |
| 1991-1996 | | 2.2% | 0.7% | 0.9% | 2.9% | 3.4% | 4.0% | 3.6% |
| 1976-1996 | | 2.0% | 1.3% | 1.0% | 3.3% | 3.0% | 3.4% | 3.4% |
| 1986-1996 | | 1.9% | 0.9% | 0.8% | 2.8% | 2.4% | 3.6% | 3.3% |
| 1996-2001 | | 2.2% | na | 0.7% | na | 2.8% | na | 3.7% |
| 2001-2006 | | 1.9% | na | 0.5% | na | 2.5% | na | 3.5% |
| 2006-2011 | | 1.7% | na | 0.5% | na | 2.3% | na | 3.5% |
| 2011-2016 | | 1.6% | na | 0.5% | na | 2.1% | na | 3.5% |
| 1996-2016 | | 2.0% | na | 0.6% | na | 2.5% | na | 3.5% |
| 1972 | KY62 | 52831 | 730 | ERR | 426199 | | 188145 | 22409 |
| 1973 | KY62 | 54920 | 782 | 924 | 475060 | 563955 | 188997 | 194662 |
| 1974 | KY62 | 56975 | 786 | 895 | 495221 | 564730 | 190553 | 195110 |
| 1975 | KY62 | 58878 | 869 | 933 | 565706 | 604335 | 221820 | 205861 |
| 1976 | KY62 | 61040 | 895 | 953 | 603393 | 637755 | 235573 | 236974 |
| 1977 | KY62 | 63441 | 1011 | 1071 | 706616 | 738751 | 280660 | 288719 |
| 1978 | KY62 | 65205 | 1054 | 1122 | 756149 | 792792 | 309797 | 307097 |
| 1979 | KY62 | 67573 | 991 | 1086 | 735825 | 775765 | 250462 | 262101 |
| 1980 | KY62 | 68948 | 1052 | 1115 | 795980 | 803712 | 266633 | 268744 |
| 1981 | KY62 | 70106 | 972 | 1054 | 745835 | 782519 | 272242 | 271847 |
| 1982 | KY62 | 70894 | 978 | 1007 | 756931 | 776177 | 283508 | 274971 |
| 1983 | KY62 | 72269 | 994 | 1055 | 781501 | 842051 | 292126 | 295508 |
| 1984 | KY62 | 73660 | 1026 | 1048 | 819670 | 859180 | 313999 | 303686 |
| 1985 | KY62 | 74913 | 1008 | 1075 | 819928 | 907595 | 321458 | 320401 |
| 1986 | KY62 | 76008 | 1057 | 1060 | 871530 | 902323 | 325914 | 333264 |
| 1987 | KY62 | 77384 | 1083 | 1072 | 909195 | 922318 | 338858 | 339690 |
| 1988 | KY62 | 78603 | 1093 | 1106 | 931639 | 949169 | 351822 | 349934 |
| 1989 | KY62 | 79853 | 1069 | 1103 | 925721 | 951237 | 355923 | 359321 |
| 1990 | KY62 | 81050 | 1060 | 1020 | 930785 | 888461 | 371964 | 352089 |
| 1991 | KY62 | 82201 | 1114 | 1102 | 991459 | 971072 | 381198 | 384898 |
| 1992 | KY62 | 83737 | 1041 | 1049 | 945487 | 935830 | 388913 | 379343 |
| 1993 | KY62 | 85501 | 1135 | 1119 | 1052301 | 1024725 | 419026 | 414846 |
| 1994 | KY62 | 87257 | 1099 | 1102 | 1040652 | 1041437 | 429433 | 420497 |
| 1995 | KY62 | 89395 | 1136 | 1151 | 1101490 | 1120356 | 447653 | 447945 |
| 1996 | KY62 | 91548 | 1154 | 1153 | 1144623 | 1148242 | 463285 | 459619 |
| 1997 | KY62 | 93578 | | 1164 | | 1180057 | | 491697 |
| 1998 | KY62 | 95653 | | 1173 | | 1214250 | | 506614 |
| 1999 | KY62 | 97771 | | 1180 | | 1248689 | | 522816 |
| 2000 | KY62 | 99932 | | 1188 | | 1283875 | | 540256 |
| 2001 | KY62 | 102139 | | 1195 | | 1319683 | | 558798 |
| 2002 | KY62 | 104104 | | 1201 | | 1352259 | | 577848 |
| 2003 | KY62 | 106105 | | 1208 | | 1385437 | | 597655 |
| 2004 | KY62 | 108142 | | 1214 | | 1419369 | | 618305 |
| 2005 | KY62 | 110217 | | 1221 | | 1454116 | | 639847 |
| 2006 | KY62 | 112330 | | 1227 | | 1489713 | | 662320 |
| 2007 | KY62 | 114270 | | 1234 | | 1523234 | | 685467 |
| 2008 | KY62 | 116242 | | 1240 | | 1557529 | | 709413 |
| 2009 | KY62 | 118247 | | 1247 | | 1592605 | | 734230 |
| 2010 | KY62 | 120284 | | 1253 | | 1628478 | | 759971 |
| 2011 | KY62 | 122355 | | 1260 | | 1665164 | | 786683 |
| 2012 | KY62 | 124334 | | 1266 | | 1700581 | | 814061 |
| 2013 | KY62 | 126344 | | 1273 | | 1736650 | | 842253 |
| 2014 | KY62 | 128385 | | 1279 | | 1773456 | | 871343 |
| 2015 | KY62 | 130457 | | 1286 | | 1811036 | | 901392 |
| 2016 | KY62 | 132562 | | 1292 | | 1849414 | | 932458 |
| Normalized 1996 | KY62 | 91548 | 1156 | | 1146945 | | 466249 | |

| Year | | C/I Large Energy (MWh) (Hist/FC) | Pb St Lgt Energy (MWh) (Hist/FC) | Irrigation Energy (MWh) (Hist/FC) | Own Use Energy (MWh) (Hist/FC) | Rural System Energy Sales (MWh) (Hist/FC) | Smelter Energy (MWh) (Hist/FC) | Non Smelter Energy (MWh) (Hist/FC) |
|---|---|---|---|---|---|---|---|---|
| 1976-1981 | | 3.9% | -2.5% | na | -0.4% | 3.9% | na | na |
| 1981-1986 | | -5.0% | -0.0% | -8.8% | 1.2% | 3.3% | -6.6% | 5.0% |
| 1986-1991 | | 6.8% | 2.8% | 11.5% | 1.0% | 2.8% | 7.3% | 3.0% |
| 1991-1996 | | -1.5% | 3.2% | 5.1% | 2.8% | 3.2% | -3.4% | 5.3% |
| 1976-1996 | | 0.9% | 0.8% | na | 1.2% | 3.3% | na | na |
| 1986-1996 | | 2.5% | 3.0% | 8.2% | 1.9% | 3.0% | 1.8% | 4.2% |
| 1996-2001 | | 4.2% | 2.4% | -4.7% | 0.8% | 3.1% | 3.8% | 4.2% |
| 2001-2006 | | -0.0% | 2.2% | 0.0% | 0.8% | 2.8% | 0.0% | 1.4% |
| 2006-2011 | | 0.3% | 2.0% | 0.0% | 0.7% | 2.6% | 0.0% | 2.1% |
| 2011-2016 | | 0.2% | 1.8% | 0.0% | 0.7% | 2.6% | 0.0% | 1.9% |
| 1996-2016 | | 1.5% | 2.2% | -1.6% | 0.8% | 2.8% | 1.3% | 2.6% |
| 1972 | KY62 | 3177303 | 1321 | 0 | 3102 | 615665 | na | na |
| 1973 | KY62 | 4368418 | 1512 | 0 | 2811 | 665570 | na | na |
| 1974 | KY62 | 5230483 | 1839 | 0 | 2651 | 687613 | na | na |
| 1975 | KY62 | 5073573 | 2145 | 0 | 2546 | 789672 | na | na |
| 1976 | KY62 | 5262762 | 2252 | 0 | 2860 | 841218 | 4934026 | 1169954 |
| 1977 | KY62 | 5443274 | 2188 | 0 | 2801 | 989464 | 5103835 | 1328903 |
| 1978 | KY62 | 5368154 | 2204 | 33 | 3042 | 1068182 | 5014840 | 1421496 |
| 1979 | KY62 | 5940734 | 2210 | 40 | 2909 | 988537 | 5500327 | 1428943 |
| 1980 | KY62 | 6390170 | 2032 | 42 | 2754 | 1064688 | 5935116 | 1519743 |
| 1981 | KY62 | 6380899 | 1985 | 79 | 2810 | 1020141 | 5893803 | 1507237 |
| 1982 | KY62 | 5300242 | 1999 | 63 | 2932 | 1042501 | 4732186 | 1610557 |
| 1983 | KY62 | 5528519 | 1833 | 65 | 2816 | 1075525 | 4880411 | 1723633 |
| 1984 | KY62 | 6194365 | 1887 | 74 | 3042 | 1135629 | 5495014 | 1834979 |
| 1985 | KY62 | 5653054 | 1927 | 39 | 2864 | 1143352 | 4964900 | 1831506 |
| 1986 | KY62 | 4926411 | 1981 | 50 | 2982 | 1199475 | 4198758 | 1927128 |
| 1987 | KY62 | 4929857 | 2048 | 68 | 3079 | 1250169 | 4163242 | 2016784 |
| 1988 | KY62 | 6427497 | 2110 | 85 | 3196 | 1285657 | 5627682 | 2085472 |
| 1989 | KY62 | 6667299 | 2154 | 82 | 3255 | 1283879 | 5862015 | 2089163 |
| 1990 | KY62 | 6808988 | 2177 | 48 | 3133 | 1304974 | 5916778 | 2197184 |
| 1991 | KY62 | 6833471 | 2276 | 86 | 3136 | 1375019 | 5969212 | 2239278 |
| 1992 | KY62 | 6885705 | 2275 | 114 | 3362 | 1336789 | 6001284 | 2221209 |
| 1993 | KY62 | 6863080 | 2417 | 78 | 3089 | 1473823 | 5966768 | 2370135 |
| 1994 | KY62 | 5882908 | 2509 | 93 | 3227 | 1472687 | 4942862 | 2412733 |
| 1995 | KY62 | 6297252 | 2641 | 100 | 3334 | 1551884 | 5162811 | 2686325 |
| 1996 | KY62 | 6320441 | 2661 | 110 | 3598 | 1610679 | 5028097 | 2903023 |
| 1997 | KY62 | 6790687 | 2729 | 86 | 3630 | 1674569 | 5426886 | 3038370 |
| 1998 | KY62 | 7585880 | 2797 | 86 | 3658 | 1723747 | 6065161 | 3244466 |
| 1999 | KY62 | 7727230 | 2865 | 86 | 3687 | 1774456 | 6065161 | 3436525 |
| 2000 | KY62 | 7759953 | 2933 | 86 | 3715 | 1827151 | 6065161 | 3521943 |
| 2001 | KY62 | 7764607 | 3001 | 86 | 3744 | 1881569 | 6065161 | 3581015 |
| 2002 | KY62 | 7754407 | 3069 | 86 | 3773 | 1933262 | 6065161 | 3622508 |
| 2003 | KY62 | 7754407 | 3137 | 86 | 3801 | 1986315 | 6065161 | 3675561 |
| 2004 | KY62 | 7754407 | 3205 | 86 | 3830 | 2040965 | 6065161 | 3730211 |
| 2005 | KY62 | 7754407 | 3273 | 86 | 3858 | 2097322 | 6065161 | 3786568 |
| 2006 | KY62 | 7754407 | 3341 | 86 | 3887 | 2155460 | 6065161 | 3844706 |
| 2007 | KY62 | 7754407 | 3409 | 86 | 3915 | 2212196 | 6065161 | 3901442 |
| 2008 | KY62 | 7866097 | 3477 | 86 | 3944 | 2270505 | 6065161 | 4071441 |
| 2009 | KY62 | 7866097 | 3545 | 86 | 3973 | 2330467 | 6065161 | 4131403 |
| 2010 | KY62 | 7866097 | 3612 | 86 | 4001 | 2392148 | 6065161 | 4193084 |
| 2011 | KY62 | 7866097 | 3680 | 86 | 4030 | 2455614 | 6065161 | 4256550 |
| 2012 | KY62 | 7866097 | 3748 | 86 | 4058 | 2518476 | 6065161 | 4319412 |
| 2013 | KY62 | 7948003 | 3816 | 86 | 4087 | 2582806 | 6065161 | 4465648 |
| 2014 | KY62 | 7948003 | 3884 | 86 | 4116 | 2648770 | 6065161 | 4531612 |
| 2015 | KY62 | 7948003 | 3952 | 86 | 4144 | 2716467 | 6065161 | 4599309 |
| 2016 | KY62 | 7948003 | 4020 | 86 | 4173 | 2785979 | 6065161 | 4668821 |
| Normalized 1996 | KY62 | 6320441 | 2661 | 110 | 3598 | 1615965 | 5028097 | 2908309 |

| Year | | Total Mbr. System Energy Sales (MWh) (Hist/FC) | Rural System Losses (%) (Hist/FC) | Native Sales (MWh) (Hist/FC) | Total Energy Req. (MWh) (Hist/FC) | Summer Rural System NCP (kW) (Hist/FC-LF) | Summer Rural System NCP L.F. (Hist/FC) | Summer Rural System NCP (kW) (Model) |
|---|---|---|---|---|---|---|---|---|
| 1976-1981 | | 3.9% | 7.7% | 3.9% | 3.9% | na | na | na |
| 1981-1986 | | -3.7% | 7.1% | -3.6% | -3.6% | 3.2% | 43.7% | na |
| 1986-1991 | | 6.0% | 6.8% | 6.0% | 6.0% | 0.6% | 45.8% | na |
| 1991-1996 | | -0.7% | 6.6% | -0.7% | -0.7% | 2.0% | 47.4% | na |
| 1976-1996 | | 1.3% | 7.1% | 1.3% | 1.3% | na | na | na |
| 1986-1996 | | 2.6% | 6.7% | 2.6% | 2.6% | 1.3% | 46.6% | na |
| 1996-2001 | | 4.0% | 6.4% | 4.0% | 4.0% | 2.7% | 47.9% | 2.6% |
| 2001-2006 | | 0.5% | 6.4% | 0.6% | 0.6% | 2.7% | 47.5% | 2.4% |
| 2006-2011 | | 0.8% | 6.4% | 0.8% | 0.8% | 2.6% | 47.5% | 2.4% |
| 2011-2016 | | 0.8% | 6.4% | 0.8% | 0.8% | 2.6% | 47.5% | 2.3% |
| 1996-2016 | | 1.8% | 6.4% | 1.8% | 1.8% | 2.7% | 47.6% | 2.5% |
| 1972 | KY62 | 3792968 | 9.7% | 3862045 | 3939286 | na | na | na |
| 1973 | KY62 | 5033988 | 8.9% | 5102148 | 5204191 | na | na | na |
| 1974 | KY62 | 5918096 | 8.7% | 5986239 | 6105964 | na | na | na |
| 1975 | KY62 | 5863245 | 8.5% | 5939400 | 6058188 | na | na | na |
| 1976 | KY62 | 6103980 | 9.1% | 6190692 | 6314506 | na | na | na |
| 1977 | KY62 | 6432738 | 7.4% | 6514107 | 6644389 | na | na | na |
| 1978 | KY62 | 6436336 | 7.6% | 6527678 | 6658231 | na | na | na |
| 1979 | KY62 | 6929271 | 9.0% | 7029485 | 7170074 | 274000 | 45.2% | na |
| 1980 | KY62 | 7454859 | 6.2% | 7528564 | 7679135 | 302000 | 42.9% | na |
| 1981 | KY62 | 7401040 | 6.9% | 7479670 | 7629264 | 295000 | 42.4% | na |
| 1982 | KY62 | 6342743 | 7.2% | 6426261 | 6554786 | 294000 | 43.6% | na |
| 1983 | KY62 | 6604043 | 8.5% | 6707235 | 6841380 | 320000 | 41.9% | na |
| 1984 | KY62 | 7329994 | 5.5% | 7398951 | 7546930 | 299000 | 45.9% | na |
| 1985 | KY62 | 6796406 | 8.0% | 6899093 | 7037074 | 309000 | 45.9% | na |
| 1986 | KY62 | 6125886 | 6.7% | 6215491 | 6339799 | 346000 | 42.4% | na |
| 1987 | KY62 | 6180027 | 6.5% | 6270519 | 6395929 | 330000 | 46.3% | na |
| 1988 | KY62 | 7713154 | 7.0% | 7813146 | 7969409 | 349000 | 45.2% | na |
| 1989 | KY62 | 7951178 | 8.4% | 8072761 | 8234217 | 329000 | 48.7% | na |
| 1990 | KY62 | 8113961 | 5.4% | 8191465 | 8355294 | 350000 | 45.0% | na |
| 1991 | KY62 | 8208490 | 7.0% | 8314440 | 8484123 | 357160 | 47.2% | na |
| 1992 | KY62 | 8222493 | 7.0% | 8326337 | 8496262 | 345226 | 47.5% | na |
| 1993 | KY62 | 8336903 | 6.7% | 8445130 | 8617480 | 390425 | 46.2% | na |
| 1994 | KY62 | 7355595 | 6.1% | 7454220 | 7606347 | 371171 | 48.2% | na |
| 1995 | KY62 | 7849136 | 6.6% | 7961435 | 8123913 | 414874 | 45.7% | na |
| 1996 | KY62 | 7931120 | 6.5% | 8045961 | 8210164 | 394421 | 49.8% | 394421 |
| 1997 | KY62 | 8465256 | 6.4% | 8582736 | 8757894 | 429885 | 47.5% | 434548 |
| 1998 | KY62 | 9309627 | 6.3% | 9430154 | 9622606 | 442431 | 47.5% | 445519 |
| 1999 | KY62 | 9501686 | 6.3% | 9625335 | 9821771 | 455364 | 47.5% | 456832 |
| 2000 | KY62 | 9587104 | 6.3% | 9713985 | 9912229 | 468800 | 47.5% | 468588 |
| 2001 | KY62 | 9646176 | 6.3% | 9776385 | 9975903 | 482674 | 47.5% | 480728 |
| 2002 | KY62 | 9687669 | 6.3% | 9820995 | 10021423 | 495842 | 47.5% | 492260 |
| 2003 | KY62 | 9740722 | 6.3% | 9877237 | 10078813 | 509354 | 47.5% | 504096 |
| 2004 | KY62 | 9795372 | 6.3% | 9935570 | 10138337 | 523369 | 47.5% | 516288 |
| 2005 | KY62 | 9851729 | 6.3% | 9995723 | 10199717 | 537821 | 47.5% | 528861 |
| 2006 | KY62 | 9909867 | 6.3% | 10057773 | 10263033 | 552729 | 47.5% | 541831 |
| 2007 | KY62 | 9966603 | 6.3% | 10118323 | 10324819 | 567277 | 47.5% | 554488 |
| 2008 | KY62 | 10136602 | 6.3% | 10292239 | 10502285 | 582227 | 47.5% | 567496 |
| 2009 | KY62 | 10196564 | 6.3% | 10356226 | 10567578 | 597601 | 47.5% | 580873 |
| 2010 | KY62 | 10258245 | 6.3% | 10422046 | 10634741 | 613415 | 47.5% | 594634 |
| 2011 | KY62 | 10321711 | 6.3% | 10489767 | 10703844 | 629687 | 47.5% | 608792 |
| 2012 | KY62 | 10384573 | 6.3% | 10556841 | 10772287 | 645802 | 47.5% | 622816 |
| 2013 | KY62 | 10530809 | 6.3% | 10707384 | 10925902 | 662294 | 47.5% | 637168 |
| 2014 | KY62 | 10596773 | 6.3% | 10777761 | 10997716 | 679204 | 47.5% | 651883 |
| 2015 | KY62 | 10664470 | 6.3% | 10849987 | 11071415 | 696558 | 47.5% | 666986 |
| 2016 | KY62 | 10733982 | 6.3% | 10924145 | 11147087 | 714376 | 47.5% | 682493 |
| Normalized 1996 | KY62 | 7936406 | 6.4% | 8051611 | 8215930 | 423356 | 46.5% | 423356 |

| Year | | Summer Rural System NCP L.F. (Model) | Summer Rural System CP (kW) (Hist) | Summer Rural System CP L.F. (Hist) | Summer Rural System CP (kW) (Model) | Summer Rural System CP L.F. (Model) | Summer C/I Large NCP (kW) (Hist/FC) | Summer Smelter NCP (kW) (Hist/FC) |
|---|---|---|---|---|---|---|---|---|
| 1976-1981 | | na | na | na | na | na | na | na |
| 1981-1986 | | na | 3.2% | 45.5% | na | na | na | -4.2% |
| 1986-1991 | | na | 0.1% | 47.0% | na | na | na | 4.3% |
| 1991-1996 | | na | 2.3% | 49.8% | na | na | -1.6% | -3.8% |
| 1976-1996 | | na | na | na | na | na | na | na |
| 1986-1996 | | na | 1.2% | 48.3% | na | na | na | 0.2% |
| 1996-2001 | | 47.8% | na | na | 2.6% | 49.0% | 4.1% | 4.4% |
| 2001-2006 | | 48.1% | na | na | 2.5% | 49.2% | -0.0% | 0.0% |
| 2006-2011 | | 48.8% | na | na | 2.4% | 49.8% | 0.3% | 0.0% |
| 2011-2016 | | 49.4% | na | na | 2.3% | 50.4% | 0.2% | 0.0% |
| 1996-2016 | | 48.2% | na | na | 2.5% | 49.4% | 1.4% | 1.5% |
| 1972 | KY62 | na | na | na | na | na | na | na |
| 1973 | KY62 | na | na | na | na | na | na | na |
| 1974 | KY62 | na | na | na | na | na | na | na |
| 1975 | KY62 | na | na | na | na | na | na | na |
| 1976 | KY62 | na | na | na | na | na | na | 587500 |
| 1977 | KY62 | na | na | na | na | na | na | 595000 |
| 1978 | KY62 | na | na | na | na | na | na | 594500 |
| 1979 | KY62 | na | 265000 | 46.8% | na | na | na | 684000 |
| 1980 | KY62 | na | 299000 | 43.4% | na | na | na | 688000 |
| 1981 | KY62 | na | 289000 | 43.3% | na | na | na | 690000 |
| 1982 | KY62 | na | 276000 | 46.5% | na | na | na | 680000 |
| 1983 | KY62 | na | 300000 | 44.7% | na | na | na | 663000 |
| 1984 | KY62 | na | 282000 | 48.6% | na | na | na | 664500 |
| 1985 | KY62 | na | 303000 | 46.8% | na | na | na | 558500 |
| 1986 | KY62 | na | 339000 | 43.3% | na | na | na | 558000 |
| 1987 | KY62 | na | 323000 | 47.3% | na | na | na | 553760 |
| 1988 | KY62 | na | 342000 | 46.1% | na | na | na | 678020 |
| 1989 | KY62 | na | 321000 | 49.9% | na | na | 811558 | 685617 |
| 1990 | KY62 | na | 344000 | 45.8% | na | na | 832311 | 689174 |
| 1991 | KY62 | na | 339855 | 49.6% | na | na | 833878 | 689181 |
| 1992 | KY62 | na | 331489 | 49.5% | na | na | 791875 | 696922 |
| 1993 | KY62 | na | 370687 | 48.6% | na | na | 791777 | 697574 |
| 1994 | KY62 | na | 354703 | 50.5% | na | na | 689221 | 568645 |
| 1995 | KY62 | na | 387914 | 48.9% | na | na | 754183 | 697574 |
| 1996 | KY62 | 49.8% | 380236 | 51.7% | 380236 | 51.7% | 768925 | 568645 |
| 1997 | KY62 | 47.0% | | | 423583 | 48.2% | 898000 | 706500 |
| 1998 | KY62 | 47.2% | | | 434485 | 48.4% | 930800 | 706500 |
| 1999 | KY62 | 47.3% | | | 445727 | 48.5% | 933750 | 706500 |
| 2000 | KY62 | 47.5% | | | 457409 | 48.7% | 937450 | 706500 |
| 2001 | KY62 | 47.7% | | | 469472 | 48.8% | 938075 | 706500 |
| 2002 | KY62 | 47.8% | | | 480932 | 49.0% | 935875 | 706500 |
| 2003 | KY62 | 48.0% | | | 492693 | 49.1% | 935875 | 706500 |
| 2004 | KY62 | 48.1% | | | 504808 | 49.2% | 935875 | 706500 |
| 2005 | KY62 | 48.3% | | | 517302 | 49.4% | 935875 | 706500 |
| 2006 | KY62 | 48.4% | | | 530190 | 49.5% | 935875 | 706500 |
| 2007 | KY62 | 48.6% | | | 542768 | 49.6% | 935875 | 706500 |
| 2008 | KY62 | 48.7% | | | 555694 | 49.8% | 950875 | 706500 |
| 2009 | KY62 | 48.9% | | | 568987 | 49.9% | 950875 | 706500 |
| 2010 | KY62 | 49.0% | | | 582660 | 50.0% | 950875 | 706500 |
| 2011 | KY62 | 49.1% | | | 596730 | 50.1% | 950875 | 706500 |
| 2012 | KY62 | 49.2% | | | 610666 | 50.2% | 950875 | 706500 |
| 2013 | KY62 | 49.4% | | | 624926 | 50.3% | 961875 | 706500 |
| 2014 | KY62 | 49.5% | | | 639550 | 50.4% | 961875 | 706500 |
| 2015 | KY62 | 49.6% | | | 654557 | 50.5% | 961875 | 706500 |
| 2016 | KY62 | 49.7% | | | 669967 | 50.6% | 961875 | 706500 |
| Normalized 1996 | KY62 | 46.5% | 412714 | 47.7% | 412714 | 47.7% | 768925 | 568645 |

| Year | | Summer Non Smelter NCP (kW) (Hist/FC) | Summer Total System NCP (kW) (Hist/FC) | Summer Total System NCP L.F. (Hist/FC) | Summer Total System NCP (kW) (Model) | Summer Total System NCP L.F. (Model) | Summer Total System CP (kW) (Hist) | Summer Total System CP L.F. (Hist) |
|---|---|---|---|---|---|---|---|---|
| 1976-1981 | | na | na | na | na | na | 6.4% | 89.2% |
| 1981-1986 | | 8.8% | 1.0% | 73.4% | na | na | -3.0% | 82.9% |
| 1986-1991 | | -1.6% | 1.6% | 72.1% | na | na | 5.6% | 80.0% |
| 1991-1996 | | 3.3% | -0.5% | 79.1% | na | na | -0.0% | 81.5% |
| 1976-1996 | | na | na | 77.0% | na | na | 2.2% | 83.5% |
| 1986-1996 | | 0.8% | 0.5% | 75.2% | na | na | 2.7% | 80.6% |
| 1996-2001 | | 2.1% | 3.6% | 78.0% | 3.6% | 78.2% | na | na |
| 2001-2006 | | 1.8% | 0.9% | 77.9% | 0.8% | 78.5% | na | na |
| 2006-2011 | | 2.2% | 1.2% | 76.5% | 1.1% | 77.5% | na | na |
| 2011-2016 | | 2.1% | 1.2% | 75.1% | 1.1% | 76.6% | na | na |
| 1996-2016 | | 2.1% | 1.9% | 77.4% | 1.8% | 78.0% | na | na |
| 1972 | KY62 | na | na | na | na | na | 497000 | 90.5% |
| 1973 | KY62 | na | na | na | na | na | 707000 | 84.0% |
| 1974 | KY62 | na | na | na | na | na | 737000 | 94.6% |
| 1975 | KY62 | na | na | na | na | na | 722000 | 95.8% |
| 1976 | KY62 | 251963 | 856252 | 84.2% | na | na | 759000 | 95.0% |
| 1977 | KY62 | 287183 | 899827 | 84.3% | na | na | 801000 | 94.7% |
| 1978 | KY62 | 308846 | 921413 | 82.5% | na | na | 802000 | 94.8% |
| 1979 | KY62 | 318824 | 1022880 | 80.0% | na | na | 994000 | 82.3% |
| 1980 | KY62 | 361216 | 1070200 | 81.9% | na | na | 1039000 | 84.4% |
| 1981 | KY62 | 356651 | 1067584 | 81.6% | na | na | 1034000 | 84.2% |
| 1982 | KY62 | 373283 | 1074349 | 69.6% | na | na | 890000 | 84.1% |
| 1983 | KY62 | 407100 | 1091502 | 71.6% | na | na | 966000 | 80.8% |
| 1984 | KY62 | 393245 | 1078900 | 79.9% | na | na | 1027000 | 83.9% |
| 1985 | KY62 | 510300 | 1090176 | 73.7% | na | na | 965000 | 83.2% |
| 1986 | KY62 | 544400 | 1124448 | 64.4% | na | na | 890000 | 81.3% |
| 1987 | KY62 | 604240 | 1181160 | 61.8% | na | na | 990000 | 73.8% |
| 1988 | KY62 | 516080 | 1217982 | 74.7% | na | na | 1157000 | 78.6% |
| 1989 | KY62 | 565483 | 1276122 | 73.7% | na | na | 1142000 | 82.3% |
| 1990 | KY62 | 502826 | 1215840 | 78.4% | na | na | 1174000 | 81.2% |
| 1991 | KY62 | 501999 | 1215004 | 79.7% | na | na | 1168000 | 82.9% |
| 1992 | KY62 | 484563 | 1205115 | 80.5% | na | na | 1166000 | 83.2% |
| 1993 | KY62 | 524728 | 1246748 | 78.9% | na | na | 1217000 | 80.8% |
| 1994 | KY62 | 510157 | 1100378 | 78.9% | na | na | 1055000 | 82.3% |
| 1995 | KY62 | 480964 | 1202109 | 77.1% | na | na | 1166000 | 79.5% |
| 1996 | KY62 | 590405 | 1182231 | 79.3% | 1182231 | 79.3% | 1167000 | 80.3% |
| 1997 | KY62 | 621385 | 1354443 | 73.8% | 1354817 | 73.8% | | |
| 1998 | KY62 | 666731 | 1400696 | 78.4% | 1399464 | 78.5% | | |
| 1999 | KY62 | 682614 | 1416896 | 79.1% | 1414012 | 79.3% | | |
| 2000 | KY62 | 699750 | 1434375 | 78.9% | 1429777 | 79.1% | | |
| 2001 | KY62 | 714249 | 1449164 | 78.6% | 1442797 | 78.9% | | |
| 2002 | KY62 | 725217 | 1460351 | 78.3% | 1452316 | 78.8% | | |
| 2003 | KY62 | 738729 | 1474134 | 78.0% | 1464389 | 78.6% | | |
| 2004 | KY62 | 752744 | 1488429 | 77.8% | 1476824 | 78.4% | | |
| 2005 | KY62 | 767196 | 1503170 | 77.5% | 1489648 | 78.2% | | |
| 2006 | KY62 | 782104 | 1518376 | 77.2% | 1502878 | 78.0% | | |
| 2007 | KY62 | 796652 | 1533215 | 76.9% | 1515788 | 77.8% | | |
| 2008 | KY62 | 826602 | 1563764 | 76.7% | 1544357 | 77.6% | | |
| 2009 | KY62 | 841976 | 1579446 | 76.4% | 1558001 | 77.4% | | |
| 2010 | KY62 | 857790 | 1595576 | 76.1% | 1572037 | 77.2% | | |
| 2011 | KY62 | 874062 | 1612173 | 75.8% | 1586479 | 77.0% | | |
| 2012 | KY62 | 890177 | 1628611 | 75.5% | 1600783 | 76.8% | | |
| 2013 | KY62 | 917669 | 1656652 | 75.3% | 1626641 | 76.7% | | |
| 2014 | KY62 | 934579 | 1673900 | 75.0% | 1641652 | 76.5% | | |
| 2015 | KY62 | 951933 | 1691602 | 74.7% | 1657056 | 76.3% | | |
| 2016 | KY62 | 969751 | 1709777 | 74.4% | 1672874 | 76.1% | | |
| Normalized 1996 | KY62 | 643100 | 1211745 | 77.4% | 1211745 | 77.4% | 1199478 | 78.2% |

| Year | | Summer Total System CP (kW) (Model) | Summer Total System CP L.F. (Model) | Winter Rural System NCP (kW) (Hist/FC-LF) | Winter Rural System NCP L.F. (Hist/FC) | Winter Rural System NCP (kW) (Model) | Winter Rural System NCP L.F. (Model) | Winter Rural System CP (kW) (Hist) |
|---|---|---|---|---|---|---|---|---|
| 1976-1981 | | na | na | na | na | na | na | na |
| 1981-1986 | | na | na | 2.9% | 43.5% | na | na | 2.7% |
| 1986-1991 | | na | na | -0.1% | 50.3% | na | na | -0.9% |
| 1991-1996 | | na | na | 4.7% | 51.3% | na | na | 4.9% |
| 1976-1996 | | na | na | na | na | na | na | na |
| 1986-1996 | | na | na | 2.3% | 50.6% | na | na | 2.0% |
| 1996-2001 | | 3.5% | 79.1% | 2.0% | 50.6% | 2.9% | 48.5% | na |
| 2001-2006 | | 0.8% | 79.4% | 2.7% | 51.0% | 2.5% | 49.1% | na |
| 2006-2011 | | 1.1% | 78.5% | 2.6% | 51.0% | 2.4% | 49.7% | na |
| 2011-2016 | | 1.1% | 77.6% | 2.6% | 51.0% | 2.4% | 50.2% | na |
| 1996-2016 | | 1.8% | 79.0% | 2.4% | 50.8% | 2.6% | 49.1% | na |
| 1972 | KY62 | na | na | na | na | na | na | na |
| 1973 | KY62 | na | na | na | na | na | na | na |
| 1974 | KY62 | na | na | na | na | na | na | na |
| 1975 | KY62 | na | na | na | na | na | na | na |
| 1976 | KY62 | na | na | na | na | na | na | na |
| 1977 | KY62 | na | na | na | na | na | na | na |
| 1978 | KY62 | na | na | na | na | na | na | na |
| 1979 | KY62 | na | na | 278000 | 44.6% | na | na | 272000 |
| 1980 | KY62 | na | na | 263000 | 49.3% | na | na | 250000 |
| 1981 | KY62 | na | na | 278000 | 45.0% | na | na | 275000 |
| 1982 | KY62 | na | na | 311000 | 41.2% | na | na | 282000 |
| 1983 | KY62 | na | na | 334000 | 40.2% | na | na | 332000 |
| 1984 | KY62 | na | na | 298000 | 46.0% | na | na | 257000 |
| 1985 | KY62 | na | na | 331000 | 42.9% | na | na | 315000 |
| 1986 | KY62 | na | na | 320000 | 45.9% | na | na | 314000 |
| 1987 | KY62 | na | na | 275000 | 55.5% | na | na | 270000 |
| 1988 | KY62 | na | na | 295000 | 53.5% | na | na | 289000 |
| 1989 | KY62 | na | na | 379000 | 42.2% | na | na | 352000 |
| 1990 | KY62 | na | na | 305000 | 51.6% | na | na | 260000 |
| 1991 | KY62 | na | na | 318397 | 53.0% | na | na | 300584 |
| 1992 | KY62 | na | na | 323627 | 50.7% | na | na | 310047 |
| 1993 | KY62 | na | na | 335173 | 53.8% | na | na | 318252 |
| 1994 | KY62 | na | na | 377008 | 47.5% | na | na | 359832 |
| 1995 | KY62 | na | na | 352150 | 53.8% | na | na | 335672 |
| 1996 | KY62 | 1167000 | 80.3% | 401387 | 49.0% | 401387 | 49.0% | 382214 |
| 1997 | KY62 | 1339422 | 74.6% | 400676 | 51.0% | 424159 | 48.1% | |
| 1998 | KY62 | 1383124 | 79.4% | 412370 | 51.0% | 435130 | 48.3% | |
| 1999 | KY62 | 1397316 | 80.2% | 424423 | 51.0% | 446443 | 48.4% | |
| 2000 | KY62 | 1412698 | 80.1% | 436947 | 51.0% | 458198 | 48.6% | |
| 2001 | KY62 | 1425386 | 79.9% | 449878 | 51.0% | 470338 | 48.7% | |
| 2002 | KY62 | 1434646 | 79.7% | 462151 | 51.0% | 481871 | 48.9% | |
| 2003 | KY62 | 1446407 | 79.5% | 474745 | 51.0% | 493706 | 49.0% | |
| 2004 | KY62 | 1458522 | 79.4% | 487807 | 51.0% | 505898 | 49.1% | |
| 2005 | KY62 | 1471016 | 79.2% | 501278 | 51.0% | 518471 | 49.3% | |
| 2006 | KY62 | 1485904 | 79.0% | 515173 | 51.0% | 531441 | 49.4% | |
| 2007 | KY62 | 1496482 | 78.8% | 528732 | 51.0% | 544098 | 49.5% | |
| 2008 | KY62 | 1524408 | 78.6% | 542667 | 51.0% | 557107 | 49.6% | |
| 2009 | KY62 | 1537701 | 78.5% | 556996 | 51.0% | 570483 | 49.7% | |
| 2010 | KY62 | 1551374 | 78.3% | 571736 | 51.0% | 584244 | 49.9% | |
| 2011 | KY62 | 1565444 | 78.1% | 586901 | 51.0% | 598403 | 50.0% | |
| 2012 | KY62 | 1579380 | 77.9% | 601922 | 51.0% | 612427 | 50.1% | |
| 2013 | KY62 | 1604640 | 77.7% | 617293 | 51.0% | 626778 | 50.2% | |
| 2014 | KY62 | 1619264 | 77.5% | 633054 | 51.0% | 641494 | 50.3% | |
| 2015 | KY62 | 1634271 | 77.3% | 649229 | 51.0% | 656597 | 50.4% | |
| 2016 | KY62 | 1649681 | 77.1% | 665837 | 51.0% | 672104 | 50.5% | |
| Normalized 1996 | KY62 | 1199478 | 78.2% | 408283 | 48.3% | 408283 | 48.3% | 389699 |



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| Year | | Winter Rural System CP L.F. (Hist) | Winter Rural System CP (kW) (Model) | Winter Rural System CP L.F. (Model) | Winter C/I Large NCP (kW) (Hist/FC) | Winter Smelter NCP (kW) (Hist/FC) | Winter Non Smelter NCP (kW) (Hist/FC) | Winter Total System NCP (kW) (Hist/FC) |
|---|---|---|---|---|---|---|---|---|
| 1976-1981 | | na | na | na | na | na | na | na |
| 1981-1986 | | 46.1% | na | na | na | -4.0% | 8.1% | 0.7% |
| 1986-1991 | | 53.3% | na | na | na | 4.1% | -1.6% | 1.6% |
| 1991-1996 | | 53.9% | na | na | -1.9% | 0.4% | -1.1% | -0.2% |
| 1976-1996 | | na | na | na | na | na | na | na |
| 1986-1996 | | 53.4% | na | na | na | 2.2% | -1.4% | 0.7% |
| 1996-2001 | | na | 3.0% | 50.7% | 4.0% | 0.1% | 8.3% | 3.6% |
| 2001-2006 | | na | 2.6% | 51.0% | -0.0% | 0.0% | 1.8% | 0.9% |
| 2006-2011 | | na | 2.5% | 51.4% | 0.3% | 0.0% | 2.2% | 1.2% |
| 2011-2016 | | na | 2.4% | 51.8% | 0.2% | 0.0% | 2.1% | 1.1% |
| 1996-2016 | | na | 2.7% | 51.0% | 1.4% | 0.0% | 4.1% | 1.9% |
| 1972 | KY62 | na | na | na | na | na | na | na |
| 1973 | KY62 | na | na | na | na | na | na | na |
| 1974 | KY62 | na | na | na | na | na | na | na |
| 1975 | KY62 | na | na | na | na | na | na | na |
| 1976 | KY62 | na | na | na | na | 595500 | 272303 | 885159 |
| 1977 | KY62 | na | na | na | na | 596000 | 302320 | 916286 |
| 1978 | KY62 | na | na | na | na | 591500 | 301368 | 910725 |
| 1979 | KY62 | 45.6% | na | na | na | 695000 | 292356 | 1007103 |
| 1980 | KY62 | 51.9% | na | na | na | 690000 | 323835 | 1034112 |
| 1981 | KY62 | 45.5% | na | na | na | 690000 | 350161 | 1060964 |
| 1982 | KY62 | 45.5% | na | na | na | 684000 | 379403 | 1084671 |
| 1983 | KY62 | 40.4% | na | na | na | 663000 | 384899 | 1068857 |
| 1984 | KY62 | 53.4% | na | na | na | 661000 | 347573 | 1028744 |
| 1985 | KY62 | 45.1% | na | na | na | 662000 | 427200 | 1110984 |
| 1986 | KY62 | 46.8% | na | na | na | 563500 | 516100 | 1101192 |
| 1987 | KY62 | 56.6% | na | na | na | 568780 | 527520 | 1118226 |
| 1988 | KY62 | 54.6% | na | na | na | 685500 | 449500 | 1157700 |
| 1989 | KY62 | 45.5% | na | na | 831291 | 696006 | 552594 | 1273572 |
| 1990 | KY62 | 60.6% | na | na | 841326 | 695563 | 457637 | 1176264 |
| 1991 | KY62 | 56.1% | na | na | 843705 | 690510 | 475543 | 1189374 |
| 1992 | KY62 | 52.9% | na | na | 798932 | 705012 | 456080 | 1184314 |
| 1993 | KY62 | 56.6% | na | na | 794954 | 700279 | 470620 | 1194317 |
| 1994 | KY62 | 49.7% | na | na | 810417 | 703908 | 528293 | 1256845 |
| 1995 | KY62 | 56.5% | na | na | 753191 | 700279 | 404106 | 1126473 |
| 1996 | KY62 | 51.4% | 382214 | 51.4% | 768406 | 703908 | 449079 | 1176047 |
| 1997 | KY62 | | 405785 | 50.3% | 895000 | 706500 | 589176 | 1321589 |
| 1998 | KY62 | | 416687 | 50.4% | 927800 | 706500 | 633670 | 1366973 |
| 1999 | KY62 | | 427928 | 50.5% | 930750 | 706500 | 648673 | 1382277 |
| 2000 | KY62 | | 439610 | 50.6% | 934450 | 706500 | 664897 | 1398825 |
| 2001 | KY62 | | 451674 | 50.8% | 935075 | 706500 | 678453 | 1412652 |
| 2002 | KY62 | | 463133 | 50.8% | 932875 | 706500 | 688526 | 1422926 |
| 2003 | KY62 | | 474894 | 50.9% | 932875 | 706500 | 701120 | 1435772 |
| 2004 | KY62 | | 487009 | 51.0% | 932875 | 706500 | 714182 | 1449096 |
| 2005 | KY62 | | 499503 | 51.1% | 932875 | 706500 | 727653 | 1462836 |
| 2006 | KY62 | | 512391 | 51.2% | 932875 | 706500 | 741548 | 1477009 |
| 2007 | KY62 | | 524969 | 51.3% | 932875 | 706500 | 755107 | 1490839 |
| 2008 | KY62 | | 537895 | 51.4% | 947875 | 706500 | 784042 | 1520353 |
| 2009 | KY62 | | 551188 | 51.5% | 947875 | 706500 | 798371 | 1534968 |
| 2010 | KY62 | | 564862 | 51.6% | 947875 | 706500 | 813111 | 1550003 |
| 2011 | KY62 | | 578931 | 51.7% | 947875 | 706500 | 828276 | 1565472 |
| 2012 | KY62 | | 592867 | 51.7% | 947875 | 706500 | 843297 | 1580793 |
| 2013 | KY62 | | 607128 | 51.8% | 958875 | 706500 | 869668 | 1607691 |
| 2014 | KY62 | | 621751 | 51.9% | 958875 | 706500 | 885429 | 1623768 |
| 2015 | KY62 | | 636759 | 52.0% | 958875 | 706500 | 901604 | 1640266 |
| 2016 | KY62 | | 652168 | 52.0% | 958875 | 706500 | 918212 | 1657206 |
| Normalized 1996 | KY62 | 50.6% | 389699 | 50.6% | 768406 | 703908 | 455975 | 1183080 |

| Year | | Winter Total System NCP L.F. (Hist/FC) | Winter Total System NCP (kW) (Model) | Winter Total System NCP L.F. (Model) | Winter Total System CP (kW) (Hist) | Winter Total System CP L.F. (Hist) | Winter Total System CP (kW) (Model) | Winter Total System CP L.F. (Model) |
|---|---|---|---|---|---|---|---|---|
| 1976-1981 | | na | na | na | 6.8% | 87.7% | na | na |
| 1981-1986 | | 74.3% | na | na | -0.9% | 76.6% | na | na |
| 1986-1991 | | 74.3% | na | na | 2.8% | 80.1% | na | na |
| 1991-1996 | | 79.5% | na | na | 0.2% | 81.2% | na | na |
| 1976-1996 | | 77.9% | na | na | 2.2% | 81.8% | na | na |
| 1986-1996 | | 76.5% | na | na | 1.5% | 80.4% | na | na |
| 1996-2001 | | 79.7% | 3.7% | 79.5% | na | na | 3.7% | 81.0% |
| 2001-2006 | | 80.0% | 0.8% | 79.9% | na | na | 0.8% | 81.4% |
| 2006-2011 | | 78.7% | 1.1% | 78.9% | na | na | 1.1% | 80.4% |
| 2011-2016 | | 77.4% | 1.1% | 77.8% | na | na | 1.1% | 79.3% |
| 1996-2016 | | 79.4% | 1.9% | 79.3% | na | na | 1.9% | 80.9% |
| 1972 | KY62 | na | na | na | 472000 | 93.4% | na | na |
| 1973 | KY62 | na | na | na | 508000 | 114.7% | na | na |
| 1974 | KY62 | na | na | na | 722000 | 94.6% | na | na |
| 1975 | KY62 | na | na | na | 731000 | 92.8% | na | na |
| 1976 | KY62 | 81.4% | na | na | 748000 | 94.5% | na | na |
| 1977 | KY62 | 82.8% | na | na | 820000 | 90.7% | na | na |
| 1978 | KY62 | 83.5% | na | na | 819000 | 91.0% | na | na |
| 1979 | KY62 | 81.3% | na | na | 974000 | 82.4% | na | na |
| 1980 | KY62 | 84.8% | na | na | 1007000 | 85.3% | na | na |
| 1981 | KY62 | 82.1% | na | na | 1037000 | 82.3% | na | na |
| 1982 | KY62 | 69.0% | na | na | 1034000 | 70.9% | na | na |
| 1983 | KY62 | 73.1% | na | na | 1046000 | 73.2% | na | na |
| 1984 | KY62 | 83.7% | na | na | 979000 | 86.3% | na | na |
| 1985 | KY62 | 72.3% | na | na | 1042000 | 75.6% | na | na |
| 1986 | KY62 | 65.7% | na | na | 993000 | 71.5% | na | na |
| 1987 | KY62 | 65.3% | na | na | 920000 | 77.8% | na | na |
| 1988 | KY62 | 78.6% | na | na | 1063000 | 83.9% | na | na |
| 1989 | KY62 | 73.8% | na | na | 1177000 | 78.3% | na | na |
| 1990 | KY62 | 81.1% | na | na | 1089000 | 85.9% | na | na |
| 1991 | KY62 | 81.4% | na | na | 1140000 | 83.3% | na | na |
| 1992 | KY62 | 81.9% | na | na | 1149000 | 82.7% | na | na |
| 1993 | KY62 | 82.4% | na | na | 1137000 | 84.8% | na | na |
| 1994 | KY62 | 69.1% | na | na | 1189000 | 71.6% | na | na |
| 1995 | KY62 | 82.3% | na | na | 1063000 | 85.5% | na | na |
| 1996 | KY62 | 79.7% | 1176047 | 79.7% | 1154000 | 79.6% | 1154000 | 81.2% |
| 1997 | KY62 | 75.6% | 1328400 | 75.3% | | | 1304165 | 76.7% |
| 1998 | KY62 | 80.4% | 1373046 | 80.0% | | | 1347867 | 81.5% |
| 1999 | KY62 | 81.1% | 1387594 | 80.8% | | | 1362058 | 82.3% |
| 2000 | KY62 | 80.9% | 1403359 | 80.6% | | | 1377440 | 82.1% |
| 2001 | KY62 | 80.6% | 1416380 | 80.4% | | | 1390129 | 81.9% |
| 2002 | KY62 | 80.4% | 1425898 | 80.2% | | | 1399388 | 81.7% |
| 2003 | KY62 | 80.1% | 1437971 | 80.0% | | | 1411149 | 81.5% |
| 2004 | KY62 | 79.9% | 1450407 | 79.8% | | | 1423264 | 81.3% |
| 2005 | KY62 | 79.6% | 1463231 | 79.6% | | | 1435758 | 81.1% |
| 2006 | KY62 | 79.3% | 1476460 | 79.4% | | | 1448646 | 80.9% |
| 2007 | KY62 | 79.1% | 1489371 | 79.1% | | | 1461224 | 80.7% |
| 2008 | KY62 | 78.9% | 1517939 | 79.0% | | | 1489150 | 80.5% |
| 2009 | KY62 | 78.6% | 1531583 | 78.8% | | | 1502443 | 80.3% |
| 2010 | KY62 | 78.3% | 1545619 | 78.5% | | | 1516117 | 80.1% |
| 2011 | KY62 | 78.1% | 1560061 | 78.3% | | | 1530186 | 79.9% |
| 2012 | KY62 | 77.8% | 1574366 | 78.1% | | | 1544122 | 79.6% |
| 2013 | KY62 | 77.6% | 1600224 | 77.9% | | | 1569383 | 79.5% |
| 2014 | KY62 | 77.3% | 1615234 | 77.7% | | | 1584006 | 79.3% |
| 2015 | KY62 | 77.1% | 1630639 | 77.5% | | | 1599014 | 79.0% |
| 2016 | KY62 | 76.8% | 1646456 | 77.3% | | | 1614423 | 78.8% |
| Normalized 1996 | KY62 | 79.3% | 1183080 | 79.3% | 1161485 | 80.7% | 1161485 | 80.7% |

| Year | | Population (Hist/FC) | Per Capita Income (Hist/FC) | Employment (Hist/FC) | Personal Income (Hist/FC) | Cooling Degree Days (Hist/FC) | Heating Degree Days (Hist/FC) | Peak Mo. CDD (Hist/FC) |
|---|---|---|---|---|---|---|---|---|
| 1976-1981 | | 1.6% | 2.0% | 1.7% | 3.6% | 1466 | 4979 | na |
| 1981-1986 | | 2.2% | 0.2% | 2.2% | 2.5% | 1465 | 4563 | na |
| 1986-1991 | | 0.5% | 1.1% | 2.2% | 1.7% | 1539 | 4406 | 409 |
| 1991-1996 | | 1.9% | 1.9% | 3.3% | 3.8% | 1534 | 4356 | 466 |
| 1976-1996 | | 1.6% | 1.3% | 2.4% | 2.9% | 1490 | 4602 | 443 |
| 1986-1996 | | 1.2% | 1.5% | 2.7% | 2.7% | 1516 | 4393 | 443 |
| 1996-2001 | | 1.7% | 1.2% | 1.8% | 2.9% | 1376 | 4708 | 431 |
| 2001-2006 | | 1.5% | 1.2% | 1.6% | 2.8% | 1376 | 4708 | 431 |
| 2006-2011 | | 1.3% | 1.2% | 1.5% | 2.6% | 1376 | 4708 | 431 |
| 2011-2016 | | 1.3% | 1.2% | 1.4% | 2.5% | 1376 | 4708 | 431 |
| 1996-2016 | | 1.5% | 1.2% | 1.6% | 2.8% | 1376 | 4708 | 431 |
| 1972 | KY62 | 147730 | 11487 | 58720 | 1698 | 1160 | 4909 | |
| 1973 | KY62 | 150880 | 12445 | 62250 | 1877 | 1567 | 4188 | |
| 1974 | KY62 | 154710 | 12429 | 64880 | 1923 | 1229 | 4172 | |
| 1975 | KY62 | 157950 | 12199 | 63410 | 1927 | 1500 | 4283 | |
| 1976 | KY62 | 161790 | 12927 | 66800 | 2092 | 1112 | 4784 | |
| 1977 | KY62 | 165570 | 13722 | 69710 | 2272 | 1779 | 4799 | |
| 1978 | KY62 | 168680 | 13906 | 73190 | 2346 | 1550 | 5420 | |
| 1979 | KY62 | 170070 | 14406 | 73160 | 2450 | 1238 | 5227 | |
| 1980 | KY62 | 171220 | 13844 | 71870 | 2370 | 1726 | 5095 | |
| 1981 | KY62 | 175470 | 14242 | 72760 | 2499 | 1389 | 4548 | |
| 1982 | KY62 | 181000 | 14075 | 72990 | 2547 | 1349 | 4399 | |
| 1983 | KY62 | 186260 | 13336 | 75460 | 2484 | 1664 | 4640 | |
| 1984 | KY62 | 190400 | 14557 | 78390 | 2771 | 1365 | 4622 | |
| 1985 | KY62 | 194780 | 14300 | 80410 | 2785 | 1445 | 4785 | |
| 1986 | KY62 | 195720 | 14418 | 81160 | 2821 | 1576 | 4386 | |
| 1987 | KY62 | 197190 | 14406 | 83320 | 2841 | 1623 | 4290 | |
| 1988 | KY62 | 197090 | 14582 | 85040 | 2874 | 1500 | 4822 | 436 |
| 1989 | KY62 | 197690 | 15081 | 87560 | 2981 | 1396 | 4830 | 369 |
| 1990 | KY62 | 199200 | 15256 | 90020 | 3039 | 1380 | 3856 | 387 |
| 1991 | KY62 | 201090 | 15237 | 90580 | 3064 | 1757 | 4253 | 445 |
| 1992 | KY62 | 203000 | 15719 | 92220 | 3191 | 1240 | 4217 | 440 |
| 1993 | KY62 | 207110 | 15646 | 95760 | 3240 | 1613 | 4652 | 566 |
| 1994 | KY62 | 212260 | 16118 | 100590 | 3421 | 1489 | 4180 | 449 |
| 1995 | KY62 | 216930 | 16474 | 103980 | 3573 | 1613 | 4652 | 577 |
| 1996 | KY62 | 220790 | 16701 | 106420 | 3688 | 1489 | 4180 | 321 |
| 1997 | KY62 | 224541 | 16902 | 108378 | 3795 | 1376 | 4708 | 431 |
| 1998 | KY62 | 228356 | 17104 | 110374 | 3906 | 1376 | 4708 | 431 |
| 1999 | KY62 | 232239 | 17307 | 112408 | 4019 | 1376 | 4708 | 431 |
| 2000 | KY62 | 236189 | 17513 | 114481 | 4136 | 1376 | 4708 | 431 |
| 2001 | KY62 | 240208 | 17721 | 116594 | 4257 | 1376 | 4708 | 431 |
| 2002 | KY62 | 243804 | 17941 | 118490 | 4374 | 1376 | 4708 | 431 |
| 2003 | KY62 | 247456 | 18164 | 120418 | 4495 | 1376 | 4708 | 431 |
| 2004 | KY62 | 251163 | 18389 | 122378 | 4619 | 1376 | 4708 | 431 |
| 2005 | KY62 | 254928 | 18617 | 124372 | 4746 | 1376 | 4708 | 431 |
| 2006 | KY62 | 258750 | 18848 | 126399 | 4877 | 1376 | 4708 | 431 |
| 2007 | KY62 | 262219 | 19083 | 128250 | 5004 | 1376 | 4708 | 431 |
| 2008 | KY62 | 265735 | 19321 | 130128 | 5134 | 1376 | 4708 | 431 |
| 2009 | KY62 | 269299 | 19561 | 132035 | 5268 | 1376 | 4708 | 431 |
| 2010 | KY62 | 272913 | 19805 | 133971 | 5405 | 1376 | 4708 | 431 |
| 2011 | KY62 | 276576 | 20052 | 135936 | 5546 | 1376 | 4708 | 431 |
| 2012 | KY62 | 280043 | 20289 | 137771 | 5682 | 1376 | 4708 | 431 |
| 2013 | KY62 | 283554 | 20529 | 139632 | 5821 | 1376 | 4708 | 431 |
| 2014 | KY62 | 287110 | 20771 | 141520 | 5964 | 1376 | 4708 | 431 |
| 2015 | KY62 | 290711 | 21017 | 143433 | 6110 | 1376 | 4708 | 431 |
| 2016 | KY62 | 294357 | 21266 | 145373 | 6260 | 1376 | 4708 | 431 |
| Normalized 1996 | KY62 | 220790 | 16701 | 106420 | 3688 | 1376 | 4708 | 439 |

| Year | | Peak Mo. HDD (Hist/FC) |
|---|---|---|
| 1976-1981 | | na |
| 1981-1986 | | na |
| 1986-1991 | | 984 |
| 1991-1996 | | 940 |
| 1976-1996 | | 986 |
| 1986-1996 | | 986 |
| 1996-2001 | | 1124 |
| 2001-2006 | | 1124 |
| 2006-2011 | | 1124 |
| 2011-2016 | | 1124 |
| 1996-2016 | | 1124 |
| 1972 | KY62 | |
| 1973 | KY62 | |
| 1974 | KY62 | |
| 1975 | KY62 | |
| 1976 | KY62 | |
| 1977 | KY62 | |
| 1978 | KY62 | |
| 1979 | KY62 | |
| 1980 | KY62 | |
| 1981 | KY62 | |
| 1982 | KY62 | |
| 1983 | KY62 | |
| 1984 | KY62 | |
| 1985 | KY62 | |
| 1986 | KY62 | |
| 1987 | KY62 | |
| 1988 | KY62 | 1108 |
| 1989 | KY62 | 1297 |
| 1990 | KY62 | 828 |
| 1991 | KY62 | 702 |
| 1992 | KY62 | 913 |
| 1993 | KY62 | 892 |
| 1994 | KY62 | 1164 |
| 1995 | KY62 | 922 |
| 1996 | KY62 | 1048 |
| 1997 | KY62 | 1124 |
| 1998 | KY62 | 1124 |
| 1999 | KY62 | 1124 |
| 2000 | KY62 | 1124 |
| 2001 | KY62 | 1124 |
| 2002 | KY62 | 1124 |
| 2003 | KY62 | 1124 |
| 2004 | KY62 | 1124 |
| 2005 | KY62 | 1124 |
| 2006 | KY62 | 1124 |
| 2007 | KY62 | 1124 |
| 2008 | KY62 | 1124 |
| 2009 | KY62 | 1124 |
| 2010 | KY62 | 1124 |
| 2011 | KY62 | 1124 |
| 2012 | KY62 | 1124 |
| 2013 | KY62 | 1124 |
| 2014 | KY62 | 1124 |
| 2015 | KY62 | 1124 |
| 2016 | KY62 | 1124 |
| Normalized 1996 | KY62 | 1099 |

**Section 3**
**Long-Term Forecast-High Case**

## Big Rivers Electric Corporation
## 1997 Load Forecast - High Case
## Total System Requirements

| Year | Consumers | Percent Change | Sales (MWh) | Percent Change | Own Use (MWh) | Losses (%) | Member MWh Purchases | Total MWh Requirements | Percent Change |
|---|---|---|---|---|---|---|---|---|---|
| 1972 | 52,831 | | 3,792,968 | | 3,102 | 9.7% | 3,862,045 | 3,939,286 | |
| 1973 | 54,920 | 4.0% | 5,033,988 | 32.7% | 2,811 | 8.9% | 5,102,148 | 5,204,191 | 32.1% |
| 1974 | 56,975 | 3.7% | 5,918,096 | 17.6% | 2,651 | 8.7% | 5,986,239 | 6,105,964 | 17.3% |
| 1975 | 58,878 | 3.3% | 5,863,245 | -0.9% | 2,546 | 8.5% | 5,939,400 | 6,058,188 | -0.8% |
| 1976 | 61,040 | 3.7% | 6,103,980 | 4.1% | 2,860 | 9.1% | 6,190,692 | 6,314,506 | 4.2% |
| 1977 | 63,441 | 3.9% | 6,432,738 | 5.4% | 2,801 | 7.4% | 6,514,107 | 6,644,389 | 5.2% |
| 1978 | 65,205 | 2.8% | 6,436,336 | 0.1% | 3,042 | 7.6% | 6,527,678 | 6,658,231 | 0.2% |
| 1979 | 67,573 | 3.6% | 6,929,271 | 7.7% | 2,909 | 9.0% | 7,029,485 | 7,170,074 | 7.7% |
| 1980 | 68,948 | 2.0% | 7,454,859 | 7.6% | 2,754 | 6.2% | 7,528,564 | 7,679,135 | 7.1% |
| 1981 | 70,106 | 1.7% | 7,401,040 | -0.7% | 2,810 | 6.9% | 7,479,670 | 7,629,264 | -0.6% |
| 1982 | 70,894 | 1.1% | 6,342,743 | -14.3% | 2,932 | 7.2% | 6,426,261 | 6,554,786 | -14.1% |
| 1983 | 72,269 | 1.9% | 6,604,043 | 4.1% | 2,816 | 8.5% | 6,707,235 | 6,841,380 | 4.4% |
| 1984 | 73,660 | 1.9% | 7,329,994 | 11.0% | 3,042 | 5.5% | 7,398,951 | 7,546,930 | 10.3% |
| 1985 | 74,913 | 1.7% | 6,796,406 | -7.3% | 2,864 | 8.0% | 6,899,093 | 7,037,074 | -6.8% |
| 1986 | 76,008 | 1.5% | 6,125,886 | -9.9% | 2,982 | 6.7% | 6,215,491 | 6,339,799 | -9.9% |
| 1987 | 77,384 | 1.8% | 6,180,027 | 0.9% | 3,079 | 6.5% | 6,270,519 | 6,395,929 | 0.9% |
| 1988 | 78,603 | 1.6% | 7,713,154 | 24.8% | 3,196 | 7.0% | 7,813,146 | 7,969,409 | 24.6% |
| 1989 | 79,853 | 1.6% | 7,951,178 | 3.1% | 3,255 | 8.4% | 8,072,761 | 8,234,217 | 3.3% |
| 1990 | 81,050 | 1.5% | 8,113,961 | 2.0% | 3,133 | 5.4% | 8,191,465 | 8,355,294 | 1.5% |
| 1991 | 82,201 | 1.4% | 8,208,490 | 1.2% | 3,136 | 7.0% | 8,314,440 | 8,484,123 | 1.5% |
| 1992 | 83,737 | 1.9% | 8,222,493 | 0.2% | 3,362 | 7.0% | 8,326,337 | 8,496,262 | 0.1% |
| 1993 | 85,501 | 2.1% | 8,336,903 | 1.4% | 3,089 | 6.7% | 8,445,130 | 8,617,480 | 1.4% |
| 1994 | 87,257 | 2.1% | 7,355,595 | -11.8% | 3,226 | 6.1% | 7,454,220 | 7,606,347 | -11.7% |
| 1995 | 89,395 | 2.4% | 7,849,136 | 6.7% | 3,334 | 6.6% | 7,961,435 | 8,123,913 | 6.8% |
| 1996 | 91,548 | 2.4% | 7,931,120 | 1.0% | 3,598 | 6.5% | 8,045,961 | 8,210,164 | 1.1% |
| 1997 | 95,728 | 4.6% | 8,624,381 | 8.7% | 3,630 | 6.4% | 8,741,234 | 8,919,627 | 8.6% |
| 1998 | 100,092 | 4.6% | 9,533,932 | 10.5% | 3,658 | 6.4% | 9,663,109 | 9,860,315 | 10.5% |
| 1999 | 104,652 | 4.6% | 9,804,048 | 2.8% | 3,687 | 6.4% | 9,936,884 | 10,139,678 | 2.8% |
| 2000 | 109,418 | 4.6% | 10,260,568 | 4.7% | 3,715 | 6.3% | 10,399,590 | 10,611,826 | 4.7% |
| 2001 | 114,399 | 4.6% | 10,692,688 | 4.2% | 3,744 | 6.3% | 10,852,856 | 11,074,343 | 4.4% |
| 2002 | 116,874 | 2.2% | 10,748,899 | 0.5% | 3,773 | 6.3% | 10,913,008 | 11,135,723 | 0.6% |
| 2003 | 119,807 | 2.5% | 10,867,569 | 1.1% | 3,801 | 6.3% | 11,039,231 | 11,264,521 | 1.2% |
| 2004 | 123,615 | 3.2% | 10,997,639 | 1.2% | 3,830 | 6.3% | 11,178,077 | 11,406,201 | 1.3% |
| 2005 | 127,237 | 2.9% | 11,126,824 | 1.2% | 3,858 | 6.3% | 11,315,993 | 11,546,932 | 1.2% |
| 2006 | 131,616 | 3.4% | 11,276,892 | 1.3% | 3,887 | 6.3% | 11,476,244 | 11,710,454 | 1.4% |
| 2007 | 134,550 | 2.2% | 11,362,336 | 0.8% | 3,915 | 6.3% | 11,567,317 | 11,803,385 | 0.8% |
| 2008 | 137,421 | 2.1% | 11,604,864 | 2.1% | 3,944 | 6.3% | 11,818,515 | 12,059,710 | 2.2% |
| 2009 | 140,815 | 2.5% | 11,748,220 | 1.2% | 3,973 | 6.3% | 11,971,488 | 12,215,804 | 1.3% |
| 2010 | 144,362 | 2.5% | 11,895,526 | 1.3% | 4,001 | 6.3% | 12,128,678 | 12,376,202 | 1.3% |
| 2011 | 148,373 | 2.8% | 12,060,620 | 1.4% | 4,030 | 6.3% | 12,304,864 | 12,555,983 | 1.5% |
| 2012 | 151,290 | 2.0% | 12,195,534 | 1.1% | 4,058 | 6.3% | 12,448,665 | 12,702,719 | 1.2% |
| 2013 | 154,104 | 1.9% | 12,389,716 | 1.6% | 4,087 | 6.3% | 12,650,321 | 12,908,491 | 1.6% |
| 2014 | 158,215 | 2.7% | 12,565,029 | 1.4% | 4,116 | 6.3% | 12,837,270 | 13,099,255 | 1.5% |
| 2015 | 161,696 | 2.2% | 12,727,685 | 1.3% | 4,144 | 6.3% | 13,010,931 | 13,276,460 | 1.4% |
| 2016 | 166,608 | 3.0% | 12,924,602 | 1.5% | 4,173 | 6.3% | 13,220,910 | 13,490,724 | 1.6% |

Notes:

1. Years 1997-1999 based on short-term forecast
2. Year 2000 based on the average values for the short-term and long-term forecasts
3. Years 2001-2016 based on the long-term forecast
4. Losses represent distribution losses on rural system energy requirements
5. 1972-1996 respresents actual values, 1997-2016 represents weather normalized values

## Big Rivers Electric Corporation
## 1997 Load Forecast - High Case
## Total System Requirements

| Year | Summer Peak (kW) | Percent Change | Load Factor | Winter Peak (kW) | Percent Change | Load Factor |
|---|---|---|---|---|---|---|
| 1972 | 497,000 | | 90.5% | 472,000 | | 93.4% |
| 1973 | 707,000 | 42.3% | 84.0% | 508,000 | 7.6% | 114.7% |
| 1974 | 737,000 | 4.2% | 94.6% | 722,000 | 42.1% | 94.6% |
| 1975 | 722,000 | -2.0% | 95.8% | 731,000 | 1.2% | 92.8% |
| 1976 | 759,000 | 5.1% | 95.0% | 748,000 | 2.3% | 94.5% |
| 1977 | 801,000 | 5.5% | 94.7% | 820,000 | 9.6% | 90.7% |
| 1978 | 802,000 | 0.1% | 94.8% | 819,000 | -0.1% | 91.0% |
| 1979 | 994,000 | 23.9% | 82.3% | 974,000 | 18.9% | 82.4% |
| 1980 | 1,039,000 | 4.5% | 84.4% | 1,007,000 | 3.4% | 85.3% |
| 1981 | 1,034,000 | -0.5% | 84.2% | 1,037,000 | 3.0% | 82.3% |
| 1982 | 890,000 | -13.9% | 84.1% | 1,034,000 | -0.3% | 70.9% |
| 1983 | 966,000 | 8.5% | 80.8% | 1,046,000 | 1.2% | 73.2% |
| 1984 | 1,027,000 | 6.3% | 83.9% | 979,000 | -6.4% | 86.3% |
| 1985 | 965,000 | -6.0% | 83.2% | 1,042,000 | 6.4% | 75.6% |
| 1986 | 890,000 | -7.8% | 81.3% | 993,000 | -4.7% | 71.5% |
| 1987 | 990,000 | 11.2% | 73.8% | 920,000 | -7.4% | 77.8% |
| 1988 | 1,157,000 | 16.9% | 78.6% | 1,063,000 | 15.5% | 83.9% |
| 1989 | 1,142,000 | -1.3% | 82.3% | 1,177,000 | 10.7% | 78.3% |
| 1990 | 1,174,000 | 2.8% | 81.2% | 1,089,000 | -7.5% | 85.9% |
| 1991 | 1,168,000 | -0.5% | 82.9% | 1,140,000 | 4.7% | 83.3% |
| 1992 | 1,166,000 | -0.2% | 83.2% | 1,149,000 | 0.8% | 82.7% |
| 1993 | 1,217,000 | 4.4% | 80.8% | 1,137,000 | -1.0% | 84.8% |
| 1994 | 1,055,000 | -13.3% | 82.3% | 1,189,000 | 4.6% | 71.6% |
| 1995 | 1,166,000 | 10.5% | 79.5% | 1,063,000 | -10.6% | 85.5% |
| 1996 | 1,167,000 | 0.1% | 80.3% | 1,154,000 | 8.6% | 79.6% |
| 1997 | 1,349,298 | 15.6% | 74.3% | 1,323,654 | 14.7% | 76.3% |
| 1998 | 1,406,008 | 4.2% | 78.8% | 1,379,777 | 4.2% | 80.8% |
| 1999 | 1,503,683 | 6.9% | 80.3% | 1,476,462 | 7.0% | 82.2% |
| 2000 | 1,545,938 | 2.8% | 79.9% | 1,514,536 | 2.6% | 81.8% |
| 2001 | 1,591,445 | 2.9% | 79.4% | 1,556,188 | 2.8% | 81.2% |
| 2002 | 1,603,968 | 0.8% | 79.3% | 1,568,710 | 0.8% | 81.0% |
| 2003 | 1,630,275 | 1.6% | 78.9% | 1,595,018 | 1.7% | 80.6% |
| 2004 | 1,659,110 | 1.8% | 78.5% | 1,623,852 | 1.8% | 80.2% |
| 2005 | 1,687,748 | 1.7% | 78.1% | 1,652,491 | 1.8% | 79.8% |
| 2006 | 1,721,016 | 2.0% | 77.7% | 1,685,758 | 2.0% | 79.3% |
| 2007 | 1,739,958 | 1.1% | 77.4% | 1,704,700 | 1.1% | 79.0% |
| 2008 | 1,783,963 | 2.5% | 77.2% | 1,748,705 | 2.6% | 78.7% |
| 2009 | 1,815,743 | 1.8% | 76.8% | 1,780,485 | 1.8% | 78.3% |
| 2010 | 1,848,398 | 1.8% | 76.4% | 1,813,141 | 1.8% | 77.9% |
| 2011 | 1,884,997 | 2.0% | 76.0% | 1,849,740 | 2.0% | 77.5% |
| 2012 | 1,914,906 | 1.6% | 75.7% | 1,879,648 | 1.6% | 77.1% |
| 2013 | 1,950,796 | 1.9% | 75.5% | 1,915,538 | 1.9% | 76.9% |
| 2014 | 1,989,660 | 2.0% | 75.2% | 1,954,402 | 2.0% | 76.5% |
| 2015 | 2,025,719 | 1.8% | 74.8% | 1,990,461 | 1.8% | 76.1% |
| 2016 | 2,069,372 | 2.2% | 74.4% | 2,034,115 | 2.2% | 75.7% |

Notes:
1. Years 1997-1999 based on short-term forecast
2. Year 2000 based on the average values for the short-term and long-term forecasts
3. Years 2001-2016 based on the long-term forecast
4. 1972-1996 respresents actual values, 1997-2016 represents weather normalized values
5. Peak amounts represent the total Big Rivers 60-minute CP demand value

Big Rivers Electric Corporation

1997 Load Forecast - High Case

Residential Classification

| Year | Consumers | Percent Change | Sales (MWh) | Percent Change | Average Use (kWh/Cust/Mo) | Percent Change |
|---|---|---|---|---|---|---|
| 1972 | 48,646 | | 426,199 | | 730 | |
| 1973 | 50,636 | 4.1% | 475,060 | 11.5% | 782 | 7.1% |
| 1974 | 52,494 | 3.7% | 495,221 | 4.2% | 786 | 0.6% |
| 1975 | 54,230 | 3.3% | 565,706 | 14.2% | 869 | 10.6% |
| 1976 | 56,193 | 3.6% | 603,393 | 6.7% | 895 | 2.9% |
| 1977 | 58,226 | 3.6% | 706,616 | 17.1% | 1,011 | 13.0% |
| 1978 | 59,761 | 2.6% | 756,149 | 7.0% | 1,054 | 4.3% |
| 1979 | 61,858 | 3.5% | 735,825 | -2.7% | 991 | -6.0% |
| 1980 | 63,049 | 1.9% | 795,980 | 8.2% | 1,052 | 6.1% |
| 1981 | 63,941 | 1.4% | 745,835 | -6.3% | 972 | -7.6% |
| 1982 | 64,502 | 0.9% | 756,931 | 1.5% | 978 | 0.6% |
| 1983 | 65,519 | 1.6% | 781,501 | 3.2% | 994 | 1.6% |
| 1984 | 66,607 | 1.7% | 819,670 | 4.9% | 1,026 | 3.2% |
| 1985 | 67,754 | 1.7% | 819,928 | 0.0% | 1,008 | -1.7% |
| 1986 | 68,718 | 1.4% | 871,530 | 6.3% | 1,057 | 4.8% |
| 1987 | 69,946 | 1.8% | 909,195 | 4.3% | 1,083 | 2.5% |
| 1988 | 71,032 | 1.6% | 931,639 | 2.5% | 1,093 | 0.9% |
| 1989 | 72,171 | 1.6% | 925,721 | -0.6% | 1,069 | -2.2% |
| 1990 | 73,156 | 1.4% | 930,785 | 0.5% | 1,060 | -0.8% |
| 1991 | 74,176 | 1.4% | 991,459 | 6.5% | 1,114 | 5.1% |
| 1992 | 75,668 | 2.0% | 945,487 | -4.6% | 1,041 | -6.5% |
| 1993 | 77,266 | 2.1% | 1,052,301 | 11.3% | 1,135 | 9.0% |
| 1994 | 78,879 | 2.1% | 1,040,652 | -1.1% | 1,099 | -3.1% |
| 1995 | 80,808 | 2.4% | 1,101,490 | 5.8% | 1,136 | 3.3% |
| 1996 | 82,659 | 2.3% | 1,144,623 | 3.9% | 1,154 | 1.6% |
| 1997 | 86,438 | 4.6% | 1,269,136 | 10.9% | 1,224 | 6.0% |
| 1998 | 90,391 | 4.6% | 1,366,232 | 7.7% | 1,260 | 2.9% |
| 1999 | 94,524 | 4.6% | 1,462,581 | 7.1% | 1,289 | 2.4% |
| 2000 | 98,846 | 4.6% | 1,559,061 | 6.6% | 1,314 | 1.9% |
| 2001 | 103,365 | 4.6% | 1,663,927 | 6.7% | 1,341 | 2.1% |
| 2002 | 105,573 | 2.1% | 1,700,128 | 2.2% | 1,342 | 0.0% |
| 2003 | 108,250 | 2.5% | 1,780,154 | 4.7% | 1,370 | 2.1% |
| 2004 | 111,714 | 3.2% | 1,871,304 | 5.1% | 1,396 | 1.9% |
| 2005 | 114,927 | 2.9% | 1,953,876 | 4.4% | 1,417 | 1.5% |
| 2006 | 118,896 | 3.5% | 2,052,806 | 5.1% | 1,439 | 1.6% |
| 2007 | 121,651 | 2.3% | 2,099,226 | 2.3% | 1,438 | -0.1% |
| 2008 | 124,224 | 2.1% | 2,181,451 | 3.9% | 1,463 | 1.8% |
| 2009 | 127,334 | 2.5% | 2,264,892 | 3.8% | 1,482 | 1.3% |
| 2010 | 130,515 | 2.5% | 2,350,553 | 3.8% | 1,501 | 1.3% |
| 2011 | 134,129 | 2.8% | 2,452,582 | 4.3% | 1,524 | 1.5% |
| 2012 | 136,729 | 1.9% | 2,522,929 | 2.9% | 1,538 | 0.9% |
| 2013 | 139,273 | 1.9% | 2,580,070 | 2.3% | 1,544 | 0.4% |
| 2014 | 143,027 | 2.7% | 2,687,106 | 4.1% | 1,566 | 1.4% |
| 2015 | 146,179 | 2.2% | 2,778,616 | 3.4% | 1,584 | 1.2% |
| 2016 | 150,654 | 3.1% | 2,901,213 | 4.4% | 1,605 | 1.3% |

Notes:
1. Years 1997-2016 based on the long-term forecast
2. 1972-1996 respresents actual values, 1997-2016 represents weather normalized values

## Big Rivers Electric Corporation

## 1997 Load Forecast - High Case

## C/I Small Classification

| Year | Consumers | Percent Change | Sales (MWh) | Percent Change | Average Use (kWh/Cust/Mo) | Percent Change |
|---|---|---|---|---|---|---|
| 1972 | 4,111 | | 188,145 | | 3,814 | |
| 1973 | 4,207 | 2.3% | 188,997 | 0.5% | 3,744 | -1.8% |
| 1974 | 4,402 | 4.6% | 190,553 | 0.8% | 3,607 | -3.6% |
| 1975 | 4,565 | 3.7% | 221,820 | 16.4% | 4,049 | 12.3% |
| 1976 | 4,762 | 4.3% | 235,573 | 6.2% | 4,122 | 1.8% |
| 1977 | 5,131 | 7.7% | 280,660 | 19.1% | 4,558 | 10.6% |
| 1978 | 5,352 | 4.3% | 309,797 | 10.4% | 4,824 | 5.8% |
| 1979 | 5,617 | 5.0% | 250,462 | -19.2% | 3,716 | -23.0% |
| 1980 | 5,801 | 3.3% | 266,633 | 6.5% | 3,830 | 3.1% |
| 1981 | 6,062 | 4.5% | 272,242 | 2.1% | 3,742 | -2.3% |
| 1982 | 6,277 | 3.5% | 283,508 | 4.1% | 3,764 | 0.6% |
| 1983 | 6,622 | 5.5% | 292,126 | 3.0% | 3,676 | -2.3% |
| 1984 | 6,918 | 4.5% | 313,999 | 7.5% | 3,782 | 2.9% |
| 1985 | 7,021 | 1.5% | 321,458 | 2.4% | 3,815 | 0.9% |
| 1986 | 7,151 | 1.9% | 325,914 | 1.4% | 3,798 | -0.5% |
| 1987 | 7,296 | 2.0% | 338,858 | 4.0% | 3,870 | 1.9% |
| 1988 | 7,424 | 1.8% | 351,822 | 3.8% | 3,949 | 2.0% |
| 1989 | 7,526 | 1.4% | 355,923 | 1.2% | 3,941 | -0.2% |
| 1990 | 7,730 | 2.7% | 371,964 | 4.5% | 4,010 | 1.7% |
| 1991 | 7,854 | 1.6% | 381,198 | 2.5% | 4,045 | 0.9% |
| 1992 | 7,898 | 0.6% | 388,913 | 2.0% | 4,103 | 1.5% |
| 1993 | 8,060 | 2.1% | 419,026 | 7.7% | 4,332 | 5.6% |
| 1994 | 8,198 | 1.7% | 429,433 | 2.5% | 4,365 | 0.8% |
| 1995 | 8,406 | 2.5% | 447,653 | 4.2% | 4,438 | 1.7% |
| 1996 | 8,689 | 3.4% | 463,285 | 3.5% | 4,443 | 0.1% |
| 1997 | 9,087 | 4.6% | 508,005 | 9.7% | 4,659 | 4.9% |
| 1998 | 9,494 | 4.5% | 537,416 | 5.8% | 4,717 | 1.3% |
| 1999 | 9,917 | 4.5% | 568,814 | 5.8% | 4,780 | 1.3% |
| 2000 | 10,357 | 4.4% | 605,462 | 6.4% | 4,872 | 1.9% |
| 2001 | 10,815 | 4.4% | 647,867 | 7.0% | 4,992 | 2.5% |
| 2002 | 11,079 | 2.4% | 678,009 | 4.7% | 5,100 | 2.2% |
| 2003 | 11,331 | 2.3% | 716,585 | 5.7% | 5,270 | 3.3% |
| 2004 | 11,671 | 3.0% | 755,437 | 5.4% | 5,394 | 2.4% |
| 2005 | 12,076 | 3.5% | 801,982 | 6.2% | 5,534 | 2.6% |
| 2006 | 12,482 | 3.4% | 853,052 | 6.4% | 5,695 | 2.9% |
| 2007 | 12,657 | 1.4% | 892,008 | 4.6% | 5,873 | 3.1% |
| 2008 | 12,951 | 2.3% | 940,554 | 5.4% | 6,052 | 3.0% |
| 2009 | 13,231 | 2.2% | 1,000,401 | 6.4% | 6,301 | 4.1% |
| 2010 | 13,593 | 2.7% | 1,061,977 | 6.2% | 6,511 | 3.3% |
| 2011 | 13,986 | 2.9% | 1,124,974 | 5.9% | 6,703 | 3.0% |
| 2012 | 14,299 | 2.2% | 1,189,473 | 5.7% | 6,932 | 3.4% |
| 2013 | 14,565 | 1.9% | 1,244,540 | 4.6% | 7,121 | 2.7% |
| 2014 | 14,918 | 2.4% | 1,312,749 | 5.5% | 7,333 | 3.0% |
| 2015 | 15,243 | 2.2% | 1,383,827 | 5.4% | 7,565 | 3.2% |
| 2016 | 15,676 | 2.8% | 1,458,080 | 5.4% | 7,751 | 2.5% |

Notes:
1. Years 1997-2016 based on the long-term forecast
2. 1972-1996 respresents actual values, 1997-2016 represents weather normalized values

## Big Rivers Electric Corporation
## 1997 Load Forecast - High Case
## C/I Large Classification

| Year | Consumers | Percent Change | Sales (MWh) | Percent Change |
|---|---|---|---|---|
| 1972 | 9 | | 3,177,303 | |
| 1973 | 10 | 11.1% | 4,368,418 | 37.5% |
| 1974 | 10 | 0.0% | 5,230,483 | 19.7% |
| 1975 | 11 | 10.0% | 5,073,573 | -3.0% |
| 1976 | 16 | 45.5% | 5,262,762 | 3.7% |
| 1977 | 17 | 6.3% | 5,443,274 | 3.4% |
| 1978 | 15 | -11.8% | 5,368,154 | -1.4% |
| 1979 | 17 | 13.3% | 5,940,734 | 10.7% |
| 1980 | 18 | 5.9% | 6,390,170 | 7.6% |
| 1981 | 19 | 5.6% | 6,380,899 | -0.1% |
| 1982 | 22 | 15.8% | 5,300,242 | -16.9% |
| 1983 | 23 | 4.5% | 5,528,519 | 4.3% |
| 1984 | 25 | 8.7% | 6,194,365 | 12.0% |
| 1985 | 27 | 8.0% | 5,653,054 | -8.7% |
| 1986 | 33 | 22.2% | 4,926,411 | -12.9% |
| 1987 | 34 | 3.0% | 4,929,857 | 0.1% |
| 1988 | 36 | 5.9% | 6,427,497 | 30.4% |
| 1989 | 40 | 11.1% | 6,667,299 | 3.7% |
| 1990 | 40 | 0.0% | 6,808,988 | 2.1% |
| 1991 | 41 | 2.5% | 6,833,471 | 0.4% |
| 1992 | 38 | -7.3% | 6,885,705 | 0.8% |
| 1993 | 37 | -2.6% | 6,863,080 | -0.3% |
| 1994 | 37 | 0.0% | 5,882,908 | -14.3% |
| 1995 | 35 | -5.4% | 6,297,252 | 7.0% |
| 1996 | 38 | 8.6% | 6,320,441 | 0.4% |
| 1997 | 37 | -2.6% | 6,790,687 | 7.4% |
| 1998 | 37 | 0.0% | 7,585,880 | 11.7% |
| 1999 | 37 | 0.0% | 8,340,430 | 9.9% |
| 2000 | 37 | 0.0% | 8,373,153 | 0.4% |
| 2001 | 37 | 0.0% | 8,377,807 | 0.1% |
| 2002 | 36 | -2.7% | 8,367,607 | -0.1% |
| 2003 | 36 | 0.0% | 8,367,607 | 0.0% |
| 2004 | 36 | 0.0% | 8,367,607 | 0.0% |
| 2005 | 36 | 0.0% | 8,367,607 | 0.0% |
| 2006 | 36 | 0.0% | 8,367,607 | 0.0% |
| 2007 | 36 | 0.0% | 8,367,607 | 0.0% |
| 2008 | 36 | 0.0% | 8,479,297 | 1.3% |
| 2009 | 36 | 0.0% | 8,479,297 | 0.0% |
| 2010 | 36 | 0.0% | 8,479,297 | 0.0% |
| 2011 | 36 | 0.0% | 8,479,297 | 0.0% |
| 2012 | 36 | 0.0% | 8,479,297 | 0.0% |
| 2013 | 36 | 0.0% | 8,561,203 | 1.0% |
| 2014 | 36 | 0.0% | 8,561,203 | 0.0% |
| 2015 | 36 | 0.0% | 8,561,203 | 0.0% |
| 2016 | 36 | 0.0% | 8,561,203 | 0.0% |

Notes:
1. Years 1997-2016 based on the long-term forecast
2. 1972-1996 respresents actual values, 1997-2016 represents weather normalized values

Big Rivers Electric Corporation

1997 Load Forecast - High Case

Public Street Lighting Classification

| Year | Consumers | Percent Change | Sales (MWh) | Percent Change |
|---|---|---|---|---|
| 1972 | 65 | | 1,321 | |
| 1973 | 67 | 3.1% | 1,512 | 14.5% |
| 1974 | 69 | 3.0% | 1,839 | 21.6% |
| 1975 | 72 | 4.3% | 2,145 | 16.7% |
| 1976 | 69 | -4.2% | 2,252 | 5.0% |
| 1977 | 68 | -1.4% | 2,188 | -2.8% |
| 1978 | 71 | 4.4% | 2,204 | 0.7% |
| 1979 | 76 | 7.0% | 2,210 | 0.3% |
| 1980 | 74 | -2.6% | 2,032 | -8.0% |
| 1981 | 76 | 2.7% | 1,985 | -2.3% |
| 1982 | 84 | 10.5% | 1,999 | 0.7% |
| 1983 | 93 | 10.7% | 1,833 | -8.3% |
| 1984 | 98 | 5.4% | 1,887 | 2.9% |
| 1985 | 99 | 1.0% | 1,927 | 2.2% |
| 1986 | 96 | -3.0% | 1,981 | 2.8% |
| 1987 | 101 | 5.2% | 2,048 | 3.4% |
| 1988 | 104 | 3.0% | 2,110 | 3.0% |
| 1989 | 109 | 4.8% | 2,154 | 2.1% |
| 1990 | 116 | 6.4% | 2,177 | 1.1% |
| 1991 | 121 | 4.3% | 2,276 | 4.5% |
| 1992 | 124 | 2.5% | 2,275 | -0.1% |
| 1993 | 129 | 4.0% | 2,417 | 6.2% |
| 1994 | 134 | 3.9% | 2,509 | 3.8% |
| 1995 | 136 | 1.5% | 2,641 | 5.3% |
| 1996 | 152 | 11.8% | 2,661 | 0.8% |
| 1997 | 156 | 2.6% | 2,729 | 2.6% |
| 1998 | 160 | 2.6% | 2,797 | 2.5% |
| 1999 | 164 | 2.5% | 2,865 | 2.4% |
| 2000 | 168 | 2.4% | 2,933 | 2.4% |
| 2001 | 172 | 2.4% | 3,001 | 2.3% |
| 2002 | 176 | 2.3% | 3,069 | 2.3% |
| 2003 | 180 | 2.3% | 3,137 | 2.2% |
| 2004 | 184 | 2.2% | 3,205 | 2.2% |
| 2005 | 188 | 2.2% | 3,273 | 2.1% |
| 2006 | 192 | 2.1% | 3,341 | 2.1% |
| 2007 | 196 | 2.1% | 3,409 | 2.0% |
| 2008 | 200 | 2.0% | 3,477 | 2.0% |
| 2009 | 204 | 2.0% | 3,545 | 2.0% |
| 2010 | 208 | 2.0% | 3,612 | 1.9% |
| 2011 | 212 | 1.9% | 3,680 | 1.9% |
| 2012 | 216 | 1.9% | 3,748 | 1.8% |
| 2013 | 220 | 1.9% | 3,816 | 1.8% |
| 2014 | 224 | 1.8% | 3,884 | 1.8% |
| 2015 | 228 | 1.8% | 3,952 | 1.7% |
| 2016 | 232 | 1.8% | 4,020 | 1.7% |

Notes:
1. Years 1997-2016 based on the long-term forecast
2. 1972-1996 respresents actual values, 1997-2016 represents weather normalized values

**Big Rivers Electric Corporation**

**1997 Load Forecast - High Case**

**Irrigation Classification**

| Year | Consumers | Percent Change | Sales (MWh) | Percent Change |
|---|---|---|---|---|
| 1972 | 0 | | 0 | |
| 1973 | 0 | 0.0% | 0 | 0.0% |
| 1974 | 0 | 0.0% | 0 | 0.0% |
| 1975 | 0 | 0.0% | 0 | 0.0% |
| 1976 | 0 | 0.0% | 0 | 0.0% |
| 1977 | 0 | 0.0% | 0 | 0.0% |
| 1978 | 6 | 0.0% | 33 | 0.0% |
| 1979 | 6 | 0.0% | 40 | 23.3% |
| 1980 | 7 | 16.7% | 42 | 5.1% |
| 1981 | 8 | 14.3% | 79 | 85.5% |
| 1982 | 9 | 12.5% | 63 | -20.0% |
| 1983 | 12 | 33.3% | 65 | 3.1% |
| 1984 | 12 | 0.0% | 74 | 13.4% |
| 1985 | 12 | 0.0% | 39 | -46.5% |
| 1986 | 9 | -25.0% | 50 | 26.3% |
| 1987 | 8 | -11.1% | 68 | 36.9% |
| 1988 | 7 | -12.5% | 85 | 24.6% |
| 1989 | 7 | 0.0% | 82 | -3.9% |
| 1990 | 8 | 14.3% | 48 | -41.3% |
| 1991 | 9 | 12.5% | 86 | 79.1% |
| 1992 | 9 | 0.0% | 114 | 32.5% |
| 1993 | 9 | 0.0% | 78 | -31.2% |
| 1994 | 9 | 0.0% | 93 | 19.3% |
| 1995 | 10 | 11.1% | 100 | 7.2% |
| 1996 | 10 | 0.0% | 110 | 10.0% |
| 1997 | 10 | 0.0% | 86 | -21.5% |
| 1998 | 10 | 0.0% | 86 | 0.0% |
| 1999 | 10 | 0.0% | 86 | 0.0% |
| 2000 | 10 | 0.0% | 86 | 0.0% |
| 2001 | 10 | 0.0% | 86 | 0.0% |
| 2002 | 10 | 0.0% | 86 | 0.0% |
| 2003 | 10 | 0.0% | 86 | 0.0% |
| 2004 | 10 | 0.0% | 86 | 0.0% |
| 2005 | 10 | 0.0% | 86 | 0.0% |
| 2006 | 10 | 0.0% | 86 | 0.0% |
| 2007 | 10 | 0.0% | 86 | 0.0% |
| 2008 | 10 | 0.0% | 86 | 0.0% |
| 2009 | 10 | 0.0% | 86 | 0.0% |
| 2010 | 10 | 0.0% | 86 | 0.0% |
| 2011 | 10 | 0.0% | 86 | 0.0% |
| 2012 | 10 | 0.0% | 86 | 0.0% |
| 2013 | 10 | 0.0% | 86 | 0.0% |
| 2014 | 10 | 0.0% | 86 | 0.0% |
| 2015 | 10 | 0.0% | 86 | 0.0% |
| 2016 | 10 | 0.0% | 86 | 0.0% |

Notes:
1. Years 1997-2016 based on the long-term forecast
2. 1972-1996 respresents actual values, 1997-2016 represents weather normalized values

| Year | | Residential Consumers (Historical) | Residential Consumers (Model) | C/I Small Consumers (Historical) | C/I Small Consumers (Model) | C/I Large Consumers (Hist/FC) | Pb St Lgt Consumers (Hist/FC) | Irrigation Consumers (Hist/FC) |
|---|---|---|---|---|---|---|---|---|
| 1976-1981 | | 2.6% | 2.1% | 4.9% | 2.3% | 3.5% | 1.9% | na |
| 1981-1986 | | 1.5% | 2.8% | 3.4% | 3.2% | 11.7% | 5.0% | 2.4% |
| 1986-1991 | | 1.5% | 0.7% | 1.9% | 2.9% | 4.4% | 4.6% | 0.4% |
| 1991-1996 | | 2.2% | 2.5% | 2.0% | 4.4% | -1.5% | 4.8% | 1.8% |
| 1976-1996 | | 1.9% | 2.0% | 3.1% | 3.2% | 4.4% | 4.0% | na |
| 1986-1996 | | 1.9% | 1.6% | 2.0% | 3.7% | 1.4% | 4.7% | 1.1% |
| 1996-2001 | | na | 4.6% | na | 4.5% | -0.5% | 2.5% | 0.0% |
| 2001-2006 | | na | 2.8% | na | 2.9% | -0.5% | 2.2% | 0.0% |
| 2006-2011 | | na | 2.4% | na | 2.3% | 0.0% | 2.0% | 0.0% |
| 2011-2016 | | na | 2.4% | na | 2.3% | 0.0% | 1.8% | 0.0% |
| 1996-2016 | | na | 3.3% | na | 3.2% | -0.4% | 2.2% | 0.0% |
| 1972 | KY62 | 48646 | | 4111 | | 9 | 65 | 0 |
| 1973 | KY62 | 50636 | 50877 | 4207 | 4616 | 10 | 67 | 0 |
| 1974 | KY62 | 52494 | 52557 | 4402 | 4891 | 10 | 69 | 0 |
| 1975 | KY62 | 54230 | 53993 | 4565 | 4734 | 11 | 72 | 0 |
| 1976 | KY62 | 56193 | 55752 | 4762 | 5060 | 16 | 69 | 0 |
| 1977 | KY62 | 58226 | 57489 | 5131 | 5344 | 17 | 68 | 0 |
| 1978 | KY62 | 59761 | 58883 | 5352 | 5705 | 15 | 71 | 6 |
| 1979 | KY62 | 61858 | 59539 | 5617 | 5694 | 17 | 76 | 6 |
| 1980 | KY62 | 63049 | 60080 | 5801 | 5566 | 18 | 74 | 7 |
| 1981 | KY62 | 63941 | 61880 | 6062 | 5672 | 19 | 76 | 8 |
| 1982 | KY62 | 64502 | 64238 | 6277 | 5707 | 22 | 84 | 9 |
| 1983 | KY62 | 65519 | 66517 | 6622 | 5998 | 23 | 93 | 12 |
| 1984 | KY62 | 66607 | 68343 | 6918 | 6303 | 25 | 98 | 12 |
| 1985 | KY62 | 67754 | 70337 | 7021 | 6536 | 27 | 99 | 12 |
| 1986 | KY62 | 68718 | 70914 | 7151 | 6645 | 33 | 96 | 9 |
| 1987 | KY62 | 69946 | 71665 | 7296 | 6882 | 34 | 101 | 8 |
| 1988 | KY62 | 71032 | 71533 | 7424 | 7039 | 36 | 104 | 7 |
| 1989 | KY62 | 72171 | 71890 | 7526 | 7320 | 40 | 109 | 7 |
| 1990 | KY62 | 73156 | 72562 | 7730 | 7601 | 40 | 116 | 8 |
| 1991 | KY62 | 74176 | 73426 | 7854 | 7679 | 41 | 121 | 9 |
| 1992 | KY62 | 75668 | 74332 | 7898 | 7849 | 38 | 124 | 9 |
| 1993 | KY62 | 77266 | 76292 | 8060 | 8273 | 37 | 129 | 9 |
| 1994 | KY62 | 78879 | 78785 | 8198 | 8826 | 37 | 134 | 9 |
| 1995 | KY62 | 80808 | 81106 | 8406 | 9224 | 35 | 136 | 10 |
| 1996 | KY62 | 82659 | 82969 | 8689 | 9517 | 38 | 152 | 10 |
| 1997 | KY62 | | 86438 | | 9087 | 37 | 156 | 10 |
| 1998 | KY62 | | 90391 | | 9494 | 37 | 160 | 10 |
| 1999 | KY62 | | 94524 | | 9917 | 37 | 164 | 10 |
| 2000 | KY62 | | 98846 | | 10357 | 37 | 168 | 10 |
| 2001 | KY62 | | 103365 | | 10815 | 37 | 172 | 10 |
| 2002 | KY62 | | 105573 | | 11079 | 36 | 176 | 10 |
| 2003 | KY62 | | 108250 | | 11331 | 36 | 180 | 10 |
| 2004 | KY62 | | 111714 | | 11671 | 36 | 184 | 10 |
| 2005 | KY62 | | 114927 | | 12076 | 36 | 188 | 10 |
| 2006 | KY62 | | 118896 | | 12482 | 36 | 192 | 10 |
| 2007 | KY62 | | 121651 | | 12657 | 36 | 196 | 10 |
| 2008 | KY62 | | 124224 | | 12951 | 36 | 200 | 10 |
| 2009 | KY62 | | 127334 | | 13231 | 36 | 204 | 10 |
| 2010 | KY62 | | 130515 | | 13593 | 36 | 208 | 10 |
| 2011 | KY62 | | 134129 | | 13986 | 36 | 212 | 10 |
| 2012 | KY62 | | 136729 | | 14299 | 36 | 216 | 10 |
| 2013 | KY62 | | 139273 | | 14565 | 36 | 220 | 10 |
| 2014 | KY62 | | 143027 | | 14918 | 36 | 224 | 10 |
| 2015 | KY62 | | 146179 | | 15243 | 36 | 228 | 10 |
| 2016 | KY62 | | 150654 | | 15676 | 36 | 232 | 10 |
| Normalized 1996 | KY62 | 82659 | 82969 | 8689 | 9517 | 38 | 152 | 10 |

| Year | | Total Consumers (Hist/FC) | Residential kWh/Cons/Mo (Historical) | Residential kWh/Cons/Mo (Model) | Residential Energy (MWh) (Historical) | Residential Energy (MWh) (Model) | C/I Small Energy (MWh) (Historical) | C/I Small Energy (MWh) (Model) |
|---|---|---|---|---|---|---|---|---|
| 1976-1981 | | 2.8% | 1.7% | 2.0% | 4.3% | 4.2% | 2.9% | 2.8% |
| 1981-1986 | | 1.6% | 1.7% | 0.1% | 3.2% | 2.9% | 3.7% | 4.2% |
| 1986-1991 | | 1.6% | 1.1% | 0.8% | 2.6% | 1.5% | 3.2% | 2.9% |
| 1991-1996 | | 2.2% | 0.7% | 0.9% | 2.9% | 3.4% | 4.0% | 3.6% |
| 1976-1996 | | 2.0% | 1.3% | 1.0% | 3.3% | 3.0% | 3.4% | 3.4% |
| 1986-1996 | | 1.9% | 0.9% | 0.8% | 2.8% | 2.4% | 3.6% | 3.3% |
| 1996-2001 | | 4.6% | na | 3.0% | na | 7.7% | na | 6.8% |
| 2001-2006 | | 2.8% | na | 1.4% | na | 4.3% | na | 5.7% |
| 2006-2011 | | 2.4% | na | 1.2% | na | 3.6% | na | 5.7% |
| 2011-2016 | | 2.3% | na | 1.0% | na | 3.4% | na | 5.3% |
| 1996-2016 | | 3.3% | na | 1.9% | na | 5.2% | na | 6.0% |
| 1972 | KY62 | 52831 | 730 | | 426199 | | 188145 | 22409 |
| 1973 | KY62 | 54920 | 782 | 924 | 475060 | 563955 | 188997 | 194662 |
| 1974 | KY62 | 56975 | 786 | 895 | 495221 | 564730 | 190553 | 195110 |
| 1975 | KY62 | 58878 | 869 | 933 | 565706 | 604335 | 221820 | 205861 |
| 1976 | KY62 | 61040 | 895 | 953 | 603393 | 637755 | 235573 | 236974 |
| 1977 | KY62 | 63441 | 1011 | 1071 | 706616 | 738751 | 280660 | 288719 |
| 1978 | KY62 | 65205 | 1054 | 1122 | 756149 | 792792 | 309797 | 307097 |
| 1979 | KY62 | 67573 | 991 | 1086 | 735825 | 775765 | 250462 | 262101 |
| 1980 | KY62 | 68948 | 1052 | 1115 | 795980 | 803712 | 266633 | 268744 |
| 1981 | KY62 | 70106 | 972 | 1054 | 745835 | 782519 | 272242 | 271847 |
| 1982 | KY62 | 70894 | 978 | 1007 | 756931 | 776177 | 283508 | 274971 |
| 1983 | KY62 | 72269 | 994 | 1055 | 781501 | 842051 | 292126 | 295508 |
| 1984 | KY62 | 73660 | 1026 | 1048 | 819670 | 859180 | 313999 | 303686 |
| 1985 | KY62 | 74913 | 1008 | 1075 | 819928 | 907595 | 321458 | 320401 |
| 1986 | KY62 | 76008 | 1057 | 1060 | 871530 | 902323 | 325914 | 333264 |
| 1987 | KY62 | 77384 | 1083 | 1072 | 909195 | 922318 | 338858 | 339690 |
| 1988 | KY62 | 78603 | 1093 | 1106 | 931639 | 949169 | 351822 | 349934 |
| 1989 | KY62 | 79853 | 1069 | 1103 | 925721 | 951237 | 355923 | 359321 |
| 1990 | KY62 | 81050 | 1060 | 1020 | 930785 | 888461 | 371964 | 352089 |
| 1991 | KY62 | 82201 | 1114 | 1102 | 991459 | 971072 | 381198 | 384898 |
| 1992 | KY62 | 83737 | 1041 | 1049 | 945487 | 935830 | 388913 | 379343 |
| 1993 | KY62 | 85501 | 1135 | 1119 | 1052301 | 1024725 | 419026 | 414846 |
| 1994 | KY62 | 87257 | 1099 | 1102 | 1040652 | 1041437 | 429433 | 420497 |
| 1995 | KY62 | 89395 | 1136 | 1151 | 1101490 | 1120356 | 447653 | 447945 |
| 1996 | KY62 | 91548 | 1154 | 1153 | 1144623 | 1148242 | 463285 | 459619 |
| 1997 | KY62 | 95728 | | 1224 | | 1269136 | | 508005 |
| 1998 | KY62 | 100092 | | 1260 | | 1366232 | | 537416 |
| 1999 | KY62 | 104652 | | 1289 | | 1462581 | | 568814 |
| 2000 | KY62 | 109418 | | 1314 | | 1559061 | | 605462 |
| 2001 | KY62 | 114399 | | 1341 | | 1663927 | | 647867 |
| 2002 | KY62 | 116874 | | 1342 | | 1700128 | | 678009 |
| 2003 | KY62 | 119807 | | 1370 | | 1780154 | | 716585 |
| 2004 | KY62 | 123615 | | 1396 | | 1871304 | | 755437 |
| 2005 | KY62 | 127237 | | 1417 | | 1953876 | | 801982 |
| 2006 | KY62 | 131616 | | 1439 | | 2052806 | | 853052 |
| 2007 | KY62 | 134550 | | 1438 | | 2099226 | | 892008 |
| 2008 | KY62 | 137421 | | 1463 | | 2181451 | | 940554 |
| 2009 | KY62 | 140815 | | 1482 | | 2264892 | | 1000401 |
| 2010 | KY62 | 144362 | | 1501 | | 2350553 | | 1061977 |
| 2011 | KY62 | 148373 | | 1524 | | 2452582 | | 1124974 |
| 2012 | KY62 | 151290 | | 1538 | | 2522929 | | 1189473 |
| 2013 | KY62 | 154104 | | 1544 | | 2580070 | | 1244540 |
| 2014 | KY62 | 158215 | | 1566 | | 2687106 | | 1312749 |
| 2015 | KY62 | 161696 | | 1584 | | 2778616 | | 1383827 |
| 2016 | KY62 | 166608 | | 1605 | | 2901213 | | 1458080 |
| Normalized 1996 | KY62 | 91548 | 1156 | | 1146945 | | 466249 | |

| Year | | C/I Large Energy (MWh) (Hist/FC) | Pb St Lgt Energy (MWh) (Hist/FC) | Irrigation Energy (MWh) (Hist/FC) | Own Use Energy (MWh) (Hist/FC) | Rural System Energy Sales (MWh) (Hist/FC) | Smelter Energy (MWh) (Hist/FC) | Non Smelter Energy (MWh) (Hist/FC) |
|---|---|---|---|---|---|---|---|---|
| 1976-1981 | | 3.9% | -2.5% | na | -0.4% | 3.9% | na | na |
| 1981-1986 | | -5.0% | -0.0% | -8.8% | 1.2% | 3.3% | -6.6% | 5.0% |
| 1986-1991 | | 6.8% | 2.8% | 11.5% | 1.0% | 2.8% | 7.3% | 3.0% |
| 1991-1996 | | -1.5% | 3.2% | 5.1% | 2.8% | 3.2% | -3.4% | 5.3% |
| 1976-1996 | | 0.9% | 0.8% | na | 1.2% | 3.3% | na | na |
| 1986-1996 | | 2.5% | 3.0% | 8.2% | 1.9% | 3.0% | 1.8% | 4.2% |
| 1996-2001 | | 5.8% | 2.4% | -4.7% | 0.8% | 7.5% | 3.8% | 9.7% |
| 2001-2006 | | -0.0% | 2.2% | 0.0% | 0.8% | 4.7% | 0.0% | 2.4% |
| 2006-2011 | | 0.3% | 2.0% | 0.0% | 0.7% | 4.2% | 0.0% | 2.8% |
| 2011-2016 | | 0.2% | 1.8% | 0.0% | 0.7% | 4.0% | 0.0% | 2.7% |
| 1996-2016 | | 2.0% | 2.2% | -1.6% | 0.8% | 5.4% | 1.3% | 4.9% |
| 1972 | KY62 | 3177303 | 1321 | 0 | 3102 | 615665 | na | na |
| 1973 | KY62 | 4368418 | 1512 | 0 | 2811 | 665570 | na | na |
| 1974 | KY62 | 5230483 | 1839 | 0 | 2651 | 687613 | na | na |
| 1975 | KY62 | 5073573 | 2145 | 0 | 2546 | 789672 | na | na |
| 1976 | KY62 | 5262762 | 2252 | 0 | 2860 | 841218 | 4934026 | 1169954 |
| 1977 | KY62 | 5443274 | 2188 | 0 | 2801 | 989464 | 5103835 | 1328903 |
| 1978 | KY62 | 5368154 | 2204 | 33 | 3042 | 1068182 | 5014840 | 1421496 |
| 1979 | KY62 | 5940734 | 2210 | 40 | 2909 | 988537 | 5500327 | 1428943 |
| 1980 | KY62 | 6390170 | 2032 | 42 | 2754 | 1064688 | 5935116 | 1519743 |
| 1981 | KY62 | 6380899 | 1985 | 79 | 2810 | 1020141 | 5893803 | 1507237 |
| 1982 | KY62 | 5300242 | 1999 | 63 | 2932 | 1042501 | 4732186 | 1610557 |
| 1983 | KY62 | 5528519 | 1833 | 65 | 2816 | 1075525 | 4880411 | 1723633 |
| 1984 | KY62 | 6194365 | 1887 | 74 | 3042 | 1135629 | 5495014 | 1834979 |
| 1985 | KY62 | 5653054 | 1927 | 39 | 2864 | 1143352 | 4964900 | 1831506 |
| 1986 | KY62 | 4926411 | 1981 | 50 | 2982 | 1199475 | 4198758 | 1927128 |
| 1987 | KY62 | 4929857 | 2048 | 68 | 3079 | 1250169 | 4163242 | 2016784 |
| 1988 | KY62 | 6427497 | 2110 | 85 | 3196 | 1285657 | 5627682 | 2085472 |
| 1989 | KY62 | 6667299 | 2154 | 82 | 3255 | 1283879 | 5862015 | 2089163 |
| 1990 | KY62 | 6808988 | 2177 | 48 | 3133 | 1304974 | 5916778 | 2197184 |
| 1991 | KY62 | 6833471 | 2276 | 86 | 3136 | 1375019 | 5969212 | 2239278 |
| 1992 | KY62 | 6885705 | 2275 | 114 | 3362 | 1336789 | 6001284 | 2221209 |
| 1993 | KY62 | 6863080 | 2417 | 78 | 3089 | 1473823 | 5966768 | 2370135 |
| 1994 | KY62 | 5882908 | 2509 | 93 | 3226 | 1472687 | 4942862 | 2412733 |
| 1995 | KY62 | 6297252 | 2641 | 100 | 3334 | 1551884 | 5162811 | 2686325 |
| 1996 | KY62 | 6320441 | 2661 | 110 | 3598 | 1610679 | 5028097 | 2903023 |
| 1997 | KY62 | 6790687 | 2729 | 86 | 3630 | 1779957 | 5426886 | 3143758 |
| 1998 | KY62 | 7585880 | 2797 | 86 | 3658 | 1906531 | 6065161 | 3427250 |
| 1999 | KY62 | 8340430 | 2865 | 86 | 3687 | 2034347 | 6065161 | 4309616 |
| 2000 | KY62 | 8373153 | 2933 | 86 | 3715 | 2167543 | 6065161 | 4475535 |
| 2001 | KY62 | 8377807 | 3001 | 86 | 3744 | 2314881 | 6065161 | 4627527 |
| 2002 | KY62 | 8367607 | 3069 | 86 | 3773 | 2381292 | 6065161 | 4683738 |
| 2003 | KY62 | 8367607 | 3137 | 86 | 3801 | 2499962 | 6065161 | 4802408 |
| 2004 | KY62 | 8367607 | 3205 | 86 | 3830 | 2630032 | 6065161 | 4932478 |
| 2005 | KY62 | 8367607 | 3273 | 86 | 3858 | 2759217 | 6065161 | 5061663 |
| 2006 | KY62 | 8367607 | 3341 | 86 | 3887 | 2909285 | 6065161 | 5211731 |
| 2007 | KY62 | 8367607 | 3409 | 86 | 3915 | 2994729 | 6065161 | 5297175 |
| 2008 | KY62 | 8479297 | 3477 | 86 | 3944 | 3125567 | 6065161 | 5539703 |
| 2009 | KY62 | 8479297 | 3545 | 86 | 3973 | 3268923 | 6065161 | 5683059 |
| 2010 | KY62 | 8479297 | 3612 | 86 | 4001 | 3416229 | 6065161 | 5830365 |
| 2011 | KY62 | 8479297 | 3680 | 86 | 4030 | 3581323 | 6065161 | 5995459 |
| 2012 | KY62 | 8479297 | 3748 | 86 | 4058 | 3716237 | 6065161 | 6130373 |
| 2013 | KY62 | 8561203 | 3816 | 86 | 4087 | 3828513 | 6065161 | 6324555 |
| 2014 | KY62 | 8561203 | 3884 | 86 | 4116 | 4003826 | 6065161 | 6499868 |
| 2015 | KY62 | 8561203 | 3952 | 86 | 4144 | 4166482 | 6065161 | 6662524 |
| 2016 | KY62 | 8561203 | 4020 | 86 | 4173 | 4363399 | 6065161 | 6859441 |
| Normalized 1996 | KY62 | 6320441 | 2661 | 110 | 3598 | 1615965 | 5028097 | 2908309 |

| Year | | Total Mbr. System Energy Sales (MWh) (Hist/FC) | Rural System Losses (%) (Hist/FC) | Native Sales (MWh) (Hist/FC) | Total Energy Req. (MWh) (Hist/FC) | Summer Rural System NCP (kW) (Hist/FC-LF) | Summer Rural System NCP L.F. (Hist/FC) | Summer Rural System NCP (kW) (Model) |
|---|---|---|---|---|---|---|---|---|
| 1976-1981 | | 3.9% | 7.7% | 3.9% | 3.9% | na | na | na |
| 1981-1986 | | -3.7% | 7.1% | -3.6% | -3.6% | 3.2% | 43.7% | na |
| 1986-1991 | | 6.0% | 6.8% | 6.0% | 6.0% | 0.6% | 45.8% | na |
| 1991-1996 | | -0.7% | 6.6% | -0.7% | -0.7% | 2.0% | 47.4% | na |
| 1976-1996 | | 1.3% | 7.1% | 1.3% | 1.3% | na | na | na |
| 1986-1996 | | 2.6% | 6.7% | 2.6% | 2.6% | 1.3% | 46.6% | na |
| 1996-2001 | | 6.1% | 6.4% | 6.2% | 6.2% | 7.0% | 47.9% | 6.4% |
| 2001-2006 | | 1.1% | 6.4% | 1.1% | 1.1% | 4.7% | 47.5% | 4.2% |
| 2006-2011 | | 1.4% | 6.4% | 1.4% | 1.4% | 4.2% | 47.5% | 3.9% |
| 2011-2016 | | 1.4% | 6.4% | 1.4% | 1.4% | 4.0% | 47.5% | 3.8% |
| 1996-2016 | | 2.8% | 6.4% | 2.9% | 2.9% | 5.3% | 47.6% | 4.8% |
| 1972 | KY62 | 3792968 | 9.7% | 3862045 | 3939286 | na | na | na |
| 1973 | KY62 | 5033988 | 8.9% | 5102148 | 5204191 | na | na | na |
| 1974 | KY62 | 5918096 | 8.7% | 5986239 | 6105964 | na | na | na |
| 1975 | KY62 | 5863245 | 8.5% | 5939400 | 6058188 | na | na | na |
| 1976 | KY62 | 6103980 | 9.1% | 6190692 | 6314506 | na | na | na |
| 1977 | KY62 | 6432738 | 7.4% | 6514107 | 6644389 | na | na | na |
| 1978 | KY62 | 6436336 | 7.6% | 6527678 | 6658231 | na | na | na |
| 1979 | KY62 | 6929271 | 9.0% | 7029485 | 7170074 | 274000 | 45.2% | na |
| 1980 | KY62 | 7454859 | 6.2% | 7528564 | 7679135 | 302000 | 42.9% | na |
| 1981 | KY62 | 7401040 | 6.9% | 7479670 | 7629264 | 295000 | 42.4% | na |
| 1982 | KY62 | 6342743 | 7.2% | 6426261 | 6554786 | 294000 | 43.6% | na |
| 1983 | KY62 | 6604043 | 8.5% | 6707235 | 6841380 | 320000 | 41.9% | na |
| 1984 | KY62 | 7329994 | 5.5% | 7398951 | 7546930 | 299000 | 45.9% | na |
| 1985 | KY62 | 6796406 | 8.0% | 6899093 | 7037074 | 309000 | 45.9% | na |
| 1986 | KY62 | 6125886 | 6.7% | 6215491 | 6339799 | 346000 | 42.4% | na |
| 1987 | KY62 | 6180027 | 6.5% | 6270519 | 6395929 | 330000 | 46.3% | na |
| 1988 | KY62 | 7713154 | 7.0% | 7813146 | 7969409 | 349000 | 45.2% | na |
| 1989 | KY62 | 7951178 | 8.4% | 8072761 | 8234217 | 329000 | 48.7% | na |
| 1990 | KY62 | 8113961 | 5.4% | 8191465 | 8355294 | 350000 | 45.0% | na |
| 1991 | KY62 | 8208490 | 7.0% | 8314440 | 8484123 | 357160 | 47.2% | na |
| 1992 | KY62 | 8222493 | 7.0% | 8326337 | 8496262 | 345226 | 47.5% | na |
| 1993 | KY62 | 8336903 | 6.7% | 8445130 | 8617480 | 390425 | 46.2% | na |
| 1994 | KY62 | 7355595 | 6.1% | 7454220 | 7606347 | 371171 | 48.2% | na |
| 1995 | KY62 | 7849136 | 6.6% | 7961435 | 8123913 | 414874 | 45.7% | na |
| 1996 | KY62 | 7931120 | 6.5% | 8045961 | 8210164 | 394421 | 49.8% | 394421 |
| 1997 | KY62 | 8570644 | 6.4% | 8695523 | 8872983 | 456996 | 47.5% | 458059 |
| 1998 | KY62 | 9492411 | 6.4% | 9625726 | 9822170 | 489441 | 47.5% | 486297 |
| 1999 | KY62 | 10374777 | 6.4% | 10516529 | 10731152 | 522186 | 47.5% | 514811 |
| 2000 | KY62 | 10540696 | 6.3% | 10691216 | 10909404 | 556303 | 47.5% | 544526 |
| 2001 | KY62 | 10692688 | 6.3% | 10852856 | 11074343 | 594031 | 47.5% | 577396 |
| 2002 | KY62 | 10748899 | 6.3% | 10913008 | 11135723 | 610935 | 47.5% | 592212 |
| 2003 | KY62 | 10867569 | 6.3% | 11039231 | 11264521 | 641268 | 47.5% | 618686 |
| 2004 | KY62 | 10997639 | 6.3% | 11178077 | 11406201 | 674636 | 47.5% | 647703 |
| 2005 | KY62 | 11126824 | 6.3% | 11315993 | 11546932 | 707780 | 47.5% | 676523 |
| 2006 | KY62 | 11276892 | 6.3% | 11476244 | 11710454 | 746293 | 47.5% | 710002 |
| 2007 | KY62 | 11362336 | 6.3% | 11567317 | 11803385 | 768178 | 47.5% | 729064 |
| 2008 | KY62 | 11604864 | 6.3% | 11818515 | 12059710 | 801705 | 47.5% | 758253 |
| 2009 | KY62 | 11748220 | 6.3% | 11971488 | 12215804 | 838468 | 47.5% | 790234 |
| 2010 | KY62 | 11895526 | 6.3% | 12128678 | 12376202 | 876245 | 47.5% | 823096 |
| 2011 | KY62 | 12060620 | 6.3% | 12304864 | 12555983 | 918588 | 47.5% | 859927 |
| 2012 | KY62 | 12195534 | 6.3% | 12448665 | 12702719 | 953147 | 47.5% | 890025 |
| 2013 | KY62 | 12389716 | 6.3% | 12650321 | 12908491 | 981925 | 47.5% | 915073 |
| 2014 | KY62 | 12565029 | 6.3% | 12837270 | 13099255 | 1026855 | 47.5% | 954184 |
| 2015 | KY62 | 12727685 | 6.3% | 13010931 | 13276460 | 1068591 | 47.5% | 990471 |
| 2016 | KY62 | 12924602 | 6.3% | 13220910 | 13490724 | 1119057 | 47.5% | 1034401 |
| Normalized 1996 | KY62 | 7936406 | 6.4% | 8051611 | 8215930 | 423356 | 46.5% | 423356 |

| Year | | Summer Rural System NCP L.F. (Model) | Summer Rural System CP (kW) (Hist) | Summer Rural System CP L.F. (Hist) | Summer Rural System CP (kW) (Model) | Summer Rural System CP L.F. (Model) | Summer C/I Large NCP (kW) (Hist/FC) | Summer Smelter NCP (kW) (Hist/FC) |
|---|---|---|---|---|---|---|---|---|
| 1976-1981 | | na | na | na | na | na | na | na |
| 1981-1986 | | na | 3.2% | 45.5% | na | na | na | -4.2% |
| 1986-1991 | | na | 0.1% | 47.0% | na | na | na | 4.3% |
| 1991-1996 | | na | 2.3% | 49.8% | na | na | -1.6% | -3.8% |
| 1976-1996 | | na | na | na | na | na | na | na |
| 1986-1996 | | na | 1.2% | 48.3% | na | na | na | 0.2% |
| 1996-2001 | | 48.4% | na | na | 6.5% | 49.7% | 5.6% | 4.4% |
| 2001-2006 | | 49.4% | na | na | 4.3% | 50.3% | -0.0% | 0.0% |
| 2006-2011 | | 50.3% | na | na | 3.9% | 51.2% | 0.3% | 0.0% |
| 2011-2016 | | 51.0% | na | na | 3.8% | 51.8% | 0.2% | 0.0% |
| 1996-2016 | | 49.4% | na | na | 4.9% | 50.4% | 1.9% | 1.5% |
| 1972 | KY62 | na | na | na | na | na | na | na |
| 1973 | KY62 | na | na | na | na | na | na | na |
| 1974 | KY62 | na | na | na | na | na | na | na |
| 1975 | KY62 | na | na | na | na | na | na | na |
| 1976 | KY62 | na | na | na | na | na | na | 587500 |
| 1977 | KY62 | na | na | na | na | na | na | 595000 |
| 1978 | KY62 | na | na | na | na | na | na | 594500 |
| 1979 | KY62 | na | 265000 | 46.8% | na | na | na | 684000 |
| 1980 | KY62 | na | 299000 | 43.4% | na | na | na | 688000 |
| 1981 | KY62 | na | 289000 | 43.3% | na | na | na | 690000 |
| 1982 | KY62 | na | 276000 | 46.5% | na | na | na | 680000 |
| 1983 | KY62 | na | 300000 | 44.7% | na | na | na | 663000 |
| 1984 | KY62 | na | 282000 | 48.6% | na | na | na | 664500 |
| 1985 | KY62 | na | 303000 | 46.8% | na | na | na | 558500 |
| 1986 | KY62 | na | 339000 | 43.3% | na | na | na | 558000 |
| 1987 | KY62 | na | 323000 | 47.3% | na | na | na | 553760 |
| 1988 | KY62 | na | 342000 | 46.1% | na | na | na | 678020 |
| 1989 | KY62 | na | 321000 | 49.9% | na | na | 811558 | 685617 |
| 1990 | KY62 | na | 344000 | 45.8% | na | na | 832311 | 689174 |
| 1991 | KY62 | na | 339855 | 49.6% | na | na | 833878 | 689181 |
| 1992 | KY62 | na | 331489 | 49.5% | na | na | 791875 | 696922 |
| 1993 | KY62 | na | 370687 | 48.6% | na | na | 791777 | 697574 |
| 1994 | KY62 | na | 354703 | 50.5% | na | na | 689221 | 568645 |
| 1995 | KY62 | na | 387914 | 48.9% | na | na | 754183 | 697574 |
| 1996 | KY62 | 49.8% | 380236 | 51.7% | 380236 | 51.7% | 768925 | 568645 |
| 1997 | KY62 | 47.4% | | | 446946 | 48.6% | 898000 | 706500 |
| 1998 | KY62 | 47.8% | | | 475006 | 48.9% | 930800 | 706500 |
| 1999 | KY62 | 48.2% | | | 503341 | 49.3% | 1003750 | 706500 |
| 2000 | KY62 | 48.5% | | | 532869 | 49.6% | 1007450 | 706500 |
| 2001 | KY62 | 48.9% | | | 565531 | 49.9% | 1008075 | 706500 |
| 2002 | KY62 | 49.0% | | | 580254 | 50.0% | 1005875 | 706500 |
| 2003 | KY62 | 49.2% | | | 606561 | 50.2% | 1005875 | 706500 |
| 2004 | KY62 | 49.5% | | | 635396 | 50.4% | 1005875 | 706500 |
| 2005 | KY62 | 49.7% | | | 664034 | 50.6% | 1005875 | 706500 |
| 2006 | KY62 | 49.9% | | | 697302 | 50.8% | 1005875 | 706500 |
| 2007 | KY62 | 50.0% | | | 716244 | 50.9% | 1005875 | 706500 |
| 2008 | KY62 | 50.2% | | | 745249 | 51.1% | 1020875 | 706500 |
| 2009 | KY62 | 50.4% | | | 777029 | 51.2% | 1020875 | 706500 |
| 2010 | KY62 | 50.6% | | | 809684 | 51.4% | 1020875 | 706500 |
| 2011 | KY62 | 50.7% | | | 846283 | 51.5% | 1020875 | 706500 |
| 2012 | KY62 | 50.9% | | | 876192 | 51.7% | 1020875 | 706500 |
| 2013 | KY62 | 51.0% | | | 901082 | 51.8% | 1031875 | 706500 |
| 2014 | KY62 | 51.1% | | | 939946 | 51.9% | 1031875 | 706500 |
| 2015 | KY62 | 51.2% | | | 976005 | 52.0% | 1031875 | 706500 |
| 2016 | KY62 | 51.4% | | | 1019658 | 52.1% | 1031875 | 706500 |
| Normalized 1996 | KY62 | 46.5% | 412714 | 47.7% | 412714 | 47.7% | 768925 | 568645 |

| Year | | Summer Non Smelter NCP (kW) (Hist/FC) | Summer Total System NCP (kW) (Hist/FC) | Summer Total System NCP L.F. (Hist/FC) | Summer Total System NCP (kW) (Model) | Summer Total System NCP L.F. (Model) | Summer Total System CP (kW) (Hist) | Summer Total System CP L.F. (Hist) |
|---|---|---|---|---|---|---|---|---|
| 1976-1981 | | na | na | na | na | na | 6.4% | 89.2% |
| 1981-1986 | | 8.8% | 1.0% | 73.4% | na | na | -3.0% | 82.9% |
| 1986-1991 | | -1.6% | 1.6% | 72.1% | na | na | 5.6% | 80.0% |
| 1991-1996 | | 3.3% | -0.5% | 79.1% | na | na | -0.0% | 81.5% |
| 1976-1996 | | na | na | 77.0% | na | na | 2.2% | 83.5% |
| 1986-1996 | | 0.8% | 0.5% | 75.2% | na | na | 2.7% | 80.6% |
| 1996-2001 | | 6.8% | 6.2% | 77.4% | 5.9% | 77.9% | na | na |
| 2001-2006 | | 3.1% | 1.8% | 76.2% | 1.6% | 77.6% | na | na |
| 2006-2011 | | 3.4% | 2.1% | 73.7% | 1.9% | 75.8% | na | na |
| 2011-2016 | | 3.2% | 2.1% | 71.4% | 1.9% | 74.1% | na | na |
| 1996-2016 | | 4.4% | 3.3% | 75.7% | 3.1% | 77.0% | na | na |
| 1972 | KY62 | na | na | na | na | na | 497000 | 90.5% |
| 1973 | KY62 | na | na | na | na | na | 707000 | 84.0% |
| 1974 | KY62 | na | na | na | na | na | 737000 | 94.6% |
| 1975 | KY62 | na | na | na | na | na | 722000 | 95.8% |
| 1976 | KY62 | 251963 | 856252 | 84.2% | na | na | 759000 | 95.0% |
| 1977 | KY62 | 287183 | 899827 | 84.3% | na | na | 801000 | 94.7% |
| 1978 | KY62 | 308846 | 921413 | 82.5% | na | na | 802000 | 94.8% |
| 1979 | KY62 | 318824 | 1022880 | 80.0% | na | na | 994000 | 82.3% |
| 1980 | KY62 | 361216 | 1070200 | 81.9% | na | na | 1039000 | 84.4% |
| 1981 | KY62 | 356651 | 1067584 | 81.6% | na | na | 1034000 | 84.2% |
| 1982 | KY62 | 373283 | 1074349 | 69.6% | na | na | 890000 | 84.1% |
| 1983 | KY62 | 407100 | 1091502 | 71.6% | na | na | 966000 | 80.8% |
| 1984 | KY62 | 393245 | 1078900 | 79.9% | na | na | 1027000 | 83.9% |
| 1985 | KY62 | 510300 | 1090176 | 73.7% | na | na | 965000 | 83.2% |
| 1986 | KY62 | 544400 | 1124448 | 64.4% | na | na | 890000 | 81.3% |
| 1987 | KY62 | 604240 | 1181160 | 61.8% | na | na | 990000 | 73.8% |
| 1988 | KY62 | 516080 | 1217982 | 74.7% | na | na | 1157000 | 78.6% |
| 1989 | KY62 | 565483 | 1276122 | 73.7% | na | na | 1142000 | 82.3% |
| 1990 | KY62 | 502826 | 1215840 | 78.4% | na | na | 1174000 | 81.2% |
| 1991 | KY62 | 501999 | 1215004 | 79.7% | na | na | 1168000 | 82.9% |
| 1992 | KY62 | 484563 | 1205115 | 80.5% | na | na | 1166000 | 83.2% |
| 1993 | KY62 | 524728 | 1246748 | 78.9% | na | na | 1217000 | 80.8% |
| 1994 | KY62 | 510157 | 1100378 | 78.9% | na | na | 1055000 | 82.3% |
| 1995 | KY62 | 480964 | 1202109 | 77.1% | na | na | 1166000 | 79.5% |
| 1996 | KY62 | 590405 | 1182231 | 79.3% | 1182231 | 79.3% | 1167000 | 80.3% |
| 1997 | KY62 | 648496 | 1382096 | 73.3% | 1378799 | 73.5% | | |
| 1998 | KY62 | 713741 | 1448646 | 77.4% | 1441057 | 77.8% | | |
| 1999 | KY62 | 819436 | 1556455 | 78.7% | 1544551 | 79.3% | | |
| 2000 | KY62 | 857253 | 1595028 | 78.1% | 1578634 | 78.9% | | |
| 2001 | KY62 | 895606 | 1634148 | 77.4% | 1612799 | 78.4% | | |
| 2002 | KY62 | 910310 | 1649146 | 77.1% | 1625667 | 78.2% | | |
| 2003 | KY62 | 940643 | 1680086 | 76.5% | 1652670 | 77.8% | | |
| 2004 | KY62 | 974011 | 1714121 | 76.0% | 1682268 | 77.4% | | |
| 2005 | KY62 | 1007155 | 1747929 | 75.4% | 1711664 | 77.0% | | |
| 2006 | KY62 | 1045668 | 1787212 | 74.8% | 1745813 | 76.6% | | |
| 2007 | KY62 | 1067553 | 1809534 | 74.5% | 1765256 | 76.3% | | |
| 2008 | KY62 | 1116080 | 1859031 | 74.1% | 1810328 | 76.0% | | |
| 2009 | KY62 | 1152843 | 1896530 | 73.5% | 1842949 | 75.7% | | |
| 2010 | KY62 | 1190620 | 1935063 | 73.0% | 1876469 | 75.3% | | |
| 2011 | KY62 | 1232963 | 1978253 | 72.5% | 1914037 | 74.9% | | |
| 2012 | KY62 | 1267522 | 2013502 | 72.0% | 1944737 | 74.6% | | |
| 2013 | KY62 | 1307300 | 2054076 | 71.7% | 1981505 | 74.4% | | |
| 2014 | KY62 | 1352230 | 2099905 | 71.2% | 2021398 | 74.0% | | |
| 2015 | KY62 | 1393966 | 2142476 | 70.7% | 2058411 | 73.6% | | |
| 2016 | KY62 | 1444432 | 2193951 | 70.2% | 2103220 | 73.2% | | |
| Normalized 1996 | KY62 | 643100 | 1211745 | 77.4% | 1211745 | 77.4% | 1199478 | 78.2% |

| Year | | Summer Total System CP (kW) (Model) | Summer Total System CP L.F. (Model) | Winter Rural System NCP (kW) (Hist/FC-LF) | Winter Rural System NCP L.F. (Hist/FC) | Winter Rural System NCP (kW) (Model) | Winter Rural System NCP L.F. (Model) | Winter Rural System CP (kW) (Hist) |
|---|---|---|---|---|---|---|---|---|
| 1976-1981 | | na | na | na | na | na | na | na |
| 1981-1986 | | na | na | 2.9% | 43.5% | na | na | 2.7% |
| 1986-1991 | | na | na | -0.1% | 50.3% | na | na | -0.9% |
| 1991-1996 | | na | na | 4.7% | 51.3% | na | na | 4.9% |
| 1976-1996 | | na | na | na | na | na | na | na |
| 1986-1996 | | na | na | 2.3% | 50.6% | na | na | 2.0% |
| 1996-2001 | | 5.8% | 78.8% | 6.3% | 50.6% | 6.8% | 49.1% | na |
| 2001-2006 | | 1.6% | 78.6% | 4.7% | 51.0% | 4.3% | 50.2% | na |
| 2006-2011 | | 1.8% | 76.9% | 4.2% | 51.0% | 4.0% | 51.0% | na |
| 2011-2016 | | 1.9% | 75.3% | 4.0% | 51.0% | 3.8% | 51.6% | na |
| 1996-2016 | | 3.1% | 78.1% | 5.1% | 50.8% | 5.0% | 50.1% | na |
| 1972 | KY62 | na | na | na | na | na | na | na |
| 1973 | KY62 | na | na | na | na | na | na | na |
| 1974 | KY62 | na | na | na | na | na | na | na |
| 1975 | KY62 | na | na | na | na | na | na | na |
| 1976 | KY62 | na | na | na | na | na | na | na |
| 1977 | KY62 | na | na | na | na | na | na | na |
| 1978 | KY62 | na | na | na | na | na | na | na |
| 1979 | KY62 | na | na | 278000 | 44.6% | na | na | 272000 |
| 1980 | KY62 | na | na | 263000 | 49.3% | na | na | 250000 |
| 1981 | KY62 | na | na | 278000 | 45.0% | na | na | 275000 |
| 1982 | KY62 | na | na | 311000 | 41.2% | na | na | 282000 |
| 1983 | KY62 | na | na | 334000 | 40.2% | na | na | 332000 |
| 1984 | KY62 | na | na | 298000 | 46.0% | na | na | 257000 |
| 1985 | KY62 | na | na | 331000 | 42.9% | na | na | 315000 |
| 1986 | KY62 | na | na | 320000 | 45.9% | na | na | 314000 |
| 1987 | KY62 | na | na | 275000 | 55.5% | na | na | 270000 |
| 1988 | KY62 | na | na | 295000 | 53.5% | na | na | 289000 |
| 1989 | KY62 | na | na | 379000 | 42.2% | na | na | 352000 |
| 1990 | KY62 | na | na | 305000 | 51.6% | na | na | 260000 |
| 1991 | KY62 | na | na | 318397 | 53.0% | na | na | 300584 |
| 1992 | KY62 | na | na | 323627 | 50.7% | na | na | 310047 |
| 1993 | KY62 | na | na | 335173 | 53.8% | na | na | 318252 |
| 1994 | KY62 | na | na | 377008 | 47.5% | na | na | 359832 |
| 1995 | KY62 | na | na | 352150 | 53.8% | na | na | 335672 |
| 1996 | KY62 | 1167000 | 80.3% | 401387 | 49.0% | 401387 | 49.0% | 382214 |
| 1997 | KY62 | 1362785 | 74.3% | 425944 | 51.0% | 447670 | 48.5% | |
| 1998 | KY62 | 1423645 | 78.8% | 456185 | 51.0% | 475907 | 48.8% | |
| 1999 | KY62 | 1524930 | 80.3% | 486705 | 51.0% | 504422 | 49.2% | |
| 2000 | KY62 | 1558158 | 79.9% | 518504 | 51.0% | 534137 | 49.5% | |
| 2001 | KY62 | 1591445 | 79.4% | 553669 | 51.0% | 567006 | 49.8% | |
| 2002 | KY62 | 1603968 | 79.3% | 569424 | 51.0% | 581822 | 49.9% | |
| 2003 | KY62 | 1630275 | 78.9% | 597696 | 51.0% | 608296 | 50.1% | |
| 2004 | KY62 | 1659110 | 78.5% | 628797 | 51.0% | 637314 | 50.3% | |
| 2005 | KY62 | 1687748 | 78.1% | 659689 | 51.0% | 666134 | 50.5% | |
| 2006 | KY62 | 1721016 | 77.7% | 695585 | 51.0% | 699612 | 50.7% | |
| 2007 | KY62 | 1739958 | 77.4% | 715982 | 51.0% | 718674 | 50.8% | |
| 2008 | KY62 | 1783963 | 77.2% | 747231 | 51.0% | 747863 | 50.9% | |
| 2009 | KY62 | 1815743 | 76.8% | 781497 | 51.0% | 779844 | 51.1% | |
| 2010 | KY62 | 1848398 | 76.4% | 816707 | 51.0% | 812707 | 51.2% | |
| 2011 | KY62 | 1884997 | 76.0% | 856173 | 51.0% | 849538 | 51.4% | |
| 2012 | KY62 | 1914906 | 75.7% | 888384 | 51.0% | 879636 | 51.5% | |
| 2013 | KY62 | 1950796 | 75.5% | 915206 | 51.0% | 904684 | 51.5% | |
| 2014 | KY62 | 1989660 | 75.2% | 957083 | 51.0% | 943794 | 51.7% | |
| 2015 | KY62 | 2025719 | 74.8% | 995984 | 51.0% | 980081 | 51.8% | |
| 2016 | KY62 | 2069372 | 74.4% | 1043021 | 51.0% | 1024012 | 51.9% | |
| Normalized 1996 | KY62 | 1199478 | 78.2% | 408283 | 48.3% | 408283 | 48.3% | 389699 |



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| Year | | Winter Rural System CP L.F. (Hist) | Winter Rural System CP (kW) (Model) | Winter Rural System CP L.F. (Model) | Winter C/I Large NCP (kW) (Hist/FC) | Winter Smelter NCP (kW) (Hist/FC) | Winter Non Smelter NCP (kW) (Hist/FC) | Winter Total System NCP (kW) (Hist/FC) |
|---|---|---|---|---|---|---|---|---|
| 1976-1981 | | na | na | na | na | na | na | na |
| 1981-1986 | | 46.1% | na | na | na | -4.0% | 8.1% | 0.7% |
| 1986-1991 | | 53.3% | na | na | na | 4.1% | -1.6% | 1.6% |
| 1991-1996 | | 53.9% | na | na | -1.9% | 0.4% | -1.1% | -0.2% |
| 1976-1996 | | na | na | na | na | na | na | na |
| 1986-1996 | | 53.4% | na | na | na | 2.2% | -1.4% | 0.7% |
| 1996-2001 | | na | 7.0% | 51.1% | 5.5% | 0.1% | 13.3% | 6.1% |
| 2001-2006 | | na | 4.4% | 51.8% | -0.0% | 0.0% | 3.1% | 1.7% |
| 2006-2011 | | na | 4.0% | 52.4% | 0.3% | 0.0% | 3.3% | 2.0% |
| 2011-2016 | | na | 3.9% | 52.8% | 0.2% | 0.0% | 3.2% | 2.0% |
| 1996-2016 | | na | 5.2% | 51.8% | 1.9% | 0.0% | 6.5% | 3.3% |
| 1972 | KY62 | na | na | na | na | na | na | na |
| 1973 | KY62 | na | na | na | na | na | na | na |
| 1974 | KY62 | na | na | na | na | na | na | na |
| 1975 | KY62 | na | na | na | na | na | na | na |
| 1976 | KY62 | na | na | na | na | 595500 | 272303 | 885159 |
| 1977 | KY62 | na | na | na | na | 596000 | 302320 | 916286 |
| 1978 | KY62 | na | na | na | na | 591500 | 301368 | 910725 |
| 1979 | KY62 | 45.6% | na | na | na | 695000 | 292356 | 1007103 |
| 1980 | KY62 | 51.9% | na | na | na | 690000 | 323835 | 1034112 |
| 1981 | KY62 | 45.5% | na | na | na | 690000 | 350161 | 1060964 |
| 1982 | KY62 | 45.5% | na | na | na | 684000 | 379403 | 1084671 |
| 1983 | KY62 | 40.4% | na | na | na | 663000 | 384899 | 1068857 |
| 1984 | KY62 | 53.4% | na | na | na | 661000 | 347573 | 1028744 |
| 1985 | KY62 | 45.1% | na | na | na | 662000 | 427200 | 1110984 |
| 1986 | KY62 | 46.8% | na | na | na | 563500 | 516100 | 1101192 |
| 1987 | KY62 | 56.6% | na | na | na | 568780 | 527520 | 1118226 |
| 1988 | KY62 | 54.6% | na | na | na | 685500 | 449500 | 1157700 |
| 1989 | KY62 | 45.5% | na | na | 831291 | 696006 | 552594 | 1273572 |
| 1990 | KY62 | 60.6% | na | na | 841326 | 695563 | 457637 | 1176264 |
| 1991 | KY62 | 56.1% | na | na | 843705 | 690510 | 475543 | 1189374 |
| 1992 | KY62 | 52.9% | na | na | 798932 | 705012 | 456080 | 1184314 |
| 1993 | KY62 | 56.6% | na | na | 794954 | 700279 | 470620 | 1194317 |
| 1994 | KY62 | 49.7% | na | na | 810417 | 703908 | 528293 | 1256845 |
| 1995 | KY62 | 56.5% | na | na | 753191 | 700279 | 404106 | 1126473 |
| 1996 | KY62 | 51.4% | 382214 | 51.4% | 768406 | 703908 | 449079 | 1176047 |
| 1997 | KY62 | | 429148 | 50.6% | 895000 | 706500 | 614444 | 1347363 |
| 1998 | KY62 | | 457207 | 50.8% | 927800 | 706500 | 677485 | 1411665 |
| 1999 | KY62 | | 485542 | 51.1% | 1000750 | 706500 | 780955 | 1517204 |
| 2000 | KY62 | | 515070 | 51.3% | 1004450 | 706500 | 816454 | 1553413 |
| 2001 | KY62 | | 547733 | 51.5% | 1005075 | 706500 | 852244 | 1589918 |
| 2002 | KY62 | | 562455 | 51.6% | 1002875 | 706500 | 865799 | 1603745 |
| 2003 | KY62 | | 588763 | 51.7% | 1002875 | 706500 | 894071 | 1632583 |
| 2004 | KY62 | | 617597 | 51.9% | 1002875 | 706500 | 925172 | 1664305 |
| 2005 | KY62 | | 646236 | 52.0% | 1002875 | 706500 | 956064 | 1695815 |
| 2006 | KY62 | | 679503 | 52.2% | 1002875 | 706500 | 991960 | 1732429 |
| 2007 | KY62 | | 698445 | 52.2% | 1002875 | 706500 | 1012357 | 1753235 |
| 2008 | KY62 | | 727450 | 52.3% | 1017875 | 706500 | 1058606 | 1800408 |
| 2009 | KY62 | | 759230 | 52.4% | 1017875 | 706500 | 1092872 | 1835359 |
| 2010 | KY62 | | 791886 | 52.6% | 1017875 | 706500 | 1128082 | 1871274 |
| 2011 | KY62 | | 828485 | 52.7% | 1017875 | 706500 | 1167548 | 1911529 |
| 2012 | KY62 | | 858393 | 52.7% | 1017875 | 706500 | 1199759 | 1944384 |
| 2013 | KY62 | | 883283 | 52.8% | 1028875 | 706500 | 1237581 | 1982963 |
| 2014 | KY62 | | 922147 | 52.9% | 1028875 | 706500 | 1279458 | 2025678 |
| 2015 | KY62 | | 958206 | 53.0% | 1028875 | 706500 | 1318359 | 2065356 |
| 2016 | KY62 | | 1001860 | 53.0% | 1028875 | 706500 | 1365396 | 2113334 |
| Normalized 1996 | KY62 | 50.6% | 389699 | 50.6% | 768406 | 703908 | 455975 | 1183080 |

| Year | | Winter Total System NCP L.F. (Hist/FC) | Winter Total System NCP (kW) (Model) | Winter Total System NCP L.F. (Model) | Winter Total System CP (kW) (Hist) | Winter Total System CP L.F. (Hist) | Winter Total System CP (kW) (Model) | Winter Total System CP L.F. (Model) |
|---|---|---|---|---|---|---|---|---|
| 1976-1981 | | na | na | na | 6.8% | 87.7% | na | na |
| 1981-1986 | | 74.3% | na | na | -0.9% | 76.6% | na | na |
| 1986-1991 | | 74.3% | na | na | 2.8% | 80.1% | na | na |
| 1991-1996 | | 79.5% | na | na | 0.2% | 81.2% | na | na |
| 1976-1996 | | 77.9% | na | na | 2.2% | 81.8% | na | na |
| 1986-1996 | | 76.5% | na | na | 1.5% | 80.4% | na | na |
| 1996-2001 | | 79.1% | 6.0% | 79.1% | na | na | 6.0% | 80.6% |
| 2001-2006 | | 78.4% | 1.6% | 78.8% | na | na | 1.6% | 80.4% |
| 2006-2011 | | 76.2% | 1.9% | 76.9% | na | na | 1.9% | 78.5% |
| 2011-2016 | | 74.0% | 1.9% | 75.1% | na | na | 1.9% | 76.7% |
| 1996-2016 | | 77.9% | 3.2% | 78.2% | na | na | 3.2% | 79.7% |
| 1972 | KY62 | na | na | na | 472000 | 93.4% | na | na |
| 1973 | KY62 | na | na | na | 508000 | 114.7% | na | na |
| 1974 | KY62 | na | na | na | 722000 | 94.6% | na | na |
| 1975 | KY62 | na | na | na | 731000 | 92.8% | na | na |
| 1976 | KY62 | 81.4% | na | na | 748000 | 94.5% | na | na |
| 1977 | KY62 | 82.8% | na | na | 820000 | 90.7% | na | na |
| 1978 | KY62 | 83.5% | na | na | 819000 | 91.0% | na | na |
| 1979 | KY62 | 81.3% | na | na | 974000 | 82.4% | na | na |
| 1980 | KY62 | 84.8% | na | na | 1007000 | 85.3% | na | na |
| 1981 | KY62 | 82.1% | na | na | 1037000 | 82.3% | na | na |
| 1982 | KY62 | 69.0% | na | na | 1034000 | 70.9% | na | na |
| 1983 | KY62 | 73.1% | na | na | 1046000 | 73.2% | na | na |
| 1984 | KY62 | 83.7% | na | na | 979000 | 86.3% | na | na |
| 1985 | KY62 | 72.3% | na | na | 1042000 | 75.6% | na | na |
| 1986 | KY62 | 65.7% | na | na | 993000 | 71.5% | na | na |
| 1987 | KY62 | 65.3% | na | na | 920000 | 77.8% | na | na |
| 1988 | KY62 | 78.6% | na | na | 1063000 | 83.9% | na | na |
| 1989 | KY62 | 73.8% | na | na | 1177000 | 78.3% | na | na |
| 1990 | KY62 | 81.1% | na | na | 1089000 | 85.9% | na | na |
| 1991 | KY62 | 81.4% | na | na | 1140000 | 83.3% | na | na |
| 1992 | KY62 | 81.9% | na | na | 1149000 | 82.7% | na | na |
| 1993 | KY62 | 82.4% | na | na | 1137000 | 84.8% | na | na |
| 1994 | KY62 | 69.1% | na | na | 1189000 | 71.6% | na | na |
| 1995 | KY62 | 82.3% | na | na | 1063000 | 85.5% | na | na |
| 1996 | KY62 | 79.7% | 1176047 | 79.7% | 1154000 | 79.6% | 1154000 | 81.2% |
| 1997 | KY62 | 75.2% | 1352381 | 74.9% | | | 1327528 | 76.3% |
| 1998 | KY62 | 79.4% | 1414639 | 79.3% | | | 1388387 | 80.8% |
| 1999 | KY62 | 80.7% | 1518133 | 80.7% | | | 1489672 | 82.2% |
| 2000 | KY62 | 80.2% | 1552216 | 80.2% | | | 1522900 | 81.8% |
| 2001 | KY62 | 79.5% | 1586381 | 79.7% | | | 1556188 | 81.2% |
| 2002 | KY62 | 79.3% | 1599249 | 79.5% | | | 1568710 | 81.0% |
| 2003 | KY62 | 78.8% | 1626253 | 79.1% | | | 1595018 | 80.6% |
| 2004 | KY62 | 78.2% | 1655850 | 78.6% | | | 1623852 | 80.2% |
| 2005 | KY62 | 77.7% | 1685247 | 78.2% | | | 1652491 | 79.8% |
| 2006 | KY62 | 77.2% | 1719395 | 77.7% | | | 1685758 | 79.3% |
| 2007 | KY62 | 76.9% | 1738838 | 77.5% | | | 1704700 | 79.0% |
| 2008 | KY62 | 76.5% | 1783911 | 77.2% | | | 1748705 | 78.7% |
| 2009 | KY62 | 76.0% | 1816532 | 76.8% | | | 1780485 | 78.3% |
| 2010 | KY62 | 75.5% | 1850051 | 76.4% | | | 1813141 | 77.9% |
| 2011 | KY62 | 75.0% | 1887619 | 75.9% | | | 1849740 | 77.5% |
| 2012 | KY62 | 74.6% | 1918319 | 75.6% | | | 1879648 | 77.1% |
| 2013 | KY62 | 74.3% | 1955088 | 75.4% | | | 1915538 | 76.9% |
| 2014 | KY62 | 73.8% | 1994980 | 75.0% | | | 1954402 | 76.5% |
| 2015 | KY62 | 73.4% | 2031993 | 74.6% | | | 1990461 | 76.1% |
| 2016 | KY62 | 72.9% | 2076802 | 74.2% | | | 2034115 | 75.7% |
| Normalized 1996 | KY62 | 79.3% | 1183080 | 79.3% | 1161485 | 80.7% | 1161485 | 80.7% |

| Year | | Population (Hist/FC) | Per Capita Income (Hist/FC) | Employment (Hist/FC) | Personal Income (Hist/FC) | Cooling Degree Days (Hist/FC) | Heating Degree Days (Hist/FC) | Peak Mo. CDD (Hist/FC) |
|---|---|---|---|---|---|---|---|---|
| 1976-1981 | | 1.6% | 2.0% | 1.7% | 3.6% | 1466 | 4979 | na |
| 1981-1986 | | 2.2% | 0.2% | 2.2% | 2.5% | 1465 | 4563 | na |
| 1986-1991 | | 0.5% | 1.1% | 2.2% | 1.7% | 1539 | 4406 | 409 |
| 1991-1996 | | 1.9% | 1.9% | 3.3% | 3.8% | 1534 | 4356 | 466 |
| 1976-1996 | | 1.6% | 1.3% | 2.4% | 2.9% | 1490 | 4602 | 443 |
| 1986-1996 | | 1.2% | 1.5% | 2.7% | 2.7% | 1516 | 4393 | 443 |
| 1996-2001 | | 1.7% | 1.2% | 1.8% | 2.9% | 1376 | 4708 | 431 |
| 2001-2006 | | 1.5% | 1.2% | 1.6% | 2.8% | 1376 | 4708 | 431 |
| 2006-2011 | | 1.3% | 1.2% | 1.5% | 2.6% | 1376 | 4708 | 431 |
| 2011-2016 | | 1.3% | 1.2% | 1.4% | 2.5% | 1376 | 4708 | 431 |
| 1996-2016 | | 1.5% | 1.2% | 1.6% | 2.8% | 1376 | 4708 | 431 |
| 1972 | KY62 | 147730 | 11487 | 58720 | 1698 | 1160 | 4909 | |
| 1973 | KY62 | 150880 | 12445 | 62250 | 1877 | 1567 | 4188 | |
| 1974 | KY62 | 154710 | 12429 | 64880 | 1923 | 1229 | 4172 | |
| 1975 | KY62 | 157950 | 12199 | 63410 | 1927 | 1500 | 4283 | |
| 1976 | KY62 | 161790 | 12927 | 66800 | 2092 | 1112 | 4784 | |
| 1977 | KY62 | 165570 | 13722 | 69710 | 2272 | 1779 | 4799 | |
| 1978 | KY62 | 168680 | 13906 | 73190 | 2346 | 1550 | 5420 | |
| 1979 | KY62 | 170070 | 14406 | 73160 | 2450 | 1238 | 5227 | |
| 1980 | KY62 | 171220 | 13844 | 71870 | 2370 | 1726 | 5095 | |
| 1981 | KY62 | 175470 | 14242 | 72760 | 2499 | 1389 | 4548 | |
| 1982 | KY62 | 181000 | 14075 | 72990 | 2547 | 1349 | 4399 | |
| 1983 | KY62 | 186260 | 13336 | 75460 | 2484 | 1664 | 4640 | |
| 1984 | KY62 | 190400 | 14557 | 78390 | 2771 | 1365 | 4622 | |
| 1985 | KY62 | 194780 | 14300 | 80410 | 2785 | 1445 | 4785 | |
| 1986 | KY62 | 195720 | 14418 | 81160 | 2821 | 1576 | 4386 | |
| 1987 | KY62 | 197190 | 14406 | 83320 | 2841 | 1623 | 4290 | |
| 1988 | KY62 | 197090 | 14582 | 85040 | 2874 | 1500 | 4822 | 436 |
| 1989 | KY62 | 197690 | 15081 | 87560 | 2981 | 1396 | 4830 | 369 |
| 1990 | KY62 | 199200 | 15256 | 90020 | 3039 | 1380 | 3856 | 387 |
| 1991 | KY62 | 201090 | 15237 | 90580 | 3064 | 1757 | 4253 | 445 |
| 1992 | KY62 | 203000 | 15719 | 92220 | 3191 | 1240 | 4217 | 440 |
| 1993 | KY62 | 207110 | 15646 | 95760 | 3240 | 1613 | 4652 | 566 |
| 1994 | KY62 | 212260 | 16118 | 100590 | 3421 | 1489 | 4180 | 449 |
| 1995 | KY62 | 216930 | 16474 | 103980 | 3573 | 1613 | 4652 | 577 |
| 1996 | KY62 | 220790 | 16701 | 106420 | 3688 | 1489 | 4180 | 321 |
| 1997 | KY62 | 224541 | 16902 | 108378 | 3795 | 1376 | 4708 | 431 |
| 1998 | KY62 | 228356 | 17104 | 110374 | 3906 | 1376 | 4708 | 431 |
| 1999 | KY62 | 232239 | 17307 | 112408 | 4019 | 1376 | 4708 | 431 |
| 2000 | KY62 | 236189 | 17513 | 114481 | 4136 | 1376 | 4708 | 431 |
| 2001 | KY62 | 240208 | 17721 | 116594 | 4257 | 1376 | 4708 | 431 |
| 2002 | KY62 | 243804 | 17941 | 118490 | 4374 | 1376 | 4708 | 431 |
| 2003 | KY62 | 247456 | 18164 | 120418 | 4495 | 1376 | 4708 | 431 |
| 2004 | KY62 | 251163 | 18389 | 122378 | 4619 | 1376 | 4708 | 431 |
| 2005 | KY62 | 254928 | 18617 | 124372 | 4746 | 1376 | 4708 | 431 |
| 2006 | KY62 | 258750 | 18848 | 126399 | 4877 | 1376 | 4708 | 431 |
| 2007 | KY62 | 262219 | 19083 | 128250 | 5004 | 1376 | 4708 | 431 |
| 2008 | KY62 | 265735 | 19321 | 130128 | 5134 | 1376 | 4708 | 431 |
| 2009 | KY62 | 269299 | 19561 | 132035 | 5268 | 1376 | 4708 | 431 |
| 2010 | KY62 | 272913 | 19805 | 133971 | 5405 | 1376 | 4708 | 431 |
| 2011 | KY62 | 276576 | 20052 | 135936 | 5546 | 1376 | 4708 | 431 |
| 2012 | KY62 | 280043 | 20289 | 137771 | 5682 | 1376 | 4708 | 431 |
| 2013 | KY62 | 283554 | 20529 | 139632 | 5821 | 1376 | 4708 | 431 |
| 2014 | KY62 | 287110 | 20771 | 141520 | 5964 | 1376 | 4708 | 431 |
| 2015 | KY62 | 290711 | 21017 | 143433 | 6110 | 1376 | 4708 | 431 |
| 2016 | KY62 | 294357 | 21266 | 145373 | 6260 | 1376 | 4708 | 431 |
| Normalized 1996 | KY62 | 220790 | 16701 | 106420 | 3688 | 1376 | 4708 | 439 |

| Year | | Peak Mo. HDD (Hist/FC) |
|---|---|---|
| 1976-1981 | | na |
| 1981-1986 | | na |
| 1986-1991 | | 984 |
| 1991-1996 | | 940 |
| 1976-1996 | | 986 |
| 1986-1996 | | 986 |
| 1996-2001 | | 1124 |
| 2001-2006 | | 1124 |
| 2006-2011 | | 1124 |
| 2011-2016 | | 1124 |
| 1996-2016 | | 1124 |
| 1972 | KY62 | |
| 1973 | KY62 | |
| 1974 | KY62 | |
| 1975 | KY62 | |
| 1976 | KY62 | |
| 1977 | KY62 | |
| 1978 | KY62 | |
| 1979 | KY62 | |
| 1980 | KY62 | |
| 1981 | KY62 | |
| 1982 | KY62 | |
| 1983 | KY62 | |
| 1984 | KY62 | |
| 1985 | KY62 | |
| 1986 | KY62 | |
| 1987 | KY62 | |
| 1988 | KY62 | 1108 |
| 1989 | KY62 | 1297 |
| 1990 | KY62 | 828 |
| 1991 | KY62 | 702 |
| 1992 | KY62 | 913 |
| 1993 | KY62 | 892 |
| 1994 | KY62 | 1164 |
| 1995 | KY62 | 922 |
| 1996 | KY62 | 1048 |
| 1997 | KY62 | 1124 |
| 1998 | KY62 | 1124 |
| 1999 | KY62 | 1124 |
| 2000 | KY62 | 1124 |
| 2001 | KY62 | 1124 |
| 2002 | KY62 | 1124 |
| 2003 | KY62 | 1124 |
| 2004 | KY62 | 1124 |
| 2005 | KY62 | 1124 |
| 2006 | KY62 | 1124 |
| 2007 | KY62 | 1124 |
| 2008 | KY62 | 1124 |
| 2009 | KY62 | 1124 |
| 2010 | KY62 | 1124 |
| 2011 | KY62 | 1124 |
| 2012 | KY62 | 1124 |
| 2013 | KY62 | 1124 |
| 2014 | KY62 | 1124 |
| 2015 | KY62 | 1124 |
| 2016 | KY62 | 1124 |
| Normalized 1996 | KY62 | 1099 |

## Section 4
## Long-Term Forecast-Low Case

## Big Rivers Electric Corporation
## 1997 Load Forecast - Low Case
## Total System Requirements

| Year | Consumers | Percent Change | Sales (MWh) | Percent Change | Own Use (MWh) | Losses (%) | Member MWh Purchases | Total MWh Requirements | Percent Change |
|---|---|---|---|---|---|---|---|---|---|
| 1972 | 52,831 | | 3,792,968 | | 3,102 | 9.7% | 3,862,045 | 3,939,286 | |
| 1973 | 54,920 | 4.0% | 5,033,988 | 32.7% | 2,811 | 8.9% | 5,102,148 | 5,204,191 | 32.1% |
| 1974 | 56,975 | 3.7% | 5,918,096 | 17.6% | 2,651 | 8.7% | 5,986,239 | 6,105,964 | 17.3% |
| 1975 | 58,878 | 3.3% | 5,863,245 | -0.9% | 2,546 | 8.5% | 5,939,400 | 6,058,188 | -0.8% |
| 1976 | 61,040 | 3.7% | 6,103,980 | 4.1% | 2,860 | 9.1% | 6,190,692 | 6,314,506 | 4.2% |
| 1977 | 63,441 | 3.9% | 6,432,738 | 5.4% | 2,801 | 7.4% | 6,514,107 | 6,644,389 | 5.2% |
| 1978 | 65,205 | 2.8% | 6,436,336 | 0.1% | 3,042 | 7.6% | 6,527,678 | 6,658,231 | 0.2% |
| 1979 | 67,573 | 3.6% | 6,929,271 | 7.7% | 2,909 | 9.0% | 7,029,485 | 7,170,074 | 7.7% |
| 1980 | 68,948 | 2.0% | 7,454,859 | 7.6% | 2,754 | 6.2% | 7,528,564 | 7,679,135 | 7.1% |
| 1981 | 70,106 | 1.7% | 7,401,040 | -0.7% | 2,810 | 6.9% | 7,479,670 | 7,629,264 | -0.6% |
| 1982 | 70,894 | 1.1% | 6,342,743 | -14.3% | 2,932 | 7.2% | 6,426,261 | 6,554,786 | -14.1% |
| 1983 | 72,269 | 1.9% | 6,604,043 | 4.1% | 2,816 | 8.5% | 6,707,235 | 6,841,380 | 4.4% |
| 1984 | 73,660 | 1.9% | 7,329,994 | 11.0% | 3,042 | 5.5% | 7,398,951 | 7,546,930 | 10.3% |
| 1985 | 74,913 | 1.7% | 6,796,406 | -7.3% | 2,864 | 8.0% | 6,899,093 | 7,037,074 | -6.8% |
| 1986 | 76,008 | 1.5% | 6,125,886 | -9.9% | 2,982 | 6.7% | 6,215,491 | 6,339,799 | -9.9% |
| 1987 | 77,384 | 1.8% | 6,180,027 | 0.9% | 3,079 | 6.5% | 6,270,519 | 6,395,929 | 0.9% |
| 1988 | 78,603 | 1.6% | 7,713,154 | 24.8% | 3,196 | 6.9% | 7,813,146 | 7,969,409 | 24.6% |
| 1989 | 79,853 | 1.6% | 7,951,178 | 3.1% | 3,255 | 8.3% | 8,072,761 | 8,234,217 | 3.3% |
| 1990 | 81,050 | 1.5% | 8,113,961 | 2.0% | 3,133 | 5.6% | 8,191,465 | 8,355,294 | 1.5% |
| 1991 | 82,201 | 1.4% | 8,208,490 | 1.2% | 3,136 | 7.0% | 8,314,440 | 8,484,123 | 1.5% |
| 1992 | 83,737 | 1.9% | 8,222,493 | 0.2% | 3,362 | 7.1% | 8,326,337 | 8,496,262 | 0.1% |
| 1993 | 85,501 | 2.1% | 8,336,903 | 1.4% | 3,089 | 6.8% | 8,445,130 | 8,617,480 | 1.4% |
| 1994 | 87,257 | 2.1% | 7,355,595 | -11.8% | 3,226 | 6.1% | 7,454,220 | 7,606,347 | -11.7% |
| 1995 | 89,395 | 2.4% | 7,849,136 | 6.7% | 3,334 | 6.5% | 7,961,435 | 8,123,913 | 6.8% |
| 1996 | 91,548 | 2.4% | 7,931,120 | 1.0% | 3,598 | 6.5% | 8,045,961 | 8,210,164 | 1.1% |
| 1997 | 91,413 | -0.1% | 8,300,190 | 4.7% | 3,630 | 6.4% | 8,412,650 | 8,584,337 | 4.6% |
| 1998 | 91,289 | -0.1% | 9,081,199 | 9.4% | 3,658 | 6.3% | 9,204,242 | 9,392,084 | 9.4% |
| 1999 | 91,171 | -0.1% | 9,217,301 | 1.5% | 3,687 | 6.3% | 9,342,188 | 9,532,845 | 1.5% |
| 2000 | 91,055 | -0.1% | 9,252,061 | 0.4% | 3,715 | 6.3% | 9,377,419 | 9,568,795 | 0.4% |
| 2001 | 90,941 | -0.1% | 9,268,630 | 0.2% | 3,744 | 6.3% | 9,372,892 | 9,564,176 | -0.0% |
| 2002 | 92,283 | 1.5% | 9,291,132 | 0.2% | 3,773 | 6.2% | 9,397,324 | 9,589,106 | 0.3% |
| 2003 | 93,276 | 1.1% | 9,302,617 | 0.1% | 3,801 | 6.2% | 9,409,260 | 9,601,285 | 0.1% |
| 2004 | 93,881 | 0.6% | 9,304,666 | 0.0% | 3,830 | 6.2% | 9,411,480 | 9,603,551 | 0.0% |
| 2005 | 94,909 | 1.1% | 9,318,114 | 0.1% | 3,858 | 6.2% | 9,425,762 | 9,618,125 | 0.2% |
| 2006 | 95,283 | 0.4% | 9,319,542 | 0.0% | 3,887 | 6.2% | 9,427,227 | 9,619,619 | 0.0% |
| 2007 | 96,573 | 1.4% | 9,350,668 | 0.3% | 3,915 | 6.2% | 9,460,522 | 9,653,594 | 0.4% |
| 2008 | 97,484 | 0.9% | 9,477,833 | 1.4% | 3,944 | 6.2% | 9,588,754 | 9,784,443 | 1.4% |
| 2009 | 98,655 | 1.2% | 9,493,169 | 0.2% | 3,973 | 6.2% | 9,605,087 | 9,801,109 | 0.2% |
| 2010 | 99,134 | 0.5% | 9,497,816 | 0.0% | 4,001 | 6.2% | 9,610,054 | 9,806,178 | 0.1% |
| 2011 | 99,644 | 0.5% | 9,504,294 | 0.1% | 4,030 | 6.2% | 9,616,935 | 9,813,199 | 0.1% |
| 2012 | 101,544 | 1.9% | 9,543,954 | 0.4% | 4,058 | 6.2% | 9,659,267 | 9,856,395 | 0.4% |
| 2013 | 102,964 | 1.4% | 9,646,724 | 1.1% | 4,087 | 6.2% | 9,763,381 | 9,962,634 | 1.1% |
| 2014 | 103,982 | 1.0% | 9,659,968 | 0.1% | 4,116 | 6.2% | 9,777,613 | 9,977,156 | 0.1% |
| 2015 | 104,914 | 0.9% | 9,680,100 | 0.2% | 4,144 | 6.2% | 9,799,070 | 9,999,051 | 0.2% |
| 2016 | 105,324 | 0.4% | 9,685,320 | 0.1% | 4,173 | 6.2% | 9,804,672 | 10,004,767 | 0.1% |

Notes:
1. Years 1997-1999 based on short-term forecast
2. Year 2000 based on the average values for the short-term and long-term forecasts
3. Years 2001-2016 based on the long-term forecast
4. Losses represent distribution losses on rural system energy requirements
5. 1972-1996 respresents actual values, 1997-2016 represents weather normalized values

**Big Rivers Electric Corporation**

**1997 Load Forecast - Low Case**

**Total System Requirements**

| Year | Summer Peak (kW) | Percent Change | Load Factor | Winter Peak (kW) | Percent Change | Load Factor |
|---|---|---|---|---|---|---|
| 1972 | 497,000 | | 90.5% | 472,000 | | 93.4% |
| 1973 | 707,000 | 42.3% | 84.0% | 508,000 | 7.6% | 114.7% |
| 1974 | 737,000 | 4.2% | 94.6% | 722,000 | 42.1% | 94.6% |
| 1975 | 722,000 | -2.0% | 95.8% | 731,000 | 1.2% | 92.8% |
| 1976 | 759,000 | 5.1% | 95.0% | 748,000 | 2.3% | 94.5% |
| 1977 | 801,000 | 5.5% | 94.7% | 820,000 | 9.6% | 90.7% |
| 1978 | 802,000 | 0.1% | 94.8% | 819,000 | -0.1% | 91.0% |
| 1979 | 994,000 | 23.9% | 82.3% | 974,000 | 18.9% | 82.4% |
| 1980 | 1,039,000 | 4.5% | 84.4% | 1,007,000 | 3.4% | 85.3% |
| 1981 | 1,034,000 | -0.5% | 84.2% | 1,037,000 | 3.0% | 82.3% |
| 1982 | 890,000 | -13.9% | 84.1% | 1,034,000 | -0.3% | 70.9% |
| 1983 | 966,000 | 8.5% | 80.8% | 1,046,000 | 1.2% | 73.2% |
| 1984 | 1,027,000 | 6.3% | 83.9% | 979,000 | -6.4% | 86.3% |
| 1985 | 965,000 | -6.0% | 83.2% | 1,042,000 | 6.4% | 75.6% |
| 1986 | 890,000 | -7.8% | 81.3% | 993,000 | -4.7% | 71.5% |
| 1987 | 990,000 | 11.2% | 73.8% | 920,000 | -7.4% | 77.8% |
| 1988 | 1,157,000 | 16.9% | 78.6% | 1,063,000 | 15.5% | 83.9% |
| 1989 | 1,142,000 | -1.3% | 82.3% | 1,177,000 | 10.7% | 78.3% |
| 1990 | 1,174,000 | 2.8% | 81.2% | 1,089,000 | -7.5% | 85.9% |
| 1991 | 1,168,000 | -0.5% | 82.9% | 1,140,000 | 4.7% | 83.3% |
| 1992 | 1,166,000 | -0.2% | 83.2% | 1,149,000 | 0.8% | 82.7% |
| 1993 | 1,217,000 | 4.4% | 80.8% | 1,137,000 | -1.0% | 84.8% |
| 1994 | 1,055,000 | -13.3% | 82.3% | 1,189,000 | 4.6% | 71.6% |
| 1995 | 1,166,000 | 10.5% | 79.5% | 1,063,000 | -10.6% | 85.5% |
| 1996 | 1,167,000 | 0.1% | 80.3% | 1,154,000 | 8.6% | 79.6% |
| 1997 | 1,293,947 | 10.9% | 75.0% | 1,249,075 | 8.2% | 77.1% |
| 1998 | 1,325,902 | 2.5% | 80.1% | 1,280,627 | 2.5% | 82.3% |
| 1999 | 1,328,192 | 0.2% | 81.2% | 1,282,874 | 0.2% | 83.4% |
| 2000 | 1,337,677 | 0.7% | 81.3% | 1,297,366 | 1.1% | 83.5% |
| 2001 | 1,341,690 | 0.3% | 81.4% | 1,306,432 | 0.7% | 83.6% |
| 2002 | 1,346,739 | 0.4% | 81.3% | 1,311,482 | 0.4% | 83.5% |
| 2003 | 1,349,286 | 0.2% | 81.2% | 1,314,028 | 0.2% | 83.4% |
| 2004 | 1,349,740 | 0.0% | 81.2% | 1,314,482 | 0.0% | 83.4% |
| 2005 | 1,352,721 | 0.2% | 81.2% | 1,317,463 | 0.2% | 83.3% |
| 2006 | 1,353,037 | 0.0% | 81.2% | 1,317,780 | 0.0% | 83.3% |
| 2007 | 1,359,938 | 0.5% | 81.0% | 1,324,680 | 0.5% | 83.2% |
| 2008 | 1,378,368 | 1.4% | 81.0% | 1,343,111 | 1.4% | 83.2% |
| 2009 | 1,381,768 | 0.2% | 81.0% | 1,346,510 | 0.3% | 83.1% |
| 2010 | 1,382,798 | 0.1% | 81.0% | 1,347,541 | 0.1% | 83.1% |
| 2011 | 1,384,234 | 0.1% | 80.9% | 1,348,977 | 0.1% | 83.0% |
| 2012 | 1,393,026 | •0.6% | 80.8% | 1,357,769 | 0.7% | 82.9% |
| 2013 | 1,408,651 | 1.1% | 80.7% | 1,373,394 | 1.2% | 82.8% |
| 2014 | 1,411,588 | 0.2% | 80.7% | 1,376,330 | 0.2% | 82.8% |
| 2015 | 1,416,051 | 0.3% | 80.6% | 1,380,793 | 0.3% | 82.7% |
| 2016 | 1,417,208 | 0.1% | 80.6% | 1,381,950 | 0.1% | 82.6% |

Notes:
1. Years 1997-1999 based on short-term forecast
2. Year 2000 based on the average values for the short-term and long-term forecasts
3. Years 2001-2016 based on the long-term forecast
4. 1972-1996 respresents actual values, 1997-2016 represents weather normalized values
5. Peak amounts represent the total Big Rivers 60-minute CP demand value

Big Rivers Electric Corporation

1997 Load Forecast - Low Case

Residential Classification

| Year | Consumers | Percent Change | Sales (MWh) | Percent Change | Average Use (kWh/Cust/Mo) | Percent Change |
|---|---|---|---|---|---|---|
| 1972 | 48,646 | | 426,199 | | 730 | |
| 1973 | 50,636 | 4.1% | 475,060 | 11.5% | 782 | 7.1% |
| 1974 | 52,494 | 3.7% | 495,221 | 4.2% | 786 | 0.6% |
| 1975 | 54,230 | 3.3% | 565,706 | 14.2% | 869 | 10.6% |
| 1976 | 56,193 | 3.6% | 603,393 | 6.7% | 895 | 2.9% |
| 1977 | 58,226 | 3.6% | 706,616 | 17.1% | 1,011 | 13.0% |
| 1978 | 59,761 | 2.6% | 756,149 | 7.0% | 1,054 | 4.3% |
| 1979 | 61,858 | 3.5% | 735,825 | -2.7% | 991 | -6.0% |
| 1980 | 63,049 | 1.9% | 795,980 | 8.2% | 1,052 | 6.1% |
| 1981 | 63,941 | 1.4% | 745,835 | -6.3% | 972 | -7.6% |
| 1982 | 64,502 | 0.9% | 756,931 | 1.5% | 978 | 0.6% |
| 1983 | 65,519 | 1.6% | 781,501 | 3.2% | 994 | 1.6% |
| 1984 | 66,607 | 1.7% | 819,670 | 4.9% | 1,026 | 3.2% |
| 1985 | 67,754 | 1.7% | 819,928 | 0.0% | 1,008 | -1.7% |
| 1986 | 68,718 | 1.4% | 871,530 | 6.3% | 1,057 | 4.8% |
| 1987 | 69,946 | 1.8% | 909,195 | 4.3% | 1,083 | 2.5% |
| 1988 | 71,032 | 1.6% | 931,639 | 2.5% | 1,093 | 0.9% |
| 1989 | 72,171 | 1.6% | 925,721 | -0.6% | 1,069 | -2.2% |
| 1990 | 73,156 | 1.4% | 930,785 | 0.5% | 1,060 | -0.8% |
| 1991 | 74,176 | 1.4% | 991,459 | 6.5% | 1,114 | 5.1% |
| 1992 | 75,668 | 2.0% | 945,487 | -4.6% | 1,041 | -6.5% |
| 1993 | 77,266 | 2.1% | 1,052,301 | 11.3% | 1,135 | 9.0% |
| 1994 | 78,879 | 2.1% | 1,040,652 | -1.1% | 1,099 | -3.1% |
| 1995 | 80,808 | 2.4% | 1,101,490 | 5.8% | 1,136 | 3.3% |
| 1996 | 82,659 | 2.3% | 1,144,623 | 3.9% | 1,154 | 1.6% |
| 1997 | 82,460 | -0.2% | 1,083,125 | -5.4% | 1,095 | -5.1% |
| 1998 | 82,264 | -0.2% | 1,064,171 | -1.7% | 1,078 | -1.5% |
| 1999 | 82,073 | -0.2% | 1,051,790 | -1.2% | 1,068 | -0.9% |
| 2000 | 81,884 | -0.2% | 1,039,069 | -1.2% | 1,057 | -1.0% |
| 2001 | 81,697 | -0.2% | 1,024,533 | -1.4% | 1,045 | -1.2% |
| 2002 | 82,858 | 1.4% | 1,050,771 | 2.6% | 1,057 | 1.1% |
| 2003 | 83,683 | 1.0% | 1,055,544 | 0.5% | 1,051 | -0.5% |
| 2004 | 84,144 | 0.6% | 1,051,431 | -0.4% | 1,041 | -0.9% |
| 2005 | 85,058 | 1.1% | 1,061,196 | 0.9% | 1,040 | -0.2% |
| 2006 | 85,327 | 0.3% | 1,060,559 | -0.1% | 1,036 | -0.4% |
| 2007 | 86,444 | 1.3% | 1,082,119 | 2.0% | 1,043 | 0.7% |
| 2008 | 87,224 | 0.9% | 1,092,850 | 1.0% | 1,044 | 0.1% |
| 2009 | 88,283 | 1.2% | 1,100,116 | 0.7% | 1,038 | -0.5% |
| 2010 | 88,618 | 0.4% | 1,098,289 | -0.2% | 1,033 | -0.5% |
| 2011 | 89,021 | 0.5% | 1,100,489 | 0.2% | 1,030 | -0.3% |
| 2012 | 90,759 | 2.0% | 1,128,919 | 2.6% | 1,037 | 0.6% |
| 2013 | 92,056 | 1.4% | 1,138,692 | 0.9% | 1,031 | -0.6% |
| 2014 | 92,939 | 1.0% | 1,148,119 | 0.8% | 1,029 | -0.1% |
| 2015 | 93,747 | 0.9% | 1,154,662 | 0.6% | 1,026 | -0.3% |
| 2016 | 94,043 | 0.3% | 1,155,334 | 0.1% | 1,024 | -0.3% |

Notes:
1. Years 1997-2016 based on the long-term forecast
2. 1972-1996 respresents actual values, 1997-2016 represents weather normalized values

## Big Rivers Electric Corporation
## 1997 Load Forecast - Low Case
## C/I Small Classification

| Year | Consumers | Percent Change | Sales (MWh) | Percent Change | Average Use (kWh/Cust/Mo) | Percent Change |
|---|---|---|---|---|---|---|
| 1972 | 4,111 | | 188,145 | | 3,814 | |
| 1973 | 4,207 | 2.3% | 188,997 | 0.5% | 3,744 | -1.8% |
| 1974 | 4,402 | 4.6% | 190,553 | 0.8% | 3,607 | -3.6% |
| 1975 | 4,565 | 3.7% | 221,820 | 16.4% | 4,049 | 12.3% |
| 1976 | 4,762 | 4.3% | 235,573 | 6.2% | 4,122 | 1.8% |
| 1977 | 5,131 | 7.7% | 280,660 | 19.1% | 4,558 | 10.6% |
| 1978 | 5,352 | 4.3% | 309,797 | 10.4% | 4,824 | 5.8% |
| 1979 | 5,617 | 5.0% | 250,462 | -19.2% | 3,716 | -23.0% |
| 1980 | 5,801 | 3.3% | 266,633 | 6.5% | 3,830 | 3.1% |
| 1981 | 6,062 | 4.5% | 272,242 | 2.1% | 3,742 | -2.3% |
| 1982 | 6,277 | 3.5% | 283,508 | 4.1% | 3,764 | 0.6% |
| 1983 | 6,622 | 5.5% | 292,126 | 3.0% | 3,676 | -2.3% |
| 1984 | 6,918 | 4.5% | 313,999 | 7.5% | 3,782 | 2.9% |
| 1985 | 7,021 | 1.5% | 321,458 | 2.4% | 3,815 | 0.9% |
| 1986 | 7,151 | 1.9% | 325,914 | 1.4% | 3,798 | -0.5% |
| 1987 | 7,296 | 2.0% | 338,858 | 4.0% | 3,870 | 1.9% |
| 1988 | 7,424 | 1.8% | 351,822 | 3.8% | 3,949 | 2.0% |
| 1989 | 7,526 | 1.4% | 355,923 | 1.2% | 3,941 | -0.2% |
| 1990 | 7,730 | 2.7% | 371,964 | 4.5% | 4,010 | 1.7% |
| 1991 | 7,854 | 1.6% | 381,198 | 2.5% | 4,045 | 0.9% |
| 1992 | 7,898 | 0.6% | 388,913 | 2.0% | 4,103 | 1.5% |
| 1993 | 8,060 | 2.1% | 419,026 | 7.7% | 4,332 | 5.6% |
| 1994 | 8,198 | 1.7% | 429,433 | 2.5% | 4,365 | 0.8% |
| 1995 | 8,406 | 2.5% | 447,653 | 4.2% | 4,438 | 1.7% |
| 1996 | 8,689 | 3.4% | 463,285 | 3.5% | 4,443 | 0.1% |
| 1997 | 8,751 | 0.7% | 473,431 | 2.2% | 4,508 | 1.5% |
| 1998 | 8,819 | 0.8% | 474,603 | 0.2% | 4,485 | -0.5% |
| 1999 | 8,888 | 0.8% | 474,715 | 0.0% | 4,451 | -0.8% |
| 2000 | 8,957 | 0.8% | 475,716 | 0.2% | 4,426 | -0.6% |
| 2001 | 9,026 | 0.8% | 476,402 | 0.1% | 4,398 | -0.6% |
| 2002 | 9,204 | 2.0% | 482,799 | 1.3% | 4,371 | -0.6% |
| 2003 | 9,368 | 1.8% | 489,443 | 1.4% | 4,354 | -0.4% |
| 2004 | 9,508 | 1.5% | 495,536 | 1.2% | 4,343 | -0.2% |
| 2005 | 9,618 | 1.2% | 499,152 | 0.7% | 4,325 | -0.4% |
| 2006 | 9,719 | 1.1% | 501,149 | 0.4% | 4,297 | -0.6% |
| 2007 | 9,888 | 1.7% | 510,647 | 1.9% | 4,304 | 0.2% |
| 2008 | 10,015 | 1.3% | 515,324 | 0.9% | 4,288 | -0.4% |
| 2009 | 10,123 | 1.1% | 523,325 | 1.6% | 4,308 | 0.5% |
| 2010 | 10,263 | 1.4% | 529,732 | 1.2% | 4,301 | -0.2% |
| 2011 | 10,366 | 1.0% | 533,942 | 0.8% | 4,292 | -0.2% |
| 2012 | 10,524 | 1.5% | 545,103 | 2.1% | 4,316 | 0.6% |
| 2013 | 10,643 | 1.1% | 556,126 | 2.0% | 4,354 | 0.9% |
| 2014 | 10,774 | 1.2% | 559,876 | 0.7% | 4,330 | -0.5% |
| 2015 | 10,894 | 1.1% | 573,397 | 2.4% | 4,386 | 1.3% |
| 2016 | 11,004 | 1.0% | 577,877 | 0.8% | 4,376 | -0.2% |

Notes:
1. Years 1997-2016 based on the long-term forecast
2. 1972-1996 respresents actual values, 1997-2016 represents weather normalized values

## Big Rivers Electric Corporation
## 1997 Load Forecast - Low Case
## C/I Large Classification

| Year | Consumers | Percent Change | Sales (MWh) | Percent Change |
|---|---|---|---|---|
| 1972 | 9 | | 3,177,303 | |
| 1973 | 10 | 11.1% | 4,368,418 | 37.5% |
| 1974 | 10 | 0.0% | 5,230,483 | 19.7% |
| 1975 | 11 | 10.0% | 5,073,573 | -3.0% |
| 1976 | 16 | 45.5% | 5,262,762 | 3.7% |
| 1977 | 17 | 6.3% | 5,443,274 | 3.4% |
| 1978 | 15 | -11.8% | 5,368,154 | -1.4% |
| 1979 | 17 | 13.3% | 5,940,734 | 10.7% |
| 1980 | 18 | 5.9% | 6,390,170 | 7.6% |
| 1981 | 19 | 5.6% | 6,380,899 | -0.1% |
| 1982 | 22 | 15.8% | 5,300,242 | -16.9% |
| 1983 | 23 | 4.5% | 5,528,519 | 4.3% |
| 1984 | 25 | 8.7% | 6,194,365 | 12.0% |
| 1985 | 27 | 8.0% | 5,653,054 | -8.7% |
| 1986 | 33 | 22.2% | 4,926,411 | -12.9% |
| 1987 | 34 | 3.0% | 4,929,857 | 0.1% |
| 1988 | 36 | 5.9% | 6,427,497 | 30.4% |
| 1989 | 40 | 11.1% | 6,667,299 | 3.7% |
| 1990 | 40 | 0.0% | 6,808,988 | 2.1% |
| 1991 | 41 | 2.5% | 6,833,471 | 0.4% |
| 1992 | 38 | -7.3% | 6,885,705 | 0.8% |
| 1993 | 37 | -2.6% | 6,863,080 | -0.3% |
| 1994 | 37 | 0.0% | 5,882,908 | -14.3% |
| 1995 | 35 | -5.4% | 6,297,252 | 7.0% |
| 1996 | 38 | 8.6% | 6,320,441 | 0.4% |
| 1997 | 36 | -5.3% | 6,790,687 | 7.4% |
| 1998 | 36 | 0.0% | 7,585,880 | 11.7% |
| 1999 | 36 | 0.0% | 7,727,230 | 1.9% |
| 2000 | 36 | 0.0% | 7,759,953 | 0.4% |
| 2001 | 36 | 0.0% | 7,764,607 | 0.1% |
| 2002 | 35 | -2.8% | 7,754,407 | -0.1% |
| 2003 | 35 | 0.0% | 7,754,407 | 0.0% |
| 2004 | 35 | 0.0% | 7,754,407 | 0.0% |
| 2005 | 35 | 0.0% | 7,754,407 | 0.0% |
| 2006 | 35 | 0.0% | 7,754,407 | 0.0% |
| 2007 | 35 | 0.0% | 7,754,407 | 0.0% |
| 2008 | 35 | 0.0% | 7,866,097 | 1.4% |
| 2009 | 35 | 0.0% | 7,866,097 | 0.0% |
| 2010 | 35 | 0.0% | 7,866,097 | 0.0% |
| 2011 | 35 | 0.0% | 7,866,097 | 0.0% |
| 2012 | 35 | 0.0% | 7,866,097 | 0.0% |
| 2013 | 35 | 0.0% | 7,948,003 | 1.0% |
| 2014 | 35 | 0.0% | 7,948,003 | 0.0% |
| 2015 | 35 | 0.0% | 7,948,003 | 0.0% |
| 2016 | 35 | 0.0% | 7,948,003 | 0.0% |

Notes:
1. Years 1997-2016 based on the long-term forecast
2. 1972-1996 respresents actual values, 1997-2016 represents weather normalized values

**Big Rivers Electric Corporation**

**1997 Load Forecast - Low Case**

**Public Street Lighting Classification**

| Year | Consumers | Percent Change | Sales (MWh) | Percent Change |
|---|---|---|---|---|
| 1972 | 65 | | 1,321 | |
| 1973 | 67 | 3.1% | 1,512 | 14.5% |
| 1974 | 69 | 3.0% | 1,839 | 21.6% |
| 1975 | 72 | 4.3% | 2,145 | 16.7% |
| 1976 | 69 | -4.2% | 2,252 | 5.0% |
| 1977 | 68 | -1.4% | 2,188 | -2.8% |
| 1978 | 71 | 4.4% | 2,204 | 0.7% |
| 1979 | 76 | 7.0% | 2,210 | 0.3% |
| 1980 | 74 | -2.6% | 2,032 | -8.0% |
| 1981 | 76 | 2.7% | 1,985 | -2.3% |
| 1982 | 84 | 10.5% | 1,999 | 0.7% |
| 1983 | 93 | 10.7% | 1,833 | -8.3% |
| 1984 | 98 | 5.4% | 1,887 | 2.9% |
| 1985 | 99 | 1.0% | 1,927 | 2.2% |
| 1986 | 96 | -3.0% | 1,981 | 2.8% |
| 1987 | 101 | 5.2% | 2,048 | 3.4% |
| 1988 | 104 | 3.0% | 2,110 | 3.0% |
| 1989 | 109 | 4.8% | 2,154 | 2.1% |
| 1990 | 116 | 6.4% | 2,177 | 1.1% |
| 1991 | 121 | 4.3% | 2,276 | 4.5% |
| 1992 | 124 | 2.5% | 2,275 | -0.1% |
| 1993 | 129 | 4.0% | 2,417 | 6.2% |
| 1994 | 134 | 3.9% | 2,509 | 3.8% |
| 1995 | 136 | 1.5% | 2,641 | 5.3% |
| 1996 | 152 | 11.8% | 2,661 | 0.8% |
| 1997 | 156 | 2.6% | 2,729 | 2.6% |
| 1998 | 160 | 2.6% | 2,797 | 2.5% |
| 1999 | 164 | 2.5% | 2,865 | 2.4% |
| 2000 | 168 | 2.4% | 2,933 | 2.4% |
| 2001 | 172 | 2.4% | 3,001 | 2.3% |
| 2002 | 176 | 2.3% | 3,069 | 2.3% |
| 2003 | 180 | 2.3% | 3,137 | 2.2% |
| 2004 | 184 | 2.2% | 3,205 | 2.2% |
| 2005 | 188 | 2.2% | 3,273 | 2.1% |
| 2006 | 192 | 2.1% | 3,341 | 2.1% |
| 2007 | 196 | 2.1% | 3,409 | 2.0% |
| 2008 | 200 | 2.0% | 3,477 | 2.0% |
| 2009 | 204 | 2.0% | 3,545 | 2.0% |
| 2010 | 208 | 2.0% | 3,612 | 1.9% |
| 2011 | 212 | 1.9% | 3,680 | 1.9% |
| 2012 | 216 | 1.9% | 3,748 | 1.8% |
| 2013 | 220 | 1.9% | 3,816 | 1.8% |
| 2014 | 224 | 1.8% | 3,884 | 1.8% |
| 2015 | 228 | 1.8% | 3,952 | 1.7% |
| 2016 | 232 | 1.8% | 4,020 | 1.7% |

Notes:
1. Years 1997-2016 based on the long-term forecast
2. 1972-1996 respresents actual values, 1997-2016 represents weather normalized values

**Big Rivers Electric Corporation**

**1997 Load Forecast - Low Case**

**Irrigation Classification**

| Year | Consumers | Percent Change | Sales (MWh) | Percent Change |
|---|---|---|---|---|
| 1972 | 0 | | 0 | |
| 1973 | 0 | 0.0% | 0 | 0.0% |
| 1974 | 0 | 0.0% | 0 | 0.0% |
| 1975 | 0 | 0.0% | 0 | 0.0% |
| 1976 | 0 | 0.0% | 0 | 0.0% |
| 1977 | 0 | 0.0% | 0 | 0.0% |
| 1978 | 6 | 0.0% | 33 | 0.0% |
| 1979 | 6 | 0.0% | 40 | 23.3% |
| 1980 | 7 | 16.7% | 42 | 5.1% |
| 1981 | 8 | 14.3% | 79 | 85.5% |
| 1982 | 9 | 12.5% | 63 | -20.0% |
| 1983 | 12 | 33.3% | 65 | 3.1% |
| 1984 | 12 | 0.0% | 74 | 13.4% |
| 1985 | 12 | 0.0% | 39 | -46.5% |
| 1986 | 9 | -25.0% | 50 | 26.3% |
| 1987 | 8 | -11.1% | 68 | 36.9% |
| 1988 | 7 | -12.5% | 85 | 24.6% |
| 1989 | 7 | 0.0% | 82 | -3.9% |
| 1990 | 8 | 14.3% | 48 | -41.3% |
| 1991 | 9 | 12.5% | 86 | 79.1% |
| 1992 | 9 | 0.0% | 114 | 32.5% |
| 1993 | 9 | 0.0% | 78 | -31.2% |
| 1994 | 9 | 0.0% | 93 | 19.3% |
| 1995 | 10 | 11.1% | 100 | 7.2% |
| 1996 | 10 | 0.0% | 110 | 10.0% |
| 1997 | 10 | 0.0% | 86 | -21.5% |
| 1998 | 10 | 0.0% | 86 | 0.0% |
| 1999 | 10 | 0.0% | 86 | 0.0% |
| 2000 | 10 | 0.0% | 86 | 0.0% |
| 2001 | 10 | 0.0% | 86 | 0.0% |
| 2002 | 10 | 0.0% | 86 | 0.0% |
| 2003 | 10 | 0.0% | 86 | 0.0% |
| 2004 | 10 | 0.0% | 86 | 0.0% |
| 2005 | 10 | 0.0% | 86 | 0.0% |
| 2006 | 10 | 0.0% | 86 | 0.0% |
| 2007 | 10 | 0.0% | 86 | 0.0% |
| 2008 | 10 | 0.0% | 86 | 0.0% |
| 2009 | 10 | 0.0% | 86 | 0.0% |
| 2010 | 10 | 0.0% | 86 | 0.0% |
| 2011 | 10 | 0.0% | 86 | 0.0% |
| 2012 | 10 | 0.0% | 86 | 0.0% |
| 2013 | 10 | 0.0% | 86 | 0.0% |
| 2014 | 10 | 0.0% | 86 | 0.0% |
| 2015 | 10 | 0.0% | 86 | 0.0% |
| 2016 | 10 | 0.0% | 86 | 0.0% |

Notes:
1. Years 1997-2016 based on the long-term forecast
2. 1972-1996 respresents actual values, 1997-2016 represents weather normalized values

| Year | | Residential Consumers (Historical) | Residential Consumers (Model) | C/I Small Consumers (Historical) | C/I Small Consumers (Model) | C/I Large Consumers (Hist/FC) | Pb St Lgt Consumers (Hist/FC) | Irrigation Consumers (Hist/FC) |
|---|---|---|---|---|---|---|---|---|
| 1976-1981 | | 2.6% | 2.1% | 4.9% | 2.3% | 3.5% | 1.9% | na |
| 1981-1986 | | 1.5% | 2.8% | 3.4% | 3.2% | 11.7% | 5.0% | 2.4% |
| 1986-1991 | | 1.5% | 0.7% | 1.9% | 2.9% | 4.4% | 4.6% | 0.4% |
| 1991-1996 | | 2.2% | 2.5% | 2.0% | 4.4% | -1.5% | 4.8% | 1.8% |
| 1976-1996 | | 1.9% | 2.0% | 3.1% | 3.2% | 4.4% | 4.0% | na |
| 1986-1996 | | 1.9% | 1.6% | 2.0% | 3.7% | 1.4% | 4.7% | 1.1% |
| 1996-2001 | | na | -0.2% | na | 0.8% | -1.1% | 2.5% | 0.0% |
| 2001-2006 | | na | 0.9% | na | 1.5% | -0.6% | 2.2% | 0.0% |
| 2006-2011 | | na | 0.9% | na | 1.3% | 0.0% | 2.0% | 0.0% |
| 2011-2016 | | na | 1.1% | na | 1.2% | 0.0% | 1.8% | 0.0% |
| 1996-2016 | | na | 0.5% | na | 1.2% | -0.5% | 2.2% | 0.0% |
| 1972 | KY62 | 48646 | | 4111 | | 9 | 65 | 0 |
| 1973 | KY62 | 50636 | 50877 | 4207 | 4616 | 10 | 67 | 0 |
| 1974 | KY62 | 52494 | 52557 | 4402 | 4891 | 10 | 69 | 0 |
| 1975 | KY62 | 54230 | 53993 | 4565 | 4734 | 11 | 72 | 0 |
| 1976 | KY62 | 56193 | 55752 | 4762 | 5060 | 16 | 69 | 0 |
| 1977 | KY62 | 58226 | 57489 | 5131 | 5344 | 17 | 68 | 0 |
| 1978 | KY62 | 59761 | 58883 | 5352 | 5705 | 15 | 71 | 6 |
| 1979 | KY62 | 61858 | 59539 | 5617 | 5694 | 17 | 76 | 6 |
| 1980 | KY62 | 63049 | 60080 | 5801 | 5566 | 18 | 74 | 7 |
| 1981 | KY62 | 63941 | 61880 | 6062 | 5672 | 19 | 76 | 8 |
| 1982 | KY62 | 64502 | 64238 | 6277 | 5707 | 22 | 84 | 9 |
| 1983 | KY62 | 65519 | 66517 | 6622 | 5998 | 23 | 93 | 12 |
| 1984 | KY62 | 66607 | 68343 | 6918 | 6303 | 25 | 98 | 12 |
| 1985 | KY62 | 67754 | 70337 | 7021 | 6536 | 27 | 99 | 12 |
| 1986 | KY62 | 68718 | 70914 | 7151 | 6645 | 33 | 96 | 9 |
| 1987 | KY62 | 69946 | 71665 | 7296 | 6882 | 34 | 101 | 8 |
| 1988 | KY62 | 71032 | 71533 | 7424 | 7039 | 36 | 104 | 7 |
| 1989 | KY62 | 72171 | 71890 | 7526 | 7320 | 40 | 109 | 7 |
| 1990 | KY62 | 73156 | 72562 | 7730 | 7601 | 40 | 116 | 8 |
| 1991 | KY62 | 74176 | 73426 | 7854 | 7679 | 41 | 121 | 9 |
| 1992 | KY62 | 75668 | 74332 | 7898 | 7849 | 38 | 124 | 9 |
| 1993 | KY62 | 77266 | 76292 | 8060 | 8273 | 37 | 129 | 9 |
| 1994 | KY62 | 78879 | 78785 | 8198 | 8826 | 37 | 134 | 9 |
| 1995 | KY62 | 80808 | 81106 | 8406 | 9224 | 35 | 136 | 10 |
| 1996 | KY62 | 82659 | 82969 | 8689 | 9517 | 38 | 152 | 10 |
| 1997 | KY62 | | 82460 | | 8751 | 36 | 156 | 10 |
| 1998 | KY62 | | 82264 | | 8819 | 36 | 160 | 10 |
| 1999 | KY62 | | 82073 | | 8888 | 36 | 164 | 10 |
| 2000 | KY62 | | 81884 | | 8957 | 36 | 168 | 10 |
| 2001 | KY62 | | 81697 | | 9026 | 36 | 172 | 10 |
| 2002 | KY62 | | 82858 | | 9204 | 35 | 176 | 10 |
| 2003 | KY62 | | 83683 | | 9368 | 35 | 180 | 10 |
| 2004 | KY62 | | 84144 | | 9508 | 35 | 184 | 10 |
| 2005 | KY62 | | 85058 | | 9618 | 35 | 188 | 10 |
| 2006 | KY62 | | 85327 | | 9719 | 35 | 192 | 10 |
| 2007 | KY62 | | 86444 | | 9888 | 35 | 196 | 10 |
| 2008 | KY62 | | 87224 | | 10015 | 35 | 200 | 10 |
| 2009 | KY62 | | 88283 | | 10123 | 35 | 204 | 10 |
| 2010 | KY62 | | 88618 | | 10263 | 35 | 208 | 10 |
| 2011 | KY62 | | 89021 | | 10366 | 35 | 212 | 10 |
| 2012 | KY62 | | 90759 | | 10524 | 35 | 216 | 10 |
| 2013 | KY62 | | 92056 | | 10643 | 35 | 220 | 10 |
| 2014 | KY62 | | 92939 | | 10774 | 35 | 224 | 10 |
| 2015 | KY62 | | 93747 | | 10894 | 35 | 228 | 10 |
| 2016 | KY62 | | 94043 | | 11004 | 35 | 232 | 10 |
| Normalized 1996 | KY62 | 82659 | 82969 | 8689 | 9517 | 38 | 152 | 10 |

| Year | | Total Consumers (Hist/FC) | Residential kWh/Cons/Mo (Historical) | Residential kWh/Cons/Mo (Model) | Residential Energy (MWh) (Historical) | Residential Energy (MWh) (Model) | C/I Small Energy (MWh) (Historical) | C/I Small Energy (MWh) (Model) |
|---|---|---|---|---|---|---|---|---|
| 1976-1981 | | 2.8% | 1.7% | 2.0% | 4.3% | 4.2% | 2.9% | 2.8% |
| 1981-1986 | | 1.6% | 1.7% | 0.1% | 3.2% | 2.9% | 3.7% | 4.2% |
| 1986-1991 | | 1.6% | 1.1% | 0.8% | 2.6% | 1.5% | 3.2% | 2.9% |
| 1991-1996 | | 2.2% | 0.7% | 0.9% | 2.9% | 3.4% | 4.0% | 3.6% |
| 1976-1996 | | 2.0% | 1.3% | 1.0% | 3.3% | 3.0% | 3.4% | 3.4% |
| 1986-1996 | | 1.9% | 0.9% | 0.8% | 2.8% | 2.4% | 3.6% | 3.3% |
| 1996-2001 | | -0.1% | na | -2.0% | na | -2.2% | na | 0.4% |
| 2001-2006 | | 0.9% | na | -0.2% | na | 0.7% | na | 1.0% |
| 2006-2011 | | 0.9% | na | -0.1% | na | 0.7% | na | 1.3% |
| 2011-2016 | | 1.1% | na | -0.1% | na | 1.0% | na | 1.6% |
| 1996-2016 | | 0.6% | na | -0.8% | na | -0.3% | na | 0.9% |
| 1972 | KY62 | 52831 | 730 | | 426199 | 0 | 188145 | 22409 |
| 1973 | KY62 | 54920 | 782 | 924 | 475060 | 563955 | 188997 | 194662 |
| 1974 | KY62 | 56975 | 786 | 895 | 495221 | 564730 | 190553 | 195110 |
| 1975 | KY62 | 58878 | 869 | 933 | 565706 | 604335 | 221820 | 205861 |
| 1976 | KY62 | 61040 | 895 | 953 | 603393 | 637755 | 235573 | 236974 |
| 1977 | KY62 | 63441 | 1011 | 1071 | 706616 | 738751 | 280660 | 288719 |
| 1978 | KY62 | 65205 | 1054 | 1122 | 756149 | 792792 | 309797 | 307097 |
| 1979 | KY62 | 67573 | 991 | 1086 | 735825 | 775765 | 250462 | 262101 |
| 1980 | KY62 | 68948 | 1052 | 1115 | 795980 | 803712 | 266633 | 268744 |
| 1981 | KY62 | 70106 | 972 | 1054 | 745835 | 782519 | 272242 | 271847 |
| 1982 | KY62 | 70894 | 978 | 1007 | 756931 | 776177 | 283508 | 274971 |
| 1983 | KY62 | 72269 | 994 | 1055 | 781501 | 842051 | 292126 | 295508 |
| 1984 | KY62 | 73660 | 1026 | 1048 | 819670 | 859180 | 313999 | 303686 |
| 1985 | KY62 | 74913 | 1008 | 1075 | 819928 | 907595 | 321458 | 320401 |
| 1986 | KY62 | 76008 | 1057 | 1060 | 871530 | 902323 | 325914 | 333264 |
| 1987 | KY62 | 77384 | 1083 | 1072 | 909195 | 922318 | 338858 | 339690 |
| 1988 | KY62 | 78603 | 1093 | 1106 | 931639 | 949169 | 351822 | 349934 |
| 1989 | KY62 | 79853 | 1069 | 1103 | 925721 | 951237 | 355923 | 359321 |
| 1990 | KY62 | 81050 | 1060 | 1020 | 930785 | 888461 | 371964 | 352089 |
| 1991 | KY62 | 82201 | 1114 | 1102 | 991459 | 971072 | 381198 | 384898 |
| 1992 | KY62 | 83737 | 1041 | 1049 | 945487 | 935830 | 388913 | 379343 |
| 1993 | KY62 | 85501 | 1135 | 1119 | 1052301 | 1024725 | 419026 | 414846 |
| 1994 | KY62 | 87257 | 1099 | 1102 | 1040652 | 1041437 | 429433 | 420497 |
| 1995 | KY62 | 89395 | 1136 | 1151 | 1101490 | 1120356 | 447653 | 447945 |
| 1996 | KY62 | 91548 | 1154 | 1153 | 1144623 | 1148242 | 463285 | 459619 |
| 1997 | KY62 | 91413 | | 1095 | | 1083125 | | 473431 |
| 1998 | KY62 | 91289 | | 1078 | | 1064171 | | 474603 |
| 1999 | KY62 | 91171 | | 1068 | | 1051790 | | 474715 |
| 2000 | KY62 | 91055 | | 1057 | | 1039069 | | 475716 |
| 2001 | KY62 | 90941 | | 1045 | | 1024533 | | 476402 |
| 2002 | KY62 | 92283 | | 1057 | | 1050771 | | 482799 |
| 2003 | KY62 | 93276 | | 1051 | | 1055544 | | 489443 |
| 2004 | KY62 | 93881 | | 1041 | | 1051431 | | 495536 |
| 2005 | KY62 | 94909 | | 1040 | | 1061196 | | 499152 |
| 2006 | KY62 | 95283 | | 1036 | | 1060559 | | 501149 |
| 2007 | KY62 | 96573 | | 1043 | | 1082119 | | 510647 |
| 2008 | KY62 | 97484 | | 1044 | | 1092850 | | 515324 |
| 2009 | KY62 | 98655 | | 1038 | | 1100116 | | 523325 |
| 2010 | KY62 | 99134 | | 1033 | | 1098289 | | 529732 |
| 2011 | KY62 | 99644 | | 1030 | | 1100489 | | 533942 |
| 2012 | KY62 | 101544 | | 1037 | | 1128919 | | 545103 |
| 2013 | KY62 | 102964 | | 1031 | | 1138692 | | 556126 |
| 2014 | KY62 | 103982 | | 1029 | | 1148119 | | 559876 |
| 2015 | KY62 | 104914 | | 1026 | | 1154662 | | 573397 |
| 2016 | KY62 | 105324 | | 1024 | | 1155334 | | 577877 |
| Normalized 1996 | KY62 | 91548 | 1156 | | 1146945 | | 466249 | |

| Year | | C/I Large Energy (MWh) (Hist/FC) | Pb St Lgt Energy (MWh) (Hist/FC) | Irrigation Energy (MWh) (Hist/FC) | Own Use Energy (MWh) (Hist/FC) | Rural System Energy Sales (MWh) (Hist/FC) | Smelter Energy (MWh) (Hist/FC) | Non Smelter Energy (MWh) (Hist/FC) |
|---|---|---|---|---|---|---|---|---|
| 1976-1981 | | 3.9% | -2.5% | na | -0.4% | 3.9% | na | na |
| 1981-1986 | | -5.0% | -0.0% | -8.8% | 1.2% | 3.3% | -6.6% | 5.0% |
| 1986-1991 | | 6.8% | 2.8% | 11.5% | 1.0% | 2.8% | 7.3% | 3.0% |
| 1991-1996 | | -1.5% | 3.2% | 5.1% | 2.8% | 3.2% | -3.4% | 5.3% |
| 1976-1996 | | 0.9% | 0.8% | na | 1.2% | 3.3% | na | na |
| 1986-1996 | | 2.5% | 3.0% | 8.2% | 1.9% | 3.0% | 1.8% | 4.2% |
| 1996-2001 | | 4.2% | 2.4% | -4.7% | 0.8% | -1.4% | 3.8% | 2.0% |
| 2001-2006 | | -0.0% | 2.2% | 0.0% | 0.8% | 0.8% | 0.0% | 0.3% |
| 2006-2011 | | 0.3% | 2.0% | 0.0% | 0.7% | 0.9% | 0.0% | 1.1% |
| 2011-2016 | | 0.2% | 1.8% | 0.0% | 0.7% | 1.2% | 0.0% | 1.0% |
| 1996-2016 | | 1.5% | 2.2% | -1.6% | 0.8% | 0.1% | 1.3% | 1.1% |
| 1972 | KY62 | 3177303 | 1321 | 0 | 3102 | 615665 | na | na |
| 1973 | KY62 | 4368418 | 1512 | 0 | 2811 | 665570 | na | na |
| 1974 | KY62 | 5230483 | 1839 | 0 | 2651 | 687613 | na | na |
| 1975 | KY62 | 5073573 | 2145 | 0 | 2546 | 789672 | na | na |
| 1976 | KY62 | 5262762 | 2252 | 0 | 2860 | 841218 | 4934026 | 1169954 |
| 1977 | KY62 | 5443274 | 2188 | 0 | 2801 | 989464 | 5103835 | 1328903 |
| 1978 | KY62 | 5368154 | 2204 | 33 | 3042 | 1068182 | 5014840 | 1421496 |
| 1979 | KY62 | 5940734 | 2210 | 40 | 2909 | 988537 | 5500327 | 1428943 |
| 1980 | KY62 | 6390170 | 2032 | 42 | 2754 | 1064688 | 5935116 | 1519743 |
| 1981 | KY62 | 6380899 | 1985 | 79 | 2810 | 1020141 | 5893803 | 1507237 |
| 1982 | KY62 | 5300242 | 1999 | 63 | 2932 | 1042501 | 4732186 | 1610557 |
| 1983 | KY62 | 5528519 | 1833 | 65 | 2816 | 1075525 | 4880411 | 1723633 |
| 1984 | KY62 | 6194365 | 1887 | 74 | 3042 | 1135629 | 5495014 | 1834979 |
| 1985 | KY62 | 5653054 | 1927 | 39 | 2864 | 1143352 | 4964900 | 1831506 |
| 1986 | KY62 | 4926411 | 1981 | 50 | 2982 | 1199475 | 4198758 | 1927128 |
| 1987 | KY62 | 4929857 | 2048 | 68 | 3079 | 1250169 | 4163242 | 2016784 |
| 1988 | KY62 | 6427497 | 2110 | 85 | 3196 | 1285657 | 5627682 | 2085472 |
| 1989 | KY62 | 6667299 | 2154 | 82 | 3255 | 1283879 | 5862015 | 2089163 |
| 1990 | KY62 | 6808988 | 2177 | 48 | 3133 | 1304974 | 5916778 | 2197184 |
| 1991 | KY62 | 6833471 | 2276 | 86 | 3136 | 1375019 | 5969212 | 2239278 |
| 1992 | KY62 | 6885705 | 2275 | 114 | 3362 | 1336789 | 6001284 | 2221209 |
| 1993 | KY62 | 6863080 | 2417 | 78 | 3089 | 1473823 | 5966768 | 2370135 |
| 1994 | KY62 | 5882908 | 2509 | 93 | 3226 | 1472687 | 4942862 | 2412733 |
| 1995 | KY62 | 6297252 | 2641 | 100 | 3334 | 1551884 | 5162811 | 2686325 |
| 1996 | KY62 | 6320441 | 2661 | 110 | 3598 | 1610679 | 5028097 | 2903023 |
| 1997 | KY62 | 6790687 | 2729 | 86 | 3630 | 1559372 | 5426886 | 2923173 |
| 1998 | KY62 | 7585880 | 2797 | 86 | 3658 | 1541657 | 6065161 | 3062376 |
| 1999 | KY62 | 7727230 | 2865 | 86 | 3687 | 1529457 | 6065161 | 3191526 |
| 2000 | KY62 | 7759953 | 2933 | 86 | 3715 | 1517804 | 6065161 | 3212596 |
| 2001 | KY62 | 7764607 | 3001 | 86 | 3744 | 1504023 | 6065161 | 3203469 |
| 2002 | KY62 | 7754407 | 3069 | 86 | 3773 | 1536725 | 6065161 | 3225971 |
| 2003 | KY62 | 7754407 | 3137 | 86 | 3801 | 1548210 | 6065161 | 3237456 |
| 2004 | KY62 | 7754407 | 3205 | 86 | 3830 | 1550259 | 6065161 | 3239505 |
| 2005 | KY62 | 7754407 | 3273 | 86 | 3858 | 1563707 | 6065161 | 3252953 |
| 2006 | KY62 | 7754407 | 3341 | 86 | 3887 | 1565135 | 6065161 | 3254381 |
| 2007 | KY62 | 7754407 | 3409 | 86 | 3915 | 1596261 | 6065161 | 3285507 |
| 2008 | KY62 | 7866097 | 3477 | 86 | 3944 | 1611736 | 6065161 | 3412672 |
| 2009 | KY62 | 7866097 | 3545 | 86 | 3973 | 1627072 | 6065161 | 3428008 |
| 2010 | KY62 | 7866097 | 3612 | 86 | 4001 | 1631719 | 6065161 | 3432655 |
| 2011 | KY62 | 7866097 | 3680 | 86 | 4030 | 1638197 | 6065161 | 3439133 |
| 2012 | KY62 | 7866097 | 3748 | 86 | 4058 | 1677857 | 6065161 | 3478793 |
| 2013 | KY62 | 7948003 | 3816 | 86 | 4087 | 1698721 | 6065161 | 3581563 |
| 2014 | KY62 | 7948003 | 3884 | 86 | 4116 | 1711965 | 6065161 | 3594807 |
| 2015 | KY62 | 7948003 | 3952 | 86 | 4144 | 1732097 | 6065161 | 3614939 |
| 2016 | KY62 | 7948003 | 4020 | 86 | 4173 | 1737317 | 6065161 | 3620159 |
| Normalized 1996 | KY62 | 6320441 | 2661 | 110 | 3598 | 1615965 | 5028097 | 2908309 |

| Year | | Total Mbr. System Energy Sales (MWh) (Hist/FC) | Rural System Losses (%) (Hist/FC) | Native Sales (MWh) (Hist/FC) | Total Energy Req. (MWh) (Hist/FC) | Summer Rural System NCP (kW) (Hist/FC-LF) | Summer Rural System NCP L.F. (Hist/FC) | Summer Rural System NCP (kW) (Model) |
|---|---|---|---|---|---|---|---|---|
| 1976-1981 | | 3.9% | 7.7% | 3.9% | 3.9% | na | na | na |
| 1981-1986 | | -3.7% | 7.1% | -3.6% | -3.6% | 3.2% | 43.7% | na |
| 1986-1991 | | 6.0% | 6.8% | 6.0% | 6.0% | 0.6% | 45.8% | na |
| 1991-1996 | | -0.7% | 6.6% | -0.7% | -0.7% | 2.0% | 47.4% | na |
| 1976-1996 | | 1.3% | 7.1% | 1.3% | 1.3% | na | na | na |
| 1986-1996 | | 2.6% | 6.7% | 2.6% | 2.6% | 1.3% | 46.6% | na |
| 1996-2001 | | 3.2% | 6.4% | 3.1% | 3.1% | -1.8% | 47.9% | -1.3% |
| 2001-2006 | | 0.1% | 6.4% | 0.1% | 0.1% | 0.8% | 47.5% | 0.7% |
| 2006-2011 | | 0.4% | 6.4% | 0.4% | 0.4% | 0.9% | 47.5% | 0.8% |
| 2011-2016 | | 0.4% | 6.4% | 0.4% | 0.4% | 1.2% | 47.5% | 1.0% |
| 1996-2016 | | 1.2% | 6.4% | 1.2% | 1.2% | -0.1% | 47.6% | 0.0% |
| 1972 | KY62 | 3792968 | 9.7% | 3862045 | 3939286 | na | na | na |
| 1973 | KY62 | 5033988 | 8.9% | 5102148 | 5204191 | na | na | na |
| 1974 | KY62 | 5918096 | 8.7% | 5986239 | 6105964 | na | na | na |
| 1975 | KY62 | 5863245 | 8.5% | 5939400 | 6058188 | na | na | na |
| 1976 | KY62 | 6103980 | 9.1% | 6190692 | 6314506 | na | na | na |
| 1977 | KY62 | 6432738 | 7.4% | 6514107 | 6644389 | na | na | na |
| 1978 | KY62 | 6436336 | 7.6% | 6527678 | 6658231 | na | na | na |
| 1979 | KY62 | 6929271 | 9.0% | 7029485 | 7170074 | 274000 | 45.2% | na |
| 1980 | KY62 | 7454859 | 6.2% | 7528564 | 7679135 | 302000 | 42.9% | na |
| 1981 | KY62 | 7401040 | 6.9% | 7479670 | 7629264 | 295000 | 42.4% | na |
| 1982 | KY62 | 6342743 | 7.2% | 6426261 | 6554786 | 294000 | 43.6% | na |
| 1983 | KY62 | 6604043 | 8.5% | 6707235 | 6841380 | 320000 | 41.9% | na |
| 1984 | KY62 | 7329994 | 5.5% | 7398951 | 7546930 | 299000 | 45.9% | na |
| 1985 | KY62 | 6796406 | 8.0% | 6899093 | 7037074 | 309000 | 45.9% | na |
| 1986 | KY62 | 6125886 | 6.7% | 6215491 | 6339799 | 346000 | 42.4% | na |
| 1987 | KY62 | 6180027 | 6.5% | 6270519 | 6395929 | 330000 | 46.3% | na |
| 1988 | KY62 | 7713154 | 7.0% | 7813146 | 7969409 | 349000 | 45.2% | na |
| 1989 | KY62 | 7951178 | 8.4% | 8072761 | 8234217 | 329000 | 48.7% | na |
| 1990 | KY62 | 8113961 | 5.4% | 8191465 | 8355294 | 350000 | 45.0% | na |
| 1991 | KY62 | 8208490 | 7.0% | 8314440 | 8484123 | 357160 | 47.2% | na |
| 1992 | KY62 | 8222493 | 7.0% | 8326337 | 8496262 | 345226 | 47.5% | na |
| 1993 | KY62 | 8336903 | 6.7% | 8445130 | 8617480 | 390425 | 46.2% | na |
| 1994 | KY62 | 7355595 | 6.1% | 7454220 | 7606347 | 371171 | 48.2% | na |
| 1995 | KY62 | 7849136 | 6.6% | 7961435 | 8123913 | 414874 | 45.7% | na |
| 1996 | KY62 | 7931120 | 6.5% | 8045961 | 8210164 | 394421 | 49.8% | 394421 |
| 1997 | KY62 | 8350059 | 6.4% | 8459474 | 8632116 | 400256 | 47.5% | 408849 |
| 1998 | KY62 | 9127537 | 6.3% | 9235385 | 9423862 | 395615 | 47.5% | 404897 |
| 1999 | KY62 | 9256687 | 6.3% | 9363371 | 9554460 | 392395 | 47.5% | 402175 |
| 2000 | KY62 | 9277757 | 6.3% | 9383289 | 9574784 | 389310 | 47.5% | 399576 |
| 2001 | KY62 | 9268630 | 6.3% | 9372892 | 9564176 | 385686 | 47.5% | 396501 |
| 2002 | KY62 | 9291132 | 6.2% | 9397324 | 9589106 | 394003 | 47.5% | 403797 |
| 2003 | KY62 | 9302617 | 6.2% | 9409260 | 9601285 | 396866 | 47.5% | 406359 |
| 2004 | KY62 | 9304666 | 6.2% | 9411480 | 9603551 | 397393 | 47.5% | 406816 |
| 2005 | KY62 | 9318114 | 6.2% | 9425762 | 9618125 | 400819 | 47.5% | 409816 |
| 2006 | KY62 | 9319542 | 6.2% | 9427227 | 9619619 | 401164 | 47.5% | 410135 |
| 2007 | KY62 | 9350668 | 6.2% | 9460522 | 9653594 | 409160 | 47.5% | 417079 |
| 2008 | KY62 | 9477833 | 6.2% | 9588754 | 9784443 | 413129 | 47.5% | 420531 |
| 2009 | KY62 | 9493169 | 6.2% | 9605087 | 9801109 | 417049 | 47.5% | 423952 |
| 2010 | KY62 | 9497816 | 6.2% | 9610054 | 9806178 | 418236 | 47.5% | 424989 |
| 2011 | KY62 | 9504294 | 6.2% | 9616935 | 9813199 | 419883 | 47.5% | 426434 |
| 2012 | KY62 | 9543954 | 6.2% | 9659267 | 9856395 | 430051 | 47.5% | 435282 |
| 2013 | KY62 | 9646724 | 6.2% | 9763381 | 9962634 | 435383 | 47.5% | 439936 |
| 2014 | KY62 | 9659968 | 6.2% | 9777613 | 9977156 | 438797 | 47.5% | 442891 |
| 2015 | KY62 | 9680100 | 6.2% | 9799070 | 9999051 | 443947 | 47.5% | 447382 |
| 2016 | KY62 | 9685320 | 6.2% | 9804672 | 10004767 | 445287 | 47.5% | 448547 |
| Normalized 1996 | KY62 | 7936406 | 6.4% | 8051611 | 8215930 | 423356 | 46.5% | 423356 |

| Year | | Summer Rural System NCP L.F. (Model) | Summer Rural System CP (kW) (Hist) | Summer Rural System CP L.F. (Hist) | Summer Rural System CP (kW) (Model) | Summer Rural System CP L.F. (Model) | Summer C/I Large NCP (kW) (Hist/FC) | Summer Smelter NCP (kW) (Hist/FC) |
|---|---|---|---|---|---|---|---|---|
| 1976-1981 | | na | na | na | na | na | na | na |
| 1981-1986 | | na | 3.2% | 45.5% | na | na | na | -4.2% |
| 1986-1991 | | na | 0.1% | 47.0% | na | na | na | 4.3% |
| 1991-1996 | | na | 2.3% | 49.8% | na | na | -1.6% | -3.8% |
| 1976-1996 | | na | na | na | na | na | na | na |
| 1986-1996 | | na | 1.2% | 48.3% | na | na | na | 0.2% |
| 1996-2001 | | 46.9% | na | na | -1.3% | 48.3% | 4.1% | 4.4% |
| 2001-2006 | | 46.4% | na | na | 0.7% | 47.6% | -0.0% | 0.0% |
| 2006-2011 | | 46.7% | na | na | 0.8% | 47.9% | 0.3% | 0.0% |
| 2011-2016 | | 47.0% | na | na | 1.0% | 48.2% | 0.2% | 0.0% |
| 1996-2016 | | 46.7% | na | na | 0.0% | 48.0% | 1.4% | 1.5% |
| 1972 | KY62 | na | na | na | na | na | na | na |
| 1973 | KY62 | na | na | na | na | na | na | na |
| 1974 | KY62 | na | na | na | na | na | na | na |
| 1975 | KY62 | na | na | na | na | na | na | na |
| 1976 | KY62 | na | na | na | na | na | na | 587500 |
| 1977 | KY62 | na | na | na | na | na | na | 595000 |
| 1978 | KY62 | na | na | na | na | na | na | 594500 |
| 1979 | KY62 | na | 265000 | 46.8% | na | na | na | 684000 |
| 1980 | KY62 | na | 299000 | 43.4% | na | na | na | 688000 |
| 1981 | KY62 | na | 289000 | 43.3% | na | na | na | 690000 |
| 1982 | KY62 | na | 276000 | 46.5% | na | na | na | 680000 |
| 1983 | KY62 | na | 300000 | 44.7% | na | na | na | 663000 |
| 1984 | KY62 | na | 282000 | 48.6% | na | na | na | 664500 |
| 1985 | KY62 | na | 303000 | 46.8% | na | na | na | 558500 |
| 1986 | KY62 | na | 339000 | 43.3% | na | na | na | 558000 |
| 1987 | KY62 | na | 323000 | 47.3% | na | na | na | 553760 |
| 1988 | KY62 | na | 342000 | 46.1% | na | na | na | 678020 |
| 1989 | KY62 | na | 321000 | 49.9% | na | na | 811558 | 685617 |
| 1990 | KY62 | na | 344000 | 45.8% | na | na | 832311 | 689174 |
| 1991 | KY62 | na | 339855 | 49.6% | na | na | 833878 | 689181 |
| 1992 | KY62 | na | 331489 | 49.5% | na | na | 791875 | 696922 |
| 1993 | KY62 | na | 370687 | 48.6% | na | na | 791777 | 697574 |
| 1994 | KY62 | na | 354703 | 50.5% | na | na | 689221 | 568645 |
| 1995 | KY62 | na | 387914 | 48.9% | na | na | 754183 | 697574 |
| 1996 | KY62 | 49.8% | 380236 | 51.7% | 380236 | 51.7% | 768925 | 568645 |
| 1997 | KY62 | 46.5% | | | 398046 | 47.8% | 898000 | 706500 |
| 1998 | KY62 | 46.4% | | | 394119 | 47.7% | 930800 | 706500 |
| 1999 | KY62 | 46.3% | | | 391414 | 47.6% | 933750 | 706500 |
| 2000 | KY62 | 46.3% | | | 388831 | 47.5% | 937450 | 706500 |
| 2001 | KY62 | 46.2% | | | 385776 | 47.5% | 938075 | 706500 |
| 2002 | KY62 | 46.3% | | | 393025 | 47.6% | 935875 | 706500 |
| 2003 | KY62 | 46.4% | | | 395572 | 47.6% | 935875 | 706500 |
| 2004 | KY62 | 46.4% | | | 396026 | 47.7% | 935875 | 706500 |
| 2005 | KY62 | 46.4% | | | 399007 | 47.7% | 935875 | 706500 |
| 2006 | KY62 | 46.5% | | | 399323 | 47.7% | 935875 | 706500 |
| 2007 | KY62 | 46.6% | | | 406224 | 47.8% | 935875 | 706500 |
| 2008 | KY62 | 46.7% | | | 409654 | 47.9% | 950875 | 706500 |
| 2009 | KY62 | 46.7% | | | 413054 | 48.0% | 950875 | 706500 |
| 2010 | KY62 | 46.7% | | | 414084 | 48.0% | 950875 | 706500 |
| 2011 | KY62 | 46.8% | | | 415520 | 48.0% | 950875 | 706500 |
| 2012 | KY62 | 46.9% | | | 424312 | 48.1% | 950875 | 706500 |
| 2013 | KY62 | 47.0% | | | 428937 | 48.2% | 961875 | 706500 |
| 2014 | KY62 | 47.1% | | | 431874 | 48.3% | 961875 | 706500 |
| 2015 | KY62 | 47.1% | | | 436337 | 48.3% | 961875 | 706500 |
| 2016 | KY62 | 47.1% | | | 437494 | 48.3% | 961875 | 706500 |
| Normalized 1996 | KY62 | 46.5% | 412714 | 47.7% | 412714 | 47.7% | 768925 | 568645 |

| Year | | Summer Non Smelter NCP (kW) (Hist/FC) | Summer Total System NCP (kW) (Hist/FC) | Summer Total System NCP L.F. (Hist/FC) | Summer Total System NCP (kW) (Model) | Summer Total System NCP L.F. (Model) | Summer Total System CP (kW) (Hist) | Summer Total System CP L.F. (Hist) |
|---|---|---|---|---|---|---|---|---|
| 1976-1981 | | na | na | na | na | na | 6.4% | 89.2% |
| 1981-1986 | | 8.8% | 1.0% | 73.4% | na | na | -3.0% | 82.9% |
| 1986-1991 | | -1.6% | 1.6% | 72.1% | na | na | 5.6% | 80.0% |
| 1991-1996 | | 3.3% | -0.5% | 79.1% | na | na | -0.0% | 81.5% |
| 1976-1996 | | na | na | 77.0% | na | na | 2.2% | 83.5% |
| 1986-1996 | | 0.8% | 0.5% | 75.2% | na | na | 2.7% | 80.6% |
| 1996-2001 | | -0.8% | 2.2% | 79.2% | 2.3% | 79.0% | na | na |
| 2001-2006 | | 0.4% | 0.2% | 80.6% | 0.2% | 80.3% | na | na |
| 2006-2011 | | 1.0% | 0.5% | 80.3% | 0.5% | 80.1% | na | na |
| 2011-2016 | | 1.1% | 0.5% | 79.8% | 0.5% | 79.8% | na | na |
| 1996-2016 | | 0.2% | 1.0% | 80.0% | 1.0% | 79.7% | na | na |
| 1972 | KY62 | na | na | na | na | na | 497000 | 90.5% |
| 1973 | KY62 | na | na | na | na | na | 707000 | 84.0% |
| 1974 | KY62 | na | na | na | na | na | 737000 | 94.6% |
| 1975 | KY62 | na | na | na | na | na | 722000 | 95.8% |
| 1976 | KY62 | 251963 | 856252 | 84.2% | na | na | 759000 | 95.0% |
| 1977 | KY62 | 287183 | 899827 | 84.3% | na | na | 801000 | 94.7% |
| 1978 | KY62 | 308846 | 921413 | 82.5% | na | na | 802000 | 94.8% |
| 1979 | KY62 | 318824 | 1022880 | 80.0% | na | na | 994000 | 82.3% |
| 1980 | KY62 | 361216 | 1070200 | 81.9% | na | na | 1039000 | 84.4% |
| 1981 | KY62 | 356651 | 1067584 | 81.6% | na | na | 1034000 | 84.2% |
| 1982 | KY62 | 373283 | 1074349 | 69.6% | na | na | 890000 | 84.1% |
| 1983 | KY62 | 407100 | 1091502 | 71.6% | na | na | 966000 | 80.8% |
| 1984 | KY62 | 393245 | 1078900 | 79.9% | na | na | 1027000 | 83.9% |
| 1985 | KY62 | 510300 | 1090176 | 73.7% | na | na | 965000 | 83.2% |
| 1986 | KY62 | 544400 | 1124448 | 64.4% | na | na | 890000 | 81.3% |
| 1987 | KY62 | 604240 | 1181160 | 61.8% | na | na | 990000 | 73.8% |
| 1988 | KY62 | 516080 | 1217982 | 74.7% | na | na | 1157000 | 78.6% |
| 1989 | KY62 | 565483 | 1276122 | 73.7% | na | na | 1142000 | 82.3% |
| 1990 | KY62 | 502826 | 1215840 | 78.4% | na | na | 1174000 | 81.2% |
| 1991 | KY62 | 501999 | 1215004 | 79.7% | na | na | 1168000 | 82.9% |
| 1992 | KY62 | 484563 | 1205115 | 80.5% | na | na | 1166000 | 83.2% |
| 1993 | KY62 | 524728 | 1246748 | 78.9% | na | na | 1217000 | 80.8% |
| 1994 | KY62 | 510157 | 1100378 | 78.9% | na | na | 1055000 | 82.3% |
| 1995 | KY62 | 480964 | 1202109 | 77.1% | na | na | 1166000 | 79.5% |
| 1996 | KY62 | 590405 | 1182231 | 79.3% | 1182231 | 79.3% | 1167000 | 80.3% |
| 1997 | KY62 | 591756 | 1324221 | 74.4% | 1328604 | 74.2% | | |
| 1998 | KY62 | 619915 | 1352943 | 79.5% | 1358029 | 79.2% | | |
| 1999 | KY62 | 619645 | 1352668 | 80.6% | 1358262 | 80.3% | | |
| 2000 | KY62 | 620260 | 1353296 | 80.8% | 1359384 | 80.4% | | |
| 2001 | KY62 | 617261 | 1350236 | 80.9% | 1356886 | 80.5% | | |
| 2002 | KY62 | 623378 | 1356476 | 80.7% | 1362083 | 80.4% | | |
| 2003 | KY62 | 626241 | 1359395 | 80.6% | 1364697 | 80.3% | | |
| 2004 | KY62 | 626768 | 1359933 | 80.6% | 1365163 | 80.3% | | |
| 2005 | KY62 | 630194 | 1363428 | 80.5% | 1368223 | 80.2% | | |
| 2006 | KY62 | 630539 | 1363780 | 80.5% | 1368548 | 80.2% | | |
| 2007 | KY62 | 638535 | 1371936 | 80.3% | 1375631 | 80.1% | | |
| 2008 | KY62 | 657504 | 1391285 | 80.3% | 1394452 | 80.1% | | |
| 2009 | KY62 | 661424 | 1395282 | 80.2% | 1397942 | 80.0% | | |
| 2010 | KY62 | 662611 | 1396493 | 80.2% | 1398999 | 80.0% | | |
| 2011 | KY62 | 664258 | 1398173 | 80.1% | 1400473 | 80.0% | | |
| 2012 | KY62 | 674426 | 1408545 | 79.9% | 1409498 | 79.8% | | |
| 2013 | KY62 | 690758 | 1425203 | 79.8% | 1425466 | 79.8% | | |
| 2014 | KY62 | 694172 | 1428685 | 79.7% | 1428479 | 79.7% | | |
| 2015 | KY62 | 699322 | 1433939 | 79.6% | 1433061 | 79.7% | | |
| 2016 | KY62 | 700662 | 1435305 | 79.6% | 1434248 | 79.6% | | |
| Normalized 1996 | KY62 | 643100 | 1211745 | 77.4% | 1211745 | 77.4% | 1199478 | 78.2% |

| Year | | Summer Total System CP (kW) (Model) | Summer Total System CP L.F. (Model) | Winter Rural System NCP (kW) (Hist/FC-LF) | Winter Rural System NCP L.F. (Hist/FC) | Winter Rural System NCP (kW) (Model) | Winter Rural System NCP L.F. (Model) | Winter Rural System CP (kW) (Hist) |
|---|---|---|---|---|---|---|---|---|
| 1976-1981 | | na | na | na | na | na | na | na |
| 1981-1986 | | na | na | 2.9% | 43.5% | na | na | 2.7% |
| 1986-1991 | | na | na | -0.1% | 50.3% | na | na | -0.9% |
| 1991-1996 | | na | na | 4.7% | 51.3% | na | na | 4.9% |
| 1976-1996 | | na | na | na | na | na | na | na |
| 1986-1996 | | na | na | 2.3% | 50.6% | na | na | 2.0% |
| 1996-2001 | | 2.3% | 79.9% | -2.5% | 50.6% | -1.1% | 47.8% | na |
| 2001-2006 | | 0.2% | 81.2% | 0.8% | 51.0% | 0.7% | 47.6% | na |
| 2006-2011 | | 0.5% | 81.0% | 0.9% | 51.0% | 0.8% | 47.8% | na |
| 2011-2016 | | 0.5% | 80.7% | 1.2% | 51.0% | 1.0% | 48.1% | na |
| 1996-2016 | | 1.0% | 80.6% | -0.3% | 50.8% | 0.1% | 47.8% | na |
| 1972 | KY62 | na | na | na | na | na | na | na |
| 1973 | KY62 | na | na | na | na | na | na | na |
| 1974 | KY62 | na | na | na | na | na | na | na |
| 1975 | KY62 | na | na | na | na | na | na | na |
| 1976 | KY62 | na | na | na | na | na | na | na |
| 1977 | KY62 | na | na | na | na | na | na | na |
| 1978 | KY62 | na | na | na | na | na | na | na |
| 1979 | KY62 | na | na | 278000 | 44.6% | na | na | 272000 |
| 1980 | KY62 | na | na | 263000 | 49.3% | na | na | 250000 |
| 1981 | KY62 | na | na | 278000 | 45.0% | na | na | 275000 |
| 1982 | KY62 | na | na | 311000 | 41.2% | na | na | 282000 |
| 1983 | KY62 | na | na | 334000 | 40.2% | na | na | 332000 |
| 1984 | KY62 | na | na | 298000 | 46.0% | na | na | 257000 |
| 1985 | KY62 | na | na | 331000 | 42.9% | na | na | 315000 |
| 1986 | KY62 | na | na | 320000 | 45.9% | na | na | 314000 |
| 1987 | KY62 | na | na | 275000 | 55.5% | na | na | 270000 |
| 1988 | KY62 | na | na | 295000 | 53.5% | na | na | 289000 |
| 1989 | KY62 | na | na | 379000 | 42.2% | na | na | 352000 |
| 1990 | KY62 | na | na | 305000 | 51.6% | na | na | 260000 |
| 1991 | KY62 | na | na | 318397 | 53.0% | na | na | 300584 |
| 1992 | KY62 | na | na | 323627 | 50.7% | na | na | 310047 |
| 1993 | KY62 | na | na | 335173 | 53.8% | na | na | 318252 |
| 1994 | KY62 | na | na | 377008 | 47.5% | na | na | 359832 |
| 1995 | KY62 | na | na | 352150 | 53.8% | na | na | 335672 |
| 1996 | KY62 | 1167000 | 80.3% | 401387 | 49.0% | 401387 | 49.0% | 382214 |
| 1997 | KY62 | 1313885 | 75.0% | 373060 | 51.0% | 398459 | 47.7% | |
| 1998 | KY62 | 1342758 | 80.1% | 368734 | 51.0% | 394507 | 47.6% | |
| 1999 | KY62 | 1343003 | 81.2% | 365733 | 51.0% | 391786 | 47.6% | |
| 2000 | KY62 | 1344120 | 81.3% | 362858 | 51.0% | 389186 | 47.5% | |
| 2001 | KY62 | 1341690 | 81.4% | 359480 | 51.0% | 386111 | 47.4% | |
| 2002 | KY62 | 1346739 | 81.3% | 367232 | 51.0% | 393407 | 47.6% | |
| 2003 | KY62 | 1349286 | 81.2% | 369900 | 51.0% | 395969 | 47.6% | |
| 2004 | KY62 | 1349740 | 81.2% | 370391 | 51.0% | 396426 | 47.6% | |
| 2005 | KY62 | 1352721 | 81.2% | 373584 | 51.0% | 399426 | 47.7% | |
| 2006 | KY62 | 1353037 | 81.2% | 373906 | 51.0% | 399745 | 47.7% | |
| 2007 | KY62 | 1359938 | 81.0% | 381359 | 51.0% | 406689 | 47.8% | |
| 2008 | KY62 | 1378368 | 81.0% | 385059 | 51.0% | 410141 | 47.8% | |
| 2009 | KY62 | 1381768 | 81.0% | 388711 | 51.0% | 413563 | 47.9% | |
| 2010 | KY62 | 1382798 | 81.0% | 389818 | 51.0% | 414599 | 47.9% | |
| 2011 | KY62 | 1384234 | 80.9% | 391353 | 51.0% | 416045 | 47.9% | |
| 2012 | KY62 | 1393026 | 80.8% | 400831 | 51.0% | 424892 | 48.1% | |
| 2013 | KY62 | 1408651 | 80.7% | 405800 | 51.0% | 429547 | 48.1% | |
| 2014 | KY62 | 1411588 | 80.7% | 408982 | 51.0% | 432501 | 48.2% | |
| 2015 | KY62 | 1416051 | 80.6% | 413783 | 51.0% | 436993 | 48.2% | |
| 2016 | KY62 | 1417208 | 80.6% | 415031 | 51.0% | 438157 | 48.3% | |
| Normalized 1996 | KY62 | 1199478 | 78.2% | 408283 | 48.2% | 408283 | 48.2% | 389699 |



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| Year | | Winter Rural System CP L.F. (Hist) | Winter Rural System CP (kW) (Model) | Winter Rural System CP L.F. (Model) | Winter C/I Large NCP (kW) (Hist/FC) | Winter Smelter NCP (kW) (Hist/FC) | Winter Non Smelter NCP (kW) (Hist/FC) | Winter Total System NCP (kW) (Hist/FC) |
|---|---|---|---|---|---|---|---|---|
| 1976-1981 | | na | na | na | na | na | na | na |
| 1981-1986 | | 46.1% | na | na | na | -4.0% | 8.1% | 0.7% |
| 1986-1991 | | 53.3% | na | na | na | 4.1% | -1.6% | 1.6% |
| 1991-1996 | | 53.9% | na | na | -1.9% | 0.4% | -1.1% | -0.2% |
| 1976-1996 | | na | na | na | na | na | na | na |
| 1986-1996 | | 53.4% | na | na | na | 2.2% | -1.4% | 0.7% |
| 1996-2001 | | na | -1.1% | 50.1% | 4.0% | 0.1% | 5.2% | 2.2% |
| 2001-2006 | | na | 0.7% | 49.9% | -0.0% | 0.0% | 0.4% | 0.2% |
| 2006-2011 | | na | 0.8% | 50.1% | 0.3% | 0.0% | 1.1% | 0.5% |
| 2011-2016 | | na | 1.1% | 50.3% | 0.2% | 0.0% | 1.1% | 0.5% |
| 1996-2016 | | na | 0.1% | 50.1% | 1.4% | 0.0% | 2.2% | 1.0% |
| 1972 | KY62 | na | na | na | na | na | na | na |
| 1973 | KY62 | na | na | na | na | na | na | na |
| 1974 | KY62 | na | na | na | na | na | na | na |
| 1975 | KY62 | na | na | na | na | na | na | na |
| 1976 | KY62 | na | na | na | na | 595500 | 272303 | 885159 |
| 1977 | KY62 | na | na | na | na | 596000 | 302320 | 916286 |
| 1978 | KY62 | na | na | na | na | 591500 | 301368 | 910725 |
| 1979 | KY62 | 45.6% | na | na | na | 695000 | 292356 | 1007103 |
| 1980 | KY62 | 51.9% | na | na | na | 690000 | 323835 | 1034112 |
| 1981 | KY62 | 45.5% | na | na | na | 690000 | 350161 | 1060964 |
| 1982 | KY62 | 45.5% | na | na | na | 684000 | 379403 | 1084671 |
| 1983 | KY62 | 40.4% | na | na | na | 663000 | 384899 | 1068857 |
| 1984 | KY62 | 53.4% | na | na | na | 661000 | 347573 | 1028744 |
| 1985 | KY62 | 45.1% | na | na | na | 662000 | 427200 | 1110984 |
| 1986 | KY62 | 46.8% | na | na | na | 563500 | 516100 | 1101192 |
| 1987 | KY62 | 56.6% | na | na | na | 568780 | 527520 | 1118226 |
| 1988 | KY62 | 54.6% | na | na | na | 685500 | 449500 | 1157700 |
| 1989 | KY62 | 45.5% | na | na | 831291 | 696006 | 552594 | 1273572 |
| 1990 | KY62 | 60.6% | na | na | 841326 | 695563 | 457637 | 1176264 |
| 1991 | KY62 | 56.1% | na | na | 843705 | 690510 | 475543 | 1189374 |
| 1992 | KY62 | 52.9% | na | na | 798932 | 705012 | 456080 | 1184314 |
| 1993 | KY62 | 56.6% | na | na | 794954 | 700279 | 470620 | 1194317 |
| 1994 | KY62 | 49.7% | na | na | 810417 | 703908 | 528293 | 1256845 |
| 1995 | KY62 | 56.5% | na | na | 753191 | 700279 | 404106 | 1126473 |
| 1996 | KY62 | 51.4% | 382214 | 51.4% | 768406 | 703908 | 449079 | 1176047 |
| 1997 | KY62 | | 380247 | 50.0% | 895000 | 706500 | 561560 | 1293421 |
| 1998 | KY62 | | 376320 | 49.9% | 927800 | 706500 | 590034 | 1322464 |
| 1999 | KY62 | | 373615 | 49.9% | 930750 | 706500 | 589983 | 1322413 |
| 2000 | KY62 | | 371032 | 49.8% | 934450 | 706500 | 590808 | 1323254 |
| 2001 | KY62 | | 367977 | 49.8% | 935075 | 706500 | 588055 | 1320446 |
| 2002 | KY62 | | 375227 | 49.9% | 932875 | 706500 | 593607 | 1326109 |
| 2003 | KY62 | | 377773 | 49.9% | 932875 | 706500 | 596275 | 1328830 |
| 2004 | KY62 | | 378227 | 49.9% | 932875 | 706500 | 596766 | 1329331 |
| 2005 | KY62 | | 381208 | 49.9% | 932875 | 706500 | 599959 | 1332588 |
| 2006 | KY62 | | 381525 | 49.9% | 932875 | 706500 | 600281 | 1332917 |
| 2007 | KY62 | | 388425 | 50.0% | 932875 | 706500 | 607734 | 1340519 |
| 2008 | KY62 | | 391856 | 50.1% | 947875 | 706500 | 626434 | 1359592 |
| 2009 | KY62 | | 395255 | 50.1% | 947875 | 706500 | 630086 | 1363318 |
| 2010 | KY62 | | 396286 | 50.1% | 947875 | 706500 | 631193 | 1364447 |
| 2011 | KY62 | | 397722 | 50.1% | 947875 | 706500 | 632728 | 1366013 |
| 2012 | KY62 | | 406514 | 50.2% | 947875 | 706500 | 642206 | 1375680 |
| 2013 | KY62 | | 411139 | 50.3% | 958875 | 706500 | 658175 | 1391968 |
| 2014 | KY62 | | 414075 | 50.3% | 958875 | 706500 | 661357 | 1395214 |
| 2015 | KY62 | | 418538 | 50.4% | 958875 | 706500 | 666158 | 1400111 |
| 2016 | KY62 | | 419695 | 50.4% | 958875 | 706500 | 667406 | 1401384 |
| Normalized 1996 | KY62 | 50.5% | 389699 | 50.5% | 768406 | 703908 | 455975 | 1183080 |

| Year | | Winter Total System NCP L.F. (Hist/FC) | Winter Total System NCP (kW) (Model) | Winter Total System NCP L.F. (Model) | Winter Total System CP (kW) (Hist) | Winter Total System CP L.F. (Hist) | Winter Total System CP (kW) (Model) | Winter Total System CP L.F. (Model) |
|---|---|---|---|---|---|---|---|---|
| 1976-1981 | | na | na | na | 6.8% | 87.7% | na | na |
| 1981-1986 | | 74.3% | na | na | -0.9% | 76.6% | na | na |
| 1986-1991 | | 74.3% | na | na | 2.8% | 80.1% | na | na |
| 1991-1996 | | 79.5% | na | na | 0.2% | 81.2% | na | na |
| 1976-1996 | | 77.9% | na | na | 2.2% | 81.8% | na | na |
| 1986-1996 | | 76.5% | na | na | 1.5% | 80.4% | na | na |
| 1996-2001 | | 80.8% | 2.4% | 80.4% | na | na | 2.4% | 81.8% |
| 2001-2006 | | 82.5% | 0.2% | 81.9% | na | na | 0.2% | 83.4% |
| 2006-2011 | | 82.1% | 0.5% | 81.6% | na | na | 0.5% | 83.1% |
| 2011-2016 | | 81.7% | 0.5% | 81.3% | na | na | 0.5% | 82.8% |
| 1996-2016 | | 81.7% | 1.0% | 81.2% | na | na | 1.0% | 82.7% |
| 1972 | KY62 | na | na | na | 472000 | 93.4% | na | na |
| 1973 | KY62 | na | na | na | 508000 | 114.7% | na | na |
| 1974 | KY62 | na | na | na | 722000 | 94.6% | na | na |
| 1975 | KY62 | na | na | na | 731000 | 92.8% | na | na |
| 1976 | KY62 | 81.4% | na | na | 748000 | 94.5% | na | na |
| 1977 | KY62 | 82.8% | na | na | 820000 | 90.7% | na | na |
| 1978 | KY62 | 83.5% | na | na | 819000 | 91.0% | na | na |
| 1979 | KY62 | 81.3% | na | na | 974000 | 82.4% | na | na |
| 1980 | KY62 | 84.8% | na | na | 1007000 | 85.3% | na | na |
| 1981 | KY62 | 82.1% | na | na | 1037000 | 82.3% | na | na |
| 1982 | KY62 | 69.0% | na | na | 1034000 | 70.9% | na | na |
| 1983 | KY62 | 73.1% | na | na | 1046000 | 73.2% | na | na |
| 1984 | KY62 | 83.7% | na | na | 979000 | 86.3% | na | na |
| 1985 | KY62 | 72.3% | na | na | 1042000 | 75.6% | na | na |
| 1986 | KY62 | 65.7% | na | na | 993000 | 71.5% | na | na |
| 1987 | KY62 | 65.3% | na | na | 920000 | 77.8% | na | na |
| 1988 | KY62 | 78.6% | na | na | 1063000 | 83.9% | na | na |
| 1989 | KY62 | 73.8% | na | na | 1177000 | 78.3% | na | na |
| 1990 | KY62 | 81.1% | na | na | 1089000 | 85.9% | na | na |
| 1991 | KY62 | 81.4% | na | na | 1140000 | 83.3% | na | na |
| 1992 | KY62 | 81.9% | na | na | 1149000 | 82.7% | na | na |
| 1993 | KY62 | 82.4% | na | na | 1137000 | 84.8% | na | na |
| 1994 | KY62 | 69.1% | na | na | 1189000 | 71.6% | na | na |
| 1995 | KY62 | 82.3% | na | na | 1063000 | 85.5% | na | na |
| 1996 | KY62 | 79.7% | 1176047 | 79.7% | 1154000 | 79.6% | 1154000 | 81.2% |
| 1997 | KY62 | 76.2% | 1302186 | 75.7% | | | 1278627 | 77.1% |
| 1998 | KY62 | 81.3% | 1331611 | 80.8% | | | 1307500 | 82.3% |
| 1999 | KY62 | 82.5% | 1331844 | 81.9% | | | 1307745 | 83.4% |
| 2000 | KY62 | 82.6% | 1332966 | 82.0% | | | 1308862 | 83.5% |
| 2001 | KY62 | 82.7% | 1330468 | 82.1% | | | 1306432 | 83.6% |
| 2002 | KY62 | 82.5% | 1335665 | 82.0% | | | 1311482 | 83.5% |
| 2003 | KY62 | 82.5% | 1338279 | 81.9% | | | 1314028 | 83.4% |
| 2004 | KY62 | 82.5% | 1338745 | 81.9% | | | 1314482 | 83.4% |
| 2005 | KY62 | 82.4% | 1341805 | 81.8% | | | 1317463 | 83.3% |
| 2006 | KY62 | 82.4% | 1342130 | 81.8% | | | 1317780 | 83.3% |
| 2007 | KY62 | 82.2% | 1349213 | 81.7% | | | 1324680 | 83.2% |
| 2008 | KY62 | 82.2% | 1368035 | 81.6% | | | 1343111 | 83.2% |
| 2009 | KY62 | 82.1% | 1371524 | 81.6% | | | 1346510 | 83.1% |
| 2010 | KY62 | 82.0% | 1372582 | 81.6% | | | 1347541 | 83.1% |
| 2011 | KY62 | 82.0% | 1374056 | 81.5% | | | 1348977 | 83.0% |
| 2012 | KY62 | 81.8% | 1383080 | 81.4% | | | 1357769 | 82.9% |
| 2013 | KY62 | 81.7% | 1399048 | 81.3% | | | 1373394 | 82.8% |
| 2014 | KY62 | 81.6% | 1402062 | 81.2% | | | 1376330 | 82.8% |
| 2015 | KY62 | 81.5% | 1406643 | 81.1% | | | 1380793 | 82.7% |
| 2016 | KY62 | 81.5% | 1407831 | 81.1% | | | 1381950 | 82.6% |
| Normalized 1996 | KY62 | 79.3% | 1183080 | 79.3% | 1161485 | 80.7% | 1161485 | 80.7% |

| Year | | Population (Hist/FC) | Per Capita Income (Hist/FC) | Employment (Hist/FC) | Personal Income (Hist/FC) | Cooling Degree Days (Hist/FC) | Heating Degree Days (Hist/FC) | Peak Mo. CDD (Hist/FC) |
|---|---|---|---|---|---|---|---|---|
| 1976-1981 | | 1.6% | 2.0% | 1.7% | 3.6% | 1466 | 4979 | na |
| 1981-1986 | | 2.2% | 0.2% | 2.2% | 2.5% | 1465 | 4563 | na |
| 1986-1991 | | 0.5% | 1.1% | 2.2% | 1.7% | 1539 | 4406 | 409 |
| 1991-1996 | | 1.9% | 1.9% | 3.3% | 3.8% | 1534 | 4356 | 466 |
| 1976-1996 | | 1.6% | 1.3% | 2.4% | 2.9% | 1490 | 4602 | 443 |
| 1986-1996 | | 1.2% | 1.5% | 2.7% | 2.7% | 1516 | 4393 | 443 |
| 1996-2001 | | 1.7% | 1.2% | 1.8% | 2.9% | 1376 | 4708 | 431 |
| 2001-2006 | | 1.5% | 1.2% | 1.6% | 2.8% | 1376 | 4708 | 431 |
| 2006-2011 | | 1.3% | 1.2% | 1.5% | 2.6% | 1376 | 4708 | 431 |
| 2011-2016 | | 1.3% | 1.2% | 1.4% | 2.5% | 1376 | 4708 | 431 |
| 1996-2016 | | 1.5% | 1.2% | 1.6% | 2.8% | 1376 | 4708 | 431 |
| 1972 | KY62 | 147730 | 11487 | 58720 | 1698 | 1160 | 4909 | |
| 1973 | KY62 | 150880 | 12445 | 62250 | 1877 | 1567 | 4188 | |
| 1974 | KY62 | 154710 | 12429 | 64880 | 1923 | 1229 | 4172 | |
| 1975 | KY62 | 157950 | 12199 | 63410 | 1927 | 1500 | 4283 | |
| 1976 | KY62 | 161790 | 12927 | 66800 | 2092 | 1112 | 4784 | |
| 1977 | KY62 | 165570 | 13722 | 69710 | 2272 | 1779 | 4799 | |
| 1978 | KY62 | 168680 | 13906 | 73190 | 2346 | 1550 | 5420 | |
| 1979 | KY62 | 170070 | 14406 | 73160 | 2450 | 1238 | 5227 | |
| 1980 | KY62 | 171220 | 13844 | 71870 | 2370 | 1726 | 5095 | |
| 1981 | KY62 | 175470 | 14242 | 72760 | 2499 | 1389 | 4548 | |
| 1982 | KY62 | 181000 | 14075 | 72990 | 2547 | 1349 | 4399 | |
| 1983 | KY62 | 186260 | 13336 | 75460 | 2484 | 1664 | 4640 | |
| 1984 | KY62 | 190400 | 14557 | 78390 | 2771 | 1365 | 4622 | |
| 1985 | KY62 | 194780 | 14300 | 80410 | 2785 | 1445 | 4785 | |
| 1986 | KY62 | 195720 | 14418 | 81160 | 2821 | 1576 | 4386 | |
| 1987 | KY62 | 197190 | 14406 | 83320 | 2841 | 1623 | 4290 | |
| 1988 | KY62 | 197090 | 14582 | 85040 | 2874 | 1500 | 4822 | 436 |
| 1989 | KY62 | 197690 | 15081 | 87560 | 2981 | 1396 | 4830 | 369 |
| 1990 | KY62 | 199200 | 15256 | 90020 | 3039 | 1380 | 3856 | 387 |
| 1991 | KY62 | 201090 | 15237 | 90580 | 3064 | 1757 | 4253 | 445 |
| 1992 | KY62 | 203000 | 15719 | 92220 | 3191 | 1240 | 4217 | 440 |
| 1993 | KY62 | 207110 | 15646 | 95760 | 3240 | 1613 | 4652 | 566 |
| 1994 | KY62 | 212260 | 16118 | 100590 | 3421 | 1489 | 4180 | 449 |
| 1995 | KY62 | 216930 | 16474 | 103980 | 3573 | 1613 | 4652 | 577 |
| 1996 | KY62 | 220790 | 16701 | 106420 | 3688 | 1489 | 4180 | 321 |
| 1997 | KY62 | 224541 | 16902 | 108378 | 3795 | 1376 | 4708 | 431 |
| 1998 | KY62 | 228356 | 17104 | 110374 | 3906 | 1376 | 4708 | 431 |
| 1999 | KY62 | 232239 | 17307 | 112408 | 4019 | 1376 | 4708 | 431 |
| 2000 | KY62 | 236189 | 17513 | 114481 | 4136 | 1376 | 4708 | 431 |
| 2001 | KY62 | 240208 | 17721 | 116594 | 4257 | 1376 | 4708 | 431 |
| 2002 | KY62 | 243804 | 17941 | 118490 | 4374 | 1376 | 4708 | 431 |
| 2003 | KY62 | 247456 | 18164 | 120418 | 4495 | 1376 | 4708 | 431 |
| 2004 | KY62 | 251163 | 18389 | 122378 | 4619 | 1376 | 4708 | 431 |
| 2005 | KY62 | 254928 | 18617 | 124372 | 4746 | 1376 | 4708 | 431 |
| 2006 | KY62 | 258750 | 18848 | 126399 | 4877 | 1376 | 4708 | 431 |
| 2007 | KY62 | 262219 | 19083 | 128250 | 5004 | 1376 | 4708 | 431 |
| 2008 | KY62 | 265735 | 19321 | 130128 | 5134 | 1376 | 4708 | 431 |
| 2009 | KY62 | 269299 | 19561 | 132035 | 5268 | 1376 | 4708 | 431 |
| 2010 | KY62 | 272913 | 19805 | 133971 | 5405 | 1376 | 4708 | 431 |
| 2011 | KY62 | 276576 | 20052 | 135936 | 5546 | 1376 | 4708 | 431 |
| 2012 | KY62 | 280043 | 20289 | 137771 | 5682 | 1376 | 4708 | 431 |
| 2013 | KY62 | 283554 | 20529 | 139632 | 5821 | 1376 | 4708 | 431 |
| 2014 | KY62 | 287110 | 20771 | 141520 | 5964 | 1376 | 4708 | 431 |
| 2015 | KY62 | 290711 | 21017 | 143433 | 6110 | 1376 | 4708 | 431 |
| 2016 | KY62 | 294357 | 21266 | 145373 | 6260 | 1376 | 4708 | 431 |
| Normalized 1996 | KY62 | 220790 | 16701 | 106420 | 3688 | 1376 | 4708 | 439 |

Kentucky 62

Low Range

| Year | | Peak Mo. HDD (Hist/FC) |
|---|---|---|
| 1976-1981 | | na |
| 1981-1986 | | na |
| 1986-1991 | | 984 |
| 1991-1996 | | 940 |
| 1976-1996 | | 986 |
| 1986-1996 | | 986 |
| 1996-2001 | | 1124 |
| 2001-2006 | | 1124 |
| 2006-2011 | | 1124 |
| 2011-2016 | | 1124 |
| 1996-2016 | | 1124 |
| 1972 | KY62 | |
| 1973 | KY62 | |
| 1974 | KY62 | |
| 1975 | KY62 | |
| 1976 | KY62 | |
| 1977 | KY62 | |
| 1978 | KY62 | |
| 1979 | KY62 | |
| 1980 | KY62 | |
| 1981 | KY62 | |
| 1982 | KY62 | |
| 1983 | KY62 | |
| 1984 | KY62 | |
| 1985 | KY62 | |
| 1986 | KY62 | |
| 1987 | KY62 | |
| 1988 | KY62 | 1108 |
| 1989 | KY62 | 1297 |
| 1990 | KY62 | 828 |
| 1991 | KY62 | 702 |
| 1992 | KY62 | 913 |
| 1993 | KY62 | 892 |
| 1994 | KY62 | 1164 |
| 1995 | KY62 | 922 |
| 1996 | KY62 | 1048 |
| 1997 | KY62 | 1124 |
| 1998 | KY62 | 1124 |
| 1999 | KY62 | 1124 |
| 2000 | KY62 | 1124 |
| 2001 | KY62 | 1124 |
| 2002 | KY62 | 1124 |
| 2003 | KY62 | 1124 |
| 2004 | KY62 | 1124 |
| 2005 | KY62 | 1124 |
| 2006 | KY62 | 1124 |
| 2007 | KY62 | 1124 |
| 2008 | KY62 | 1124 |
| 2009 | KY62 | 1124 |
| 2010 | KY62 | 1124 |
| 2011 | KY62 | 1124 |
| 2012 | KY62 | 1124 |
| 2013 | KY62 | 1124 |
| 2014 | KY62 | 1124 |
| 2015 | KY62 | 1124 |
| 2016 | KY62 | 1124 |
| Normalized 1996 | KY62 | 1099 |

**Section 5**
**Regression Output**

LS // Dependent Variable is RURALMWH
Date: 4-01-1997 / Time: 15:33
SMPL range: 301 - 360
Number of observations: 60

| VARIABLE | COEFFICIENT | STD. ERROR | T-STAT. | 2-TAIL SIG. |
|---|---|---|---|---|
| C | -124170.29 | 18318.668 | -6.7783470 | 0.0000 |
| TOTCON | 2.4187641 | 0.2096838 | 11.535292 | 0.0000 |
| CDD | 146.00207 | 7.5988810 | 19.213627 | 0.0000 |
| HDD | 68.323579 | 2.5153016 | 27.163175 | 0.0000 |
| M7 | 11076.828 | 3320.5818 | 3.3358093 | 0.0016 |
| M8 | 12672.140 | 3004.9566 | 4.2170792 | 0.0001 |
| M9 | 3160.1010 | 2340.0780 | 1.3504255 | 0.1826 |

| | | | |
|---|---|---|---|
| R-squared | 0.964227 | Mean of dependent var | 133083.9 |
| Adjusted R-squared | 0.960178 | S.D. of dependent var | 22991.33 |
| S.E. of regression | 4588.040 | Sum of squared resid | 1.12E+09 |
| Log likelihood | -587.2872 | F-statistic | 238.0971 |
| Durbin-Watson stat | 1.780370 | Prob(F-statistic) | 0.000000 |

LS // Dependent Variable is RURALCP
Date: 4-01-1997 / Time: 15:38
SMPL range: 301 - 360
Number of observations: 60

| VARIABLE | COEFFICIENT | STD. ERROR | T-STAT. | 2-TAIL SIG. |
|---|---|---|---|---|
| C | -211840.65 | 70191.627 | -3.0180331 | 0.0039 |
| TOTCON | 5.4128222 | 0.7904262 | 6.8479790 | 0.0000 |
| WINMIN | -1530.3430 | 221.12035 | -6.9208601 | 0.0000 |
| CDD | 220.64014 | 26.273475 | 8.3978284 | 0.0000 |
| HDD | 71.863833 | 10.972741 | 6.5493053 | 0.0000 |

| | | | |
|---|---|---|---|
| R-squared | 0.894353 | Mean of dependent var | 295670.8 |
| Adjusted R-squared | 0.886669 | S.D. of dependent var | 51361.00 |
| S.E. of regression | 17290.48 | Sum of squared resid | 1.64E+10 |
| Log likelihood | -668.0006 | F-statistic | 116.4002 |
| Durbin-Watson stat | 1.784085 | Prob(F-statistic) | 0.000000 |

LS // Dependent Variable is LRCON
Date: 3-31-1997 / Time: 13:47
SMPL range: 1 - 27
Number of observations: 27

| VARIABLE | COEFFICIENT | STD. ERROR | T-STAT. | 2-TAIL SIG. |
|---|---|---|---|---|
| C | -7.4638825 | 0.3049825 | -24.473154 | 0.0000 |
| LTOTPOP | 1.6172054 | 0.0289180 | 55.923870 | 0.0000 |

| | | | |
|---|---|---|---|
| R-squared | 0.992070 | Mean of dependent var | 9.590813 |
| Adjusted R-squared | 0.991753 | S.D. of dependent var | 0.198551 |
| S.E. of regression | 0.018032 | Sum of squared resid | 0.008128 |
| Log likelihood | 71.14975 | F-statistic | 3127.479 |
| Durbin-Watson stat | 0.531421 | Prob(F-statistic) | 0.000000 |

LS // Dependent Variable is LRCON
Date: 3-31-1997 / Time: 13:48
SMPL range: 28 - 54
Number of observations: 27

| VARIABLE | COEFFICIENT | STD. ERROR | T-STAT. | 2-TAIL SIG. |
|---|---|---|---|---|
| C | -3.7215331 | 0.3040249 | -12.240883 | 0.0000 |
| LTOTPOP | 1.2550137 | 0.0283432 | 44.279147 | 0.0000 |

| | | | |
|---|---|---|---|
| R-squared | 0.987410 | Mean of dependent var | 9.739469 |
| Adjusted R-squared | 0.986906 | S.D. of dependent var | 0.164948 |
| S.E. of regression | 0.018875 | Sum of squared resid | 0.008907 |
| Log likelihood | 69.91557 | F-statistic | 1960.643 |
| Durbin-Watson stat | 0.325500 | Prob(F-statistic) | 0.000000 |

LS // Dependent Variable is LRCON
Date: 3-31-1997 / Time: 13:49
SMPL range: 55 - 81
Number of observations: 27

| VARIABLE | COEFFICIENT | STD. ERROR | T-STAT. | 2-TAIL SIG. |
|---|---|---|---|---|
| C | -2.3655367 | 0.4459487 | -5.3045040 | 0.0000 |
| LTOTPOP | 1.1148606 | 0.0406578 | 27.420618 | 0.0000 |

| | | | |
|---|---|---|---|
| R-squared | 0.967820 | Mean of dependent var | 9.861644 |
| Adjusted R-squared | 0.966533 | S.D. of dependent var | 0.162663 |
| S.E. of regression | 0.029757 | Sum of squared resid | 0.022138 |
| Log likelihood | 57.62395 | F-statistic | 751.8903 |
| Durbin-Watson stat | 0.263737 | Prob(F-statistic) | 0.000000 |

LC // Dependent Variable is LRCON
Date: 3-31-1997 / Time: 13:49
SMPL range: 82 - 108
Number of observations: 27

| VARIABLE | COEFFICIENT | STD. ERROR | T-STAT. | 2-TAIL SIG. |
|---|---|---|---|---|
| C | -3.4973953 | 0.4035853 | -8.6658152 | 0.0000 |
| LTOTPOP | 1.2285317 | 0.0381893 | 32.169534 | 0.0000 |

| | | | |
|---|---|---|---|
| R-squared | 0.976412 | Mean of dependent var | 9.484847 |
| Adjusted R-squared | 0.975469 | S.D. of dependent var | 0.158299 |
| S.E. of regression | 0.024793 | Sum of squared resid | 0.015368 |
| Log likelihood | 62.55133 | F-statistic | 1034.879 |
| Durbin-Watson stat | 0.566234 | Prob(F-statistic) | 0.000000 |

TSLS // Dependent Variable is LRUSE
Date: 4-08-1997 / Time: 10:02
SMPL range: 17 - 27 44 - 54 71 - 81 98 - 1
08
Number of observations: 44
Instrument list: C LPCAP LCDD LHDD LRUSE(-1) D20 D33 D55 LRWHPC

| VARIABLE | COEFFICIENT | STD. ERROR | T-STAT. | 2-TAIL SIG. |
|---|---|---|---|---|
| C | -1.6014396 | 1.2415738 | -1.2898464 | 0.2056 |
| LPCAP | 0.2918423 | 0.0919647 | 3.1734173 | 0.0031 |
| LRRP | -0.0749383 | 0.0711335 | -1.0534883 | 0.2993 |
| LCDD | 0.1915428 | 0.0277834 | 6.8941393 | 0.0000 |
| LHDD | 0.3063033 | 0.0437163 | 7.0066209 | 0.0000 |
| LRUSE(-1) | 0.2875350 | 0.1075117 | 2.6744532 | 0.0113 |
| D20 | 0.1219867 | 0.0321091 | 3.7991305 | 0.0006 |
| D33 | 0.1409100 | 0.0291615 | 4.8320629 | 0.0000 |
| D55 | 0.0950803 | 0.0243930 | 3.8978540 | 0.0004 |

| | | | |
|---|---|---|---|
| R-squared | 0.984051 | Mean of dependent var | 6.983176 |
| Adjusted R-squared | 0.980405 | S.D. of dependent var | 0.128108 |
| S.E. of regression | 0.017933 | Sum of squared resid | 0.011256 |
| F-statistic | 269.5232 | Durbin-Watson stat | 1.735356 |
| Prob(F-statistic) | 0.000000 | | |

TSLS // Dependent Variable is LRRP
Date: 4-08-1997 / Time: 10:02
SMPL range: 17 - 27 44 - 54 71 - 81 98 - 1
08
Number of observations: 44
Instrument list: C LRWHPC LPCAP LCDD LHDD LRUSE(-1) D20 D33 D55

| VARIABLE | COEFFICIENT | STD. ERROR | T-STAT. | 2-TAIL SIG. |
|---|---|---|---|---|
| C | 7.4422715 | 1.3118569 | 5.6730820 | 0.0000 |
| LRUSE | -0.7503496 | 0.1770348 | -4.2384310 | 0.0001 |
| LRWHPC | 0.4195426 | 0.0715026 | 5.8675156 | 0.0000 |
| D20 | 0.2670736 | 0.0550624 | 4.8503816 | 0.0000 |
| D33 | 0.2391532 | 0.0549309 | 4.3537139 | 0.0001 |
| D55 | 0.2883987 | 0.0405905 | 7.1050853 | 0.0000 |

| | | | |
|---|---|---|---|
| R-squared | 0.720859 | Mean of dependent var | 3.889020 |
| Adjusted R-squared | 0.684130 | S.D. of dependent var | 0.063640 |
| S.E. of regression | 0.035767 | Sum of squared resid | 0.048613 |
| F-statistic | 18.83866 | Durbin-Watson stat | 1.440616 |
| Prob(F-statistic) | 0.000000 | | |

LS // Dependent Variable is LSCON
Date: 3-31-1997 / Time: 13:54
SMPL range: 1 - 27
Number of observations: 27

| VARIABLE | COEFFICIENT | STD. ERROR | T-STAT. | 2-TAIL SIG. |
|---|---|---|---|---|
| C | -4.4510794 | 0.4257072 | -10.455730 | 0.0000 |
| LTOTEMP | 1.2423946 | 0.0459238 | 27.053396 | 0.0000 |

| | | | |
|---|---|---|---|
| R-squared | 0.966970 | Mean of dependent var | 7.064614 |
| Adjusted R-squared | 0.965649 | S.D. of dependent var | 0.167250 |
| S.E. of regression | 0.030998 | Sum of squared resid | 0.024022 |
| Log likelihood | 56.52094 | F-statistic | 731.8862 |
| Durbin-Watson stat | 0.562826 | Prob(F-statistic) | 0.000000 |

LS // Dependent Variable is LCCON
Date: 3-31-1997 / Time: 13:54
SMPL range: 28 - 54
Number of observations: 27

| VARIABLE | COEFFICIENT | STD. ERROR | T-STAT. | 2-TAIL SIG. |
|---|---|---|---|---|
| C | -5.5231950 | 0.5549432 | -9.9527215 | 0.0000 |
| LTOTEMP | 1.2754762 | 0.0556638 | 22.913914 | 0.0000 |

| | | | |
|---|---|---|---|
| R-squared | 0.954549 | Mean of dependent var | 7.190342 |
| Adjusted R-squared | 0.952731 | S.D. of dependent var | 0.256779 |
| S.E. of regression | 0.055827 | Sum of squared resid | 0.077917 |
| Log likelihood | 40.63595 | F-statistic | 525.0475 |
| Durbin-Watson stat | 0.379261 | Prob(F-statistic) | 0.000000 |

LS // Dependent Variable is LSCON
Date: 3-31-1997 / Time: 13:54
SMPL range: 55 - 81
Number of observations: 27

| VARIABLE | COEFFICIENT | STD. ERROR | T-STAT. | 2-TAIL SIG. |
|---|---|---|---|---|
| C | -7.0835559 | 0.9390104 | -7.5436393 | 0.0000 |
| LTOTEMP | 1.4631520 | 0.0917390 | 15.949072 | 0.0000 |

| | | | |
|---|---|---|---|
| R-squared | 0.910514 | Mean of dependent var | 7.890052 |
| Adjusted R-squared | 0.906934 | S.D. of dependent var | 0.305733 |
| S.E. of regression | 0.093269 | Sum of squared resid | 0.217477 |
| Log likelihood | 26.77889 | F-statistic | 254.3729 |
| Durbin-Watson stat | 0.174905 | Prob(F-statistic) | 0.000000 |

LS // Dependent Variable is LSCON
Date: 3-31-1997 / Time: 13:54
SMPL range: 82 - 108
Number of observations: 27

| VARIABLE | COEFFICIENT | STD. ERROR | T-STAT. | 2-TAIL SIG. |
|---|---|---|---|---|
| C | -5.6756485 | 0.8785924 | -6.4599335 | 0.0000 |
| LTOTEMP | 1.2877212 | 0.0901154 | 14.289699 | 0.0000 |

| | | | |
|---|---|---|---|
| R-squared | 0.890923 | Mean of dependent var | 6.877005 |
| Adjusted R-squared | 0.886560 | S.D. of dependent var | 0.251853 |
| S.E. of regression | 0.084826 | Sum of squared resid | 0.179888 |
| Log likelihood | 29.34066 | F-statistic | 204.1955 |
| Durbin-Watson stat | 0.356227 | Prob(F-statistic) | 0.000000 |

TSLS // Dependent Variable is LSCMWH
Date: 4-08-1997 / Time: 9:56
SMPL range: 2 - 27 29 - 54 56 - 81 83 - 10
8
Number of observations: 104
Instrument list: C LCOOL LHEAT LSCMWH(-1) D5575 D20 D33 D55 LRWHPC DUM55

| VARIABLE | COEFFICIENT | STD. ERROR | T-STAT. | 2-TAIL SIG. |
|---|---|---|---|---|
| C | -1.2149315 | 0.4576634 | -2.6546397 | 0.0093 |
| LRCP | -0.0472631 | 0.0457379 | -1.0333459 | 0.3041 |
| LCOOL | 0.1175934 | 0.0428413 | 2.7448592 | 0.0072 |
| LHEAT | 0.1137147 | 0.0579106 | 1.9636247 | 0.0525 |
| LSCMWH(-1) | 0.8312204 | 0.0405204 | 20.513608 | 0.0000 |
| D5575 | 0.3940362 | 0.0712476 | 5.5305167 | 0.0000 |
| D20 | -0.0091678 | 0.0237556 | -0.3859219 | 0.7004 |
| D33 | -0.0086561 | 0.0276273 | -0.3133171 | 0.7547 |
| D55 | -0.0488199 | 0.0206659 | -2.3623458 | 0.0202 |

| | | | |
|---|---|---|---|
| R-squared | 0.979946 | Mean of dependent var | 11.01998 |
| Adjusted R-squared | 0.978257 | S.D. of dependent var | 0.453230 |
| S.E. of regression | 0.066831 | Sum of squared resid | 0.424300 |
| F-statistic | 580.0139 | Durbin-Watson stat | 2.119678 |
| Prob(F-statistic) | 0.000000 | | |

TSLS // Dependent Variable is LRCP
Date: 4-08-1997 / Time: 9:56
SMPL range: 2 - 27 29 - 54 56 - 81 83 - 10
8
Number of observations: 104
Instrument list: C LCOOL LHEAT LSCMWH(-1) D5575 D20 D33 D55 LRWHPC DUM55

| VARIABLE | COEFFICIENT | STD. ERROR | T-STAT. | 2-TAIL SIG. |
|---|---|---|---|---|
| C | 6.1914397 | 0.2411211 | 25.677720 | 0.0000 |
| LRWHPC | 0.6385474 | 0.0361195 | 17.678757 | 0.0000 |
| LSCMWH | -0.4142617 | 0.0311192 | -13.312074 | 0.0000 |
| DUM55 | 0.4200742 | 0.0282537 | 14.867923 | 0.0000 |
| D20 | 0.0978699 | 0.0211656 | 4.6240153 | 0.0000 |
| D33 | 0.2932712 | 0.0311389 | 9.4181735 | 0.0000 |
| D55 | 0.1543472 | 0.0201483 | 7.6605508 | 0.0000 |

| | | | |
|---|---|---|---|
| R-squared | 0.918933 | Mean of dependent var | 3.933533 |
| Adjusted R-squared | 0.913919 | S.D. of dependent var | 0.188962 |
| S.E. of regression | 0.055441 | Sum of squared resid | 0.298148 |
| F-statistic | 182.4530 | Durbin-Watson stat | 0.640159 |
| Prob(F-statistic) | 0.000000 | | |

TSLS // Dependent Variable is LSCMWH
Date: 3-31-1997 / Time: 15:47
SMPL range: 7 - 27 88 - 108
Number of observations: 42
Instrument list: C LCOOL LHEAT LSCMWH(-1) D55 LRWHPC DUM55

| VARIABLE | COEFFICIENT | STD. ERROR | T-STAT. | 2-TAIL SIG. |
|---|---|---|---|---|
| C | 0.0628085 | 1.0392390 | 0.0604370 | 0.9521 |
| LRCP | -0.0788302 | 0.0478041 | -1.6490246 | 0.1078 |
| LCOOL | 0.2455308 | 0.0475913 | 5.1591523 | 0.0000 |
| LHEAT | 0.3095221 | 0.0787013 | 3.9328720 | 0.0004 |
| LSCMWH(-1) | 0.2947877 | 0.0855491 | 3.4458291 | 0.0015 |
| D55 | -0.0460299 | 0.0271940 | -1.6926475 | 0.0992 |

| | | | |
|---|---|---|---|
| R-squared | 0.902623 | Mean of dependent var | 10.79407 |
| Adjusted R-squared | 0.889099 | S.D. of dependent var | 0.143389 |
| S.E. of regression | 0.047751 | Sum of squared resid | 0.082087 |
| F-statistic | 66.32814 | Durbin-Watson stat | 2.225531 |
| Prob(F-statistic) | 0.000000 | | |

TSLS // Dependent Variable is LRCP
Date: 3-31-1997 / Time: 15:48
SMPL range: 7 - 27 88 - 108
Number of observations: 42
Instrument list: C LCOOL LHEAT LSCMWH(-1) D55 LRWHPC DUM55

| VARIABLE | COEFFICIENT | STD. ERROR | T-STAT. | 2-TAIL SIG. |
|---|---|---|---|---|
| C | 9.0198990 | 1.0517777 | 8.5758603 | 0.0000 |
| LRWHPC | 0.5427318 | 0.0807860 | 6.7181388 | 0.0000 |
| LSCMWH | -0.6482253 | 0.1123612 | -5.7691223 | 0.0000 |
| DUM55 | 0.3588633 | 0.0375746 | 9.5506960 | 0.0000 |
| D55 | 0.2293309 | 0.0347918 | 6.5915269 | 0.0000 |

| | | | |
|---|---|---|---|
| R-squared | 0.939311 | Mean of dependent var | 4.057796 |
| Adjusted R-squared | 0.932750 | S.D. of dependent var | 0.212482 |
| S.E. of regression | 0.055102 | Sum of squared resid | 0.112341 |
| F-statistic | 142.0638 | Durbin-Watson stat | 0.987084 |
| Prob(F-statistic) | 0.000000 | | |

LS // Dependent Variable is RNCP
Date: 6-06-1997 / Time: 9:58
SMPL range: 1 - 192
Number of observations: 192

| VARIABLE | COEFFICIENT | STD. ERROR | T-STAT. | 2-TAIL SIG. |
|---|---|---|---|---|
| C | -97.661657 | 18.596260 | -5.2516827 | 0.0000 |
| RGWH | 0.2230907 | 0.0133000 | 16.773741 | 0.0000 |
| CDD | 0.2352163 | 0.0254365 | 9.2471921 | 0.0000 |
| HDD | 0.1120815 | 0.0050542 | 22.175719 | 0.0000 |
| M6 | 35.555337 | 8.0800996 | 4.4003588 | 0.0000 |
| M7 | 38.454589 | 10.660020 | 3.6073656 | 0.0004 |
| M8 | 51.348000 | 9.1983961 | 5.5822775 | 0.0000 |
| M9 | 52.548569 | 5.5884839 | 9.4030098 | 0.0000 |
| DUM1 | 23.307017 | 4.4919223 | 5.1886509 | 0.0000 |
| EXT89 | 44.084954 | 16.979239 | 2.5964035 | 0.0102 |

| | | | |
|---|---|---|---|
| R-squared | 0.902051 | Mean of dependent var | 282.5417 |
| Adjusted R-squared | 0.897208 | S.D. of dependent var | 51.27983 |
| S.E. of regression | 16.44094 | Sum of squared resid | 49195.45 |
| Log likelihood | -804.8581 | F-statistic | 186.2352 |
| Durbin-Watson stat | 1.724690 | Prob(F-statistic) | 0.000000 |

**Section 6**
**Forecast Scenarios**

## Big Rivers Electric Corporation
## 1997 Load Forecast - High Scenario #1
## Optimistic Economic Outlook / Normal Weather
## Total System Requirements

| Year | Consumers | Percent Change | Sales (MWh) | Percent Change | Own Use (MWh) | Losses (%) | Member MWh Purchases | Total MWh Requirements | Percent Change |
|---|---|---|---|---|---|---|---|---|---|
| 1972 | 52,831 | | 3,792,968 | | 3,102 | 9.7% | 3,862,045 | 3,939,286 | |
| 1973 | 54,920 | 4.0% | 5,033,988 | 32.7% | 2,811 | 8.9% | 5,102,148 | 5,204,191 | 32.1% |
| 1974 | 56,975 | 3.7% | 5,918,096 | 17.6% | 2,651 | 8.7% | 5,986,239 | 6,105,964 | 17.3% |
| 1975 | 58,878 | 3.3% | 5,863,245 | -0.9% | 2,546 | 8.5% | 5,939,400 | 6,058,188 | -0.8% |
| 1976 | 61,040 | 3.7% | 6,103,980 | 4.1% | 2,860 | 9.1% | 6,190,692 | 6,314,506 | 4.2% |
| 1977 | 63,441 | 3.9% | 6,432,738 | 5.4% | 2,801 | 7.4% | 6,514,107 | 6,644,389 | 5.2% |
| 1978 | 65,205 | 2.8% | 6,436,336 | 0.1% | 3,042 | 7.6% | 6,527,678 | 6,658,231 | 0.2% |
| 1979 | 67,573 | 3.6% | 6,929,271 | 7.7% | 2,909 | 9.0% | 7,029,485 | 7,170,074 | 7.7% |
| 1980 | 68,948 | 2.0% | 7,454,859 | 7.6% | 2,754 | 6.2% | 7,528,564 | 7,679,135 | 7.1% |
| 1981 | 70,106 | 1.7% | 7,401,040 | -0.7% | 2,810 | 6.9% | 7,479,670 | 7,629,264 | -0.6% |
| 1982 | 70,894 | 1.1% | 6,342,743 | -14.3% | 2,932 | 7.2% | 6,426,261 | 6,554,786 | -14.1% |
| 1983 | 72,269 | 1.9% | 6,604,043 | 4.1% | 2,816 | 8.5% | 6,707,235 | 6,841,380 | 4.4% |
| 1984 | 73,660 | 1.9% | 7,329,994 | 11.0% | 3,042 | 5.5% | 7,398,951 | 7,546,930 | 10.3% |
| 1985 | 74,913 | 1.7% | 6,796,406 | -7.3% | 2,864 | 8.0% | 6,899,093 | 7,037,074 | -6.8% |
| 1986 | 76,008 | 1.5% | 6,125,886 | -9.9% | 2,982 | 6.7% | 6,215,491 | 6,339,799 | -9.9% |
| 1987 | 77,384 | 1.8% | 6,180,027 | 0.9% | 3,079 | 6.5% | 6,270,519 | 6,395,929 | 0.9% |
| 1988 | 78,603 | 1.6% | 7,713,154 | 24.8% | 3,196 | 7.0% | 7,813,146 | 7,969,409 | 24.6% |
| 1989 | 79,853 | 1.6% | 7,951,178 | 3.1% | 3,255 | 8.4% | 8,072,761 | 8,234,217 | 3.3% |
| 1990 | 81,050 | 1.5% | 8,113,961 | 2.0% | 3,133 | 5.4% | 8,191,465 | 8,355,294 | 1.5% |
| 1991 | 82,201 | 1.4% | 8,208,490 | 1.2% | 3,136 | 7.0% | 8,314,440 | 8,484,123 | 1.5% |
| 1992 | 83,737 | 1.9% | 8,222,493 | 0.2% | 3,362 | 7.0% | 8,326,337 | 8,496,262 | 0.1% |
| 1993 | 85,501 | 2.1% | 8,336,903 | 1.4% | 3,089 | 6.7% | 8,445,130 | 8,617,480 | 1.4% |
| 1994 | 87,257 | 2.1% | 7,355,595 | -11.8% | 3,226 | 6.1% | 7,454,220 | 7,606,347 | -11.7% |
| 1995 | 89,395 | 2.4% | 7,849,136 | 6.7% | 3,334 | 6.6% | 7,961,435 | 8,123,913 | 6.8% |
| 1996 | 91,548 | 2.4% | 7,931,120 | 1.0% | 3,598 | 6.5% | 8,045,961 | 8,210,164 | 1.1% |
| 1997 | 94,822 | 3.6% | 8,496,324 | 7.1% | 3,630 | 6.4% | 8,611,442 | 8,787,186 | 7.0% |
| 1998 | 98,215 | 3.6% | 9,367,556 | 10.3% | 3,658 | 6.4% | 9,494,479 | 9,688,243 | 10.3% |
| 1999 | 101,725 | 3.6% | 10,205,409 | 8.9% | 3,687 | 6.4% | 10,343,684 | 10,554,779 | 8.9% |
| 2000 | 105,358 | 3.6% | 10,337,888 | 1.3% | 3,715 | 6.3% | 10,477,958 | 10,691,793 | 1.3% |
| 2001 | 109,119 | 3.6% | 10,447,329 | 1.1% | 3,744 | 6.3% | 10,590,816 | 10,806,955 | 1.1% |
| 2002 | 112,703 | 3.3% | 10,540,254 | 0.9% | 3,773 | 6.3% | 10,690,368 | 10,908,539 | 0.9% |
| 2003 | 116,407 | 3.3% | 10,649,461 | 1.0% | 3,801 | 6.3% | 10,806,565 | 11,027,107 | 1.1% |
| 2004 | 120,231 | 3.3% | 10,765,278 | 1.1% | 3,830 | 6.3% | 10,930,272 | 11,153,339 | 1.1% |
| 2005 | 124,182 | 3.3% | 10,888,136 | 1.1% | 3,858 | 6.3% | 11,061,491 | 11,287,235 | 1.2% |
| 2006 | 128,262 | 3.3% | 11,018,455 | 1.2% | 3,887 | 6.3% | 11,200,668 | 11,429,253 | 1.3% |
| 2007 | 132,220 | 3.1% | 11,152,658 | 1.2% | 3,915 | 6.3% | 11,343,986 | 11,575,496 | 1.3% |
| 2008 | 136,300 | 3.1% | 11,406,318 | 2.3% | 3,944 | 6.3% | 11,607,280 | 11,844,163 | 2.3% |
| 2009 | 140,507 | 3.1% | 11,556,540 | 1.3% | 3,973 | 6.3% | 11,767,685 | 12,007,842 | 1.4% |
| 2010 | 144,844 | 3.1% | 11,715,513 | 1.4% | 4,001 | 6.3% | 11,937,426 | 12,181,047 | 1.4% |
| 2011 | 149,317 | 3.1% | 11,883,769 | 1.4% | 4,030 | 6.3% | 12,117,069 | 12,364,356 | 1.5% |
| 2012 | 153,785 | 3.0% | 12,058,450 | 1.5% | 4,058 | 6.3% | 12,303,562 | 12,554,655 | 1.5% |
| 2013 | 158,388 | 3.0% | 12,324,674 | 2.2% | 4,087 | 6.3% | 12,582,239 | 12,839,019 | 2.3% |
| 2014 | 163,129 | 3.0% | 12,519,361 | 1.6% | 4,116 | 6.3% | 12,790,068 | 13,051,090 | 1.7% |
| 2015 | 168,012 | 3.0% | 12,725,100 | 1.6% | 4,144 | 6.3% | 13,009,685 | 13,275,188 | 1.7% |
| 2016 | 173,043 | 3.0% | 12,942,587 | 1.7% | 4,173 | 6.3% | 13,241,831 | 13,512,072 | 1.8% |

Notes:
1. Years 1997-2016 based on the long-term forecast
2. Losses represent distribution losses on rural system energy requirements
3. 1972-1996 respresents actual values, 1997-2016 represents weather normalized values

## Big Rivers Electric Corporation

### 1997 Load Forecast - High Scenario #1
### Optimistic Economic Outlook / Normal Weather
### Total System Requirements

| Year | Summer Peak (kW) | Percent Change | Load Factor | Winter Peak (kW) | Percent Change | Load Factor |
|---|---|---|---|---|---|---|
| 1972 | 497,000 | | 88.7% | 472,000 | | 93.4% |
| 1973 | 707,000 | 42.3% | 82.4% | 508,000 | 7.6% | 114.7% |
| 1974 | 737,000 | 4.2% | 92.7% | 722,000 | 42.1% | 94.6% |
| 1975 | 722,000 | -2.0% | 93.9% | 731,000 | 1.2% | 92.8% |
| 1976 | 759,000 | 5.1% | 93.1% | 748,000 | 2.3% | 94.5% |
| 1977 | 801,000 | 5.5% | 92.8% | 820,000 | 9.6% | 90.7% |
| 1978 | 802,000 | 0.1% | 92.9% | 819,000 | -0.1% | 91.0% |
| 1979 | 994,000 | 23.9% | 80.7% | 974,000 | 18.9% | 82.4% |
| 1980 | 1,039,000 | 4.5% | 82.7% | 1,007,000 | 3.4% | 85.3% |
| 1981 | 1,034,000 | -0.5% | 82.6% | 1,037,000 | 3.0% | 82.3% |
| 1982 | 890,000 | -13.9% | 82.4% | 1,034,000 | -0.3% | 70.9% |
| 1983 | 966,000 | 8.5% | 79.3% | 1,046,000 | 1.2% | 73.2% |
| 1984 | 1,027,000 | 6.3% | 82.2% | 979,000 | -6.4% | 86.3% |
| 1985 | 965,000 | -6.0% | 81.6% | 1,042,000 | 6.4% | 75.6% |
| 1986 | 890,000 | -7.8% | 79.7% | 993,000 | -4.7% | 71.5% |
| 1987 | 990,000 | 11.2% | 72.3% | 920,000 | -7.4% | 77.8% |
| 1988 | 1,157,000 | 16.9% | 77.1% | 1,063,000 | 15.5% | 83.9% |
| 1989 | 1,142,000 | -1.3% | 80.7% | 1,177,000 | 10.7% | 78.3% |
| 1990 | 1,174,000 | 2.8% | 79.7% | 1,089,000 | -7.5% | 85.9% |
| 1991 | 1,168,000 | -0.5% | 81.3% | 1,140,000 | 4.7% | 83.3% |
| 1992 | 1,166,000 | -0.2% | 81.5% | 1,149,000 | 0.8% | 82.7% |
| 1993 | 1,217,000 | 4.4% | 79.2% | 1,137,000 | -1.0% | 84.8% |
| 1994 | 1,055,000 | -13.3% | 80.7% | 1,189,000 | 4.6% | 71.6% |
| 1995 | 1,166,000 | 10.5% | 77.9% | 1,063,000 | -10.6% | 85.5% |
| 1996 | 1,167,000 | 0.1% | 78.7% | 1,154,000 | 8.6% | 79.6% |
| 1997 | 1,347,462 | 15.5% | 73.0% | 1,306,987 | 13.3% | 75.2% |
| 1998 | 1,398,536 | 3.8% | 77.5% | 1,358,062 | 3.9% | 79.8% |
| 1999 | 1,421,184 | 1.6% | 83.1% | 1,380,709 | 1.7% | 85.5% |
| 2000 | 1,446,022 | 1.7% | 82.7% | 1,405,547 | 1.8% | 85.1% |
| 2001 | 1,469,175 | 1.6% | 82.3% | 1,428,701 | 1.6% | 84.6% |
| 2002 | 1,489,837 | 1.4% | 81.9% | 1,449,362 | 1.4% | 84.2% |
| 2003 | 1,514,046 | 1.6% | 81.5% | 1,473,571 | 1.7% | 83.7% |
| 2004 | 1,539,721 | 1.7% | 81.0% | 1,499,247 | 1.7% | 83.2% |
| 2005 | 1,566,957 | 1.8% | 80.6% | 1,526,482 | 1.8% | 82.7% |
| 2006 | 1,595,847 | 1.8% | 80.1% | 1,555,372 | 1.9% | 82.2% |
| 2007 | 1,625,598 | 1.9% | 79.7% | 1,585,123 | 1.9% | 81.7% |
| 2008 | 1,672,071 | 2.9% | 79.2% | 1,631,596 | 2.9% | 81.2% |
| 2009 | 1,705,372 | 2.0% | 78.8% | 1,664,898 | 2.0% | 80.7% |
| 2010 | 1,740,614 | 2.1% | 78.3% | 1,700,140 | 2.1% | 80.2% |
| 2011 | 1,777,914 | 2.1% | 77.8% | 1,737,440 | 2.2% | 79.6% |
| 2012 | 1,816,639 | 2.2% | 77.3% | 1,776,164 | 2.2% | 79.1% |
| 2013 | 1,868,499 | 2.9% | 76.9% | 1,828,025 | 2.9% | 78.6% |
| 2014 | 1,911,659 | 2.3% | 76.4% | 1,871,184 | 2.4% | 78.0% |
| 2015 | 1,957,268 | 2.4% | 75.9% | 1,916,793 | 2.4% | 77.5% |
| 2016 | 2,005,482 | 2.5% | 75.4% | 1,965,007 | 2.5% | 76.9% |

Notes:
1. Years 1997-2016 based on the long-term forecast
2. 1972-1996 respresents actual values, 1997-2016 represents weather normalized values
3. Peak amounts represent the total Big Rivers 60-minute CP demand value

## Big Rivers Electric Corporation

### 1997 Load Forecast - High Scenario #1
### Optimistic Economic Outlook / Normal Weather
### Residential Classification

| Year | Consumers | Percent Change | Sales (MWh) | Percent Change | Average Use (kWh/Cust/Mo) | Percent Change |
|---|---|---|---|---|---|---|
| 1972 | 48,646 | | 426,199 | | 730 | |
| 1973 | 50,636 | 4.1% | 475,060 | 11.5% | 782 | 7.1% |
| 1974 | 52,494 | 3.7% | 495,221 | 4.2% | 786 | 0.6% |
| 1975 | 54,230 | 3.3% | 565,706 | 14.2% | 869 | 10.6% |
| 1976 | 56,193 | 3.6% | 603,393 | 6.7% | 895 | 2.9% |
| 1977 | 58,226 | 3.6% | 706,616 | 17.1% | 1,011 | 13.0% |
| 1978 | 59,761 | 2.6% | 756,149 | 7.0% | 1,054 | 4.3% |
| 1979 | 61,858 | 3.5% | 735,825 | -2.7% | 991 | -6.0% |
| 1980 | 63,049 | 1.9% | 795,980 | 8.2% | 1,052 | 6.1% |
| 1981 | 63,941 | 1.4% | 745,835 | -6.3% | 972 | -7.6% |
| 1982 | 64,502 | 0.9% | 756,931 | 1.5% | 978 | 0.6% |
| 1983 | 65,519 | 1.6% | 781,501 | 3.2% | 994 | 1.6% |
| 1984 | 66,607 | 1.7% | 819,670 | 4.9% | 1,026 | 3.2% |
| 1985 | 67,754 | 1.7% | 819,928 | 0.0% | 1,008 | -1.7% |
| 1986 | 68,718 | 1.4% | 871,530 | 6.3% | 1,057 | 4.8% |
| 1987 | 69,946 | 1.8% | 909,195 | 4.3% | 1,083 | 2.5% |
| 1988 | 71,032 | 1.6% | 931,639 | 2.5% | 1,093 | 0.9% |
| 1989 | 72,171 | 1.6% | 925,721 | -0.6% | 1,069 | -2.2% |
| 1990 | 73,156 | 1.4% | 930,785 | 0.5% | 1,060 | -0.8% |
| 1991 | 74,176 | 1.4% | 991,459 | 6.5% | 1,114 | 5.1% |
| 1992 | 75,668 | 2.0% | 945,487 | -4.6% | 1,041 | -6.5% |
| 1993 | 77,266 | 2.1% | 1,052,301 | 11.3% | 1,135 | 9.0% |
| 1994 | 78,879 | 2.1% | 1,040,652 | -1.1% | 1,099 | -3.1% |
| 1995 | 80,808 | 2.4% | 1,101,490 | 5.8% | 1,136 | 3.3% |
| 1996 | 82,659 | 2.3% | 1,144,623 | 3.9% | 1,154 | 1.6% |
| 1997 | 85,589 | 3.5% | 1,203,095 | 5.1% | 1,171 | 1.5% |
| 1998 | 88,623 | 3.5% | 1,264,470 | 5.1% | 1,189 | 1.5% |
| 1999 | 91,766 | 3.5% | 1,328,935 | 5.1% | 1,207 | 1.5% |
| 2000 | 95,022 | 3.5% | 1,396,679 | 5.1% | 1,225 | 1.5% |
| 2001 | 98,394 | 3.5% | 1,467,550 | 5.1% | 1,243 | 1.5% |
| 2002 | 101,618 | 3.3% | 1,537,294 | 4.8% | 1,261 | 1.4% |
| 2003 | 104,950 | 3.3% | 1,610,132 | 4.7% | 1,278 | 1.4% |
| 2004 | 108,391 | 3.3% | 1,686,359 | 4.7% | 1,297 | 1.4% |
| 2005 | 111,946 | 3.3% | 1,766,183 | 4.7% | 1,315 | 1.4% |
| 2006 | 115,619 | 3.3% | 1,849,790 | 4.7% | 1,333 | 1.4% |
| 2007 | 119,184 | 3.1% | 1,933,699 | 4.5% | 1,352 | 1.4% |
| 2008 | 122,860 | 3.1% | 2,021,453 | 4.5% | 1,371 | 1.4% |
| 2009 | 126,651 | 3.1% | 2,113,214 | 4.5% | 1,390 | 1.4% |
| 2010 | 130,559 | 3.1% | 2,209,162 | 4.5% | 1,410 | 1.4% |
| 2011 | 134,590 | 3.1% | 2,309,486 | 4.5% | 1,430 | 1.4% |
| 2012 | 138,597 | 3.0% | 2,411,451 | 4.4% | 1,450 | 1.4% |
| 2013 | 142,724 | 3.0% | 2,517,793 | 4.4% | 1,470 | 1.4% |
| 2014 | 146,974 | 3.0% | 2,628,797 | 4.4% | 1,491 | 1.4% |
| 2015 | 151,351 | 3.0% | 2,744,702 | 4.4% | 1,511 | 1.4% |
| 2016 | 155,860 | 3.0% | 2,865,735 | 4.4% | 1,532 | 1.4% |

Notes:
1. Years 1997-2016 based on the long-term forecast
2. 1972-1996 respresents actual values, 1997-2016 represents weather normalized values

Big Rivers Electric Corporation

1997 Load Forecast - High Scenario #1
Optimistic Economic Outlook / Normal Weather
C/I Small Classification

| Year | Consumers | Percent Change | Sales (MWh) | Percent Change | Average Use (kWh/Cust/Mo) | Percent Change |
|---|---|---|---|---|---|---|
| 1972 | 4,111 | | 188,145 | | 3,814 | |
| 1973 | 4,207 | 2.3% | 188,997 | 0.5% | 3,744 | -1.8% |
| 1974 | 4,402 | 4.6% | 190,553 | 0.8% | 3,607 | -3.6% |
| 1975 | 4,565 | 3.7% | 221,820 | 16.4% | 4,049 | 12.3% |
| 1976 | 4,762 | 4.3% | 235,573 | 6.2% | 4,122 | 1.8% |
| 1977 | 5,131 | 7.7% | 280,660 | 19.1% | 4,558 | 10.6% |
| 1978 | 5,352 | 4.3% | 309,797 | 10.4% | 4,824 | 5.8% |
| 1979 | 5,617 | 5.0% | 250,462 | -19.2% | 3,716 | -23.0% |
| 1980 | 5,801 | 3.3% | 266,633 | 6.5% | 3,830 | 3.1% |
| 1981 | 6,062 | 4.5% | 272,242 | 2.1% | 3,742 | -2.3% |
| 1982 | 6,277 | 3.5% | 283,508 | 4.1% | 3,764 | 0.6% |
| 1983 | 6,622 | 5.5% | 292,126 | 3.0% | 3,676 | -2.3% |
| 1984 | 6,918 | 4.5% | 313,999 | 7.5% | 3,782 | 2.9% |
| 1985 | 7,021 | 1.5% | 321,458 | 2.4% | 3,815 | 0.9% |
| 1986 | 7,151 | 1.9% | 325,914 | 1.4% | 3,798 | -0.5% |
| 1987 | 7,296 | 2.0% | 338,858 | 4.0% | 3,870 | 1.9% |
| 1988 | 7,424 | 1.8% | 351,822 | 3.8% | 3,949 | 2.0% |
| 1989 | 7,526 | 1.4% | 355,923 | 1.2% | 3,941 | -0.2% |
| 1990 | 7,730 | 2.7% | 371,964 | 4.5% | 4,010 | 1.7% |
| 1991 | 7,854 | 1.6% | 381,198 | 2.5% | 4,045 | 0.9% |
| 1992 | 7,898 | 0.6% | 388,913 | 2.0% | 4,103 | 1.5% |
| 1993 | 8,060 | 2.1% | 419,026 | 7.7% | 4,332 | 5.6% |
| 1994 | 8,198 | 1.7% | 429,433 | 2.5% | 4,365 | 0.8% |
| 1995 | 8,406 | 2.5% | 447,653 | 4.2% | 4,438 | 1.7% |
| 1996 | 8,689 | 3.4% | 463,285 | 3.5% | 4,443 | 0.1% |
| 1997 | 9,031 | 3.9% | 496,244 | 7.1% | 4,579 | 3.1% |
| 1998 | 9,384 | 3.9% | 518,623 | 4.5% | 4,606 | 0.6% |
| 1999 | 9,746 | 3.9% | 544,701 | 5.0% | 4,657 | 1.1% |
| 2000 | 10,120 | 3.8% | 574,349 | 5.4% | 4,729 | 1.5% |
| 2001 | 10,505 | 3.8% | 607,495 | 5.8% | 4,819 | 1.9% |
| 2002 | 10,862 | 3.4% | 643,614 | 5.9% | 4,938 | 2.5% |
| 2003 | 11,230 | 3.4% | 683,119 | 6.1% | 5,069 | 2.7% |
| 2004 | 11,609 | 3.4% | 726,288 | 6.3% | 5,214 | 2.8% |
| 2005 | 12,001 | 3.4% | 773,388 | 6.5% | 5,370 | 3.0% |
| 2006 | 12,404 | 3.4% | 824,702 | 6.6% | 5,541 | 3.2% |
| 2007 | 12,806 | 3.2% | 880,153 | 6.7% | 5,727 | 3.4% |
| 2008 | 13,220 | 3.2% | 940,163 | 6.8% | 5,926 | 3.5% |
| 2009 | 13,647 | 3.2% | 1,005,117 | 6.9% | 6,138 | 3.6% |
| 2010 | 14,087 | 3.2% | 1,075,407 | 7.0% | 6,362 | 3.7% |
| 2011 | 14,541 | 3.2% | 1,151,450 | 7.1% | 6,599 | 3.7% |
| 2012 | 15,000 | 3.2% | 1,233,156 | 7.1% | 6,851 | 3.8% |
| 2013 | 15,474 | 3.2% | 1,321,122 | 7.1% | 7,115 | 3.9% |
| 2014 | 15,963 | 3.2% | 1,415,887 | 7.2% | 7,392 | 3.9% |
| 2015 | 16,467 | 3.2% | 1,518,006 | 7.2% | 7,682 | 3.9% |
| 2016 | 16,988 | 3.2% | 1,628,064 | 7.3% | 7,986 | 4.0% |

Notes:
1. Years 1997-2016 based on the long-term forecast
2. 1972-1996 respresents actual values, 1997-2016 represents weather normalized values

## Big Rivers Electric Corporation

## 1997 Load Forecast - High Scenario #1
## Optimistic Economic Outlook / Normal Weather
## C/I Large Classification

| Year | Consumers | Percent Change | Sales (MWh) | Percent Change |
|---|---|---|---|---|
| 1972 | 9 | | 3,177,303 | |
| 1973 | 10 | 11.1% | 4,368,418 | 37.5% |
| 1974 | 10 | 0.0% | 5,230,483 | 19.7% |
| 1975 | 11 | 10.0% | 5,073,573 | -3.0% |
| 1976 | 16 | 45.5% | 5,262,762 | 3.7% |
| 1977 | 17 | 6.3% | 5,443,274 | 3.4% |
| 1978 | 15 | -11.8% | 5,368,154 | -1.4% |
| 1979 | 17 | 13.3% | 5,940,734 | 10.7% |
| 1980 | 18 | 5.9% | 6,390,170 | 7.6% |
| 1981 | 19 | 5.6% | 6,380,899 | -0.1% |
| 1982 | 22 | 15.8% | 5,300,242 | -16.9% |
| 1983 | 23 | 4.5% | 5,528,519 | 4.3% |
| 1984 | 25 | 8.7% | 6,194,365 | 12.0% |
| 1985 | 27 | 8.0% | 5,653,054 | -8.7% |
| 1986 | 33 | 22.2% | 4,926,411 | -12.9% |
| 1987 | 34 | 3.0% | 4,929,857 | 0.1% |
| 1988 | 36 | 5.9% | 6,427,497 | 30.4% |
| 1989 | 40 | 11.1% | 6,667,299 | 3.7% |
| 1990 | 40 | 0.0% | 6,808,988 | 2.1% |
| 1991 | 41 | 2.5% | 6,833,471 | 0.4% |
| 1992 | 38 | -7.3% | 6,885,705 | 0.8% |
| 1993 | 37 | -2.6% | 6,863,080 | -0.3% |
| 1994 | 37 | 0.0% | 5,882,908 | -14.3% |
| 1995 | 35 | -5.4% | 6,297,252 | 7.0% |
| 1996 | 38 | 8.6% | 6,320,441 | 0.4% |
| 1997 | 36 | -5.3% | 6,790,687 | 7.4% |
| 1998 | 36 | 0.0% | 7,585,880 | 11.7% |
| 1999 | 36 | 0.0% | 8,340,430 | 9.9% |
| 2000 | 36 | 0.0% | 8,373,153 | 0.4% |
| 2001 | 36 | 0.0% | 8,377,807 | 0.1% |
| 2002 | 35 | -2.8% | 8,367,607 | -0.1% |
| 2003 | 35 | 0.0% | 8,367,607 | 0.0% |
| 2004 | 35 | 0.0% | 8,367,607 | 0.0% |
| 2005 | 35 | 0.0% | 8,367,607 | 0.0% |
| 2006 | 35 | 0.0% | 8,367,607 | 0.0% |
| 2007 | 35 | 0.0% | 8,367,607 | 0.0% |
| 2008 | 35 | 0.0% | 8,479,297 | 1.3% |
| 2009 | 35 | 0.0% | 8,479,297 | 0.0% |
| 2010 | 35 | 0.0% | 8,479,297 | 0.0% |
| 2011 | 35 | 0.0% | 8,479,297 | 0.0% |
| 2012 | 35 | 0.0% | 8,479,297 | 0.0% |
| 2013 | 35 | 0.0% | 8,561,203 | 1.0% |
| 2014 | 35 | 0.0% | 8,561,203 | 0.0% |
| 2015 | 35 | 0.0% | 8,561,203 | 0.0% |
| 2016 | 35 | 0.0% | 8,561,203 | 0.0% |

Notes:
1. Years 1997-2016 based on the long-term forecast
2. 1972-1996 respresents actual values. 1997-2016 represents weather normalized values

**Big Rivers Electric Corporation**

**1997 Load Forecast - High Scenario #1**
**Optimistic Economic Outlook / Normal Weather**
**Public Street Lighting Classification**

| Year | Consumers | Percent Change | Sales (MWh) | Percent Change |
|---|---|---|---|---|
| 1972 | 65 | | 1,321 | |
| 1973 | 67 | 3.1% | 1,512 | 14.5% |
| 1974 | 69 | 3.0% | 1,839 | 21.6% |
| 1975 | 72 | 4.3% | 2,145 | 16.7% |
| 1976 | 69 | -4.2% | 2,252 | 5.0% |
| 1977 | 68 | -1.4% | 2,188 | -2.8% |
| 1978 | 71 | 4.4% | 2,204 | 0.7% |
| 1979 | 76 | 7.0% | 2,210 | 0.3% |
| 1980 | 74 | -2.6% | 2,032 | -8.0% |
| 1981 | 76 | 2.7% | 1,985 | -2.3% |
| 1982 | 84 | 10.5% | 1,999 | 0.7% |
| 1983 | 93 | 10.7% | 1,833 | -8.3% |
| 1984 | 98 | 5.4% | 1,887 | 2.9% |
| 1985 | 99 | 1.0% | 1,927 | 2.2% |
| 1986 | 96 | -3.0% | 1,981 | 2.8% |
| 1987 | 101 | 5.2% | 2,048 | 3.4% |
| 1988 | 104 | 3.0% | 2,110 | 3.0% |
| 1989 | 109 | 4.8% | 2,154 | 2.1% |
| 1990 | 116 | 6.4% | 2,177 | 1.1% |
| 1991 | 121 | 4.3% | 2,276 | 4.5% |
| 1992 | 124 | 2.5% | 2,275 | -0.1% |
| 1993 | 129 | 4.0% | 2,417 | 6.2% |
| 1994 | 134 | 3.9% | 2,509 | 3.8% |
| 1995 | 136 | 1.5% | 2,641 | 5.3% |
| 1996 | 152 | 11.8% | 2,661 | 0.8% |
| 1997 | 156 | 2.6% | 2,729 | 2.6% |
| 1998 | 160 | 2.6% | 2,797 | 2.5% |
| 1999 | 164 | 2.5% | 2,865 | 2.4% |
| 2000 | 168 | 2.4% | 2,933 | 2.4% |
| 2001 | 172 | 2.4% | 3,001 | 2.3% |
| 2002 | 176 | 2.3% | 3,069 | 2.3% |
| 2003 | 180 | 2.3% | 3,137 | 2.2% |
| 2004 | 184 | 2.2% | 3,205 | 2.2% |
| 2005 | 188 | 2.2% | 3,273 | 2.1% |
| 2006 | 192 | 2.1% | 3,341 | 2.1% |
| 2007 | 196 | 2.1% | 3,409 | 2.0% |
| 2008 | 200 | 2.0% | 3,477 | 2.0% |
| 2009 | 204 | 2.0% | 3,545 | 2.0% |
| 2010 | 208 | 2.0% | 3,612 | 1.9% |
| 2011 | 212 | 1.9% | 3,680 | 1.9% |
| 2012 | 216 | 1.9% | 3,748 | 1.8% |
| 2013 | 220 | 1.9% | 3,816 | 1.8% |
| 2014 | 224 | 1.8% | 3,884 | 1.8% |
| 2015 | 228 | 1.8% | 3,952 | 1.7% |
| 2016 | 232 | 1.8% | 4,020 | 1.7% |

Notes:
1. Years 1997-2016 based on the long-term forecast
2. 1972-1996 respresents actual values, 1997-2016 represents weather normalized values

## Big Rivers Electric Corporation

### 1997 Load Forecast - High Scenario #1
### Optimistic Economic Outlook / Normal Weather
### Irrigation Classification

| Year | Consumers | Percent Change | Sales (MWh) | Percent Change |
|---|---|---|---|---|
| 1972 | 0 | | 0 | |
| 1973 | 0 | 0.0% | 0 | 0.0% |
| 1974 | 0 | 0.0% | 0 | 0.0% |
| 1975 | 0 | 0.0% | 0 | 0.0% |
| 1976 | 0 | 0.0% | 0 | 0.0% |
| 1977 | 0 | 0.0% | 0 | 0.0% |
| 1978 | 6 | 0.0% | 33 | 0.0% |
| 1979 | 6 | 0.0% | 40 | 23.3% |
| 1980 | 7 | 16.7% | 42 | 5.1% |
| 1981 | 8 | 14.3% | 79 | 85.5% |
| 1982 | 9 | 12.5% | 63 | -20.0% |
| 1983 | 12 | 33.3% | 65 | 3.1% |
| 1984 | 12 | 0.0% | 74 | 13.4% |
| 1985 | 12 | 0.0% | 39 | -46.5% |
| 1986 | 9 | -25.0% | 50 | 26.3% |
| 1987 | 8 | -11.1% | 68 | 36.9% |
| 1988 | 7 | -12.5% | 85 | 24.6% |
| 1989 | 7 | 0.0% | 82 | -3.9% |
| 1990 | 8 | 14.3% | 48 | -41.3% |
| 1991 | 9 | 12.5% | 86 | 79.1% |
| 1992 | 9 | 0.0% | 114 | 32.5% |
| 1993 | 9 | 0.0% | 78 | -31.2% |
| 1994 | 9 | 0.0% | 93 | 19.3% |
| 1995 | 10 | 11.1% | 100 | 7.2% |
| 1996 | 10 | 0.0% | 110 | 10.0% |
| 1997 | 10 | 0.0% | 86 | -21.5% |
| 1998 | 10 | 0.0% | 86 | 0.0% |
| 1999 | 10 | 0.0% | 86 | 0.0% |
| 2000 | 10 | 0.0% | 86 | 0.0% |
| 2001 | 10 | 0.0% | 86 | 0.0% |
| 2002 | 10 | 0.0% | 86 | 0.0% |
| 2003 | 10 | 0.0% | 86 | 0.0% |
| 2004 | 10 | 0.0% | 86 | 0.0% |
| 2005 | 10 | 0.0% | 86 | 0.0% |
| 2006 | 10 | 0.0% | 86 | 0.0% |
| 2007 | 10 | 0.0% | 86 | 0.0% |
| 2008 | 10 | 0.0% | 86 | 0.0% |
| 2009 | 10 | 0.0% | 86 | 0.0% |
| 2010 | 10 | 0.0% | 86 | 0.0% |
| 2011 | 10 | 0.0% | 86 | 0.0% |
| 2012 | 10 | 0.0% | 86 | 0.0% |
| 2013 | 10 | 0.0% | 86 | 0.0% |
| 2014 | 10 | 0.0% | 86 | 0.0% |
| 2015 | 10 | 0.0% | 86 | 0.0% |
| 2016 | 10 | 0.0% | 86 | 0.0% |

Notes:
1. Years 1997-2016 based on the long-term forecast
2. 1972-1996 respresents actual values, 1997-2016 represents weather normalized values

## Big Rivers Electric Corporation
## 1997 Load Forecast - High Scenario #2
## Expected Economic Outlook / Extreme Weather
## Total System Requirements

| Year | Consumers | Percent Change | Sales (MWh) | Percent Change | Own Use (MWh) | Losses (%) | Member MWh Purchases | Total MWh Requirements | Percent Change |
|---|---|---|---|---|---|---|---|---|---|
| 1972 | 52,831 | | 3,792,968 | | 3,102 | 9.7% | 3,862,045 | 3,939,286 | |
| 1973 | 54,920 | 4.0% | 5,033,988 | 32.7% | 2,811 | 8.9% | 5,102,148 | 5,204,191 | 32.1% |
| 1974 | 56,975 | 3.7% | 5,918,096 | 17.6% | 2,651 | 8.7% | 5,986,239 | 6,105,964 | 17.3% |
| 1975 | 58,878 | 3.3% | 5,863,245 | -0.9% | 2,546 | 8.5% | 5,939,400 | 6,058,188 | -0.8% |
| 1976 | 61,040 | 3.7% | 6,103,980 | 4.1% | 2,860 | 9.1% | 6,190,692 | 6,314,506 | 4.2% |
| 1977 | 63,441 | 3.9% | 6,432,738 | 5.4% | 2,801 | 7.4% | 6,514,107 | 6,644,389 | 5.2% |
| 1978 | 65,205 | 2.8% | 6,436,336 | 0.1% | 3,042 | 7.6% | 6,527,678 | 6,658,231 | 0.2% |
| 1979 | 67,573 | 3.6% | 6,929,271 | 7.7% | 2,909 | 9.0% | 7,029,485 | 7,170,074 | 7.7% |
| 1980 | 68,948 | 2.0% | 7,454,859 | 7.6% | 2,754 | 6.2% | 7,528,564 | 7,679,135 | 7.1% |
| 1981 | 70,106 | 1.7% | 7,401,040 | -0.7% | 2,810 | 6.9% | 7,479,670 | 7,629,264 | -0.6% |
| 1982 | 70,894 | 1.1% | 6,342,743 | -14.3% | 2,932 | 7.2% | 6,426,261 | 6,554,786 | -14.1% |
| 1983 | 72,269 | 1.9% | 6,604,043 | 4.1% | 2,816 | 8.5% | 6,707,235 | 6,841,380 | 4.4% |
| 1984 | 73,660 | 1.9% | 7,329,994 | 11.0% | 3,042 | 5.5% | 7,398,951 | 7,546,930 | 10.3% |
| 1985 | 74,913 | 1.7% | 6,796,406 | -7.3% | 2,864 | 8.0% | 6,899,093 | 7,037,074 | -6.8% |
| 1986 | 76,008 | 1.5% | 6,125,886 | -9.9% | 2,982 | 6.7% | 6,215,491 | 6,339,799 | -9.9% |
| 1987 | 77,384 | 1.8% | 6,180,027 | 0.9% | 3,079 | 6.5% | 6,270,519 | 6,395,929 | 0.9% |
| 1988 | 78,603 | 1.6% | 7,713,154 | 24.8% | 3,196 | 7.0% | 7,813,146 | 7,969,409 | 24.6% |
| 1989 | 79,853 | 1.6% | 7,951,178 | 3.1% | 3,255 | 8.4% | 8,072,761 | 8,234,217 | 3.3% |
| 1990 | 81,050 | 1.5% | 8,113,961 | 2.0% | 3,133 | 5.4% | 8,191,465 | 8,355,294 | 1.5% |
| 1991 | 82,201 | 1.4% | 8,208,490 | 1.2% | 3,136 | 7.0% | 8,314,440 | 8,484,123 | 1.5% |
| 1992 | 83,737 | 1.9% | 8,222,493 | 0.2% | 3,362 | 7.0% | 8,326,337 | 8,496,262 | 0.1% |
| 1993 | 85,501 | 2.1% | 8,336,903 | 1.4% | 3,089 | 6.7% | 8,445,130 | 8,617,480 | 1.4% |
| 1994 | 87,257 | 2.1% | 7,355,595 | -11.8% | 3,226 | 6.1% | 7,454,220 | 7,606,347 | -11.7% |
| 1995 | 89,395 | 2.4% | 7,849,136 | 6.7% | 3,334 | 6.6% | 7,961,435 | 8,123,913 | 6.8% |
| 1996 | 91,548 | 2.4% | 7,931,120 | 1.0% | 3,598 | 6.5% | 8,045,961 | 8,210,164 | 1.1% |
| 1997 | 93,578 | 2.2% | 8,546,264 | 7.8% | 3,630 | 6.4% | 8,662,058 | 8,838,835 | 7.7% |
| 1998 | 95,655 | 2.2% | 9,413,960 | 10.2% | 3,658 | 6.4% | 9,541,511 | 9,736,235 | 10.2% |
| 1999 | 97,773 | 2.2% | 9,622,587 | 2.2% | 3,687 | 6.4% | 9,752,965 | 9,952,005 | 2.2% |
| 2000 | 99,934 | 2.2% | 9,721,031 | 1.0% | 3,715 | 6.3% | 9,852,742 | 10,053,819 | 1.0% |
| 2001 | 102,141 | 2.2% | 9,784,624 | 0.7% | 3,744 | 6.3% | 9,924,530 | 10,127,072 | 0.7% |
| 2002 | 104,106 | 1.9% | 9,834,046 | 0.5% | 3,773 | 6.3% | 9,977,548 | 10,181,172 | 0.5% |
| 2003 | 106,107 | 1.9% | 9,894,747 | 0.6% | 3,801 | 6.3% | 10,041,896 | 10,246,833 | 0.6% |
| 2004 | 108,144 | 1.9% | 9,956,910 | 0.6% | 3,830 | 6.3% | 10,108,235 | 10,314,526 | 0.7% |
| 2005 | 110,219 | 1.9% | 10,020,716 | 0.6% | 3,858 | 6.3% | 10,176,326 | 10,384,006 | 0.7% |
| 2006 | 112,332 | 1.9% | 10,086,281 | 0.7% | 3,887 | 6.3% | 10,246,291 | 10,455,399 | 0.7% |
| 2007 | 114,272 | 1.7% | 10,150,211 | 0.6% | 3,915 | 6.3% | 10,314,507 | 10,525,008 | 0.7% |
| 2008 | 116,244 | 1.7% | 10,327,407 | 1.7% | 3,944 | 6.3% | 10,496,093 | 10,710,299 | 1.8% |
| 2009 | 118,249 | 1.7% | 10,394,595 | 0.7% | 3,973 | 6.3% | 10,567,782 | 10,783,451 | 0.7% |
| 2010 | 120,286 | 1.7% | 10,463,556 | 0.7% | 4,001 | 6.3% | 10,641,361 | 10,858,532 | 0.7% |
| 2011 | 122,357 | 1.7% | 10,534,379 | 0.7% | 4,030 | 6.3% | 10,716,924 | 10,935,637 | 0.7% |
| 2012 | 124,336 | 1.6% | 10,604,509 | 0.7% | 4,058 | 6.3% | 10,791,744 | 11,011,984 | 0.7% |
| 2013 | 126,346 | 1.6% | 10,758,081 | 1.4% | 4,087 | 6.3% | 10,950,105 | 11,173,577 | 1.5% |
| 2014 | 128,387 | 1.6% | 10,831,476 | 0.7% | 4,116 | 6.3% | 11,028,404 | 11,253,474 | 0.7% |
| 2015 | 130,459 | 1.6% | 10,906,723 | 0.7% | 4,144 | 6.3% | 11,108,676 | 11,335,384 | 0.7% |
| 2016 | 132,564 | 1.6% | 10,983,919 | 0.7% | 4,173 | 6.3% | 11,191,025 | 11,419,413 | 0.7% |

Notes:
1. Years 1997-2016 based on the long-term forecast
2. Losses represent distribution losses on rural system energy requirements
3. 1972-1996 respresents actual values, 1997-2016 represents weather normalized values

**Big Rivers Electric Corporation**

**1997 Load Forecast - High Scenario #2**
**Expected Economic Outlook / Extreme Weather**
**Total System Requirements**

| Year | Summer Peak (kW) | Percent Change | Load Factor | Winter Peak (kW) | Percent Change | Load Factor |
|---|---|---|---|---|---|---|
| 1972 | 497,000 | | 88.7% | 472,000 | | 93.4% |
| 1973 | 707,000 | 42.3% | 82.4% | 508,000 | 7.6% | 114.7% |
| 1974 | 737,000 | 4.2% | 92.7% | 722,000 | 42.1% | 94.6% |
| 1975 | 722,000 | -2.0% | 93.9% | 731,000 | 1.2% | 92.8% |
| 1976 | 759,000 | 5.1% | 93.1% | 748,000 | 2.3% | 94.5% |
| 1977 | 801,000 | 5.5% | 92.8% | 820,000 | 9.6% | 90.7% |
| 1978 | 802,000 | 0.1% | 92.9% | 819,000 | -0.1% | 91.0% |
| 1979 | 994,000 | 23.9% | 80.7% | 974,000 | 18.9% | 82.4% |
| 1980 | 1,039,000 | 4.5% | 82.7% | 1,007,000 | 3.4% | 85.3% |
| 1981 | 1,034,000 | -0.5% | 82.6% | 1,037,000 | 3.0% | 82.3% |
| 1982 | 890,000 | -13.9% | 82.4% | 1,034,000 | -0.3% | 70.9% |
| 1983 | 966,000 | 8.5% | 79.3% | 1,046,000 | 1.2% | 73.2% |
| 1984 | 1,027,000 | 6.3% | 82.2% | 979,000 | -6.4% | 86.3% |
| 1985 | 965,000 | -6.0% | 81.6% | 1,042,000 | 6.4% | 75.6% |
| 1986 | 890,000 | -7.8% | 79.7% | 993,000 | -4.7% | 71.5% |
| 1987 | 990,000 | 11.2% | 72.3% | 920,000 | -7.4% | 77.8% |
| 1988 | 1,157,000 | 16.9% | 77.1% | 1,063,000 | 15.5% | 83.9% |
| 1989 | 1,142,000 | -1.3% | 80.7% | 1,177,000 | 10.7% | 78.3% |
| 1990 | 1,174,000 | 2.8% | 79.7% | 1,089,000 | -7.5% | 85.9% |
| 1991 | 1,168,000 | -0.5% | 81.3% | 1,140,000 | 4.7% | 83.3% |
| 1992 | 1,166,000 | -0.2% | 81.5% | 1,149,000 | 0.8% | 82.7% |
| 1993 | 1,217,000 | 4.4% | 79.2% | 1,137,000 | -1.0% | 84.8% |
| 1994 | 1,055,000 | -13.3% | 80.7% | 1,189,000 | 4.6% | 71.6% |
| 1995 | 1,166,000 | 10.5% | 77.9% | 1,063,000 | -10.6% | 85.5% |
| 1996 | 1,167,000 | 0.1% | 78.7% | 1,154,000 | 8.6% | 79.6% |
| 1997 | 1,391,625 | 19.2% | 71.1% | 1,373,158 | 19.0% | 72.0% |
| 1998 | 1,441,968 | 3.6% | 75.5% | 1,423,501 | 3.7% | 76.5% |
| 1999 | 1,459,543 | 1.2% | 76.3% | 1,441,076 | 1.2% | 77.3% |
| 2000 | 1,477,245 | 1.2% | 76.1% | 1,458,778 | 1.2% | 77.1% |
| 2001 | 1,491,895 | 1.0% | 75.9% | 1,473,427 | 1.0% | 76.9% |
| 2002 | 1,502,912 | 0.7% | 75.8% | 1,484,445 | 0.7% | 76.7% |
| 2003 | 1,516,368 | 0.9% | 75.6% | 1,497,901 | 0.9% | 76.5% |
| 2004 | 1,530,149 | 0.9% | 75.4% | 1,511,682 | 0.9% | 76.3% |
| 2005 | 1,544,294 | 0.9% | 75.2% | 1,525,827 | 0.9% | 76.1% |
| 2006 | 1,558,829 | 0.9% | 75.0% | 1,540,362 | 1.0% | 75.9% |
| 2007 | 1,573,001 | 0.9% | 74.9% | 1,554,534 | 0.9% | 75.7% |
| 2008 | 1,602,523 | 1.9% | 74.8% | 1,584,055 | 1.9% | 75.6% |
| 2009 | 1,617,417 | 0.9% | 74.6% | 1,598,950 | 0.9% | 75.4% |
| 2010 | 1,632,705 | 0.9% | 74.4% | 1,614,238 | 1.0% | 75.3% |
| 2011 | 1,648,406 | 1.0% | 74.2% | 1,629,938 | 1.0% | 75.1% |
| 2012 | 1,663,952 | 0.9% | 74.0% | 1,645,485 | 1.0% | 74.9% |
| 2013 | 1,690,840 | 1.6% | 73.9% | 1,672,372 | 1.6% | 74.7% |
| 2014 | 1,707,110 | 1.0% | 73.7% | 1,688,643 | 1.0% | 74.6% |
| 2015 | 1,723,791 | 1.0% | 73.6% | 1,705,324 | 1.0% | 74.4% |
| 2016 | 1,740,905 | 1.0% | 73.4% | 1,722,437 | 1.0% | 74.2% |

Notes:
1. Years 1997-2016 based on the long-term forecast
2. 1972-1996 respresents actual values, 1997-2016 represents weather normalized values
3. Peak amounts represent the total Big Rivers 60-minute CP demand value

## Big Rivers Electric Corporation
## 1997 Load Forecast - High Scenario #2
### Expected Economic Outlook / Extreme Weather
### Residential Classification

| Year | Consumers | Percent Change | Sales (MWh) | Percent Change | Average Use (kWh/Cust/Mo) | Percent Change |
|---|---|---|---|---|---|---|
| 1972 | 48,646 | | 426,199 | | 730 | |
| 1973 | 50,636 | 4.1% | 475,060 | 11.5% | 782 | 7.1% |
| 1974 | 52,494 | 3.7% | 495,221 | 4.2% | 786 | 0.6% |
| 1975 | 54,230 | 3.3% | 565,706 | 14.2% | 869 | 10.6% |
| 1976 | 56,193 | 3.6% | 603,393 | 6.7% | 895 | 2.9% |
| 1977 | 58,226 | 3.6% | 706,616 | 17.1% | 1,011 | 13.0% |
| 1978 | 59,761 | 2.6% | 756,149 | 7.0% | 1,054 | 4.3% |
| 1979 | 61,858 | 3.5% | 735,825 | -2.7% | 991 | -6.0% |
| 1980 | 63,049 | 1.9% | 795,980 | 8.2% | 1,052 | 6.1% |
| 1981 | 63,941 | 1.4% | 745,835 | -6.3% | 972 | -7.6% |
| 1982 | 64,502 | 0.9% | 756,931 | 1.5% | 978 | 0.6% |
| 1983 | 65,519 | 1.6% | 781,501 | 3.2% | 994 | 1.6% |
| 1984 | 66,607 | 1.7% | 819,670 | 4.9% | 1,026 | 3.2% |
| 1985 | 67,754 | 1.7% | 819,928 | 0.0% | 1,008 | -1.7% |
| 1986 | 68,718 | 1.4% | 871,530 | 6.3% | 1,057 | 4.8% |
| 1987 | 69,946 | 1.8% | 909,195 | 4.3% | 1,083 | 2.5% |
| 1988 | 71,032 | 1.6% | 931,639 | 2.5% | 1,093 | 0.9% |
| 1989 | 72,171 | 1.6% | 925,721 | -0.6% | 1,069 | -2.2% |
| 1990 | 73,156 | 1.4% | 930,785 | 0.5% | 1,060 | -0.8% |
| 1991 | 74,176 | 1.4% | 991,459 | 6.5% | 1,114 | 5.1% |
| 1992 | 75,668 | 2.0% | 945,487 | -4.6% | 1,041 | -6.5% |
| 1993 | 77,266 | 2.1% | 1,052,301 | 11.3% | 1,135 | 9.0% |
| 1994 | 78,879 | 2.1% | 1,040,652 | -1.1% | 1,099 | -3.1% |
| 1995 | 80,808 | 2.4% | 1,101,490 | 5.8% | 1,136 | 3.3% |
| 1996 | 82,659 | 2.3% | 1,144,623 | 3.9% | 1,154 | 1.6% |
| 1997 | 84,457 | 2.2% | 1,265,462 | 10.6% | 1,249 | 8.2% |
| 1998 | 86,295 | 2.2% | 1,330,147 | 5.1% | 1,284 | 2.9% |
| 1999 | 88,173 | 2.2% | 1,376,773 | 3.5% | 1,301 | 1.3% |
| 2000 | 90,093 | 2.2% | 1,418,369 | 3.0% | 1,312 | 0.8% |
| 2001 | 92,055 | 2.2% | 1,458,806 | 2.9% | 1,321 | 0.7% |
| 2002 | 93,810 | 1.9% | 1,495,090 | 2.5% | 1,328 | 0.6% |
| 2003 | 95,599 | 1.9% | 1,531,858 | 2.5% | 1,335 | 0.5% |
| 2004 | 97,423 | 1.9% | 1,569,403 | 2.5% | 1,342 | 0.5% |
| 2005 | 99,281 | 1.9% | 1,607,832 | 2.4% | 1,350 | 0.5% |
| 2006 | 101,175 | 1.9% | 1,647,193 | 2.4% | 1,357 | 0.5% |
| 2007 | 102,906 | 1.7% | 1,684,259 | 2.3% | 1,364 | 0.5% |
| 2008 | 104,666 | 1.7% | 1,722,180 | 2.3% | 1,371 | 0.5% |
| 2009 | 106,457 | 1.7% | 1,760,965 | 2.3% | 1,378 | 0.5% |
| 2010 | 108,279 | 1.7% | 1,800,629 | 2.3% | 1,386 | 0.5% |
| 2011 | 110,132 | 1.7% | 1,841,194 | 2.3% | 1,393 | 0.5% |
| 2012 | 111,898 | 1.6% | 1,880,354 | 2.1% | 1,400 | 0.5% |
| 2013 | 113,693 | 1.6% | 1,920,236 | 2.1% | 1,407 | 0.5% |
| 2014 | 115,516 | 1.6% | 1,960,933 | 2.1% | 1,415 | 0.5% |
| 2015 | 117,369 | 1.6% | 2,002,486 | 2.1% | 1,422 | 0.5% |
| 2016 | 119,252 | 1.6% | 2,044,921 | 2.1% | 1,429 | 0.5% |

Notes:
1. Years 1997-2016 based on the long-term forecast
2. 1972-1996 respresents actual values, 1997-2016 represents weather normalized values

**Big Rivers Electric Corporation**

**1997 Load Forecast - High Scenario #2**
**Expected Economic Outlook / Extreme Weather**
**C/I Small Classification**

| Year | Consumers | Percent Change | Sales (MWh) | Percent Change | Average Use (kWh/Cust/Mo) | Percent Change |
|---|---|---|---|---|---|---|
| 1972 | 4,111 | | 188,145 | | 3,814 | |
| 1973 | 4,207 | 2.3% | 188,997 | 0.5% | 3,744 | -1.8% |
| 1974 | 4,402 | 4.6% | 190,553 | 0.8% | 3,607 | -3.6% |
| 1975 | 4,565 | 3.7% | 221,820 | 16.4% | 4,049 | 12.3% |
| 1976 | 4,762 | 4.3% | 235,573 | 6.2% | 4,122 | 1.8% |
| 1977 | 5,131 | 7.7% | 280,660 | 19.1% | 4,558 | 10.6% |
| 1978 | 5,352 | 4.3% | 309,797 | 10.4% | 4,824 | 5.8% |
| 1979 | 5,617 | 5.0% | 250,462 | -19.2% | 3,716 | -23.0% |
| 1980 | 5,801 | 3.3% | 266,633 | 6.5% | 3,830 | 3.1% |
| 1981 | 6,062 | 4.5% | 272,242 | 2.1% | 3,742 | -2.3% |
| 1982 | 6,277 | 3.5% | 283,508 | 4.1% | 3,764 | 0.6% |
| 1983 | 6,622 | 5.5% | 292,126 | 3.0% | 3,676 | -2.3% |
| 1984 | 6,918 | 4.5% | 313,999 | 7.5% | 3,782 | 2.9% |
| 1985 | 7,021 | 1.5% | 321,458 | 2.4% | 3,815 | 0.9% |
| 1986 | 7,151 | 1.9% | 325,914 | 1.4% | 3,798 | -0.5% |
| 1987 | 7,296 | 2.0% | 338,858 | 4.0% | 3,870 | 1.9% |
| 1988 | 7,424 | 1.8% | 351,822 | 3.8% | 3,949 | 2.0% |
| 1989 | 7,526 | 1.4% | 355,923 | 1.2% | 3,941 | -0.2% |
| 1990 | 7,730 | 2.7% | 371,964 | 4.5% | 4,010 | 1.7% |
| 1991 | 7,854 | 1.6% | 381,198 | 2.5% | 4,045 | 0.9% |
| 1992 | 7,898 | 0.6% | 388,913 | 2.0% | 4,103 | 1.5% |
| 1993 | 8,060 | 2.1% | 419,026 | 7.7% | 4,332 | 5.6% |
| 1994 | 8,198 | 1.7% | 429,433 | 2.5% | 4,365 | 0.8% |
| 1995 | 8,406 | 2.5% | 447,653 | 4.2% | 4,438 | 1.7% |
| 1996 | 8,689 | 3.4% | 463,285 | 3.5% | 4,443 | 0.1% |
| 1997 | 8,919 | 2.6% | 510,973 | 10.3% | 4,774 | 7.4% |
| 1998 | 9,152 | 2.6% | 538,477 | 5.4% | 4,903 | 2.7% |
| 1999 | 9,387 | 2.6% | 564,695 | 4.9% | 5,013 | 2.2% |
| 2000 | 9,626 | 2.5% | 591,095 | 4.7% | 5,117 | 2.1% |
| 2001 | 9,866 | 2.5% | 618,070 | 4.6% | 5,221 | 2.0% |
| 2002 | 10,072 | 2.1% | 645,164 | 4.4% | 5,338 | 2.2% |
| 2003 | 10,280 | 2.1% | 672,741 | 4.3% | 5,453 | 2.2% |
| 2004 | 10,491 | 2.1% | 700,951 | 4.2% | 5,568 | 2.1% |
| 2005 | 10,703 | 2.0% | 729,895 | 4.1% | 5,683 | 2.1% |
| 2006 | 10,918 | 2.0% | 759,655 | 4.1% | 5,798 | 2.0% |
| 2007 | 11,124 | 1.9% | 789,966 | 4.0% | 5,918 | 2.1% |
| 2008 | 11,331 | 1.9% | 821,000 | 3.9% | 6,038 | 2.0% |
| 2009 | 11,541 | 1.9% | 852,867 | 3.9% | 6,158 | 2.0% |
| 2010 | 11,752 | 1.8% | 885,650 | 3.8% | 6,280 | 2.0% |
| 2011 | 11,966 | 1.8% | 919,431 | 3.8% | 6,403 | 2.0% |
| 2012 | 12,175 | 1.7% | 953,874 | 3.7% | 6,529 | 2.0% |
| 2013 | 12,387 | 1.7% | 989,165 | 3.7% | 6,655 | 1.9% |
| 2014 | 12,600 | 1.7% | 1,025,417 | 3.7% | 6,782 | 1.9% |
| 2015 | 12,815 | 1.7% | 1,062,719 | 3.6% | 6,911 | 1.9% |
| 2016 | 13,032 | 1.7% | 1,101,153 | 3.6% | 7,041 | 1.9% |

Notes:
1. Years 1997-2016 based on the long-term forecast
2. 1972-1996 respresents actual values, 1997-2016 represents weather normalized values

## Big Rivers Electric Corporation

### 1997 Load Forecast - High Scenario #2
### Expected Economic Outlook / Extreme Weather
### C/I Large Classification

| Year | Consumers | Percent Change | Sales (MWh) | Percent Change |
|---|---|---|---|---|
| 1972 | 9 | | 3,177,303 | |
| 1973 | 10 | 11.1% | 4,368,418 | 37.5% |
| 1974 | 10 | 0.0% | 5,230,483 | 19.7% |
| 1975 | 11 | 10.0% | 5,073,573 | -3.0% |
| 1976 | 16 | 45.5% | 5,262,762 | 3.7% |
| 1977 | 17 | 6.3% | 5,443,274 | 3.4% |
| 1978 | 15 | -11.8% | 5,368,154 | -1.4% |
| 1979 | 17 | 13.3% | 5,940,734 | 10.7% |
| 1980 | 18 | 5.9% | 6,390,170 | 7.6% |
| 1981 | 19 | 5.6% | 6,380,899 | -0.1% |
| 1982 | 22 | 15.8% | 5,300,242 | -16.9% |
| 1983 | 23 | 4.5% | 5,528,519 | 4.3% |
| 1984 | 25 | 8.7% | 6,194,365 | 12.0% |
| 1985 | 27 | 8.0% | 5,653,054 | -8.7% |
| 1986 | 33 | 22.2% | 4,926,411 | -12.9% |
| 1987 | 34 | 3.0% | 4,929,857 | 0.1% |
| 1988 | 36 | 5.9% | 6,427,497 | 30.4% |
| 1989 | 40 | 11.1% | 6,667,299 | 3.7% |
| 1990 | 40 | 0.0% | 6,808,988 | 2.1% |
| 1991 | 41 | 2.5% | 6,833,471 | 0.4% |
| 1992 | 38 | -7.3% | 6,885,705 | 0.8% |
| 1993 | 37 | -2.6% | 6,863,080 | -0.3% |
| 1994 | 37 | 0.0% | 5,882,908 | -14.3% |
| 1995 | 35 | -5.4% | 6,297,252 | 7.0% |
| 1996 | 38 | 8.6% | 6,320,441 | 0.4% |
| 1997 | 36 | -5.3% | 6,790,687 | 7.4% |
| 1998 | 36 | 0.0% | 7,585,880 | 11.7% |
| 1999 | 36 | 0.0% | 7,727,230 | 1.9% |
| 2000 | 36 | 0.0% | 7,759,953 | 0.4% |
| 2001 | 36 | 0.0% | 7,764,607 | 0.1% |
| 2002 | 35 | -2.8% | 7,754,407 | -0.1% |
| 2003 | 35 | 0.0% | 7,754,407 | 0.0% |
| 2004 | 35 | 0.0% | 7,754,407 | 0.0% |
| 2005 | 35 | 0.0% | 7,754,407 | 0.0% |
| 2006 | 35 | 0.0% | 7,754,407 | 0.0% |
| 2007 | 35 | 0.0% | 7,754,407 | 0.0% |
| 2008 | 35 | 0.0% | 7,866,097 | 1.4% |
| 2009 | 35 | 0.0% | 7,866,097 | 0.0% |
| 2010 | 35 | 0.0% | 7,866,097 | 0.0% |
| 2011 | 35 | 0.0% | 7,866,097 | 0.0% |
| 2012 | 35 | 0.0% | 7,866,097 | 0.0% |
| 2013 | 35 | 0.0% | 7,948,003 | 1.0% |
| 2014 | 35 | 0.0% | 7,948,003 | 0.0% |
| 2015 | 35 | 0.0% | 7,948,003 | 0.0% |
| 2016 | 35 | 0.0% | 7,948,003 | 0.0% |

Notes:
1. Years 1997-2016 based on the long-term forecast
2. 1972-1996 respresents actual values, 1997-2016 represents weather normalized values

## Big Rivers Electric Corporation

### 1997 Load Forecast - High Scenario #2
### Expected Economic Outlook / Extreme Weather
### Public Street Lighting Classification

| Year | Consumers | Percent Change | Sales (MWh) | Percent Change |
|---|---|---|---|---|
| 1972 | 65 | | 1,321 | |
| 1973 | 67 | 3.1% | 1,512 | 14.5% |
| 1974 | 69 | 3.0% | 1,839 | 21.6% |
| 1975 | 72 | 4.3% | 2,145 | 16.7% |
| 1976 | 69 | -4.2% | 2,252 | 5.0% |
| 1977 | 68 | -1.4% | 2,188 | -2.8% |
| 1978 | 71 | 4.4% | 2,204 | 0.7% |
| 1979 | 76 | 7.0% | 2,210 | 0.3% |
| 1980 | 74 | -2.6% | 2,032 | -8.0% |
| 1981 | 76 | 2.7% | 1,985 | -2.3% |
| 1982 | 84 | 10.5% | 1,999 | 0.7% |
| 1983 | 93 | 10.7% | 1,833 | -8.3% |
| 1984 | 98 | 5.4% | 1,887 | 2.9% |
| 1985 | 99 | 1.0% | 1,927 | 2.2% |
| 1986 | 96 | -3.0% | 1,981 | 2.8% |
| 1987 | 101 | 5.2% | 2,048 | 3.4% |
| 1988 | 104 | 3.0% | 2,110 | 3.0% |
| 1989 | 109 | 4.8% | 2,154 | 2.1% |
| 1990 | 116 | 6.4% | 2,177 | 1.1% |
| 1991 | 121 | 4.3% | 2,276 | 4.5% |
| 1992 | 124 | 2.5% | 2,275 | -0.1% |
| 1993 | 129 | 4.0% | 2,417 | 6.2% |
| 1994 | 134 | 3.9% | 2,509 | 3.8% |
| 1995 | 136 | 1.5% | 2,641 | 5.3% |
| 1996 | 152 | 11.8% | 2,661 | 0.8% |
| 1997 | 156 | 2.6% | 2,729 | 2.6% |
| 1998 | 160 | 2.6% | 2,797 | 2.5% |
| 1999 | 164 | 2.5% | 2,865 | 2.4% |
| 2000 | 168 | 2.4% | 2,933 | 2.4% |
| 2001 | 172 | 2.4% | 3,001 | 2.3% |
| 2002 | 176 | 2.3% | 3,069 | 2.3% |
| 2003 | 180 | 2.3% | 3,137 | 2.2% |
| 2004 | 184 | 2.2% | 3,205 | 2.2% |
| 2005 | 188 | 2.2% | 3,273 | 2.1% |
| 2006 | 192 | 2.1% | 3,341 | 2.1% |
| 2007 | 196 | 2.1% | 3,409 | 2.0% |
| 2008 | 200 | 2.0% | 3,477 | 2.0% |
| 2009 | 204 | 2.0% | 3,545 | 2.0% |
| 2010 | 208 | 2.0% | 3,612 | 1.9% |
| 2011 | 212 | 1.9% | 3,680 | 1.9% |
| 2012 | 216 | 1.9% | 3,748 | 1.8% |
| 2013 | 220 | 1.9% | 3,816 | 1.8% |
| 2014 | 224 | 1.8% | 3,884 | 1.8% |
| 2015 | 228 | 1.8% | 3,952 | 1.7% |
| 2016 | 232 | 1.8% | 4,020 | 1.7% |

Notes:
1. Years 1997-2016 based on the long-term forecast
2. 1972-1996 respresents actual values, 1997-2016 represents weather normalized values

**Big Rivers Electric Corporation**

**1997 Load Forecast - High Scenario #2**
**Expected Economic Outlook / Extreme Weather**
**Irrigation Classification**

| Year | Consumers | Percent Change | Sales (MWh) | Percent Change |
|---|---|---|---|---|
| 1972 | 0 | | 0 | |
| 1973 | 0 | 0.0% | 0 | 0.0% |
| 1974 | 0 | 0.0% | 0 | 0.0% |
| 1975 | 0 | 0.0% | 0 | 0.0% |
| 1976 | 0 | 0.0% | 0 | 0.0% |
| 1977 | 0 | 0.0% | 0 | 0.0% |
| 1978 | 6 | 0.0% | 33 | 0.0% |
| 1979 | 6 | 0.0% | 40 | 23.3% |
| 1980 | 7 | 16.7% | 42 | 5.1% |
| 1981 | 8 | 14.3% | 79 | 85.5% |
| 1982 | 9 | 12.5% | 63 | -20.0% |
| 1983 | 12 | 33.3% | 65 | 3.1% |
| 1984 | 12 | 0.0% | 74 | 13.4% |
| 1985 | 12 | 0.0% | 39 | -46.5% |
| 1986 | 9 | -25.0% | 50 | 26.3% |
| 1987 | 8 | -11.1% | 68 | 36.9% |
| 1988 | 7 | -12.5% | 85 | 24.6% |
| 1989 | 7 | 0.0% | 82 | -3.9% |
| 1990 | 8 | 14.3% | 48 | -41.3% |
| 1991 | 9 | 12.5% | 86 | 79.1% |
| 1992 | 9 | 0.0% | 114 | 32.5% |
| 1993 | 9 | 0.0% | 78 | -31.2% |
| 1994 | 9 | 0.0% | 93 | 19.3% |
| 1995 | 10 | 11.1% | 100 | 7.2% |
| 1996 | 10 | 0.0% | 110 | 10.0% |
| 1997 | 10 | 0.0% | 86 | -21.5% |
| 1998 | 10 | 0.0% | 86 | 0.0% |
| 1999 | 10 | 0.0% | 86 | 0.0% |
| 2000 | 10 | 0.0% | 86 | 0.0% |
| 2001 | 10 | 0.0% | 86 | 0.0% |
| 2002 | 10 | 0.0% | 86 | 0.0% |
| 2003 | 10 | 0.0% | 86 | 0.0% |
| 2004 | 10 | 0.0% | 86 | 0.0% |
| 2005 | 10 | 0.0% | 86 | 0.0% |
| 2006 | 10 | 0.0% | 86 | 0.0% |
| 2007 | 10 | 0.0% | 86 | 0.0% |
| 2008 | 10 | 0.0% | 86 | 0.0% |
| 2009 | 10 | 0.0% | 86 | 0.0% |
| 2010 | 10 | 0.0% | 86 | 0.0% |
| 2011 | 10 | 0.0% | 86 | 0.0% |
| 2012 | 10 | 0.0% | 86 | 0.0% |
| 2013 | 10 | 0.0% | 86 | 0.0% |
| 2014 | 10 | 0.0% | 86 | 0.0% |
| 2015 | 10 | 0.0% | 86 | 0.0% |
| 2016 | 10 | 0.0% | 86 | 0.0% |

Notes:
1. Years 1997-2016 based on the long-term forecast
2. 1972-1996 respresents actual values, 1997-2016 represents weather normalized values

## Big Rivers Electric Corporation
## 1997 Load Forecast - Low Scenario #1
## Pessimistic Economic Outlook / Normal Weather
## Total System Requirements

| Year | Consumers | Percent Change | Sales (MWh) | Percent Change | Own Use (MWh) | Losses (%) | Member MWh Purchases | Total MWh Requirements | Percent Change |
|---|---|---|---|---|---|---|---|---|---|
| 1972 | 52,831 | | 3,792,968 | | 3,102 | 9.7% | 3,862,045 | 3,939,286 | |
| 1973 | 54,920 | 4.0% | 5,033,988 | 32.7% | 2,811 | 8.9% | 5,102,148 | 5,204,191 | 32.1% |
| 1974 | 56,975 | 3.7% | 5,918,096 | 17.6% | 2,651 | 8.7% | 5,986,239 | 6,105,964 | 17.3% |
| 1975 | 58,878 | 3.3% | 5,863,245 | -0.9% | 2,546 | 8.5% | 5,939,400 | 6,058,188 | -0.8% |
| 1976 | 61,040 | 3.7% | 6,103,980 | 4.1% | 2,860 | 9.1% | 6,190,692 | 6,314,506 | 4.2% |
| 1977 | 63,441 | 3.9% | 6,432,738 | 5.4% | 2,801 | 7.4% | 6,514,107 | 6,644,389 | 5.2% |
| 1978 | 65,205 | 2.8% | 6,436,336 | 0.1% | 3,042 | 7.6% | 6,527,678 | 6,658,231 | 0.2% |
| 1979 | 67,573 | 3.6% | 6,929,271 | 7.7% | 2,909 | 9.0% | 7,029,485 | 7,170,074 | 7.7% |
| 1980 | 68,948 | 2.0% | 7,454,859 | 7.6% | 2,754 | 6.2% | 7,528,564 | 7,679,135 | 7.1% |
| 1981 | 70,106 | 1.7% | 7,401,040 | -0.7% | 2,810 | 6.9% | 7,479,670 | 7,629,264 | -0.6% |
| 1982 | 70,894 | 1.1% | 6,342,743 | -14.3% | 2,932 | 7.2% | 6,426,261 | 6,554,786 | -14.1% |
| 1983 | 72,269 | 1.9% | 6,604,043 | 4.1% | 2,816 | 8.5% | 6,707,235 | 6,841,380 | 4.4% |
| 1984 | 73,660 | 1.9% | 7,329,994 | 11.0% | 3,042 | 5.5% | 7,398,951 | 7,546,930 | 10.3% |
| 1985 | 74,913 | 1.7% | 6,796,406 | -7.3% | 2,864 | 8.0% | 6,899,093 | 7,037,074 | -6.8% |
| 1986 | 76,008 | 1.5% | 6,125,886 | -9.9% | 2,982 | 6.7% | 6,215,491 | 6,339,799 | -9.9% |
| 1987 | 77,384 | 1.8% | 6,180,027 | 0.9% | 3,079 | 6.5% | 6,270,519 | 6,395,929 | 0.9% |
| 1988 | 78,603 | 1.6% | 7,713,154 | 24.8% | 3,196 | 7.0% | 7,813,146 | 7,969,409 | 24.6% |
| 1989 | 79,853 | 1.6% | 7,951,178 | 3.1% | 3,255 | 8.4% | 8,072,761 | 8,234,217 | 3.3% |
| 1990 | 81,050 | 1.5% | 8,113,961 | 2.0% | 3,133 | 5.4% | 8,191,465 | 8,355,294 | 1.5% |
| 1991 | 82,201 | 1.4% | 8,208,490 | 1.2% | 3,136 | 7.0% | 8,314,440 | 8,484,123 | 1.5% |
| 1992 | 83,737 | 1.9% | 8,222,493 | 0.2% | 3,362 | 7.0% | 8,326,337 | 8,496,262 | 0.1% |
| 1993 | 85,501 | 2.1% | 8,336,903 | 1.4% | 3,089 | 6.7% | 8,445,130 | 8,617,480 | 1.4% |
| 1994 | 87,257 | 2.1% | 7,355,595 | -11.8% | 3,226 | 6.1% | 7,454,220 | 7,606,347 | -11.7% |
| 1995 | 89,395 | 2.4% | 7,849,136 | 6.7% | 3,334 | 6.6% | 7,961,435 | 8,123,913 | 6.8% |
| 1996 | 91,548 | 2.4% | 7,931,120 | 1.0% | 3,598 | 6.5% | 8,045,961 | 8,210,164 | 1.1% |
| 1997 | 92,269 | 0.8% | 8,390,167 | 5.8% | 3,656 | 6.4% | 8,503,847 | 8,677,395 | 5.7% |
| 1998 | 93,006 | 0.8% | 8,567,708 | 2.1% | 3,712 | 6.4% | 8,683,793 | 8,861,013 | 2.1% |
| 1999 | 93,743 | 0.8% | 9,150,395 | 6.8% | 3,767 | 6.4% | 9,274,375 | 9,463,648 | 6.8% |
| 2000 | 94,487 | 0.8% | 8,956,409 | -2.1% | 3,823 | 6.4% | 9,077,761 | 9,263,022 | -2.1% |
| 2001 | 95,238 | 0.8% | 8,978,833 | 0.3% | 3,878 | 6.4% | 9,099,271 | 9,284,970 | 0.2% |
| 2002 | 95,725 | 0.5% | 8,797,488 | -2.0% | 3,934 | 6.4% | 8,918,674 | 9,100,688 | -2.0% |
| 2003 | 96,215 | 0.5% | 8,560,905 | -2.7% | 3,989 | 6.4% | 8,682,788 | 8,859,988 | -2.6% |
| 2004 | 96,708 | 0.5% | 8,570,775 | 0.1% | 4,045 | 6.4% | 8,693,323 | 8,870,738 | 0.1% |
| 2005 | 97,203 | 0.5% | 8,397,976 | -2.0% | 4,100 | 6.4% | 8,521,164 | 8,695,066 | -2.0% |
| 2006 | 97,702 | 0.5% | 8,160,181 | -2.8% | 4,156 | 6.4% | 8,283,990 | 8,453,051 | -2.8% |
| 2007 | 98,021 | 0.3% | 8,166,442 | 0.1% | 4,211 | 6.4% | 8,290,675 | 8,459,873 | 0.1% |
| 2008 | 98,340 | 0.3% | 8,101,742 | -0.8% | 4,267 | 6.4% | 8,226,374 | 8,394,259 | -0.8% |
| 2009 | 98,662 | 0.3% | 7,860,366 | -3.0% | 4,322 | 6.4% | 7,985,379 | 8,148,346 | -2.9% |
| 2010 | 98,985 | 0.3% | 7,865,696 | 0.1% | 4,378 | 6.4% | 7,991,074 | 8,154,157 | 0.1% |
| 2011 | 99,310 | 0.3% | 7,870,812 | 0.1% | 4,433 | 6.3% | 7,996,541 | 8,159,736 | 0.1% |
| 2012 | 99,536 | 0.2% | 7,873,978 | 0.0% | 4,489 | 6.3% | 7,999,928 | 8,163,192 | 0.0% |
| 2013 | 99,764 | 0.2% | 7,958,666 | 1.1% | 4,544 | 6.3% | 8,084,811 | 8,249,807 | 1.1% |
| 2014 | 99,993 | 0.2% | 7,961,183 | 0.0% | 4,600 | 6.3% | 8,087,505 | 8,252,556 | 0.0% |
| 2015 | 100,224 | 0.2% | 7,963,493 | 0.0% | 4,655 | 6.3% | 8,089,981 | 8,255,083 | 0.0% |
| 2016 | 100,455 | 0.2% | 7,965,636 | 0.0% | 4,711 | 6.3% | 8,092,279 | 8,257,428 | 0.0% |

Notes:
1. Years 1997-2016 based on the long-term forecast
2. Losses represent distribution losses on rural system energy requirements
3. 1972-1996 respresents actual values, 1997-2016 represents weather normalized values

## Big Rivers Electric Corporation
### 1997 Load Forecast - Low Scenario # 1
### Pessimistic Economic Outlook / Normal Weather
### Total System Requirements

| Year | Summer Peak (kW) | Percent Change | Load Factor | Winter Peak (kW) | Percent Change | Load Factor |
|---|---|---|---|---|---|---|
| 1972 | 497,000 | | 88.7% | 472,000 | | 93.4% |
| 1973 | 707,000 | 42.3% | 82.4% | 508,000 | 7.6% | 114.7% |
| 1974 | 737,000 | 4.2% | 92.7% | 722,000 | 42.1% | 94.6% |
| 1975 | 722,000 | -2.0% | 93.9% | 731,000 | 1.2% | 92.8% |
| 1976 | 759,000 | 5.1% | 93.1% | 748,000 | 2.3% | 94.5% |
| 1977 | 801,000 | 5.5% | 92.8% | 820,000 | 9.6% | 90.7% |
| 1978 | 802,000 | 0.1% | 92.9% | 819,000 | -0.1% | 91.0% |
| 1979 | 994,000 | 23.9% | 80.7% | 974,000 | 18.9% | 82.4% |
| 1980 | 1,039,000 | 4.5% | 82.7% | 1,007,000 | 3.4% | 85.3% |
| 1981 | 1,034,000 | -0.5% | 82.6% | 1,037,000 | 3.0% | 82.3% |
| 1982 | 890,000 | -13.9% | 82.4% | 1,034,000 | -0.3% | 70.9% |
| 1983 | 966,000 | 8.5% | 79.3% | 1,046,000 | 1.2% | 73.2% |
| 1984 | 1,027,000 | 6.3% | 82.2% | 979,000 | -6.4% | 86.3% |
| 1985 | 965,000 | -6.0% | 81.6% | 1,042,000 | 6.4% | 75.6% |
| 1986 | 890,000 | -7.8% | 79.7% | 993,000 | -4.7% | 71.5% |
| 1987 | 990,000 | 11.2% | 72.3% | 920,000 | -7.4% | 77.8% |
| 1988 | 1,157,000 | 16.9% | 77.1% | 1,063,000 | 15.5% | 83.9% |
| 1989 | 1,142,000 | -1.3% | 80.7% | 1,177,000 | 10.7% | 78.3% |
| 1990 | 1,174,000 | 2.8% | 79.7% | 1,089,000 | -7.5% | 85.9% |
| 1991 | 1,168,000 | -0.5% | 81.3% | 1,140,000 | 4.7% | 83.3% |
| 1992 | 1,166,000 | -0.2% | 81.5% | 1,149,000 | 0.8% | 82.7% |
| 1993 | 1,217,000 | 4.4% | 79.2% | 1,137,000 | -1.0% | 84.8% |
| 1994 | 1,055,000 | -13.3% | 80.7% | 1,189,000 | 4.6% | 71.6% |
| 1995 | 1,166,000 | 10.5% | 77.9% | 1,063,000 | -10.6% | 85.5% |
| 1996 | 1,167,000 | 0.1% | 78.7% | 1,154,000 | 8.6% | 79.6% |
| 1997 | 1,256,725 | 7.7% | 77.2% | 1,216,250 | 5.4% | 79.8% |
| 1998 | 1,293,680 | 2.9% | 76.6% | 1,253,205 | 3.0% | 79.1% |
| 1999 | 1,370,431 | 5.9% | 77.3% | 1,329,956 | 6.1% | 79.6% |
| 2000 | 1,327,790 | -3.1% | 78.0% | 1,287,315 | -3.2% | 80.5% |
| 2001 | 1,331,874 | 0.3% | 78.0% | 1,291,399 | 0.3% | 80.4% |
| 2002 | 1,332,142 | 0.0% | 76.4% | 1,291,668 | 0.0% | 78.8% |
| 2003 | 1,284,443 | -3.6% | 77.2% | 1,243,968 | -3.7% | 79.7% |
| 2004 | 1,286,631 | 0.2% | 77.1% | 1,246,156 | 0.2% | 79.6% |
| 2005 | 1,288,732 | 0.2% | 75.5% | 1,248,258 | 0.2% | 77.9% |
| 2006 | 1,240,764 | -3.7% | 76.2% | 1,200,289 | -3.8% | 78.8% |
| 2007 | 1,242,152 | 0.1% | 76.2% | 1,201,678 | 0.1% | 78.8% |
| 2008 | 1,258,458 | 1.3% | 74.6% | 1,217,983 | 1.4% | 77.1% |
| 2009 | 1,209,696 | -3.9% | 75.4% | 1,169,221 | -4.0% | 78.0% |
| 2010 | 1,210,877 | 0.1% | 75.3% | 1,170,403 | 0.1% | 77.9% |
| 2011 | 1,212,011 | 0.1% | 75.3% | 1,171,537 | 0.1% | 77.9% |
| 2012 | 1,212,713 | 0.1% | 75.3% | 1,172,239 | 0.1% | 77.9% |
| 2013 | 1,224,330 | 1.0% | 75.4% | 1,183,856 | 1.0% | 78.0% |
| 2014 | 1,224,888 | 0.0% | 75.4% | 1,184,413 | 0.0% | 77.9% |
| 2015 | 1,225,400 | 0.0% | 75.4% | 1,184,926 | 0.0% | 77.9% |
| 2016 | 1,225,875 | 0.0% | 75.4% | 1,185,401 | 0.0% | 77.9% |

Notes:
1. Years 1997-2016 based on the long-term forecast
2. 1972-1996 respresents actual values, 1997-2016 represents weather normalized values
3. Peak amounts represent the total Big Rivers 60-minute CP demand value

## Big Rivers Electric Corporation

### 1997 Load Forecast - Low Scenario #1
### Pessimistic Economic Outlook / Normal Weather
### Residential Classification

| Year | Consumers | Percent Change | Sales (MWh) | Percent Change | Average Use (kWh/Cust/Mo) | Percent Change |
|---|---|---|---|---|---|---|
| 1972 | 48,646 | | 426,199 | | 730 | |
| 1973 | 50,636 | 4.1% | 475,060 | 11.5% | 782 | 7.1% |
| 1974 | 52,494 | 3.7% | 495,221 | 4.2% | 786 | 0.6% |
| 1975 | 54,230 | 3.3% | 565,706 | 14.2% | 869 | 10.6% |
| 1976 | 56,193 | 3.6% | 603,393 | 6.7% | 895 | 2.9% |
| 1977 | 58,226 | 3.6% | 706,616 | 17.1% | 1,011 | 13.0% |
| 1978 | 59,761 | 2.6% | 756,149 | 7.0% | 1,054 | 4.3% |
| 1979 | 61,858 | 3.5% | 735,825 | -2.7% | 991 | -6.0% |
| 1980 | 63,049 | 1.9% | 795,980 | 8.2% | 1,052 | 6.1% |
| 1981 | 63,941 | 1.4% | 745,835 | -6.3% | 972 | -7.6% |
| 1982 | 64,502 | 0.9% | 756,931 | 1.5% | 978 | 0.6% |
| 1983 | 65,519 | 1.6% | 781,501 | 3.2% | 994 | 1.6% |
| 1984 | 66,607 | 1.7% | 819,670 | 4.9% | 1,026 | 3.2% |
| 1985 | 67,754 | 1.7% | 819,928 | 0.0% | 1,008 | -1.7% |
| 1986 | 68,718 | 1.4% | 871,530 | 6.3% | 1,057 | 4.8% |
| 1987 | 69,946 | 1.8% | 909,195 | 4.3% | 1,083 | 2.5% |
| 1988 | 71,032 | 1.6% | 931,639 | 2.5% | 1,093 | 0.9% |
| 1989 | 72,171 | 1.6% | 925,721 | -0.6% | 1,069 | -2.2% |
| 1990 | 73,156 | 1.4% | 930,785 | 0.5% | 1,060 | -0.8% |
| 1991 | 74,176 | 1.4% | 991,459 | 6.5% | 1,114 | 5.1% |
| 1992 | 75,668 | 2.0% | 945,487 | -4.6% | 1,041 | -6.5% |
| 1993 | 77,266 | 2.1% | 1,052,301 | 11.3% | 1,135 | 9.0% |
| 1994 | 78,879 | 2.1% | 1,040,652 | -1.1% | 1,099 | -3.1% |
| 1995 | 80,808 | 2.4% | 1,101,490 | 5.8% | 1,136 | 3.3% |
| 1996 | 82,659 | 2.3% | 1,144,623 | 3.9% | 1,154 | 1.6% |
| 1997 | 83,329 | 0.8% | 1,156,989 | 1.1% | 1,157 | 0.3% |
| 1998 | 84,004 | 0.8% | 1,165,000 | 0.7% | 1,156 | -0.1% |
| 1999 | 84,686 | 0.8% | 1,171,698 | 0.6% | 1,153 | -0.2% |
| 2000 | 85,374 | 0.8% | 1,178,036 | 0.5% | 1,150 | -0.3% |
| 2001 | 86,068 | 0.8% | 1,184,028 | 0.5% | 1,146 | -0.3% |
| 2002 | 86,535 | 0.5% | 1,186,294 | 0.2% | 1,142 | -0.3% |
| 2003 | 87,005 | 0.5% | 1,188,404 | 0.2% | 1,138 | -0.4% |
| 2004 | 87,477 | 0.5% | 1,190,486 | 0.2% | 1,134 | -0.4% |
| 2005 | 87,953 | 0.5% | 1,192,578 | 0.2% | 1,130 | -0.4% |
| 2006 | 88,431 | 0.5% | 1,194,691 | 0.2% | 1,126 | -0.4% |
| 2007 | 88,737 | 0.3% | 1,194,468 | -0.0% | 1,122 | -0.4% |
| 2008 | 89,045 | 0.3% | 1,194,276 | -0.0% | 1,118 | -0.4% |
| 2009 | 89,354 | 0.3% | 1,194,108 | -0.0% | 1,114 | -0.4% |
| 2010 | 89,664 | 0.3% | 1,193,962 | -0.0% | 1,110 | -0.4% |
| 2011 | 89,975 | 0.3% | 1,193,837 | -0.0% | 1,106 | -0.4% |
| 2012 | 90,193 | 0.2% | 1,192,238 | -0.1% | 1,102 | -0.4% |
| 2013 | 90,412 | 0.2% | 1,190,588 | -0.1% | 1,097 | -0.4% |
| 2014 | 90,632 | 0.2% | 1,188,938 | -0.1% | 1,093 | -0.4% |
| 2015 | 90,853 | 0.2% | 1,187,304 | -0.1% | 1,089 | -0.4% |
| 2016 | 91,074 | 0.2% | 1,185,692 | -0.1% | 1,085 | -0.4% |

Notes:
1. Years 1997-2016 based on the long-term forecast
2. 1972-1996 respresents actual values, 1997-2016 represents weather normalized values

## Big Rivers Electric Corporation

### 1997 Load Forecast - Low Scenario #1
### Pessimistic Economic Outlook / Normal Weather
### C/I Small Classification

| Year | Consumers | Percent Change | Sales (MWh) | Percent Change | Average Use (kWh/Cust/Mo) | Percent Change |
|---|---|---|---|---|---|---|
| 1972 | 4,111 | | 188,145 | | 3,814 | |
| 1973 | 4,207 | 2.3% | 188,997 | 0.5% | 3,744 | -1.8% |
| 1974 | 4,402 | 4.6% | 190,553 | 0.8% | 3,607 | -3.6% |
| 1975 | 4,565 | 3.7% | 221,820 | 16.4% | 4,049 | 12.3% |
| 1976 | 4,762 | 4.3% | 235,573 | 6.2% | 4,122 | 1.8% |
| 1977 | 5,131 | 7.7% | 280,660 | 19.1% | 4,558 | 10.6% |
| 1978 | 5,352 | 4.3% | 309,797 | 10.4% | 4,824 | 5.8% |
| 1979 | 5,617 | 5.0% | 250,462 | -19.2% | 3,716 | -23.0% |
| 1980 | 5,801 | 3.3% | 266,633 | 6.5% | 3,830 | 3.1% |
| 1981 | 6,062 | 4.5% | 272,242 | 2.1% | 3,742 | -2.3% |
| 1982 | 6,277 | 3.5% | 283,508 | 4.1% | 3,764 | 0.6% |
| 1983 | 6,622 | 5.5% | 292,126 | 3.0% | 3,676 | -2.3% |
| 1984 | 6,918 | 4.5% | 313,999 | 7.5% | 3,782 | 2.9% |
| 1985 | 7,021 | 1.5% | 321,458 | 2.4% | 3,815 | 0.9% |
| 1986 | 7,151 | 1.9% | 325,914 | 1.4% | 3,798 | -0.5% |
| 1987 | 7,296 | 2.0% | 338,858 | 4.0% | 3,870 | 1.9% |
| 1988 | 7,424 | 1.8% | 351,822 | 3.8% | 3,949 | 2.0% |
| 1989 | 7,526 | 1.4% | 355,923 | 1.2% | 3,941 | -0.2% |
| 1990 | 7,730 | 2.7% | 371,964 | 4.5% | 4,010 | 1.7% |
| 1991 | 7,854 | 1.6% | 381,198 | 2.5% | 4,045 | 0.9% |
| 1992 | 7,898 | 0.6% | 388,913 | 2.0% | 4,103 | 1.5% |
| 1993 | 8,060 | 2.1% | 419,026 | 7.7% | 4,332 | 5.6% |
| 1994 | 8,198 | 1.7% | 429,433 | 2.5% | 4,365 | 0.8% |
| 1995 | 8,406 | 2.5% | 447,653 | 4.2% | 4,438 | 1.7% |
| 1996 | 8,689 | 3.4% | 463,285 | 3.5% | 4,443 | 0.1% |
| 1997 | 8,808 | 1.4% | 487,070 | 5.1% | 4,608 | 3.7% |
| 1998 | 8,927 | 1.4% | 494,644 | 1.6% | 4,617 | 0.2% |
| 1999 | 9,046 | 1.3% | 501,489 | 1.4% | 4,620 | 0.1% |
| 2000 | 9,165 | 1.3% | 507,813 | 1.3% | 4,617 | -0.1% |
| 2001 | 9,285 | 1.3% | 513,604 | 1.1% | 4,610 | -0.2% |
| 2002 | 9,369 | 0.9% | 518,403 | 0.9% | 4,611 | 0.0% |
| 2003 | 9,453 | 0.9% | 522,518 | 0.8% | 4,606 | -0.1% |
| 2004 | 9,537 | 0.9% | 526,080 | 0.7% | 4,597 | -0.2% |
| 2005 | 9,622 | 0.9% | 529,178 | 0.6% | 4,583 | -0.3% |
| 2006 | 9,706 | 0.9% | 531,881 | 0.5% | 4,567 | -0.4% |
| 2007 | 9,782 | 0.8% | 534,018 | 0.4% | 4,549 | -0.4% |
| 2008 | 9,858 | 0.8% | 535,726 | 0.3% | 4,529 | -0.5% |
| 2009 | 9,934 | 0.8% | 537,085 | 0.3% | 4,505 | -0.5% |
| 2010 | 10,011 | 0.8% | 538,151 | 0.2% | 4,480 | -0.6% |
| 2011 | 10,087 | 0.8% | 538,971 | 0.2% | 4,453 | -0.6% |
| 2012 | 10,160 | 0.7% | 539,358 | 0.1% | 4,424 | -0.6% |
| 2013 | 10,232 | 0.7% | 539,428 | 0.0% | 4,393 | -0.7% |
| 2014 | 10,305 | 0.7% | 539,246 | -0.0% | 4,361 | -0.7% |
| 2015 | 10,378 | 0.7% | 538,858 | -0.1% | 4,327 | -0.8% |
| 2016 | 10,451 | 0.7% | 538,298 | -0.1% | 4,292 | -0.8% |

Notes:
1. Years 1997-2016 based on the long-term forecast
2. 1972-1996 respresents actual values, 1997-2016 represents weather normalized values

## Big Rivers Electric Corporation

### 1997 Load Forecast - Low Scenario #1
### Pessimistic Economic Outlook / Normal Weather
### C/I Large Classification

| Year | Consumers | Percent Change | Sales (MWh) | Percent Change |
|---|---|---|---|---|
| 1972 | 9 | | 3,177,303 | |
| 1973 | 10 | 11.1% | 4,368,418 | 37.5% |
| 1974 | 10 | 0.0% | 5,230,483 | 19.7% |
| 1975 | 11 | 10.0% | 5,073,573 | -3.0% |
| 1976 | 16 | 45.5% | 5,262,762 | 3.7% |
| 1977 | 17 | 6.3% | 5,443,274 | 3.4% |
| 1978 | 15 | -11.8% | 5,368,154 | -1.4% |
| 1979 | 17 | 13.3% | 5,940,734 | 10.7% |
| 1980 | 18 | 5.9% | 6,390,170 | 7.6% |
| 1981 | 19 | 5.6% | 6,380,899 | -0.1% |
| 1982 | 22 | 15.8% | 5,300,242 | -16.9% |
| 1983 | 23 | 4.5% | 5,528,519 | 4.3% |
| 1984 | 25 | 8.7% | 6,194,365 | 12.0% |
| 1985 | 27 | 8.0% | 5,653,054 | -8.7% |
| 1986 | 33 | 22.2% | 4,926,411 | -12.9% |
| 1987 | 34 | 3.0% | 4,929,857 | 0.1% |
| 1988 | 36 | 5.9% | 6,427,497 | 30.4% |
| 1989 | 40 | 11.1% | 6,667,299 | 3.7% |
| 1990 | 40 | 0.0% | 6,808,988 | 2.1% |
| 1991 | 41 | 2.5% | 6,833,471 | 0.4% |
| 1992 | 38 | -7.3% | 6,885,705 | 0.8% |
| 1993 | 37 | -2.6% | 6,863,080 | -0.3% |
| 1994 | 37 | 0.0% | 5,882,908 | -14.3% |
| 1995 | 35 | -5.4% | 6,297,252 | 7.0% |
| 1996 | 38 | 8.6% | 6,320,441 | 0.4% |
| 1997 | 36 | -5.3% | 6,790,687 | 7.4% |
| 1998 | 36 | 0.0% | 7,585,880 | 11.7% |
| 1999 | 36 | 0.0% | 7,727,230 | 1.9% |
| 2000 | 36 | 0.0% | 7,759,953 | 0.4% |
| 2001 | 36 | 0.0% | 7,764,607 | 0.1% |
| 2002 | 35 | -2.8% | 7,754,407 | -0.1% |
| 2003 | 35 | 0.0% | 7,754,407 | 0.0% |
| 2004 | 35 | 0.0% | 7,754,407 | 0.0% |
| 2005 | 35 | 0.0% | 7,754,407 | 0.0% |
| 2006 | 35 | 0.0% | 7,754,407 | 0.0% |
| 2007 | 35 | 0.0% | 7,754,407 | 0.0% |
| 2008 | 35 | 0.0% | 7,866,097 | 1.4% |
| 2009 | 35 | 0.0% | 7,866,097 | 0.0% |
| 2010 | 35 | 0.0% | 7,866,097 | 0.0% |
| 2011 | 35 | 0.0% | 7,866,097 | 0.0% |
| 2012 | 35 | 0.0% | 7,866,097 | 0.0% |
| 2013 | 35 | 0.0% | 7,948,003 | 1.0% |
| 2014 | 35 | 0.0% | 7,948,003 | 0.0% |
| 2015 | 35 | 0.0% | 7,948,003 | 0.0% |
| 2016 | 35 | 0.0% | 7,948,003 | 0.0% |

Notes:
1. Years 1997-2016 based on the long-term forecast
2. 1972-1996 respresents actual values, 1997-2016 represents weather normalized values

## Big Rivers Electric Corporation

### 1997 Load Forecast - Low Scenario #1
### Pessimistic Economic Outlook / Normal Weather
### Public Street Lighting Classification

| Year | Consumers | Percent Change | Sales (MWh) | Per Cha |
|---|---|---|---|---|
| 1972 | 65 | | 1,321 | |
| 1973 | 67 | 3.1% | 1,512 | 14. |
| 1974 | 69 | 3.0% | 1,839 | 21. |
| 1975 | 72 | 4.3% | 2,145 | 16. |
| 1976 | 69 | -4.2% | 2,252 | 5.0 |
| 1977 | 68 | -1.4% | 2,188 | -2.8 |
| 1978 | 71 | 4.4% | 2,204 | 0.7 |
| 1979 | 76 | 7.0% | 2,210 | 0.3 |
| 1980 | 74 | -2.6% | 2,032 | -8.0 |
| 1981 | 76 | 2.7% | 1,985 | -2.3% |
| 1982 | 84 | 10.5% | 1,999 | 0.7% |
| 1983 | 93 | 10.7% | 1,833 | -8.3% |
| 1984 | 98 | 5.4% | 1,887 | 2.9% |
| 1985 | 99 | 1.0% | 1,927 | 2.2% |
| 1986 | 96 | -3.0% | 1,981 | 2.8% |
| 1987 | 101 | 5.2% | 2,048 | 3.4% |
| 1988 | 104 | 3.0% | 2,110 | 3.0% |
| 1989 | 109 | 4.8% | 2,154 | 2.1% |
| 1990 | 116 | 6.4% | 2,177 | 1.1% |
| 1991 | 121 | 4.3% | 2,276 | 4.5% |
| 1992 | 124 | 2.5% | 2,275 | -0.1% |
| 1993 | 129 | 4.0% | 2,417 | 6.2% |
| 1994 | 134 | 3.9% | 2,509 | 3.8% |
| 1995 | 136 | 1.5% | 2,641 | 5.3% |
| 1996 | 152 | 11.8% | 2,661 | 0.8% |
| 1997 | 156 | 2.6% | 2,729 | 2.6% |
| 1998 | 160 | 2.6% | 2,797 | 2.5% |
| 1999 | 164 | 2.5% | 2,865 | 2.4% |
| 2000 | 168 | 2.4% | 2,933 | 2.4% |
| 2001 | 172 | 2.4% | 3,001 | 2.3% |
| 2002 | 176 | 2.3% | 3,069 | 2.3% |
| 2003 | 180 | 2.3% | 3,137 | 2.2% |
| 2004 | 184 | 2.2% | 3,205 | 2.2% |
| 2005 | 188 | 2.2% | 3,273 | 2.1% |
| 2006 | 192 | 2.1% | 3,341 | 2.1% |
| 2007 | 196 | 2.1% | 3,409 | 2.0% |
| 2008 | 200 | 2.0% | 3,477 | 2.0% |
| 2009 | 204 | 2.0% | 3,545 | 2.0% |
| 2010 | 208 | 2.0% | 3,612 | 1.9% |
| 2011 | 212 | 1.9% | 3,680 | 1.9% |
| 2012 | 216 | 1.9% | 3,748 | 1.8% |
| 2013 | 220 | 1.9% | 3,816 | 1.8% |
| 2014 | 224 | 1.8% | 3,884 | 1.8% |
| 2015 | 228 | 1.8% | 3,952 | 1.7% |
| 2016 | 232 | 1.8% | 4,020 | 1.7% |

Notes:
1. Years 1997-2016 based on the long-term forecast
2. 1972-1996 respresents actual values, 1997-2016 represents weather normalized values

## Big Rivers Electric Corporation

### 1997 Load Forecast - Low Scenario #1
### Pessimistic Economic Outlook / Normal Weather
### Irrigation Classification

| Year | Consumers | Percent Change | Sales (MWh) | Percent Change |
|---|---|---|---|---|
| 1972 | 0 | | 0 | |
| 1973 | 0 | 0.0% | 0 | 0.0% |
| 1974 | 0 | 0.0% | 0 | 0.0% |
| 1975 | 0 | 0.0% | 0 | 0.0% |
| 1976 | 0 | 0.0% | 0 | 0.0% |
| 1977 | 0 | 0.0% | 0 | 0.0% |
| 1978 | 6 | 0.0% | 33 | 0.0% |
| 1979 | 6 | 0.0% | 40 | 23.3% |
| 1980 | 7 | 16.7% | 42 | 5.1% |
| 1981 | 8 | 14.3% | 79 | 85.5% |
| 1982 | 9 | 12.5% | 63 | -20.0% |
| 1983 | 12 | 33.3% | 65 | 3.1% |
| 1984 | 12 | 0.0% | 74 | 13.4% |
| 1985 | 12 | 0.0% | 39 | -46.5% |
| 1986 | 9 | -25.0% | 50 | 26.3% |
| 1987 | 8 | -11.1% | 68 | 36.9% |
| 1988 | 7 | -12.5% | 85 | 24.6% |
| 1989 | 7 | 0.0% | 82 | -3.9% |
| 1990 | 8 | 14.3% | 48 | -41.3% |
| 1991 | 9 | 12.5% | 86 | 79.1% |
| 1992 | 9 | 0.0% | 114 | 32.5% |
| 1993 | 9 | 0.0% | 78 | -31.2% |
| 1994 | 9 | 0.0% | 93 | 19.3% |
| 1995 | 10 | 11.1% | 100 | 7.2% |
| 1996 | 10 | 0.0% | 110 | 10.0% |
| 1997 | 10 | 0.0% | 86 | -21.5% |
| 1998 | 10 | 0.0% | 86 | 0.0% |
| 1999 | 10 | 0.0% | 86 | 0.0% |
| 2000 | 10 | 0.0% | 86 | 0.0% |
| 2001 | 10 | 0.0% | 86 | 0.0% |
| 2002 | 10 | 0.0% | 86 | 0.0% |
| 2003 | 10 | 0.0% | 86 | 0.0% |
| 2004 | 10 | 0.0% | 86 | 0.0% |
| 2005 | 10 | 0.0% | 86 | 0.0% |
| 2006 | 10 | 0.0% | 86 | 0.0% |
| 2007 | 10 | 0.0% | 86 | 0.0% |
| 2008 | 10 | 0.0% | 86 | 0.0% |
| 2009 | 10 | 0.0% | 86 | 0.0% |
| 2010 | 10 | 0.0% | 86 | 0.0% |
| 2011 | 10 | 0.0% | 86 | 0.0% |
| 2012 | 10 | 0.0% | 86 | 0.0% |
| 2013 | 10 | 0.0% | 86 | 0.0% |
| 2014 | 10 | 0.0% | 86 | 0.0% |
| 2015 | 10 | 0.0% | 86 | 0.0% |
| 2016 | 10 | 0.0% | 86 | 0.0% |

Notes:
1. Years 1997-2016 based on the long-term forecast
2. 1972-1996 respresents actual values, 1997-2016 represents weather normalized values

## Big Rivers Electric Corporation
## 1997 Load Forecast - Low Scenario #2
## Expected Economic Outlook / Mild Weather
## Total System Requirements

| Year | Consumers | Percent Change | Sales (MWh) | Percent Change | Own Use (MWh) | Losses (%) | Member MWh Purchases | Total MWh Requirements | Percent Change |
|---|---|---|---|---|---|---|---|---|---|
| 1972 | 52,831 | | 3,792,968 | | 3,102 | 9.7% | 3,862,045 | 3,939,286 | |
| 1973 | 54,920 | 4.0% | 5,033,988 | 32.7% | 2,811 | 8.9% | 5,102,148 | 5,204,191 | 32.1% |
| 1974 | 56,975 | 3.7% | 5,918,096 | 17.6% | 2,651 | 8.7% | 5,986,239 | 6,105,964 | 17.3% |
| 1975 | 58,878 | 3.3% | 5,863,245 | -0.9% | 2,546 | 8.5% | 5,939,400 | 6,058,188 | -0.8% |
| 1976 | 61,040 | 3.7% | 6,103,980 | 4.1% | 2,860 | 9.1% | 6,190,692 | 6,314,506 | 4.2% |
| 1977 | 63,441 | 3.9% | 6,432,738 | 5.4% | 2,801 | 7.4% | 6,514,107 | 6,644,389 | 5.2% |
| 1978 | 65,205 | 2.8% | 6,436,336 | 0.1% | 3,042 | 7.6% | 6,527,678 | 6,658,231 | 0.2% |
| 1979 | 67,573 | 3.6% | 6,929,271 | 7.7% | 2,909 | 9.0% | 7,029,485 | 7,170,074 | 7.7% |
| 1980 | 68,948 | 2.0% | 7,454,859 | 7.6% | 2,754 | 6.2% | 7,528,564 | 7,679,135 | 7.1% |
| 1981 | 70,106 | 1.7% | 7,401,040 | -0.7% | 2,810 | 6.9% | 7,479,670 | 7,629,264 | -0.6% |
| 1982 | 70,894 | 1.1% | 6,342,743 | -14.3% | 2,932 | 7.2% | 6,426,261 | 6,554,786 | -14.1% |
| 1983 | 72,269 | 1.9% | 6,604,043 | 4.1% | 2,816 | 8.5% | 6,707,235 | 6,841,380 | 4.4% |
| 1984 | 73,660 | 1.9% | 7,329,994 | 11.0% | 3,042 | 5.5% | 7,398,951 | 7,546,930 | 10.3% |
| 1985 | 74,913 | 1.7% | 6,796,406 | -7.3% | 2,864 | 8.0% | 6,899,093 | 7,037,074 | -6.8% |
| 1986 | 76,008 | 1.5% | 6,125,886 | -9.9% | 2,982 | 6.7% | 6,215,491 | 6,339,799 | -9.9% |
| 1987 | 77,384 | 1.8% | 6,180,027 | 0.9% | 3,079 | 6.5% | 6,270,519 | 6,395,929 | 0.9% |
| 1988 | 78,603 | 1.6% | 7,713,154 | 24.8% | 3,196 | 7.0% | 7,813,146 | 7,969,409 | 24.6% |
| 1989 | 79,853 | 1.6% | 7,951,178 | 3.1% | 3,255 | 8.4% | 8,072,761 | 8,234,217 | 3.3% |
| 1990 | 81,050 | 1.5% | 8,113,961 | 2.0% | 3,133 | 5.4% | 8,191,465 | 8,355,294 | 1.5% |
| 1991 | 82,201 | 1.4% | 8,208,490 | 1.2% | 3,136 | 7.0% | 8,314,440 | 8,484,123 | 1.5% |
| 1992 | 83,737 | 1.9% | 8,222,493 | 0.2% | 3,362 | 7.0% | 8,326,337 | 8,496,262 | 0.1% |
| 1993 | 85,501 | 2.1% | 8,336,903 | 1.4% | 3,089 | 6.7% | 8,445,130 | 8,617,480 | 1.4% |
| 1994 | 87,257 | 2.1% | 7,355,595 | -11.8% | 3,226 | 6.1% | 7,454,220 | 7,606,347 | -11.7% |
| 1995 | 89,395 | 2.4% | 7,849,136 | 6.7% | 3,334 | 6.6% | 7,961,435 | 8,123,913 | 6.8% |
| 1996 | 91,548 | 2.4% | 7,931,120 | 1.0% | 3,598 | 6.5% | 8,045,961 | 8,210,164 | 1.1% |
| 1997 | 93,578 | 2.2% | 8,390,744 | 5.8% | 3,630 | 6.4% | 8,504,431 | 8,677,991 | 5.7% |
| 1998 | 95,655 | 2.2% | 9,196,939 | 9.6% | 3,658 | 6.3% | 9,321,549 | 9,511,785 | 9.6% |
| 1999 | 97,773 | 2.2% | 9,374,224 | 1.9% | 3,687 | 6.3% | 9,501,237 | 9,695,140 | 1.9% |
| 2000 | 99,934 | 2.2% | 9,451,133 | 0.8% | 3,715 | 6.3% | 9,579,187 | 9,774,681 | 0.8% |
| 2001 | 102,141 | 2.2% | 9,511,475 | 0.6% | 3,744 | 6.3% | 9,632,560 | 9,829,143 | 0.6% |
| 2002 | 104,106 | 1.9% | 9,545,381 | 0.4% | 3,773 | 6.3% | 9,669,126 | 9,866,455 | 0.4% |
| 2003 | 106,107 | 1.9% | 9,591,151 | 0.5% | 3,801 | 6.3% | 9,717,650 | 9,915,969 | 0.5% |
| 2004 | 108,144 | 1.9% | 9,638,669 | 0.5% | 3,830 | 6.3% | 9,768,390 | 9,967,745 | 0.5% |
| 2005 | 110,219 | 1.9% | 9,687,970 | 0.5% | 3,858 | 6.3% | 9,821,031 | 10,021,460 | 0.5% |
| 2006 | 112,332 | 1.9% | 9,739,079 | 0.5% | 3,887 | 6.3% | 9,875,597 | 10,077,140 | 0.6% |
| 2007 | 114,272 | 1.7% | 9,789,014 | 0.5% | 3,915 | 6.3% | 9,928,907 | 10,131,538 | 0.5% |
| 2008 | 116,244 | 1.7% | 9,952,206 | 1.7% | 3,944 | 6.3% | 10,095,576 | 10,301,608 | 1.7% |
| 2009 | 118,249 | 1.7% | 10,005,326 | 0.5% | 3,973 | 6.3% | 10,152,278 | 10,359,468 | 0.6% |
| 2010 | 120,286 | 1.7% | 10,060,105 | 0.5% | 4,001 | 6.3% | 10,210,749 | 10,419,132 | 0.6% |
| 2011 | 122,357 | 1.7% | 10,116,587 | 0.6% | 4,030 | 6.3% | 10,271,034 | 10,480,647 | 0.6% |
| 2012 | 124,336 | 1.6% | 10,172,547 | 0.6% | 4,058 | 6.3% | 10,330,759 | 10,541,591 | 0.6% |
| 2013 | 126,346 | 1.6% | 10,311,805 | 1.4% | 4,087 | 6.3% | 10,473,872 | 10,687,624 | 1.4% |
| 2014 | 128,387 | 1.6% | 10,370,689 | 0.6% | 4,116 | 6.3% | 10,536,711 | 10,751,746 | 0.6% |
| 2015 | 130,459 | 1.6% | 10,431,186 | 0.6% | 4,144 | 6.3% | 10,601,270 | 10,817,623 | 0.6% |
| 2016 | 132,564 | 1.6% | 10,493,360 | 0.6% | 4,173 | 6.3% | 10,667,615 | 10,885,322 | 0.6% |

Notes:
1. Years 1997-2016 based on the long-term forecast
2. Losses represent distribution losses on rural system energy requirements
3. 1972-1996 respresents actual values, 1997-2016 represents weather normalized values

**Big Rivers Electric Corporation**
**1997 Load Forecast - Low Scenario #2**
**Expected Economic Outlook / Mild Weather**
**Total System Requirements**

| Year | Summer Peak (kW) | Percent Change | Load Factor | Winter Peak (kW) | Percent Change | Load Factor |
|---|---|---|---|---|---|---|
| 1972 | 497,000 | | 88.7% | 472,000 | | 93.4% |
| 1973 | 707,000 | 42.3% | 82.4% | 508,000 | 7.6% | 114.7% |
| 1974 | 737,000 | 4.2% | 92.7% | 722,000 | 42.1% | 94.6% |
| 1975 | 722,000 | -2.0% | 93.9% | 731,000 | 1.2% | 92.8% |
| 1976 | 759,000 | 5.1% | 93.1% | 748,000 | 2.3% | 94.5% |
| 1977 | 801,000 | 5.5% | 92.8% | 820,000 | 9.6% | 90.7% |
| 1978 | 802,000 | 0.1% | 92.9% | 819,000 | -0.1% | 91.0% |
| 1979 | 994,000 | 23.9% | 80.7% | 974,000 | 18.9% | 82.4% |
| 1980 | 1,039,000 | 4.5% | 82.7% | 1,007,000 | 3.4% | 85.3% |
| 1981 | 1,034,000 | -0.5% | 82.6% | 1,037,000 | 3.0% | 82.3% |
| 1982 | 890,000 | -13.9% | 82.4% | 1,034,000 | -0.3% | 70.9% |
| 1983 | 966,000 | 8.5% | 79.3% | 1,046,000 | 1.2% | 73.2% |
| 1984 | 1,027,000 | 6.3% | 82.2% | 979,000 | -6.4% | 86.3% |
| 1985 | 965,000 | -6.0% | 81.6% | 1,042,000 | 6.4% | 75.6% |
| 1986 | 890,000 | -7.8% | 79.7% | 993,000 | -4.7% | 71.5% |
| 1987 | 990,000 | 11.2% | 72.3% | 920,000 | -7.4% | 77.8% |
| 1988 | 1,157,000 | 16.9% | 77.1% | 1,063,000 | 15.5% | 83.9% |
| 1989 | 1,142,000 | -1.3% | 80.7% | 1,177,000 | 10.7% | 78.3% |
| 1990 | 1,174,000 | 2.8% | 79.7% | 1,089,000 | -7.5% | 85.9% |
| 1991 | 1,168,000 | -0.5% | 81.3% | 1,140,000 | 4.7% | 83.3% |
| 1992 | 1,166,000 | -0.2% | 81.5% | 1,149,000 | 0.8% | 82.7% |
| 1993 | 1,217,000 | 4.4% | 79.2% | 1,137,000 | -1.0% | 84.8% |
| 1994 | 1,055,000 | -13.3% | 80.7% | 1,189,000 | 4.6% | 71.6% |
| 1995 | 1,166,000 | 10.5% | 77.9% | 1,063,000 | -10.6% | 85.5% |
| 1996 | 1,167,000 | 0.1% | 78.7% | 1,154,000 | 8.6% | 79.6% |
| 1997 | 1,296,128 | 11.1% | 74.9% | 1,236,315 | 7.1% | 78.5% |
| 1998 | 1,333,544 | 2.9% | 79.8% | 1,273,731 | 3.0% | 83.5% |
| 1999 | 1,344,511 | 0.8% | 80.7% | 1,284,699 | 0.9% | 84.4% |
| 2000 | 1,357,661 | 1.0% | 80.5% | 1,297,848 | 1.0% | 84.3% |
| 2001 | 1,368,464 | 0.8% | 80.4% | 1,308,651 | 0.8% | 84.0% |
| 2002 | 1,376,042 | 0.6% | 80.2% | 1,316,229 | 0.6% | 83.9% |
| 2003 | 1,386,188 | 0.7% | 80.0% | 1,326,375 | 0.8% | 83.6% |
| 2004 | 1,396,722 | 0.8% | 79.8% | 1,336,909 | 0.8% | 83.4% |
| 2005 | 1,407,651 | 0.8% | 79.6% | 1,347,839 | 0.8% | 83.2% |
| 2006 | 1,418,982 | 0.8% | 79.4% | 1,359,169 | 0.8% | 82.9% |
| 2007 | 1,430,051 | 0.8% | 79.3% | 1,370,239 | 0.8% | 82.7% |
| 2008 | 1,456,469 | 1.8% | 79.1% | 1,396,656 | 1.9% | 82.5% |
| 2009 | 1,468,245 | 0.8% | 78.9% | 1,408,432 | 0.8% | 82.3% |
| 2010 | 1,480,388 | 0.8% | 78.7% | 1,420,576 | 0.9% | 82.1% |
| 2011 | 1,492,910 | 0.8% | 78.5% | 1,433,097 | 0.9% | 81.8% |
| 2012 | 1,505,315 | 0.8% | 78.3% | 1,445,502 | 0.9% | 81.6% |
| 2013 | 1,529,029 | 1.6% | 78.2% | 1,469,216 | 1.6% | 81.4% |
| 2014 | 1,542,083 | 0.9% | 78.0% | 1,482,270 | 0.9% | 81.1% |
| 2015 | 1,555,494 | 0.9% | 77.8% | 1,495,682 | 0.9% | 80.9% |
| 2016 | 1,569,277 | 0.9% | 77.6% | 1,509,464 | 0.9% | 80.7% |

Notes:
1. Years 1997-2016 based on the long-term forecast
2. 1972-1996 respresents actual values, 1997-2016 represents weather normalized values
3. Peak amounts represent the total Big Rivers 60-minute CP demand value

Big Rivers Electric Corporation

1997 Load Forecast - Low Scenario #2
Expected Economic Outlook / Mild Weather
Residential Classification

| Year | Consumers | Percent Change | Sales (MWh) | Percent Change | Average Use (kWh/Cust/Mo) | Percent Change |
|---|---|---|---|---|---|---|
| 1972 | 48,646 | | 426,199 | | 730 | |
| 1973 | 50,636 | 4.1% | 475,060 | 11.5% | 782 | 7.1% |
| 1974 | 52,494 | 3.7% | 495,221 | 4.2% | 786 | 0.6% |
| 1975 | 54,230 | 3.3% | 565,706 | 14.2% | 869 | 10.6% |
| 1976 | 56,193 | 3.6% | 603,393 | 6.7% | 895 | 2.9% |
| 1977 | 58,226 | 3.6% | 706,616 | 17.1% | 1,011 | 13.0% |
| 1978 | 59,761 | 2.6% | 756,149 | 7.0% | 1,054 | 4.3% |
| 1979 | 61,858 | 3.5% | 735,825 | -2.7% | 991 | -6.0% |
| 1980 | 63,049 | 1.9% | 795,980 | 8.2% | 1,052 | 6.1% |
| 1981 | 63,941 | 1.4% | 745,835 | -6.3% | 972 | -7.6% |
| 1982 | 64,502 | 0.9% | 756,931 | 1.5% | 978 | 0.6% |
| 1983 | 65,519 | 1.6% | 781,501 | 3.2% | 994 | 1.6% |
| 1984 | 66,607 | 1.7% | 819,670 | 4.9% | 1,026 | 3.2% |
| 1985 | 67,754 | 1.7% | 819,928 | 0.0% | 1,008 | -1.7% |
| 1986 | 68,718 | 1.4% | 871,530 | 6.3% | 1,057 | 4.8% |
| 1987 | 69,946 | 1.8% | 909,195 | 4.3% | 1,083 | 2.5% |
| 1988 | 71,032 | 1.6% | 931,639 | 2.5% | 1,093 | 0.9% |
| 1989 | 72,171 | 1.6% | 925,721 | -0.6% | 1,069 | -2.2% |
| 1990 | 73,156 | 1.4% | 930,785 | 0.5% | 1,060 | -0.8% |
| 1991 | 74,176 | 1.4% | 991,459 | 6.5% | 1,114 | 5.1% |
| 1992 | 75,668 | 2.0% | 945,487 | -4.6% | 1,041 | -6.5% |
| 1993 | 77,266 | 2.1% | 1,052,301 | 11.3% | 1,135 | 9.0% |
| 1994 | 78,879 | 2.1% | 1,040,652 | -1.1% | 1,099 | -3.1% |
| 1995 | 80,808 | 2.4% | 1,101,490 | 5.8% | 1,136 | 3.3% |
| 1996 | 82,659 | 2.3% | 1,144,623 | 3.9% | 1,154 | 1.6% |
| 1997 | 84,457 | 2.2% | 1,106,675 | -3.3% | 1,092 | -5.4% |
| 1998 | 86,295 | 2.2% | 1,116,684 | 0.9% | 1,078 | -1.2% |
| 1999 | 88,173 | 2.2% | 1,141,533 | 2.2% | 1,079 | 0.0% |
| 2000 | 90,093 | 2.2% | 1,171,571 | 2.6% | 1,084 | 0.4% |
| 2001 | 92,055 | 2.2% | 1,203,581 | 2.7% | 1,090 | 0.5% |
| 2002 | 93,810 | 1.9% | 1,233,083 | 2.5% | 1,095 | 0.5% |
| 2003 | 95,599 | 1.9% | 1,263,272 | 2.4% | 1,101 | 0.5% |
| 2004 | 97,423 | 1.9% | 1,294,192 | 2.4% | 1,107 | 0.5% |
| 2005 | 99,281 | 1.9% | 1,325,868 | 2.4% | 1,113 | 0.5% |
| 2006 | 101,175 | 1.9% | 1,358,323 | 2.4% | 1,119 | 0.5% |
| 2007 | 102,906 | 1.7% | 1,388,887 | 2.3% | 1,125 | 0.5% |
| 2008 | 104,666 | 1.7% | 1,420,157 | 2.3% | 1,131 | 0.5% |
| 2009 | 106,457 | 1.7% | 1,452,140 | 2.3% | 1,137 | 0.5% |
| 2010 | 108,279 | 1.7% | 1,484,849 | 2.3% | 1,143 | 0.5% |
| 2011 | 110,132 | 1.7% | 1,518,299 | 2.3% | 1,149 | 0.5% |
| 2012 | 111,898 | 1.6% | 1,550,592 | 2.1% | 1,155 | 0.5% |
| 2013 | 113,693 | 1.6% | 1,583,480 | 2.1% | 1,161 | 0.5% |
| 2014 | 115,516 | 1.6% | 1,617,040 | 2.1% | 1,167 | 0.5% |
| 2015 | 117,369 | 1.6% | 1,651,305 | 2.1% | 1,172 | 0.5% |
| 2016 | 119,252 | 1.6% | 1,686,299 | 2.1% | 1,178 | 0.5% |

Notes:
1. Years 1997-2016 based on the long-term forecast
2. 1972-1996 respresents actual values, 1997-2016 represents weather normalized values

## Big Rivers Electric Corporation

### 1997 Load Forecast - Low Scenario #2
### Expected Economic Outlook / Mild Weather
### C/I Small Classification

| Year | Consumers | Percent Change | Sales (MWh) | Percent Change | Average Use (kWh/Cust/Mo) | Percent Change |
|---|---|---|---|---|---|---|
| 1972 | 4,111 | | 188,145 | | 3,814 | |
| 1973 | 4,207 | 2.3% | 188,997 | 0.5% | 3,744 | -1.8% |
| 1974 | 4,402 | 4.6% | 190,553 | 0.8% | 3,607 | -3.6% |
| 1975 | 4,565 | 3.7% | 221,820 | 16.4% | 4,049 | 12.3% |
| 1976 | 4,762 | 4.3% | 235,573 | 6.2% | 4,122 | 1.8% |
| 1977 | 5,131 | 7.7% | 280,660 | 19.1% | 4,558 | 10.6% |
| 1978 | 5,352 | 4.3% | 309,797 | 10.4% | 4,824 | 5.8% |
| 1979 | 5,617 | 5.0% | 250,462 | -19.2% | 3,716 | -23.0% |
| 1980 | 5,801 | 3.3% | 266,633 | 6.5% | 3,830 | 3.1% |
| 1981 | 6,062 | 4.5% | 272,242 | 2.1% | 3,742 | -2.3% |
| 1982 | 6,277 | 3.5% | 283,508 | 4.1% | 3,764 | 0.6% |
| 1983 | 6,622 | 5.5% | 292,126 | 3.0% | 3,676 | -2.3% |
| 1984 | 6,918 | 4.5% | 313,999 | 7.5% | 3,782 | 2.9% |
| 1985 | 7,021 | 1.5% | 321,458 | 2.4% | 3,815 | 0.9% |
| 1986 | 7,151 | 1.9% | 325,914 | 1.4% | 3,798 | -0.5% |
| 1987 | 7,296 | 2.0% | 338,858 | 4.0% | 3,870 | 1.9% |
| 1988 | 7,424 | 1.8% | 351,822 | 3.8% | 3,949 | 2.0% |
| 1989 | 7,526 | 1.4% | 355,923 | 1.2% | 3,941 | -0.2% |
| 1990 | 7,730 | 2.7% | 371,964 | 4.5% | 4,010 | 1.7% |
| 1991 | 7,854 | 1.6% | 381,198 | 2.5% | 4,045 | 0.9% |
| 1992 | 7,898 | 0.6% | 388,913 | 2.0% | 4,103 | 1.5% |
| 1993 | 8,060 | 2.1% | 419,026 | 7.7% | 4,332 | 5.6% |
| 1994 | 8,198 | 1.7% | 429,433 | 2.5% | 4,365 | 0.8% |
| 1995 | 8,406 | 2.5% | 447,653 | 4.2% | 4,438 | 1.7% |
| 1996 | 8,689 | 3.4% | 463,285 | 3.5% | 4,443 | 0.1% |
| 1997 | 8,919 | 2.6% | 477,167 | 3.0% | 4,458 | 0.3% |
| 1998 | 9,152 | 2.6% | 483,284 | 1.3% | 4,401 | -1.3% |
| 1999 | 9,387 | 2.6% | 492,753 | 2.0% | 4,374 | -0.6% |
| 2000 | 9,626 | 2.5% | 504,342 | 2.4% | 4,366 | -0.2% |
| 2001 | 9,866 | 2.5% | 517,497 | 2.6% | 4,371 | 0.1% |
| 2002 | 10,072 | 2.1% | 531,492 | 2.7% | 4,397 | 0.6% |
| 2003 | 10,280 | 2.1% | 546,474 | 2.8% | 4,430 | 0.7% |
| 2004 | 10,491 | 2.1% | 562,464 | 2.9% | 4,468 | 0.9% |
| 2005 | 10,703 | 2.0% | 579,464 | 3.0% | 4,512 | 1.0% |
| 2006 | 10,918 | 2.0% | 597,477 | 3.1% | 4,560 | 1.1% |
| 2007 | 11,124 | 1.9% | 616,243 | 3.1% | 4,616 | 1.2% |
| 2008 | 11,331 | 1.9% | 635,855 | 3.2% | 4,676 | 1.3% |
| 2009 | 11,541 | 1.9% | 656,355 | 3.2% | 4,739 | 1.3% |
| 2010 | 11,752 | 1.8% | 677,775 | 3.3% | 4,806 | 1.4% |
| 2011 | 11,966 | 1.8% | 700,140 | 3.3% | 4,876 | 1.5% |
| 2012 | 12,175 | 1.7% | 723,167 | 3.3% | 4,950 | 1.5% |
| 2013 | 12,387 | 1.7% | 746,978 | 3.3% | 5,025 | 1.5% |
| 2014 | 12,600 | 1.7% | 771,636 | 3.3% | 5,103 | 1.6% |
| 2015 | 12,815 | 1.7% | 797,188 | 3.3% | 5,184 | 1.6% |
| 2016 | 13,032 | 1.7% | 823,675 | 3.3% | 5,267 | 1.6% |

Notes:
1. Years 1997-2016 based on the long-term forecast
2. 1972-1996 respresents actual values, 1997-2016 represents weather normalized values

## Big Rivers Electric Corporation

## 1997 Load Forecast - Low Scenario #2
## Expected Economic Outlook / Mild Weather
## C/I Large Classification

| Year | Consumers | Percent Change | Sales (MWh) | Percent Change |
|---|---|---|---|---|
| 1972 | 9 | | 3,177,303 | |
| 1973 | 10 | 11.1% | 4,368,418 | 37.5% |
| 1974 | 10 | 0.0% | 5,230,483 | 19.7% |
| 1975 | 11 | 10.0% | 5,073,573 | -3.0% |
| 1976 | 16 | 45.5% | 5,262,762 | 3.7% |
| 1977 | 17 | 6.3% | 5,443,274 | 3.4% |
| 1978 | 15 | -11.8% | 5,368,154 | -1.4% |
| 1979 | 17 | 13.3% | 5,940,734 | 10.7% |
| 1980 | 18 | 5.9% | 6,390,170 | 7.6% |
| 1981 | 19 | 5.6% | 6,380,899 | -0.1% |
| 1982 | 22 | 15.8% | 5,300,242 | -16.9% |
| 1983 | 23 | 4.5% | 5,528,519 | 4.3% |
| 1984 | 25 | 8.7% | 6,194,365 | 12.0% |
| 1985 | 27 | 8.0% | 5,653,054 | -8.7% |
| 1986 | 33 | 22.2% | 4,926,411 | -12.9% |
| 1987 | 34 | 3.0% | 4,929,857 | 0.1% |
| 1988 | 36 | 5.9% | 6,427,497 | 30.4% |
| 1989 | 40 | 11.1% | 6,667,299 | 3.7% |
| 1990 | 40 | 0.0% | 6,808,988 | 2.1% |
| 1991 | 41 | 2.5% | 6,833,471 | 0.4% |
| 1992 | 38 | -7.3% | 6,885,705 | 0.8% |
| 1993 | 37 | -2.6% | 6,863,080 | -0.3% |
| 1994 | 37 | 0.0% | 5,882,908 | -14.3% |
| 1995 | 35 | -5.4% | 6,297,252 | 7.0% |
| 1996 | 38 | 8.6% | 6,320,441 | 0.4% |
| 1997 | 36 | -5.3% | 6,790,687 | 7.4% |
| 1998 | 36 | 0.0% | 7,585,880 | 11.7% |
| 1999 | 36 | 0.0% | 7,727,230 | 1.9% |
| 2000 | 36 | 0.0% | 7,759,953 | 0.4% |
| 2001 | 36 | 0.0% | 7,764,607 | 0.1% |
| 2002 | 35 | -2.8% | 7,754,407 | -0.1% |
| 2003 | 35 | 0.0% | 7,754,407 | 0.0% |
| 2004 | 35 | 0.0% | 7,754,407 | 0.0% |
| 2005 | 35 | 0.0% | 7,754,407 | 0.0% |
| 2006 | 35 | 0.0% | 7,754,407 | 0.0% |
| 2007 | 35 | 0.0% | 7,754,407 | 0.0% |
| 2008 | 35 | 0.0% | 7,866,097 | 1.4% |
| 2009 | 35 | 0.0% | 7,866,097 | 0.0% |
| 2010 | 35 | 0.0% | 7,866,097 | 0.0% |
| 2011 | 35 | 0.0% | 7,866,097 | 0.0% |
| 2012 | 35 | 0.0% | 7,866,097 | 0.0% |
| 2013 | 35 | 0.0% | 7,948,003 | 1.0% |
| 2014 | 35 | 0.0% | 7,948,003 | 0.0% |
| 2015 | 35 | 0.0% | 7,948,003 | 0.0% |
| 2016 | 35 | 0.0% | 7,948,003 | 0.0% |

Notes:
1. Years 1997-2016 based on the long-term forecast
2. 1972-1996 respresents actual values, 1997-2016 represents weather normalized values

**Big Rivers Electric Corporation**

**1997 Load Forecast - Low Scenario #2**
**Expected Economic Outlook / Mild Weather**
**Public Street Lighting Classification**

| Year | Consumers | Percent Change | Sales (MWh) | Percent Change |
|---|---|---|---|---|
| 1972 | 65 | | 1,321 | |
| 1973 | 67 | 3.1% | 1,512 | 14.5% |
| 1974 | 69 | 3.0% | 1,839 | 21.6% |
| 1975 | 72 | 4.3% | 2,145 | 16.7% |
| 1976 | 69 | -4.2% | 2,252 | 5.0% |
| 1977 | 68 | -1.4% | 2,188 | -2.8% |
| 1978 | 71 | 4.4% | 2,204 | 0.7% |
| 1979 | 76 | 7.0% | 2,210 | 0.3% |
| 1980 | 74 | -2.6% | 2,032 | -8.0% |
| 1981 | 76 | 2.7% | 1,985 | -2.3% |
| 1982 | 84 | 10.5% | 1,999 | 0.7% |
| 1983 | 93 | 10.7% | 1,833 | -8.3% |
| 1984 | 98 | 5.4% | 1,887 | 2.9% |
| 1985 | 99 | 1.0% | 1,927 | 2.2% |
| 1986 | 96 | -3.0% | 1,981 | 2.8% |
| 1987 | 101 | 5.2% | 2,048 | 3.4% |
| 1988 | 104 | 3.0% | 2,110 | 3.0% |
| 1989 | 109 | 4.8% | 2,154 | 2.1% |
| 1990 | 116 | 6.4% | 2,177 | 1.1% |
| 1991 | 121 | 4.3% | 2,276 | 4.5% |
| 1992 | 124 | 2.5% | 2,275 | -0.1% |
| 1993 | 129 | 4.0% | 2,417 | 6.2% |
| 1994 | 134 | 3.9% | 2,509 | 3.8% |
| 1995 | 136 | 1.5% | 2,641 | 5.3% |
| 1996 | 152 | 11.8% | 2,661 | 0.8% |
| 1997 | 156 | 2.6% | 2,729 | 2.6% |
| 1998 | 160 | 2.6% | 2,797 | 2.5% |
| 1999 | 164 | 2.5% | 2,865 | 2.4% |
| 2000 | 168 | 2.4% | 2,933 | 2.4% |
| 2001 | 172 | 2.4% | 3,001 | 2.3% |
| 2002 | 176 | 2.3% | 3,069 | 2.3% |
| 2003 | 180 | 2.3% | 3,137 | 2.2% |
| 2004 | 184 | 2.2% | 3,205 | 2.2% |
| 2005 | 188 | 2.2% | 3,273 | 2.1% |
| 2006 | 192 | 2.1% | 3,341 | 2.1% |
| 2007 | 196 | 2.1% | 3,409 | 2.0% |
| 2008 | 200 | 2.0% | 3,477 | 2.0% |
| 2009 | 204 | 2.0% | 3,545 | 2.0% |
| 2010 | 208 | 2.0% | 3,612 | 1.9% |
| 2011 | 212 | 1.9% | 3,680 | 1.9% |
| 2012 | 216 | 1.9% | 3,748 | 1.8% |
| 2013 | 220 | 1.9% | 3,816 | 1.8% |
| 2014 | 224 | 1.8% | 3,884 | 1.8% |
| 2015 | 228 | 1.8% | 3,952 | 1.7% |
| 2016 | 232 | 1.8% | 4,020 | 1.7% |

Notes:
1. Years 1997-2016 based on the long-term forecast
2. 1972-1996 respresents actual values, 1997-2016 represents weather normalized values

**Big Rivers Electric Corporation**

**1997 Load Forecast - Low Scenario #2**
**Expected Economic Outlook / Mild Weather**
**Irrigation Classification**

| Year | Consumers | Percent Change | Sales (MWh) | Percent Change |
|---|---|---|---|---|
| 1972 | 0 | | 0 | |
| 1973 | 0 | 0.0% | 0 | 0.0% |
| 1974 | 0 | 0.0% | 0 | 0.0% |
| 1975 | 0 | 0.0% | 0 | 0.0% |
| 1976 | 0 | 0.0% | 0 | 0.0% |
| 1977 | 0 | 0.0% | 0 | 0.0% |
| 1978 | 6 | 0.0% | 33 | 0.0% |
| 1979 | 6 | 0.0% | 40 | 23.3% |
| 1980 | 7 | 16.7% | 42 | 5.1% |
| 1981 | 8 | 14.3% | 79 | 85.5% |
| 1982 | 9 | 12.5% | 63 | -20.0% |
| 1983 | 12 | 33.3% | 65 | 3.1% |
| 1984 | 12 | 0.0% | 74 | 13.4% |
| 1985 | 12 | 0.0% | 39 | -46.5% |
| 1986 | 9 | -25.0% | 50 | 26.3% |
| 1987 | 8 | -11.1% | 68 | 36.9% |
| 1988 | 7 | -12.5% | 85 | 24.6% |
| 1989 | 7 | 0.0% | 82 | -3.9% |
| 1990 | 8 | 14.3% | 48 | -41.3% |
| 1991 | 9 | 12.5% | 86 | 79.1% |
| 1992 | 9 | 0.0% | 114 | 32.5% |
| 1993 | 9 | 0.0% | 78 | -31.2% |
| 1994 | 9 | 0.0% | 93 | 19.3% |
| 1995 | 10 | 11.1% | 100 | 7.2% |
| 1996 | 10 | 0.0% | 110 | 10.0% |
| 1997 | 10 | 0.0% | 86 | -21.5% |
| 1998 | 10 | 0.0% | 86 | 0.0% |
| 1999 | 10 | 0.0% | 86 | 0.0% |
| 2000 | 10 | 0.0% | 86 | 0.0% |
| 2001 | 10 | 0.0% | 86 | 0.0% |
| 2002 | 10 | 0.0% | 86 | 0.0% |
| 2003 | 10 | 0.0% | 86 | 0.0% |
| 2004 | 10 | 0.0% | 86 | 0.0% |
| 2005 | 10 | 0.0% | 86 | 0.0% |
| 2006 | 10 | 0.0% | 86 | 0.0% |
| 2007 | 10 | 0.0% | 86 | 0.0% |
| 2008 | 10 | 0.0% | 86 | 0.0% |
| 2009 | 10 | 0.0% | 86 | 0.0% |
| 2010 | 10 | 0.0% | 86 | 0.0% |
| 2011 | 10 | 0.0% | 86 | 0.0% |
| 2012 | 10 | 0.0% | 86 | 0.0% |
| 2013 | 10 | 0.0% | 86 | 0.0% |
| 2014 | 10 | 0.0% | 86 | 0.0% |
| 2015 | 10 | 0.0% | 86 | 0.0% |
| 2016 | 10 | 0.0% | 86 | 0.0% |

Notes:
1. Years 1997-2016 based on the long-term forecast
2. 1972-1996 respresents actual values, 1997-2016 represents weather normalized values

7

CASE NO. 99-354

**Item 7)** Please provide the following information about Willamette's power consumption:

a. Please identify Willamette's monthly peak demands for the previous five years;

b. For each peak demand identified in response to question 7.a., please identify when the peak occurred.

**Response)** a. and b. The attached schedule provides: (a) Willamette's monthly peak demands for the previous five years; and (b) the date and time when the peak demands occurred. This information was taken from copies of Willamette's monthly power bills for the previous five years.

**Witness)** Mark A. Hite

| | Sep-94 | Oct-94 | Nov-94 | Dec-94 | Jan-95 | Feb-95 | Mar-95 | Apr-95 | May-95 | Jun-95 | Jul-95 | Aug-95 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak Demand | 44,755 | 45,403 | 46,008 | 45,857 | 46,526 | 46,526 | 46,159 | 45,533 | 45,187 | 45,252 | 45,295 | 45,900 |
| Date of Peak | 29-Sep | 13-Oct | 7-Nov | 10-Dec | 30-Jan | 22-Feb | 9-Mar | 23-Apr | 21-May | 2-Jun | 27-Jul | 30-Aug |
| Time of Peak | 1:00P | 11:00A | 1:00P | 2:00P | 10:00A | 8:00A | 3:00a | 8:30A | 12:00A | 2:00A | 4:00P | 9:30P |
| | | | | | | | | | | | | |
| | Sep-95 | Oct-95 | Nov-95 | Dec-95 | Jan-96 | Feb-96 | Mar-96 | Apr-96 | May-96 | Jun-96 | Jul-96 | Aug-96 |
| Peak Demand | 46,332 | 46,721 | 46,181 | 46,937 | 46,634 | 47,174 | 47,023 | 46,181 | 45,338 | 45,706 | 45,749 | 45,511 |
| Date of Peak | 14-Sep | 14-Oct | 12-Nov | 10-Dec | 19-Jan | 2-Feb | 3-Mar | 4-Apr | 3-May | 26-Jun | 10-Jul | 3-Aug |
| Time of Peak | 9:00A | 1:30P | 3:30A | 3:30P | 5:00P | 2:00P | 2:00A | 9:30P | 2:30P | 12:30A | 9:00A | 8:00P |
| | | | | | | | | | | | | |
| | Sep-96 | Oct-96 | Nov-96 | Dec-96 | Jan-97 | Feb-97 | Mar-97 | Apr-97 | May-97 | Jun-97 | Jul-97 | Aug-97 |
| Peak Demand | 47,045 | 46,915 | 47,088 | 48,600 | 49,291 | 49,226 | 50,954 | 51,732 | 51,127 | 51,084 | 50,911 | 51,559 |
| Date of Peak | 25-Sep | 2-Oct | 22-Nov | 18-Dec | 28-Jan | 12-Feb | 10-Mar | 10-Apr | 23-May | 27-Jun | 14-Jul | 11-Aug |
| Time of Peak | 7:00A | 5:00P | 5:30P | 11:00A | 10:00A | 1:00P | 6:30A | 10:00A | 12:30A | 2:00P | 4:00P | 10:30A |
| | | | | | | | | | | | | |
| | Sep-97 | Oct-97 | Nov-97 | Dec-97 | Jan-98 | Feb-98 | Mar-98 | Apr-98 | May-98 | Jun-98 | Jul-98 | Aug-98 |
| Peak Demand | 51,170 | 51,386 | 52,682 | 53,914 | 53,784 | 54,756 | 56,203 | 55,944 | 64,778 | 78,689 | 79,812 | 81,086 |
| Date of Peak | 22-Sep | 17-Oct | 5-Nov | 31-Dec | 9-Jan | 15-Feb | 13-Mar | 23-Apr | 31-May | 20-Jun | 25-Jul | 12-Aug |
| Time of Peak | 4:30A | 12:00P | 11:00A | 1:00P | 8:00A | 7:30A | 12:00A | 12:30A | 12:00P | 12:30A | 10:30A | 9:30P |
| | | | | | | | | | | | | |
| | Sep-98 | Oct-98 | Nov-98 | Dec-98 | Jan-99 | Feb-99 | Mar-99 | Apr-99 | May-99 | Jun-99 | Jul-99 | Aug-99 |
| Peak Demand | 82,318 | 81,670 | 82,210 | 82,944 | 83,095 | 83,246 | 83,160 | 82,339 | 83,333 | 83,030 | 83,268 | 83,722 |
| Date of Peak | 16-Sep | 14-Oct | 28-Nov | 29-Dec | 1-Jan | 22-Feb | 22-Mar | 8-Apr | 30-May | 28-Jun | 28-Jul | 20-Aug |
| Time of Peak | 4:30P | 5:00A | 7:00P | 3:00A | 12:00A | 10:30P | 6:30A | 9:30P | 3:00P | 4:30P | 12:30A | 12:00P |

8

CASE NO. 99-354

**Item 8)** Has BREC conducted any probability studies to quantify the risk that a cogenerator will need back-up service at the time of BREC's system peak? If so, please provide all documentation of such studies.

**Response)** No. Big Rivers has conducted no probability studies to quantify risk that a cogenerator will need back-up service at the time of Big Rivers' system peak. With respect to the proposed Willamette QF, Big Rivers has not been provided with specifications or operating characteristics with which to make such a study.

**Witness)** C. William Blackburn

9

BIG RIVERS ELECTRIC CORPORATION
RESPONSE TO WILLAMETTE INDUSTRIES, INC.'S
INITIAL REQUEST FOR INFORMATION OF OCTOBER 7, 1999

CASE NO. 99-354

**Item 9)** Please provide the following information about interruptibility of customer loads. For purposes of this Request for Information, the right to curtail deliveries of any portion of a customer's load should be considered interruptible service.

a. Does any customer of BREC or its Member Cooperatives receive interruptible service?

b. If so, please identify which customers receive interruptible service, and the size of the load that may be interrupted;

c. Please identify the terms and conditions governing the right to interrupt service to each interruptible customer;

d. Please identify when service to each interruptible customer has been interrupted in the previous five years.

**Response)** a.-d. Big Rivers currently has no contract with its member cooperatives that allows the customer to receive interruptible service, nor does Big Rivers have an approved tariff from the Commission which provides interruptible rates. Big Rivers has the right to curtail deliveries of any portion of a customer's load on either an emergency basis or on a voluntary basis. However, Big Rivers would not consider this to be interruptible service.

**Witness)** David Spainhoward

10

BIG RIVERS ELECTRIC CORPORATION
RESPONSE TO WILLAMETTE INDUSTRIES, INC.'S
INITIAL REQUEST FOR INFORMATION OF OCTOBER 7, 1999

CASE NO. 99-354

**Item 10)** Does BREC currently serve cogenerators or small power producers, either directly or through its Member Cooperatives? If so, please furnish the following information:

a. What cogenerators or small power producers does BREC or a Member Cooperative serve?

b. What entity (i.e., BREC or a specific Member Cooperative) serves each cogenerator or small power producer?

c. What is each cogenerator's or small power producer's generating capacity?

d. What type of fuel does each cogenerator or small power producer use?

e. For each cogenerator and small producer on BREC's system, please identify:

i. When (date and time) during the years 1997, 1998, and 1999 that cogenerator or small power producer experienced unscheduled outages requiring back-up service;

ii. The duration of such outages;

iii. The peak back-up demand taken during that outage;

iv. BREC's system demand at the time of the demand cited in part iii of this question;

v. The source of the back-up power provided by BREC.

**Response)** a.-c. Big Rivers does not currently serve cogenerators or small power producers either directly or through its member cooperatives.

**Witness)** C. William Blackburn

11

BIG RIVERS ELECTRIC CORPORATION
RESPONSE TO WILLAMETTE INDUSTRIES, INC.'S
INITIAL REQUEST FOR INFORMATION OF OCTOBER 7, 1999

CASE NO. 99-354

**Item 11)** Is BREC aware of any customer, other than Willamette, or potential customer of BREC or a Member Cooperative that is considering installing cogeneration? If so, please identify the customer or potential customer and, if known, the cogeneration capacity that the customer may install. Have any of these customers or potential customers inquired as to the availability or pricing of standby, maintenance, back-up or supplemental service?

**Response)** No as to all questions.

**Witness)** C. William Blackburn

12

**Item 12)** Please identify all of BREC's energy and/or capacity purchases for the previous two years other than purchases pursuant to the Power Purchase Agreement between Big Rivers Electric Corporation and LG&E Energy Marketing, Inc., dated July 15, 1998. Your answer should identify:

a. The seller;

b. The quantity of capacity and/or energy purchased; and

c. The price paid.

**Response)** a., b. and c. The attached schedules identify BREC's energy and/or capacity purchases for the years 1997, 1998, and the eight-month period from January through August 1999, including purchases pursuant to the Power Purchase Agreement between Big Rivers Electric Corporation and LG&E Energy Marketing, Inc. dated July 15, 1998. These schedules identify the seller, the quantity of power purchased and the price paid.

**Witness)** Mark A. Hite

**BIG RIVERS ELECTRIC CORPORATION**
**1997 PURCHASED POWER:**

| SELLER | QUANTIY MW | QUANTIY MWH | COST $ | PRICE $/MWH |
|---|---|---|---|---|
| Southeastern Power Administration | 178 | 272,234 | 5,848,368 | 21.48 |
| Southern Illinois Power Cooperative | | 835 | 16,775 | 20.09 |
| Coral Power | | 9,291 | 101,367 | 10.91 |
| Midcon Power Services | | 2,400 | 39,200 | 16.33 |
| Acquilla Power | | 700 | 12,705 | 18.15 |
| Hoosier Energy Rural Electric Coop | | 2,393 | 34,261 | 14.32 |
| East Kentucky Power | | 18,081 | 319,335 | 17.66 |
| Henderson Municipal Power & Light -- Stat. Two | | 1,468,787 | 34,379,417 | 23.41 |
| Louis Dreyfus | | 3,400 | 55,950 | 16.46 |
| Kentucky Utilities | | 4,970 | 131,790 | 26.52 |
| Southern Indiana Gas & Electric Co. | | 5,644 | 108,136 | 19.16 |
| Pacificorp Power Marketing | | 40,282 | 724,425 | 17.98 |
| Sonat Power | | 7,605 | 117,625 | 15.47 |
| Louisville Gas & Electric Co. | | 9,606 | 267,954 | 27.89 |
| Noram Energy Services Inc. | | 87 | 2,610 | 30.00 |
| Electric Clearing | | 2,400 | 42,400 | 17.67 |
| LG&E Energy Marketing | | 12,805 | 175,579 | 13.71 |
| Enron Power | | 8,035 | 139,410 | 17.35 |
| Rainbow Energy | | 2,320 | 32,034 | 13.81 |
| Koch Power | | 1,516 | 16,675 | 11.00 |
| Federal Energy Sales Inc. | | 558 | 7,750 | 13.89 |
| The Power Company of America | | 2,040 | 14,350 | 7.03 |
| | 178 | 1,875,989 | 42,588,116 | 22.70 |

**BIG RIVERS ELECTRIC CORPORATION**
**1998 PURCHASED POWER:**

| SELLER | TOTAL QUANTIY MW | TOTAL QUANTIY MWH | TOTAL COST $ | TOTAL PRICE $/MWH | PRE-CLOSE QUANTIY MW | PRE-CLOSE QUANTIY MWH | PRE-CLOSE COST $ | PRE-CLOSE PRICE $/MWH | POST-CLOSE QUANTIY MW | POST-CLOSE QUANTIY MWH | POST-CLOSE COST $ | POST-CLOSE PRICE $/MWH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Southeastern Power Administration | 178 | 292,746 | 5,997,534 | 20.49 | 178 | 170,862 | 3,160,005 | 18.49 | 178 | 121,884 | 2,837,529 | 23.28 |
| NP Energy Inc. | | 114,589 | 1,999,453 | 17.45 | | | | | | 114,589 | 1,999,453 | 17.45 |
| Southern Illinois Power Cooperative | | 55 | 990 | 18.00 | | 55 | 990 | 18.00 | | | | |
| Hoosier Energy Rural Electric Coop | | 364 | 15,452 | 42.45 | | 364 | 15,452 | 42.45 | | | | |
| Henderson Municipal Power & Light -- Stat. Two | | 887,004 | 18,125,143 | 20.43 | | 887,004 | 18,125,143 | 20.43 | | | | |
| Kentucky Utilities | | 362 | 13,500 | 37.29 | | 362 | 13,500 | 37.29 | | | | |
| Southern Indiana Gas & Electric Co. | | 251 | 22,609 | 90.08 | | 251 | 22,609 | 90.08 | | | | |
| Louisville Gas & Electric Co. | | 6,768 | 255,306 | 37.72 | | 6,768 | 255,306 | 37.72 | | | | |
| Noram Energy Services Inc. | | 33,877 | 537,435 | 15.86 | | | | | | 33,877 | 537,435 | 15.86 |
| LG&E Energy Marketing | | 1,596,781 | 30,094,535 | 18.85 | | 46,489 | 906,900 | 19.51 | | 1,550,292 | 29,187,635 | 18.83 |
| | 178 | 2,932,797 | 57,061,957 | 19.46 | 178 | 1,112,155 | 22,499,905 | 20.23 | 178 | 1,820,642 | 34,562,052 | 18.98 |

BIG RIVERS ELECTRIC CORPORATION
JANUARY -- AUGUST 1999 PURCHASED POWER:

| SELLER | QUANTIY MW | QUANTIY MWH | COST $ | PRICE $/MWH |
|---|---|---|---|---|
| Southeastern Power Administration | 178 | 205,010 | 4,592,042 | 22.40 |
| Duke Energy | | 116,800 | 2,505,360 | 21.45 |
| Reliant Energy | | 374,886 | 8,408,752 | 22.43 |
| LG&E Energy Marketing | | 2,261,025 | 42,894,979 | 18.97 |
| | 178 | 2,957,721 | 58,401,133 | 19.75 |

13

BIG RIVERS ELECTRIC CORPORATION
RESPONSE TO WILLAMETTE INDUSTRIES, INC.'S
INITIAL REQUEST FOR INFORMATION OF OCTOBER 7, 1999

CASE NO. 99-354

**Item 13)** Please identify all of BREC's off-system energy and/or capacity sales for the previous two years. Your answer should identify:

a. The buyer;

b. The quantity of capacity and/or energy sold; and

c. The price received.

**Response)** a.-c. The attached schedules identify BREC's off-system energy and/or capacity sales for the years 1997, 1998, and the eight-month period from January through August 1999. These schedules identify the buyer, the quantity of power sold and the price received.

**Witness)** Mark A. Hite

**BIG RIVERS ELECTRIC CORPORATION**
**1997 OFF-SYSTEM SALES:**

| BUYER | QUANTIY MW | QUANTIY MWH | REVENUE $ | PRICE $/MWH |
|---|---|---|---|---|
| Hoosier Energy Rural Electric | 198 | 105,661 | 6,417,218 | 60.73 |
| Southern Illinois Power Cooperative | | 55,450 | 814,403 | 14.69 |
| Alabama Electric Cooperative | | 250 | 4,785 | 19.14 |
| Oglethorpe Power | 103 | 617,704 | 23,786,594 | 38.51 |
| Midcon Power | 50 | 35,200 | 723,433 | 20.55 |
| Cinergy | | 57,200 | 772,461 | 13.50 |
| Pacificorp | 150 | 482,442 | 8,830,994 | 18.30 |
| Koch Power | | 8,370 | 132,369 | 15.81 |
| Noram Energy | | 3,914 | 57,913 | 14.80 |
| Tennessee Valley Authority | | 24,895 | 383,826 | 15.42 |
| Continental Power Exchange | | 2,830 | 42,697 | 15.09 |
| Sonat Power | | 12,257 | 189,753 | 15.48 |
| Henderson Municipal Power & Light | 8 | 40,860 | 1,607,681 | 39.35 |
| Vitol Gas & Electric LLC | | 103 | 1,339 | 13.00 |
| Southern Indiana Gas & Electric Company | | 3,378 | 62,233 | 18.42 |
| Enron Power | 50 | 83,322 | 1,408,220 | 16.90 |
| Electric Clearing | | 3,507 | 51,204 | 14.60 |
| Rainbow Energy | | 6,232 | 98,642 | 15.83 |
| Louisville Gas & Electric Company | | 47,910 | 931,861 | 19.45 |
| Louis Dreyfus Power Inc | | 5,474 | 87,424 | 15.97 |
| Western Power | | 291 | 4,883 | 16.78 |
| LG&E Energy Marketing | 30 | 848,192 | 15,829,327 | 18.66 |
| Heartland Energy | | 860 | 12,400 | 14.42 |
| Coral Power | 50 | 23,400 | 374,283 | 16.00 |
| Panenergy | | 7,338 | 89,874 | 12.25 |
| Acquila Power | | 7,752 | 117,758 | 15.19 |
| Delhi Energy | | 331 | 5,784 | 17.47 |
| The Power Company of America | | 502 | 19,714 | 39.27 |
| Federal Energy Sales Inc. | | 558 | 9,284 | 16.64 |
| | 639 | 2,486,183 | 62,868,357 | 25.29 |

**BIG RIVERS ELECTRIC CORPORATION**
**1998 OFF-SYSTEM SALES:**

| BUYER | TOTAL QUANTIY MW | TOTAL QUANTIY MWH | TOTAL REVENUE $ | TOTAL PRICE $/MWH | PRE-CLOSE QUANTIY MW | PRE-CLOSE QUANTIY MWH | PRE-CLOSE REVENUE $ | PRE-CLOSE PRICE $/MWH | POST-CLOSE QUANTIY MW | POST-CLOSE QUANTIY MWH | POST-CLOSE REVENUE $ | POST-CLOSE PRICE $/MWH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hoosier Energy Rural Electric | 207 | 38,381 | 2,955,597 | 77.01 | 207 | 38,381 | 2,955,597 | 77.01 | | | | |
| Oglethorpe Power | 103 | 227,193 | 10,402,326 | 45.79 | 103 | 227,193 | 10,402,326 | 45.79 | | | | |
| NP Energy Inc | 68 | 176,260 | 7,019,124 | 39.82 | | | | | 68 | 176,260 | 7,019,124 | 39.82 |
| Noram Energy | | 3,349 | 75,685 | 22.60 | | | | | | 3,349 | 75,685 | 22.60 |
| Henderson Municipal Power & Light | 10 | 17,766 | 760,154 | 42.79 | 10 | 17,766 | 760,154 | 42.79 | | | | |
| Southern Indiana Gas & Electric Company | | 362 | 32,588 | 90.02 | | 362 | 32,588 | 90.02 | | | | |
| Louisville Gas & Electric Company | | 47,224 | 803,188 | 17.01 | | 47,224 | 803,188 | 17.01 | | | | |
| LG&E Energy Marketing | 150 | 1,123,102 | 23,479,648 | 20.91 | 150 | 1,123,102 | 23,479,648 | 20.91 | | | | |
| | 538 | 1,633,637 | 45,528,310 | 27.87 | 470 | 1,454,028 | 38,433,501 | 26.43 | 68 | 179,609 | 7,094,809 | 39.50 |

BIG RIVERS ELECTRIC CORPORATION
JANUARY -- AUGUST 1999 OFF-SYSTEM SALES:

| | QUANTIY | | REVENUE | PRICE |
|---|---|---|---|---|
| BUYER | MW | MWH | $ | $/MWH |
| Hoosier Energy Rural Electric | 45 | 42,960 | 2,158,408 | 50.24 |
| Cinergy | | 116,800 | 2,511,000 | 21.50 |
| Reliant Energy | | 351,238 | 12,421,728 | 35.37 |
| Duke Energy | | 34,400 | 3,012,244 | 87.57 |
| | 45 | 545,398 | 20,103,380 | 36.86 |

14

**Item 14)** Please provide all manuals, treaties, and/or regulatory decisions relied upon by BREC in the preparation of proposed Rate Schedule 9.

**Response)** Big Rivers objects to this question on the grounds that it requests information that is protected from disclosure by the attorney-client privilege and the attorney work product rule, and that it would require disclosure of the mental impressions, conclusions, opinions, or legal theories of Big Rivers' counsel or other representatives.

**Witness)** Counsel

15

**Item 15)** Please identify any outside consultants BREC retained or consulted with in connection with the preparation of proposed Rate Schedule 9.

**Response)** Big Rivers has retained Jack Gaines to assist in the preparation of proposed Rate Schedule 9. Mr. Gaines is employed by Southern Engineering Company. Additionally, Big Rivers has relied on legal counsel from Long, Aldridge & Norman and from Sullivan, Mountjoy, Stainback & Miller for regulatory advice.

**Witness)** David A. Spainhoward

16

**Item 16)** Please provide all invoices from LG&E (or any affiliate) to BREC and from BREC to LG&E (or any affiliate) during the twelve months ended July 31, 1999.

**Response)** Based upon an agreement with counsel for Willamette, Willamette has agreed to narrow its request. Big Rivers is providing one month's invoices to and from LG&E (or any affiliate). Big Rivers has redacted a portion of the invoice page 2 of 12. The redacted information flows directly from the penalty provision (Section 6.4[b]) in the Power Purchase Agreement and could be used to easily calculate the penalty contained in the Power Purchase Agreement which the Commission has found to be confidential. Big Rivers received confidential protection in regard to this penalty by letter from the Commission dated August 16, 1999, Case 99-00326, Petition for Confidential Treatment.

**Witness)** Mark A. Hite

INVOICE # BREC9905

July 15, 1999

To: Big Rivers Electric Corp
PO Box 24
Henderson KY 42420

ATTN.: Bill Blackburn

Via Facsimile: 502-827-2101

RECEIVED
JUL 19 1999

**LG&E ENERGY MARKETING.**

*LG&E Energy Marketing Inc.*
*220 West Main Street*
*Louisville, Kentucky 40202*
*502-627-4200*

**For firm energy sold from 6/1/99 through 6/30/99:**

| | | | | | |
|---|---|---|---|---|---|
| *Energy* | 279,888 | *MWH* | *Amt Due* | $ | 5,294,641.30 |
| *Penalty* | REDACTED | | *Amt Due* | $ | REDACTED |
| | | | *Total LEM* | $ | REDACTED |
| *Prior Month Adjustment* | | | | $ | (444.34) |
| **For Big River's Oglethorpe Power Corporation Obligation** | | | | | |
| *Capacity* | 103,000 | *KWH* | *Amt Due* | $ | 759,110.00 |
| *Energy* | 36,083 | *MWH* | *Amt Due* | $ | 736,093.20 |
| | | | *Total Oglethorpe* | $ | 1,495,203.20 |
| **For Big River's Hoosier Energy Rural Electric Cooperative Obligation** | | | | | |
| *Combustion Turbine* | | | | | |
| *Capacity* | 0 | *KWH* | *Amt Due* | $ | - |
| *Energy* | 0 | *MWH* | *Amt Due* | $ | - |
| *Peaking* | | | | | |
| *Capacity* | 170,000 | *KWH* | *Amt Due* | $ | 1,275,000.00 |
| *Energy* | 26,239 | *MWH* | *Amt Due* | $ | 813,409.00 |
| | | | *Total Hoosier* | $ | 2,088,409.00 |
| **For HMP&L Obligation** | | | | | |
| *Unit Power* | | | | | |
| *Capacity* | 5,000 | *KWH* | *Amt Due* | $ | 28,500.00 |
| *Energy* | 728 | *MWH* | *Amt Due* | $ | 8,095.36 |
| *Non-Displacement Power* | | | | | |
| *Energy* | 1 | *MWH* | *Amt Due* | $ | 29.00 |
| *Emergency Power* | | | | | |
| *Energy* | 0 | *MWH* | *Amt Due* | $ | - |
| *System Reserve Power* | | | | | |
| *Energy* | 0 | *MWH* | *Amt Due* | $ | - |
| *Supplemental Power* | | | | | |
| *Energy* | 0 | *MWH* | *Amt Due* | $ | - |
| | | | *Total HMP&L* | $ | 36,624.36 |
| **Credit - Section 6.6(e)** | | | | $ | (89,000.00) |
| | | | *Total Amount Due* | | REDACTED |

Please remit funds by wire transfer to:

| | |
|---|---|
| PNC Bank, KY | |
| Account Title: | Western Kentucky Energy Corp. |
| Account Number: | 1008271299 |
| ABA Number: | 043000096 |
| Reference: | For the benefit of LEM |

*TERMS: LATER OF 15 DAYS AFTER FACSIMILE RECEIPT OR LAST BUSINESS DAY OF THE MONTH FOLLOWING THE MONTH OF SERVICE.*

Please direct questions regarding this invoice to Michael E. Hornung 502-627-4671



*A SUBSIDIARY OF* **LG&E ENERGY.**

493706

V#1524

**INVOICE**
LOUISVILLE GAS AND ELECTRIC COMPANY / KENTUCKY UTILITIES
PO Box 32000
Louisville KY 40232
(502) 627-4277

P.O.D. 7/23/99

Date: JULY 9, 1999

Amount: $ 34,867.60

Billing To: BIG RIVER ELECTRIC CORP
201 THIRD ST
PO BOX 24
HENDERSON KY 42420

Fax #: (502) 827-2558

BILLING SUMMARY - JUNE 1999

**BILLING TO BIG RIVER ELECTRIC CORP**

| | | |
|---|---|---|
| ENERGY SALES | 335 MWH | $ 34,867.60 |
| TOTAL BILLING TO BIG RIVER ELECTRIC CORP | | $ 34,867.60 |

**Payment Terms: Due 10 Days Upon Receipt of Invoice**

**PLEASE NOTE WIRE INSTRUCTIONS:**

*PNC BANK, LOUISVILLE, KY*
ABA #043000096
BENEFIT LOUISVILLE GAS AND ELECTRIC COMPANY
ACCT# 1009561271
ATTN DIANE LASLEY

OK
DGCrochett
7/16/99
RA ~~404~~ 999
EAC ~~889~~ 255
emergency power 232.=

PLEASE MAIL YOUR PAYMENT TO:
LOUISVILLE GAS AND ELECTRIC CO
PO BOX 32000
LOUISVILLE KY 40232

LG&E 493600

INVOICE
LOUISVILLE GAS AND ELECTRIC COMPANY
Incorporated In Kentucky
P.O. BOX 32000
LOUISVILLE, KENTUCKY 40232
PHONE (502) 627-2270

V=1524

A SUBSIDIARY OF LG&E ENERGY

P.O.D. 7/16/99

7335
EWIN
G28103C, Jun

DATE: JULY 2, 1999

NO: 1143002/
1023732

BIG RIVERS ELECTRIC CORPORATION
201 THIRD STREET
HENDERSON, KY 40420

AMOUNT: $ 1,759.26

PLEASE RETURN THIS PORTION WITH YOUR PAYMENT

BIG RIVERS ELECTRIC CORPORATION

RENTAL OF FACILITIES AT OUR CLOVERPORT SUBSTATION
FOR THE PERIOD: JUNE 1, 1999 TO JULY 1, 1999.

$ 162,392.94 * 13% / 12 = $ 1,759.26

13% BASED ON EFFECTIVE FEDERAL AND STATE TAX RATES

OK
DJCrockett
7/9/99
RA ~~405~~ 999
EAC 262
232.301



LOUISVILLE GAS AND ELECTRIC COMPANY

# BIG RIVERS

ELECTRIC CORPORATION

P.O. BOX 24, HENDERSON, KENTUCKY 42420

(502) 827-2561


## INVOICE

LG&E Energy Marketing, Inc.
P.O. Box 32380
Seventh Floor
Louisville, KY 40232

Invoice Number: 278

Attention: Mike Hornung

Date..........: JULY ~~May~~ 7, 1999

| Description | | Amount |
|---|---|---|
| Transmission Delivery for the Month of June 1999 | | |
| Hourly Non-Firm Transactions: | Rate | |
| 4,888 MW | $ 2.836 | $ 13,862.37 |
| Weekly Firm Transactions: | Rate | |
| 4,888 MW | $ 227.000 | $ 11,577.37 |
| Monthly Firm Transactions: | Rate | |
| 239 MW | $ 980.000/490.00 | $201,880.00 |
| Yearly Firm Transactions: | Rate | |
| 309 MW | $11,800.00/12 | $303,850.00 |

Terms: Due fifteen days from date of facsimile invoice or by the last business day of the Month whichever is the later, and payment shall be made by wire transfer.

Past Due Penalty: Interest on past due account shall accrue at the rate of six percent (6%) per annum.

Item 16

Total Amount Due: $555,289.99

BIG RIVERS
ELECTRIC CORPORATION
P.O. BOX 24, HENDERSON, KENTUCKY 42420
(502) 827-2561

# INVOICE

LG&E Energy Marketing
P. O. Box 32380
Seventh Floor
Louisville, KY 40432

Attention: Mike Hornung



**Network Transmission Service for NSA/Green River:**

Tier 1 and Tier 2*

| Demand | Demand Charge | |
|---|---|---|
| 345,918 kW | $294,017.50 | $23,836.: |

Tier 3

Demand
28,044 kW

*Tier 1 and 2 transmission charges are bundled in the energy charges as billed by Green River Electric Corporation are shown for informational purposes only and are not included in the "Total Amount Due."

**Network Transmission Service for Alcan/Henderson Union:**

Tier 1 and Tier 2*

| Demand | Demand Charge |
|---|---|
| 237,755 kW | $202,082.95 |

Tier 3

| Demand | |
|---|---|
| 334 kW | $283.89 |



*Tier 1 and 2 transmission charges are bundled in the energy charges as billed by Henderson Union Electric Cooperative are shown for informational purposes only and are not included In the "Total Amount Due."

# BIG RIVERS

ELECTRIC CORPORATION
P.O. BOX 24, HENDERSON, KENTUCKY 42420
(502) 827-2561

## INVOICE

LG&E Energy Marketing, Inc.
P.O. Box 32380
Seventh Floor
Louisville, KY 40232

Invoice Number: 279

Attention: Mike Hornung

Date..........: ~~June~~ July 8, 1999

| Description | | Amount |
|---|---|---|
| Power Delivery and/or Wheeling for Month of June 1999 | | |
| Emergency Power for June 1999 | | |
| 12 MWh | $ 66.8498/MWh from HEREC | $ 802.1 |
| 13 MWh | $100.00/MWh from HEREC | $ 1,300.0 |
| 21 MWh | $102.00/MWh from HEREC | $ 2,142.0 |
| 264 MWh | $101.70/MWh from LG&E | $26,848.8 |
| 22 MWh | $101.00/MWh from LG&E | $ 2,222.0 |
| 45 MWh | $102.00/MWh from LG&E | $ 4,590.0 |
| 103 MWh | $100.00/MWh from SIGECO | $10,300.0 |

Terms: Due fifteen days from date of invoice, but no later than the 20th of the month.

PAST DUE PENALTY: Interest on past due amount shall accrue at the rate of six percent (6%) per annum.



Total Amount Due: $48,204.9

Big Rivers
Electric Corporation

201 Third Street
P.O. Box 24
Henderson, KY 42419-0024
502-827-2561
www.bigrivers.com

# INVOICE

Ms. Debbie Dewey
Western Kentucky Energy
P. O. Box 1518
Henderson, KY 42419

Invoice No 314

Date: July 20, 1999

| *DESCRIPTION* | *AMOUNT* |
|---|---|
| Telecommunications - Quarterly<br>PBX Telephone Lease - Quarterly Cost (Schedule 1 Attached)<br>Third Quarter - April 17, 1999 through July 17, 1999<br>$\$16,319.22 \times \frac{58}{(102+58)} =$<br>**TERMS: DUE 30 DAYS**<br>Penalty: 1% of overdue fee compounded each month fee if overdue. | $ 5,915.72 |
| **TOTAL AMOUNT DUE** | **$ 5,915.72** |



A Touchstone Energy Partner

# Big Rivers Electric Corporation

201 Third Street
P.O. Box 24
Henderson, KY 42419-00?
502-827-2561
www.bigrivers.com

## INVOICE

Ms. Debbie Dewey
Western Kentucky Energy
P. O. Box 1518
Henderson, KY 42419

Invoice No 313

Date: July 20, 1999

| DESCRIPTION | | | | AMOUNT |
|---|---|---|---|---|
| Telecommunications - Quarterly | | | | |
| 39 Microwave Channels for Power Plants (Schedule Attached) | | | | |
| April-99 | 39 channels | x | $100 | $ 3,900.00 |
| May-99 | 39 channels | x | $100 | 3,900.00 |
| June-99 | 39 channels | x | $100 | 3,900.00 |
| TERMS: DUE 30 DAYS | | | | |
| Penalty: 1% of overdue fee compounded each month fee if overdue. | | | | |
| TOTAL AMOUNT DUE | | | | $ 11,700.00 |

# BIG RIVERS
ELECTRIC CORPORATION
P.O. BOX 24, HENDERSON, KENTUCKY 42420
(502) 827-2561

## INVOICE

Louisville Gas & Electric Company
P.O. Box 32010
Louisville, KY 40232

Invoice Number: 274

Attention: Glenn Flood--7th Floor

Date..........: July 8, 1999

| Description | Amount |
|---|---|
| Power Delivery and/or Wheeling for Month of June 1999 | |
| Emergency Power: | |
| Energy: | |
| 14,000 kWh @ 102.75 mills per kWh | $1,438.50 |

Terms: Due ten (10) days following receipt of invoice.

Past Due Penalty: Interest on past due amount shall accrue at the rate of six percent (6%) per annum.

| | |
|---|---|
| Total Amount Due: | $1,438.50 |

# BIG RIVERS ELECTRIC CORPORATION

201 Third Street
Henderson KY 42420
(502) 827-2561

## INVOICE

INVOICE # 282
ACCOUNT # 143720

TO: Western Kentucky Energy Corp.
Accounts Payable
P.O. Box 1518
Henderson, KY 42419

DATE: July 7, 1999

$150 Retiree Medical Subsidy Payment for June 1999

| | JUNE 1999 | TOTAL DUE |
|---|---|---|
| SEE ATTACHED SCHEDULE | 2,400.00 | 2,400.00 |

TOTAL DUE BIG RIVERS ELECTRIC CORP. $2,400.00

**Due thirty days from receipt of invoice**

Past Due Penalty:

Simple interest shall accrue on any past due amounts at an annual rate equal to 125% of the Prime Rate as of the date payment was due.

# BIG RIVERS ELECTRIC CORPORATION

201 Third Street
Henderson KY 42420
(502) 827-2561

## INVOICE

INVOICE # 283
ACCOUNT # 143710

TO: Western Kentucky Energy Corp.
Accounts Payable
P.O. Box 1518
Henderson, KY 42419

DATE: July 4, 1999

95% OF MEDICAL AND DENTAL COBRA BENEFITS
June 1999

| JUNE MEDICAL | JUNE DENTAL | JUNE TOTAL |
|---|---|---|
| 9,537.37 | 340.22 | 9,877.59 |

TOTAL DUE BIG RIVERS ELECTRIC CORP. $9,877.59

**Due thirty days from receipt of invoice**

PAST DUE PENALTY:

Simple interest shall accrue on any past due amounts at an annual rate equal to 125% of the Prime Rate as of the date payment was due.

17

**Item 17)** Please provide the most recent copy of BREC's generation and/or transmission expansion plan.

**Response)** Big Rivers is in the process of updating its Integrated Resource Plan (IRP) which will be filed with the Commission on or before October 21, 1999, Case 97-296. This plan will contain Big Rivers' generation expansion plans, if any. The most recent IRP was filed with the Commission prior to the Big Rivers/LG&E Parties transaction and is no longer applicable. Big Rivers will be happy to furnish a copy of the 1999 IRP to Willamette once it is complete.

A copy of Big Rivers' current transmission expansion plan is attached. The plan is a three-year construction work plan which identifies transmission system improvements that Big Rivers expects to be completed.

**Witness)** C. William Blackburn and David Crockett

# Big Rivers Electric Corporation
## Transmission System Construction Work Plan

Prepared by:
Big Rivers Electric Corporation Engineering Department

For the period:
2000-2002

Kentucky 62 Big Rivers
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## TABLE OF CONTENTS

## I. INTRODUCTION

Big Rivers Electric Corporation is a generation and transmission cooperative headquartered in Henderson, Kentucky. Big Rivers provides all the electrical needs of three member cooperatives, which in turn sell electricity to more than 90,000 consumers in twenty-two western Kentucky counties. These distribution cooperatives are:

Kenergy Corporation (formerly Green River E.C. and Henderson Union E.C.)
Jackson Purchase Energy Corporation
Meade County Rural Electric Cooperative Corporation

This construction work plan identifies transmission system improvements required to continue satisfactory and reliable service to Big Rivers' member systems. Four separate areas of study or analysis are included: (1) transmission system, (2) reliability analysis, (3) distribution cooperative additions, and (4) short circuit analysis. This plan covers the three-year period from 2000 to 2002.

For study and reporting purposes, Big Rivers' system is broken down into four geographical study areas. These areas, in general, correspond to the service territories of the three member cooperatives with Kenergy broken down into a Kenergy East and Kenergy West area. These East and West areas correspond to the former Green River Electric Corporation and Henderson Union Electric Cooperative service areas. The other areas are referred to as the Jackson Purchase Area and the Meade County Area.

## II. EXECUTIVE SUMMARY

The following table lists the improvements that resulted from the studies and economic analyses. This table includes a description of the improvements, the approximate year the improvements are expected to be required, and the estimated cost of the improvements in 2000 dollars. More detailed discussions of these improvements can be found in sections IV, V, VI, and VII of this report.

| IMPROVEMENTS | YEAR | COST ($2000) |
|---|---|---|
| **Kenergy East Area:** | | |
| REPLACE BOTH DAVIESS CO. TRANSFORMERS WITH TWO 100 MVA TRANSFORMERS. | 2000 | $2,200,000 |
| CENTERTOWN/BEDA 69 KV TIE TO LGEE (KU). | 2000 | $250,000 |
| NATIONAL ALUMINUM 161 KV PCB REPLACEMENTS | 2000 | $400,000 |
| HANCOCK COUNTY 161 KV PCB REPLACEMENTS | 2001 | $600,000 |
| HORSE FORK TAP RADIO CONTROLLED SWITCHING. | 2001 | $50,000 |
| 5 MILE 69 KV DAVIESS CO. TO HORSE FORK AREA LINE. | 2001 | $750,000 |
| DAVIESS COUNTY SUBSTATION 69 KV LINE TERMINAL. | 2001 | $400,000 |
| **Kenergy West Area:** | | |
| 69 KV TIE TO HMP&L SUBSTATION NUMBER 4. | 2000 | $330,000 |
| HENDERSON COUNTY 161 KV LINE TRAP UPGRADE | 2001 | $10,000 |
| 10 MVAR CAPACITOR FOR SULLIVAN AREA | 2002 | $300,000 |
| 13 MILE 161 KV LINE FROM HENDERSON CO. TO NEWMAN | 2002 | $2,275,000 |
| HENDERSON COUNTY 161 KV LINE TERMINAL | 2002 | $500,000 |
| NEWMAN 161 KV LINE TERMINAL | 2002 | $800,000 |

**Jackson Purchase Area:**

| | | |
|---|---|---|
| 5.0 MILE 69 KV LOOP LINE TO SERVE STRAWBERRY HILL SUB. | 2000 | $1,000,000 |

**Meade County Area:**

| | | |
|---|---|---|
| 12.5 MILE 69 KV LINE TO SERVE THE FALLS OF ROUGH SUB. | 2000 | $1,350,000 |
| 8.5 MILE 69 KV MEADE CO. TO DOE VALLEY TAP AREA LINE. | 2000 | $1,000,000 |
| MEADE CO. 69 KV LINE TERMINAL. | 2000 | $360,000 |
| HARDINSBURG #1 RADIO CONTROLLED SWITCHING. | 2000 | $50,000 |
| MEADE COUNTY - LGEE 138 KV TIE. | 2001 | $5,300,000 |
| 7.5 MILE 69 KV NEW HARD. TO MCDANIELS/CUSTER LINE | 2001 | $875,000 |
| 161/69 KV MEADE COUNTY TRANSFORMER #2 (50 MVA) | 2002 | $850,000 |
| NEW HARDINSBURG 161 KV BREAKER AND SWITCHES. | 2002 | $500,000 |

## III. STUDY PROCEDURE

### A. Power Flow Model Development

The model for the power flow studies was created from an ECAR power flow base case. This ECAR case was modified in order to develop a base case that represents a 2002 summer peak scenario. The modifications included merging a detailed Big Rivers system representation into the case and changing the load at each member substation. The power interchange for the case reflects Big Rivers' firm off-system sales from contracts in place as of the current date (Oglethorpe Power contract).

### B. Load Allocation

The total load for the 2002 summer peak was taken from the 1997 Power Requirements Study (1997 PRS) for Big Rivers and its three member cooperatives. The load allocation for each substation was found by a regression analysis using historical substation load data. Actual load data for each substation from 1984 to 1998 was regressed on time. From the regression results, a forecasted load for each substation was determined. This regression and forecasting was done using summer peak data. These forecasted loads were then ratioed to values that sum to the proper total system load given in the 1997 PRS. Monthly average power factors from July 1998 were used to develop the power factors for these studies.

## C. Study Approach

The study approach was a comprehensive analysis of the entire transmission system. To begin this study, a 2002 summer peak base case was run followed by a contingency study. In the contingency study, each transmission line, generator, and specific generation/transmission line combinations were individually outaged. The voltages, line loadings, and transformer loadings found in these studies were evaluated on a case by case basis for compliance with Big Rivers' transmission planning criteria.

Big Rivers' voltage criteria establishes low and high voltage limits within which all system bus voltages must be maintained during normal and single-contingency conditions. These voltage limits are summarized in Appendix 1. The planning criteria further defines that all transmission lines and transformers are to be operated within their ratings under normal and single-contingency conditions. Big Rivers' transmission lines are rated according to limits determined by the lesser of either the conductor thermal rating, NESC minimum conductor ground clearance, or terminal equipment rating. Transformer ratings are based on the maximum 65 degrees Celsius nameplate rating.

Further evaluations were necessary for those studies that yielded results that did not meet these criteria. This evaluation included using additional power flow cases to find solutions for these system problems. The problem solving process is described in more detail in the next section.

A reliability analysis was also completed as part of the study process. This analysis included a review of all radial 69 kV circuits against Big Rivers' reliability criteria in order to determine when loop feeds need to be developed to ensure the desired service reliability for the consumers served from these radial feeds.

This reliability criteria is known as the 75 MW-mile rule. This criteria uses the load served by a radial 69 kV circuit and the length of the radial circuit to determine when 69 kV loop feeds need to be developed. To apply this criteria, the radial length in miles is multiplied by the expected load in MW. If the resulting MW-mile value is greater than 75, then a loop may be created to increase reliability. This criteria is intended to be used as a general guideline. Loop feeds may be developed due to service reliability concerns for sensitive load areas that may not meet this criteria. The study process also included a review of each distribution cooperative's system work plans. The intent of this review was to determine the transmission system improvements that will be necessary to support the system additions planned by the distribution cooperatives.

A short-circuit study was performed for the Big Rivers 1999 electric system. Equivalent system impedances were modeled for each of Big Rivers' interconnections. These equivalent impedances were obtained from each neighboring utility with their system at maximum generation. These impedances were added to Big Rivers' system model and short-circuit studies were performed. Big Rivers' generation, including both HMP&L Station 2 units, was simulated at maximum generation at 1.0 per unit voltage. The three-phase short-circuit studies were performed by placing a three-phase fault at each bus and calculating the results. Single-phase short-circuit studies were performed by placing a phase-to-ground fault on each bus and calculating the results. A comparison of the maximum three-phase and single-phase-to-ground fault levels with the existing power circuit breaker ratings at each system substation was made to determine if the replacement of any circuit breakers would be required during the study period.

**D. Problem Solving**

For the transmission system study, when unacceptable voltage or equipment loading problems were encountered, possible solutions were developed and then tested to determine their viability. These alternative solutions were tested in the order of their relative cost, from the least to the most costly. The economic considerations (present worth analyses) are included in Appendix 2.

The least cost alternative and, therefore, the first option studied was always system switching. The objective was to shift load off overloaded lines and transformers or to provide support for low voltage areas. All of the switching solutions utilized existing equipment and, therefore, are generally not identified in this document.

When switching alone failed, it was combined with the addition of capacitor banks at load buses to solve specific low voltage problems. The size of these capacitor banks was adjusted as needed to raise the system voltages to acceptable levels and, if possible, to reduce line and transformer loadings to acceptable levels. Capacitor bank additions at load buses will not be sized larger than that which will result in unity power factor at that load bus at peak load conditions.

Other alternative solutions studied, primarily for overload problems, included re-sagging, re-conductoring or double circuiting transmission lines, upgrading or replacing transformers, constructing new transmission lines, and constructing new substations.

## IV. TRANSMISSION SYSTEM STUDY RESULTS

The following is a discussion of the power flow study results and economic analyses. This discussion is subdivided according to the four geographic study areas previously described. Problem solving options that require transmission system improvements are included in this discussion. Problem solving options which rely solely on system switching are not included.

**Kenergy East Area**

Replace both Daviess County 161/69 kV Transformers- An outage of one Daviess County transformer will result in an overload on the remaining 50 MVA transformer. System switching will not reduce the transformer loading to acceptable levels. The replacement of both transformers with 100 MVA transformers will provide the necessary transformation for this high growth area. The existing transformers will be available for use at other locations.

Construct a new 69 kV circuit from Daviess County Substation to the Horse Fork area- An outage of the Daviess County to Rome Junction 69 kV circuit will result in voltage problems in the South Owensboro area. System switching failed to provide the necessary voltage support. A new 5 mile 69 kV circuit from the Daviess County substation to a point near the Horse Fork delivery point was found to correct the voltage problem. In addition to the contingency problem, maintaining at least .95 P.U. at Horse Fork Substation will be difficult without the addition of this circuit.

Alternative Construction - A new 161/69 kV substation in the East Owensboro area could be an alternative to the above described transformer additions. This alternative would require the construction of a 1 mile 161 kV transmission tap line from the Daviess County to Hancock County line. In addition, construction of 69 kV lines from the new substation as well as the re-conductoring of 1.5 miles of 3/0 between Thruston Junction and South Dermont would be needed. An economic analysis showed this construction to be the high cost alternative

**Kenergy West Area**

Construct a 69 kV interconnection to HMP&L Substation Number 4 - This project was identified in Big Rivers' 1995 Construction Work Plan. Other system improvement additions have allowed this project to be delayed subject to completing a satisfactory interconnection agreement with HMP&L. Studies, and actual experience, have shown that the completion of this project is still necessary. This project is now scheduled to be completed in the year 2000.

Install a 10 MVAR capacitor in the Sullivan area - A capacitor addition is required to support voltages during an outage of the Hopkins County to Providence 69 kV line. The capacitor would also help to support voltages during an outage of the Barkley to Lyon County 69 kV line. Transformation additions, which appear to be necessary shortly after the 2000-2002 time period, may alter the need for the capacitor addition. (Studies of a Reid 161/69 kV transformer outage show the need for additional transformation sometime after 2002.) For future flexibility, a mobile capacitor installation may be appropriate.

Construct a 13 mile 161 kV line from Henderson County to Newman- An outage of either 345 kV circuit can cause an overload of the Reid to Daviess County 161 kV circuit. Generation outages at Coleman, as well as the NSA load addition, tend to increase the loading on this circuit. The construction of a 161 kV line from Henderson County Substation to Newman Substation will alleviate this potential loading problem during all of these system contingencies.

Replace 161 kV line trap at Henderson County - Due to the 800 amp rating of a Henderson County line trap, the rating of the Big Rivers to SIGECO interconnection is limited to 191 MVA (not 224 MVA as previously assumed). This reduced rating will limit the Big Rivers to SIGECO available contract path thereby reducing the amount of transmission that can be sold on the path. This will limit the amount of power that can be sold directly to SIGECO from Big Rivers, the amount of power that can be purchased from SIGECO for use by native load, and the amount of power that can be wheeled across Big Rivers' system (to and from SIGECO). In addition, this facility was identified in a regional study as an overloaded facility during an outage of SIGECO's Culley to Grandview 138 kV circuit (East Central Area Reliability Coordination Agreement 1999/00 Winter Assessment of Transmission System Performance). Subsequent studies showed that the overload could be reduced to below the 224 MVA rating. However, reducing the loading to below the 191 MW level would be more difficult. Due to the potential loading problem, and the contract path limit, the wave trap should be replaced allowing the full capability of the interconnection to be utilized.

Potential 69 kV line upgrades - The loadings on the Reid to Sebree 69 kV line and the Reid to Corydon line may reach their maximum rating by the end of the study period. The actual loadings should be monitored to determine if an upgrade is needed.

**Jackson Purchase Area**

No construction is anticipated for the 2000-2002 time period. However, the loadings on the Livingston County to Dover 69 kV line and the Livingston County to Smithland line may reach their maximum rating by the end of the study period. Re-sagging the lines may be necessary. The actual loadings should be monitored.

In addition, part of the 69 kV circuit between Bryan Road and Husbands Road is constructed with 267 MCM conductor. Due to heavy loading, this circuit should be field checked in order to determine the actual rating. After the field check is complete, a determination of any required upgrade will be made.

**Meade County Area**

Construct a new 69 kV circuit from Meade Co. Substation to the Doe Valley Tap Area- An outage of either the Garrett to Doe Valley 69 kV circuit or the Meade Co. to Garrett 69 kV circuit will result in voltage problems in the Doe Valley area. Capacitor additions and system switching proved to be ineffective in alleviating low voltages during the Meade County to Garrett outage. The capacitance necessary to raise voltages to acceptable levels exceeded the maximum capacitance standard (unity power factor) at Garrett. A new 8.5 mile 69 kV circuit from Meade County to a point on the Doe Valley Tap to Brandenburg 69 kV line section was found to correct the voltage problems during both contingencies.

Install a 69 kV radio controlled switch at the Hardinsburg 1 Substation - An outage of the New Hardinsburg to Hardinsburg 1 Substation results in low voltages in the Hardinsburg 1 area. Serving the Hardinsburg 1 Substation from the existing Fordsville Tie to Hardinsburg 1 line helps to alleviate the voltage problems. Installation of a radio-controlled switch is necessary to effectively utilize this existing back-up source.

Construct a 69 kV circuit from New Hardinsburg Sub to the McDaniels/Custer Area - An outage of the New Hardinsburg to Hardinsburg 1 69 kV circuit, an outage of the Hardinsburg 1 to Harned 69 kV circuit, or an outage of the Harned to McDaniels 69 kV circuit all yield low system voltages. System switching and the addition of 69 kV capacitors proved to be ineffective in alleviating the voltage problems. The construction of a new 7.5 mile line to effectively tie the New Hardinsburg Substation to a point between Custer and McDaniels substations was found to alleviate the voltage constraints. The actual length of this circuit will be influenced by the routing of the new Falls of Rough delivery point transmission line scheduled for year 2000.

Additional required Construction- In addition to proposed construction identified from the power flow studies, additions to the New Hardinsburg Substation are required to improve service reliability. The primary addition is to separate Autotransformers 1 and 2 (161-69 kV) from the same 161 kV bus connection point by adding a 161 kV circuit breaker between them. As it now stands, a single breaker failure may cause the outages of both New Hardinsburg 161/69 kV transformers as well as the Meade County 161 kV line. Line disconnect switches should also be added to the Meade, Paradise and Skillman 161 kV lines. This would allow restoration of the 161 kV ring bus during line maintenance periods.

Construct a back-up source for the Meade County Substation and install a second 161/69 kV Meade County transformer - Outages of the Meade County transformer, the Meade County 161 kV source from New Hardinsburg, or an outage of one New Hardinsburg 161/69 kV transformers will yield unacceptable loading and voltage conditions. The installation of a second Meade County transformer and the construction of a back-up source will alleviate the loading and voltage constraints. The back-up source could be a 138 kV line and 161/138 kV transformer tied into the nearby LG&E transmission system or an additional 161 kV line from the New Hardinsburg Substation. Additional studies and negotiations with LG&E are required in order to determine the most economical and feasible alternative.

Meade County Alternative 2 - The present worth analyses in Appendix 2 include the selected alternative as well as two alternatives to the previously described Meade County area construction. These analyses show that the present worth of Alternative 1 (the selected alternative) and Alternative 2 are essentially the same. Alternative 3 was found to be the high cost alternative.

Alternative 2 includes a 40 MVAR 69 kV capacitor addition at Meade County along with the addition of a third 161/69 kV transformer at New Hardinsburg Substation in the three-year study period. A re-conductoring of the 10.6 mile 69 kV Irvington line, as well as the same 69 kV improvements identified in Alternative 1 studies, are also required.

Additionally, Alternative 2 studies completed with a 2008 summer peak study showed the need for the 138 kV LGEE interconnection and a second 161/69 kV Meade County transformer in the 2007/2008 time-frame. Alternative 1 studies (2008 summer peak) show the need for additional transformation at New Hardinsburg in the 2005 time frame. While both alternatives include the addition of an LGEE interconnection and the addition of transformation at both the Meade County and New Hardinsburg Substations, the timing varies with each. The Alternative 2 study results can be seen in Plots 108-120 included in Appendix 3.

With nearly equivalent costs (on a present worth basis), Alternative 1 was selected on the basis of relief provided to potential loading problems on the 161/138 kV New Hardinsburg transformer. An outage of the 161 kV Coleman to National Aluminum line can cause loading problems on the transformer. An outage of one or more generating units at TVA's Paradise Station, as well as heavy north to south power transfers, will increase the transformer loading.

The addition of the 138 kV LGEE interconnection provides relief to the transformer loading (see Plots 121-123). With Alternative 2, no relief can be expected on the transformer without opening the New Hardinsburg to Paradise 161 kV line. As the system load grows, the rural Meade County R.E.C.C. load, when added to the industrial load served from the National Aluminum and Skillman substations, will exceed the rating of the transformer. At that point (2008-2010), outaging the Paradise interconnection will not reduced the New Hardinsburg transformer loading to below 100 percent during a Coleman to National Aluminum outage.

In order to complete the proposed facilities, terms for an LGEE interconnection will need to be established. If negotiations prove difficult, or other unforeseen circumstances occur which make the completion of an interconnection with LGEE unlikely in the desired time frame, then Alternative 2 will be pursued. This would allow more time for the completion of negotiations with LGEE (or the evaluation of another option).

Meade County Alternative 3 - This high cost alternative included a new 161/69 kV substation in the Flaherty or Garrett area (served from a 9 mile 161 kV transmission line from the Meade County Substation). The construction of a back-up source to the new substation would also be required. In addition, construction of 69 kV lines from the new substation to the Doe Valley area (in lieu of the previously mentioned Doe Valley line) and to the Flaherty area (in lieu of the previously mentioned Custer area line) would also be needed.

## V. FIRST CONTINGENCY SWITCHING ALTERNATIVES

Switching alternatives described in this section utilize all facilities proposed for construction in this report. As with other sections of this report, the summaries are broken down in geographical areas that are generally consistent with the service areas of the three distribution cooperatives. The switching alternatives described were found to provide acceptable voltage and line loading conditions during normal and single contingency situations.

**Meade County Area:**

Base Case - no outages: The new base case scenario (i.e. normal operating conditions) is shown on Plot 8. This scenario includes a normally open switch at Garrett toward Flaherty, a normally open switch at McDaniels toward the new Custer Tap, and a normally open switch at Garrett toward the Doe Valley tap point. No other switching changes were made.

Meade County transformer outage: Andyville and Battletown are served radially from Cloverport, Fordsville is served radially from Whitesville, and the normally open Garrett switch is closed toward Flaherty. This scenario can be seen on Plot 18.

New Hardinsburg Transformer outage: Plots 20 and 21 show similar switching scenarios with this outage. Both include closing the normally open Garrett switch toward Flaherty then opening the normally closed switch at the new Custer Tap Point toward Custer. In addition, Plot 21 includes closing the normally open Whitesville switch toward Fordsville and opening the New Hardinsburg to Fordsville line.

Meade to Garrett line outage: The normally open switch at Garrett is closed toward the Doe Valley tap. The switch at Garrett toward the Flaherty tap is left open. This scenario can be seen on Plot 9.

New Hardinsburg to Hardinsburg 1 outage: Plot 11 shows an acceptable scenario in which the normally open switch at Garrett is closed toward Flaherty, the normally closed switch at the new Custer Tap Point is opened toward Custer, and Hardinsburg 1 is served radially from Fordsville tie. Plot 10 shows unacceptable results with Hardinsburg 1 service from Harned.

Hardinsburg 1 to Harned outage: Plot 11, which was previously described as part of the New Hardinsburg to Hardinsburg 1 outage, shows an acceptable switching scenario. This scenario is almost identical to the recommended switching scenario for an outage of the Hardinsburg 1 to Harned outage (Hardinsburg 1 should be served from New Hardinsburg rather than from Fordsville tie). Due to the similarities of the scenarios, no new plot was created.

New Hardinsburg to Custer Tap outage: Plot 12 shows an acceptable scenario in which the normally open switch at Garrett is closed toward Flaherty.

Meade to New Doe Valley Junction outage: Plot 13 shows an acceptable scenario in which the normally open switch at Garrett is closed toward Doe Valley. However, loading on the Meade County to Garrett line may require serving Brandenburg radially from Battletown.

New Doe Valley Junction to Doe Valley Tap outage: Acceptable service can be provided by closing the normally open Garrett switch toward Doe Valley Tap.

Meade to Andyville outage: Plots 15 and 16 show two acceptable switching alternatives. The alternative that seems to provide the best voltage support is shown in Plot 16. This scenario includes serving Andyville and Battletown radially from Union Star.

Andyville to Battletown outage: Serving Battletown radially from Brandenburg provides acceptable service during this outage.

Brandenburg to New Doe Valley Junction outage: Plot 17 shows an acceptable switching arrangement that includes closing the normally open Brandenburg switch toward Battletown.

**Jackson Purchase Area:**

Base Case - no outages: The new base case scenario (i.e. normal operating conditions) is shown on Plot 34. This scenario includes a normally open switch at Culp Junction toward Culp and a normally open switch at Massac Junction toward Krebs Road due to the recent addition of the Bryan Road Substation. No loop feeds are present.

McCracken County transformer outage: No switching was necessary (see Plot 35).

Livingston County transformer outage: No switching was necessary (see Plot 36).

Bryan Road transformer outage: Plot 37 shows acceptable system conditions during this outage with Krebs Road supplied from McCracken County and Freemont, Husbands Road, Reidland, and Culp supplied from Livingston County. It was necessary to maintain 1.05 P.U. voltage at Livingston County during this scenario. Plot 38 shows an acceptable alternative to the previous. This alternative involved serving Freemont from McCracken County (open at Husbands Road toward Bryan Road).

McCracken County to Highpoint outage: Plot 39 shows an acceptable scenario in which the load on the Highpoint line is served from Bryan Road. During this scenario, it is necessary to serve Freemont, Husbands Road, Reidland, and Culp from Livingston County (the 69 kV voltage at Livingston County should be maintained at or near 1.05 P.U.).

McCracken County to Kevil outage: Plots 40-43 show various switching alternatives for this outage. Plot 40 shows an acceptable scenario in which the load on the Kevil line is served from Bryan Road. During this scenario, it is necessary to serve Freemont, Husbands Road, Reidland, and Culp from Livingston County (the 69 kV voltage at Livingston County should be maintained at or near 1.05 P.U.). Plot 41 shows the impact of serving Kevil from the Shell line with the previous switching scenario (this is also an acceptable scenario). Plot 42 shows service to the Kevil line from the Highpoint line. This alternative results in an overload of the McCracken County to Highpoint line. Plot 43 shows the impact of serving Kevil from the Shell line with the previous switching scenario. The McCracken County to Highpoint line is still overloaded with this alternative (however, this scenario may be acceptable during light load conditions).

McCracken County to Shell outage: Plot 44 shows acceptable system conditions with this outage and no switching other than closing the Ceredo Jct. switch toward LaCenter.

Livingston County to Dover Outaged: Plot 45 shows acceptable system conditions with service to the Dover line provided from the Smithland line (the voltage on the 69 kV Livingston County bus was maintained near 1.05 P.U.).

Livingston County to Smithland Outaged: Plot 46 shows acceptable system conditions with service to the Smithland line provided from the Dover line (the voltage on the 69 kV Livingston County bus was maintained near 1.05 P.U.).

**Kenergy East Area:**

Base Case - no outages: The base case scenario (i.e. normal operating conditions) is shown on Plot 47. Plot 60 shows a new base scenario after the addition of a new 69 kV Daviess County to Horse Fork circuit.

Daviess County transformer outage: Plot 48 shows this outage with no switching. With the replacement of the existing 50 MVA transformer with two 100 MVA transformers, the resulting transformer loading was seen to be acceptable. Prior to the replacement of the transformers, the most effective switching scenario includes serving Utica and Nuckols from Reid while serving Beda and Centertown from Weberstown. Increasing the 69 kV voltage to 1.05 P.U. at Hancock County is necessary to support the voltages at Beda and Centertown. This switching scenario is shown on Plot 49.

Hancock County to Lewisport outaged: Plot 50 shows this outage with Horse Fork, South Dermont, and Lewisport served from South Owensboro. After the construction of a new Daviess County to Horse Fork 69 kV line, service to Horse Fork, South Dermont, and Lewisport could be provided by the new line.

Daviess County to Masonville outaged: Plot 51 shows this outage with Horse Fork and South Dermont served from South Owensboro. Due to voltage concerns at Masonville, it is necessary to increase the 69 kV voltage at Hancock County to 1.05 P.U. After the construction of a new Daviess County to Horse Fork 69 kV line, service to Horse Fork and South Dermont could be provided by the new line.

Hancock to Hawesville Junction outage: Plot 52 shows with outage with Whitesville to Weberstown closed. Plot 53 shows the same outage with Hawesville to Cloverport closed. The later option appears to provide the best voltage support.

Pleasant Ridge to Utica Junction outaged: Plot 54 shows this outage with Whitesville to Weberstown closed. Increasing the 69 kV voltage at Hancock County may be necessary to support the voltages at Beda and Centertown

Reid to St. Joe outaged: Plot 55 shows acceptable system conditions with Rome Junction to West Owensboro closed during this outage.

Thruston Junction to South Dermont outaged: Plot 56 shows acceptable system conditions with this outage and South Owensboro closed toward Horse Fork (South Dermont).

Hancock County transformer outaged: Plot 57 shows this outage with the Hancock County to Hawesville Junction line open to reduce the loading on the remaining transformer. Weberstown, Yager, and Hawesville were served via Cloverport with this scenario.

Daviess County to Rome Junction (South Owensboro) outaged: Plots 58 and 59 show South Owensboro served from the St. Joe line and from South Dermont respectively. In both cases, the South Owensboro voltage dropped below the criteria limit. Plot 61 shows South Owensboro acceptably served from a new Daviess County to Horse Fork circuit.

**Kenergy West Area:**

Base Case - no outages: The base case scenario (i.e. normal operating conditions) is shown on Plot 65. Plot 66 shows a new base scenario after the addition of a new 69 kV interconnection to HMP&L's Substation 4.

Reid 161/69 kV transformer outage: Plots 67-70 show various switching scenarios with an outage of the Reid transformer. The switching scenario that most effectively reduces the transformer loading is shown in Plot 70. This scenario includes the outage of the 69 kV tie to SIPC (Gallatin), the outage of the Onton line, and the outage of the Niagara line. The loading on the remaining transformer shows that additional transformation will likely be needed in the Kenergy West area shortly after the year 2002. The transformer addition could include the addition of a 161/69 kV substation near Corydon or an expansion at the Reid switchyard.

Henderson County 161/69 kV transformer outage: Plots 71-76 show various switching scenarios with an outage of the Henderson County transformer. The switching scenario that most effectively reduces the transformer loading is shown in Plots 75 and 75. This scenario includes a voltage reduction at Henderson County, serving Accuride from Weaverton, and an outage of the Henderson County to HMP&L Sub 3 line. This scenario is shown with and without generation at HMP&L Station 1. The low voltage seen at Accuride will be improved to acceptable levels by the addition of the HMP&L Sub 4 tie (see Plot 83). The loading on the remaining transformer shows that additional transformation will likely be needed at Henderson County shortly after the year 2002.

Henderson County to HMP&L Sub 3 outaged: Plot 77 shows acceptable system conditions with this outage and no switching. The loading on the Henderson County to Zion Tap line may be reduced from over 96% loaded by serving Accuride from Weaverton. This loading level shows that the Henderson County to Zion Tap circuit should be re-conductored in the 2002-2004 time frame.

Zion Tap to HMP&L Sub 6 outaged: Plot 78 shows acceptable system conditions with this outage and no switching (Henderson County voltage was reduced). However, the loading on the Henderson County to HMP&L 3 line was heavy. HMP&L may need to re-conductored the circuit in the mid 2000s.

Henderson County to Zion Tap outaged: Plot 79 shows acceptable system conditions with this outage and no switching (Henderson County voltage was reduced). However, the loading on the Henderson County to HMP&L 3 line was again seen to be heavy. HMP&L may need to re-conductored the circuit in the mid 2000s.

Reid to Niagara outaged: Plot 80 shows acceptable system conditions with this outage and no switching (Henderson County voltage was reduced). However, the loading on the Henderson County to Zion Tap and Zion Tap to Race Creek Tap were seen to be heavy. Serving Accuride from Weaverton would help to reduce the loading on both circuits (see plot 81).

New HMP&L Sub 4 tie outaged: Plot 82 shows acceptable system conditions with this outage and no switching. However, the voltage at Weaverton was seen to be near .95 P.U.

Anthoston Junction to Accuride outaged: Plot 83 shows Accuride acceptable served from Weaverton with the addition of the HMP&L Sub 4 tie.

Corydon to Geneva Junction outaged: Plot 84 shows acceptable system conditions with this outage and no switching.

Corydon to Little Dixie outaged: Plot 87 shows acceptable system conditions with this outage and no switching. However, the voltage at Reid should be increased to better support the system voltages.

Corydon toward Reid outaged: Plot 88 shows acceptable system conditions with this outage and no switching.

Morganfield to Peabody outaged: Plot 90 shows acceptable system conditions with this outage and no switching.

Morganfield to Dixon outaged: Plot 91 shows acceptable system conditions with this outage and no switching.

Morganfield to Sullivan outaged: Plot 92 shows acceptable system conditions with this outage and no switching.

Reid to Sebree outaged: Plots 93-97 show various switching scenarios with this outage. The most effective scenario is shown in Plot 96. With this scenario, voltages at Reid, Hopkins County, and Henderson County were increased. In addition, Corydon to Geneva Junction was opened. Hudson was served from the Niagara line. With this switching, the voltage at Sebree was an acceptable .918 P.U. This voltage levels shows a capacitor may be required just beyond the three year window of this work plan. The need for the capacitor should be reviewed along with future transformer addition plans (Corydon 161/69 kV Substation).

Reid to Corydon outaged: Plots 97 and 98 show two switching scenarios with this outage. The most effective scenario is shown in Plot 98. With this scenario, voltages at Reid, Hopkins County, and Henderson County were increased. In addition, Hudson was served from the Niagara line.

Hopkins County to Providence outaged: Plots 99-101 show various switching scenarios with this outage. The most effective scenario with no system improvement is shown in Plot 100. With this scenario, the voltage at Reid was increased. In addition, the Morganfield to Peabody line was outaged. However, at .909 P.U. the voltage at Providence was still slightly below the single contingency criteria limit (.917 P.U.). Plot 101 shows an acceptable voltage profile with the addition of a 10 MVAR capacitor at Sullivan.

Barkley to Lyon County outaged: Plots 102 and 103 show this outage with and without the addition of a 10 MVAR capacitor at Sullivan. Without the addition of the capacitor, the Lyon County voltage was acceptable (.919 P.U.). With the capacitor addition, the Lyon County voltage increased to .931 P.U.

Hopkins County 161/69 kV transformer outaged: Plot 104 shows acceptable system conditions during this outage and no switching. However, the loading on the Reid to Sebree line should be monitored during this outage.

Hopkins County outaged toward Onton: Plot 105 shows acceptable system conditions during this outage and no switching.

## VI. RELIABILITY ANALYSIS RESULTS

A reliability analysis was performed. This analysis included the review of all radial 69 kV circuits. The intent of this review was to determine when and if additional circuits should be constructed to provide loop service to any distribution substations currently served by radial circuits. All circuits meet the 75 MW-mile criteria during the study period. However, other concerns have made the creation of loop feeds necessary.

### Jackson Purchase

The radially fed Coleman Road Substation feeds a sensitive load (Kentucky Oaks Mall complex). The Olivet Church Road Substation also feeds a sensitive load (Technology Park). Acceptably back feeding either of these substations during peak load conditions is not possible. Therefore, a loop source for these delivery points is required. A loop source will be created as part of a new Strawberry Hill Substation project. The new loop will tie the Coleman Road Substation to the Olivet Church Road Substation through the new Strawberry Hill Substation.

### Kenergy East

The radially fed Beda and Centertown Substations cannot be acceptably back-fed through the distribution system. In addition, a new shopping center served in this area is considered a sensitive load. Because of this, a 69 kV normally open emergency back-up tie to LGEE is required.

### Kenergy West and Meade County

No improvements were identified.

## VII. DISTRIBUTION COOPERATIVE ADDITIONS

The system plans of each distribution cooperative were reviewed to determine the transmission improvements required to support their near-term plans. The following facilities were identified as necessary to support the distribution improvements. As each distribution cooperative completes more up-to-date system studies, additional facilities may be added to the following list:

### Kenergy East and West

A new Kenergy work plan is currently being developed. At this time, plans concerning the addition of new delivery points are unknown.

### Jackson Purchase

The construction of a new Strawberry Hill Substation with a loop to back up for the radially fed Coleman Road and Olivet Church Road substations is scheduled for the year 2000. At this time, a new Jackson Purchase work plan is being developed. Therefore, plans concerning any additional delivery points are unkown at this time.

### Meade County

Approximately 12.5 miles of 69 kV line (336 MCM) is required to serve a new Falls of Rough Substation in Grayson County. This substation is being constructed to relieve the loading on the McDaniels Substation. Since a new Meade County R.E.C.C. work plan is currently being developed, plans concerning any additional delivery points are unknown at this time.

## VIII. SHORT CIRCUIT ANALYSIS

A short-circuit study was completed for the Big Rivers 1999 electric system. The intent of the study was to determine if the replacement of any circuit breakers would be required during the study period. The study results are shown in Appendix 4. Based on these results, the following projects should be completed:

69 kV PCB Number 01042 at Reid (Onton Line) should be replaced in year 2000. This PCB would then be available for use at the Daviess County substation (new Horse Fork circuit).

69 kV PCB Number 01122 at Reid (HMP&L Sub 7 Line) should be replaced in year 2000. This PCB would then be available for use at the HMP&L Substation Number 4 (new Big Rivers to HMP&L tie).

161 kV PCBs located at the National Aluminum Substation should be replaced. Four breakers (0602, 0612, 0622, and 0632) are at their ratings. All 161 kV PCBs located at Hancock County Substation should also be replaced. Six 161 kV PCBs (0202, 0212, 0222, 0232, 0242, and 0252) are at or very near their ratings. These ten 161 kV PCBs will allow the Meade County - LGEE 138 kV tie (2001), the Meade County transformer #2 addition (2002), the New Hardinsburg 161 kV breaker and switches addition (2000), and the Henderson County and Newman 161 kV line terminal additions (2002) to all be completed without additional PCB purchases.

18

BIG RIVERS ELECTRIC CORPORATION
RESPONSE TO WILLAMETTE INDUSTRIES, INC.'S
INITIAL REQUEST FOR INFORMATION OF OCTOBER 7, 1999

CASE NO. 99-354

**Item 18)** How much of Willamette's current full requirements rate is intended to recover:

a. Generation, production or supply costs?

b. Transmission costs?

c. Distribution and/or customer-related costs?

**Response)** a., b. and c. The rates established by the Commission are not unbundled, however, assuming Willamette's full requirement is 84 MW at a 94 percent load factor, the resulting rate is 28.507 mills/kWh, from the data below:

| | | | | |
|---|---|---|---|---|
| 1,008,000 kW | x | $10.150/kW | = | $10,231,200 |
| 691,689,600 kWh | x | 13.715 mills/kWh | = | 9,486,523 |
| Amount Billed | | | | $19,717,723 |

Had the Commission approved the tariff requested by Big Rivers, the rate would have been 31.140 mills/kWh from the data below:

| | | | | |
|---|---|---|---|---|
| 1,008,000 kW | x | $7.370/kW | = | $ 7,428,960 |
| 691,689,600 kWh | x | 20.400 mills/kWh | = | 14,110,468 |
| Amount Billed | | | | $21,539,428 |

While the Commission-approved tariff is beneficial to high load factor large industrial customers, it was intended to be revenue neutral to Big Rivers. The result for Willamette is for Big Rivers to recover some of the energy power supply cost through the large industrial demand charge. However, the Commission established the large industrial tariff rate applicable to Willamette and did not provide the rate breakdown as requested by Willamette.

**Witness)** Mark A. Hite

19

BIG RIVERS ELECTRIC CORPORATION
RESPONSE TO WILLAMETTE INDUSTRIES, INC.'S
INITIAL REQUEST FOR INFORMATION OF OCTOBER 7, 1999

CASE NO. 99-354

**Item 19)** With respect to the Power Purchase Agreement between Big Rivers Electric Corporation and LG&E Energy Marketing, Inc., dated July 15, 1998, please provide the following information:

a. Any minimum monthly or annual amounts of energy that must be purchased from LG&E;

b. The pricing consequences to BREC if less than the minimum is purchased;

c. Any maximum daily contract demands and or maximum monthly or annual energy quantities;

d. The pricing consequences to BREC if the maximum demands or energies specified in part c of this question is exceeded;

e. Any unit demand charges that are predicated on some measure of coincident demand, non-coincident demand, and/or contract demand;

f. Any fixed monthly charges that are assessed independent of any demand or energy taken and the termination date of these charges.

**Response)** a. Section 4.3(a) of the Power Purchase Agreement provides for a Minimum Hourly Power Purchase Amount of 272 megawatt-hours of Base Power through December 31, 2000, and a Minimum Hourly Power Purchase Amount of 297 megawatt-hours of Base Power during the period January 1, 2001, through December 31, 2010. The Minimum Hourly Power Purchase Amount is 517 megawatt-hours during 2011 and is 600 megawatt-hours for every year following 2011.

Section 4.3(b) establishes a Minimum Annual Power Purchase Amount of 2,687,750 megawatt-hours through December 31, 2000. This Minimum Annual Power Purchase Amount increases to 2,902,285 megawatt-hours for the period January 1, 2001, through December 31, 2010. These amounts increase in 2011 and thereafter.

b. In the event that Big Rivers fails to purchase sufficient Base Power in a month, the deficiency between the Minimum Hourly Power Purchase Amount and the amount actually purchased for each hour of the month shall be determined and summed for the month. Big Rivers is required to pay LEM an amount equal to a ___(confidential) percentage of the amount that would otherwise have been paid at the then applicable Base Power Rates for the monthly deficiency amount. The same process is applied to the Minimum Annual Power Purchase Amount; the amount of the deficiency is calculated each January and Big Rivers is required to pay an amount equal to a ___ (confidential) percentage of the amount that would otherwise have been paid at the then applicable Base Power Rate for the annual deficiency amount. Amounts paid for monthly deficiencies are credited toward annual deficiencies.

The pricing consequences (penalty) are contained in the Power Purchase Agreement between Big Rivers and LG&E Energy Marketing, Inc. filed with the Kentucky Public Service Commission with a petition for confidential treatment. Big Rivers received confidentiality protection in regard to this penalty by letter from the Commission dated August 16, 1999, Case 99-00326, Petition for Confidential Treatment.

c. Section 4.3 (c) of the Power Purchase Agreement establishes a Maximum Hourly Power Purchase Amount of 572 megawatt-hours through December 31, 2000. The Maximum Hourly Power Purchase Amount increases to 597 megawatt-hours for the period January 1, 2001, through December 31, 2010, and increases further in years thereafter. Section 4.3(d) provides for a Maximum Annual Power Purchase

Amount of 5,112,750 megawatt-hours through December 31, 2000, and 5,327,285 for the period January 1, 2001, through December 31, 2010. The Maximum Annual Power Purchase Amount increases further in years thereafter.

d. The contract is a finite resource and cannot be exceeded. Big Rivers has no right to obtain power or energy from LEM in excess of the maximum hourly and annual amounts specified in the contract and must obtain such amounts from another source outside the Power Purchase Agreement.

e. As Willamette is aware from its participation in Case No. 97-204, the rate to Big Rivers from LEM under the Power Purchase Agreement was structured as a single fixed rate for Base Power, with no separation into traditional demand and energy components. The single rate from LEM to Big Rivers includes both fixed and variable costs, and is expressed in terms of a rate for each megawatt-hour of power taken. Due to the way the Power Purchase Agreement is structured as a long-term contract with minimum power purchase amounts and guaranteed prices, there was no need to develop a more traditional demand charge based on fixed costs and energy charge based on variable costs. Moreover, as witnesses for Big Rivers and LEM testified in the case, the power price was a negotiated component of the lease transaction as a whole and could have been established either higher or lower depending upon the lease price paid by LEM for the Big Rivers' generation. Accordingly, there is no demand charge for this power and thus, no variation in cost to Big Rivers when power is taken by a particular customer during a given month.

f. No fixed monthly charges are payable to LEM under the Power Purchase Agreement other than with respect to the payments for Base Power. However, Big Rivers has a number of fixed financial obligations to the Rural Utilities Service which are assessed on a fixed monthly basis independent of any demand or energy taken. These obligations are reflected in the rates charged by Big Rivers to its distribution cooperatives for power taken from Big Rivers.

**Witness)** David Spainhoward

20

**Item 20)** Please provide copies of BREC's annual reports for 1997, 1998 and (if available) 1999.

**Response)** Big Rivers did not produce an annual report for 1997, however, attached is a copy of the audited financial statements for 1997. Also attached is a copy of Big Rivers' 1998 annual report.

**Witness)** Mark Hite

# BIG RIVERS ELECTRIC CORPORATION
# SALARIED EMPLOYEES' RETIREMENT PLAN

## FINANCIAL STATEMENTS AND SUPPLEMENTAL SCHEDULES
## AS OF DECEMBER 31, 1997 AND 1996
## TOGETHER WITH AUDITORS' REPORT

# BIG RIVERS ELECTRIC CORPORATION

## SALARIED EMPLOYEES' RETIREMENT PLAN

## FINANCIAL STATEMENTS AND SUPPLEMENTAL SCHEDULES

## DECEMBER 31, 1997 AND 1996

### TABLE OF CONTENTS

## Report of Independent Public Accountants

To the Salaried Employees' Retirement Plan Committee of
Big Rivers Electric Corporation:

We have audited the accompanying statements of net assets available for benefits of the Big Rivers Electric Corporation Salaried Employees' Retirement Plan (the "Plan") as of December 31, 1997 and 1996, and the related statements of changes in net assets available for benefits for the years then ended. These financial statements and supplemental schedules referred to below are the responsibility of the Plan's management. Our responsibility is to express an opinion on these financial statements and supplemental schedules based on our audits.

We conducted our audits in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the net assets available for benefits of the Plan as of December 31, 1997 and 1996, and the changes in its net assets available for benefits for the years then ended, in conformity with generally accepted accounting principles.

Our audits were performed for the purpose of forming an opinion on the basic financial statements taken as a whole. The supplemental schedules, as listed in the accompanying table of contents, are presented for the purpose of additional analysis and are not a required part of the basic financial statements but are supplementary information required by the Department of Labor's Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974. These supplemental schedules are the responsibility of the Plan's management. The supplemental schedules have been subjected to the auditing procedures applied in our audits of the basic financial statements and, in our opinion, are fairly stated in all material respects in relation to the basic financial statements taken as a whole.

Arthur Andersen LLP

Little Rock, Arkansas,
August 27, 1998.

BIG RIVERS ELECTRIC CORPORATION

SALARIED EMPLOYEES' RETIREMENT PLAN

STATEMENTS OF NET ASSETS AVAILABLE FOR BENEFITS

AS OF DECEMBER 31

| | 1997 | 1996 |
|---|---|---|
| ASSETS: | | |
| Investments, at fair value: | | |
| Money Market Fund - Federated Short-Term | | |
| U.S. Government Trust | $ 1,332,534 | $ 553,296 |
| Bonds and Notes: | | |
| U.S. Government obligations | 4,905,393 | 7,084,827 |
| Government agency bonds | 736,520 | 226,341 |
| Corporate bonds and notes | 4,429,586 | 3,138,489 |
| Foreign bonds and notes | 211,823 | 212,657 |
| Common stocks | 2,761,614 | 3,789,771 |
| Convertible preferred stock | - | 31,725 |
| Total investments | 14,377,470 | 15,037,106 |
| Receivables: | | |
| Employer contributions | - | 1,039,042 |
| Interest | 141,406 | 193,073 |
| Dividends | 4,029 | 5,848 |
| Total receivables | 145,435 | 1,237,963 |
| Cash | 42,369 | 817 |
| Total assets | 14,565,274 | 16,275,886 |
| LIABILITIES: | | |
| Payable to Big Rivers Electric Corporation | | |
| Bargaining Employees' Retirement Plan | - | 250,836 |
| NET ASSETS AVAILABLE FOR BENEFITS | $14,565,274 | $16,025,050 |

The accompanying notes to financial statements are an integral part of these statements.

BIG RIVERS ELECTRIC CORPORATION

SALARIED EMPLOYEES' RETIREMENT PLAN

STATEMENTS OF CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS

FOR THE YEARS ENDED DECEMBER 31

| | 1997 | 1996 |
|---|---|---|
| ADDITIONS TO NET ASSETS ATTRIBUTED TO: | | |
| Employer contributions | $ 2,105,695 | $ 1,789,042 |
| Investment income: | | |
| Net appreciation in fair value of investments | 1,001,125 | 685,205 |
| Interest | 585,125 | 606,544 |
| Dividends | 48,035 | 77,864 |
| | 3,739,980 | 3,158,655 |
| DEDUCTIONS FROM NET ASSETS ATTRIBUTED TO: | | |
| Pension benefit payments | 5,199,756 | 2,774,487 |
| Net (decrease)/increase | (1,459,776) | 384,168 |
| NET ASSETS AVAILABLE FOR BENEFITS: | | |
| Beginning of year | 16,025,050 | 15,640,882 |
| End of year | $14,565,274 | $16,025,050 |

The accompanying notes to financial statements are an integral part of these statements.

BIG RIVERS ELECTRIC CORPORATION

SALARIED EMPLOYEES' RETIREMENT PLAN

NOTES TO FINANCIAL STATEMENTS

DECEMBER 31, 1997 AND 1996

## 1. REORGANIZATION:

Management has prepared the accompanying financial statements of Big Rivers Electric Corporation Salaried Employees' Retirement Plan (the Plan) on the basis that the Plan will continue as a going concern. As disclosed in Big Rivers Electric Corporation's (Big Rivers, the Plan's sponsor) audited financial statements for the year ended December 31, 1997, Big Rivers filed a voluntary petition for relief under Chapter 11 of the United States Bankruptcy Code (hereinafter referred to as Chapter 11) and began operating as a debtor-in-possession under the supervision of the United States Bankruptcy Court for the Western District of Kentucky (the Bankruptcy Court). As of the petition date, all actions of Big Rivers' creditors to collect indebtedness as of the Chapter 11 filing date are stayed. As a result, no party which has a security or adverse interest in Big Rivers' property may take any action against Big Rivers.

On June 9, 1997, management filed a restated plan of reorganization that was accepted by the Bankruptcy Court. Under the plan of reorganization, Big Rivers will lease its generation assets to Western Kentucky Energy Corp. (WKEC), which is a subsidiary of LG&E Energy Corp. Under the lease, Big Rivers will retain ownership of its generation facilities and will continue to provide services to its four distribution cooperatives and their jurisdictional customers excluding wholesale electric services to National Southwire Aluminum Company and Alcan Aluminum Corporation. Additionally, LG&E Energy Marketing, Inc. (LEM), a subsidiary of LG&E Energy Corp., will be allowed to sell a certain amount of Big Rivers' excess capacity and energy to non-jurisdictional customers. To the extent its jurisdictional load increases in the future exceed the maximum power allowed to be purchased from LEM and Southeastern Power Administration (SEPA), Big Rivers will be free to competitively purchase power on the open market to serve such load. To the extent Big Rivers has surplus capacity and energy available from LEM and SEPA to serve its members' requirements, Big Rivers may purchase and sell such power to non-jurisdictional customers. Further, to the extent Big Rivers can profit from purchasing power from third parties to supply its member requirements instead of purchasing it from LEM, Big Rivers may do so.

The plan of reorganization and a certain proposed rate design thereunder are subject to approval by the Federal Energy Regulatory Commission (FERC) and the Kentucky Public Service Commission (KPSC).

Due to the nature of the above circumstances, and the uncertainty as to the outcome, the financial statements do not include any adjustments that might result from the plan of reorganization.

2. PLAN DESCRIPTION:

The following brief description of the Plan is provided for general information purposes only. Participants should refer to the Plan agreement for more complete information.

General-

The Plan is a defined benefit plan which covers substantially all salaried employees of Big Rivers. Effective January 1, 1989, the Plan was amended and restated to conform with the requirements of the Tax Reform Act of 1986. The Plan is subject to the provisions of the Employee Retirement Income Security Act of 1974 ("ERISA").

Overall responsibility for administering the Plan rests with the Retirement Plan Committee which is appointed by the Board of Directors of Big Rivers. The Plan's trustee, Ohio Valley National Bank, is responsible for the management and control of the Plan's assets and has certain discretionary authority and control over such assets. Brinson Partners, Inc. serves as investment advisor for the Plan.

Administrative Expenses-

All administrative expenses, including investment management and trustee fees, are paid by Big Rivers.

Contributions-

Contributions are recorded based on the applicable ERISA minimum funding requirements as determined by the Plan's actuary.

Eligibility and Vesting-

An employee is eligible to participate in the Plan on the first day of the month following the completion of twelve months of employment with Big Rivers, provided such employee was credited with 1,000 or more hours of service during that period, and is not covered by a collective bargaining agreement. Upon termination of employment prior to retirement eligibility, a participant will be vested in the employer provided portion of his accrued benefit at the rate of 10% per year of vesting service for the first four years and 20% per year for the next three years. A participant is 100% vested after seven years of service.

Retirement Benefits-

Participants are eligible for normal retirement at age 65. Any participant who continues to work beyond age 65 will continue to accrue additional benefits for service. Normal compensation is a monthly benefit payment for the remainder of the participant's lifetime with 120 guaranteed payments. Alternate forms of payment may be elected prior to the commencement of benefits.

2. PLAN DESCRIPTION (Continued):

The normal monthly retirement income is 1.7% (1.36% for participants retiring prior to January 1, 1989) of the average monthly base earnings for the highest five consecutive years during the ten years before retirement, multiplied by years of credited service after December 31, 1976. Benefits earned under a plan prior to December 31, 1976, will be added to the amount determined above, as the prior plan was contributory.

Upon retirement, if certain criteria are met, the participant or beneficiary may choose to accept a lump-sum distribution of the vested accrued benefit as payment in full.

Participants may elect early retirement beginning at age 55. Those participants electing early retirement and who are not 62 years of age will receive a reduced monthly retirement income. Those participants electing early retirement after attaining 62 years of age receive full retirement benefits.

Benefits to participants who become totally and permanently disabled will automatically be deferred until the normal retirement date as the participants will be receiving benefits under Big Rivers' disability plan. The amount of death benefits to a participant's beneficiary is based on, among other factors, age, marital status, years of service and employment status at the time of death.

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES:

Basis of Accounting-

The accompanying financial statements have been prepared using the accrual method of accounting.

Use of Estimates-

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued):

Valuation of Investments-

Marketable securities are stated at fair value based on the market quotation on the last business day of the year.

Net Appreciation in Fair Value of Investments-

Net realized and unrealized appreciation is recorded in the accompanying statements of changes in net assets available for benefits as net appreciation in fair value of investments.

4. INVESTMENTS:

The fair value of individual investments that represent 5% or more of the Plan's total net assets as of December 31, 1997, was as follows:

| Description | 1997 |
|---|---|
| Money Market Fund | |
| Federated Short-Term U.S. Government Trust | $1,332,534 |
| U.S. Government Obligations: | |
| U.S. Treasury Notes, 6.000%, due 06/30/99 | 1,386,900 |
| U.S. Treasury Notes, 6.625%, due 07/31/01 | 730,192 |
| U.S. Treasury Bonds, 6.000%, due 02/15/26 | 873,906 |

The fair value of individual investments that represented 5% or more of the Plan's total net assets as of December 31, 1996, was as follows:

| Description | 1996 |
|---|---|
| U.S. Government Obligations: | |
| U.S. Treasury Notes, 6.250%, due 10/31/01 | $1,991,254 |
| U.S. Treasury Notes, 7.000%, due 07/15/06 | 2,826,243 |
| U.S. Treasury Bonds, 8.125%, due 05/15/21 | 1,844,400 |

## 4. INVESTMENTS (Continued):

During 1997 and 1996, the Plan's investments appreciated (depreciated) in fair value by $1,001,125 and $685,205, respectively, as follows:

| Description | 1997 | 1996 |
|---|---|---|
| U.S. Government obligations | $ 83,132 | $(148,415) |
| Government agency bonds | 6,266 | (22,332) |
| Corporate bonds and notes | 117,579 | (47,148) |
| Foreign bonds and notes | (834) | (8,534) |
| Common stocks | 593,570 | 903,969 |
| Convertible preferred stock | - | 2,438 |
| Foreign equities | - | 5,227 |
| U.S. Government Zero Coupon Bonds | 201,412 | - |
| | $1,001,125 | $ 685,205 |

## 5. ACTUARIAL PRESENT VALUE OF ACCUMULATED PLAN BENEFITS:

Accumulated plan benefits represent the estimated future periodic payments, including lump-sum distributions, under the Plan's provisions that are attributable to services rendered by the participants through the valuation date. Accumulated plan benefits include benefits expected to be paid to the following: (a) retired or terminated participants; (b) beneficiaries of participants who have died; and (c) present participants or their beneficiaries. Benefits under the Plan are calculated based on a percentage of the employees' highest average compensation during any consecutive five year period of credited service during the ten years before retirement, multiplied by years of credited service after December 31, 1976. The accumulated plan benefits for active employees are based on their average compensation during the five years ending on the date as of which the benefit information is presented. Benefits payable under all circumstances; retirement, death, disability and termination of employment; are included in accumulated plan benefits, to the extent deemed attributable to employees' service rendered through the valuation date.

The actuarial present value of accumulated plan benefits is determined by the Plan's actuary and is the amount resulting from applying actuarial assumptions to adjust the accumulated plan benefits to reflect the time value of money (through discounts for interest costs) and the probability of payment (by means of decrements such as for death, disability, withdrawal or retirement) between the valuation date and the expected date of payment. Significant actuarial assumptions used in the valuation for the years beginning after December 31, 1997 and 1996, are as follows:

- Discount rate-6.0% in 1997 and 7.5% in 1996
- Mortality basis-1983 Group Annuity Mortality Table, without setback
- Normal retirement age-65

5. ACTUARIAL PRESENT VALUE OF ACCUMULATED PLAN BENEFITS (Continued):

The foregoing assumptions are based on the presumption that the Plan will continue. If the Plan was to terminate, different actuarial assumptions and other factors might be applicable in determining the actuarial present value of accumulated plan benefits.

The accumulated plan benefit obligation for the Plan years beginning after December 31, 1997 and 1996, is as follows:

| Description | December 31, 1997 | December 31, 1996 |
|---|---|---|
| Actuarial present value of accumulated vested pension benefits: | | |
| Active and deferred payments to participants | $12,447,295 | $10,406,446 |
| Retired participants and beneficiaries | 393,005 | 363,822 |
| | 12,840,300 | 10,770,268 |
| Actuarial present value of accumulated nonvested pension benefits | 1,238,491 | 1,614,495 |
| Total actuarial present value of accumulated pension benefits | $14,078,791 | $12,384,763 |

The change in the actuarial present value of accumulated pension benefits for the years beginning after December 31, 1997 and 1996, is as follows:

| Description | December 31, 1997 | December 31, 1996 |
|---|---|---|
| Actuarial present value of accumulated pension benefits, beginning of year | $12,384,763 | $12,478,676 |
| Benefits accumulated, net of forfeitures | 2,544,525 | 4,287,098 |
| Interest | 748,298 | 818,745 |
| Benefits paid | (4,903,551) | (5,199,756) |
| Change in actuarial assumptions | 3,304,756 | - |
| Net increase/(decrease) | 1,694,028 | (93,913) |
| Actuarial present value of accumulated pension benefits, end of year | $14,078,791 | $12,384,763 |

6. PLAN TERMINATION AND PENSION BENEFIT GUARANTY CORPORATION MATTERS:

Big Rivers has the right under the Plan to discontinue its operations at any time and to terminate the Plan. However, in the event the Plan is terminated, subject to conditions set forth in ERISA:

(a) the net assets of the Plan shall be allocated among the participants and beneficiaries of the Plan in the order provided for by ERISA, and

(b) to the extent unfunded vested benefits then exist, such benefits are payable by the Pension Benefit Guaranty Corporation to participants, up to specified limitations, as described by ERISA.

7. TAX STATUS:

The Internal Revenue Service issued a determination letter dated June 16, 1993, stating that the Plan was operating in accordance with applicable plan design requirements as of that date. Management believes that the Plan is in compliance with the applicable requirements of the Internal Revenue Code. Therefore, in management's opinion, the Plan was qualified and the related trust was tax-exempt as of December 31, 1997.

8. SUBSEQUENT EVENT:

As of July 14, 1998, Big Rivers' proposed lease transaction with WKEC had received the required approval from the FERC and the KPSC. On July 15, 1998, Big Rivers' plan of reorganization became effective. In conjunction with the lease transaction, a significant portion of Plan participants were terminated, and upon termination, such participants became 100% vested. Terminated participants will have the option to remain in the Plan or elect to receive a distribution of their accrued benefit in the form of a lump-sum distribution or monthly benefit payment.

# BIG RIVERS ELECTRIC CORPORATION

## SALARIED EMPLOYEES' RETIREMENT PLAN

## LINE 27a - SCHEDULE OF ASSETS HELD FOR INVESTMENT PURPOSES

## AS OF DECEMBER 31, 1997

| Issuer and Description of Investment | Cost | Fair Value |
|---|---|---|
| **Money Market Fund** | | |
| Federated Short-Term U.S. Government Trust | $1,332,534 | $1,332,534 |
| **U.S. Government Obligations** | | |
| U.S. Treasury Notes, 6.000%, 06/30/99 | $1,383,142 | $1,386,900 |
| U.S. Treasury Notes, 5.875%, 08/31/99 | 561,775 | 561,753 |
| U.S. Treasury Notes, 6.625%, 07/31/01 | 722,365 | 730,192 |
| U.S. Treasury Notes, 6.250%, 08/31/02 | 491,637 | 495,006 |
| U.S. Treasury Notes, 7.000%, 07/15/06 | 213,105 | 221,336 |
| U.S. Treasury Bonds, 8.125%, 05/15/21 | 601,837 | 636,300 |
| U.S. Treasury Bonds, 6.000%, 02/15/26 | 848,997 | 873,906 |
| | 4,822,858 | 4,905,393 |
| **Government Agency Bonds** | | |
| Government National Mortgage Association, 8.000%, 12/15/22 | $144,744 | $145,605 |
| Government National Mortgage Association, 7.500%, 08/15/25 | 52,826 | 54,397 |
| Federal National Mortgage Association, 6.740%, 08/25/07 | 202,009 | 202,000 |
| Federal National Mortgage Association, 6.620%, 11/13/07 | 329,339 | 334,518 |
| | 728,918 | 736,520 |
| **Corporate Bonds and Notes** | | |
| Dayton Hudson Credit Card Trust, 6.100%, 9/28/98 | $101,151 | $100,087 |
| Chase Credit Card Trust, 6.730%, 05/15/99 | 90,681 | 90,862 |
| Capitol One Bank, 6.830%, 05/17/99 | 149,829 | 151,040 |
| Donaldson Lukfin & Jenrette, 6.700%, 06/30/00 | 175,009 | 177,146 |
| Ford Credit Grantor Trust, 5.900%, 10/15/00 | 36,795 | 36,783 |
| Walt Disney Co. Global, 6.375%, 03/30/01 | 200,009 | 201,760 |
| Premier Auto Trust, 6.400%, 10/06/01 | 154,911 | 155,859 |
| General Motors Acceptance, 6.375%, 12/01/01 | 149,787 | 150,659 |
| AT&T Corporation | 165,009 | 165,000 |

# BIG RIVERS ELECTRIC CORPORATION

## SALARIED EMPLOYEES' RETIREMENT PLAN

## LINE 27a - SCHEDULE OF ASSETS HELD FOR INVESTMENT PURPOSES

## AS OF DECEMBER 31, 1997

| Issuer and Description of Investment | Cost | Fair Value |
|---|---|---|
| **Corporate Bonds and Notes** | | |
| Lehman Brothers Holdings, 7.250%, 04/15/03 | 89,896 | 92,914 |
| Pacific Gas & Electric, 6.250%, 06/25/04 | 174,985 | 174,975 |
| United Companies FC 97-C, 5.856%, 07/15/04 | 78,220 | 78,144 |
| USA Waste Services Inc., 7.000%, 10/01/04 | 199,603 | 204,525 |
| Hanson PLC Notes, 6.750%, 09/15/05 | 99,969 | 102,209 |
| Associates Corporation, 7.550%, 07/17/06 | 150,009 | 160,838 |
| CS First Boston MSC 97-C1, 7.150%, 08/20/06 | 101,509 | 100,500 |
| US West Capital Funding Inc., 7.300%, 01/15/07 | 102,912 | 103,712 |
| Morgan Stanley Finance, 8.030%, 02/28/17 | 189,327 | 194,214 |
| Banco Santiago, 7.000%, 07/18/07 | 162,754 | 165,449 |
| Consolidated Edison, 6.450%, 12/01/97 | 148,380 | 149,718 |
| National Australia Bank, 6.400%, 12/10/97 | 164,890 | 165,610 |
| Lockheed Martin, 7.700%, 06/15/08 | 159,964 | 173,792 |
| Green Tree Financial, 8.250%, 11/15/19 | 43,034 | 42,515 |
| Time Warner Entertainment, 8.375%, 03/15/23 | 65,382 | 74,152 |
| USX Corporation, 8.125%, 07/15/23 | 124,990 | 129,629 |
| Time Warner Inc., 7.570%, 02/01/24 | 70,009 | 73,374 |
| Interpublic Development Bank, 6.800%, 10/15/25 | 147,926 | 169,250 |
| IBM Corp., 7.000%, 10/30/25 | 149,345 | 154,157 |
| Freeport McMoran Copper & GD, 7.200%, 11/15/26 | 199,795 | 203,156 |
| Rite Aid Corp., 7.700%, 02/15/27 | 199,441 | 218,446 |
| General Electric CMS HEL A7, 6.735%, 12/25/02 | 165,009 | 165,000 |
| News America Holdings, 7.750%, 12/01/45 | 96,112 | 104,111 |
| | 4,306,642 | 4,429,586 |
| **Foreign Bonds and Notes** | | |
| AT&T Corporation, 8.250%, 01/11/00 | $103,766 | $103,757 |
| African Development Bank, 9.300%, 07/01/00 | 99,590 | 108,066 |
| | 203,356 | 211,823 |

BIG RIVERS ELECTRIC CORPORATION

SALARIED EMPLOYEES' RETIREMENT PLAN

LINE 27a - SCHEDULE OF ASSETS HELD FOR INVESTMENT PURPOSES

AS OF DECEMBER 31, 1997

| Issuer and Description of Investment | Cost | Fair Value |
|---|---|---|
| Common Stock | | |
| Allergan Inc. | $ 17,546 | $ 30,210 |
| Alza Corp. Del | 19,288 | 25,450 |
| American Home Products Corp. | 50,147 | 53,500 |
| AON Corp. | 33,122 | 92,335 |
| Automatic Data Processing | 36,091 | 67,515 |
| Baxter International Inc. | 59,264 | 55,482 |
| Beckman Instrs. Inc. New | 7,951 | 12,000 |
| Biogen Inc. | 10,729 | 10,915 |
| Birmingham Stl. Corp. | 7,098 | 4,725 |
| Boston Technology | 4,492 | 7,540 |
| Briggs & Stratton Co. | 4,881 | 4,856 |
| Burlington No. Santa Fe | 49,430 | 83,645 |
| Cigna Corp. | 48,515 | 103,425 |
| CMS Energy Corp. | 25,267 | 48,470 |
| CPC Intl Inc. | 32,297 | 43,200 |
| CVS Corp Com | 14,041 | 32,032 |
| Champion Enterprises Inc. | 11,309 | 14,395 |
| Chase Manhattan Corp New | 28,622 | 43,800 |
| Circuit City | 40,905 | 42,676 |
| Citicorp | 9,445 | 50,575 |
| Comerica Incorporated | 5,837 | 18,050 |
| Commscope Inc. | 9,315 | 8,625 |
| Comverse Technology | 2,429 | 3,900 |
| Corning Inc. | 63,043 | 63,115 |
| Covance Inc. | 7,300 | 8,450 |
| Crown Cork & Seal Inc. | 18,736 | 20,050 |
| The Dial Corporation | 4,862 | 8,325 |
| EMC Corporation | 34,468 | 65,851 |
| Eastman Chem Co. | 28,036 | 29,782 |
| Echlin | 7,421 | 7,240 |
| Enron Corporation | 36,552 | 41,565 |
| Entergy Corporation | 56,422 | 65,865 |
| Federal Express Corp. | 46,632 | 73,276 |
| First American Corp. | 5,755 | 9,950 |
| First Data Corporation | 64,184 | 58,150 |

BIG RIVERS ELECTRIC CORPORATION

SALARIED EMPLOYEES' RETIREMENT PLAN

LINE 27a - SCHEDULE OF ASSETS HELD FOR INVESTMENT PURPOSES

AS OF DECEMBER 31, 1997

| Issuer and Description of Investment | Cost | Fair Value |
|---|---|---|
| Common Stock | | |
| First Sec Corp Del | 6,908 | 12,565 |
| First Energy Corp Com | 11,285 | 18,270 |
| Fleetwood Enterprises Inc. | 9,399 | 12,731 |
| Food Lion Incorporated | 10,476 | 12,657 |
| Forest Labs Inc. CL A | 15,096 | 19,725 |
| Fort James Corp Com | 32,152 | 38,250 |
| Gannett Company | 24,107 | 49,450 |
| General Semiconductor Inc. | 6,816 | 5,492 |
| Geon Company | 4,051 | 4,675 |
| Genzyme Corp. Comm. Gen. Div. | 5,470 | 8,325 |
| Goodyear Tire & Rubber | 52,421 | 76,350 |
| Harnischfeger Inds., Inc. | 22,808 | 21,190 |
| Health Care & Retirement | 10,566 | 20,125 |
| Hibernia Corp. | 6,830 | 9,440 |
| Informix Corp. | 6,920 | 1,900 |
| Interpublic Group | 13,562 | 29,890 |
| Kimberly Clark | 46,494 | 44,382 |
| Lear Corp. | 18,292 | 19,000 |
| Lockheed Martin Corp. | 73,205 | 118,005 |
| Lyondell Petro Chem | 21,423 | 23,850 |
| Manor Care Inc. | 9,321 | 26,250 |
| Martin Marietta Materials | 2,812 | 10,275 |
| Masco Corporation | 34,150 | 50,875 |
| Nabisco Holdings Class A | 31,467 | 43,650 |
| National SVC Inds Inc. | 8,265 | 9,915 |
| Nextel Communications | 19,525 | 31,200 |
| Nextel Systems Inc. | 34,431 | 33,965 |
| Old Republic International | 3,572 | 7,440 |
| Peco Energy Co. | 58,162 | 60,625 |
| Pentair Inc. | 5,984 | 14,375 |
| Pharmacia-Upjohn Inc. | 23,469 | 21,975 |
| Phillip Morris | 75,340 | 108,600 |
| Raytheon Company Class B | 57,429 | 50,500 |
| Regions Financial Corp. | 6,059 | 8,438 |

# BIG RIVERS ELECTRIC CORPORATION

## SALARIED EMPLOYEES' RETIREMENT PLAN

## LINE 27a - SCHEDULE OF ASSETS HELD FOR INVESTMENT PURPOSES

## AS OF DECEMBER 31, 1997

| Issuer and Description of Investment | Cost | Fair Value |
|---|---|---|
| Common Stock | | |
| Reynolds & Reynolds Co. | 15,264 | 14,750 |
| Schering Plough Corp. | 19,284 | 80,765 |
| Seagate Technology | 24,281 | 13,475 |
| Timken Co. | 5,307 | 10,313 |
| Tyson Foods | 28,007 | 34,850 |
| US Bancorp New | 39,130 | 75,782 |
| Ultramar Diamond Shamrock | 25,503 | 28,879 |
| Vencor Inc. | 18,804 | 14,663 |
| Viad Corporation | 10,088 | 15,450 |
| West Vaco Corporation | 1,916 | 4,716 |
| Witco Corp. | 4,612 | 4,081 |
| Xerox Corp. | 78,961 | 110,813 |
| York International | 23,861 | 19,782 |
| | 1,964,717 | 2,761,614 |
| Total Investments | $13,359,025 | $14,377,470 |

BIG RIVERS ELECTRIC CORPORATION

SALARIED EMPLOYEES' RETIREMENT PLAN

LINE 27d - SCHEDULE OF REPORTABLE TRANSACTIONS

FOR THE YEAR ENDED DECEMBER 31, 1997

| | Purchases | | Sales | | | |
|---|---|---|---|---|---|---|
| Description of Investment | Number of Transactions | Purchase Price | Number of Transactions | Sales Price | Cost | Net Gain/(Loss) |
| Federated Short-Term U.S. Government Trust | 135 | $ 8,683,111 | 98 | $ 7,903,872 | $ 7,903,872 | $ - |
| U.S. Treasury Coupon Strips, 11/15/04 | 3 | 1,090,059 | 2 | 1,135,669 | 1,090,059 | 45,610 |
| U.S. Treasury Bonds, 8.125%, 05/15/21 | 6 | 1,312,105 | 6 | 2,526,242 | 2,553,916 | (27,674) |
| U.S. Treasury Notes, 6.000%, 02/15/26 | 8 | 2,028,730 | 3 | 1,193,301 | 1,179,734 | 13,567 |
| U.S. Treasury Notes, 5.250%, 07/31/98 | 1 | 507,369 | 1 | 505,951 | 507,369 | (1,418) |
| U.S. Treasury Notes, 4.750%, 08/31/98 | 1 | 507,892 | 1 | 508,845 | 507,892 | 953 |
| U.S. Treasury Notes, 7.000%, 07/15/06 | 6 | 2,278,533 | 15 | 4,898,471 | 4,899,374 | (903) |
| U.S. Treasury Notes, 6.625%, 07/31/01 | 7 | 3,962,082 | 8 | 3,235,415 | 3,239,717 | (4,302) |
| U.S. Treasury Notes, 6.000%, 09/30/98 | 1 | 509,871 | 1 | 510,592 | 509,871 | 721 |
| U.S. Treasury Notes, 5.875%, 10/31/98 | 1 | 512,383 | 1 | 513,750 | 512,383 | 1,367 |
| U.S. Treasury Notes, 6.250%, 10/31/01 | 3 | 1,330,375 | 4 | 3,331,303 | 3,334,132 | (2,829) |
| U.S. Treasury Notes, 5.625%, 11/30/98 | 1 | 516,026 | 1 | 517,546 | 516,026 | 1,520 |
| U.S. Treasury Notes, 6.000%, 06/30/99 | 1 | 1,508,426 | 1 | 125,460 | 125,285 | 175 |
| U.S. Treasury Notes, 6.250%, 08/31/02 | 1 | 780,537 | 2 | 289,346 | 288,900 | 446 |
| U.S. Treasury Coupon Strips, 05/15/03 | 1 | 1,038,514 | 1 | 1,078,927 | 1,038,514 | 40,413 |
| U.S. Treasury Coupon Strips, 05/15/08 | 1 | 855,168 | 2 | 1,234,686 | 1,123,467 | 111,219 |

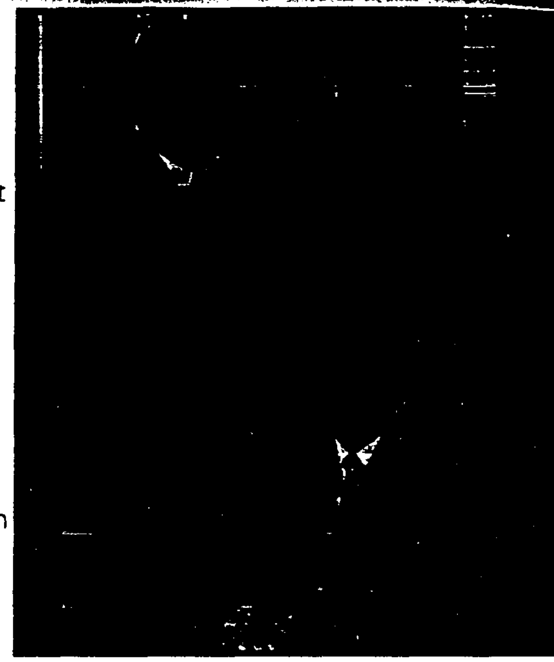
# THE SWITCH IS ON!

**New Attitude**
**New Vision**
**New Look**

Big Rivers Electric Corporation

A Touchstone Energy® Partner

The switch was definitely on for Big Rivers Electric Corporation (Big Rivers) in 1998. It was turned on with a new attitude, a new vision and a new look as Big Rivers reached a resolution to its past financial and business challenges. Effective July 15, Big Rivers implemented a bankruptcy court-approved Plan of Reorganization (Plan) by consummating a transaction with LG&E Energy Corp. (LEC) and certain of its affiliates. The affiliates of LEC are four wholly-owned subsidiaries: Western Kentucky Energy Corp. (WKEC), WKE Station Two Inc. (Station Two Subsidiary), Western Kentucky Leasing Corp. (Leaseco), and LG&E Energy Marketing Inc. (LEM). WKEC has leased Big Rivers' generating facilities and Station Two Subsidiary is the assignee of Big Rivers' Station Two contractual obligations related to generation. WKEC operates the units and owns the output of Big Rivers' generating facilities. Station Two Subsidiary operates the units and owns that portion of Station Two output not otherwise allocated to the City of Henderson. The transaction was the completion of a nearly four-year process for Big Rivers.



WILLIAM C. DENTON, CHAIR, AND MIKE CORE, PRESIDENT & CEO

In 1994, Big Rivers' board of directors established a committee to develop a resolution to the challenges that plagued the organization. The resolution process involved evaluating several alternatives and led to the selection of a partner and development of a plan. In 1996, Big Rivers filed for protection under Chapter 11 of the U.S. Bankruptcy Code in order to resolve the final details of the Plan. During that process, LEC became the new partner. The final bankruptcy Plan was approved by the court and, after final approval by the Kentucky Public Service Commission (KPSC), was implemented. Four years of hard work had paid off.

While it is very early in the life of the new Big Rivers, it is clear the new partnership with LEC is working well. In the first five plus months, Big Rivers has modestly exceeded the expectations of its financial model utilized in the Plan. These and expected similar results in 1999 will give Big Rivers a good base from which to move forward.

Big Rivers is a much different corporation. During 1992, employment had reached nearly 900. Today, with the power plants leased to LEC, Big Rivers has 95 employees. While Big Rivers has the power supply responsibilities for its four member distribution cooperative systems, it no longer has most of the risks associated with generation (e.g., fuel supply). Big Rivers fulfills its power requirements from LEC, the Southeastern Power Administration (SEPA), and the wholesale market place.

Big Rivers also has a new attitude in place creating a customer-driven organization. It is dedicated to providing outstanding service to its four member systems and their respective member customers. Working leaner and smarter, Big Rivers is striving to bring positive value to its members and the 22 counties of western Kentucky served by the four member distribution systems.

We are excited about the future. It will take a strong vision, along with careful management and governance, to be successful. The board, member systems, management and staff are committed to these necessary efforts. We believe Big Rivers has the necessary flexibility and positioning to be able to navigate the uncharted waters of utility restructuring faced by the electric industry.

We hope you rejoice with us in our successes of 1998, and join with us in our optimism for 1999 and the future. Clearly, at Big Rivers the "switch is on," and the new attitude, vision and look are the lights illuminating the path to the future.

**William C. Denton**
Chair of the Board

**Mike Core**
President & CEO

Big Rivers is an electric generation and transmission cooperative (G&T) that provides wholesale electric service to its four member distribution systems. Those member owners are Green River Electric Corporation in Owensboro; Henderson Union Electric Cooperative in Henderson; Jackson Purchase Energy Corporation in Paducah; and Meade County Rural Electric Cooperative Corporation in Brandenburg. These four serve approximately 97,000 member consumers in 22 counties in western Kentucky.

Big Rivers began a process in 1994 to find a permanent solution to an imminent financial crisis. In the two years leading up to September 1996, its careful evaluation of many alternatives led Big Rivers to pick a partner that would lease the generating plants and, in turn, sell wholesale power back to it. Because of impending default on its long-term debt obligations, troublesome litigation and the still-burdensome coal contracts, on September 25, 1996, Big Rivers filed a voluntary petition for relief under Chapter 11 bankruptcy.

During the bankruptcy, LEC emerged as the new partner of Big Rivers. On June 9, 1997, the bankruptcy court confirmed the Plan proposed by Big Rivers, and on June 1, 1998, approved modifications to the Plan. The KPSC approved the Plan and the final new rate schedule that resulted in a permanent reduction in rates on July 14. On July 17, Big Rivers and LEC closed the transaction that implemented the Plan.

In the transaction with LEC, Big Rivers leases, but continues to own, its 1,459 MW of generating capacity at three sites. In addition, Big Rivers assigns its capacity rights to approximately another 240 MW in the Henderson Municipal Power and Light's Station Two facility. For these rights, LEC makes monthly lease payments to Big Rivers and owns the output of the generating facilities through 2023.

Through a Purchase Power Agreement (PPA) in effect through 2023, Big Rivers purchases power from LEC at fixed rates in amounts within certain contractually-established minimum and maximum hourly and annual quantities. Big Rivers also continues to purchase a contracted amount of power from the SEPA. Big Rivers will satisfy any future needs for additional power from the wholesale power market or other third-party arrangements. Big Rivers may also sell to third parties any power that it can contractually purchase from LEC.

An important change going forward for Big Rivers is the "sale" to LEC of the wholesale power requirements obligation to support retail service to the two aluminum smelters. This was accomplished by amendments to the "all-requirements" wholesale power contracts of Big Rivers' members Green River Electric Corporation and Henderson Union Electric Cooperative. The two smelters had previously purchased approximately 56 percent of the energy sold by Big Rivers to its members.

A significant benefit of the Plan for Big Rivers was the restructuring of the Rural Utilities Service (RUS) debt. The effective interest rate on the approximately $1.1 billion debt has been reduced from 8.0 percent to 5.8 percent, with the term of the obligation extended from 2018 to 2023. This debt restructuring results in an annualized reduction of $24 million in interest expense. Big Rivers still retains essentially the same obligations on its other outstanding debt, $142.1 million in pollution control bonds.

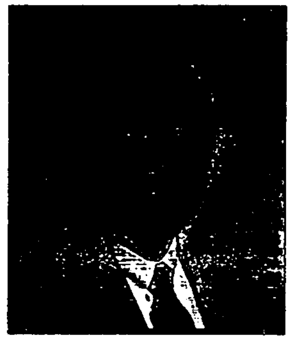
The effective date of the Plan generally resulted in the release and settlement of all existing claims and causes of actions that were pending against Big Rivers and its member systems in September of 1996.

### Terminology Reference Guide

**ECAR:** East Central Area Reliability Council
**FERC:** Federal Energy Regulatory Commission
**G&T:** Generation & Transmission Cooperative
**KPSC:** Kentucky Public Service Commission
**Leaseco:** Western Kentucky Leasing Corp.
**LEC:** LG&E Energy Corp.
**LEM:** LG&E Marketing, Inc.
**NERC:** National Electric Reliability Council
**The Plan:** Plan of Reorganization
**PC Bonds:** Pollution Control Bonds
**PPA:** Purchase Power Agreement
**RUS:** Rural Utilities Service
**SEPA:** Southeastern Power Administration
**WKEC:** Western Kentucky Energy Corp.
**Y2K:** Year 2000

Big Rivers continues to own and operate its transmission system and to provide transmission services to its members, LEC and other third parties in accordance with its open access transmission tariff. Big Rivers is still responsible for power supply to the four member systems under its "all-requirements" wholesale power contracts, except for the previously noted smelter transactions.

For Big Rivers' structure, the "switch is on" is an apt description for 1998. From an organization of nearly 900 employees to one of less than 100, Big Rivers was significantly changed in operational characteristics and overall business culture. Gone were coal purchases, power plant operations and the inherent accompanying risks. Retained were transmission operations, power supply obligations to the member systems and services to the members. New was the culture of a leaner organization dedicated to being customer driven. It was a major transition to create the switch. With the elimination of fuel purchases and generation production responsibilities, the number of departments was reduced from seven to five. The remaining five departments were restructured to reflect the new organization. Those five are system operations, power supply, finance and administrative services, contract administration and regulatory affairs, and marketing. Four of the five departments are headed by new vice presidents, who bring with them a wealth of qualifications and experience in their respective areas.

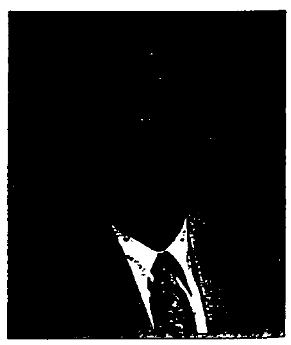


**Travis Housley**
VP of System Operations

System Operations is the department that has changed the least as Big Rivers retained the operating responsibilities for its 1,190-mile transmission system. Not only does it provide transmission services to the four member systems and third-party users, it also contracts with LEC to provide services on the power plants' interfaces with the transmission system.

All but approximately 80 miles of transmission line is either at 69 kV or 161 kV. The transmission system is connected to 79 substations owned by the four member systems and it interconnects with seven surrounding utilities at 15 locations. Big Rivers has an open access transmission tariff filed with the (FERC) Federal Energy Regulatory Commission and the KPSC.

There are 54 employees utilized in the operation, maintenance and construction projects for the transmission system. The organization has a work plan that will keep the system prepared for the growth of the member systems and the required needs of third-party users. In focusing on the future, Big Rivers has put special emphasis on cost-effective reliability, setting specific goals with each member system. In addition, Big Rivers works closely with the East Central Area Reliability (ECAR) Council to ensure coordination and strengthened reliability of both Big Rivers and the regional grid. ECAR, along with other members of the National Electric Reliability Council (NERC), have put special emphasis on the Year 2000 concerns as they relate to power production and transmission.



**Bill Blackburn**
VP of Power Supply

Big Rivers, under its "all-requirements" (except smelter loads) power contracts with its members, retains responsibility to provide wholesale power to meet the members' energy needs. While this responsibility is retained, the resource mix with which Big Rivers performs this function is new.

Big Rivers no longer operates the plants or owns the power they produce. Instead, it has a PPA with LEC that allows Big Rivers to purchase certain minimums and maximums of energy at pre-determined costs throughout the 25-year lease agreement. In addition, Big Rivers purchases power from SEPA for the member system needs and has access to the wholesale market for any additional needs. The key strategy in the future for power supply is the careful management of those wholesale power resources to provide the most economic benefit to the member systems.

Under the PPA parameters, Big Rivers can purchase and resell the power it does not need when it is economically viable to do so. It can also purchase power from other sources when the same economic viability exists. The benefits of such "arbitrage" transactions were not included in the Plan because the future value of the benefit is unknown and unpredictable. To the extent those efforts are successful, however, they offer additional financial strength to Big Rivers. The net proceeds from arbitrage sales are divided between Big Rivers (one-third) and RUS (two-thirds) in order to accelerate debt service payments.

There are contract limits on the purchases from both LEC and SEPA. As member system requirements grow, other resources will be needed. To that end, in 1999, Big Rivers will develop a power requirements study and integrated resource plan to map out directions to meet those needs efficiently and economically.

**MARK HITE**
**VP OF FINANCE & ADMINISTRATIVE SERVICES**

As a downsized organization, Big Rivers was able to reduce the number of departments from seven to five. Part of that reduction was the combination of the Finance and Corporate Services Departments. This consolidated department was impacted the most by the implementation of the LEC transaction, as it was involved with the transferral of 480 employees to LEC and significant financial accounting issues to reflect the new organization on Big Rivers' books.

Helping to improve the financial picture of Big Rivers is the annual $35 million LEC lease and the transmission use payments essentially resolving the historical excess capacity concerns. Further, although the obligation to serve the smelters' power requirements has shifted to LEC, Big Rivers retains the expected margins as though it had continued to supply them.

In addition to the previously mentioned RUS debt restructuring, Big Rivers' obligations on its $142.1 million of pollution control (PC) bonds, while secured and remarketed, were essentially unaffected by the reorganization. Moody's Investors Service and Standard and Poor's have assigned investment grade ratings of "Baa3" and "BBB-", respectively, to Big Rivers' PC bond reimbursement obligations.

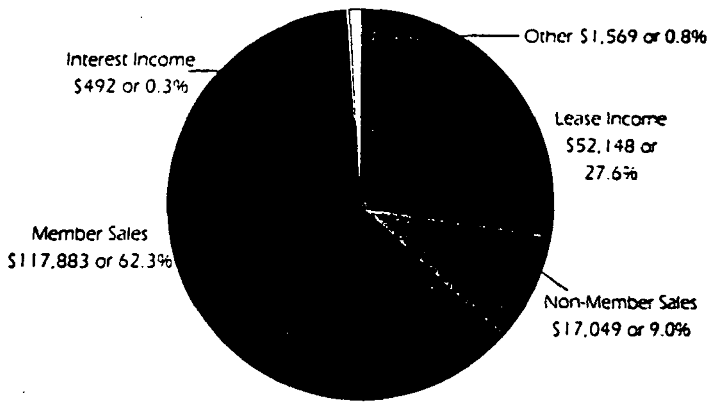
For its LEC lease, Big Rivers follows the lease accounting prescribed by Statement of Financial Accounting Standards Nos. 13 and 98. As the lease involves real estate and no transfer of ownership at the end of the lease term, the lease is properly accounted for as an operating lease rather than a capital lease.

A new depreciation study, completed in 1998, has been approved by the RUS and awaits KPSC approval. As a result, the remaining service lives of the utility plant in service on December 31, 1998, were significantly extended and depreciation reduced to $28.1 million annually, reflecting a $9.8 million decrease.

Y2K concerns were brought to the forefront in 1998 for all businesses. Big Rivers provides information system/technology services to both itself and its four member systems. Working closely with the member systems, Big Rivers is well into making the necessary changes and updates to keep their computer billing, accounting and other functions ready for the next century. In addition, as previously mentioned, Big Rivers is coordinating closely with ECAR to address Y2K concerns in the area of transmission. Big Rivers is working with LEC and other vendors to address any other critical areas regarding Y2K readiness.

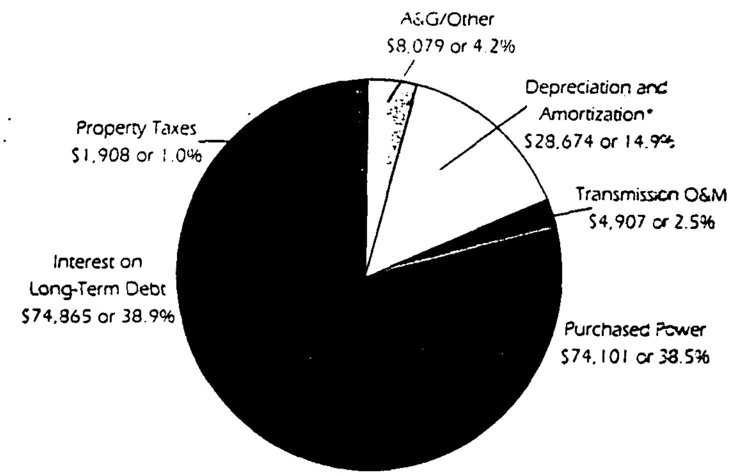
Considering the "switch" which occurred July 15, 1998, and because the financial statements accompanying this annual report do not reflect operations for the "new" Big Rivers, please focus on the two pie charts depicting the 1999 budgeted revenues and expenses, as shown on the next page. As illustrated, the 1999 budgeted loss is $3.4 million. Our increasing member sales volume and declining wholesale power rates are two more reasons for our optimism about Big Rivers' future.

## 1999 Budgeted Revenues
(Thousands of Dollars)




Total Revenues of $189,141

## 1999 Budgeted Expenses
(Thousands of Dollars)

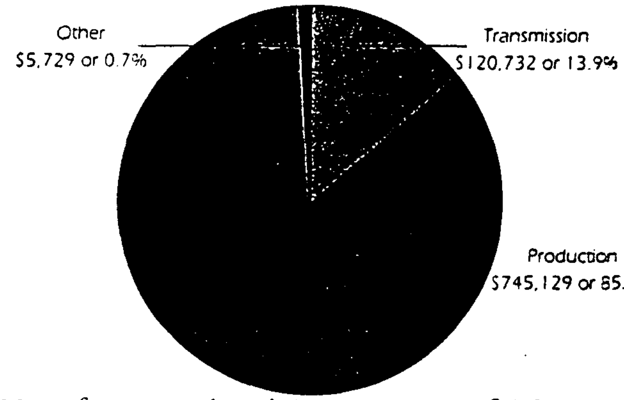



Total Expenses of $192,534

*Includes July 14, 1998 Depreciation Study

The 1999 budgeted statement of operations is illustrated by the two pie charts of revenues and expenses. The expense chart includes the previously-mentioned depreciation study.

## Electric Utility Plant Assets
(Thousands of Dollars)



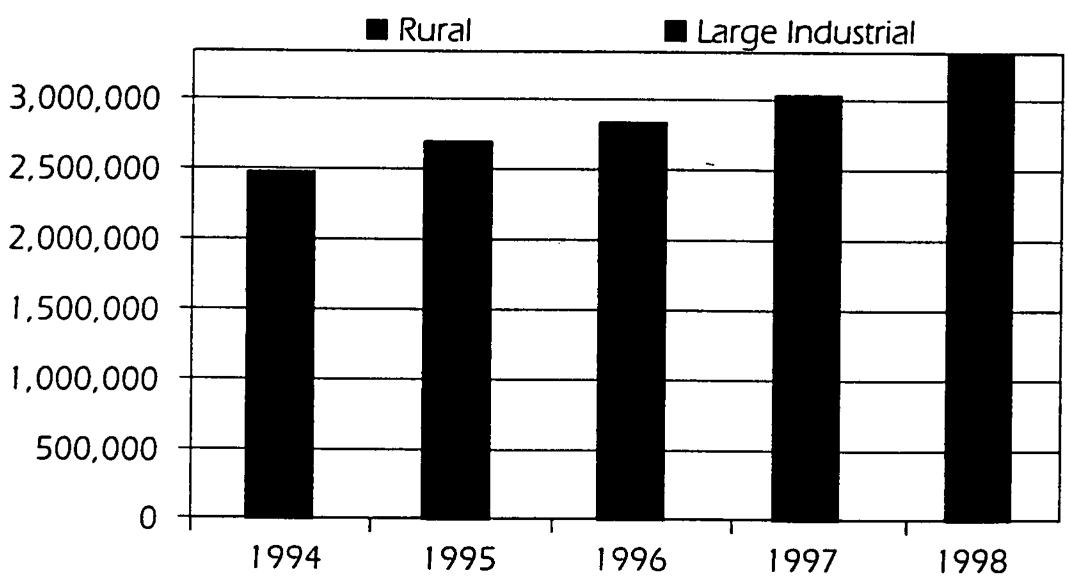

- Net of Accumulated Depreciation of $644,358
- Includes the July 14, 1998 Depreciation Study
- Excludes Construction Work in Progress of $3,772

# Owned Electric Generation

| Facilities | Type of Fuel | Net Capacity (MW) | Commercial Operation Date |
|---|---|---|---|
| **Kenneth C. Coleman Plant** | | | |
| Unit 1 | Coal | 150 | 1969 |
| Unit 2 | Coal | 150 | 1970 |
| Unit 3 | Coal | 155 | 1972 |
| **Robert D. Green Plant** | | | |
| Unit 1 | Coal | 231 | 1979 |
| Unit 2 | Coal | 223 | 1981 |
| **Robert A. Reid Plant** | | | |
| Unit 1 | Coal | 65 | 1966 |
| Combustion Turbine | Oil | 65 | 1976 |
| **D.B. Wilson Unit No. 1** | Coal | 420 | 1986 |
| **Total** | | **1,459** | |

lthough leased to LEC, Big Rivers continues to own its 1,459 megawatts of electric generating cilities, as described above.

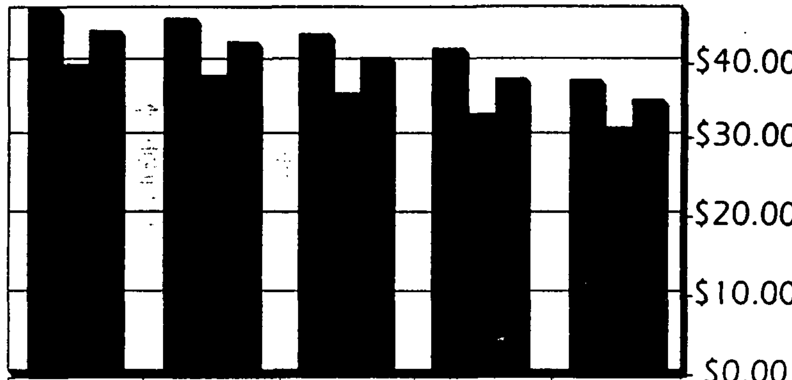
# Member Wholesale Power Sales
(Megawatt-Hours)




| | 1994 | 1995 | 1996 | 1997 | 1998 |
|---|---|---|---|---|---|
| Rural | 1,571,691 | 1,665,310 | 1,728,687 | 1,758,398 | 1,861,051 |
| Large Industrial | 907,639 | 1,019,130 | 1,092,611 | 1,258,705 | 1,427,793 |
| Total | 2,479,330 | 2,684,440 | 2,821,298 | 3,017,103 | 3,288,844 |

Excludes sales to aluminum smelters.

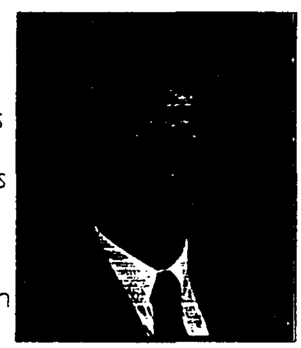
# Member Wholesale Power Rates
## (Dollars/Megawatt-Hours)




| | 1994 | 1995 | 1996 | 1997 | 1998 |
|---|---|---|---|---|---|
| ■ Rural | $45.58 | $44.76 | $42.72 | $40.17 | $36.72 |
| ■ Large Industrial | $38.72 | $37.27 | $35.35 | $32.43 | $30.70 |
| ■ Average | $43.07 | $41.92 | $39.87 | $36.94 | $34.11 |

Excludes sales to aluminum smelters.

**Big Rivers' wholesale rates to its members average 3.4 cents/kWh. As illustrated, rates have continued to decline the past four years, while sales to members have increased at an annual compound rate of 7.3 percent, 4.3 percent for rural loads and 12.0 percent for industrial loads.**

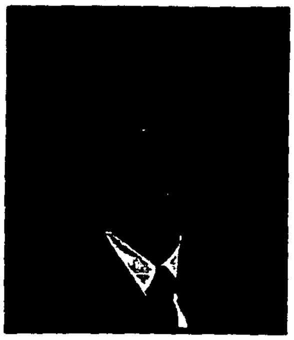


David Spainhoward
VP of Contract Administration & Regulatory Affairs

The new Contract Administration and Regulatory Affairs Department has the responsibility and oversight for the many contracts to which Big Rivers is a party, for regulatory compliance and approval, for governmental affairs and for environmental compliance. The lease with LEC is a complex, 25-year transaction that requires constant attention. Additionally, Big Rivers has dozens of other contracts whose proper administration is a fundamental requirement.

Big Rivers' contract administration is closely tied to regulatory affairs at both the state and national level. Its rates and certain financial activities remain under the jurisdiction of the KPSC. Big Rivers also has an open access transmission tariff that was approved by the KPSC and the FERC. Many of the Big Rivers' contracts are also subject to regulatory monitoring and approval.

Governmental affairs includes having a registered lobbyist on staff who works with legislators and other lobbyists across the state and interacts with the Kentucky Association of Electric Cooperatives. Constant monitoring of proposed legislation is an important ingredient to the future of Big Rivers in a changing, competitive re-regulated business environment. While LEC has responsibility for environmental compliance with regard to the generating plants, Big Rivers is required to pay a portion of the costs associated with new environmental laws. Additionally, Big Rivers must remain compliant with environmental laws and regulations regarding its transmission system and other operations.



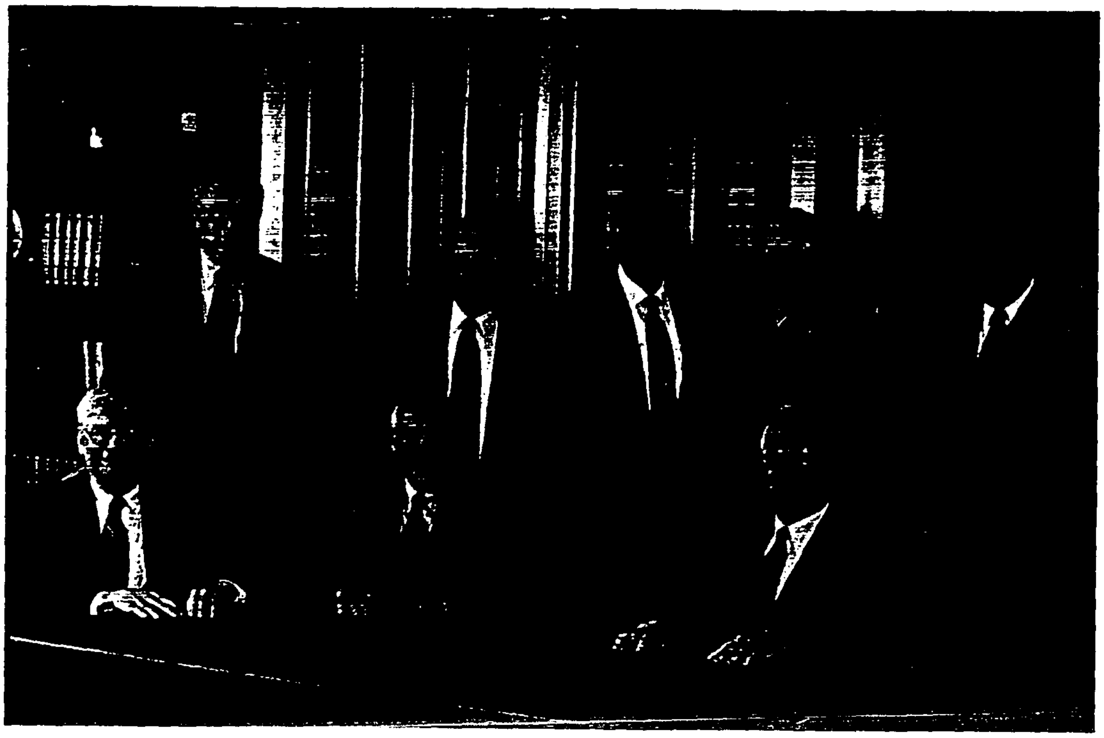
**RICHARD BECK**
VP OF MARKETING

In the restructuring of Big Rivers, the retained function of marketing was elevated to the level of a department. While this department is involved with the marketing and image building of Big Rivers, the bulk of its efforts is in working with the member systems in building and strengthening relationships with their residential and commercial/industrial customers. Marketing has taken on an added focus with the member systems, especially in light of the potential restructuring of the electric utility industry. To that end, a marketing strategic plan was developed at the end of 1998 by the member systems and Big Rivers.

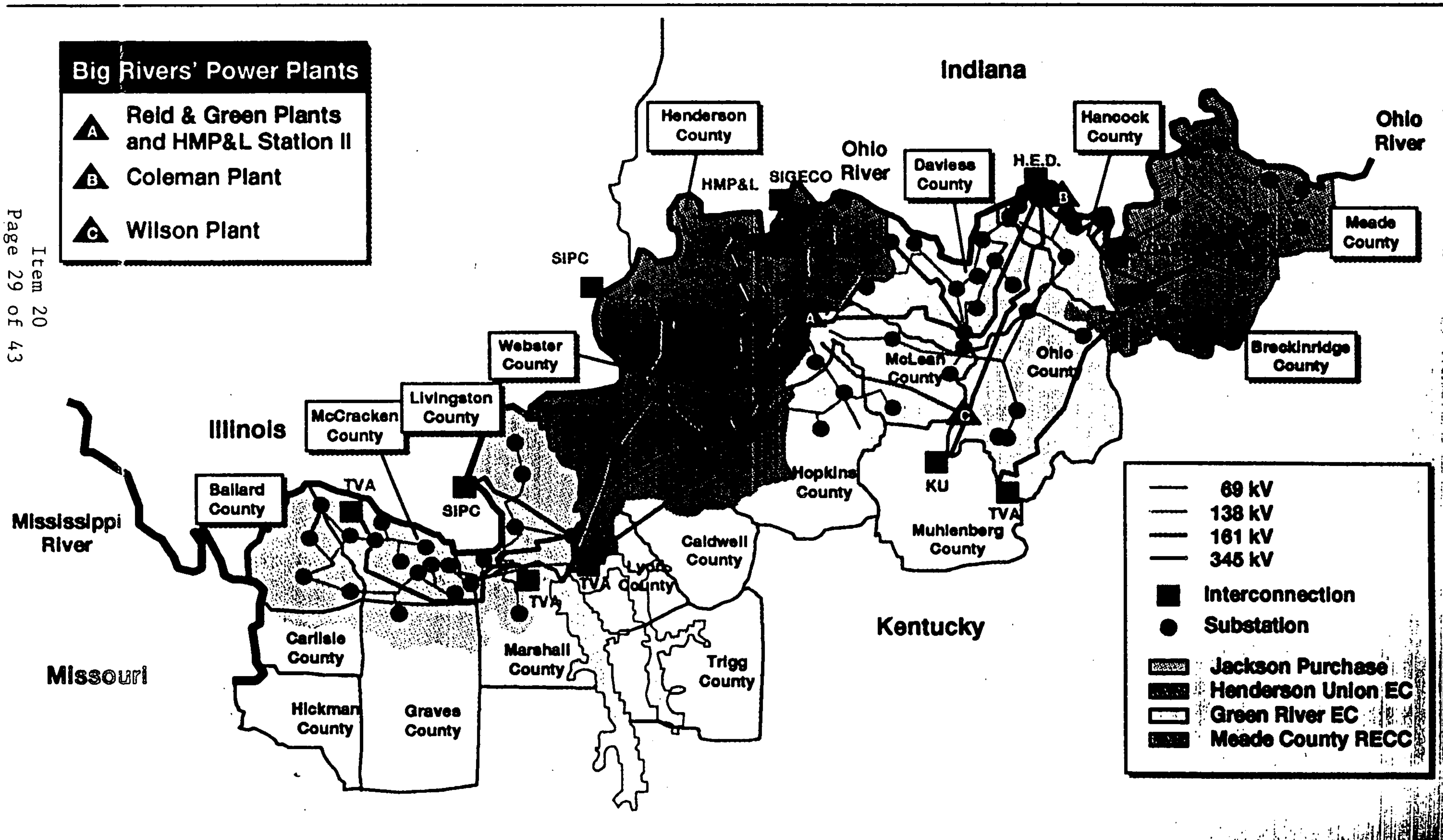
To further that plan, Big Rivers and its members have become part of the Touchstone® Energy partners. This is an alliance of more than 500 rural electric cooperatives across the country to promote the benefits of the cooperatively-owned brand of electricity and other services. "The Power of Human Connections" is a powerful approach to the opportunities created by customer choice within the electric utility industry.

Big Rivers also created a "new look" in 1998 with a change in its logo and the roll out of "The Switch Is On" program. Choosing not to change its name, rather Big Rivers changed its look to emphasize the new nature of the organization.

Three years ago, Big Rivers faced the possibility of no future. High debt service, high coal costs, excess capacity and high rates had all combined to paint a bleak picture for its future. Thanks to the efforts of the board, member systems, staff, creditors and others, Big Rivers overcame those challenges. Today at Big Rivers, the switch is on; there is a new attitude, a new vision, and a new look that does indeed see a future.



SEATED LEFT TO RIGHT: DR. H.M. "BO" SMITH; DICK WILSON; AND JOHN MYERS, SECRETARY-TREASURER. STANDING LEFT TO RIGHT: DR. JAMES SILLS, VICE CHAIR; LEE BEARDEN; JIM MOUNTS; JOSEPH HAMILTON; AND WILLIAM C. DENTON, CHAIR.


Big Rivers' Power Plants
A Reid & Green Plants and HMP&L Station II
B Coleman Plant
C Wilson Plant
Indiana
Illinois
Missouri
Kentucky
Ohio River
Mississippi River
Henderson County
Webster County
Livingston County
McCracken County
Ballard County
Carlisle County
Hickman County
Graves County
Marshall County
Lyon County
Caldwell County
Trigg County
Hopkins County
McLean County
Muhlenberg County
Ohio County
Daviess County
Hancock County
Breckinridge County
Meade County
HMP&L
SIGECO
SIPC
TVA
H.E.D.
KU
69 kV
138 kV
161 kV
345 kV
Interconnection
Substation
Jackson Purchase
Henderson Union EC
Green River EC
Meade County RECC

## Report of Independent Public Accountants

To the Board of Directors of
Big Rivers Electric Corporation:

We have audited the accompanying balance sheets of Big Rivers Electric Corporation (Big Rivers, a Kentucky corporation) as of December 31, 1998 and 1997, and the related statements of revenues and expenses, equities (deficit) and cash flows for the period ended July 14, 1998 (pre-confirmation), the period ended December 31, 1998 (post-confirmation) and for the two years in the period ended December 31, 1997. These financial statements are the responsibility of Big Rivers' management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with generally accepted auditing standards and the standards for financial audits contained in Government Auditing Standards (1994 Revision), issued by the Comptroller General of the United States. These standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Big Rivers as of December 31, 1998 and 1997, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 1998, in conformity with generally accepted accounting principles.

As discussed in Note 1 to the financial statements, effective July 15, 1998, Big Rivers emerged from bankruptcy and adopted a new basis of accounting whereby all liabilities were adjusted to their estimated fair values. Accordingly, the financial statements for periods subsequent to the confirmation of the reorganization are not comparable to the financial statements presented for prior periods.

As explained in Note 2 to the financial statements, for the year ended December 31, 1996, Big Rivers discontinued the accounting principles prescribed by Statement of Financial Accounting Standards No. 71, "Accounting for the Effects of Certain Types of Regulation."

In accordance with Government Auditing Standards, we have also issued reports dated March 26, 1999, on our consideration of Big Rivers' internal control structure and compliance with laws and regulations.

Arthur Andersen LLP

Little Rock, Arkansas,
March 26, 1999.

(Dollars in thousands)

| ASSETS | 1998 | 1997 |
|---|---|---|
| Utility plant, net | $ 875,362 | $ 914,429 |
| Deferred charges | 32,651 | - |
| Other deposits and investments, at cost | 8,973 | 6,067 |
| Current assets: | | |
| Cash and cash equivalents | 32,016 | 14,861 |
| Accounts receivable | 13,614 | 27,875 |
| Fuel inventory | | 17,522 |
| Non-fuel inventory | 546 | 15,672 |
| Prepaid expenses | 1,381 | |
| Total current assets | 47,557 | 75,930 |
| | $ 964,543 | $ 996,426 |

| EQUITIES (DEFICIT) AND LIABILITIES | 1998 | 1997 |
|---|---|---|
| Capitalization: | | |
| Equities (deficit) | $ (359,957) | $ (292,553) |
| Liabilities subject to compromise | - | 1,250,677 |
| Long-term debt | 1,228,837 | - |
| Other long-term obligations | 2,904 | 4,449 |
| Total capitalization | 871,784 | 962,573 |
| Current liabilities: | | |
| Current maturities of long-term obligations and liabilities subject to compromise | 8,062 | 1,153 |
| Purchased power payable | 10,903 | 743 |
| Accounts payable | 4,441 | 16,355 |
| Accrued expenses | 7,272 | 9,799 |
| Total current liabilities | 30,678 | 28,050 |
| Deferred credits and other: | | |
| Deferred lease revenue | 54,652 | - |
| Other | 7,429 | 5,803 |
| Total deferred credits and other | 62,081 | 5,803 |
| Commitments and contingencies | | |
| | $ 964,543 | $ 996,426 |

The accompanying notes to financial statements are an integral part of these balance sheets.

## BIG RIVERS ELECTRIC CORPORATION
## STATEMENTS OF REVENUES AND EXPENSES
## FOR THE YEARS ENDED DECEMBER 31
(Dollars in thousands)

| | 1998 | 1997 | 1996 |
|---|---|---|---|
| Operating revenue | $230,307 | $304,626 | $321,988 |
| Lease revenue | 24,247 | - | - |
| Total operating revenues | 254,554 | 304,626 | 321,988 |
| Operating expenses: | | | |
| Operations: | | | |
| Fuel for electric generation | 51,876 | 92,966 | 109,695 |
| Power purchased and interchanged | 59,586 | 44,916 | 45,864 |
| Production, excluding fuel | 19,684 | 33,409 | 36,818 |
| Other | 8,600 | 13,997 | 18,506 |
| Maintenance | 19,764 | 33,125 | 27,913 |
| Depreciation | 31,032 | 35,860 | 36,141 |
| Total operating expenses | 190,542 | 254,273 | 274,937 |
| Electric operating margins | 64,012 | 50,353 | 47,051 |
| Interest expense and other: | | | |
| Interest | 75,021 | 41,272 | 70,041 |
| Other, net | (184) | (192) | (9,659) |
| Total interest expense and other | 74,837 | 41,080 | 60,382 |
| Operating (loss) margin before non-operating (loss) margin and extraordinary (loss) gain, net | (10,825) | 9,273 | (13,331) |
| Non-operating (loss) margin: | | | |
| Reorganization expenses | (17,373) | (18,352) | (10,335) |
| Interest income and other | 1,321 | 1,025 | 1,296 |
| Total non-operating loss | (16,052) | (17,327) | (9,039) |
| Net loss before extraordinary (loss) gain | (26,877) | (8,054) | (22,370) |
| Extraordinary (loss) gain, net (Notes 1 and 2) | (40,527) | - | 31,244 |
| Net (loss) margin | $ (67,404) | $ (8,054) | $ 8,874 |

The accompanying notes to financial statements are an integral part of these statements.

## BIG RIVERS ELECTRIC CORPORATION
## STATEMENTS OF EQUITIES (DEFICIT)
## FOR THE YEARS ENDED DECEMBER 31
(Dollars in thousands)

| | | | | Other equities | |
|---|---|---|---|---|---|
| | Total equities (deficit) | Accumulated deficit | Patronage capital | Donated capital and memberships | Consumers contributions to debt service |
| Balance at December 31, 1995 | $(293,373) | $(425,739) | $ 127,921 | $764 | $3,681 |
| Margins for 1996: | | | | | |
| Operating | (13,331) | (13,331) | - | - | - |
| Non-operating | (9,039) | (9,039) | - | - | - |
| Extraordinary gain (Note 2) | 31,244 | 31,244 | - | - | - |
| Balance at December 31, 1996 | (284,499) | (416,865) | 127,921 | 764 | 3,681 |
| Margins for 1997: | | | | | |
| Operating | 9,273 | 9,273 | - | - | - |
| Non-operating | (17,327) | (17,327) | - | - | - |
| Balance at December 31, 1997 | (292,553) | (424,919) | 127,921 | 764 | 3,681 |
| Margins for 1998: | | | | | |
| Forgiveness of patronage capital allocations (Note 3) | - | 127,921 | (127,921) | - | - |
| Operating | (10,825) | (10,825) | - | - | - |
| Non-operating | (16,052) | (16,052) | - | - | - |
| Extraordinary loss, net (Note 1) | (40,527) | (40,527) | - | - | - |
| Balance at December 31, 1998 | $(359,957) | $(364,402) | $ - | $764 | $3,681 |

The accompanying notes to financial statements are an integral part of these statements.

## BIG RIVERS ELECTRIC CORPORATION
## STATEMENTS OF CASH FLOWS
## FOR THE YEARS ENDED DECEMBER 31
## (Dollars in thousands)

| | 1998 | 1997 | 1996 |
|---|---|---|---|
| Cash flows from operating activities: | | | |
| Net (loss) margin | $(67,404) | $ (8,054) | $ 8,874 |
| Adjustments to reconcile net (loss) margin to net cash provided by (used in) operating activities: | | | |
| Non-cash extraordinary loss (gain), net (Notes 1 and 2) | 54,727 | | (31,244) |
| Non-cash reorganization expenses | 4,004 | | 4,210 |
| Depreciation and amortization | 34,125 | 40,542 | 32,513 |
| Net change in balancing account | - | (39,257) | (38,344) |
| Changes in operating assets and liabilities: | | | |
| Deferred charges | (13,820) | - | - |
| Other deposits and investments | (2,906) | (1,404) | 63 |
| Accounts receivable | 14,261 | (3,714) | 7,619 |
| Fuel inventory | 2,524 | (4,623) | 8,053 |
| Non-fuel inventory | 446 | 31 | (857) |
| Prepaid expenses | (1,381) | 1,689 | (1,529) |
| Other long-term obligations | (2,147) | 5,602 | - |
| Purchased power payable | 10,160 | 743 | - |
| Accounts payable | (11,914) | 423 | (7,218) |
| Accrued expenses | (2,527) | 3,735 | (214) |
| Deferred lease revenue | 54,652 | - | - |
| Other, net | 1,626 | (577) | (3,395) |
| Net cash provided by (used in) operating activities | 74,426 | (4,864) | (21,469) |
| Cash flows from investing activities: | | | |
| Proceeds from sale of assets in conjunction with Lease Agreement | 35,919 | - | - |
| Capital expenditures, net | (4,458) | (4,437) | (5,259) |
| Net cash provided by (used in) investing activities | 31,461 | (4,437) | (5,259) |
| Cash flows from financing activities: | | | |
| (Decrease) increase in liabilities subject to compromise | (7,412) | 15,728 | 25,039 |
| Principal payments on long-term obligations | (89,653) | - | - |
| Increase in LEM Advances | 8,333 | - | - |
| Net cash (used in) provided by financing activities | (88,732) | 15,728 | 25,039 |
| Net increase (decrease) in cash and cash equivalents | 17,155 | 6,427 | (1,689) |
| Cash and cash equivalents, beginning of year | 14,861 | 8,434 | 10,123 |
| Cash and cash equivalents, end of year | $ 32,016 | $ 14,861 | $ 8,434 |
| Supplemental Cash Flow Information: | | | |
| Cash paid relating to interest | $ 76,716 | $ 36,918 | $ 48,420 |

The accompanying notes to financial statements are an integral part of these statements.

## 1. CHAPTER 11 BANKRUPTCY FILING, EMERGENCE FROM BANKRUPTCY AND CONTINGENCIES:

### Chapter 11 Bankruptcy Filing:

On September 25, 1996, Big Rivers Electric Corporation (Big Rivers or the Company) filed a voluntary petition for relief under Chapter 11 of the United States Bankruptcy Code (hereinafter referred to as Chapter 11) and the Company began operating as a debtor-in-possession under the supervision of the United States Bankruptcy Court for the Western District of Kentucky (the Bankruptcy Court). Big Rivers believed it was necessary to file Chapter 11 in order to, among other reasons, (a) restructure its debt obligations, upon which the Company would otherwise default in the near term; (b) relieve the Company of severely burdensome long-term coal contracts; (c) receive judicial approval in conjunction with consummating a long-term lease transaction involving the generation assets of Big Rivers; (d) sufficiently resolve other alleged claims, suits and liabilities asserted against Big Rivers such that the reorganized Company could emerge from Chapter 11 able to repay its restructured debt and (e) implement its reorganization in a timely manner. On January 22, 1997, Big Rivers filed a plan of reorganization with the Bankruptcy Court (the Plan). The Plan, further amended on April 18, 1997, was approved by substantially all creditors and rate payer constituents of Big Rivers and was confirmed by the Bankruptcy Court on June 9, 1997. On June 30, 1997, the Company filed an application with the Kentucky Public Service Commission (the KPSC) for an order approving various components of the Plan (the Rate Hearing). In particular, the Company requested approval for the leasing of its generation assets and the related energy to certain affiliates of LG&E Energy Corporation (LG&E Energy) (the Lease Agreement). The KPSC approved the Lease Agreement in principle on April 30, 1998, pending the revision of the rates associated with National Southwire Aluminum Company (NSA) and Alcan Aluminum Corporation (Alcan) (collectively referred to as the Aluminum Smelters) and Big Rivers' other large industrial customers. Modifications to the rate structure were made and the Plan, as further amended, was approved by the Bankruptcy Court on June 1, 1998. The KPSC issued an order dated July 14, 1998, approving the Plan as it relates to the Lease Agreement.

### Emergence from Bankruptcy:

Big Rivers' Chapter 11 reorganization was confirmed effective July 15, 1998 (the Effective Date), with the closing of the Lease Agreement, whereby Big Rivers will lease its generating facilities to Western Kentucky Energy Corporation (WKEC), a wholly-owned subsidiary of LG&E Energy. Pursuant to the Lease Agreement, WKEC will operate the generating facilities and maintain title to all energy produced. Throughout the lease term, in order to fulfill Big Rivers' obligation to supply power to its members following the Effective Date, the Company will substantially purchase its power requirements from LG&E Energy Marketing Corporation (LEM), a wholly-owned subsidiary of LG&E Energy, pursuant to a power purchase agreement. Big Rivers will continue to operate its transmission facilities and will charge WKEC tariff rates for delivery of the energy produced and consumed by WKEC and its customers. As part of the Lease Agreement, WKEC also purchased certain property, inventory and other assets necessary for the operation of the generation facilities from Big Rivers for $35,919. In connection with the purchase of these assets, the Company recorded a net loss of $4,004 which is reflected as a reorganization expense in the accompanying statements of revenues and expenses. The significant terms of the Lease Agreement are as follows:

I. WKEC will lease and operate Big Rivers' generation facilities for a 25-year term, beginning on the Effective Date.

II. Big Rivers will retain ownership of the generation facilities at the end of the lease term.

III. WKEC will pay Big Rivers an annual lease payment of $30,965 over the lease term, subject to certain adjustments.

IV. On the Effective Date, Big Rivers received $69,100 representing certain closing payments and the first two years of the annual lease payments. In accordance with Statement of Financial Accounting Standards (SFAS) No. 13, Accounting for Leases, the Company will amortize these payments into lease revenue over the lease term.

V. Big Rivers will continue to provide power for its members, excluding the member loads serving the Aluminum Smelters, through the power purchase agreement with LEM, based on a pre-determined maximum capacity. When possible, the Company may also obtain the power necessary to supply its member loads, excluding the Aluminum Smelters, in the open market. The member loads for the Aluminum Smelters will be served by LEM. To the extent the power purchased from LEM does not reach predetermined minimums, the Company will be required to pay certain penalties. Also, to the extent additional power is available to Big Rivers under the LEM contract, Big Rivers may also sell to non-members.

VI. Through 2011, WKEC will reimburse Big Rivers approximately $260,668 for the "expected margins" of the Aluminum Smelters, being defined as the net cash flows that Big Rivers would have received over the term of the Lease Agreement if the Company had continued to serve the Aluminum Smelters' load, as filed in the Rate Hearing (the Expected Margins).

VII. WKEC will be responsible for the operating costs of the generation facilities; however, Big Rivers will be partially responsible for ordinary capital expenditures of the generation facilities over the term of the Lease Agreement, up to a 49% maximum, as defined. This maximum is not expected to exceed $148,000 over the Lease Agreement.

VIII. Big Rivers entered into a note payable with LEM for $19,676 to be repaid over the Lease Agreement, which bears interest at 8% per annum, in consideration for LEM's assumption of the risk related to unforeseen costs with respect to power to be supplied to the Aluminum Smelters and the increased responsibility for financing capital improvements. The Company has recorded this obligation as a component of deferred charges with the related payable recorded as long-term debt in the accompanying balance sheets. This deferred charge will be amortized straight-line over the lease term.

IX. On the Effective Date, Big Rivers paid a non-refundable marketing payment of $5,933 to LEM, which has been recorded as a component of deferred charges. This amount will be amortized straight-line over the lease term.

X. During the lease term, Big Rivers will be entitled to certain "billing credits" against amounts the Company owes to LEM under the power purchase agreement. Each month during the first fifty-five months of the lease term, Big Rivers will receive a credit of $89. For the year 2011, Big Rivers will receive a credit of $2,611 and for the years 2012 through 2023, the Company will receive a credit of $4,111 annually. Big Rivers will recognize these credits as a reduction of power purchased as service is provided.

As disclosed in the Company's 1997 audited financial statements, the Company initially anticipated recording an impairment loss related to its generation facilities in conjunction with the consummation of the Lease Agreement, as prescribed by generally accepted accounting principles. This impairment loss was anticipated due to the estimated fair value of Big Rivers' generation facilities based on a November 1997 appraisal. Management has since determined that, based upon a number of elements of the Plan which changed during the period from November 1997 to the Effective Date, including a new depreciation study completed in July 1998 which significantly extends the remaining service lives of Big Rivers' generating facilities, the fair value of Big Rivers' generating facilities on the Effective Date was such that no impairment loss was warranted in conjunction with the consummation of the Lease Agreement.

1. CHAPTER 11 BANKRUPTCY FILING, EMERGENCE FROM BANKRUPTCY AND CONTINGENCIES (Continued):

As prescribed by the Plan and in conjunction with the Effective Date, Big Rivers settled the liabilities subject to compromise as recorded in the accompanying balance sheet. Upon attaining the Effective Date, the Rural Utilities Service (RUS) Promissory Note (see Note 6) was replaced by two separate notes. The first note (the New RUS Promissory Note) represents a stated principal balance of $1,022,583, net of $78,582 paid on the Effective Date, which bears a stated interest rate of 5.75% per annum, respectively, with a varying repayment schedule over the Lease Agreement. The second note (the ARVP Note) represents a $265,000 obligation due to the RUS at the end of the Lease Agreement, and this obligation does not bear interest.

In accordance with Statement of Position (SOP) 90-7, "Financial Reporting by Entities in Reorganization Under the Bankruptcy Code," at the Effective Date the Company was required to record its liabilities at fair value. In determining the fair value of Big Rivers' liabilities, the Company was required to record its long-term debt by applying a discount rate commensurate with the market rate to the future debt service payments under the New RUS Promissory Note and the ARVP Note, regardless of the stated principal and coupon rates of the obligations. In conjunction with recording the two separate notes on the Effective Date, the Company determined that the market rate associated with the New RUS Promissory Note and the ARVP Note was 5.81%. In discounting the future debt service payments using the market rate, the Company recorded a combined principal balance of $1,077,311 for the two RUS notes, net of $78,582 paid on the Effective Date, and recorded a $54,727 loss as an extraordinary item in the accompanying statements of revenues and expenses for the year ended December 31, 1998. Additionally, this transaction was treated as a non-cash transaction and was excluded from the accompanying statements of cash flows. Also, in conjunction with the Plan, certain pollution control bonds (discussed herein) were secured and remarketed following the mandatory tender of the bonds by the holders thereof. The irrevocable standby letters of credit, which were supporting the bonds held by Chase Manhattan Bank and the Bank of New York were replaced with the bond insurance policies and standby bond purchase agreements issued by Ambac Assurance Corporation, each dated at the Effective Date between Big Rivers, U.S. Bank Trust National Association, as trustee, and Credit Suisse First Boston, as the liquidity provider. In connection therewith, the Company realized cash proceeds of $14,200 and recognized an extraordinary gain in the accompanying statements of revenues and expenses. For Big Rivers' remaining liabilities, there were no other significant differences between the carrying amounts and the respective fair values on the Effective Date.

In accordance with the Lease Agreement, the Company is allowed to purchase power in the open market, incurring penalties when the power purchased from LEM does not meet certain minimum levels, and sell excess power (power not needed to supply its jurisdictional load) in the open market (collectively referred to as Arbitrage). Pursuant to the New RUS Promissory Note and the ARVP Note, the total value created by Arbitrage must be divided as follows: one-third, adjusted for member sales volume and capital expenditures, will be used to make principal payments on the New RUS Promissory Note; one-third will be used to make principal payments on the ARVP Note; and the remaining payments received may be retained by the Company.

In connection with the Chapter 11 filing and subsequent Effective Date, certain items have been segregated and presented as reorganization expenses in the accompanying statements of revenues and expenses as costs related to transactions which were directly associated with the Chapter 11 proceedings. Reorganization expenses for the years ended December 31, were as follows:

| | 1998 | 1997 | 1996 |
|---|---|---|---|
| Professional services | $ 4,365 | $ 6,362 | $ 1,733 |
| Net loss on sale of property, inventory and other assets | 4,004 | - | - |
| Loss on coal prepayment | | - | 4,210 |
| Bankruptcy Court examiner fee | 2,300 | 266 | 72 |
| Employee termination benefits | 4,979 | - | 1,737 |
| Expected allowed claim | - | - | 1,583 |
| Coal contract settlements | - | 10,200 | 1,000 |
| Other, net | 1,725 | 1,524 | - |
| | $17,373 | $18,352 | $10,335 |

During 1997, Big Rivers terminated two unfavorable coal contracts with pending lawsuits. Of the amounts settled, $6,000 was paid upon initial settlement. During 1998, the Company paid $2,328 and has a remaining liability of $3,455 at December 31, 1998.

Contingencies:

The initial plan of reorganization, filed January 22, 1997, included a proposed lease agreement with PacifiCorp Kentucky Energy Corporation (PKEC), with terms similar in nature to the Lease Agreement. Based on the Bankruptcy Court's decision to award the lease agreement to WKEC, PKEC and certain related entities filed proof of claims with the Bankruptcy Court seeking damages and allowance of claims in the approximate aggregate amount of $30,709. The Bankruptcy Court disallowed these claims, the U.S. District Court for the Western District of Kentucky affirmed this decision in 1998, and PKEC and related entities have appealed this decision to the U. S. Court of Appeals. Management intends to vigorously defend these claims. Management is unable to predict the outcome of these matters, and accordingly, no adjustments have been recorded to reflect these uncertainties in the accompanying financial statements.

On June 5, 1997, an examiner appointed by the Bankruptcy Court filed for a $4,410 fee. On March 26, 1999, the Company received an order from the Bankruptcy Court entitling the examiner to receive a fee of $2,638. Management has accrued amounts under this order as a reorganization expense for the year ended December 31, 1998. However, management intends to appeal this order and vigorously defend this claim.

In 1997, employees of Big Rivers discovered that certain wastes subject to 40 CFR Part 760 had been stored at a Company facility in excess of the regulatory time limits for such storage. This situation was subsequently disclosed to the United States Environmental Protection Agency (USEPA), Region IV, in accordance with regulatory requirements. The USEPA has not asserted a claim for damages at this time. Management is unable to predict the damages, if any, that may be imposed by the USEPA. Accordingly, no adjustments have been recorded to reflect this uncertainty in the accompanying financial statements.

2. DISCONTINUATION OF ACCOUNTING FOR RATE REGULATED ENTITIES:

During 1996, Big Rivers determined the Company was no longer eligible for the continued application of the accounting required by SFAS No. 71, "Accounting for the Effects of Certain Types of Regulation." In conjunction with the decision to discontinue the regulatory accounting principles as prescribed by SFAS No. 71, Big Rivers recorded a non-cash extraordinary gain of $31,244 for the year ended December 31, 1996.

3. ORGANIZATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

General Information:

Big Rivers, an electric generation and transmission cooperative, supplies the power needs of its four member distribution cooperatives (excluding the power needs of the Aluminum Smelters) and markets power to non-member utilities and power marketers. The members provide electric power and energy to industrial, residential and commercial customers located in portions of 22 western Kentucky counties. Big Rivers has wholesale power contracts with each of its members which require the members to buy and receive from Big Rivers all power and energy requirements other than as discussed in Note 1. The wholesale power contracts with the members extend to the year 2023. Rates to its members are established by the KPSC and are subject to approval by the RUS.

Financial Statement Presentation:

The preparation of the financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses and disclosure of contingent assets and liabilities. The estimates and assumptions used in the accompanying financial statements are based upon management's evaluation of the relevant facts and circumstances as of the date of the financial statements. Actual results may differ from those estimates.

System of Accounts:

Big Rivers' accrual basis accounting policies follow the Uniform System of Accounts as prescribed by the RUS Bulletin 1767B-1, as adopted by the KPSC. The regulatory agencies retain authority and periodically issue orders on various accounting and ratemaking matters.

Revenue Recognition:

Revenues generated from the Company's wholesale power contracts are based on month-end meter readings and are recognized as earned. In accordance with SFAS No. 13, Big Rivers lease revenue will be recognized straight-line over the expected benefit period. The major components of Big Rivers lease revenue will include the annual lease payments and the Expected Margins as discussed in Note 1.

In conjunction with the Lease Agreement, Big Rivers expects to realize the following minimum lease revenue for the years ending December 31:

| Year | Amount |
|---|---|
| 1999 | $ 52,150 |
| 2000 | 52,150 |
| 2001 | 52,150 |
| 2002 | 52,150 |
| 2003 | 52,150 |
| Thereafter | 851,219 |
| | $1,111,969 |

Utility Plant and Depreciation:

Utility plant is recorded at original cost, which includes the cost of contracted services, materials, labor, overhead and an allowance for borrowed funds used during construction. Replacements of depreciable property units, except minor replacements, are charged to utility plant.

Allowance for borrowed funds used during construction is included on projects with an estimated total cost of $250 or more before consideration of such allowance. The interest capitalized is determined by applying the effective rate of Big Rivers' weighted average debt to the accumulated expenditures for qualifying projects included in construction in progress.

Depreciation of utility plant in service is recorded using the straight-line method over the estimated remaining service lives, as approved by the RUS. During 1996, the RUS approved new depreciation rates, which were based on the results of a depreciation study which extended the estimated service lives of Big Rivers' utility plant. These rates were utilized from January 1995 through June 1998. During 1998, the Company commissioned another depreciation study to again evaluate the remaining economic lives of its assets. The study received the approval of the RUS and is pending approval from the KPSC (expected in 1999). As a result of the July 1998 study, the remaining service lives of the Company's depreciable assets were further extended. The 1998 study has been accepted beginning with the Effective Date for purposes of recording depreciation expense. For 1998, the difference between the depreciation rates prescribed by the 1996 study as compared to the 1998 study resulted in decreased depreciation expense of approximately $4,900.

For the three years ended December 31, the annual composite depreciation rates used to compute depreciation expense were as follows:

| | Periods prior to July 15, 1998 | Period subsequent to July 15, 1998 |
|---|---|---|
| Production plant | 1.45 - 4.25% | 1.6 - 2.5% |
| Transmission plant | 2.49% | 1.8 - 3.2% |
| Station equipment | 2.49% | 2.2 - 2.9% |
| General plant | 2.00 - 14.29% | 1.1 - 5.4% |

For 1998, 1997 and 1996, the average composite depreciation rates were 2.05%, 2.37% and 2.54%, respectively.

Cash and Cash Equivalents:

For purposes of the statement of cash flows, Big Rivers considers all short-term, highly liquid investments with original maturities of three months less to be cash equivalents.

3. ORGANIZATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

Patronage Capital:

As provided in the bylaws, any excess of revenues over the sum of (a) operating costs and expenses properly chargeable against the furnishing of electric energy, and (b) amounts required to offset operating losses incurred during the current or any prior fiscal year, is capital furnished by the patrons and credited to a capital account for each patron on a patronage basis. In accordance with the Plan, all patronage capital claims were extinguished and discharged on the Effective Date.

4. UTILITY PLANT:

The following summarizes utility plant at December 31:

| | 1998 | 1997 |
|---|---|---|
| Classified plant in service: | | |
| Electric plant - leased | $1,312,345 | $ - |
| Production plant | - | 1,329,593 |
| Transmission plant | 84,350 | 84,067 |
| Station equipment | 101,982 | 101,888 |
| General plant | 14,713 | 18,229 |
| Other | 67 | 190 |
| Unclassified plant in service | 2,490 | 1,679 |
| | $1,515,947 | $ 1,535,646 |
| Less accumulated depreciation | 644,358 | 622,926 |
| | 871,589 | 912,720 |
| Construction in progress | 3,773 | 1,709 |
| | $ 875,362 | $ 914,429 |

Interest capitalized for the years ended December 31, 1998, 1997 and 1996, was not significant to the Company.

5 UNAMORTIZED DEBT EXPENSES AND COAL PREPAYMENTS:

In prior years, Big Rivers refinanced portions of its long-term obligations at lower interest rates and incurred refinancing expenses. These costs were being amortized over the term of the RUS Promissory Note; however, as discussed in Note 2, in conjunction with Big Rivers' discontinuing the application of SFAS No. 71, the remaining unamortized debt expenses of $3,525 were recognized as a component of an extraordinary gain in the accompanying statements of revenues and expenses for the year ended December 31, 1996.

On July 18, 1989, Big Rivers endeavored to enter into an agreement with a coal supplier to buy out a high-cost, long-term coal supply contract. On September 24, 1991, a contract for substitution of coal was executed with this coal supplier. In connection therewith, Big Rivers made fuel prepayments of $7,000, which Big Rivers was withholding from payment to the supplier at a rate of one dollar per ton of coal shipped. In October 1996, the Bankruptcy Court determined that the contract with the supplier was unfavorable to Big Rivers and allowed the Company to reject the contract. Based on this decision, and due to the uncertainty associated with realizing this prepayment, Big Rivers reserved for the remaining prepayment balance and recorded $4,210 as a reorganization expense in the accompanying statements of revenues and expenses for the year ended December 31, 1996.

6. LONG-TERM DEBT:

Due to the underlying collateral value of the RUS Promissory Note, Big Rivers ceased accruing interest for all long-term debt effective September 30, 1996. However, in accordance with the Plan, Big Rivers resumed recording interest on the RUS Promissory Note effective June 9, 1997, to the extent of payments resulting from a month-end operating cash balance in excess of $10,000. However, upon achieving the Effective Date, the Company began recording interest based on the fair value rate of 5.81% per annum.

Contractual interest related to both secured and unsecured long-term obligations not recognized as interest expense for accounting purposes totaled $7,021, $54,024 and $24,702 for the years ended December 31, 1998, 1997 and 1996, respectively.

A detail of long-term debt and liabilities subject to compromise is as follows at December 31:

| Long-term debt: | 1998 |
|---|---|
| New RUS Promissory Note, stated interest rate of 5.75%, recorded at fair value (Note 1), with an interest rate of 5.81% | $1,003,791 |
| RUS ARVP Note, no stated interest rate, recorded at fair value (Note 1), with interest imputed at 5.81% | 62,405 |
| LEM Advances, interest rate of 6.98%, payable in monthly installments beginning in August 2000 (Due July 2003) | 8,481 |
| LEM Settlement Note, interest rate of 8.0% | 19,571 |
| County of Ohio, Kentucky, promissory note, variable interest rate of 4.20% | 83,300 |
| County of Ohio, Kentucky, promissory note, variable interest rate of 4.20% | 58,800 |
| Total long-term debt | 1,236,348 |
| Current maturities | 7,511 |
| Total long-term debt, net of current maturities | $1,228,837 |

6. LONG-TERM DEBT (Continued):

Liabilities subject to compromise:

| | 1997 |
|---|---|
| Promissory Note - RUS 8.0% | $ 530,905 |
| Unamortized premium | 570,260 |
| County of Ohio, Kentucky, promissory note, with variable interest rate of 4.5% | 83,300 |
| County of Ohio, Kentucky, promissory note, with variable interest rate of 4.5% | 58,800 |
| Accounts payable | 7,412 |
| Total liabilities subject to compromise | $1,250,677 |

The following are estimated maturities of long-term debt at December 31 (excluding the LEM Advances):

| Year | Amount |
|---|---|
| 1999 | $ 7,511 |
| 2000 | 4,520 |
| 2001 | 4,041 |
| 2002 | 2,053 |
| 2003 | 366 |
| Thereafter | 1,209,376 |
| | $1,227,867 |

RUS Promissory Note:

On February 25, 1988, Big Rivers refinanced $319,426 of high interest rate debt. As a result of this refinancing, a gain of $37,734 was realized. As prescribed by regulatory guidelines, this gain was deferred and was being amortized into income over the term of the RUS Promissory Note. However, in conjunction with Big Rivers discontinuing the application of SFAS No. 71, the remaining unamortized gain was recognized as a component of an extraordinary gain in the accompanying statements of revenues and expenses for the year ended December 31, 1996.

Pollution Control Bonds:

On October 31, 1985, the County of Ohio, Kentucky, issued $83,300 of Pollution Control Refunding Demand Bonds, Series 1985, the proceeds of which are supported by a promissory note from Big Rivers, which bears the same interest rate as the bonds. These bonds bear interest at a variable rate and, prior to the Effective Date, were supported by a Chase Manhattan irrevocable standby letter of credit. These bonds are dated to mature on October 1, 2015.

On June 30, 1983, the County of Ohio, Kentucky, issued $58,800 of Pollution Control Bonds, Series 1983, the proceeds of which are supported by a promissory note from Big Rivers, which bears the same interest rate as the bonds. These bonds bear interest at a variable rate and, prior to the Effective Date, were supported by a Bank of New York irrevocable standby letter of credit. These bonds are dated to mature on June 1, 2013.

Big Rivers' obligations with respect to the bonds, although secured and remarketed, were not affected by the Plan. However, the irrevocable standby letters of credit issued by the Chase Manhattan Bank and the Bank of New York were replaced on the Effective Date by two liquidity facilities issued by Credit Suisse First Boston and municipal bond insurance policies issued by Ambac Assurance Corporation (see Note 1). Big Rivers has agreed to reimburse Ambac Assurance Corporation for any payments under the municipal bond insurance policies or the surety policies.

LEM Settlement Note:

On the Effective Date, Big Rivers executed the Settlement Note with LEM. The Settlement Note will require Big Rivers to pay to LEM $19,676, plus interest at 8% per annum over the lease term (the LEM Advances). The estimated principal and interest payment is approximately $1,822 annually. This payment is consideration for LEM's assumption of the risk related to unforeseen costs with respect to power to be supplied to the Aluminum Smelters and the increased responsibility for financing capital improvements. The execution of the Settlement Note was treated as a non-cash transaction and was excluded from the accompanying statements of cash flows.

LEM Advances:

Beginning in August 1998 (the first month after the Effective Date) and ending in July 2000, LEM will make monthly payments totaling $50 to the RUS on behalf of the Company. The Company will then make monthly payments of $60 to LEM over the next 36 months. The payments made by LEM to the RUS will be applied to the New RUS Promissory Note. The Company will also recognize interest expense over the five-year life of the LEM Advances at 6.98% per annum.

7. RATE MATTERS:

As approved by the Bankruptcy Court and the KPSC, effective September 1997, the interim rates charged to Big Rivers' members consist of a billing demand charge per KW and an energy charge per kWh consumed. The interim rates of Big Rivers included specific rate designs for its members' two classes of customers, the large industrial customers and the rural customers under their jurisdiction. For the large industrial customers, the demand charge is based on each customer's maximum demand during the current month. The remaining customers billing demand is based upon the maximum coincident demand of each member's delivery points. The demand and energy charges are not subject to adjustment for increases or decreases in fuel or environmental costs. On April 30, 1998, the KPSC modified the interim rates for the large industrial customers. On June 1, 1998, the modified rates were approved by the Bankruptcy Court. These rates will remain in effect until revoked or modified by the KPSC. The rates resulted in a significant decrease in Big Rivers' rates for wholesale electric service to certain members from the rates in effect prior to the Chapter 11 filing.

7. RATE MATTERS (Continued):

Pursuant to the Lease Agreement, LEM will supply the energy necessary to comply with the Oglethorpe Power Corporation (Oglethorpe Power) and the two Hoosier Energy Rural Electric Company (Hoosier Energy) contracts. In turn, Big Rivers will remit the net revenues from the contracts to LEM. The Oglethorpe Power contract originated in August 1992 for the sale of 103 MW of power for ten years. The first of the Hoosier Energy contracts is for the sale of 65 MW of capacity during a three-month summer period through the year 2000. The second Hoosier Energy contract is a peaking power contract varying from 10 MW in 1993 to 170 MW in 1999. This contract is for the summer months of June through September of each calendar year.

In accordance with the Lease Agreement, LG&E Energy will operate certain generating facilities owned by the City of Henderson, Kentucky (the City) which were operated by Big Rivers prior to the Effective Date, pursuant to certain lease contracts between the City and Big Rivers. The Company will retain the service obligation under these contracts to provide transmission services, as defined.

8. INCOME TAXES:

Big Rivers was initially formed as a tax-exempt cooperative organization under section 501(c)(12) of the Internal Revenue Code. To retain tax-exempt status under this section of the Internal Revenue Code, at least 85% of Big Rivers' revenues must be generated from sales to the Company's members. In 1983, sales to non-members resulted in Big Rivers being unable to meet the 85% requirement. In a letter dated March 23, 1984, the Internal Revenue Service notified Big Rivers that effective for 1983 and subsequent years, the Company would be considered a taxable organization until such year that sales to members would satisfy the 85% requirement and Big Rivers formally reapplies for tax-exempt status. Big Rivers is also subject to Kentucky income tax.

Under the provisions of SFAS No. 109, "Accounting for Income Taxes," Big Rivers is required to record deferred tax assets and liabilities for temporary differences between amounts reported for financial reporting purposes as compared to amounts reported for income tax purposes. Deferred tax assets and liabilities are determined based on these temporary differences using enacted tax rates in effect for the year in which these differences are expected to reverse.

At December 31, 1998 and 1997, Big Rivers had deferred tax assets of $462,348 and $468,557, respectively, which primarily relate to tax credits and net operating losses. At December 31, 1998, the tax credits and net operating losses amounted to $57,468 and $1,049,072, and the tax credits expire in 1999 through 2000. The non-member portion of the net operating losses expire in 1999 through 2018. Additionally, at December 31, 1998 and 1997, Big Rivers had deferred tax liabilities of $246,862 and $281,545, respectively, which primarily relate to depreciation differences on utility plant. At December 31, 1998 and 1997, Big Rivers did not anticipate utilization of a portion of the deferred tax assets, thus a valuation allowance was established of $215,486 and $187,012, respectively.

9. POWER PURCHASED:

In accordance with the Lease Agreement, Big Rivers will supply all of the members' requirements for power to serve their customers other than the Aluminum Smelters, including Big Rivers' existing wholesale power contracts. Contract limits were established in the Lease Agreement and include minimum and maximum hourly and annual power purchase amounts. At any time after December 31, 1998, Big Rivers has the right to elect to reduce the contract limits up to a certain extent. However, Big Rivers cannot reduce the contract limits by more than 12 MW in any year, or by more than a total of 72 MW over the lease term. In the event Big Rivers fails to take the minimum requirement during any hour or year, Big Rivers will be liable to LEM for a certain percentage of the difference between the amount of power actually taken and the applicable minimum requirement.

Although Big Rivers will be required by the Lease Agreement to purchase minimum hourly and annual amounts of power from LEM, the lease does not prevent Big Rivers from paying the associated penalty in certain hours to purchase lower cost power, if available, in the open market or reselling a portion of its purchased power to a third party.

10. PENSION AND DEFERRED COMPENSATION PLANS:

Big Rivers has non-contributory defined benefit pension plans covering substantially all employees who meet minimum age and service requirements. The plans provide benefits based on the participants' years of service and the five highest consecutive years' compensation during the last ten years of employment. Big Rivers' policy is to fund such plans in accordance with the requirements of the Employee Retirement Income Security Act of 1974. Also, Big Rivers has executed non-contributory defined compensation agreements with certain key employees which provide for periodic payments upon retirement or to beneficiaries in the event of death. The deferred compensation plan is fully funded and has been suspended since 1995.

In conjunction with the Lease Agreement, approximately 550 of the Company's employees were effectively terminated and transferred to WKEC on the Effective Date. Terminated employees will or have received distributions in the amount of their respective vested benefits. The Company recognized a curtailment loss of $2,086 which was recorded as a reorganization expense in the accompanying statements of revenues and expenses.

The following is an assessment of the Company's non-contributory defined benefit pension plans at December 31:

| | 1998 | 1997 |
|---|---|---|
| Projected benefit obligation | $ 9,700 | $40,735 |
| Fair value of plan assets | 10,005 | 32,060 |
| Funded status | $ (305) | $ 8,675 |
| Prepaid (unfunded) accrued pension cost | $ 1,088 | $ (440) |

Net periodic pension costs, which are calculated based on actuarial assumptions at January 1, were as follows for the years ended December 31:

| | 1998 | 1997 | 1996 |
|---|---|---|---|
| Benefit cost | $ 1,686 | $3,5[illegible] | $2,861 |
| Curtailment cost | 2,086 | 969 | - |
| Employer contribution | 5,300 | 3,831 | 3,268 |
| Benefits paid or transferred | 29,357 | 5,810 | 4,801 |

Assumptions used to develop the projected benefit obligation were:

| | 1998 | 1997 | 1996 |
|---|---|---|---|
| Discount rates | 7.0% | 7.5% | 7.5% |
| Rates of increase in compensation levels | 4.0 | 4.0 | 4.0 |
| Expected long-term rate of return on assets | 8.5 | 8.5 | 8.5 |

11. POSTRETIREMENT BENEFITS OTHER THAN PENSIONS:

Big Rivers provides certain postretirement medical benefits for retired employees and their spouses. For all employees who retired prior to 1994, Big Rivers pays 80% of the cost from age 62 to 65; and from age 65, for salaried employees, Big Rivers pays 100% of Medicare supplemental cost. For salaried employees who retire after December 31, 1993, the paid Medicare supplemental was eliminated.

The discount rate used in computing the postretirement obligation for 1998 and 1997 was 7.0% and 7.5%, respectively. A health care cost trend rate of 9.0% in 1998 declining to 5.5% in 2004 was utilized. The health care cost trend rate assumption had a significant effect on the amounts reported, resulting in an unrecognized net gain of $1,215 in 1998. A 1.0% increase in the health care trend rate each future year would increase the aggregate service and interest costs by $51 and the accumulated other postretirement benefit obligation by $667.

The following is an assessment of the Company's postretirement plan at December 31:

| | 1998 | 1997 |
|---|---|---|
| Total benefit obligation | $(2,218) | $(5,245) |
| Unfunded accrued postretirement cost | (3,536) | (3,519) |

The components of net periodic postretirement benefit costs for the years ended December 31 were as follows:

| | 1998 | 1997 | 1996 |
|---|---|---|---|
| Benefit cost | $ 436 | $ 719 | $ 811 |
| Benefits paid | 389 | 142 | 172 |

As noted above, approximately 550 employees were transferred to WKEC in conjunction with the Lease Agreement, and in conjunction therewith the Company transferred to WKEC the postretirement liability for these employees. During 1998, the Company recognized a curtailment gain of $2,753 which was principally offset by the realization of the previously unrecognized transition obligation related to these employees totaling $2,538.

In addition to the postretirement plan discussed above, in 1992 Big Rivers began a postretirement benefit plan which vests a portion of accrued sick leave benefits to salaried employees upon retirement or death. To the extent an employee's sick leave hour balance exceeds 480 hours, such excess hours are paid at 20% of the employee's base hourly rate at time of retirement or death. The accumulated obligation recorded for the postretirement sick leave benefit is $101 and $362 at December 31, 1998 and 1997, respectively, and the postretirement expense recorded was $51, $61 and $93 for 1998, 1997 and 1996, respectively.

12. RELATED PARTIES AND MAJOR CUSTOMERS:

| | Operating Revenues | | |
|---|---|---|---|
| | 1998 | 1997 | 1996 |
| Members: | | | |
| Green River Electric Corporation | $ 95,942 | $130,318 | $132,589 |
| Henderson Union Electric Cooperative | 49,850 | 75,304 | 82,226 |
| Jackson Purchase Electric Cooperative Corporation | 22,247 | 23,136 | 24,511 |
| Meade County Rural Electric Cooperative Corporation | 12,618 | 12,978 | 13,329 |
| KPSC Ordered Fuel Cost Refund | - | - | (427) |
| Non-members | 45,742 | 62,452 | 69,694 |
| Lease revenue | 24,247 | - | - |
| Other revenue | 3,908 | 438 | 66 |
| | $254,554 | $304,626 | $321,988 |

Big Rivers agrees to indemnify its member cooperatives by performing their power supply agreements with certain industrial customers and requiring payments for power consumed and only such other payments as each member receives from its customers.

At December 31, 1998 and 1997, Big Rivers had accounts receivable from its members of approximately $10,142 and $20,552, respectively.

13. YEAR 2000:

With the approach of the year 2000, there has been concern over the impact of this event on computer systems worldwide. Big Rivers has assessed the impact of the year 2000 on its business and has developed a project plan to remediate its current status of systems not yet deemed year 2000 compliant.

Big Rivers is an electric generation and transmission company and is dependent upon outside parties whose performance could affect the Company. Through the Lease Agreement, the Company relies on LG&E Energy and Southeastern Power Administration for power supply. Big Rivers' other dependence includes telephone companies, internet companies, and external businesses that supply them with goods and services such as equipment supplies and maintenance.

Additionally, risk exists regarding the non-compliance of third parties with key business or operational importance to the Company. Year 2000 problems affecting key customers, interconnected utilities, telecommunications providers or financial institutions could result in lost power sales, reduced power transmission capabilities or internal operational or administrative difficulties. The Company is not presently aware of any such situations; however, occurrences of this type could have an effect upon the business, operating results or financial condition of the Company. There can be no assurance that the Company will be able to identify and correct all aspects of the year 2000 problems among these third parties in sufficient time.

The Company has begun developing a formal contingency plan for year 2000 non-compliance and expects the contingency plan to be completed by the second quarter of 1999. In the event of the Company's non-compliance, management does not believe the Company's operations will be adversely affected.

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21

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BIG RIVERS ELECTRIC CORPORATION
RESPONSE TO WILLAMETTE INDUSTRIES, INC.'S
INITIAL REQUEST FOR INFORMATION OF OCTOBER 7, 1999

CASE NO. 99-354

**Item 21)** Please provide copies of all documents that BREC has filed with the Federal Energy Regulatory Commission since the beginning of 1997.

**Response)** Based upon an agreement with counsel for Willamette, Willamette has agreed to narrow its response. Listed below are the documents filed by Big Rivers Electric Corporation with the Federal Energy Regulatory Commission from January 1, 1997 through October 13, 1999:

| | Description | Date Filed |
|---|---|---|
| 1. | FERC Form 423 – Monthly Report of Cost and Quality of Fuels for the Electric Plants | Monthly – Jan. 1997 – July 1998 |
| 2. | Big Rivers Electric Corp.'s FERC Form 1, annual report of major electric utilities, licensees and others | 4/14/97 |
| 3. | Motion for leave to intervene re: LG&E et. al. under EC98-2 et. al. | 10/21/97 |
| 4. | Motion for leave to intervene re: LG&E Energy Marketing Inc. under ER94-1188 | 12/22/97 |
| 5. | Motion for leave to intervene re: LG&E under ER92-533 | 12/22/97 |
| 6. | Motion for leave to intervene and in support of filing of Big Rivers Electric Corp. re: Western Kentucky Energy Corp. under ER98-2569 | 5/6/98 |
| 7. | Motion for leave to intervene and in support of filing of Big Rivers Electric Corp. re: LG&E Energy Marketing Inc. et. al. under ER98-2684 | 5/6/98 |
| 8. | Motion for leave to intervene and in support of filing of Big Rivers Electric Corp. re: WKE Station Two Inc. under ER98-2568 | 5/6/98 |
| 9. | Big Rivers Electric Corp.'s FERC Form 1 | 5/27/98 |
| 10. | Big Rivers Electric Corp.'s FERC Form 1 | 5/28/98 |

| | Description | Date Filed |
|---|---|---|
| 11. | Big Rivers Electric Corp. open access transmission tariff and request for declaratory order under NJ98-5 | 5/29/98 |
| 12. | LG&E Energy Corp. et. al. request that FERC act on several matters concerning WKE Station Two Inc. et. al. under ER98-2568 | 6/11/98 |
| 13. | Big Rivers Electric Corp.'s resubmission of FERC Form 1 | 9/9/98 |
| 14. | Big Rivers Electric Corp.'s revised standards of conduct under NJ98-5 | 10/15/98 |
| 15. | Big Rivers Electric Corp.'s 1999 FERC Form 715, annual transmission planning & evaluation report | 2/18/99 |
| 16. | Big Rivers Electric Corp.'s revised transmission organizational chart as part of its standards of conduct under NJ98-5 | 3/4/99 |
| 17. | Big Rivers Electric Corp.'s FERC Form 1 | 4/29/99 |
| 18. | Big Rivers Electric Corp. CPA Certification for 1998 FERC Form 1 filing | 5/3/99 |
| 19. | Big Rivers Electric Corp.'s FERC Form 714, annual electric control planning area report | 5/28/99 |
| 20. | Initial comments of Big Rivers Electric Corp. re: Notice of Proposed Rulemaking re: Regional Transmission Organizations under RM99-2 | 8/18/99 |
| 21. | Reply comments of Big Rivers Electric Corp. re: Notice of Proposed Rulemaking re: Regional Transmission Organizations under RM99-2 | 9/29/99 |

**Witness)** David A. Spainhoward