GDS Associates, Inc.
Engineers and Consultants

2011 Load Forecast

Energy and Peak Demand Projections for 2011- 2025

Big Rivers Electric Corporation

Henderson, Kentucky

August 2011

In Cooperation with
Meade County Rural Electric Cooperative Corporation
Jackson Purchase Energy Corporation
Kenergy Corp.

GDS Associates, Inc.
1850 Parkway Place
Suite 800
Marietta, GA 30067
770.425.8100
www.gdsassociates.com

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APPENDICES

1. Executive Summary

Big Rivers Electric Corporation (Big Rivers) is an electric generation and transmission cooperative headquartered in Henderson, Kentucky. The 2011 Load Forecast was completed in August 2011 and updates the most recent forecast that was completed in July 2009. The forecast contains projections of energy and demand requirements for a forecast horizon spanning years 2011-2025. High and low range forecast scenarios were developed to address uncertainties regarding the factors expected to influence energy consumption in the future. In addition to the energy and demand projections, this report presents the assumptions upon which the forecast is based and the methodologies employed in development of the forecast.

1.1 Forecast Results

Total system energy and coincident peak demand requirements are projected to increase at average compound rates of 0.3% and 0.5% per year, respectively, from 2010 through 2025. These growth rates are low compared to industry norms; however, Big Rivers is unique as approximately two-thirds of total system energy requirements in 2010 corresponded to two large industrial customers. Growth for these two customers is projected to be flat over the next fifteen years. Native system energy and peak demand requirements, defined as total system requirements less smelter requirements, are projected to increase at average compound rates of 0.9% and 1.2%, respectively over the forecast horizon. Rural system energy and demand requirements, which are represented as total system requirements less direct-serve customer loads, are projected to increase at average rates of 1.3% and 1.3% per year, respectively, over the same period. The forecast is summarized in Table 1.1 below and Table 1.2 on the following page.

Table 1.1
Load Forecast Summary

		Total System		Native System		Rural System	
Year	Consumers	Energy (GWH)	Peak Demand (MW)	Energy (GWH)	Peak Demand (MW)	Energy (MWH)	Peak Demand (CP)
2000	100,272	10,005	1,404	3,598	655	2,032	463
2005	107,883	10,604	1,476	3,260	618	2,281	502
2010a	112,412	10,669	1,530	3,474	663	2,500	544
2010n	112,412	10,443	1,501	3,335	633	2,355	515
2015	118,522	10,838	1,537	3,469	679	2,504	561
2020	124,448	11,025	1,573	3,637	715	2,672	597
2025	129,384	11,191	1,613	3,823	755	2,858	637

2010a represent actual values; 2010n represents weather adjusted values

Energy and peak demand values include average generation and transmission losses

Table 1.2
Load Forecast – Average Annual Growth Rates

Description	2010–2015	2010-2025
Total System Energy Requirements	0.3%	0.3%
Total System Peak Demand (NCP)	0.5%	0.5%
Native System Energy Requirements	0.8%	0.9%
Native System Peak Demand (CP)	1.6%	1.2%
Rural System Energy Requirements	1.2%	1.3%
Rural System Peak Demand (CP)	1.4%	1.3%
Residential Energy Sales	0.7%	1.1%
Residential Consumers	0.9%	0.9%
Small Commercial Energy Sales	2.1%	1.6%
Small Commercial Consumers	2.1%	1.4%
Large Commercial Energy Sales	0.4%	0.1%
Large Commercial Consumers	0.0%	0.0%
Public Street Lighting Sales	1.6%	1.4%
Irrigation Sales	-9.5%	-3.3%

Total system energy and demand include smelters
Native and rural system energy and demand exclude smelters

The primary influences on growth in the rural system requirements over the forecast period will continue to be growth in residential sales, which is primarily a function of growth in the number of customers. Growth in residential sales is projected to be low over the near term due to retail price increases at the member cooperative level and reductions in lighting consumption due to higher lighting standards. Growth in small commercial customers and energy sales over the near term is expected to outpace growth over the long term as growth in 2013-2015 reflects a rebound from the economic recession. An increase in the large commercial class sales is projected in 2011 before leveling for the remainder of the forecast period. Big Rivers is projected to be a winter peaking system in the future, as growth in electric heating and electric water heating market shares are expected to outpace increases in air conditioning market share.

With the exception of the projections presented in Section 6, Table 6.2, all projections presented in this report exclude the potential impacts associated with new energy efficiency and demand-side management programs that Big Rivers' member cooperatives plan to implement in the coming years.

Section 2 of the report presents a brief summary of the cooperative background and service area characteristics. Section 3 identifies the sources of the data used to prepare the forecast. Section 4 presents the assumptions made during the forecasting process. Sections 5 and 6 present the short and long-term base case forecasts. Section 7 presents four forecast scenarios, which address

optimistic/pessimistic economic growth and extreme/mild weather conditions. Section 8 describes the forecasting methodologies incorporated in developing the forecasting models

1.2 Forecast Assumptions

The forecast is based upon a number of assumptions regarding factors that impact energy consumption, including: demographics, economic activity, price of electricity and competing fuels, electric market share, and weather conditions. The assumptions were developed by GDS Associates and discussed with cooperative management prior to development of the final forecast. The economic outlook for the base case forecast was formulated using information collected from Woods & Poole Economics, Inc., NPA Data Services, and the University of Louisville.

- Number of households will increase at an average rate of 0.5% per year from 2010-2025.
- Employment will increase at an average rate of 0.8% per year from 2010-2025.
- Real gross regional product will increase at an average rate of 1.9% per year from 2010-2025.
- Real average income per household will increase at an average rate of 1.0% per year from 2010-2025.
- Real retail sales will increase at an average rate of 1.2% per year from 2010-2025.
- Inflation, as measured by the Personal Consumption Expenditure Index, will increase at an average compound rate of 3.4% per year from 2010-2025.
- The average price of electricity to residential and small commercial customers for the member cooperatives will exceed the rate of inflation over the near term and fall below the rate of inflation over the long term.
- Heating and cooling degree days for Evansville, Indiana and Paducah, Kentucky will be equal to averages based on the twenty years ending 2010.
- New energy efficiency programs will be implemented during the forecast horizon and will impact energy and peak demand requirements.

1.3 Forecasting Process

A bottom-up approach was followed in developing Big Rivers' load forecast. Projections of energy sales and peak demand were developed at the member cooperative level, and the results were aggregated to the Big Rivers level. The member cooperative forecasts were developed using methods recognized in the industry today as the standards, including end-use, econometrics, informed judgment, exponential smoothing, and historical trends. The residential class accounts for the majority of rural system requirements for each member cooperative; therefore, considerable time and effort were devoted to development of statistically adjusted end-use models (SAE) to forecast energy consumption for the class. Econometric models were used to project the number of residential customers. Similarly, econometric

models were developed to project small commercial energy sales and number of customers. Large commercial demand and energy projections were developed using information provided by cooperative management regarding local industrial operations. Energy sales projections for all other classifications were based on linear trends. Econometric models were developed to project rural system CP demand. Projections of rural system NCP demand were developed by applying an average coincident factor to projections of rural CP demand. Total system NCP demand was computed as the sum of rural system CP demand and direct-serve NCP demand.

The member cooperative energy sales forecasts are based on a bottom-up approach. Projections were developed at the customer class level and aggregated to the total system level. Projections of peak demand were developed at the rural system and total system levels. The forecast is based on an analysis of data and information for a historical period covering the 1980 through 2010 period, and the forecast period covers years 2011-2025. The base case forecast assumes normal weather conditions for each year, and the averages were computed using heating and cooling degree days for the twenty years ending 2010.

1.4 Changes from Prior Load Forecast

The 2011 load forecast is nearly identical to the 2009 forecast with respect to projected energy and peak demand requirements, due primarily to consistency in the projected requirements for the two aluminum smelter loads, which represent approximately 67% of total system requirements.

Figure 1.1
Total System Energy Requirements (GWh)

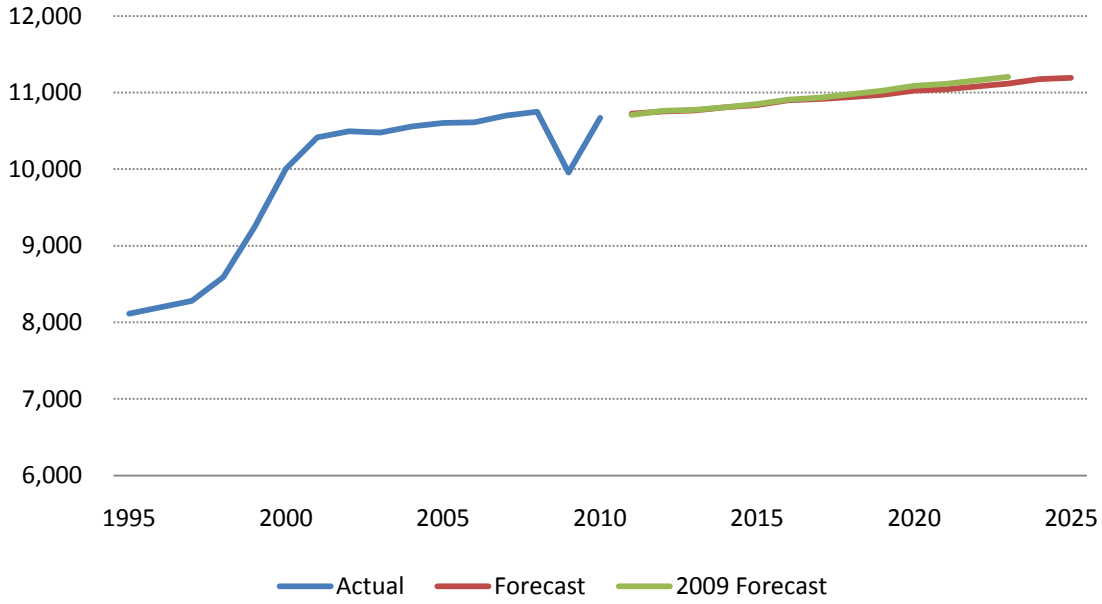


Figure 1.2
Total System Peak Demand (MW)

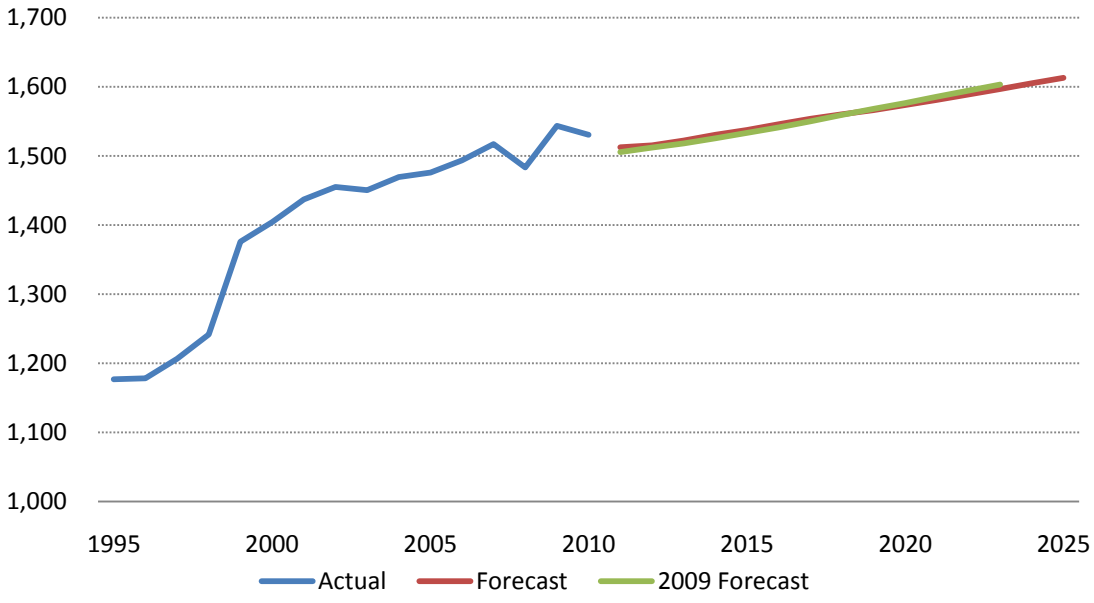


Figure 1.3
Total Native System Energy Requirements (GWh)

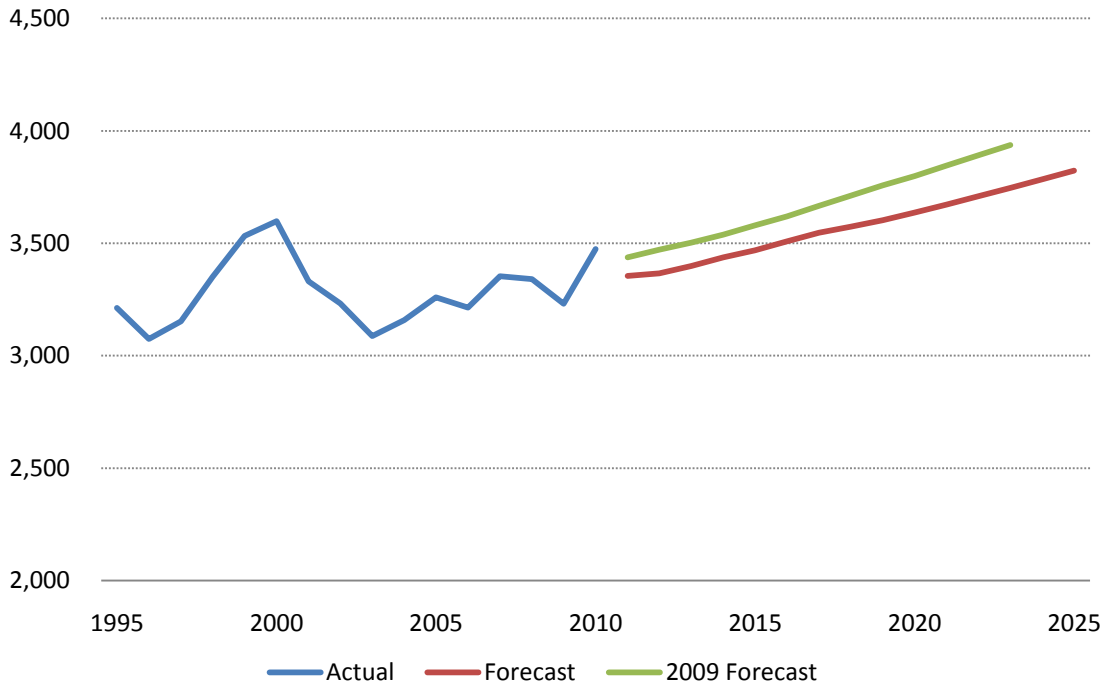
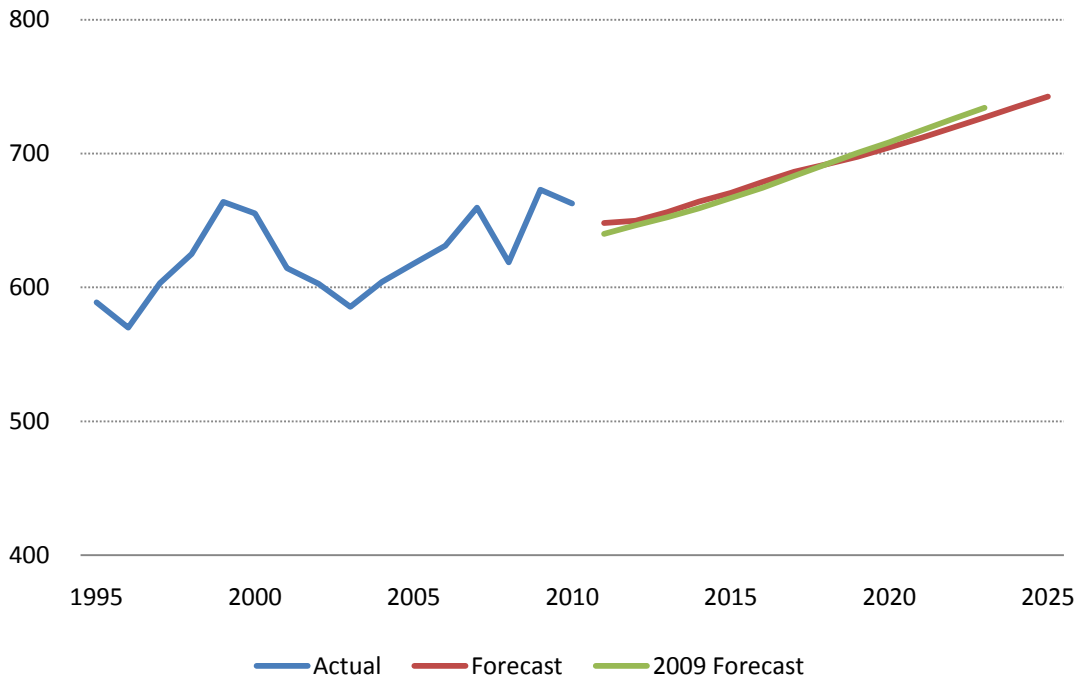


Figure 1.4
Total Native System Peak Demand (MW)



Rural system energy requirements in the current forecast are lower than in the 2009 forecast, as the current forecast reflects lower long term customer growth and slightly lower average consumption per customer. There are no significant differences between the 2009 and 2011 Load Forecasts with respect to projected rural system peak demand.

Figure 1.5
Rural System Energy Requirements (GWh)

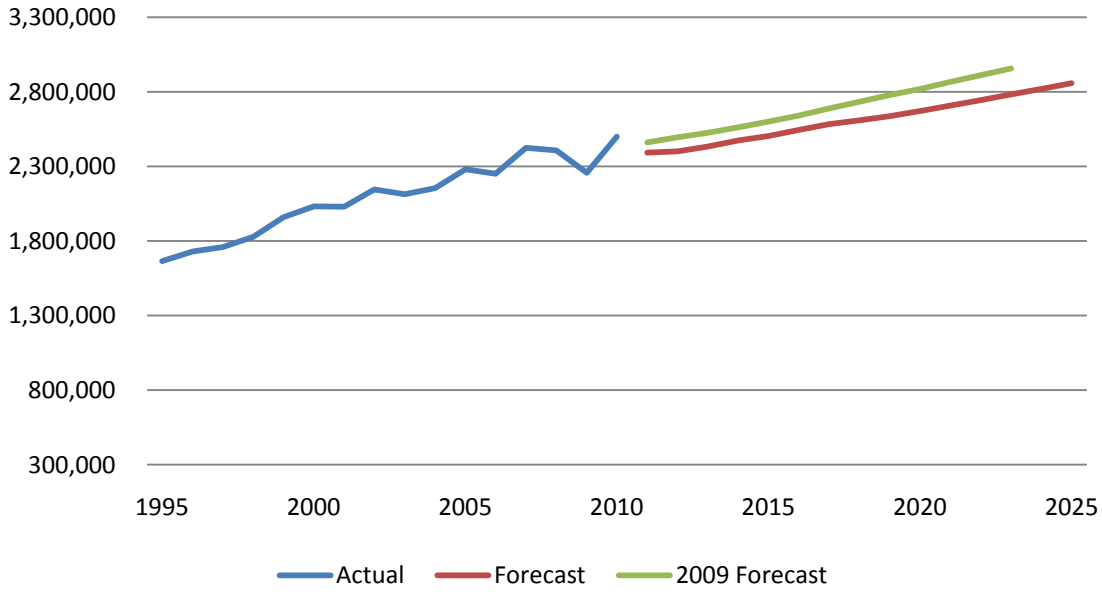
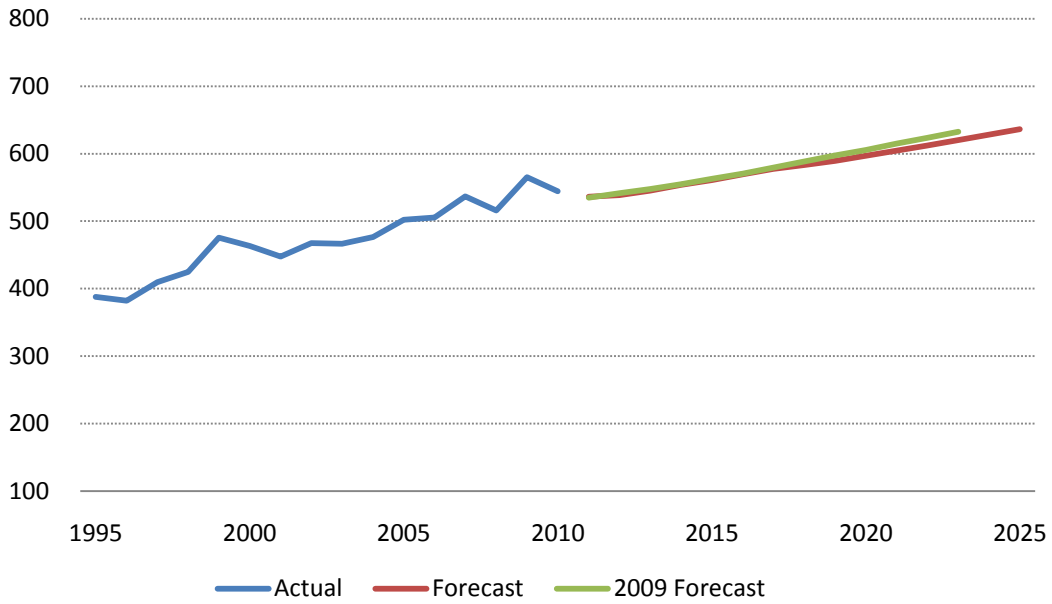


Figure 1.6
Rural System Coincident Peak Demand (MW)



1.5 Forecast Scenarios

The base case forecast was developed using the expected economic outlook and average weather conditions. Given the uncertainty with the forecast, four forecast scenarios were generated to evaluate varying economic and weather impacts from those contained in the base case forecast. Results from the four scenarios are presented graphically in Figures 1.7 through 1.12 and described in detail in Section 7.

Figure 1.7
Total System Energy Requirements (GWh)

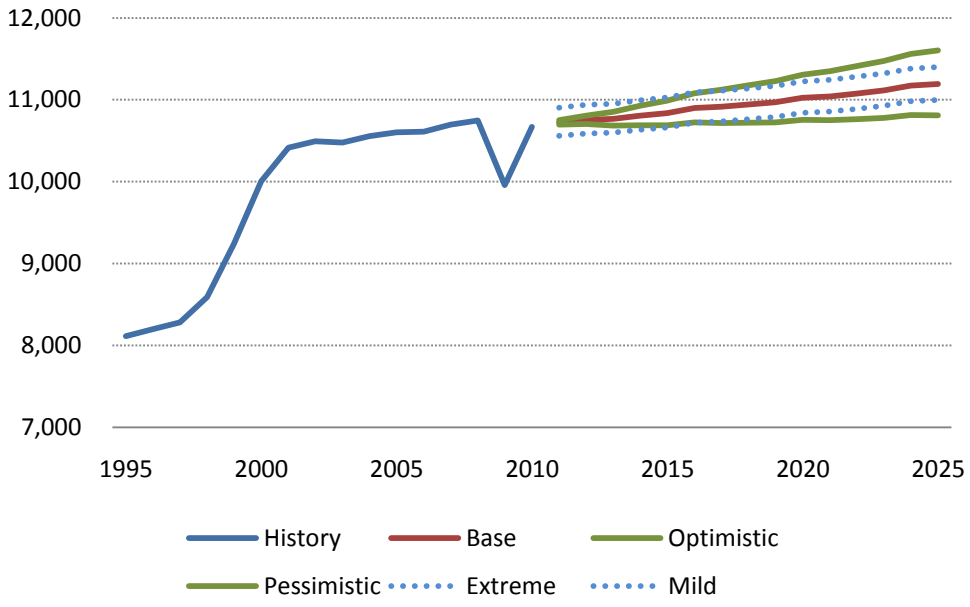


Figure 1.8
Total System Peak Demand Requirements (MW)

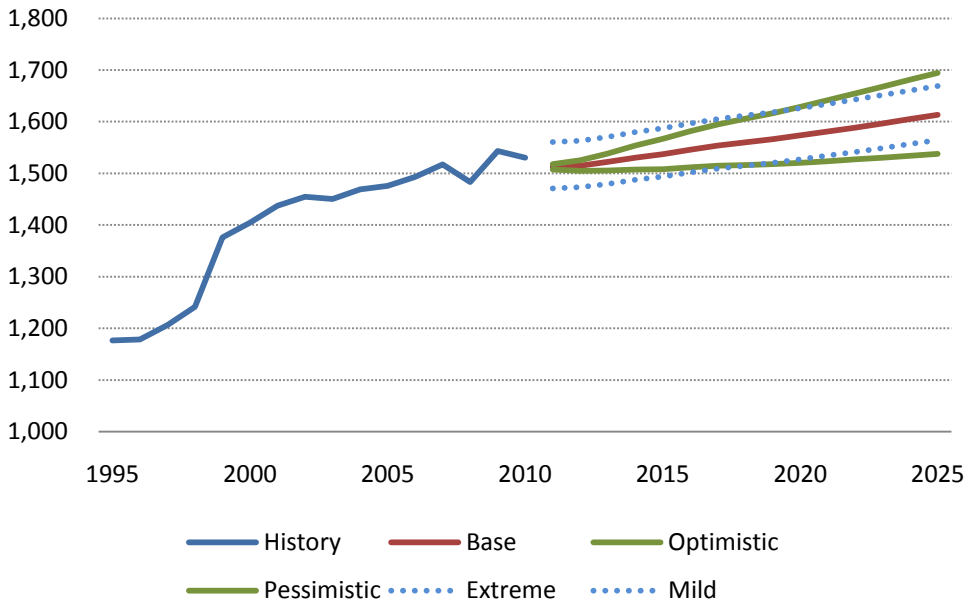


Figure 1.9
Total System Native Energy Requirements (GWh)

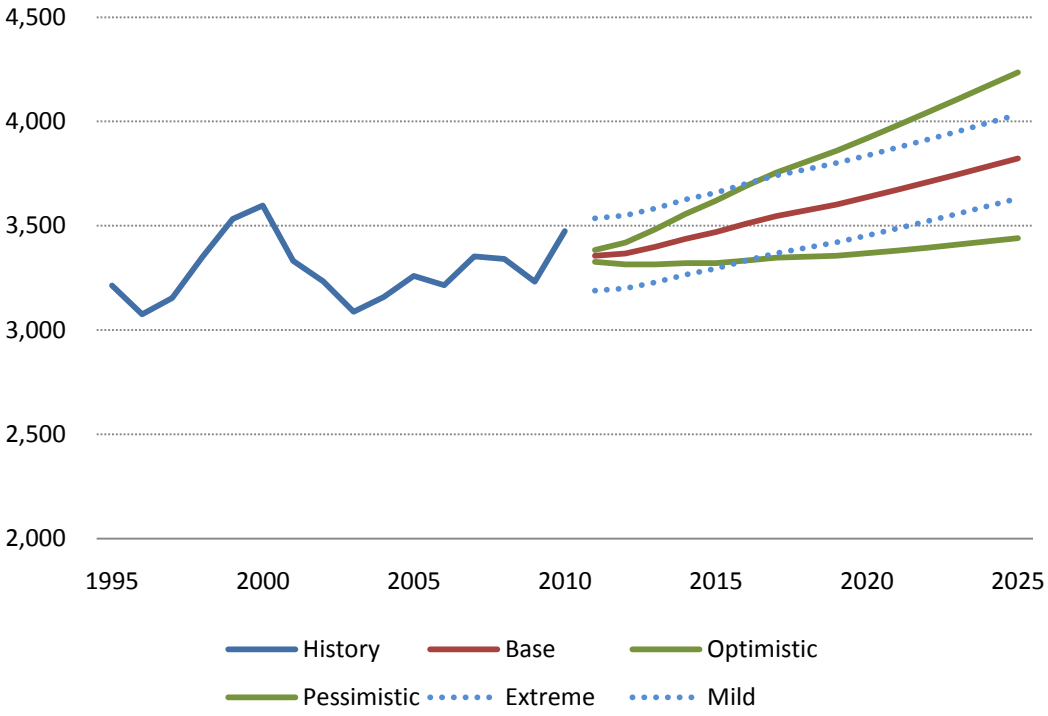


Figure 1.10
Total System Native Peak Demand Requirements (MW)

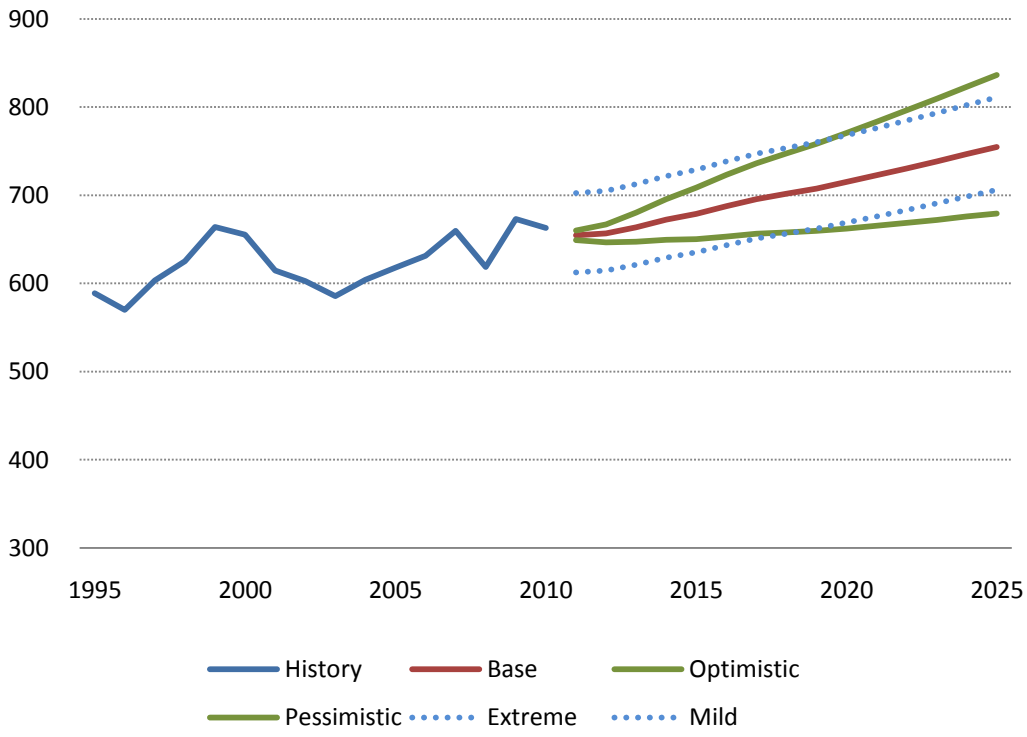


Figure 1.11
Rural System Energy Requirements (GWh)

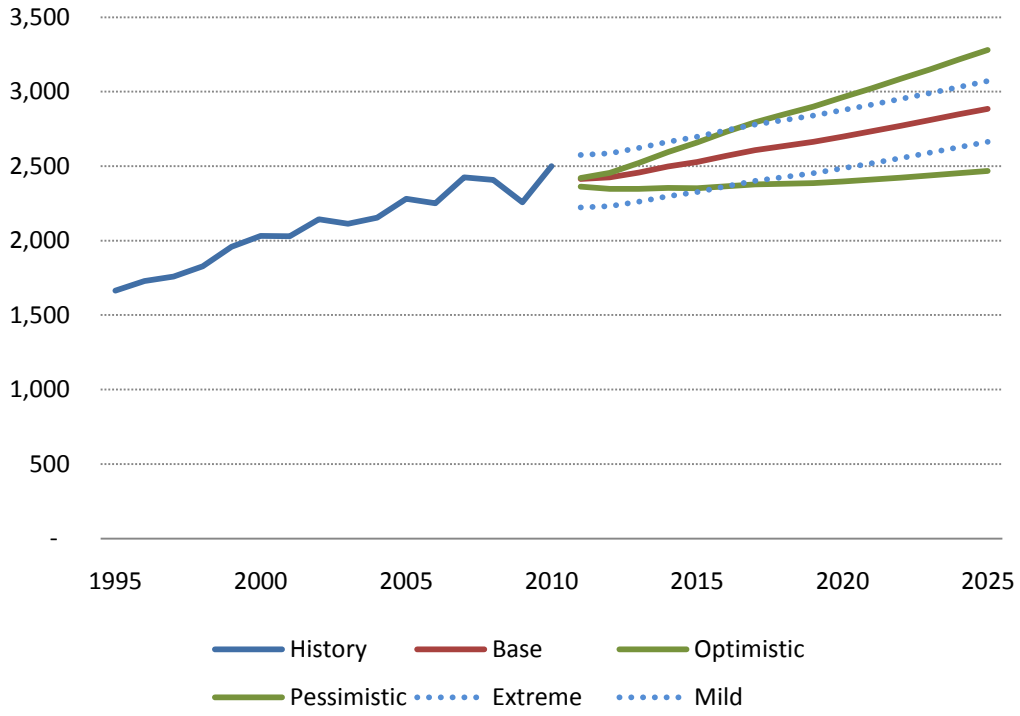
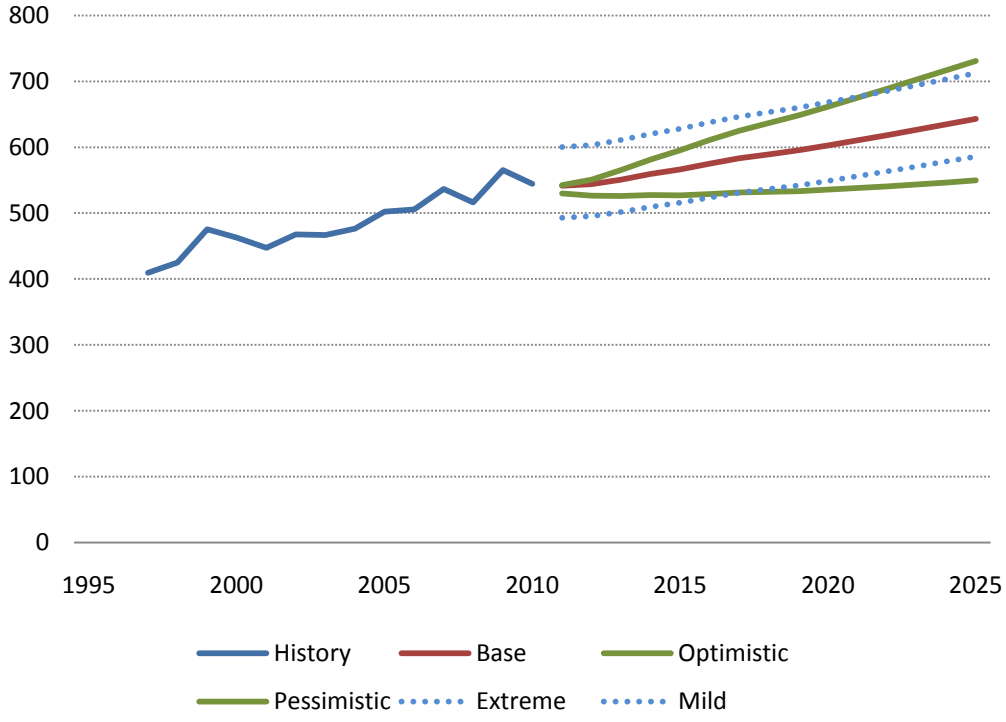


Figure 1.12
Rural System Peak Demand Requirements (MW)



1.6 Comparison to Regional and National Forecasts

Table 1.3 compares Big Rivers' forecast to regional and national forecasts developed by the following entities.

Table 1.3
Forecast Comparison – Average Annual Growth Rates

	Total Energy Consumption	Residential Energy	Commercial Energy
AEO2011	0.9%	0.4%	1.3%
AEO2011 - ESC	1.0%	0.7%	1.4%
EVA	0.5%	1.0%	1.3%
IHSGI	1.9%	2.0%	2.1%
Big Rivers	1.3%	1.1%	1.6%

Source:
AEO2011: Annual Energy Outlook 2011 (U.S.)
AEO2011: Annual Energy Outlook 2011 (East South Central Region)
EVA: Energy Ventures Analysis
IHSGI: Global Insight

Note:
Growth rate represents 2009-2025 unless specified otherwise
Cooperative values reflect rural system sales (2010-2025)
Big Rivers commercial energy represents the small commercial class

2. Introduction

The 2011 Load Forecast was conducted by representatives from Big Rivers, the member cooperatives of Big Rivers, and GDS Associates, Inc.

2.1 Purpose

The purpose of the long-term load forecast is to provide reliable load projections for the Cooperative's resource, distribution, and financial planning functions. This forecast of system requirements includes the following:

- Number of consumers by customer classification
- Energy sales by customer classification
- Distribution losses
- Total system energy requirements
- Total system seasonal peak demand
- Rural system energy sales
- Rural system seasonal peak demand

Five forecast scenarios were developed in the forecast: a base case, which focuses on expected economic conditions and normal weather, and two sets of high-range and low-range projections, both of which consider deviations from expected economic conditions and deviations from normal weather conditions.

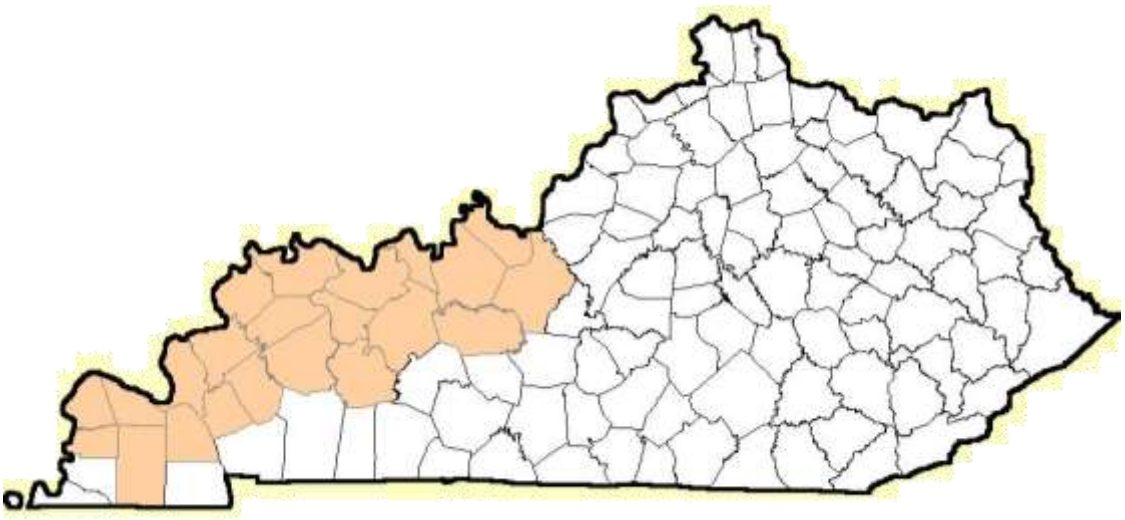
2.2 Cooperative Background

Big Rivers is headquartered in Henderson, Kentucky, and provides wholesale power to three member cooperatives: Kenergy Corp. ("Kenergy"), Jackson Purchase Energy Corporation ("JPEC"), and Meade County RECC ("MCRECC"), all of which provide retail electric service to consumers located in western Kentucky. Approximately 89% of all customers served by the member cooperatives serve are residential. Kenergy Corp. provides electric service to two aluminum smelters, which together consume over 7 billion kWh per year and contribute approximately 850 MW to total system peak demand.

2.3 Service Area

Big Rivers' member cooperatives provide electric service in 22 counties located in western Kentucky, which are presented in Figure 2.1.

Figure 2.1
Service Area Counties



2.3.1 Geography

The topography of Big Rivers' member cooperatives' service areas ranges from rolling, sandy embayment areas to flat plateau areas with low relief and subterranean drainage. Typical elevations range from approximately 340 to 1000 feet above sea level. The climate in the area is humid, temperate and continental.

2.3.2 Climate

Weather conditions are similar to those of Evansville, Indiana and Paducah, Kentucky. The climate in the area is humid, temperate and continental. Daily and seasonal changes in temperature, cloudiness, wind and precipitation may be sudden and extreme. The seasons are well defined, but changes between the seasons are gradual. Winters are harsh with sustained periods of very low temperatures. Snowfall provides minimal precipitation, averaging 10 inches per year. The frequent thunderstorms that occur in the spring bring rainfall, which is beneficial to area crops. Annual rainfall averages 46 to 50 inches. The summer season is long, humid and hot.

Heating and cooling degree days for Evansville, Indiana and Paducah, Kentucky were used in the forecasting models to quantify the impacts of weather on energy consumption. A degree day represents the difference between the average temperature for a given day and a base temperature. Positive differences represent cooling degree days, and negative differences represent heating degree days. For example, if the

average temperature for a day is 80 degrees, and the base temperature used is 65 degrees[1], there would be 15 cooling degree days for that day. Cooling and heating degree days are presented in Table 2.1.

Table 2.1
Degree Days

	Evansville, IN		Paducah, KY	
Year	Heating Degree Days	Cooling Degree Days	Heating Degree Days	Cooling Degree Days
1991	4,264	1,757	3,713	2,954
1992	4,230	1,240	3,724	2,358
1993	4,665	1,613	4,531	2,676
1994	4,193	1,489	3,911	2,409
1995	4,327	1,773	4,129	2,626
1996	5,081	1,224	4,573	2,376
1997	4,914	1,119	4,445	2,256
1998	3,876	1,629	3,535	2,782
1999	4,162	1,284	3,650	2,522
2000	4,723	1,289	4,273	2,562
2001	4,246	1,377	3,921	2,500
2002	4,423	1,737	4,099	2,873
2003	4,542	1,143	4,150	2,241
2004	4,266	1,269	3,885	2,373
2005	4,333	1,544	3,904	2,674
2006	4,057	1,342	3,672	2,505
2007	4,172	1,888	3,823	2,967
2008	4,703	1,421	4,274	2,499
2009	4,426	1,281	3,877	2,419
2010	4,689	1,904	4,377	3,001
Average	4,414	1,466	4,023	2,579

2.4 Power Supply

Big Rivers provides wholesale power to three member cooperatives: Kenergy, JPEC, and MCRECC, all of which provide retail electric service to consumers located in western Kentucky. Two aluminum smelters, Alcan Primary Products Corporation ("Alcan") and Century Aluminum of Kentucky, LLC ("Century"), which are served under special contracts with Big Rivers and Kenergy. Big Rivers provides all of the power requirements of its three member cooperatives.

Big Rivers owns and operates the 443 MW three unit coal-fired Coleman Plant, the 454 MW two unit coal-fired Green Plant, the Reid Plant, which consists of a 65 MW coal and natural gas-fired unit as well as a 65

[1] The National Oceanic and Atmospheric Administration computes degree days using a base of 65 degrees.

MW natural gas or oil-fired combustion turbine, and the 417 MW coal-fired Wilson unit. Big Rivers also has contractual rights to a portion of 312 MW at Henderson Municipal Power and Light's ("HMP&L's") Station Two facility. Big Rivers has one purchase power agreement, that being with the Southeastern Power Administration ("SEPA").

2.5 Alternative Fuels

Electricity, natural gas, and propane are the primary heating fuels available in the service area. Some consumers use wood as a supplemental heating source as timber is readily available in western Kentucky. Refer to Big Rivers' End-Use and Energy Efficiency Survey (December 2007) for details regarding specific fuels used for heating, water heating, and air conditioning.

2.6 Economic Conditions

Energy consumption is influenced significantly over the long-term by economic conditions. As the local economy expands, population and employment increase, which translate into new cooperative consumers and additional energy sales and peak demand. The economy of western Kentucky depends primarily upon mining, 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. Refer to section 4 of this report for details regarding historical and projected growth in the economic variables included in this forecast.

3. Load Forecast Database

A load forecast database was created to house the data used in development of the load forecast. This section identifies the data collected and used in 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 and 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 3.1.

Table 3.1
Load Forecast Database

Class of Data	Source	Data Element	Units	Time Period
System	RUS Form 7	Number of Customers by RUS Classification	Meters	1970 – 2010
		Energy Sales by RUS Classification	kWh	1970 – 2010
		Revenue by RUS Classification	$	1970 – 2010
		Purchases	kWh	1970 – 2010
		Power Cost	$	1970 – 2010
		Peak Demand	NCP	1970 – 2010
Price Index	Woods & Poole Economics Moody's Analytics	Implicit Price Deflator, Gross National Product, 2004=100, Seasonally Adjusted	Index	1970.01 – 2010.12
Economic and Demographic	Woods & Poole Economic, Inc. Moody's Analytics	Average Household Income	Real $	1970 – 2030
		Retail Sales	Real $	1970 – 2030
		Gross Regional Product (GRP)	Real $	1970 – 2030
		Total Population	Number of People	1970 – 2030
		Households	Number of Households	1970 – 2030
		Total Employment	Number of Employees	1970 – 2030
End-Use Data	Energy Information Administration	Unit Energy Consumption	kWh	2005-2030
	U.S. Census Big Rivers Surveys	Electric Market Share	Percent	1990, 2000, 2005 2007
Meteorological	National Oceanic and Atmospheric Administration	Heating and Cooling Degree Days	Base of 65°F	1970.01 – 2010.12
		Temperatures	Degrees F	1970.01 – 2010.12

3.1 Weighting Factors

Economic and demographic data were collected for each county in which Big Rivers' member cooperatives provide electric service. Typically, a cooperative provides electric service in only portions of each county served, and the remaining portions are served by other electric systems. Weighting factors were developed to estimate the cooperatives' market share of county population, employment, income, and retail sales.

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. These weighting factors represent the member cooperatives' market shares for each county served. County weights were computed using the formula presented in Equation 3.1.

$$CTYWGT_{it} = RCON_{it} \ / \ HHOLD_{it} \qquad (3.1)$$

Where:

$CTYWGT_{it}$ = 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 $year_t$

3.2 Historical Data Estimates

The historical values for economic data series used in the modeling process were collected from Woods & Poole Economics, Inc. Population data are historical for years 1970-2009 and projected for years 2010-2040. Population data reflect estimates for July 1st of each year.

Number of households is historical for 1970, 1980, 1985, 1990 and 2000 with all interim years being estimates by Woods & Poole. Number of households is estimated for years 2001-2009 and projected for years 2010-2040.

Average household income data is historical for 1970-2008 and projected for 2009-2040.

Employment and total personal income amounts for 1970 through 2008 are estimates based upon quarterly surveys conducted by the U.S. Department of Commerce, Bureau of Economic Analysis. All total personal income and employment values are projected for years 2009-2040.

Retail sales data are historical for years 1972, 1977, 1982, 1987, 1992, 1997, and 2002 and estimated by Woods & Poole for all interim years. Retail sales are projected for years 2003-2040.

Gross regional product (GRP) values for the U.S. and states are historical for years 1970-2008. All county values for 1970-2008 are estimated by Woods & Poole by allocating state GRP in a particular year to counties within the state based on the proportions of total state earnings of employees originating in a particular county. GRP is projected for years 2009-2040.

3.3 Weather Data

Weather conditions recorded at Evansville, Indiana and Paducah, Kentucky were used to represent weather within the member cooperative service territories. Heating and cooling degree days were used in projecting residential and small commercial energy sales. Data for years 1980-2010 are actual amounts, while data for 2011-2025 are equal to the average for the most recent 20 years.

3.4 End-Use Data

End-use energy data was obtained from the Department of Energy, Energy Information Administration (EIA). End-use market share data is collected through customer surveys conducted periodically by Big Rivers.

4. Forecast Assumptions

4.1 Forecast Methodology

Econometrics was the forecasting methodology employed in developing the energy sales forecasting models for the residential and small commercial classifications. When using econometric techniques to forecast energy sales, it is assumed that the relationships between energy consumption and those influential factors included in the models remain the same in both the historical and forecast periods.

4.2 Economic Outlook

It is assumed that growth in peak demand and energy requirements over time has been strongly influenced by economic conditions, including number of households, employment, total personal income, and retail sales. It is assumed that the influences of these factors will continue over the next fifteen years. The economic outlook used in developing the base case forecast were formulated using information obtained from Woods & Poole Economics, Inc. and Moody's Analytics. The outlook presented in this forecast reflects a relatively slow recovery from the economic recession before a return to pre-recession growth rates over the extended long term. Projections for key economic data used in this forecast are presented in Table 4.1.

4.2.1 Number of Households

Number of households is an excellent measure of number of residential cooperative customers. The number of households in the service area has increased, while population has flattened, indicating that the average household size has declined over time. Growth in the number of households is projected to increase at an average rate of 0.5% per year. The number of households forecast is based on data obtained from Moody's Analytics.

4.2.2 Employment

Employment is a measure of economic activity and, with respect to this forecast, captures growth in the number of commercial accounts over time. Employment is projected to increase at an average compound rate of 0.8% per year over the 15 year forecast horizon, which is higher than the growth over the most recent ten years. Employment projections are based on data obtained from Moody's Analytics.

4.2.3 Household Income

Household income, expressed in real dollars (adjusted for inflation using the personal consumption expenditures index), represents income received from all sources. Household income provides a measure of consumer spending potential, including electricity. Household income is projected to increase at an

average rate of 1.0% per year from 2010 to 2025. This rate of growth is lower than growth over the previous 10 years and based on information collected from Woods and Poole Economics.

4.2.4 Gross Regional Output

Gross regional product (GRP) is expressed in real dollars and represents the monetary value of all the finished goods and services produced within the service area and includes private and public consumption, government outlays, investments and exports less imports. GRP is an indicator of commercial and industrial energy sales. GRP for the service area is estimated by allocating state GRP to counties on the proportion of total state earnings of employees originating in the respective counties. County GRP estimates are constrained to the state total for each year. GRP in the service area is projected to increase at an average rate of 1.9% per year from 2010 through 2025. Projected growth in GRP is higher than growth measured over the most recent 10 year period and based on data collected from Moody's Analytics.

4.2.5 Retail Sales

Retail sales represent all sales dollars (adjusted for inflation using the personal consumption expenditures index), for all business establishments, including mail order and on-line sales. Retail sales provide a measure of commercial activity in the service area. Retail sales are projected to increase at an average rate of 1.2% over the forecast period. This rate is higher than growth over the most recent 10 years and based on data collected from Woods & Poole Economics.

4.3 Weather Conditions

It is assumed that the weather conditions measured at the Evansville, Indiana and Paducah, Kentucky airports are representative of the member cooperative service areas. Heating and cooling degree days were used to represent weather conditions, and values for each year of the forecast period are based on the average amounts computed for the 20 year period ending in 2010.

4.4 Retail Electricity Prices

The average price of electricity to residential and small commercial customers in the Big Rivers area is expected to increase, in real terms, at a rate of approximately 1% per year from 2010-2015.

4.5 Alternative Fuel Prices

Natural gas and liquid propane are the two primary alternative heating fuels in the service area. Real prices for both are expected to increase over the short-term and then level over the long-term. This load forecast contains no direct impacts of changes in alternative fuel prices as it was assumed that the changes in alternative fuel prices will not be significant enough over the long term to impact electricity consumption.

Table 4.1
Key Economic Variables

Year	Population (thousands)	Employment (thousands)	Households (thousands)	Real GDP ($millions)	Real Retail Sales ($millions)	Real Household Income
1990	226.9	103.3	86.2	$2,269	$1,866	$53,597
1991	227.0	102.8	86.8	$2,266	$1,812	$53,764
1992	228.6	104.5	88.0	$2,337	$1,862	$55,298
1993	230.9	107.4	88.8	$2,399	$1,956	$55,064
1994	232.4	110.2	89.3	$2,547	$2,082	$56,717
1995	234.6	114.4	90.8	$2,565	$2,148	$56,555
1996	236.1	116.1	92.3	$5,915	$2,237	$57,794
1997	237.8	119.0	93.2	$6,267	$2,301	$59,077
1998	238.9	120.6	93.9	$6,259	$2,347	$60,725
1999	239.8	122.0	94.8	$6,316	$2,473	$61,098
2000	241.1	123.0	95.6	$5,950	$2,534	$64,066
2001	240.7	119.1	95.7	$5,784	$2,509	$63,761
2002	241.2	118.6	96.1	$5,949	$2,494	$63,152
2003	241.6	118.7	96.6	$6,004	$2,530	$63,480
2004	242.3	119.1	97.4	$6,106	$2,607	$64,531
2005	243.0	119.4	98.1	$6,195	$2,668	$65,665
2006	243.0	120.3	98.6	$6,315	$2,704	$66,388
2007	243.3	122.5	99.2	$6,378	$2,697	$67,152
2008	244.0	123.5	99.9	$6,436	$2,574	$68,061
2009	243.8	120.7	100.4	$6,283	$2,382	$69,057
2010	244.7	120.8	100.0	$6,294	$2,494	$71,021
2011	245.6	122.7	100.6	$6,560	$2,590	$71,913
2012	246.5	125.6	101.5	$6,743	$2,615	$72,348
2013	247.5	128.4	102.4	$6,902	$2,640	$73,021
2014	248.5	131.5	103.2	$7,029	$2,666	$73,587
2015	249.5	133.3	104.0	$7,134	$2,692	$74,195
2016	250.5	133.8	104.5	$7,237	$2,719	$74,861
2017	251.5	134.1	105.0	$7,354	$2,746	$75,554
2018	252.6	134.3	105.5	$7,477	$2,773	$76,272
2019	253.6	134.5	106.0	$7,600	$2,801	$77,020
2020	254.7	134.7	106.5	$7,727	$2,830	$77,805
2021	255.7	134.9	106.8	$7,857	$2,858	$78,631
2022	256.8	135.2	107.2	$7,992	$2,888	$79,508
2023	257.9	135.4	107.4	$8,125	$2,918	$80,423
2024	259.0	135.5	107.6	$8,261	$2,949	$81,374
2025	260.1	135.7	107.8	$8,402	$2,979	$82,364
Average Annual Compound Growth Rates						
1990 - 2000	0.6%	1.8%	1.0%	10.1%	3.1%	1.8%
2000 - 2010	0.2%	-0.2%	0.5%	0.6%	-0.2%	1.0%
2010 - 2015	0.4%	2.0%	0.8%	2.5%	1.5%	0.9%
2015 - 2020	0.4%	0.2%	0.5%	1.6%	1.0%	1.0%
2020 - 2025	0.4%	0.1%	0.3%	1.7%	1.0%	1.1%
2010 - 2025	0.4%	0.8%	0.5%	1.9%	1.2%	1.0%

5. Short-Term Energy Sales and Peak Demand Forecast

The short-term forecast contains energy and demand projections by month for years 2011 and 2014. The short-term forecast includes projections of energy sales by class, rural system energy sales, rural system coincident and non-coincident peak demand, total system energy sales, and total system non-coincident peak demand. A summary of projected growth rates is presented in Table 5.1. Projected energy sales and peak demand requirements are presented by month in Appendix A, Tables – Short-Term Forecast.

Table 5.1
Short-Term Forecast

Description	2011	2012	2013	2014
Residential Sales	0.9%	-0.1%	0.8%	1.2%
Small Commercial Sales	1.7%	1.6%	2.5%	2.5%
Large Commercial Sales	1.9%	0.3%	-0.2%	0.0%
Street Lights Sales	2.0%	1.5%	1.5%	1.5%
Irrigation Sales	-39.3%	0.0%	0.0%	0.0%
Total System Energy Requirements	0.6%	0.3%	1.0%	1.2%
Total System Peak Demand (NCP)	-1.6%	0.1%	0.4%	0.5%
Native System Energy Requirements	0.6%	0.3%	0.3%	0.3%
Native System Peak Demand (CP)	4.1%	0.4%	0.4%	0.4%
Rural System Energy Requirements	1.5%	0.4%	1.3%	1.6%
Rural System Peak Demand (CP)	4.8%	0.4%	1.3%	1.6%

5.1 Short-Term Energy Sales Forecast

Regression models were developed to project monthly energy consumption and number of customers for the residential and small commercial classifications. Energy sales projections for the large commercial classification were developed individually by customer based on historic trends, operating characteristics, and information made available to the cooperative by individual consumers. Public street lighting energy sales projections were developed using historic trends. Projections of rural system energy sales were computed as total system sales less sales to direct-serve consumers, all of which are large commercial consumers.

5.2 Short-Term Peak Demand Forecast

Projections of rural system CP demand were developed for the summer and winter seasons using econometric models. An average load shape was applied to the seasonal projections to develop the monthly demands. Projections of direct serve peak demand were developed by member cooperative management and based on historic trends and information made available by individual direct-serve

consumers. Total system NCP is equal to the sum of rural system CP and direct-serve NCP amounts. Native system NCP is equal to total system NCP less smelter load.

6. Long-Term Energy Sales and Peak Demand Forecast

The load and energy projections presented in this section show that energy sales and peak demand requirements are expected to increase at average compound rates of 0.3% and 0.5%, respectively, from 2010 to 2025. Rural system energy sales and peak demand are projected to increase at average compound rates of 1.3% and 1.3%, respectively. The primary impact on growth in rural system sales will be the result of increases in the number of consumers, which are expected to increase at a rate of 0.9% per year. Tables presenting the long-term energy sales and peak demand forecast are included in Appendix B, Tables - Long-Term Forecast.

Table 6.1
Load Forecast – Average Annual Growth Rates

Description	2010 - 2015	2010 - 2025
Total System Energy Requirements	0.3%	0.3%
Total System Peak Demand (NCP)	0.5%	0.5%
Native System Energy Requirements	0.8%	0.9%
Native System Peak Demand (CP)	1.6%	1.2%
Rural System Energy Requirements	1.2%	1.3%
Rural System Peak Demand (CP)	1.4%	1.3%
Residential Energy Sales	0.7%	1.1%
Residential Consumers	0.9%	0.9%
Small Commercial Energy Sales	2.1%	1.6%
Small Commercial Consumers	2.1%	1.4%
Large Commercial Energy Sales	0.4%	0.1%
Large Commercial Consumers	0.0%	0.0%
Public Street Lighting Sales	1.6%	1.4%
Irrigation Sales	-9.5%	-3.3%

6.1 Forecast Methodology

The forecast was developed using methods recognized in the industry today as the standards, including econometrics, end-use, informed judgment, and historical trends. Details for each methodology used in developing the forecast are presented in section 8 of this report.

Econometric models were used to project number of customers for the residential and small commercial classifications and energy sales for the small commercial classification. Statistically adjusted end-use models were used to project residential energy use per customer. Informed judgment was used to forecast energy sales for large commercial customers. Energy sales for the street lighting classification were projected using a historical trend.

Econometric models were developed to project rural system coincident peak demand for each member cooperative. Demand was projected on a summer and winter seasonal basis for each year of the forecast period. The summer season includes months May through October, and the winter season includes months January, February, and March of the current year and November and December from the prior year.

The energy sales forecast is based on a bottom-up approach. Projections were developed at the customer class level and aggregated to the total system level. Peak demand forecasts were developed at the total system and rural system levels for each cooperative and summed to the Big Rivers level.

6.2 Forecast Results

6.2.1 Residential

In 2010, the residential class accounted for 87% of all accounts and 64% of rural system energy. Weather normalized class sales over the past ten years increased at an average rate of 1.8% per year. Sales are projected to increase at a rate of 1.1% per year from 2010 through 2025. Growth in average consumption per customer is expected to be low in future years due primarily to the vintaging of heating and cooling systems, energy conservation, and a slowing of increases in electric heating market share. Customer growth is projected to average 905 consumers per year over the forecast period, which is higher than the most recent five years but lower than the extended long term historical average.

Average monthly energy consumption per customer is projected to increase at 0.2% per year from 2010 to 2025. The rate of growth is lower than the most recent ten years. Impacts contributing to continued long term growth in average use per consumer include:

- Increases in electric heating, electric air conditioning, and electric water heating market share;
- Increases in average home size, which result in higher heating and cooling load as well as increases in “plug-in” loads;
- Increases in “plug-in” loads, regardless of home size
- Growth in average household income, which increases disposable income available to purchase electric goods

Impacts influencing lower growth in household energy consumption include:

- Increased efficiencies in new electric appliances
- Regulatory energy standards
- Energy conservation

Projections of total residential sales were computed as the product of projected energy consumption per consumer and projected number of consumers.

The energy use per customer model quantifies the impacts of the following factors:

- Household income
- Price of electricity
- Weather conditions (heating and cooling degree days)
- Electric market share (heating, cooling, water heating)
- Appliance efficiencies
- Home size
- Thermal efficiency of home

The consumer models quantify a relationship between consumer growth and number of households. Autoregressive parameters were also included in the consumer models to correct for serial autocorrelation. Statistical outputs for the average energy consumption and customer models are presented in the appendix.

6.2.2 Commercial & Industrial

The Commercial and Industrial (C/I) classification contains all commercial and industrial customers that are not direct serve customers of Big Rivers. The class represented about 30% of rural system energy sales in 2010 and consists of a wide variety of customers, from small establishments with demands less than 10 kW to larger industrial operations with demands exceeding 1,000 kW. Growth in class sales from 2010 through 2025 is projected to be 1.6% per year. The number of customers is projected to increase at a rate of 1.4% per year over the same period.

Econometric models were developed for each member cooperative to forecast sales for the group of customers whose peak demand falls below 1,000 kW. The econometric models specify relationships between monthly energy sales, a ratio of real retail sales to employment, heating degree days, and cooling degree days. The models developed to project small commercial consumers specify relationships between number of consumers and employment. The statistical output for the models is presented in the appendix.

Energy sales for those customers whose demand exceeds 1,000 kW were projected on an individual basis based on historical trends and input received from cooperative management about anticipated changes in operations. This forecast includes no new customers with demands exceeding 1,000 kW.

6.2.3 Direct Serve

The Direct Serve classification contains all non-rural commercial and industrial customers that are served directly by Big Rivers. These customers are usually large industrial operations, and there are currently 22 customers in this class, which represented 77% of total system energy sales in 2010. Sales to two aluminum smelters alone account for about 67% of total system sales and 57% of total system peak demand. Projections of energy sales and peak demand were developed by cooperative management on an individual basis for each account. Energy sales for existing accounts are projected to be constant over the forecast horizon.

6.2.4 All Other Classifications

The public street lighting and irrigation classifications represent less than 1% of rural system sales. Energy sales have increased over the past ten years, and are projected to continue their increase at a rate of approximately 1% per year from 2010 to 2025.

6.3 Distribution and Transmission Losses

Distribution losses were projected for each member cooperative and added to member system energy sales to compute member system energy purchases. The sum of member system purchases, excluding smelter requirements, is equal to Big Rivers' native sales. Transmission losses are projected to be 0.97% per year throughout the forecast period.

6.4 Peak Demand

This forecast contains projections of rural system coincident peak (CP) demand, rural system non-coincident demand (NCP), and total system non-coincident peak demand. Coincident demand is the maximum aggregated simultaneous load of all rural substations on the Big Rivers' system. Peak demand projections were developed on a summer and winter seasonal basis. Big Rivers is projected to continue a recent trend of being a winter peaking system, as growth in electric heating and electric water heating market shares are expected to outpace increases in air conditioning market share.

Rural system CP demand is projected to increase at an average rate of 1.3% over the forecast period, reaching 637 MW by 2025. Coincident demand is expected to occur during the winter season.

Regression models were developed at the member cooperative level to project rural system CP for the summer and winter seasons. The models quantify the relationship between peak demand, energy requirements, and extreme temperature. Projected load factor was computed using the energy and demand forecasts and compared to historical trends as a final test of reasonableness for the demand forecast.

6.5 Energy Efficiency Program Impacts

Each of Big Rivers' three member cooperatives plans to implement energy efficiency programs that will impact energy sales and peak demand over the forecast horizon. A comprehensive energy efficiency and demand-side management study was conducted in 2010 by Big Rivers Electric Corporation[2], and the seven programs listed in Table 6.2 were concluded to be economically feasible. Details for each of the seven programs are described in that report.

Table 6.2
Energy Efficiency Programs

Residential Programs	Commercial Programs
Lighting	Lighting
Efficient Appliances	HVAC
Advanced Technologies	
Weatherization	
New Construction	

The portfolio of programs was designed at the Big Rivers level rather than at each of Big Rivers' three member cooperatives. Total program potential through 2020 is estimated at 1 percent of rural system energy sales and 1.4 percent of rural system peak demand (winter peak). Energy and peak savings are based on total funding by Big Rivers of $11.2 million, consisting of $1 million in 2011, followed by increases of 2.5 percent annually from 2012-2020.

The Big Rivers study examined over 200 energy efficiency measure permutations in the residential, commercial and industrial sectors combined. The findings suggest that Big Rivers could save up to 31.6% of total energy sales and 40.1% of winter peak demand by pursuing "Economic Potential" energy efficient technologies. In the base case "Achievable Potential" scenario, savings of approximately 8.8% of total energy sales (311,744 MWh) and 11.6% of winter peak demand (79.5 MW) are possible by 2020.

The example programs analyzed in the "Program Potential" scenario achieve estimated savings in 2020 of 34,845 MWh and peak load reductions of 9.5 MW in the winter and 7.2 MW in the summer at the end-consumer level for all three Big Rivers member cooperatives in the aggregate. This represents approximately 1.0% of total energy sales, 1.4% of peak demand in the winter, and 1.0% of peak demand in the summer by 2020.

[2] Demand-Side Management (DSM) Potential Report for Big Rivers Electric Corporation, October 2010.

Table 6.3 presents the forecast of rural system energy and peak demand, estimated program impacts at all three member cooperatives in the aggregate, and projected rural system requirements adjusted for the programs.

Table 6.3
Energy Efficiency Programs

Year	Rural Energy Sales (MWh)	Energy Efficiency Program Impact (MWh)	Adjusted Energy Sales (MWh)	Rural Peak Demand (MW)	Energy Efficiency Program Impact (MW)	Adjusted Peak Demand (MW)
2011	2,367,958	3,416	2,364,542	557	0.9	556
2012	2,377,958	7,139	2,370,819	559	1.9	557
2013	2,409,830	10,962	2,398,868	566	2.9	563
2014	2,448,796	14,445	2,434,351	575	3.9	571
2015	2,479,657	18,009	2,461,648	582	4.8	577
2016	2,519,437	21,673	2,497,764	590	5.8	585
2017	2,556,536	25,414	2,531,122	599	6.8	592
2018	2,584,016	28,540	2,555,477	605	7.7	597
2019	2,611,403	31,828	2,579,575	611	8.6	602
2020	2,645,606	34,845	2,610,761	618	9.5	609
2021	2,680,766	37,702	2,643,064	626	10.3	616
2022	2,717,068	40,343	2,676,725	634	11.1	623
2023	2,754,136	42,940	2,711,196	642	11.9	630
2024	2,792,175	45,386	2,746,789	650	12.7	638
2025	2,829,900	47,887	2,782,013	659	13.5	645

7. Range Forecasts

The base case projections reflect expected economic growth for the area as well as average weather conditions. To address the inherent uncertainty related to these factors, long-term high and low range projections were developed. The range forecasts reflect the energy and demand requirements corresponding to more optimistic or pessimistic economic growth and to mild or extreme weather conditions. Such forecast scenarios are useful for various planning functions. Four scenarios were generated: (i) base case economics and mild weather, (ii) base case economics and extreme weather, (iii) optimistic economics and normal weather, and (iv) pessimistic economics and normal weather. The range forecasts are presented in table and graphical form in Appendix C, Range Forecasts.

7.1 Weather Scenarios

7.1.1 Extreme Weather

Residential sales are sensitive to weather conditions, as are small commercial sales to a lesser extent. Energy sales for the large commercial, public street and highway lighting, and any other classes are assumed to be non-weather sensitive. Residential sales under the extreme weather scenario were estimated using the residential class models. Residential use per customer was based on degree days representing an extreme year (refer to each member cooperative report for degree day values for extreme year). Based on severe weather conditions, total system energy requirements would reach 11,400,580 MWh by 2025, which would result in average growth of 0.4% per year over the forecast period. Native system energy would reach 4,032,025 MWh by 2025, which would result in average growth of 1.0% per year over the forecast period. Rural system energy would reach 3,070,533 MWh by 2025, which would result in average growth of 1.4% per year over the forecast period.

To develop the extreme weather non-coincident peak demand scenario for the system, the difference between the minimum load factor experienced from 1994 through 2010 and the average load factor recorded during those years was subtracted from the base case load factors. These extreme load factors were then applied to the base case energy requirements forecast to get the extreme demands. This forecast indicates that total system non-coincident peak demand would reach 1,669 MW by 2025, resulting in an average growth rate of 0.7% over the forecast period. Native system coincident peak demand would reach 811 MW by 2025, resulting in an average growth rate of 1.7% over the forecast period. Rural system CP demand would reach 712 MW by 2025, which would result in average growth of 2.2% per year over the forecast period.

7.1.2 Mild Weather

To project energy requirements for this scenario, degree days for representing a mild year were input into the residential energy sales per consumer. Based on mild weather conditions, total system energy requirements would reach 10,998,987 MWh by 2025, which would result in average growth of 0.2% per year over the forecast period. Native system energy requirements would reach 3,630,432 MWh by 2025, which would result in average growth of 0.3% per year over the forecast period. Rural system energy requirements would reach 2,662,657 MWh by 2025, resulting in average growth of 0.4% per year over the forecast period.

To develop the mild weather system non-coincident peak demand scenario, the load factor difference described in section 7.1.1 was added to the base case load factors. These mild load factors were then applied to the base case energy requirements forecast to get the mild demands. This forecast indicates that total system non-coincident peak demand would reach 1,576 MW by 2025, resulting in an average growth rate of 0.7% over the forecast period. Native system CP demand would reach 718 MW by 2025, resulting in average growth of 0.5% per year over the forecast period. Rural system CP demand would reach 597 MW by 2025, resulting in average growth of 0.6% per year over the forecast period.

7.2 Economy Scenarios

High and low scenarios for energy requirements and peak demand were developed based on optimistic and pessimistic macroeconomic assumptions. Economic uncertainty was addressed for the economic factors specified in the econometric models, including households, employment, and income.

7.2.1 Optimistic Outlook

The coefficients for number of households, average household income and retail sales from the SAE and econometric models were applied to the optimistic forecasts of each respective economic factor included in the long-term forecasting models.

Based on the assumptions made in the optimistic economic outlook scenario for each of the member cooperatives, total system energy requirements would reach 11,604,494 MWh by 2025, resulting in an average annual growth rate 0.6% per year. Native system energy would reach 4,235,939 MWh by 2025, resulting in average growth of 1.3% per year over the forecast period. Rural system energy requirements would reach 3,280,055 MWh by 2025, resulting in average growth of 1.8% per year over the forecast period.

To develop the corresponding system non-coincident peak demand forecast, the base case system load factor was applied to the energy requirements forecast based on the optimistic economic outlook. This forecast indicates total system non-coincident peak demand would reach 1,695 MW by 2025, resulting in an

average annual growth rate of 0.8% per year. Native system CP demand would reach 836 MW by 2025, resulting in average growth of 1.9% per year over the forecast period. Rural system CP demand would reach 731 MW by 2025, resulting in average growth of 2.4% per year over the forecast period.

7.2.2 Pessimistic Outlook

Based on the assumptions made in the pessimistic economic outlook scenario, total system energy requirements would reach 10,809,135 MWh by 2025, resulting in an average annual growth rate 0.1% per year. Native system energy requirements would reach 3,440,580 MWh by 2025, resulting in average growth of -0.1% per year over the forecast period. Rural system energy requirements would reach 2,467,277 MWh by 2025, resulting in average growth of -0.1% per year over the forecast period.

To develop the corresponding system non-coincident peak demand forecast, the base case system load factor was applied to the energy requirements forecast based on the pessimistic economic outlook. This forecast indicates total system non-coincident peak demand would reach 1,538 MW by 2025, resulting in an average annual growth rate of 0.2% per year. Native system CP demand would reach 679 MW by 2025, resulting in average growth of 0.5% per year over the forecast period. Rural system CP demand would reach 550 MW by 2025, resulting in average growth of 0.5% per year over the forecast period.

8. Forecast Methodology

A bottom-up approach was developed to project energy sales. Number of consumers and energy sales were projected at the customer class level and aggregated to produce the member cooperative and G&T system sales forecasts. Statistically adjusted end-use models were used to forecast residential energy use per customer. Econometrics was employed to forecast small commercial energy sales. Energy sales and peak demand for large commercial customers were developed by cooperative staff using historical trends and information made available by the individual customers. Energy sales and number of consumers for all other classifications were based on historical trends. Total system energy requirements were projected by applying average distribution and transmission line loss factors to projections of total system energy sales. The rural system peak demand forecast was developed using econometric models. The total system peak demand forecast is based on the sum of rural system peak demand and peak projections for the direct serve commercial and industrial customers.

8.1 Forecasting Process

Econometric models have the advantage of explicitly tracking the underlying causes of trends and patterns in historical data. They provide information that allows Cooperative management to estimate the impacts of certain factors on energy consumption. 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. Econometric models have been developed to project residential and small commercial requirements as these two consumer classifications account for the overwhelming majority of total system energy sales.

End-use modeling is an engineering approach to forecasting and disaggregates energy consumption into key end-use segments. End-use models require copious amounts of system-specific data including economic activity, housing characteristics, weather, market share of major electric end-uses, price of electricity, appliance size, and efficiency. Engineering equations equate these drivers to consumption by end-use. End-use models are valuable in that they allow the forecaster to identify specific trends in key drivers of electricity consumption. Their drawback is that they require detailed data that is difficult and often expensive to derive at the system level.

Statistically adjusted engineering (SAE) models combine the two traditional approaches to project long-term residential energy consumption: end-use engineering models and econometric regression models. SAE models incorporate the strengths of both approaches into predictions for consumption.

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.

8.2 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:

$$y_t = ß_0 + ß_1(x_{t1}) + ß_2(x_{t2}) + ß_3(x_{t3}) + ...ß_k(x_{tn}) + e_t$$

where:

t	= time element
y_t	= the dependent variable
$x_1, x_2, ... x_n$	= the set of independent variables
$ß_0, ß_1, ... ß_k$	= the set of parameter coefficients
e_t	= modeling error

8.2.1 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.

Models sometime include as an independent variable the lag of the dependent variable. 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.

8.2.2 Model Estimation

Once a hypothesized relationship or model is specified, historical data are used to estimate the model parameters, $ß_0$, $ß_1$, $ß_2$,... $ß_k$ 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 exits 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.

8.2.3 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:

$$RUSE_t = ß_0 + ß_1(PCAP_t) - ß_2(RRPE_t) + ß_3(CDD_t) + ß_4(HDD_t) + e_t$$

$RUSE_t$	=	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

8.2.4 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 that 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 energy consumption and price of electricity. As price increases, consumers tend to conserve energy, and consumption decreases.

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. An analysis of the models' residuals was performed to determine whether mathematical transformations of the independent 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.

8.2.5 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 is 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.

8.2.6 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.

8.3 Statistically Adjusted End-Use Modeling

The SAE modeling structure combines the benefits of both end-use and econometric models. Three indices are developed that represent end-use factors and are run through a regression model to allow the end-use indices to be statistically weighted or adjusted to historical residential usage patterns. An index is developed for space heating, air conditioning, and base load appliances. The data requirements for a true end-use model are relaxed in the SAE framework, as regional or even national data on several inputs can be utilized because the regression procedure will weight these variables to fit system consumption. The response to key drivers of electricity can also be adjusted in the development of each index, eliminating the

primary weakness of a traditional econometric model. Further, because a regression is developed, all the statistical diagnostic tools associated with regression are available for analyzing the SAE specification. The SAE regression model takes on the following form:

$RUSE = ß_0 + ß_1 \times SHIndx + ß_2 \times ACIndx + ß_3 \times BaseIndx + e$

where:

RUSE = Residential Average Use per Consumer per Month
SHIndx = Space Heating Index
ACIndx = Air Conditioning Index
BaseIndx = Base Appliance Index
ß1, ß2, ß3 = Weights for Each Index
e = Error Term

The indices are developed as described below. The coefficients, or weights, are determined using two-stage least squares regression procedures.

8.3.1 Space Heating Index

The space heating index combines several appliance, household, weather, and economic factors that directly impact the level of space heating electricity consumption in a home:

- Market share of electric space heating devices
- Average device efficiency
- Effective size of the envelope through which heat is lost in the home (including exterior walls, ceiling/roof, and the floor)
- Thermal heat loss characteristics of the home
- Real retail price of electricity
- Household income
- Heating degree days

These variables increase or decrease the index depending on how they impact space heating electricity consumption. Market share, size of home, income, and degree days all increase consumption as they increase. Device efficiency, home efficiency, and price of electricity decrease consumption as they increase. When it is available, system-level data is used for each of the heating factors. If system-specific data is not available, regional or national trends that are easier to obtain can be utilized. The index is developed on a monthly basis.

8.3.2 Air Conditioning Index

The air conditioning index is built in the exact manner as the space heating index, but focuses instead on air conditioning equipment. The key variables used to develop the air conditioning index include:

- Market share of electric air conditioning devices, including room units
- Average device efficiency
- Effective size of the envelope through which heat is gained in the home (including exterior walls, ceiling/roof, and the floor)
- Thermal heat gain characteristics of the home
- Real retail price of electricity
- Household income
- Cooling degree days

8.3.3 Base Load Index

The base load index captures the general trend associated with increased penetration of plug appliances, lighting, and water heating in the home. The base load index takes into account use associated with several appliances:

- Water heaters
- Refrigerators
- Separate freezers
- Electric ranges and ovens
- Electric clothes washers and driers
- Dishwashers
- Television sets
- Lighting

The index is modified to include impacts associated with price of electricity, household income, and number of people in the household. As the real price of electricity goes up, the base load index goes down. An increase in household income has a positive effect on the base load index as more money is available for plug load electronics. The number of people in the household also has a positive effect on usage. More people in the home leads to more loads of laundry, more showers, more loads of dishes, and more lighting usage. The impact of weather on use of these appliances is negligible, so weather is not included as a factor in the base load index.

Appendix A
Tables – Short-Term Forecast

BIG RIVERS ELECTRIC CORPORATION

2011 SHORT-TERM LOAD FORECAST - BASE CASE

TOTAL SYSTEM REQUIREMENTS

Year	Month	Actual Sales (MWh)	Normal Sales (MWh)	Percent Growth	Actual Requirements (MWh)	Normal Requirements (MWh)	Percent Growth	Actual CP (MW)	Normal CP (MW)	Percent Growth	Actual Load Factor	Normal Load Factor
2010	Jan	955,382	935,496		963,172	941,895		1,498	1,476		87.3%	85.8%
2010	Feb	860,866	838,737	-10.3%	868,042	844,546	-10.3%	1,454	1,453	-1.5%	81.1%	86.5%
2010	Mar	873,105	879,406	4.8%	880,381	885,594	4.9%	1,376	1,382	-4.9%	86.9%	86.1%
2010	Apr	803,833	813,571	-7.5%	810,531	819,362	-7.5%	1,278	1,305	-5.6%	86.2%	87.2%
2010	May	853,226	843,399	3.7%	860,337	849,381	3.7%	1,395	1,386	6.2%	83.8%	82.4%
2010	Jun	895,835	867,448	2.9%	903,302	873,458	2.8%	1,490	1,488	7.4%	82.4%	81.5%
2010	Jul	936,543	916,563	5.7%	944,350	922,866	5.7%	1,499	1,496	0.6%	85.6%	82.9%
2010	Aug	949,303	916,127	0.0%	957,217	922,461	0.0%	1,530	1,501	0.3%	85.0%	82.6%
2010	Sep	839,677	830,438	-9.4%	846,675	836,261	-9.3%	1,440	1,420	-5.4%	79.9%	81.8%
2010	Oct	822,669	830,108	0.0%	829,524	836,012	0.0%	1,305	1,285	-9.5%	86.4%	87.5%
2010	Nov	838,268	841,058	1.3%	845,255	846,929	1.3%	1,355	1,360	5.9%	84.7%	86.5%
2010	Dec	952,567	930,861	10.7%	960,508	937,226	10.7%	1,526	1,504	10.6%	85.5%	83.7%
2011	Jan		947,116	1.7%		956,393	2.0%		1,513	0.6%		85.0%
2011	Feb		834,642	-11.9%		842,818	-11.9%		1,455	-3.8%		86.2%
2011	Mar		882,534	5.7%		891,179	5.7%		1,392	-4.3%		86.0%
2011	Apr		823,759	-6.7%		831,828	-6.7%		1,302	-6.5%		88.7%
2011	May		863,984	4.9%		872,447	4.9%		1,348	3.5%		87.0%
2011	Jun		890,828	3.1%		899,554	3.1%		1,445	7.2%		86.4%
2011	Jul		940,607	5.6%		949,820	5.6%		1,467	1.5%		87.0%
2011	Aug		932,051	-0.9%		941,180	-0.9%		1,506	2.7%		84.0%
2011	Sep		854,246	-8.3%		862,613	-8.3%		1,390	-7.7%		86.2%
2011	Oct		852,891	-0.2%		861,245	-0.2%		1,310	-5.7%		88.3%
2011	Nov		854,288	0.2%		862,656	0.2%		1,351	3.1%		88.7%
2011	Dec		942,913	10.4%		952,148	10.4%		1,467	8.6%		87.2%
2012	Jan		948,462	0.6%		957,752	0.6%		1,515	3.3%		85.0%
2012	Feb		856,032	-9.7%		864,417	-9.7%		1,457	-3.8%		88.3%
2012	Mar		883,311	3.2%		891,964	3.2%		1,394	-4.3%		86.0%
2012	Apr		824,369	-6.7%		832,443	-6.7%		1,304	-6.5%		88.7%
2012	May		864,664	4.9%		873,134	4.9%		1,350	3.5%		87.0%
2012	Jun		891,710	3.1%		900,445	3.1%		1,447	7.2%		86.4%
2012	Jul		941,609	5.6%		950,832	5.6%		1,468	1.5%		87.0%
2012	Aug		933,008	-0.9%		942,147	-0.9%		1,508	2.7%		84.0%
2012	Sep		854,981	-8.4%		863,356	-8.4%		1,391	-7.8%		86.2%
2012	Oct		853,529	-0.2%		861,890	-0.2%		1,312	-5.7%		88.3%
2012	Nov		855,037	0.2%		863,412	0.2%		1,353	3.1%		88.7%
2012	Dec		943,959	10.4%		953,205	10.4%		1,469	8.6%		87.2%
2013	Jan		951,739	0.8%		961,061	0.8%		1,522	3.6%		84.9%
2013	Feb		838,774	-11.9%		846,989	-11.9%		1,463	-3.9%		86.1%
2013	Mar		885,787	5.6%		894,464	5.6%		1,399	-4.4%		85.9%
2013	Apr		826,326	-6.7%		834,419	-6.7%		1,308	-6.5%		88.6%
2013	May		866,858	4.9%		875,349	4.9%		1,354	3.5%		86.9%
2013	Jun		894,592	3.2%		903,354	3.2%		1,453	7.3%		86.4%
2013	Jul		944,840	5.6%		954,095	5.6%		1,474	1.5%		87.0%
2013	Aug		936,122	-0.9%		945,291	-0.9%		1,515	2.7%		83.9%
2013	Sep		857,358	-8.4%		865,755	-8.4%		1,396	-7.8%		86.1%
2013	Oct		855,568	-0.2%		863,949	-0.2%		1,316	-5.8%		88.3%
2013	Nov		857,404	0.2%		865,802	0.2%		1,357	3.2%		88.6%
2013	Dec		947,186	10.5%		956,463	10.5%		1,476	8.7%		87.1%
2014	Jan		955,750	0.9%		965,111	0.9%		1,530	3.7%		84.8%
2014	Feb		842,121	-11.9%		850,370	-11.9%		1,471	-3.9%		86.0%
2014	Mar		888,817	5.5%		897,523	5.5%		1,406	-4.4%		85.8%
2014	Apr		828,718	-6.8%		836,836	-6.8%		1,313	-6.6%		88.5%
2014	May		869,537	4.9%		878,054	4.9%		1,360	3.6%		86.8%
2014	Jun		898,111	3.3%		906,908	3.3%		1,460	7.4%		86.3%
2014	Jul		948,787	5.6%		958,080	5.6%		1,482	1.5%		86.9%
2014	Aug		939,924	-0.9%		949,131	-0.9%		1,523	2.8%		83.8%
2014	Sep		860,260	-8.5%		868,686	-8.5%		1,402	-7.9%		86.0%
2014	Oct		858,060	-0.3%		866,465	-0.3%		1,321	-5.8%		88.2%
2014	Nov		860,298	0.3%		868,725	0.3%		1,363	3.2%		88.5%
2014	Dec		951,134	10.6%		960,451	10.6%		1,483	8.8%		87.0%

BIG RIVERS ELECTRIC CORPORATION

2011 SHORT-TERM LOAD FORECAST - BASE CASE

NATIVE SYSTEM REQUIREMENTS

Year	Month	Actual Sales (MWh)	Normal Sales (MWh)	Percent Growth	Actual Requirements (MWh)	Normal Requirements (MWh)	Percent Growth	Actual CP (MW)	Normal CP (MW)	Percent Growth	Actual Load Factor	Normal Load Factor
2010	Jan	344,542	324,656		347,251	325,973		628	606		75.1%	72.4%
2010	Feb	296,088	273,959	-15.6%	298,566	275,070	-15.6%	588	588	-2.9%	69.0%	69.7%
2010	Mar	258,265	264,566	-3.4%	260,426	265,640	-3.4%	513	520	-11.6%	69.0%	68.7%
2010	Apr	219,601	229,339	-13.3%	221,439	230,270	-13.3%	415	442	-15.0%	72.5%	72.4%
2010	May	252,383	242,556	5.8%	254,496	243,540	5.8%	527	518	17.3%	65.6%	63.2%
2010	Jun	311,340	282,953	16.7%	313,945	284,101	16.7%	627	625	20.6%	68.0%	63.1%
2010	Jul	330,209	310,230	9.6%	332,973	311,489	9.6%	631	629	0.6%	71.7%	66.6%
2010	Aug	335,125	301,949	-2.7%	337,930	303,174	-2.7%	663	633	0.8%	69.3%	64.3%
2010	Sep	263,794	254,555	-15.7%	266,002	255,588	-15.7%	570	551	-13.1%	63.3%	64.5%
2010	Oct	227,570	235,009	-7.7%	229,475	235,963	-7.7%	435	415	-24.7%	71.7%	76.5%
2010	Nov	261,479	264,269	12.5%	263,668	265,341	12.5%	485	490	18.2%	73.9%	75.2%
2010	Dec	345,007	323,300	22.3%	347,894	324,612	22.3%	652	630	28.5%	72.5%	69.2%
2011	Jan		327,364	1.3%		330,571	1.8%		654	3.8%		67.9%
2011	Feb		274,866	-16.0%		277,559	-16.0%		597	-8.8%		69.2%
2011	Mar		262,782	-4.4%		265,356	-4.4%		534	-10.5%		66.8%
2011	Apr		223,999	-14.8%		226,193	-14.8%		444	-16.8%		70.8%
2011	May		244,232	9.0%		246,624	9.0%		490	10.4%		67.6%
2011	Jun		291,068	19.2%		293,919	19.2%		587	19.8%		69.5%
2011	Jul		320,855	10.2%		323,998	10.2%		608	3.6%		71.6%
2011	Aug		312,299	-2.7%		315,358	-2.7%		648	6.5%		65.4%
2011	Sep		254,486	-18.5%		256,978	-18.5%		532	-18.0%		67.1%
2011	Oct		233,139	-8.4%		235,423	-8.4%		452	-14.9%		70.0%
2011	Nov		254,528	9.2%		257,021	9.2%		493	8.9%		72.5%
2011	Dec		323,161	27.0%		326,326	27.0%		609	23.6%		72.0%
2012	Jan		328,710	1.7%		331,929	1.7%		657	7.9%		67.9%
2012	Feb		276,264	-16.0%		278,970	-16.0%		599	-8.8%		69.3%
2012	Mar		263,559	-4.6%		266,141	-4.6%		536	-10.5%		66.8%
2012	Apr		224,609	-14.8%		226,809	-14.8%		445	-16.9%		70.7%
2012	May		244,912	9.0%		247,311	9.0%		491	10.3%		67.7%
2012	Jun		291,950	19.2%		294,810	19.2%		589	19.8%		69.6%
2012	Jul		321,857	10.2%		325,009	10.2%		610	3.6%		71.6%
2012	Aug		313,256	-2.7%		316,324	-2.7%		650	6.5%		65.4%
2012	Sep		255,221	-18.5%		257,721	-18.5%		533	-18.0%		67.2%
2012	Oct		233,777	-8.4%		236,067	-8.4%		453	-14.9%		70.0%
2012	Nov		255,277	9.2%		257,777	9.2%		494	9.0%		72.4%
2012	Dec		324,207	27.0%		327,383	27.0%		611	23.7%		72.0%
2013	Jan		331,987	2.4%		335,238	2.4%		664	8.6%		67.9%
2013	Feb		278,998	-16.0%		281,730	-16.0%		605	-8.8%		69.3%
2013	Mar		266,035	-4.6%		268,641	-4.6%		541	-10.6%		66.7%
2013	Apr		226,566	-14.8%		228,785	-14.8%		450	-16.9%		70.7%
2013	May		247,106	9.1%		249,526	9.1%		496	10.3%		67.6%
2013	Jun		294,832	19.3%		297,720	19.3%		594	19.9%		69.6%
2013	Jul		325,088	10.3%		328,273	10.3%		616	3.6%		71.6%
2013	Aug		316,370	-2.7%		319,469	-2.7%		656	6.6%		65.4%
2013	Sep		257,598	-18.6%		260,121	-18.6%		538	-18.0%		67.2%
2013	Oct		235,816	-8.5%		238,126	-8.5%		457	-15.0%		70.0%
2013	Nov		257,644	9.3%		260,167	9.3%		499	9.1%		72.4%
2013	Dec		327,434	27.1%		330,641	27.1%		617	23.7%		72.0%
2014	Jan		335,998	2.6%		339,289	2.6%		672	8.9%		67.8%
2014	Feb		282,345	-16.0%		285,111	-16.0%		613	-8.9%		69.3%
2014	Mar		269,065	-4.7%		271,701	-4.7%		548	-10.6%		66.7%
2014	Apr		228,958	-14.9%		231,201	-14.9%		455	-17.0%		70.6%
2014	May		249,785	9.1%		252,231	9.1%		501	10.3%		67.6%
2014	Jun		298,351	19.4%		301,274	19.4%		601	20.0%		69.6%
2014	Jul		329,035	10.3%		332,258	10.3%		623	3.6%		71.6%
2014	Aug		320,172	-2.7%		323,308	-2.7%		664	6.6%		65.4%
2014	Sep		260,500	-18.6%		263,051	-18.6%		544	-18.1%		67.1%
2014	Oct		238,308	-8.5%		240,643	-8.5%		462	-15.0%		70.0%
2014	Nov		260,538	9.3%		263,090	9.3%		505	9.2%		72.4%
2014	Dec		331,382	27.2%		334,628	27.2%		625	23.8%		71.9%

BIG RIVERS ELECTRIC CORPORATION

2011 SHORT-TERM LOAD FORECAST - BASE CASE

RURAL SYSTEM REQUIREMENTS

Year	Month	Actual Energy (MWh)	Normal Energy (MWh)	Percent Growth	CP (MW)	Normal CP (MW)	Percent Growth	Load Factor
2010	Jan	263,137	240,843		511	489		66.3%
2010	Feb	227,441	202,822	-15.8%	474	474	-7.3%	63.7%
2010	Mar	181,040	186,445	-8.1%	387	394	-18.4%	63.6%
2010	Apr	142,571	152,031	-18.5%	299	326	-22.8%	64.8%
2010	May	172,148	161,302	6.1%	409	400	36.7%	54.3%
2010	Jun	233,279	203,463	26.1%	506	504	23.9%	56.1%
2010	Jul	253,319	231,835	13.9%	513	510	1.2%	61.0%
2010	Aug	253,372	218,619	-5.7%	544	515	6.2%	57.0%
2010	Sep	186,134	175,895	-19.5%	453	433	-16.8%	56.4%
2010	Oct	148,621	155,394	-11.7%	298	278	-34.2%	75.2%
2010	Nov	174,723	176,476	13.6%	369	374	23.9%	65.4%
2010	Dec	264,110	239,716	35.8%	537	515	45.4%	62.6%
2011	Jan		247,277	3.2%		536	4.1%	62.0%
2011	Feb		206,426	-16.5%		479	-10.7%	64.2%
2011	Mar		186,212	-9.8%		416	-13.1%	60.2%
2011	Apr		146,734	-21.2%		326	-21.6%	62.6%
2011	May		163,905	11.7%		372	14.3%	59.1%
2011	Jun		215,083	31.2%		470	26.1%	63.6%
2011	Jul		241,353	12.2%		491	4.5%	66.1%
2011	Aug		232,356	-3.7%		530	8.1%	58.9%
2011	Sep		177,503	-23.6%		414	-22.0%	59.5%
2011	Oct		152,779	-13.9%		335	-19.2%	61.4%
2011	Nov		177,873	16.4%		374	11.9%	66.0%
2011	Dec		243,651	37.0%		491	31.1%	66.7%
2012	Jan		248,339	1.9%		539	9.8%	62.0%
2012	Feb		207,307	-16.5%		481	-10.8%	64.2%
2012	Mar		186,997	-9.8%		418	-13.1%	60.2%
2012	Apr		147,350	-21.2%		327	-21.6%	62.6%
2012	May		164,592	11.7%		374	14.2%	59.2%
2012	Jun		215,973	31.2%		471	26.1%	63.7%
2012	Jul		242,365	12.2%		492	4.5%	66.2%
2012	Aug		233,322	-3.7%		532	8.1%	58.9%
2012	Sep		178,246	-23.6%		415	-22.0%	59.6%
2012	Oct		153,424	-13.9%		336	-19.2%	61.4%
2012	Nov		178,629	16.4%		376	12.0%	66.0%
2012	Dec		244,708	37.0%		493	31.1%	66.7%
2013	Jan		251,648	2.8%		545	10.7%	62.0%
2013	Feb		210,066	-16.5%		487	-10.8%	64.2%
2013	Mar		189,497	-9.8%		423	-13.1%	60.2%
2013	Apr		149,326	-21.2%		331	-21.6%	62.6%
2013	May		166,806	11.7%		378	14.1%	59.3%
2013	Jun		218,883	31.2%		477	26.1%	63.8%
2013	Jul		245,628	12.2%		498	4.5%	66.2%
2013	Aug		236,467	-3.7%		539	8.1%	59.0%
2013	Sep		180,646	-23.6%		420	-22.0%	59.7%
2013	Oct		155,483	-13.9%		340	-19.2%	61.5%
2013	Nov		181,019	16.4%		381	12.1%	66.0%
2013	Dec		247,966	37.0%		499	31.1%	66.8%
2014	Jan		255,698	3.1%		554	11.0%	62.0%
2014	Feb		213,447	-16.5%		494	-10.7%	64.2%
2014	Mar		192,556	-9.8%		429	-13.1%	60.3%
2014	Apr		151,742	-21.2%		337	-21.6%	62.6%
2014	May		169,512	11.7%		384	14.0%	59.4%
2014	Jun		222,437	31.2%		484	26.1%	63.9%
2014	Jul		249,613	12.2%		506	4.5%	66.3%
2014	Aug		240,306	-3.7%		547	8.1%	59.1%
2014	Sep		183,576	-23.6%		427	-22.0%	59.8%
2014	Oct		157,999	-13.9%		345	-19.2%	61.6%
2014	Nov		183,942	16.4%		387	12.2%	66.0%
2014	Dec		251,953	37.0%		507	31.1%	66.8%

(Including Generation & Tramsmission Losses)

BIG RIVERS ELECTRIC CORPORATION

2011 SHORT-TERM LOAD FORECAST - BASE CASE

RESIDENTIAL CLASSIFICATION

Year	Month	Consumers	Percent Growth	Actual Sales (MWh)	Normal Sales (MWh)	Percent Growth	Actual Average Use (kWh/Cust/Mo)	Normal Average Use (kWh/Cust/Mo)	Percent Growth
2010	Jan	97,264		182,119	167,111		1,872	1,718	
2010	Feb	97,278	0.0%	160,806	144,201	-13.7%	1,653	1,482	-13.7%
2010	Mar	97,320	0.0%	121,494	125,241	-13.1%	1,248	1,287	-13.2%
2010	Apr	97,414	0.1%	88,744	95,128	-24.0%	911	977	-24.1%
2010	May	97,387	0.0%	101,178	93,726	-1.5%	1,039	962	-1.4%
2010	Jun	97,415	0.0%	143,353	122,893	31.1%	1,472	1,262	31.1%
2010	Jul	97,499	0.1%	160,588	145,832	18.7%	1,647	1,496	18.6%
2010	Aug	97,615	0.1%	172,020	148,125	1.6%	1,762	1,517	1.5%
2010	Sep	97,550	-0.1%	114,849	107,761	-27.2%	1,177	1,105	-27.2%
2010	Oct	97,548	0.0%	90,636	95,268	-11.6%	929	977	-11.6%
2010	Nov	97,628	0.1%	105,157	106,342	11.6%	1,077	1,089	11.5%
2010	Dec	97,685	0.1%	170,268	153,726	44.6%	1,743	1,574	44.5%
2011	Jan	97,744	0.1%		157,777	2.6%		1,614	2.6%
2011	Feb	97,772	0.0%		141,093	-10.6%		1,443	-10.6%
2011	Mar	97,801	0.0%		123,635	-12.4%		1,264	-12.4%
2011	Apr	97,829	0.0%		101,030	-18.3%		1,033	-18.3%
2011	May	97,857	0.0%		98,295	-2.7%		1,004	-2.7%
2011	Jun	97,885	0.0%		125,986	28.2%		1,287	28.1%
2011	Jul	97,912	0.0%		149,806	18.9%		1,530	18.9%
2011	Aug	97,939	0.0%		148,837	-0.6%		1,520	-0.7%
2011	Sep	97,967	0.0%		115,997	-22.1%		1,184	-22.1%
2011	Oct	97,993	0.0%		98,526	-15.1%		1,005	-15.1%
2011	Nov	98,020	0.0%		114,414	16.1%		1,167	16.1%
2011	Dec	98,047	0.0%		143,648	25.6%		1,465	25.5%
2012	Jan	98,136	0.1%		154,561	7.6%		1,575	7.5%
2012	Feb	98,226	0.1%		139,876	-9.5%		1,424	-9.6%
2012	Mar	98,316	0.1%		123,347	-11.8%		1,255	-11.9%
2012	Apr	98,406	0.1%		101,189	-18.0%		1,028	-18.0%
2012	May	98,497	0.1%		98,625	-2.5%		1,001	-2.6%
2012	Jun	98,588	0.1%		126,347	28.1%		1,282	28.0%
2012	Jul	98,679	0.1%		150,296	19.0%		1,523	18.8%
2012	Aug	98,770	0.1%		149,414	-0.6%		1,513	-0.7%
2012	Sep	98,862	0.1%		116,567	-22.0%		1,179	-22.1%
2012	Oct	98,954	0.1%		98,954	-15.1%		1,000	-15.2%
2012	Nov	99,046	0.1%		114,694	15.9%		1,158	15.8%
2012	Dec	99,138	0.1%		143,923	25.5%		1,452	25.4%
2013	Jan	99,231	0.1%		156,016	8.4%		1,572	8.3%
2013	Feb	99,324	0.1%		141,097	-9.6%		1,421	-9.6%
2013	Mar	99,417	0.1%		124,290	-11.9%		1,250	-12.0%
2013	Apr	99,510	0.1%		101,801	-18.1%		1,023	-18.2%
2013	May	99,603	0.1%		99,193	-2.6%		996	-2.7%
2013	Jun	99,696	0.1%		127,317	28.4%		1,277	28.2%
2013	Jul	99,790	0.1%		151,548	19.0%		1,519	18.9%
2013	Aug	99,883	0.1%		150,705	-0.6%		1,509	-0.6%
2013	Sep	99,977	0.1%		117,405	-22.1%		1,174	-22.2%
2013	Oct	100,071	0.1%		99,576	-15.2%		995	-15.3%
2013	Nov	100,164	0.1%		115,585	16.1%		1,154	16.0%
2013	Dec	100,258	0.1%		145,258	25.7%		1,449	25.6%
2014	Jan	100,350	0.1%		157,629	8.5%		1,571	8.4%
2014	Feb	100,441	0.1%		142,590	-9.5%		1,420	-9.6%
2014	Mar	100,533	0.1%		125,608	-11.9%		1,249	-12.0%
2014	Apr	100,625	0.1%		102,888	-18.1%		1,022	-18.2%
2014	May	100,716	0.1%		100,347	-2.5%		996	-2.6%
2014	Jun	100,808	0.1%		128,997	28.6%		1,280	28.4%
2014	Jul	100,900	0.1%		153,637	19.1%		1,523	19.0%
2014	Aug	100,992	0.1%		152,747	-0.6%		1,512	-0.7%
2014	Sep	101,084	0.1%		118,909	-22.2%		1,176	-22.2%
2014	Oct	101,175	0.1%		100,790	-15.2%		996	-15.3%
2014	Nov	101,267	0.1%		117,003	16.1%		1,155	16.0%
2014	Dec	101,360	0.1%		147,049	25.7%		1,451	25.6%

BIG RIVERS ELECTRIC CORPORATION

2011 SHORT-TERM LOAD FORECAST - BASE CASE

SMALL COMMERCIAL & INDUSTRIAL CLASSIFICATION (RURAL SYSTEM)

Year	Month	Consumers	Percent Growth	Sales (MWh)	Percent Growth	Average Use (kWh/Cust/Mo)	Percent Growth
2010	Jan	14,819		67,567		3,811	
2010	Feb	14,766	-0.4%	55,307	-18.1%	3,131	-17.9%
2010	Mar	14,750	-0.1%	50,289	-9.1%	2,850	-9.0%
2010	Apr	14,751	0.0%	45,861	-8.8%	2,599	-8.8%
2010	May	14,783	0.2%	55,286	20.6%	3,126	20.3%
2010	Jun	14,836	0.4%	76,396	38.2%	4,304	37.7%
2010	Jul	14,803	-0.2%	74,462	-2.5%	4,205	-2.3%
2010	Aug	14,828	0.2%	72,986	-2.0%	4,114	-2.1%
2010	Sep	14,857	0.2%	58,561	-19.8%	3,295	-19.9%
2010	Oct	14,919	0.4%	52,206	-10.9%	2,925	-11.2%
2010	Nov	14,927	0.1%	58,807	12.6%	3,293	12.6%
2010	Dec	14,935	0.1%	72,434	23.2%	4,054	23.1%
2011	Jan	14,918	-0.1%	66,368	-8.6%	3,711	-8.5%
2011	Feb	14,927	0.1%	61,259	-7.7%	3,423	-7.8%
2011	Mar	14,937	0.1%	57,010	-6.9%	3,184	-7.0%
2011	Apr	14,946	0.1%	52,089	-8.6%	2,907	-8.7%
2011	May	14,955	0.1%	54,083	3.8%	3,017	3.8%
2011	Jun	14,964	0.1%	64,845	19.9%	3,615	19.8%
2011	Jul	14,973	0.1%	71,731	10.6%	3,996	10.6%
2011	Aug	14,982	0.1%	70,253	-2.1%	3,912	-2.1%
2011	Sep	14,990	0.1%	58,078	-17.3%	3,232	-17.4%
2011	Oct	14,999	0.1%	52,221	-10.1%	2,904	-10.1%
2011	Nov	15,008	0.1%	55,853	7.0%	3,105	6.9%
2011	Dec	15,016	0.1%	62,179	11.3%	3,454	11.3%
2012	Jan	15,103	0.6%	64,178	3.3%	3,547	2.7%
2012	Feb	15,133	0.2%	61,085	-4.8%	3,369	-5.0%
2012	Mar	15,163	0.2%	57,649	-5.6%	3,174	-5.8%
2012	Apr	15,190	0.2%	53,055	-8.0%	2,915	-8.1%
2012	May	15,217	0.2%	55,279	4.2%	3,032	4.0%
2012	Jun	15,243	0.2%	66,344	20.0%	3,633	19.8%
2012	Jul	15,269	0.2%	73,435	10.7%	4,014	10.5%
2012	Aug	15,294	0.2%	71,980	-2.0%	3,928	-2.1%
2012	Sep	15,319	0.2%	59,581	-17.2%	3,246	-17.4%
2012	Oct	15,343	0.2%	53,623	-10.0%	2,917	-10.1%
2012	Nov	15,367	0.2%	57,368	7.0%	3,116	6.8%
2012	Dec	15,391	0.2%	63,881	11.4%	3,464	11.2%
2013	Jan	15,490	0.6%	65,696	3.3%	3,557	2.7%
2013	Feb	15,529	0.3%	62,563	-4.8%	3,379	-5.0%
2013	Mar	15,566	0.2%	59,071	-5.6%	3,183	-5.8%
2013	Apr	15,599	0.2%	54,386	-7.9%	2,924	-8.1%
2013	May	15,629	0.2%	56,670	4.2%	3,041	4.0%
2013	Jun	15,658	0.2%	67,995	20.0%	3,642	19.8%
2013	Jul	15,684	0.2%	75,247	10.7%	4,024	10.5%
2013	Aug	15,709	0.2%	73,754	-2.0%	3,938	-2.1%
2013	Sep	15,733	0.2%	61,067	-17.2%	3,255	-17.3%
2013	Oct	15,756	0.1%	54,977	-10.0%	2,926	-10.1%
2013	Nov	15,778	0.1%	58,808	7.0%	3,126	6.8%
2013	Dec	15,800	0.1%	65,462	11.3%	3,475	11.2%
2014	Jan	15,896	0.6%	67,313	3.3%	3,568	2.7%
2014	Feb	15,934	0.2%	64,098	-4.8%	3,389	-5.0%
2014	Mar	15,971	0.2%	60,524	-5.6%	3,193	-5.8%
2014	Apr	16,004	0.2%	55,733	-7.9%	2,934	-8.1%
2014	May	16,035	0.2%	58,069	4.2%	3,051	4.0%
2014	Jun	16,065	0.2%	69,644	19.9%	3,653	19.7%
2014	Jul	16,093	0.2%	77,055	10.6%	4,034	10.4%
2014	Aug	16,121	0.2%	75,530	-2.0%	3,948	-2.1%
2014	Sep	16,147	0.2%	62,566	-17.2%	3,265	-17.3%
2014	Oct	16,173	0.2%	56,353	-9.9%	2,936	-10.1%
2014	Nov	16,198	0.2%	60,285	7.0%	3,136	6.8%
2014	Dec	16,223	0.2%	67,101	11.3%	3,485	11.1%

BIG RIVERS ELECTRIC CORPORATION

2011 SHORT-TERM LOAD FORECAST - BASE CASE

LARGE COMMERCIAL & INDUSTRIAL CLASSIFICATION (DIRECT SERVE)

Year	Month	Consumers	Percent Growth	Sales (MWh)	Percent Growth	Average Use (kWh/Cust/Mo)	Percent Growth
2010	Jan	22		693,244		31,511,071	
2010	Feb	22	0.0%	635,148	-8.4%	28,870,351	-8.4%
2010	Mar	22	0.0%	693,017	9.1%	31,500,782	9.1%
2010	Apr	22	0.0%	662,250	-4.4%	30,102,256	-4.4%
2010	May	22	0.0%	682,263	3.0%	31,011,963	3.0%
2010	Jun	22	0.0%	664,329	-2.6%	30,196,753	-2.6%
2010	Jul	22	0.0%	685,260	3.2%	31,148,191	3.2%
2010	Aug	22	0.0%	697,493	1.8%	31,704,238	1.8%
2010	Sep	22	0.0%	655,063	-6.1%	29,775,596	-6.1%
2010	Oct	22	0.0%	674,976	3.0%	30,680,720	3.0%
2010	Nov	22	0.0%	664,870	-1.5%	30,221,350	-1.5%
2010	Dec	22	0.0%	690,214	3.8%	31,373,378	3.8%
2011	Jan	22	0.0%	702,238	1.7%	31,919,901	1.7%
2011	Feb	22	0.0%	630,218	-10.3%	28,646,290	-10.3%
2011	Mar	22	0.0%	698,128	10.8%	31,733,109	10.8%
2011	Apr	22	0.0%	678,448	-2.8%	30,838,551	-2.8%
2011	May	22	0.0%	701,669	3.4%	31,894,060	3.4%
2011	Jun	22	0.0%	677,832	-3.4%	30,810,549	-3.4%
2011	Jul	22	0.0%	701,595	3.5%	31,890,669	3.5%
2011	Aug	22	0.0%	701,949	0.1%	31,906,773	0.1%
2011	Sep	22	0.0%	678,464	-3.3%	30,839,283	-3.3%
2011	Oct	22	0.0%	701,594	3.4%	31,890,638	3.4%
2011	Nov	22	0.0%	678,140	-3.3%	30,824,557	-3.3%
2011	Dec	22	0.0%	701,625	3.5%	31,892,047	3.5%
2012	Jan	22	0.0%	702,532	0.1%	31,933,269	0.1%
2012	Feb	22	0.0%	650,737	-7.4%	29,578,945	-7.4%
2012	Mar	22	0.0%	698,128	7.3%	31,733,109	7.3%
2012	Apr	22	0.0%	678,448	-2.8%	30,838,551	-2.8%
2012	May	22	0.0%	701,669	3.4%	31,894,060	3.4%
2012	Jun	22	0.0%	677,832	-3.4%	30,810,549	-3.4%
2012	Jul	22	0.0%	701,595	3.5%	31,890,669	3.5%
2012	Aug	22	0.0%	701,949	0.1%	31,906,773	0.1%
2012	Sep	22	0.0%	678,464	-3.3%	30,839,283	-3.3%
2012	Oct	22	0.0%	701,594	3.4%	31,890,638	3.4%
2012	Nov	22	0.0%	678,140	-3.3%	30,824,557	-3.3%
2012	Dec	22	0.0%	701,625	3.5%	31,892,047	3.5%
2013	Jan	22	0.0%	702,532	0.1%	31,933,269	0.1%
2013	Feb	22	0.0%	630,745	-10.2%	28,670,217	-10.2%
2013	Mar	22	0.0%	698,128	10.7%	31,733,109	10.7%
2013	Apr	22	0.0%	678,448	-2.8%	30,838,551	-2.8%
2013	May	22	0.0%	701,669	3.4%	31,894,060	3.4%
2013	Jun	22	0.0%	677,832	-3.4%	30,810,549	-3.4%
2013	Jul	22	0.0%	701,595	3.5%	31,890,669	3.5%
2013	Aug	22	0.0%	701,949	0.1%	31,906,773	0.1%
2013	Sep	22	0.0%	678,464	-3.3%	30,839,283	-3.3%
2013	Oct	22	0.0%	701,594	3.4%	31,890,638	3.4%
2013	Nov	22	0.0%	678,140	-3.3%	30,824,557	-3.3%
2013	Dec	22	0.0%	701,625	3.5%	31,892,047	3.5%
2014	Jan	22	0.0%	702,532	0.1%	31,933,269	0.1%
2014	Feb	22	0.0%	630,745	-10.2%	28,670,217	-10.2%
2014	Mar	22	0.0%	698,128	10.7%	31,733,109	10.7%
2014	Apr	22	0.0%	678,448	-2.8%	30,838,551	-2.8%
2014	May	22	0.0%	701,669	3.4%	31,894,060	3.4%
2014	Jun	22	0.0%	677,832	-3.4%	30,810,549	-3.4%
2014	Jul	22	0.0%	701,595	3.5%	31,890,669	3.5%
2014	Aug	22	0.0%	701,949	0.1%	31,906,773	0.1%
2014	Sep	22	0.0%	678,464	-3.3%	30,839,283	-3.3%
2014	Oct	22	0.0%	701,594	3.4%	31,890,638	3.4%
2014	Nov	22	0.0%	678,140	-3.3%	30,824,557	-3.3%
2014	Dec	22	0.0%	701,625	3.5%	31,892,047	3.5%

BIG RIVERS ELECTRIC CORPORATION

2011 SHORT-TERM LOAD FORECAST - BASE CASE

STREET LIGHTING CLASSIFICATION

Year	Month	Consumers	Percent Growth	Sales (MWh)	Percent Growth	Average Use (kWh/Cust/Mo)	Percent Growth
2010	Jan	85		302		3,548	
2010	Feb	85	0.0%	262	-13.0%	3,085	-13.0%
2010	Mar	85	0.0%	238	-9.3%	2,799	-9.3%
2010	Apr	85	0.0%	240	0.7%	2,818	0.7%
2010	May	85	0.0%	298	24.3%	3,504	24.3%
2010	Jun	85	0.0%	339	13.7%	3,984	13.7%
2010	Jul	91	7.1%	303	-10.5%	3,330	-16.4%
2010	Aug	91	0.0%	290	-4.4%	3,185	-4.4%
2010	Sep	91	0.0%	236	-18.6%	2,593	-18.6%
2010	Oct	91	0.0%	251	6.5%	2,763	6.5%
2010	Nov	91	0.0%	314	24.7%	3,446	24.7%
2010	Dec	91	0.0%	367	16.9%	4,028	16.9%
2011	Jan	82	-9.9%	307	-16.2%	3,744	-7.0%
2011	Feb	82	0.0%	268	-12.8%	3,264	-12.8%
2011	Mar	82	0.0%	243	-9.1%	2,968	-9.1%
2011	Apr	82	0.0%	245	0.7%	2,987	0.7%
2011	May	82	0.0%	303	23.8%	3,698	23.8%
2011	Jun	82	0.0%	344	13.5%	4,196	13.5%
2011	Jul	82	0.0%	309	-10.3%	3,766	-10.3%
2011	Aug	82	0.0%	296	-4.3%	3,605	-4.3%
2011	Sep	82	0.0%	242	-18.2%	2,947	-18.2%
2011	Oct	82	0.0%	257	6.4%	3,136	6.4%
2011	Nov	82	0.0%	319	24.2%	3,895	24.2%
2011	Dec	82	0.0%	372	16.6%	4,540	16.6%
2012	Jan	82	0.0%	312	-16.3%	3,799	-16.3%
2012	Feb	82	0.0%	272	-12.6%	3,319	-12.6%
2012	Mar	82	0.0%	248	-8.9%	3,022	-8.9%
2012	Apr	82	0.0%	249	0.7%	3,042	0.7%
2012	May	82	0.0%	308	23.4%	3,753	23.4%
2012	Jun	82	0.0%	349	13.3%	4,251	13.3%
2012	Jul	82	0.0%	313	-10.1%	3,820	-10.1%
2012	Aug	82	0.0%	300	-4.2%	3,660	-4.2%
2012	Sep	82	0.0%	246	-18.0%	3,002	-18.0%
2012	Oct	82	0.0%	262	6.3%	3,191	6.3%
2012	Nov	82	0.0%	324	23.8%	3,949	23.8%
2012	Dec	82	0.0%	377	16.3%	4,595	16.3%
2013	Jan	82	0.0%	316	-16.1%	3,854	-16.1%
2013	Feb	82	0.0%	277	-12.4%	3,374	-12.4%
2013	Mar	82	0.0%	252	-8.8%	3,077	-8.8%
2013	Apr	82	0.0%	254	0.6%	3,097	0.6%
2013	May	82	0.0%	312	23.0%	3,808	23.0%
2013	Jun	82	0.0%	353	13.1%	4,306	13.1%
2013	Jul	82	0.0%	318	-10.0%	3,875	-10.0%
2013	Aug	82	0.0%	305	-4.2%	3,714	-4.2%
2013	Sep	82	0.0%	251	-17.7%	3,057	-17.7%
2013	Oct	82	0.0%	266	6.2%	3,246	6.2%
2013	Nov	82	0.0%	328	23.4%	4,004	23.4%
2013	Dec	82	0.0%	381	16.1%	4,649	16.1%
2014	Jan	82	0.0%	321	-15.9%	3,909	-15.9%
2014	Feb	82	0.0%	281	-12.3%	3,429	-12.3%
2014	Mar	82	0.0%	257	-8.7%	3,132	-8.7%
2014	Apr	82	0.0%	258	0.6%	3,152	0.6%
2014	May	82	0.0%	317	22.6%	3,863	22.6%
2014	Jun	82	0.0%	358	12.9%	4,361	12.9%
2014	Jul	82	0.0%	322	-9.9%	3,930	-9.9%
2014	Aug	82	0.0%	309	-4.1%	3,769	-4.1%
2014	Sep	82	0.0%	255	-17.4%	3,112	-17.4%
2014	Oct	82	0.0%	271	6.1%	3,300	6.1%
2014	Nov	82	0.0%	333	23.0%	4,059	23.0%
2014	Dec	82	0.0%	386	15.9%	4,704	15.9%

BIG RIVERS ELECTRIC CORPORATION

2011 SHORT-TERM LOAD FORECAST - BASE CASE

IRRIGATION CLASSIFICATION

Year	Month	Consumers	Percent Growth	Sales (MWh)	Percent Growth	Average Use (kWh/Cust/Mo)	Percent Growth
2010	Jan	3		-110		-36,775	
2010	Feb	3	0.0%	18	-116.6%	6,122	-116.6%
2010	Mar	3	0.0%	-2	-108.8%	-541	-108.8%
2010	Apr	3	0.0%	7	-531.1%	2,331	-531.1%
2010	May	3	0.0%	1	-81.7%	428	-81.7%
2010	Jun	3	0.0%	69	5299.9%	23,094	5299.9%
2010	Jul	3	0.0%	124	78.6%	41,239	78.6%
2010	Aug	3	0.0%	91	-26.5%	30,320	-26.5%
2010	Sep	3	0.0%	41	-55.2%	13,572	-55.2%
2010	Oct	3	0.0%	47	14.2%	15,503	14.2%
2010	Nov	3	0.0%	24	-47.5%	8,136	-47.5%
2010	Dec	3	0.0%	46	87.4%	15,247	87.4%
2011	Jan	3	0.0%	0	-100.0%	0	-100.0%
2011	Feb	3	0.0%	0	0.0%	0	0.0%
2011	Mar	3	0.0%	18	0.0%	6,000	0.0%
2011	Apr	3	0.0%	18	0.0%	6,000	0.0%
2011	May	3	0.0%	36	100.0%	12,000	100.0%
2011	Jun	3	0.0%	36	0.0%	12,000	0.0%
2011	Jul	3	0.0%	36	0.0%	12,000	0.0%
2011	Aug	3	0.0%	36	0.0%	12,000	0.0%
2011	Sep	3	0.0%	18	-50.0%	6,000	-50.0%
2011	Oct	3	0.0%	18	0.0%	6,000	0.0%
2011	Nov	3	0.0%	0	-100.0%	0	-100.0%
2011	Dec	3	0.0%	0	0.0%	0	0.0%
2012	Jan	3	0.0%	0	0.0%	0	0.0%
2012	Feb	3	0.0%	0	0.0%	0	0.0%
2012	Mar	3	0.0%	18	0.0%	6,000	0.0%
2012	Apr	3	0.0%	18	0.0%	6,000	0.0%
2012	May	3	0.0%	36	100.0%	12,000	100.0%
2012	Jun	3	0.0%	36	0.0%	12,000	0.0%
2012	Jul	3	0.0%	36	0.0%	12,000	0.0%
2012	Aug	3	0.0%	36	0.0%	12,000	0.0%
2012	Sep	3	0.0%	18	-50.0%	6,000	-50.0%
2012	Oct	3	0.0%	18	0.0%	6,000	0.0%
2012	Nov	3	0.0%	0	-100.0%	0	-100.0%
2012	Dec	3	0.0%	0	0.0%	0	0.0%
2013	Jan	3	0.0%	0	0.0%	0	0.0%
2013	Feb	3	0.0%	0	0.0%	0	0.0%
2013	Mar	3	0.0%	18	0.0%	6,000	0.0%
2013	Apr	3	0.0%	18	0.0%	6,000	0.0%
2013	May	3	0.0%	36	100.0%	12,000	100.0%
2013	Jun	3	0.0%	36	0.0%	12,000	0.0%
2013	Jul	3	0.0%	36	0.0%	12,000	0.0%
2013	Aug	3	0.0%	36	0.0%	12,000	0.0%
2013	Sep	3	0.0%	18	-50.0%	6,000	-50.0%
2013	Oct	3	0.0%	18	0.0%	6,000	0.0%
2013	Nov	3	0.0%	0	-100.0%	0	-100.0%
2013	Dec	3	0.0%	0	0.0%	0	0.0%
2014	Jan	3	0.0%	0	0.0%	0	0.0%
2014	Feb	3	0.0%	0	0.0%	0	0.0%
2014	Mar	3	0.0%	18	0.0%	6,000	0.0%
2014	Apr	3	0.0%	18	0.0%	6,000	0.0%
2014	May	3	0.0%	36	100.0%	12,000	100.0%
2014	Jun	3	0.0%	36	0.0%	12,000	0.0%
2014	Jul	3	0.0%	36	0.0%	12,000	0.0%
2014	Aug	3	0.0%	36	0.0%	12,000	0.0%
2014	Sep	3	0.0%	18	-50.0%	6,000	-50.0%
2014	Oct	3	0.0%	18	0.0%	6,000	0.0%
2014	Nov	3	0.0%	0	-100.0%	0	-100.0%
2014	Dec	3	0.0%	0	0.0%	0	0.0%

Appendix B
Tables – Long-Term Forecast

BIG RIVERS ELECTRIC CORPORATION

2011 LONG-TERM LOAD FORECAST - BASE CASE

TOTAL NATIVE REQUIREMENTS

Year	Consumers	Percent Growth	Native Energy Sales (MWh)	Normal Sales (MWh)	Percent Growth	Gen. & Trans. Losses	Native Requirements (MWh)	Normal Requirements (MWh)	Percent Growth
1995	89,395		3,153,395	3,112,549		1.85%	3,212,833	3,171,216	
1996	91,546	2.4%	3,017,864	2,996,728	-3.7%	1.85%	3,074,747	3,053,213	-3.7%
1997	93,844	2.5%	3,094,475	3,119,944	4.1%	1.85%	3,152,802	3,178,751	4.1%
1998	96,154	2.5%	3,288,843	3,303,060	5.9%	1.85%	3,350,833	3,365,318	5.9%
1999	98,170	2.1%	3,468,648	3,513,088	6.4%	1.82%	3,532,841	3,578,104	6.3%
2000	100,272	2.1%	3,540,880	3,528,575	0.4%	1.57%	3,597,500	3,584,998	0.2%
2001	101,989	1.7%	3,284,322	3,329,413	-5.6%	1.41%	3,331,207	3,376,942	-5.8%
2002	103,482	1.5%	3,192,013	3,186,957	-4.3%	1.25%	3,232,553	3,227,433	-4.4%
2003	104,764	1.2%	3,052,358	3,150,920	-1.1%	1.14%	3,087,548	3,187,247	-1.2%
2004	106,414	1.6%	3,130,003	3,169,017	0.6%	0.91%	3,158,698	3,198,070	0.3%
2005	107,883	1.4%	3,233,941	3,237,450	2.2%	0.80%	3,259,867	3,263,404	2.0%
2006	109,329	1.3%	3,188,056	3,263,066	0.8%	0.81%	3,214,136	3,289,760	0.8%
2007	110,585	1.1%	3,327,805	3,273,415	0.3%	0.75%	3,352,934	3,298,133	0.3%
2008	111,694	1.0%	3,312,709	3,312,332	1.2%	0.83%	3,340,321	3,339,941	1.3%
2009	111,943	0.2%	3,206,088	3,302,426	-0.3%	0.78%	3,231,354	3,328,451	-0.3%
2010	112,412	0.4%	3,445,404	3,307,343	0.1%	0.82%	3,474,065	3,334,856	0.2%
2011	112,972	0.5%		3,322,780	0.5%	0.97%		3,355,326	0.6%
2012	113,995	0.9%		3,333,600	0.3%	0.97%		3,366,253	0.3%
2013	115,512	1.3%		3,365,472	1.0%	0.97%		3,398,437	1.0%
2014	117,033	1.3%		3,404,438	1.2%	0.97%		3,437,784	1.2%
2015	118,522	1.3%		3,435,299	0.9%	0.97%		3,468,948	0.9%
2016	119,872	1.1%		3,475,079	1.2%	0.97%		3,509,117	1.2%
2017	121,078	1.0%		3,512,178	1.1%	0.97%		3,546,579	1.1%
2018	122,226	0.9%		3,539,658	0.8%	0.97%		3,574,329	0.8%
2019	123,348	0.9%		3,567,045	0.8%	0.97%		3,601,985	0.8%
2020	124,448	0.9%		3,601,248	1.0%	0.97%		3,636,522	1.0%
2021	125,515	0.9%		3,636,408	1.0%	0.97%		3,672,026	1.0%
2022	126,539	0.8%		3,672,709	1.0%	0.97%		3,708,684	1.0%
2023	127,522	0.8%		3,709,778	1.0%	0.97%		3,746,115	1.0%
2024	128,468	0.7%		3,747,817	1.0%	0.97%		3,784,527	1.0%
2025	129,384	0.7%		3,785,542	1.0%	0.97%		3,822,622	1.0%

ANNUAL GROWTH RATES						
1995-2000	2.3%	2.3%	2.5%	-3.2%	2.3%	2.5%
2000-2005	1.5%	-1.8%	-1.7%	-12.8%	-2.0%	-1.9%
2005-2010	0.8%	1.3%	0.4%	0.7%	1.3%	0.4%
2010-2015	1.1%		0.8%	3.3%		0.8%
2015-2020	1.0%		0.9%	0.0%		0.9%
2020-2025	0.8%		1.0%	0.0%		1.0%
2010-2025	0.9%		0.9%	1.1%		0.9%

BIG RIVERS ELECTRIC CORPORATION

2011 LONG-TERM LOAD FORECAST - BASE CASE
TOTAL NATIVE ENERGY REQUIREMENTS
PLUS SMELTERS & FIRM OFF-SYSTEM CONTRACTS

Year	Native Energy Sales (MWh)	Smelters Energy Sales (MWh)	Native + Smelters (MWh)	Gen. & Trans. Losses	Total Requirements (MWh)
1995	3,153,395	4,808,040	7,961,435	1.85%	8,111,498
1996	3,017,864	5,028,098	8,045,962	1.85%	8,197,618
1997	3,094,475	5,032,885	8,127,361	1.85%	8,280,551
1998	3,288,843	5,142,775	8,431,618	1.85%	8,590,543
1999	3,468,648	5,606,178	9,074,826	1.82%	9,242,771
2000	3,540,880	6,306,888	9,847,768	1.57%	10,005,237
2001	3,284,322	6,983,985	10,268,307	1.41%	10,414,892
2002	3,192,013	7,169,801	10,361,814	1.25%	10,493,414
2003	3,052,358	7,306,866	10,359,224	1.14%	10,478,654
2004	3,130,003	7,331,341	10,461,344	0.91%	10,557,251
2005	3,233,941	7,285,475	10,519,416	0.80%	10,603,749
2006	3,188,056	7,335,682	10,523,738	0.81%	10,609,828
2007	3,327,805	7,289,181	10,616,986	0.75%	10,697,157
2008	3,312,709	7,345,942	10,658,651	0.83%	10,747,493
2009	3,206,088	6,672,110	9,878,198	0.78%	9,956,045
2010	3,445,404	7,135,869	10,581,273	0.82%	10,669,295
2011	3,322,780	7,297,080	10,619,860	0.97%	10,723,881
2012	3,333,600	7,317,072	10,650,672	0.97%	10,754,996
2013	3,365,472	7,297,080	10,662,552	0.97%	10,766,992
2014	3,404,438	7,297,080	10,701,518	0.97%	10,806,339
2015	3,435,299	7,297,080	10,732,379	0.97%	10,837,503
2016	3,475,079	7,317,072	10,792,151	0.97%	10,897,860
2017	3,512,178	7,297,080	10,809,258	0.97%	10,915,134
2018	3,539,658	7,297,080	10,836,738	0.97%	10,942,884
2019	3,567,045	7,297,080	10,864,125	0.97%	10,970,540
2020	3,601,248	7,317,072	10,918,320	0.97%	11,025,265
2021	3,636,408	7,297,080	10,933,488	0.97%	11,040,581
2022	3,672,709	7,297,080	10,969,789	0.97%	11,077,239
2023	3,709,778	7,297,080	11,006,858	0.97%	11,114,670
2024	3,747,817	7,317,072	11,064,889	0.97%	11,173,270
2025	3,785,542	7,297,080	11,082,622	0.97%	11,191,177

ANNUAL GROWTH RATES				
1995-2000	2.3%	5.6%	4.3%	4.3%
2000-2005	-1.8%	2.9%	1.3%	1.2%
2005-2010	1.3%	-0.4%	0.1%	0.1%
2010-2015	-0.1%	0.4%	0.3%	0.3%
2015-2020	0.9%	0.1%	0.3%	0.3%
2020-2025	1.0%	-0.1%	0.3%	0.3%
2010-2025	0.6%	0.1%	0.3%	0.3%

BIG RIVERS ELECTRIC CORPORATION

2011 LONG-TERM LOAD FORECAST - BASE CASE
SUMMER PEAK DEMAND
TOTAL SYSTEM REQUIREMENTS

Year	Native CP Summer (kW)	Percent Growth	Load Factor	Smelter Peak (kW)	Total Peak Requirements (kW)	Percent Growth	Total Load Factor
1995	588,872		61.5%	588,006	1,176,878		78.7%
1996	570,093	-3.2%	61.1%	608,158	1,178,251	0.1%	79.4%
1997	603,198	5.8%	60.2%	602,957	1,206,155	2.4%	78.4%
1998	624,931	3.6%	61.5%	616,474	1,241,405	2.9%	79.0%
1999	663,890	6.2%	61.5%	711,882	1,375,773	10.8%	76.7%
2000	655,248	-1.3%	62.5%	749,069	1,404,318	2.1%	81.3%
2001	596,310	-9.0%	64.6%	833,599	1,429,909	1.8%	83.1%
2002	602,623	1.1%	61.1%	852,340	1,454,964	1.8%	82.3%
2003	583,906	-3.1%	62.3%	866,590	1,450,496	-0.3%	82.5%
2004	604,155	3.5%	60.4%	865,032	1,469,188	1.3%	82.0%
2005	617,787	2.3%	60.3%	858,008	1,475,795	0.4%	82.0%
2006	631,181	2.2%	59.5%	862,067	1,493,248	1.2%	81.1%
2007	659,516	4.5%	57.1%	857,611	1,517,127	1.6%	80.5%
2008	616,264	-6.6%	61.9%	865,452	1,481,717	-2.3%	82.8%
2009	611,392	-0.8%	62.1%	846,331	1,457,723	-1.6%	78.0%
2010	662,680	8.4%	57.4%	867,778	1,530,458	5.0%	79.6%
2011	648,091	-2.2%	59.1%	858,326	1,506,417	-1.6%	81.3%
2012	649,863	0.3%	59.1%	858,326	1,508,189	0.1%	81.4%
2013	656,303	1.0%	59.1%	858,326	1,514,629	0.4%	81.1%
2014	664,237	1.2%	59.1%	858,326	1,522,563	0.5%	81.0%
2015	670,525	0.9%	59.1%	858,326	1,528,850	0.4%	80.9%
2016	678,671	1.2%	59.0%	858,326	1,536,996	0.5%	80.9%
2017	686,279	1.1%	59.0%	858,326	1,544,605	0.5%	80.7%
2018	691,908	0.8%	59.0%	858,326	1,550,233	0.4%	80.6%
2019	697,525	0.8%	58.9%	858,326	1,555,851	0.4%	80.5%
2020	704,563	1.0%	58.9%	858,326	1,562,888	0.5%	80.5%
2021	711,807	1.0%	58.9%	858,326	1,570,133	0.5%	80.3%
2022	719,292	1.1%	58.9%	858,326	1,577,617	0.5%	80.2%
2023	726,941	1.1%	58.8%	858,326	1,585,267	0.5%	80.0%
2024	734,796	1.1%	58.8%	858,326	1,593,122	0.5%	80.1%
2025	742,597	1.1%	58.8%	858,326	1,600,922	0.5%	79.8%

Amounts include generation and transmission losses

ANNUAL GROWTH RATES					
1995-2000	2.2%	61.4%	5.0%	3.6%	79.0%
2000-2005	-1.2%	61.8%	2.8%	1.0%	82.4%
2005-2010	1.4%	59.6%	0.2%	0.7%	80.4%
2010-2015	0.2%	59.1%	-0.2%	0.0%	81.2%
2015-2020	1.0%	59.0%	0.0%	0.4%	80.6%
2020-2025	1.1%	58.8%	0.0%	0.5%	80.1%
2010-2025	0.8%	59.0%	-0.1%	0.3%	80.6%

Summer season is May to October

BIG RIVERS ELECTRIC CORPORATION

2011 LONG-TERM LOAD FORECAST - BASE CASE
WINTER PEAK DEMAND
TOTAL SYSTEM REQUIREMENTS

Year	Native CP Winter (kW)	Percent Growth	Load Factor	Smelter Peak (kW)	Total Peak Requirements (kW)	Percent Growth	Total Load Factor
1995	492,221		73.5%	598,858	1,091,079		84.9%
1996	559,771	13.7%	62.3%	605,429	1,165,200	6.8%	80.3%
1997	559,198	-0.1%	64.9%	608,051	1,167,249	0.2%	81.0%
1998	520,931	-6.8%	73.7%	613,417	1,134,348	-2.8%	86.5%
1999	577,320	10.8%	70.8%	622,710	1,200,030	5.8%	87.9%
2000	576,843	-0.1%	70.9%	724,022	1,300,865	8.4%	87.8%
2001	614,496	6.5%	62.7%	822,577	1,437,074	10.5%	82.7%
2002	530,467	-13.7%	69.5%	840,936	1,371,404	-4.6%	87.3%
2003	585,549	10.4%	62.1%	862,658	1,448,207	5.6%	82.6%
2004	539,476	-7.9%	67.7%	863,696	1,403,173	-3.1%	85.9%
2005	562,082	4.2%	66.3%	858,153	1,420,235	1.2%	85.2%
2006	555,303	-1.2%	67.6%	866,220	1,421,523	0.1%	85.2%
2007	610,090	9.9%	61.7%	863,445	1,473,535	3.7%	82.9%
2008	618,676	1.4%	61.6%	864,436	1,483,112	0.6%	82.7%
2009	672,938	8.8%	56.5%	870,519	1,543,456	4.1%	73.6%
2010	628,309	-6.6%	60.6%	870,118	1,498,427	-2.9%	81.3%
2011	654,351	4.1%	58.5%	858,326	1,512,677	1.0%	80.9%
2012	656,755	0.4%	58.5%	858,326	1,515,080	0.2%	81.0%
2013	663,660	1.1%	58.5%	858,326	1,521,986	0.5%	80.8%
2014	672,121	1.3%	58.4%	858,326	1,530,447	0.6%	80.6%
2015	678,904	1.0%	58.3%	858,326	1,537,229	0.4%	80.5%
2016	687,522	1.3%	58.3%	858,326	1,545,848	0.6%	80.5%
2017	695,559	1.2%	58.2%	858,326	1,553,885	0.5%	80.2%
2018	701,612	0.9%	58.2%	858,326	1,559,938	0.4%	80.1%
2019	707,640	0.9%	58.1%	858,326	1,565,966	0.4%	80.0%
2020	715,043	1.0%	58.1%	858,326	1,573,369	0.5%	80.0%
2021	722,634	1.1%	58.0%	858,326	1,580,960	0.5%	79.7%
2022	730,466	1.1%	58.0%	858,326	1,588,792	0.5%	79.6%
2023	738,456	1.1%	57.9%	858,326	1,596,781	0.5%	79.5%
2024	746,645	1.1%	57.9%	858,326	1,604,971	0.5%	79.5%
2025	754,753	1.1%	57.8%	858,326	1,613,079	0.5%	79.2%

Amounts include generation and transmission losses

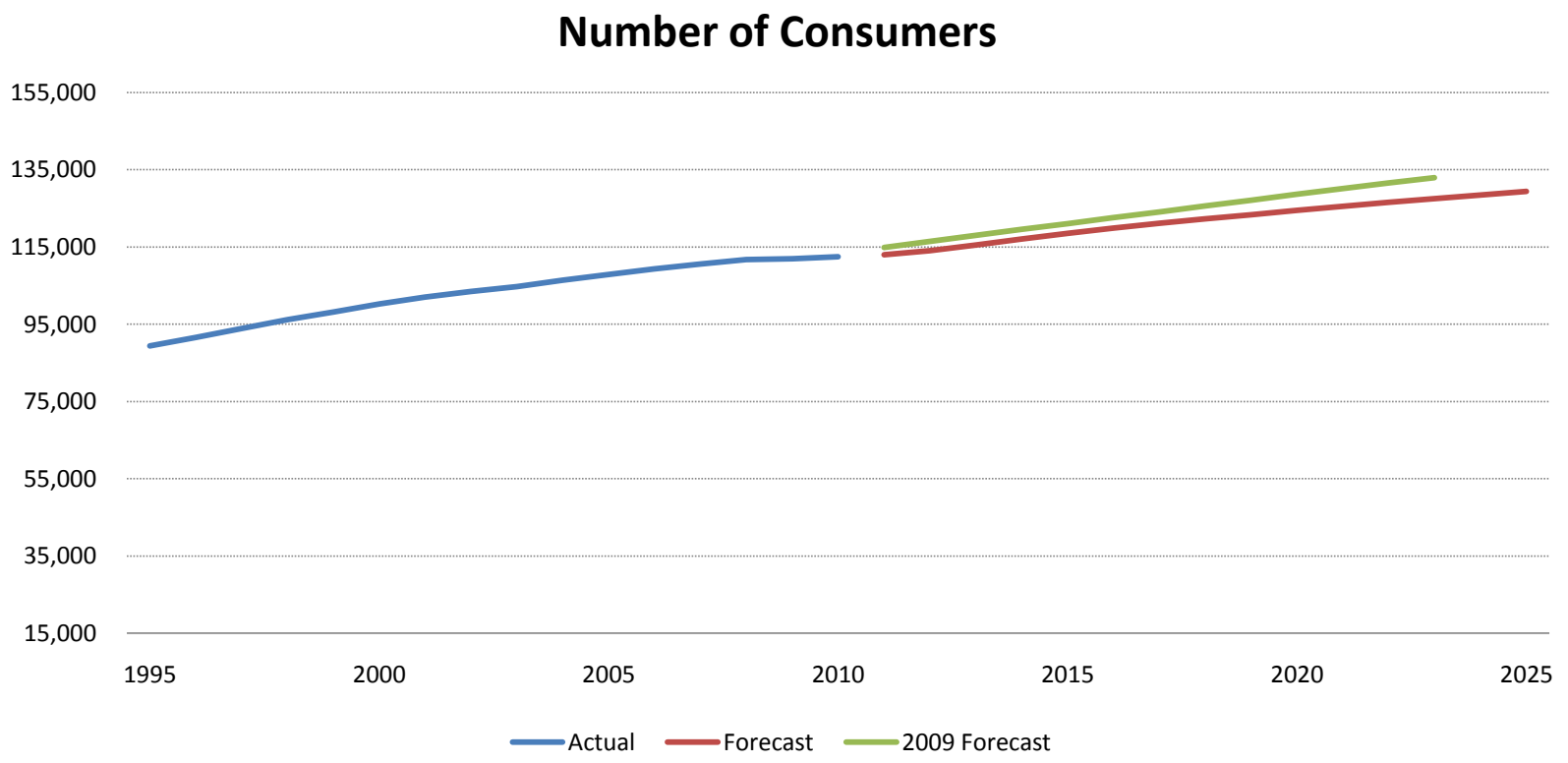
ANNUAL GROWTH RATES					
1995-2000	3.2%	68.5%	3.9%	3.6%	84.7%
2000-2005	-0.5%	65.7%	3.5%	1.8%	84.8%
2005-2010	2.3%	61.6%	0.3%	1.1%	81.1%
2010-2015	1.6%	58.4%	-0.3%	0.5%	80.8%
2015-2020	1.0%	58.2%	0.0%	0.5%	80.1%
2020-2025	1.1%	57.9%	0.0%	0.5%	79.5%
2010-2025	1.2%	58.2%	-0.1%	0.5%	80.1%

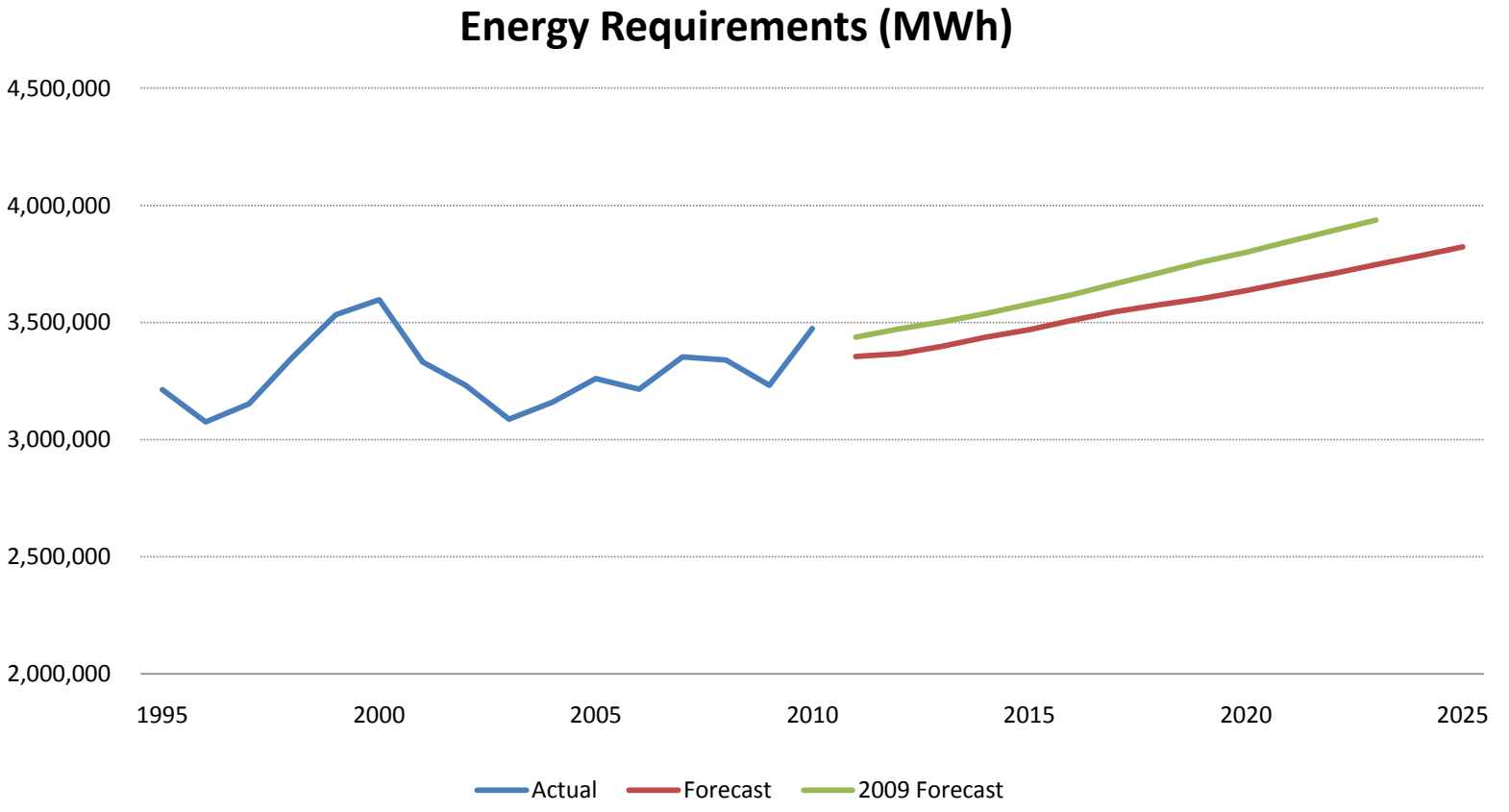
Winter season is November of the prior year through April of the reported year.

BIG RIVERS ELECTRIC CORPORATION

2011 LONG-TERM LOAD FORECAST - BASE CASE

TOTAL NATIVE REQUIREMENTS

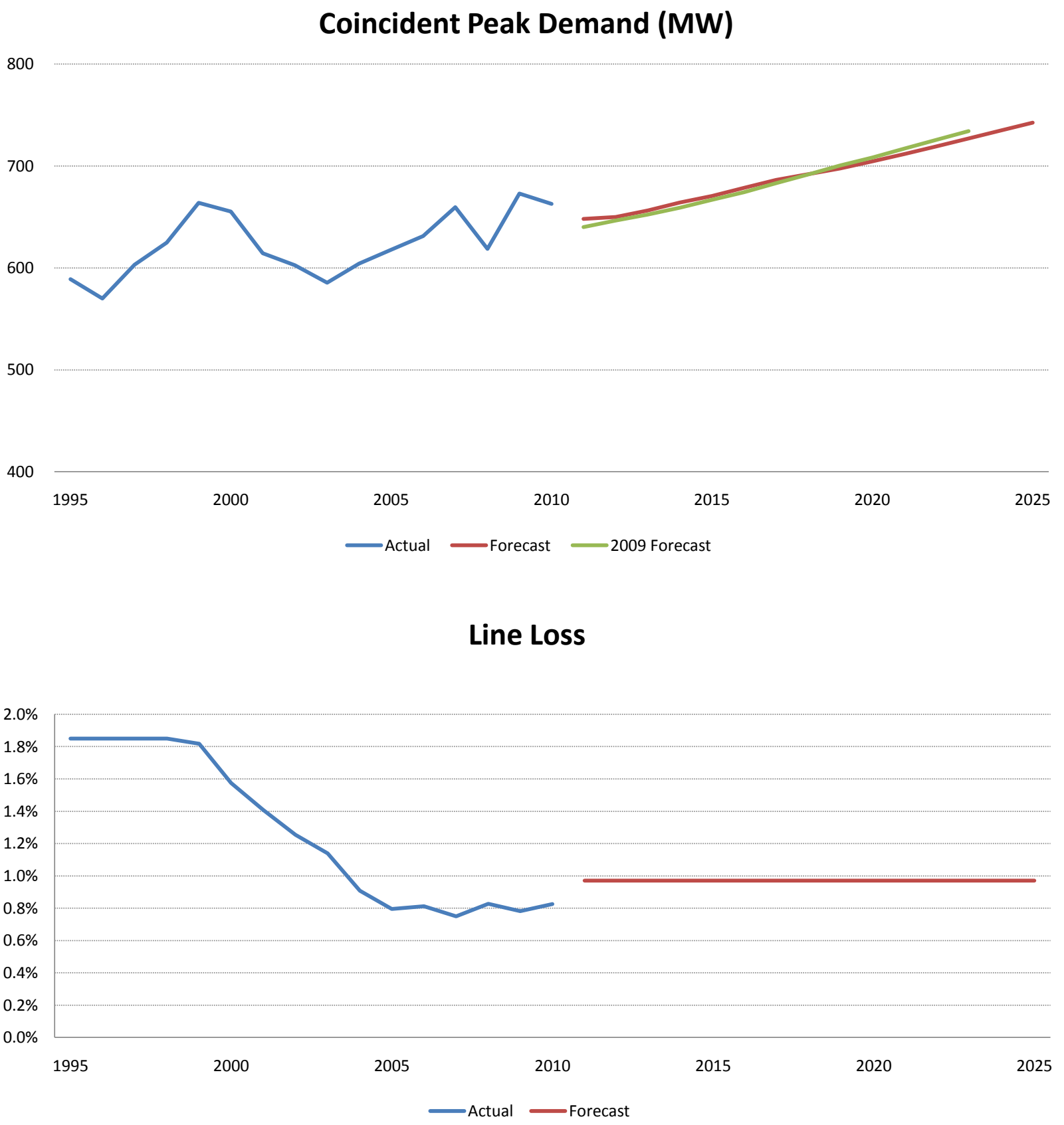




BIG RIVERS ELECTRIC CORPORATION

2011 LONG-TERM LOAD FORECAST - BASE CASE

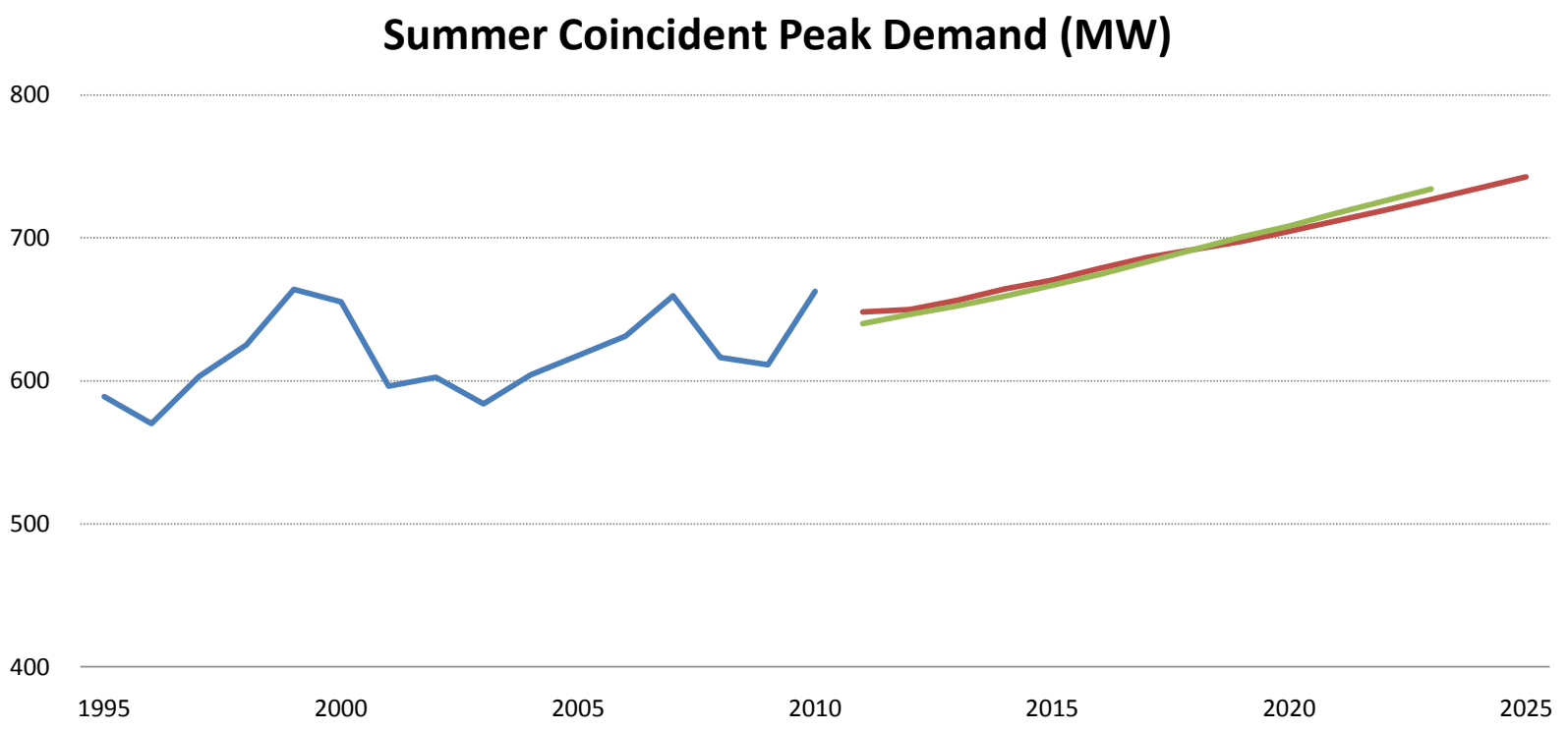
TOTAL NATIVE REQUIREMENTS

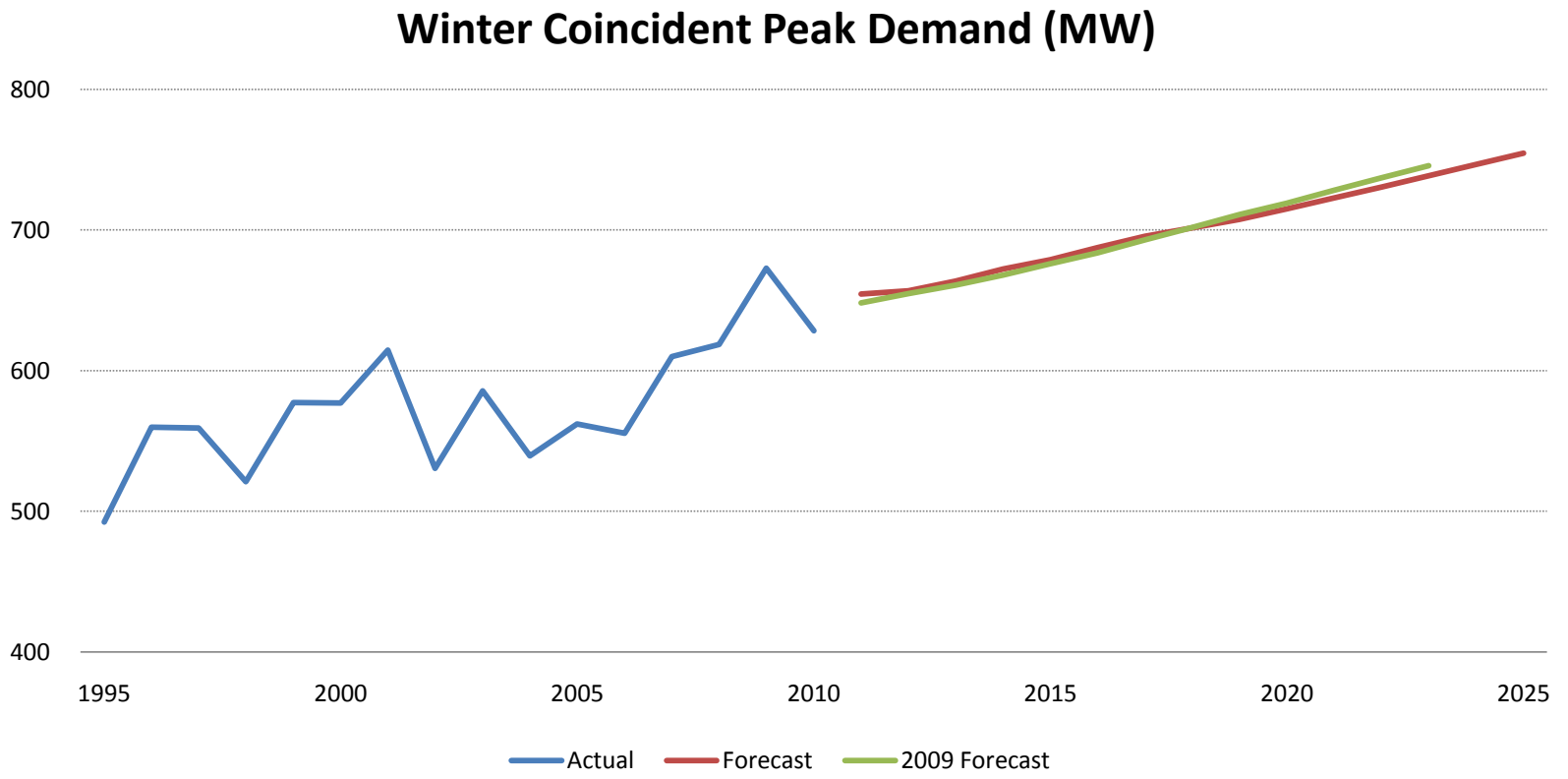


BIG RIVERS ELECTRIC CORPORATION

2011 LONG-TERM LOAD FORECAST - BASE CASE

TOTAL NATIVE REQUIREMENTS





BIG RIVERS ELECTRIC CORPORATION

2011 LONG-TERM LOAD FORECAST - BASE CASE

TOTAL SYSTEM REQUIREMENTS

BIG RIVERS ELECTRIC CORPORATION

2011 LONG-TERM LOAD FORECAST - BASE CASE

RURAL SYSTEM REQUIREMENTS

Year	Actual Energy (MWh)	Normal Energy (MWh)	Percent Growth	Summer CP (kW)	Summer Normal CP (kW)	Percent Growth	Load Factor	Winter CP (kW)	Winter Normal CP (kW)	Percent Growth	Load Factor
1995	1,665,313	1,624,467		387,796			47.8%	335,570			55.3%
1996	1,728,686	1,707,551	5.1%	380,121		-2.0%	51.3%	382,098		13.9%	51.0%
1997	1,758,397	1,783,865	4.5%	409,400		7.7%	49.7%	376,117		-1.6%	54.1%
1998	1,828,160	1,842,377	3.3%	424,906		3.8%	49.5%	339,757		-9.7%	61.9%
1999	1,957,857	1,987,539	7.9%	475,416		11.9%	47.7%	397,189		16.9%	57.1%
2000	2,031,592	2,008,716	1.1%	463,015		-2.6%	49.5%	385,384		-3.0%	59.5%
2001	2,029,371	2,035,351	1.3%	447,402		-3.4%	51.9%	429,854		11.5%	54.1%
2002	2,143,965	2,037,653	0.1%	467,498		4.5%	49.8%	385,501		-10.3%	60.3%
2003	2,113,703	2,163,065	6.2%	463,238		-0.9%	53.3%	466,551		21.0%	52.9%
2004	2,153,540	2,200,024	1.7%	476,409		2.8%	52.7%	434,995		-6.8%	57.7%
2005	2,280,596	2,248,475	2.2%	502,064		5.4%	51.1%	448,485		3.1%	57.2%
2006	2,250,188	2,295,459	2.1%	505,405		0.7%	51.8%	442,753		-1.3%	59.2%
2007	2,424,029	2,336,675	1.8%	536,611		6.2%	49.7%	493,267		11.4%	54.1%
2008	2,407,127	2,396,843	2.6%	501,757		-6.5%	54.5%	516,082		4.6%	53.0%
2009	2,257,576	2,307,983	-3.7%	500,545		-0.2%	52.6%	565,119		9.5%	46.6%
2010	2,499,895	2,355,107	2.0%	544,474	525,347	8.8%	49.4%	511,377	523,598	-9.5%	52.6%
2011		2,391,152	1.5%		530,491	-2.6%	51.5%		536,166	4.8%	50.9%
2012		2,401,250	0.4%		532,263	0.3%	51.5%		538,569	0.4%	50.9%
2013		2,433,435	1.3%		538,703	1.2%	51.6%		545,475	1.3%	50.9%
2014		2,472,782	1.6%		546,637	1.5%	51.6%		553,936	1.6%	51.0%
2015		2,503,946	1.3%		552,924	1.2%	51.7%		560,718	1.2%	51.0%
2016		2,544,115	1.6%		561,071	1.5%	51.8%		569,337	1.5%	51.0%
2017		2,581,577	1.5%		568,679	1.4%	51.8%		577,374	1.4%	51.0%
2018		2,609,327	1.1%		574,307	1.0%	51.9%		583,427	1.0%	51.1%
2019		2,636,982	1.1%		579,925	1.0%	51.9%		589,455	1.0%	51.1%
2020		2,671,520	1.3%		586,962	1.2%	52.0%		596,858	1.3%	51.1%
2021		2,707,024	1.3%		594,207	1.2%	52.0%		604,449	1.3%	51.1%
2022		2,743,681	1.4%		601,691	1.3%	52.1%		612,281	1.3%	51.2%
2023		2,781,113	1.4%		609,341	1.3%	52.1%		620,270	1.3%	51.2%
2024		2,819,524	1.4%		617,196	1.3%	52.1%		628,460	1.3%	51.2%
2025		2,857,619	1.4%		624,996	1.3%	52.2%		636,567	1.3%	51.2%

ANNUAL GROWTH RATES				
1995-2000	4.1%	4.3%	3.6%	
2000-2005	2.3%	2.3%	1.6%	
2005-2010	1.9%	0.9%	1.6%	
2010-2015		1.2%	1.0%	1.4%
2015-2020		1.3%	1.2%	1.3%
2020-2025		1.4%	1.3%	1.3%
2010-2025		1.3%	1.2%	1.3%

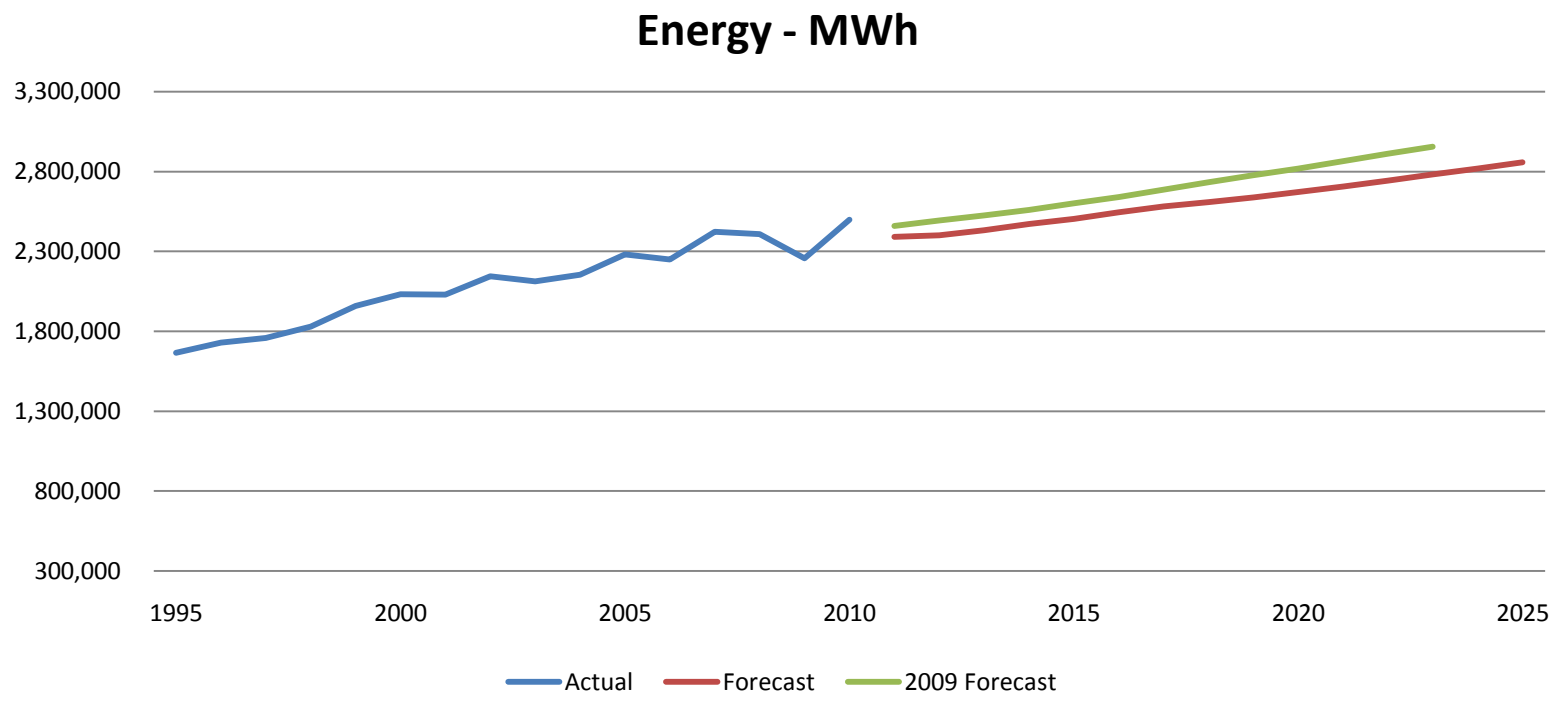
G&T losses included beginning in 1999

Summer season is May to October. Winter season is November of the prior year through April of the reported year.
For instance, the Winter CP for 2000 is the CP recorded between November 1999 and April 2000.

BIG RIVERS ELECTRIC CORPORATION

2011 LONG-TERM LOAD FORECAST - BASE CASE

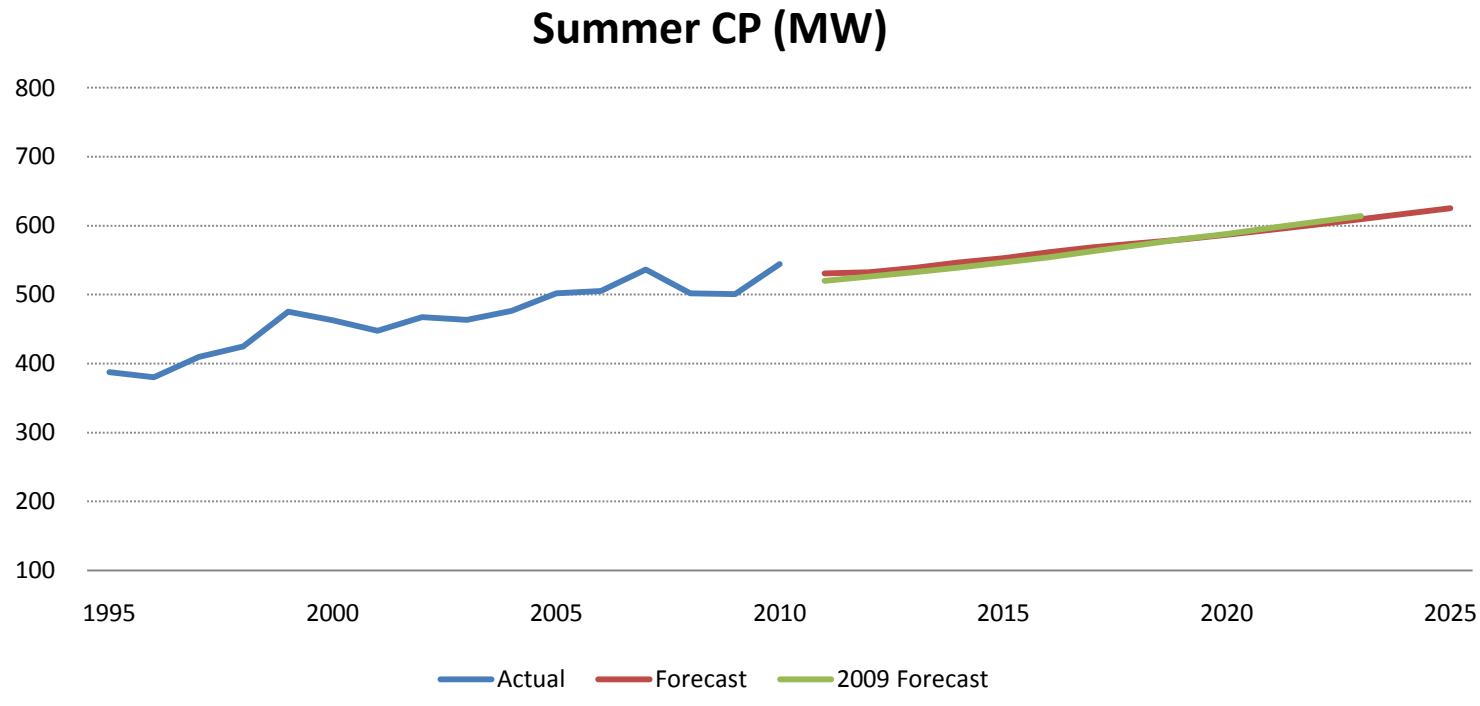
RURAL SYSTEM REQUIREMENTS

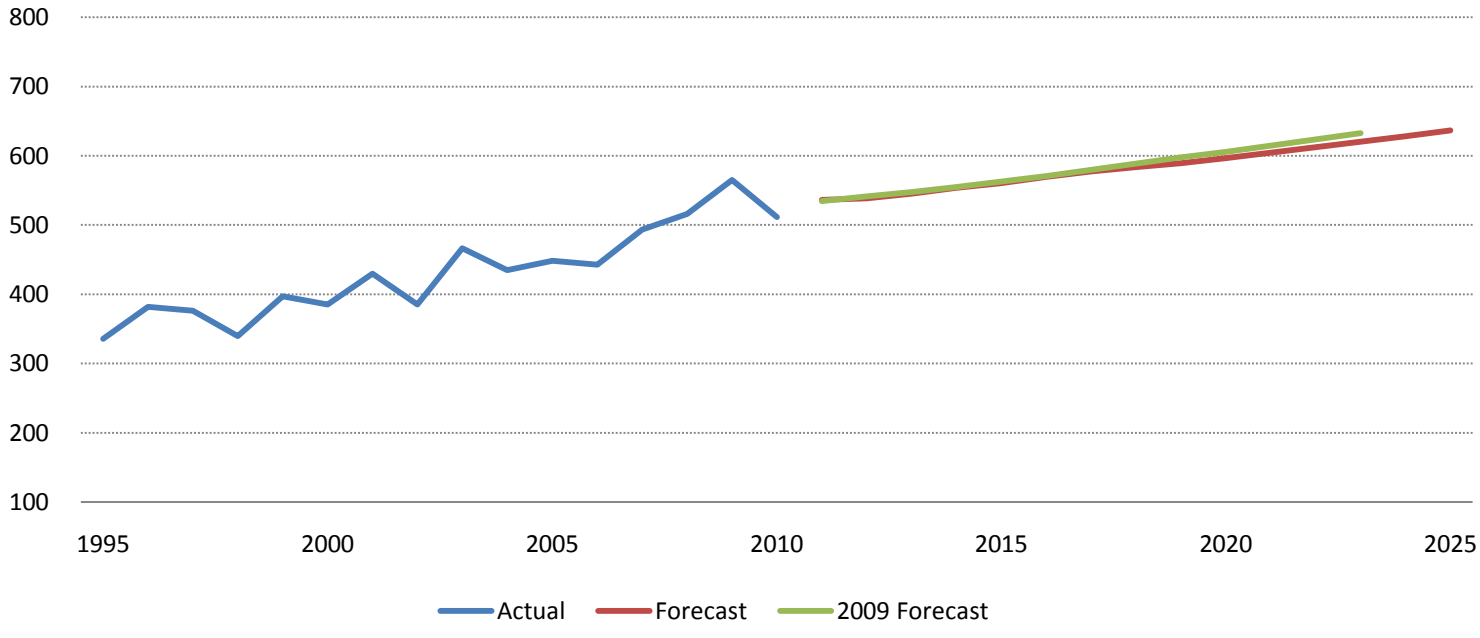


BIG RIVERS ELECTRIC CORPORATION

2011 LONG-TERM LOAD FORECAST - BASE CASE

RURAL SYSTEM REQUIREMENTS





BIG RIVERS ELECTRIC CORPORATION

2011 LONG-TERM LOAD FORECAST - BASE CASE

RESIDENTIAL CLASSIFICATION

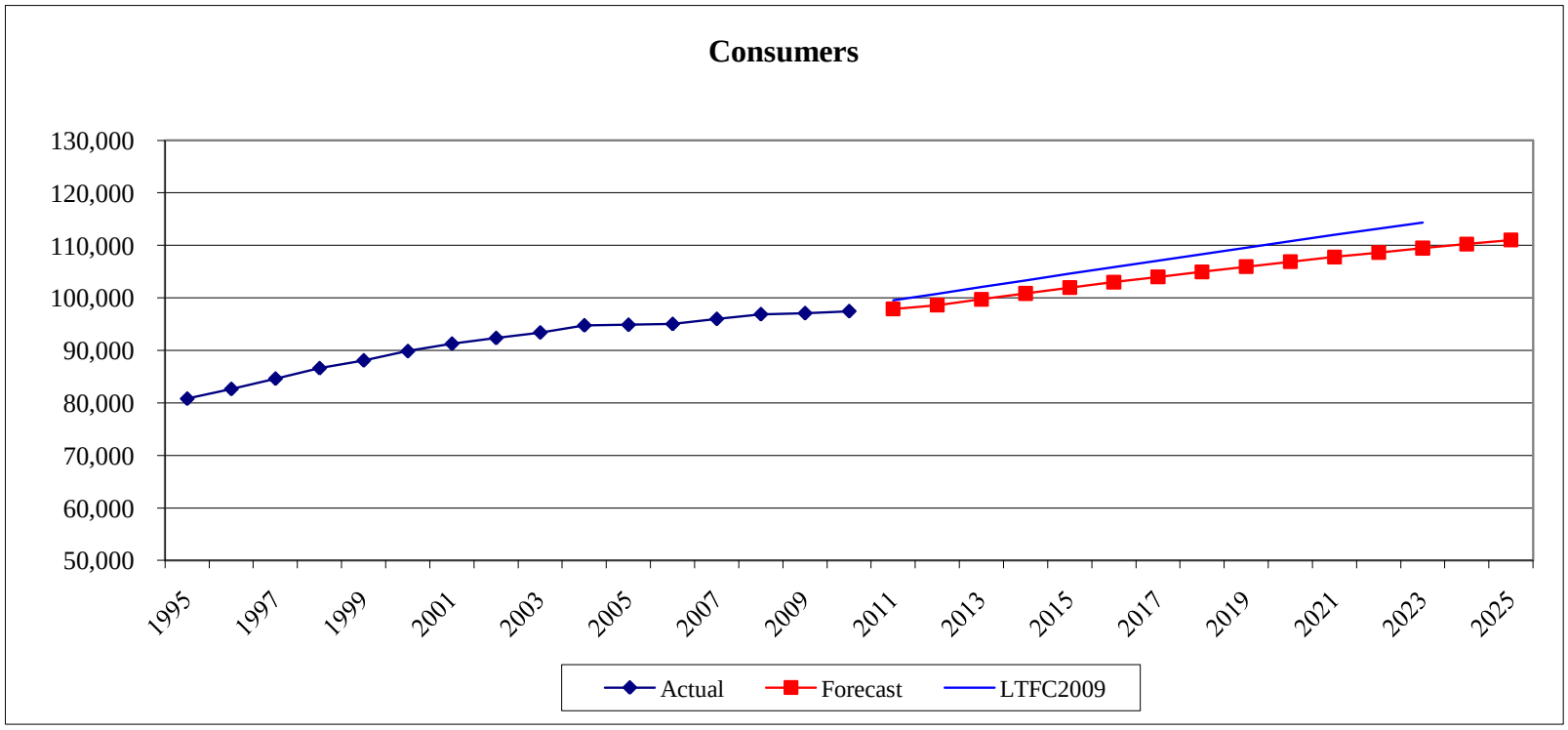
Year	Consumers	Consumer Growth	Percent Growth	Actual Sales (MWh)	Normal Sales (MWh)	Percent Growth	Actual Average Use (kWh/Cust/Mo)	Normal Average Use (kWh/Cust/Mo)	Percent Growth
1995	80,808			1,101,490	1,070,169		1,136	1,104	
1996	82,658	1,851	2.3%	1,144,623	1,134,908	6.0%	1,154	1,144	3.7%
1997	84,622	1,964	2.4%	1,137,995	1,157,033	1.9%	1,121	1,139	-0.4%
1998	86,615	1,993	2.4%	1,199,476	1,210,262	4.6%	1,154	1,164	2.2%
1999	88,092	1,477	1.7%	1,215,474	1,262,096	4.3%	1,150	1,194	2.5%
2000	89,860	1,768	2.0%	1,264,194	1,262,552	0.0%	1,172	1,171	-1.9%
2001	91,276	1,416	1.6%	1,286,139	1,311,796	3.9%	1,174	1,198	2.3%
2002	92,355	1,079	1.2%	1,371,067	1,319,977	0.6%	1,237	1,191	-0.6%
2003	93,405	1,050	1.1%	1,340,451	1,386,438	5.0%	1,196	1,237	3.9%
2004	94,768	1,363	1.5%	1,362,667	1,410,638	1.7%	1,198	1,240	0.3%
2005	94,877	109	0.1%	1,452,182	1,445,393	2.5%	1,275	1,270	2.3%
2006	95,028	151	0.2%	1,415,359	1,465,093	1.4%	1,241	1,285	1.2%
2007	95,993	965	1.0%	1,534,506	1,480,369	1.0%	1,332	1,285	0.0%
2008	96,886	893	0.9%	1,529,478	1,516,364	2.4%	1,316	1,304	1.5%
2009	97,084	198	0.2%	1,426,775	1,461,794	-3.6%	1,225	1,255	-3.8%
2010	97,467	383	0.4%	1,611,212	1,505,354	3.0%	1,378	1,287	2.6%
2011	97,897	430	0.4%		1,519,043	0.9%		1,293	0.5%
2012	98,635	738	0.8%		1,517,793	-0.1%		1,282	-0.8%
2013	99,744	1,109	1.1%		1,529,793	0.8%		1,278	-0.3%
2014	100,854	1,111	1.1%		1,548,192	1.2%		1,279	0.1%
2015	101,944	1,090	1.1%		1,559,281	0.7%		1,275	-0.4%
2016	102,993	1,049	1.0%		1,582,166	1.5%		1,280	0.4%
2017	103,997	1,004	1.0%		1,605,702	1.5%		1,287	0.5%
2018	104,977	980	0.9%		1,621,146	1.0%		1,287	0.0%
2019	105,938	961	0.9%		1,636,629	1.0%		1,287	0.0%
2020	106,877	939	0.9%		1,658,468	1.3%		1,293	0.4%
2021	107,782	906	0.8%		1,681,081	1.4%		1,300	0.5%
2022	108,647	864	0.8%		1,704,663	1.4%		1,307	0.6%
2023	109,475	828	0.8%		1,728,954	1.4%		1,316	0.7%
2024	110,270	795	0.7%		1,754,119	1.5%		1,326	0.7%
2025	111,035	766	0.7%		1,778,856	1.4%		1,335	0.7%

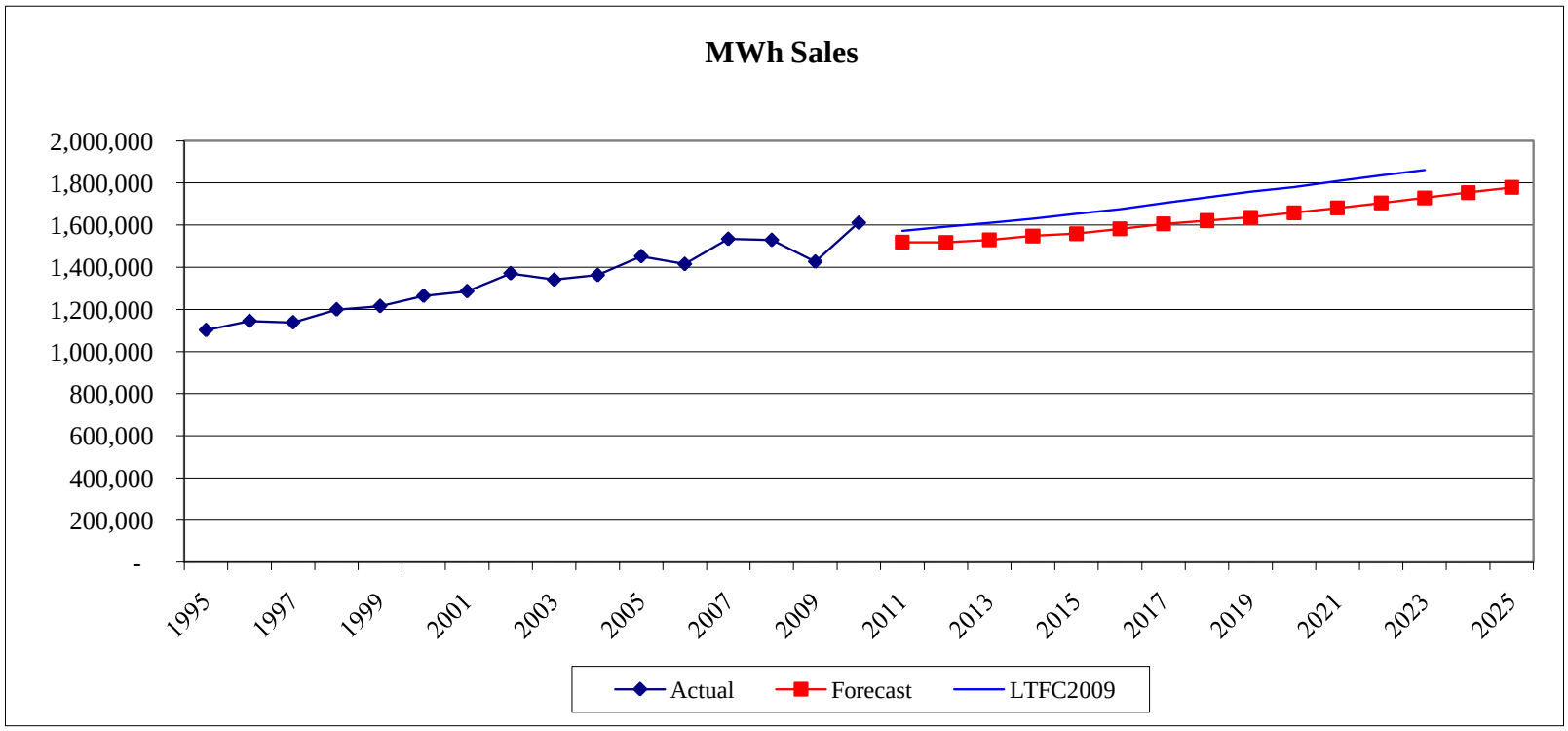
ANNUAL GROWTH RATES						
1995-2000	2.1%	1,811	2.8%	3.4%	0.6%	1.2%
2000-2005	1.1%	1,003	2.8%	2.7%	1.7%	1.6%
2005-2010	0.5%	518	2.1%	0.8%	1.6%	0.3%
2010-2015	0.9%	895		0.7%		-0.2%
2015-2020	0.9%	986		1.2%		0.3%
2020-2025	0.8%	832		1.4%		0.6%
2010-2025	0.9%	905		1.1%		0.2%

BIG RIVERS ELECTRIC CORPORATION

2011 LONG-TERM LOAD FORECAST - BASE CASE

RESIDENTIAL CLASSIFICATION

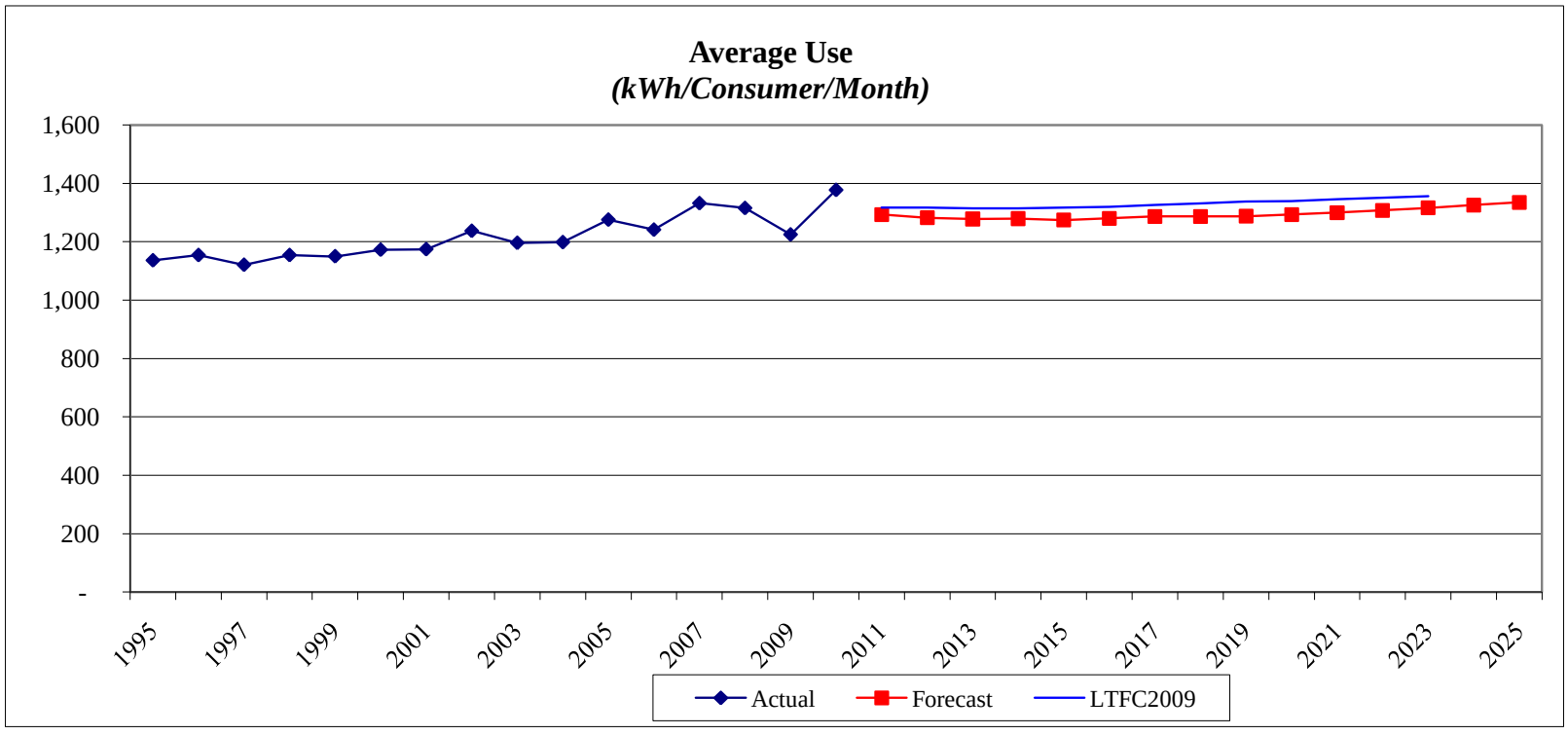




BIG RIVERS ELECTRIC CORPORATION

2011 LONG-TERM LOAD FORECAST - BASE CASE

RESIDENTIAL CLASSIFICATION



BIG RIVERS ELECTRIC CORPORATION

2011 LONG-TERM LOAD FORECAST - BASE CASE

COMMERCIAL & INDUSTRIAL CLASSIFICATION

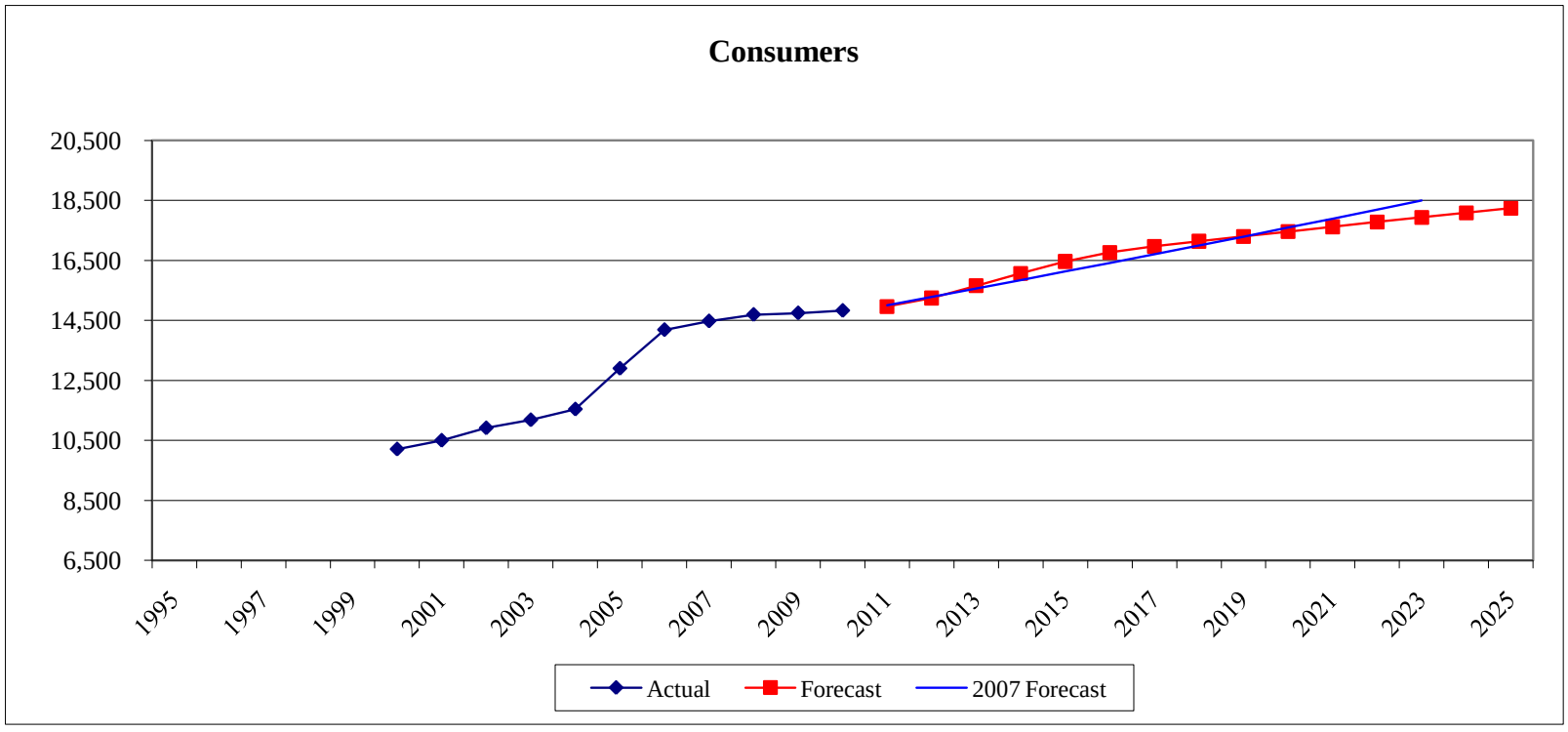
Year	Consumers	Percent Growth	Actual Sales (MWh)	Normal Sales (MWh)	Percent Growth	Actual Average Use (kWh/Cust/Mo)	Normal Average Use (kWh/Cust/Mo)	Percent Growth
1995	8,431		448,782	442,455				
1996	8,717	3.4%	466,450	468,151				
1997	9,043	3.7%	502,803	509,121				
1998	9,347	3.4%	513,762	512,609				
1999	9,883	5.7%	591,594	599,137				
2000	10,208	3.3%	613,100	614,755		5,005	5,019	
2001	10,500	2.9%	602,412	606,644	-1.3%	4,781	4,815	-4.1%
2002	10,913	3.9%	627,652	616,908	1.7%	4,793	4,711	-2.2%
2003	11,182	2.5%	637,787	648,504	5.1%	4,753	4,833	2.6%
2004	11,539	3.2%	659,726	668,988	3.2%	4,764	4,831	0.0%
2005	12,898	11.8%	695,491	691,997	3.4%	4,494	4,471	-7.5%
2006	14,185	10.0%	708,219	718,207	3.8%	4,161	4,219	-5.6%
2007	14,477	2.1%	753,591	736,634	2.6%	4,338	4,240	0.5%
2008	14,692	1.5%	749,573	748,381	1.6%	4,251	4,245	0.1%
2009	14,744	0.4%	693,582	702,682	-6.1%	3,920	3,972	-6.4%
2010	14,826	0.6%	740,160	714,125	1.6%	4,160	4,014	1.1%
2011	14,962	0.9%		725,969	1.7%		4,043	0.7%
2012	15,247	1.9%		737,458	1.6%		4,031	-0.3%
2013	15,655	2.7%		755,694	2.5%		4,023	-0.2%
2014	16,066	2.6%		774,272	2.5%		4,016	-0.2%
2015	16,465	2.5%		792,447	2.3%		4,011	-0.1%
2016	16,765	1.8%		807,314	1.9%		4,013	0.0%
2017	16,968	1.2%		818,981	1.4%		4,022	0.2%
2018	17,137	1.0%		829,583	1.3%		4,034	0.3%
2019	17,298	0.9%		840,057	1.3%		4,047	0.3%
2020	17,459	0.9%		850,667	1.3%		4,060	0.3%
2021	17,620	0.9%		861,413	1.3%		4,074	0.3%
2022	17,779	0.9%		872,276	1.3%		4,089	0.4%
2023	17,934	0.9%		883,160	1.2%		4,104	0.4%
2024	18,085	0.8%		894,092	1.2%		4,120	0.4%
2025	18,236	0.8%		905,154	1.2%		4,136	0.4%

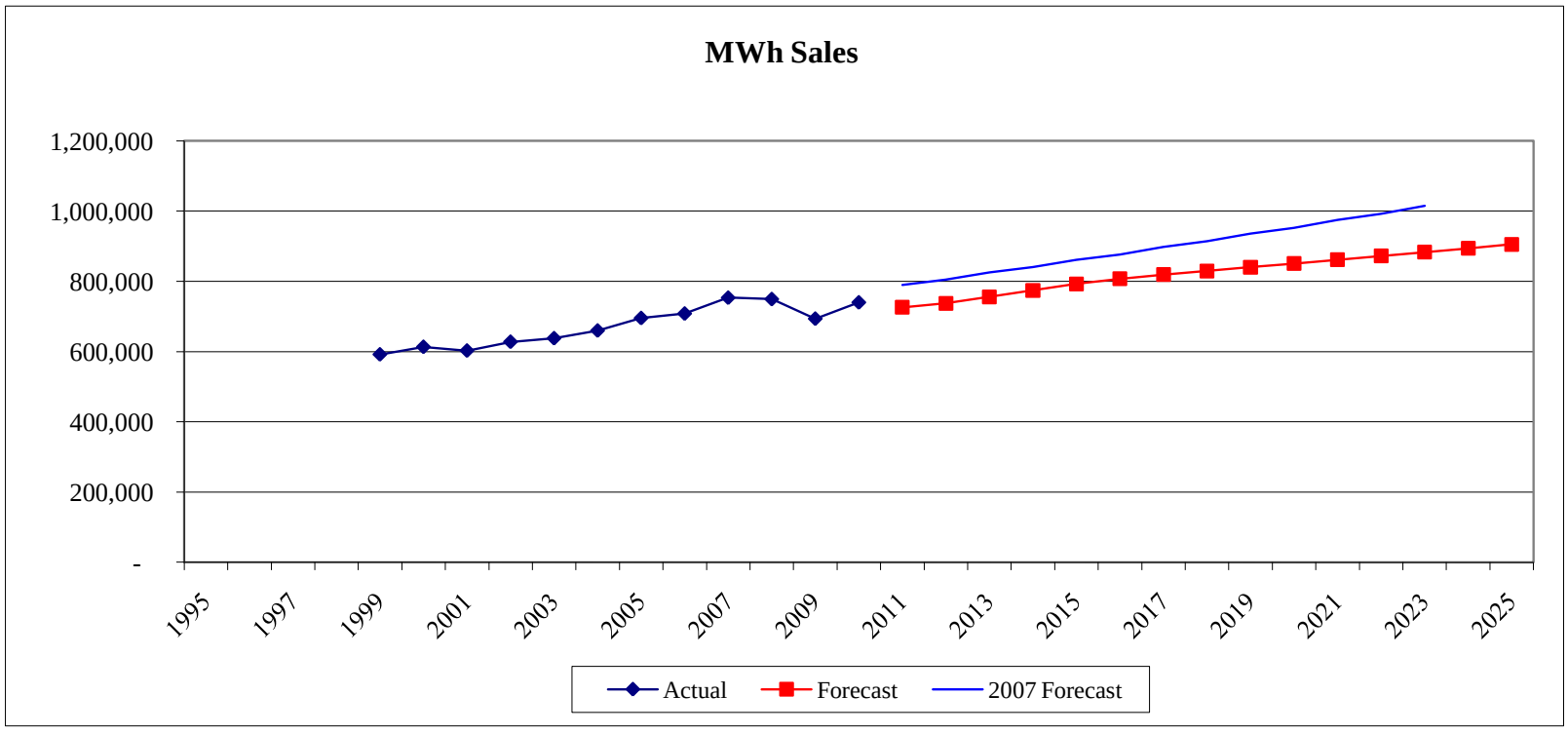
ANNUAL GROWTH RATES					
1995-2000					
2000-2005	4.8%	2.6%	2.4%	-2.1%	-2.3%
2005-2010	2.8%	1.3%	0.6%	-1.5%	-2.1%
2010-2015	2.1%		2.1%		0.0%
2015-2020	1.2%		1.4%		0.2%
2020-2025	0.9%		1.2%		0.4%
2010-2025	1.4%		1.6%		0.2%

BIG RIVERS ELECTRIC CORPORATION

2011 LONG-TERM LOAD FORECAST - BASE CASE

COMMERCIAL & INDUSTRIAL CLASSIFICATION





BIG RIVERS ELECTRIC CORPORATION

2011 LONG-TERM LOAD FORECAST - BASE CASE

LARGE INDUSTRIAL - DIRECT SERVE CUSTOMERS

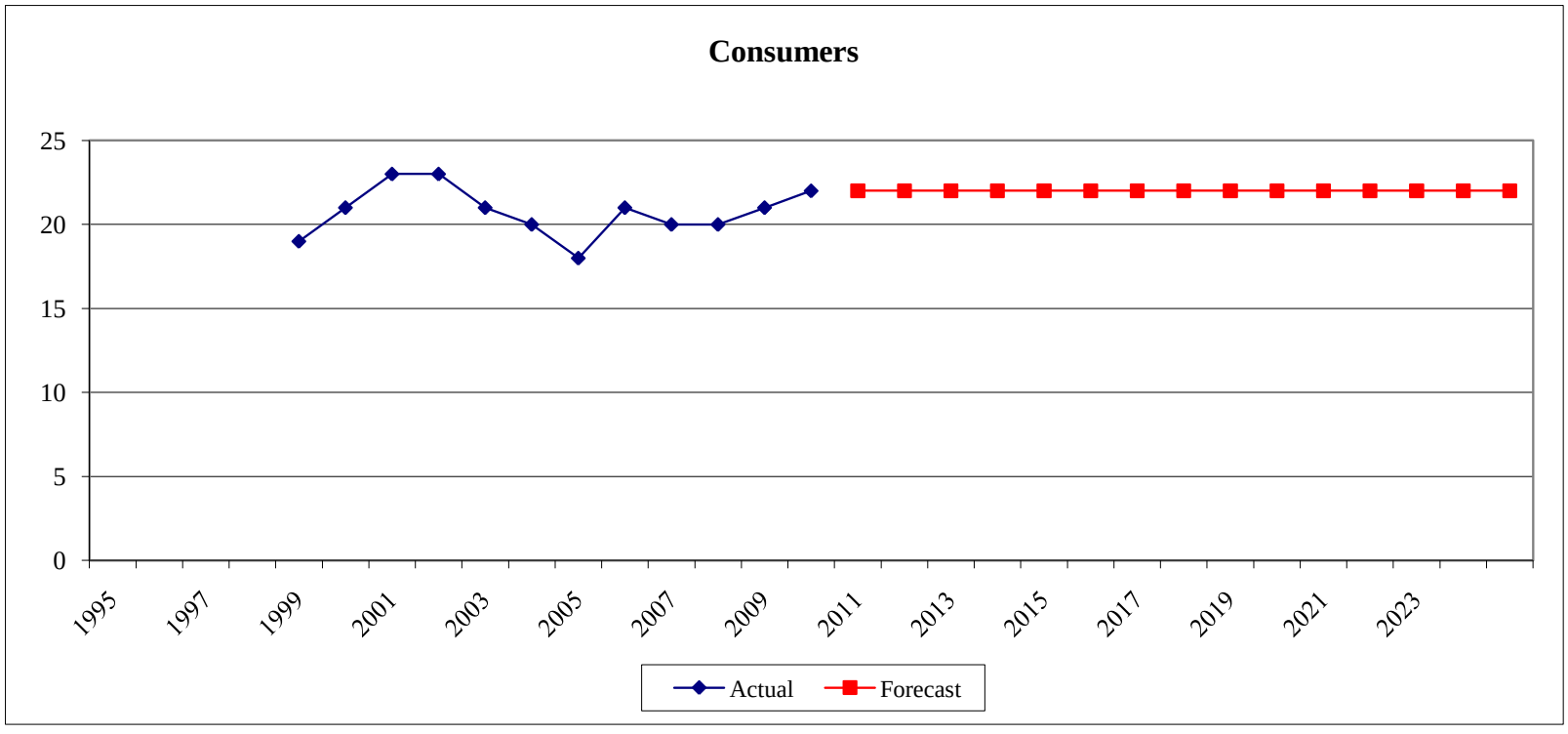
Year	Consumers	Percent Growth	Sales (MWh)	Percent Growth	Average Use (kWh/Cust/Mo)	Percent Growth
1995	10		6,296,122		52,467,681	
1996	10	0.0%	6,317,276	0.3%	52,643,964	0.3%
1997	11	10.0%	6,368,964	0.8%	48,249,724	-8.3%
1998	20	81.8%	4,235,544	-33.5%	17,648,100	-63.4%
1999	19	-5.0%	1,544,587	-63.5%	6,774,505	-61.6%
2000	21	10.5%	1,539,384	-0.3%	6,108,666	-9.8%
2001	23	9.5%	1,300,686	-15.5%	4,712,630	-22.9%
2002	23	0.0%	1,118,264	-14.0%	4,051,680	-14.0%
2003	21	-8.7%	1,022,803	-8.5%	4,058,743	0.2%
2004	20	-4.8%	1,001,791	-2.1%	4,174,128	2.8%
2005	18	-10.0%	981,086	-2.1%	4,542,066	8.8%
2006	21	16.7%	963,691	-1.8%	3,824,170	-15.8%
2007	20	-4.8%	926,769	-3.8%	3,861,539	1.0%
2008	20	0.0%	933,580	0.7%	3,889,918	0.7%
2009	21	5.0%	3,846,407	312.0%	15,263,521	292.4%
2010	22	4.8%	8,098,126	110.5%	30,674,721	101.0%
2011	22	0.0%	8,251,901	1.9%	31,257,202	1.9%
2012	22	0.0%	8,272,714	0.3%	31,336,038	0.3%
2013	22	0.0%	8,252,722	-0.2%	31,260,310	-0.2%
2014	22	0.0%	8,252,722	0.0%	31,260,310	0.0%
2015	22	0.0%	8,252,722	0.0%	31,260,310	0.0%
2016	22	0.0%	8,272,714	0.2%	31,336,038	0.2%
2017	22	0.0%	8,252,722	-0.2%	31,260,310	-0.2%
2018	22	0.0%	8,252,722	0.0%	31,260,310	0.0%
2019	22	0.0%	8,252,722	0.0%	31,260,310	0.0%
2020	22	0.0%	8,272,714	0.2%	31,336,038	0.2%
2021	22	0.0%	8,252,722	-0.2%	31,260,310	-0.2%
2022	22	0.0%	8,252,722	0.0%	31,260,310	0.0%
2023	22	0.0%	8,252,722	0.0%	31,260,310	0.0%
2024	22	0.0%	8,272,714	0.2%	31,336,038	0.2%
2025	22	0.0%	8,252,722	-0.2%	31,260,310	-0.2%

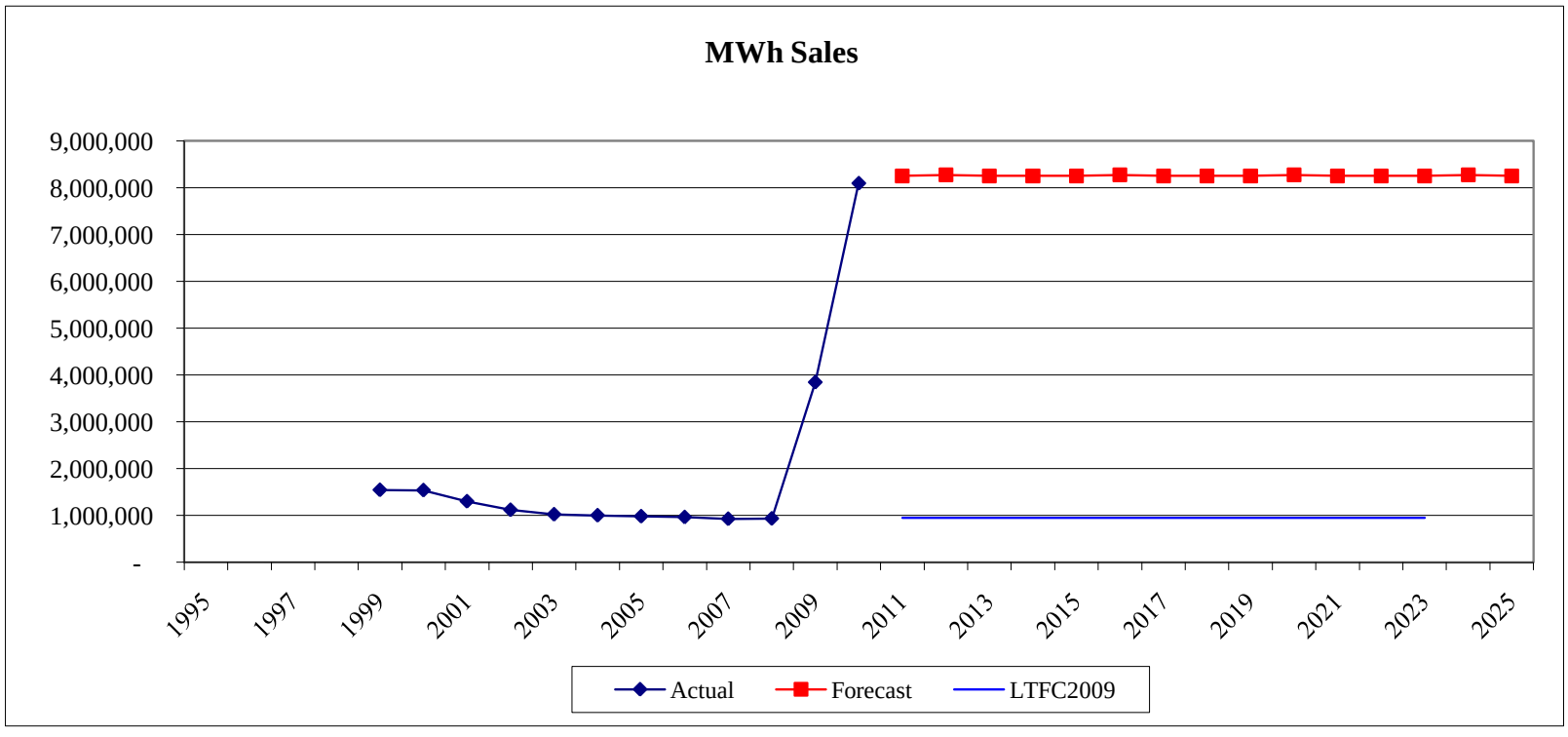
ANNUAL GROWTH RATES			
1995-2000			
2000-2005	-3.0%	-8.6%	-5.8%
2005-2010	4.1%	52.5%	46.5%
2010-2015	0.0%	0.4%	0.4%
2015-2020	0.0%	0.0%	0.0%
2020-2025	0.0%	0.0%	0.0%
2010-2025	0.0%	0.1%	0.1%

BIG RIVERS ELECTRIC CORPORATION

2011 LONG-TERM LOAD FORECAST - BASE CASE

LARGE INDUSTRIAL - DIRECT SERVE CUSTOMERS





BIG RIVERS ELECTRIC CORPORATION

2011 LONG-TERM LOAD FORECAST - BASE CASE

STREET LIGHTING CLASSIFICATION

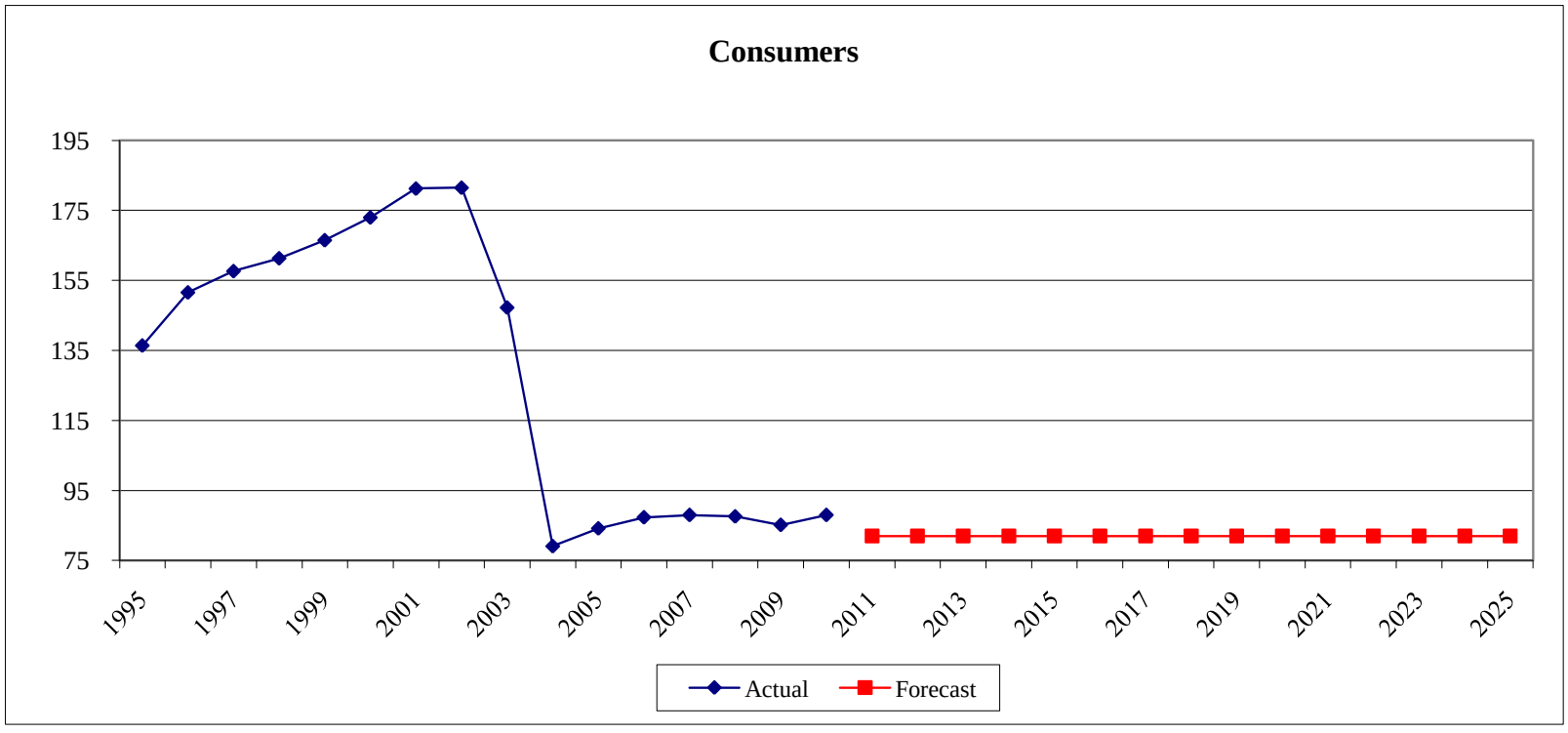
Year	Consumers	Percent Growth	Sales (MWh)	Percent Growth	Average Use (kWh/Cust/Mo)	Percent Growth
1995	136		2,641		1,613	
1996	152	11.1%	2,661	0.8%	1,463	-9.3%
1997	158	4.0%	2,802	5.3%	1,481	1.2%
1998	161	2.3%	2,846	1.6%	1,470	-0.8%
1999	167	3.2%	3,138	10.3%	1,571	6.8%
2000	173	3.9%	3,191	1.7%	1,537	-2.1%
2001	181	4.8%	3,104	-2.7%	1,427	-7.2%
2002	182	0.1%	3,277	5.6%	1,505	5.4%
2003	147	-18.9%	3,235	-1.3%	1,831	21.7%
2004	79	-46.3%	2,997	-7.3%	3,158	72.5%
2005	84	6.4%	3,077	2.7%	3,047	-3.5%
2006	87	3.8%	3,104	0.9%	2,962	-2.8%
2007	88	0.8%	3,175	2.3%	3,007	1.5%
2008	88	-0.5%	3,287	3.5%	3,128	4.0%
2009	85	-2.8%	3,246	-1.2%	3,177	1.6%
2010	88	3.3%	3,438	5.9%	3,256	2.5%
2011	82	-6.8%	3,505	2.0%	3,562	9.4%
2012	82	0.0%	3,559	1.5%	3,617	1.5%
2013	82	0.0%	3,613	1.5%	3,672	1.5%
2014	82	0.0%	3,667	1.5%	3,727	1.5%
2015	82	0.0%	3,721	1.5%	3,782	1.5%
2016	82	0.0%	3,775	1.5%	3,836	1.5%
2017	82	0.0%	3,829	1.4%	3,891	1.4%
2018	82	0.0%	3,883	1.4%	3,946	1.4%
2019	82	0.0%	3,937	1.4%	4,001	1.4%
2020	82	0.0%	3,991	1.4%	4,056	1.4%
2021	82	0.0%	4,045	1.4%	4,111	1.4%
2022	82	0.0%	4,099	1.3%	4,166	1.3%
2023	82	0.0%	4,153	1.3%	4,221	1.3%
2024	82	0.0%	4,207	1.3%	4,276	1.3%
2025	82	0.0%	4,261	1.3%	4,330	1.3%

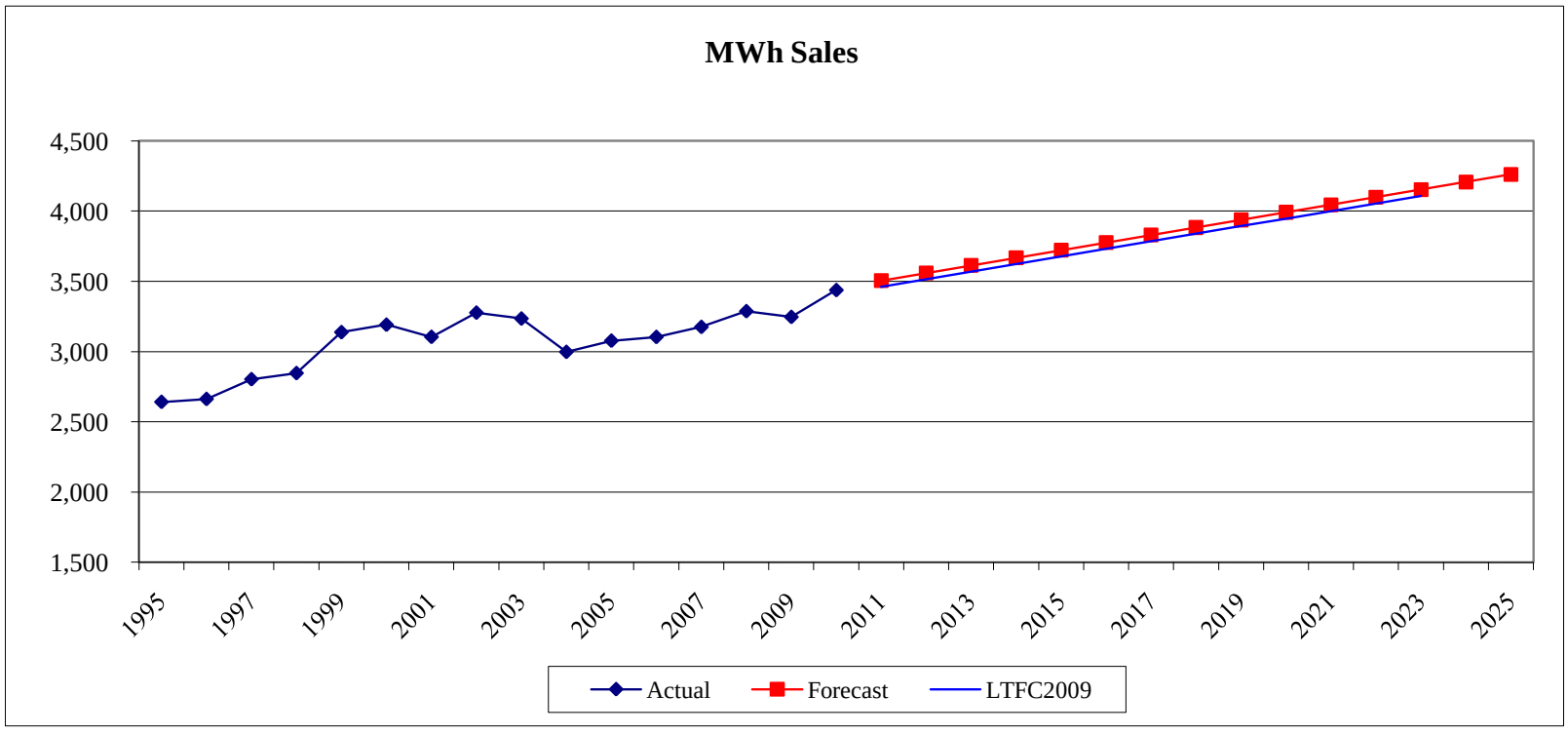
ANNUAL GROWTH RATES			
1995-2000	4.9%	3.9%	-1.0%
2000-2005	-13.4%	-0.7%	14.7%
2005-2010	0.9%	2.2%	1.3%
2010-2015	-1.4%	1.6%	3.0%
2015-2020	0.0%	1.4%	1.4%
2020-2025	0.0%	1.3%	1.3%
2010-2025	-0.5%	1.4%	1.9%

BIG RIVERS ELECTRIC CORPORATION

2011 LONG-TERM LOAD FORECAST - BASE CASE

STREET LIGHTING CLASSIFICATION





BIG RIVERS ELECTRIC CORPORATION

2011 LONG-TERM LOAD FORECAST - BASE CASE

IRRIGATION CLASSIFICATION

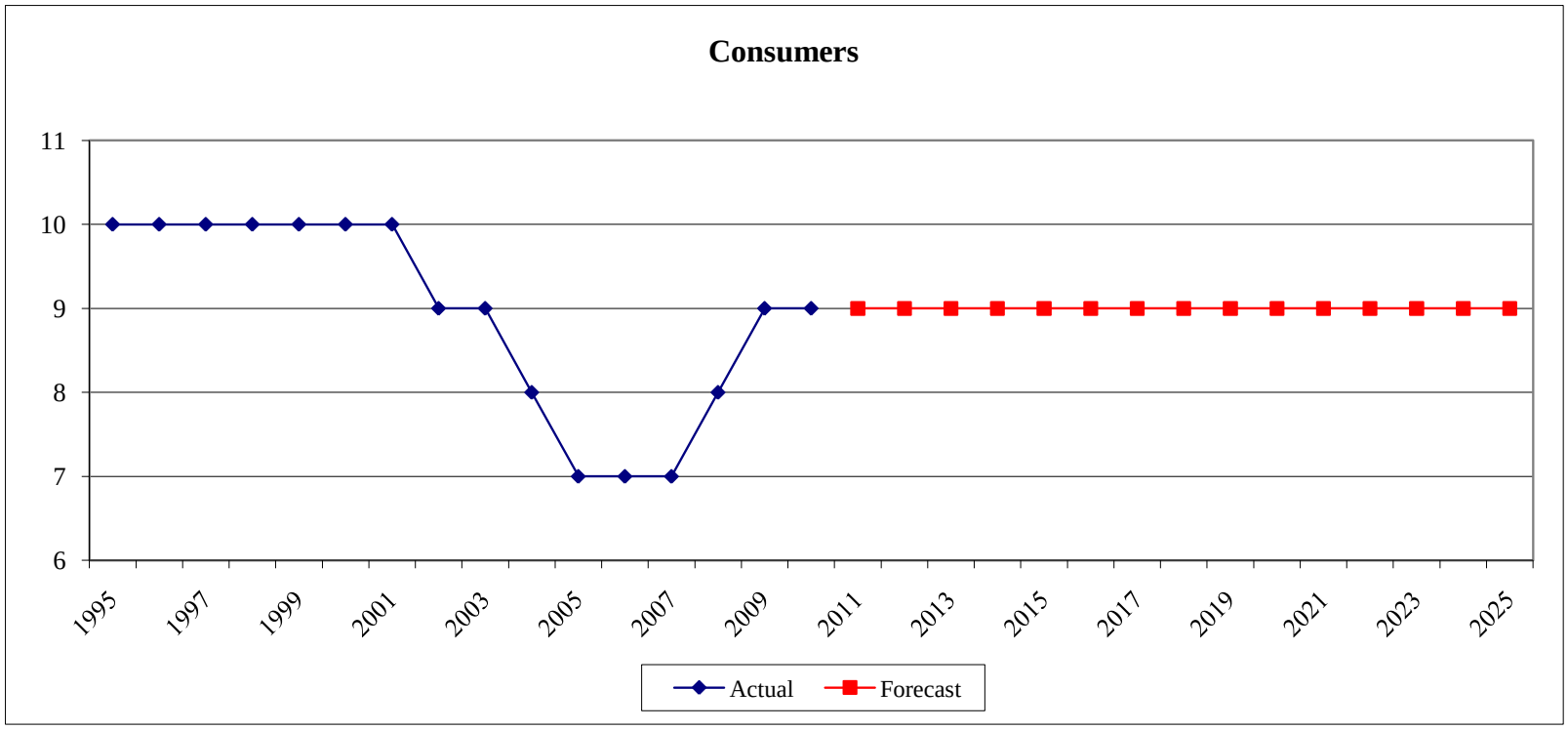
Year	Consumers	Percent Growth	Sales (MWh)	Percent Growth	Average Use (kWh/Cust/Mo)	Percent Growth
1995	10		100		835	
1996	10	0.0%	110	9.3%	913	9.3%
1997	10	0.0%	107	-2.6%	890	-2.6%
1998	10	0.0%	121	13.6%	1,010	13.6%
1999	10	0.0%	121	-0.2%	1,008	-0.2%
2000	10	0.0%	70	-42.0%	585	-42.0%
2001	10	0.0%	75	6.5%	623	6.5%
2002	9	-10.0%	38	-49.1%	352	-43.5%
2003	9	0.0%	113	196.9%	1,045	196.9%
2004	8	-11.1%	164	45.1%	1,706	63.2%
2005	7	-12.5%	114	-30.4%	1,356	-20.5%
2006	7	0.0%	65	-43.2%	770	-43.2%
2007	7	0.0%	1,068	1551.4%	12,715	1551.4%
2008	8	14.3%	432	-59.6%	4,498	-64.6%
2009	9	12.5%	406	-5.9%	3,763	-16.3%
2010	9	0.0%	356	-12.4%	3,297	-12.4%
2011	9	0.0%	216	-39.3%	2,002	-39.3%
2012	9	0.0%	216	0.0%	2,002	0.0%
2013	9	0.0%	216	0.0%	2,002	0.0%
2014	9	0.0%	216	0.0%	2,002	0.0%
2015	9	0.0%	216	0.0%	2,002	0.0%
2016	9	0.0%	216	0.0%	2,002	0.0%
2017	9	0.0%	216	0.0%	2,002	0.0%
2018	9	0.0%	216	0.0%	2,002	0.0%
2019	9	0.0%	216	0.0%	2,002	0.0%
2020	9	0.0%	216	0.0%	2,002	0.0%
2021	9	0.0%	216	0.0%	2,002	0.0%
2022	9	0.0%	216	0.0%	2,002	0.0%
2023	9	0.0%	216	0.0%	2,002	0.0%
2024	9	0.0%	216	0.0%	2,002	0.0%
2025	9	0.0%	216	0.0%	2,002	0.0%

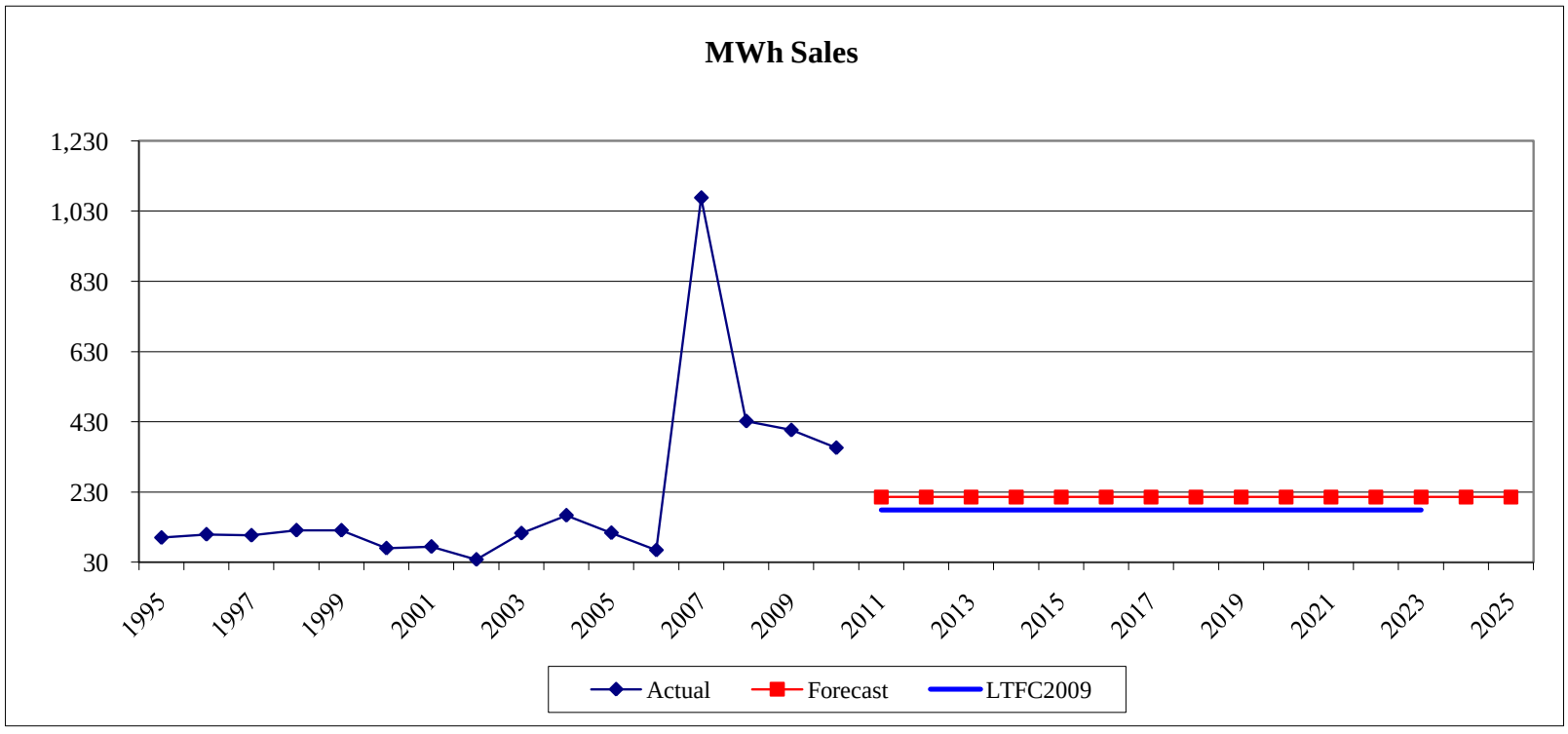
ANNUAL GROWTH RATES			
1995-2000	0.0%	-6.9%	-6.9%
2000-2005	-6.9%	10.2%	18.3%
2005-2010	5.2%	25.6%	19.4%
2010-2015	0.0%	-9.5%	-9.5%
2015-2020	0.0%	0.0%	0.0%
2020-2025	0.0%	0.0%	0.0%
2010-2025	0.0%	-3.3%	-3.3%

BIG RIVERS ELECTRIC CORPORATION

2011 LONG-TERM LOAD FORECAST - BASE CASE

IRRIGATION CLASSIFICATION





Appendix C
Tables – Range Forecasts

BIG RIVERS ELECTRIC CORPORATION

2011 LONG-TERM LOAD FORECAST - RANGE FORECASTS

TOTAL SYSTEM REQUIREMENTS

Year	Base Case (MWh)	ECONOMIC SCENARIOS		WEATHER SCENARIOS	
		Optimistic (MWh)	Pessimistic (MWh)	Extreme (MWh)	Mild (MWh)
1995	8,111,498				
1996	8,197,618				
1997	8,280,551				
1998	8,590,543				
1999	9,242,771				
2000	10,005,237				
2001	10,414,892				
2002	10,493,414				
2003	10,478,654				
2004	10,557,251				
2005	10,603,749				
2006	10,609,828				
2007	10,697,157				
2008	10,747,493				
2009	9,956,045				
2010	10,669,295				
2011	10,723,881	10,751,823	10,695,988	10,904,762	10,558,054
2012	10,754,996	10,807,379	10,702,992	10,937,567	10,587,592
2013	10,766,992	10,852,284	10,682,862	10,952,071	10,597,268
2014	10,806,339	10,925,227	10,689,801	10,993,926	10,634,292
2015	10,837,503	10,989,282	10,689,640	11,027,539	10,663,182
2016	10,897,860	11,079,395	10,722,021	11,090,151	10,721,451
2017	10,915,134	11,122,999	10,714,855	11,109,491	10,736,819
2018	10,942,884	11,175,510	10,719,897	11,139,236	10,762,729
2019	10,970,540	11,227,854	10,725,142	11,168,865	10,788,566
2020	11,025,265	11,308,077	10,756,932	11,225,548	10,841,488
2021	11,040,581	11,349,142	10,749,325	11,242,787	10,855,032
2022	11,077,239	11,411,716	10,763,158	11,281,314	10,889,965
2023	11,114,670	11,475,214	10,777,878	11,320,565	10,925,717
2024	11,173,270	11,560,057	10,813,853	11,380,937	10,982,680
2025	11,191,177	11,604,494	10,809,135	11,400,580	10,998,987

ANNUAL GROWTH RATES					
1995-2000	4.3%				
2000-2005	1.2%				
2005-2010	0.1%				
2010-2015	0.3%	0.6%	0.0%	0.7%	0.0%
2015-2020	0.3%	0.6%	0.1%	0.4%	0.3%
2020-2025	0.3%	0.5%	0.1%	0.3%	0.3%
2010-2025	0.3%	0.6%	0.1%	0.4%	0.2%

BIG RIVERS ELECTRIC CORPORATION

2011 LONG-TERM LOAD FORECAST - RANGE FORECASTS

TOTAL SYSTEM CP DEMAND - SUMMER

Year	Base Case (kW)	ECONOMIC SCENARIOS		WEATHER SCENARIOS	
		Optimistic (kW)	Pessimistic (kW)	Extreme (kW)	Mild (kW)
1995	1,176,878				
1996	1,178,251				
1997	1,206,155				
1998	1,241,405				
1999	1,375,773				
2000	1,404,318				
2001	1,429,909				
2002	1,454,964				
2003	1,450,496				
2004	1,469,188				
2005	1,475,795				
2006	1,493,248				
2007	1,517,127				
2008	1,481,717				
2009	1,457,723				
2010	1,530,458				
2011	1,506,417	1,511,814	1,501,029	1,529,116	1,485,203
2012	1,508,189	1,518,302	1,498,149	1,530,938	1,486,928
2013	1,514,629	1,531,100	1,498,382	1,537,612	1,493,150
2014	1,522,563	1,545,534	1,500,046	1,545,836	1,500,814
2015	1,528,850	1,558,188	1,500,269	1,552,354	1,506,887
2016	1,536,996	1,572,106	1,502,989	1,560,799	1,514,754
2017	1,544,605	1,584,828	1,505,850	1,568,688	1,522,102
2018	1,550,233	1,595,264	1,507,068	1,574,523	1,527,537
2019	1,555,851	1,605,680	1,508,329	1,580,347	1,532,962
2020	1,562,888	1,617,682	1,510,900	1,587,645	1,539,758
2021	1,570,133	1,629,946	1,513,674	1,595,157	1,546,752
2022	1,577,617	1,642,489	1,516,702	1,602,918	1,553,979
2023	1,585,267	1,655,231	1,519,911	1,610,851	1,561,365
2024	1,593,122	1,668,220	1,523,339	1,618,998	1,568,949
2025	1,600,922	1,681,215	1,526,706	1,627,087	1,576,480

ANNUAL GROWTH RATES					
1995-2000	3.6%				
2000-2005	1.0%				
2005-2010	0.7%				
2010-2015	0.0%	0.4%	-0.4%	0.3%	-0.3%
2015-2020	0.4%	0.8%	0.1%	0.5%	0.4%
2020-2025	0.5%	0.8%	0.2%	0.5%	0.5%
2010-2025	0.3%	0.6%	0.0%	0.4%	0.2%

BIG RIVERS ELECTRIC CORPORATION

2011 LONG-TERM LOAD FORECAST - RANGE FORECASTS

TOTAL SYSTEM CP DEMAND - WINTER

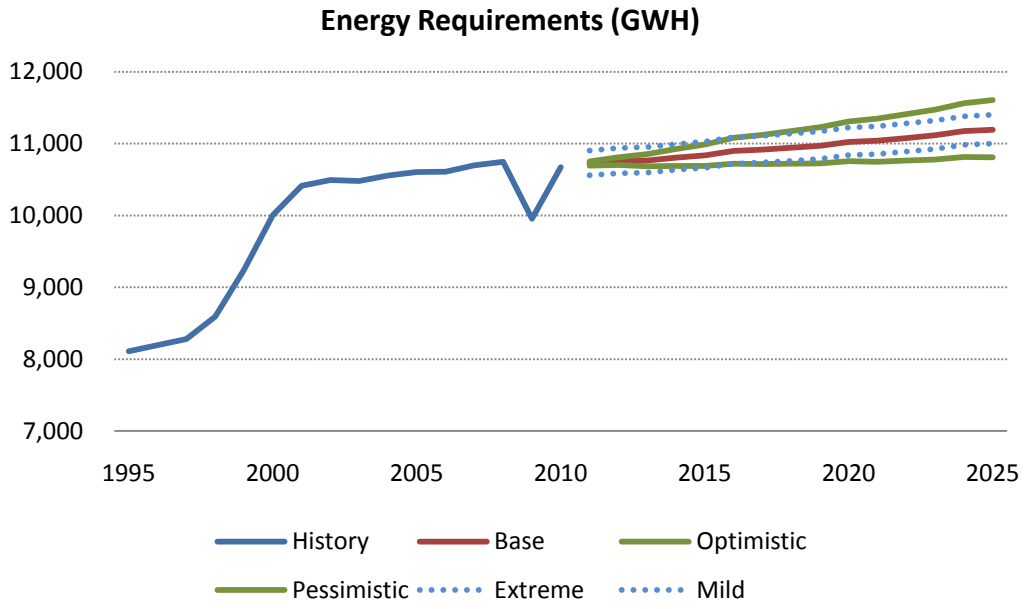
Year	Base Case (kW)	ECONOMIC SCENARIOS		WEATHER SCENARIOS	
		Optimistic (kW)	Pessimistic (kW)	Extreme (kW)	Mild (kW)
1995	1,091,079				
1996	1,165,200				
1997	1,167,249				
1998	1,134,348				
1999	1,200,030				
2000	1,300,865				
2001	1,437,074				
2002	1,371,404				
2003	1,448,207				
2004	1,403,173				
2005	1,420,235				
2006	1,421,523				
2007	1,473,535				
2008	1,483,112				
2009	1,543,456				
2010	1,498,427				
2011	1,512,677	1,518,126	1,507,237	1,560,671	1,470,822
2012	1,515,080	1,525,300	1,504,935	1,563,273	1,473,056
2013	1,521,986	1,538,642	1,505,557	1,570,734	1,479,482
2014	1,530,447	1,553,690	1,507,662	1,579,878	1,487,354
2015	1,537,229	1,566,934	1,508,291	1,587,214	1,493,660
2016	1,545,848	1,581,415	1,511,397	1,596,527	1,501,680
2017	1,553,885	1,594,652	1,514,606	1,605,212	1,509,159
2018	1,559,938	1,605,600	1,516,167	1,611,760	1,514,786
2019	1,565,966	1,616,518	1,517,756	1,618,281	1,520,390
2020	1,573,369	1,628,978	1,520,607	1,626,280	1,527,279
2021	1,580,960	1,641,683	1,523,642	1,634,481	1,534,344
2022	1,588,792	1,654,671	1,526,930	1,642,942	1,541,633
2023	1,596,781	1,667,854	1,530,391	1,651,573	1,549,070
2024	1,604,971	1,681,280	1,534,062	1,660,420	1,556,693
2025	1,613,079	1,694,685	1,537,647	1,669,177	1,564,240

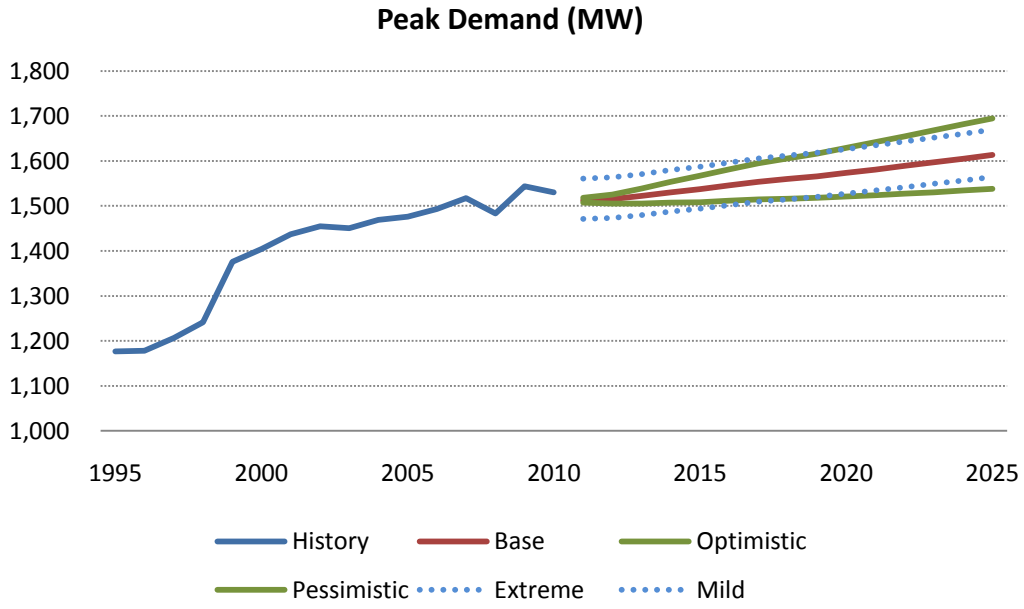
ANNUAL GROWTH RATES					
1995-2000	3.6%				
2000-2005	1.8%				
2005-2010	1.1%				
2010-2015	0.5%	0.9%	0.1%	1.2%	-0.1%
2015-2020	0.5%	0.8%	0.2%	0.5%	0.4%
2020-2025	0.5%	0.8%	0.2%	0.5%	0.5%
2010-2025	0.5%	0.8%	0.2%	0.7%	0.3%

BIG RIVERS ELECTRIC CORPORATION

2011 LONG-TERM LOAD FORECAST - RANGE FORECASTS

TOTAL SYSTEM REQUIREMENTS





BIG RIVERS ELECTRIC CORPORATION

2011 LONG-TERM LOAD FORECAST - RANGE FORECASTS

NATIVE SYSTEM REQUIREMENTS

Year	Base Case (MWh)	ECONOMIC SCENARIOS		WEATHER SCENARIOS	
		Optimistic (MWh)	Pessimistic (MWh)	Extreme (MWh)	Mild (MWh)
1995	3,212,833				
1996	3,074,747				
1997	3,152,802				
1998	3,350,833				
1999	3,532,841				
2000	3,597,500				
2001	3,331,207				
2002	3,232,553				
2003	3,087,548				
2004	3,158,698				
2005	3,259,867				
2006	3,214,136				
2007	3,352,934				
2008	3,340,321				
2009	3,231,354				
2010	3,474,065				
2011	3,355,326	3,383,268	3,327,433	3,536,207	3,189,499
2012	3,366,253	3,418,636	3,314,249	3,548,824	3,198,849
2013	3,398,437	3,483,729	3,314,307	3,583,516	3,228,713
2014	3,437,784	3,556,672	3,321,246	3,625,371	3,265,737
2015	3,468,948	3,620,727	3,321,085	3,658,984	3,294,627
2016	3,509,117	3,690,652	3,333,279	3,701,408	3,332,709
2017	3,546,579	3,754,444	3,346,300	3,740,936	3,368,264
2018	3,574,329	3,806,955	3,351,342	3,770,681	3,394,174
2019	3,601,985	3,859,299	3,356,587	3,800,310	3,420,011
2020	3,636,522	3,919,334	3,368,189	3,836,805	3,452,745
2021	3,672,026	3,980,587	3,380,770	3,874,232	3,486,477
2022	3,708,684	4,043,161	3,394,603	3,912,759	3,521,410
2023	3,746,115	4,106,659	3,409,323	3,952,010	3,557,162
2024	3,784,527	4,171,314	3,425,110	3,992,194	3,593,938
2025	3,822,622	4,235,939	3,440,580	4,032,025	3,630,432

ANNUAL GROWTH RATES					
1995-2000	2.3%				
2000-2005	-2.0%				
2005-2010	1.3%				
2010-2015	0.0%	0.8%	-0.9%	1.0%	-1.1%
2015-2020	0.9%	1.6%	0.3%	1.0%	0.9%
2020-2025	1.0%	1.6%	0.4%	1.0%	1.0%
2010-2025	0.6%	1.3%	-0.1%	1.0%	0.3%

BIG RIVERS ELECTRIC CORPORATION

2011 LONG-TERM LOAD FORECAST - RANGE FORECASTS

NATIVE SYSTEM CP DEMAND - SUMMER

Year	Base Case (kW)	ECONOMIC SCENARIOS		WEATHER SCENARIOS	
		Optimistic (kW)	Pessimistic (kW)	Extreme (kW)	Mild (kW)
1995	588,872				
1996	570,093				
1997	603,198				
1998	624,931				
1999	663,890				
2000	655,248				
2001	596,310				
2002	602,623				
2003	583,906				
2004	604,155				
2005	617,787				
2006	631,181				
2007	659,516				
2008	616,264				
2009	611,392				
2010	662,680				
2011	648,091	653,488	642,703	670,791	626,877
2012	649,863	659,976	639,824	672,613	628,602
2013	656,303	672,775	640,056	679,287	634,824
2014	664,237	687,208	641,720	687,510	642,488
2015	670,525	699,863	641,944	694,028	648,561
2016	678,671	713,780	644,663	702,473	656,428
2017	686,279	726,502	647,524	710,362	663,776
2018	691,908	736,939	648,742	716,197	669,212
2019	697,525	747,354	650,004	722,021	674,636
2020	704,563	759,356	652,574	729,319	681,432
2021	711,807	771,620	655,348	736,831	688,427
2022	719,292	784,163	658,376	744,593	695,654
2023	726,941	796,905	661,586	752,525	703,039
2024	734,796	809,894	665,013	760,672	710,623
2025	742,597	822,889	668,380	768,761	718,154

ANNUAL GROWTH RATES					
1995-2000	2.2%				
2000-2005	-1.2%				
2005-2010	1.4%				
2010-2015	0.2%	1.1%	-0.6%	0.9%	-0.4%
2015-2020	1.0%	1.6%	0.3%	1.0%	1.0%
2020-2025	1.1%	1.6%	0.5%	1.1%	1.1%
2010-2025	0.8%	1.5%	0.1%	1.0%	0.5%

BIG RIVERS ELECTRIC CORPORATION

2011 LONG-TERM LOAD FORECAST - RANGE FORECASTS

NATIVE SYSTEM CP DEMAND - WINTER

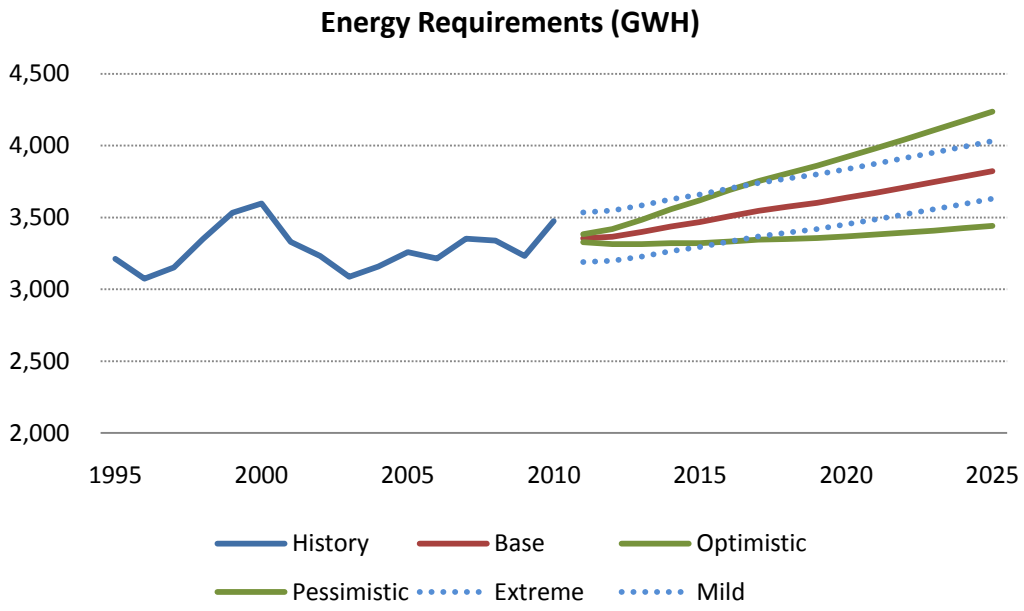
Year	Base Case (kW)	ECONOMIC SCENARIOS		WEATHER SCENARIOS	
		Optimistic (kW)	Pessimistic (kW)	Extreme (kW)	Mild (kW)
1995	492,221				
1996	559,771				
1997	559,198				
1998	520,931				
1999	577,320				
2000	576,843				
2001	614,496				
2002	530,467				
2003	585,549				
2004	539,476				
2005	562,082				
2006	555,303				
2007	610,090				
2008	618,676				
2009	672,938				
2010	628,309				
2011	654,351	659,800	648,911	702,345	612,496
2012	656,755	666,975	646,609	704,947	614,730
2013	663,660	680,316	647,231	712,409	621,156
2014	672,121	695,365	649,337	721,552	629,028
2015	678,904	708,608	649,965	728,888	635,335
2016	687,522	723,089	653,071	738,201	643,354
2017	695,559	736,326	656,280	746,886	650,834
2018	701,612	747,275	657,841	753,434	656,460
2019	707,640	758,192	659,430	759,955	662,064
2020	715,043	770,652	662,281	767,954	668,953
2021	722,634	783,357	665,316	776,155	676,018
2022	730,466	796,345	668,605	784,617	683,308
2023	738,456	809,528	672,065	793,247	690,744
2024	746,645	822,954	675,736	802,094	698,367
2025	754,753	836,360	679,321	810,851	705,915

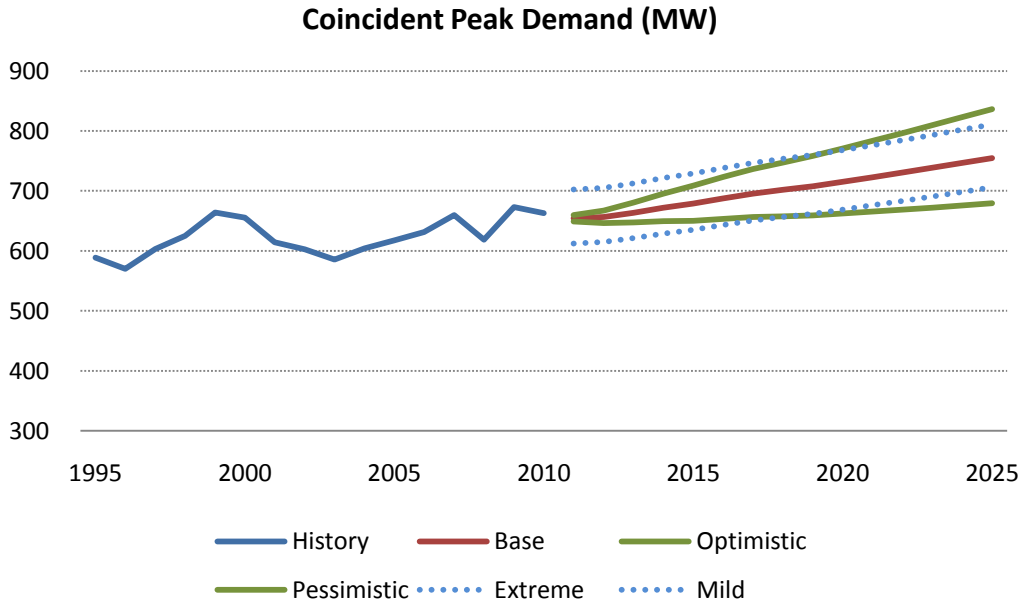
ANNUAL GROWTH RATES					
1995-2000	3.2%				
2000-2005	-0.5%				
2005-2010	2.3%				
2010-2015	1.6%	2.4%	0.7%	3.0%	0.2%
2015-2020	1.0%	1.7%	0.4%	1.0%	1.0%
2020-2025	1.1%	1.6%	0.5%	1.1%	1.1%
2010-2025	1.2%	1.9%	0.5%	1.7%	0.8%

BIG RIVERS ELECTRIC CORPORATION

2011 LONG-TERM LOAD FORECAST - RANGE FORECASTS

NATIVE SYSTEM REQUIREMENTS





BIG RIVERS ELECTRIC CORPORATION

2011 LONG-TERM LOAD FORECAST - RANGE FORECASTS

RURAL SYSTEM REQUIREMENTS

Year	Base Case (MWh)	ECONOMIC SCENARIOS		WEATHER SCENARIOS	
		Optimistic (MWh)	Pessimistic (MWh)	Extreme (MWh)	Mild (MWh)
1995	1,665,313				
1996	1,728,686				
1997	1,758,397				
1998	1,828,160				
1999	1,957,857				
2000	2,031,592				
2001	2,029,371				
2002	2,143,965				
2003	2,113,703				
2004	2,153,540				
2005	2,280,596				
2006	2,250,188				
2007	2,424,029				
2008	2,407,127				
2009	2,257,576				
2010	2,499,895				
2011	2,414,574	2,419,841	2,362,514	2,575,168	2,222,852
2012	2,424,771	2,454,915	2,347,976	2,586,990	2,231,344
2013	2,457,270	2,520,815	2,347,249	2,621,723	2,261,174
2014	2,497,002	2,594,577	2,353,405	2,663,617	2,298,165
2015	2,528,472	2,659,442	2,352,482	2,697,270	2,327,023
2016	2,569,034	2,730,068	2,364,026	2,739,725	2,365,079
2017	2,606,863	2,794,429	2,376,532	2,779,277	2,400,615
2018	2,634,885	2,847,444	2,381,124	2,809,048	2,426,506
2019	2,662,811	2,900,282	2,385,935	2,838,702	2,452,324
2020	2,697,687	2,960,836	2,397,084	2,875,220	2,485,041
2021	2,733,539	3,022,613	2,409,213	2,912,668	2,518,757
2022	2,770,556	3,085,709	2,422,602	2,951,214	2,553,675
2023	2,808,354	3,149,728	2,436,884	2,990,484	2,589,413
2024	2,847,142	3,214,904	2,452,239	3,030,685	2,626,176
2025	2,885,610	3,280,055	2,467,277	3,070,533	2,662,657

ANNUAL GROWTH RATES					
1995-2000					
2000-2005					
2005-2010	1.9%				
2010-2015	0.2%	1.2%	-1.2%	1.5%	-1.4%
2015-2020	1.3%	2.2%	0.4%	1.3%	1.3%
2020-2025	1.4%	2.1%	0.6%	1.3%	1.4%
2010-2025	1.0%	1.8%	-0.1%	1.4%	0.4%

BIG RIVERS ELECTRIC CORPORATION

2011 LONG-TERM LOAD FORECAST - RANGE FORECASTS

RURAL SYSTEM CP DEMAND - SUMMER

Year	Base Case (kW)	ECONOMIC SCENARIOS		WEATHER SCENARIOS	
		Optimistic (kW)	Pessimistic (kW)	Extreme (kW)	Mild (kW)
1995	387,796				
1996	380,121				
1997	409,400				
1998	424,906				
1999	475,416				
2000	463,015				
2001	447,402				
2002	467,498				
2003	463,238				
2004	476,409				
2005	502,064				
2006	505,405				
2007	536,611				
2008	501,757				
2009	500,545				
2010	544,474				
2011	535,687	536,855	524,137	568,853	506,175
2012	537,476	544,158	520,454	570,722	507,891
2013	543,980	558,047	519,624	577,582	514,072
2014	551,991	573,561	520,247	586,037	521,684
2015	558,340	587,261	519,478	592,738	527,716
2016	566,566	602,080	521,354	601,423	535,529
2017	574,249	615,567	523,511	609,535	542,825
2018	579,933	626,716	524,080	615,536	548,223
2019	585,605	637,830	524,714	621,526	553,609
2020	592,712	650,528	526,666	629,032	560,357
2021	600,027	663,480	528,836	636,759	567,301
2022	607,585	676,698	531,278	644,743	574,477
2023	615,309	690,104	533,920	652,903	581,809
2024	623,242	703,745	536,797	661,283	589,339
2025	631,118	717,388	539,624	669,606	596,815

ANNUAL GROWTH RATES					
1995-2000					
2000-2005					
2005-2010	1.6%				
2010-2015	0.5%	1.5%	-0.9%	1.7%	-0.6%
2015-2020	1.2%	2.1%	0.3%	1.2%	1.2%
2020-2025	1.3%	2.0%	0.5%	1.3%	1.3%
2010-2025	1.0%	1.9%	-0.1%	1.4%	0.6%

BIG RIVERS ELECTRIC CORPORATION

2011 LONG-TERM LOAD FORECAST - RANGE FORECASTS

RURAL SYSTEM CP DEMAND - WINTER

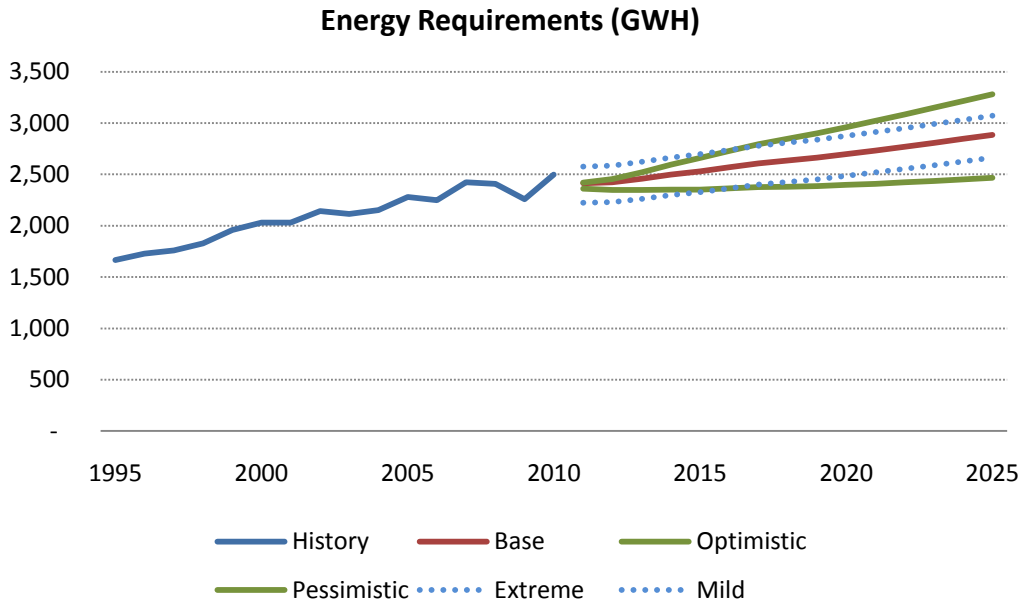
Year	Base Case (kW)	ECONOMIC SCENARIOS		WEATHER SCENARIOS	
		Optimistic (kW)	Pessimistic (kW)	Extreme (kW)	Mild (kW)
1995	335,570				
1996	382,098				
1997	376,117				
1998	339,757				
1999	397,189				
2000	385,384				
2001	429,854				
2002	385,501				
2003	466,551				
2004	434,995				
2005	448,485				
2006	442,753				
2007	493,267				
2008	516,082				
2009	565,119				
2010	511,377				
2011	541,417	542,598	529,744	600,382	492,999
2012	543,845	550,606	526,621	603,091	495,198
2013	550,818	565,062	526,156	610,786	501,573
2014	559,361	581,219	527,194	620,216	509,382
2015	566,210	595,539	526,800	627,786	515,635
2016	574,913	610,950	529,035	637,389	523,592
2017	583,029	624,979	531,515	646,345	531,012
2018	589,141	636,668	532,402	653,102	536,591
2019	595,229	648,311	533,337	659,831	542,148
2020	602,704	661,496	535,545	668,080	548,983
2021	610,369	674,916	537,951	676,535	555,993
2022	618,278	688,608	540,629	685,258	563,226
2023	626,346	702,482	543,497	694,156	570,605
2024	634,616	716,589	546,594	703,275	578,170
2025	642,803	730,670	549,614	712,302	585,660

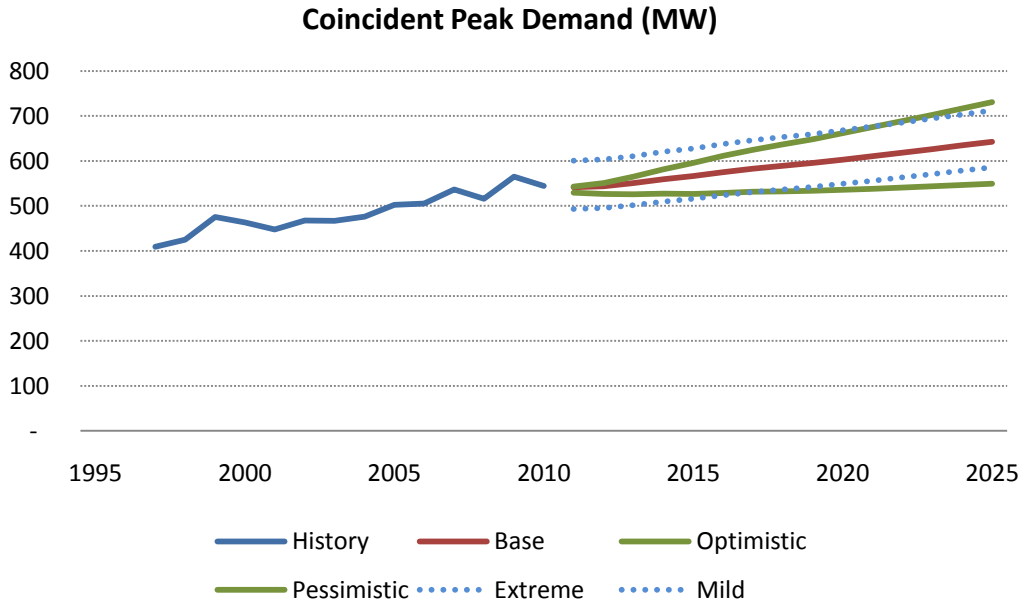
ANNUAL GROWTH RATES					
1995-2000					
2000-2005					
2005-2010	2.7%				
2010-2015	2.1%	3.1%	0.6%	4.2%	0.2%
2015-2020	1.3%	2.1%	0.3%	1.3%	1.3%
2020-2025	1.3%	2.0%	0.5%	1.3%	1.3%
2010-2025	1.5%	2.4%	0.5%	2.2%	0.9%

BIG RIVERS ELECTRIC CORPORATION

2011 LONG-TERM LOAD FORECAST - RANGE FORECASTS

RURAL SYSTEM REQUIREMENTS





BIG RIVERS ELECTRIC CORPORATION

2011 LONG-TERM LOAD FORECAST - RANGE FORECASTS

RESIDENTIAL ENERGY SALES

Year	Base Case (MWh)	ECONOMIC SCENARIOS		WEATHER SCENARIOS	
		Optimistic (MWh)	Pessimistic (MWh)	Extreme (MWh)	Mild (MWh)
1995	1,101,490				
1996	1,144,623				
1997	1,137,995				
1998	1,199,476				
1999	1,215,474				
2000	1,264,194				
2001	1,286,139				
2002	1,371,067				
2003	1,340,451				
2004	1,362,667				
2005	1,452,182				
2006	1,415,359				
2007	1,534,506				
2008	1,529,478				
2009	1,426,775				
2010	1,611,212				
2011	1,519,043	1,525,174	1,512,918	1,665,771	1,387,132
2012	1,517,793	1,533,380	1,502,273	1,665,555	1,384,959
2013	1,529,793	1,558,689	1,501,118	1,679,198	1,395,499
2014	1,548,192	1,590,558	1,506,286	1,699,227	1,412,448
2015	1,559,281	1,614,703	1,504,628	1,711,913	1,422,111
2016	1,582,166	1,650,847	1,514,645	1,736,337	1,443,622
2017	1,605,702	1,687,508	1,525,522	1,761,353	1,465,832
2018	1,621,146	1,715,535	1,528,905	1,778,252	1,479,973
2019	1,636,629	1,743,551	1,532,442	1,795,174	1,494,169
2020	1,658,468	1,778,444	1,541,910	1,818,430	1,514,741
2021	1,681,081	1,814,090	1,552,245	1,842,420	1,536,124
2022	1,704,663	1,850,637	1,563,685	1,867,327	1,558,523
2023	1,728,954	1,887,868	1,575,926	1,892,894	1,581,673
2024	1,754,119	1,925,995	1,589,088	1,919,291	1,605,739
2025	1,778,856	1,963,670	1,601,919	1,945,222	1,629,415

ANNUAL GROWTH RATES					
1995-2000	2.8%				
2000-2005	2.8%				
2005-2010	2.1%				
2010-2015	-0.7%	0.0%	-1.4%	1.2%	-2.5%
2015-2020	1.2%	2.0%	0.5%	1.2%	1.3%
2020-2025	1.4%	2.0%	0.8%	1.4%	1.5%
2010-2025	0.7%	1.3%	0.0%	1.3%	0.1%

BIG RIVERS ELECTRIC CORPORATION

2011 LONG-TERM LOAD FORECAST - RANGE FORECASTS

SMALL COMMERCIAL ENERGY SALES

Year	Base Case (MWh)	ECONOMIC SCENARIOS		WEATHER SCENARIOS	
		Optimistic (MWh)	Pessimistic (MWh)	Extreme (MWh)	Mild (MWh)
1995					
1996					
1997	502,803				
1998	513,762				
1999	591,594				
2000	613,100				
2001	602,412				
2002	627,652				
2003	637,787				
2004	659,726				
2005	695,491				
2006	708,219				
2007	753,591				
2008	749,573				
2009	693,582				
2010	740,160				
2011	725,969	747,502	706,118	753,170	700,409
2012	737,458	752,218	683,015	744,433	690,498
2013	755,694	808,864	703,428	783,418	727,970
2014	774,272	846,358	704,005	802,762	745,782
2015	792,447	883,191	704,730	821,682	763,211
2016	807,314	893,468	685,536	817,169	757,474
2017	818,981	937,313	706,373	849,315	788,647
2018	829,583	959,103	707,249	860,363	798,803
2019	840,057	980,737	708,177	871,278	808,836
2020	850,667	982,780	689,159	862,342	799,007
2021	861,413	1,025,209	710,181	893,533	829,294
2022	872,276	1,047,985	711,292	904,849	839,703
2023	883,160	1,070,948	712,443	916,186	850,134
2024	894,092	1,074,112	693,690	907,578	840,622
2025	905,154	1,117,690	714,953	939,088	871,219

ANNUAL GROWTH RATES					
1995-2000					
2000-2005	2.6%				
2005-2010	1.3%				
2010-2015	1.4%	3.6%	-1.0%	2.1%	0.6%
2015-2020	1.4%	2.2%	-0.4%	1.0%	0.9%
2020-2025	1.2%	2.6%	0.7%	1.7%	1.7%
2010-2025	1.4%	2.8%	-0.2%	1.6%	1.1%

BIG RIVERS ELECTRIC CORPORATION

2011 LONG-TERM LOAD FORECAST - RANGE FORECASTS

LARGE INDUSTRIAL - DIRECT SERVE CUSTOMERS

Year	Base Case (MWh)	ECONOMIC SCENARIOS		WEATHER SCENARIOS	
		Optimistic (MWh)	Pessimistic (MWh)	Extreme (MWh)	Mild (MWh)
1995					
1996					
1997	6,368,964				
1998	4,235,544				
1999	1,544,587				
2000	1,539,384				
2001	1,300,686				
2002	1,118,264				
2003	1,022,803				
2004	1,001,791				
2005	981,086				
2006	963,691				
2007	926,769				
2008	933,580				
2009	3,846,407				
2010	8,098,126				
2011	8,251,901	8,251,901	8,251,901	8,251,901	8,251,901
2012	8,272,714	8,272,714	8,272,714	8,272,714	8,272,714
2013	8,252,722	8,252,722	8,252,722	8,252,722	8,252,722
2014	8,252,722	8,252,722	8,252,722	8,252,722	8,252,722
2015	8,252,722	8,252,722	8,252,722	8,252,722	8,252,722
2016	8,272,714	8,272,714	8,272,714	8,272,714	8,272,714
2017	8,252,722	8,252,722	8,252,722	8,252,722	8,252,722
2018	8,252,722	8,252,722	8,252,722	8,252,722	8,252,722
2019	8,252,722	8,252,722	8,252,722	8,252,722	8,252,722
2020	8,272,714	8,272,714	8,272,714	8,272,714	8,272,714
2021	8,252,722	8,252,722	8,252,722	8,252,722	8,252,722
2022	8,252,722	8,252,722	8,252,722	8,252,722	8,252,722
2023	8,252,722	8,252,722	8,252,722	8,252,722	8,252,722
2024	8,272,714	8,272,714	8,272,714	8,272,714	8,272,714
2025	8,252,722	8,252,722	8,252,722	8,252,722	8,252,722

ANNUAL GROWTH RATES					
1995-2000					
2000-2005	-8.6%				
2005-2010	52.5%				
2010-2015	0.4%	0.4%	0.4%	0.4%	0.4%
2015-2020	0.0%	0.0%	0.0%	0.0%	0.0%
2020-2025	0.0%	0.0%	0.0%	0.0%	0.0%
2010-2025	0.1%	0.1%	0.1%	0.1%	0.1%

BIG RIVERS ELECTRIC CORPORATION

2011 LONG-TERM LOAD FORECAST - RANGE FORECASTS

STREET LIGHTING ENERGY SALES

Year	Base Case (MWh)	ECONOMIC SCENARIOS		WEATHER SCENARIOS	
		Optimistic (MWh)	Pessimistic (MWh)	Extreme (MWh)	Mild (MWh)
1995	2,641				
1996	2,661				
1997	2,802				
1998	2,846				
1999	3,138				
2000	3,191				
2001	3,104				
2002	3,277				
2003	3,235				
2004	2,997				
2005	3,077				
2006	3,104				
2007	3,175				
2008	3,287				
2009	3,246				
2010	3,438				
2011	3,505	3,658	3,352	3,505	3,505
2012	3,559	3,714	3,404	3,559	3,559
2013	3,613	3,771	3,456	3,613	3,613
2014	3,667	3,827	3,507	3,667	3,667
2015	3,721	3,883	3,559	3,721	3,721
2016	3,775	3,940	3,610	3,775	3,775
2017	3,829	3,996	3,662	3,829	3,829
2018	3,883	4,053	3,714	3,883	3,883
2019	3,937	4,109	3,765	3,937	3,937
2020	3,991	4,165	3,817	3,991	3,991
2021	4,045	4,222	3,868	4,045	4,045
2022	4,099	4,278	3,920	4,099	4,099
2023	4,153	4,335	3,972	4,153	4,153
2024	4,207	4,391	4,023	4,207	4,207
2025	4,261	4,448	4,075	4,261	4,261

ANNUAL GROWTH RATES					
1995-2000	3.9%				
2000-2005	-0.7%				
2005-2010	2.2%				
2010-2015	1.6%	2.5%	0.7%	1.6%	1.6%
2015-2020	1.4%	1.4%	1.4%	1.4%	1.4%
2020-2025	1.3%	1.3%	1.3%	1.3%	1.3%
2010-2025	1.4%	1.7%	1.1%	1.4%	1.4%

BIG RIVERS ELECTRIC CORPORATION

2011 LONG-TERM LOAD FORECAST - RANGE FORECASTS

IRRIGATION ENERGY SALES

Year	Base Case (MWh)	ECONOMIC SCENARIOS		WEATHER SCENARIOS	
		Optimistic (MWh)	Pessimistic (MWh)	Extreme (MWh)	Mild (MWh)
1995	100				
1996	110				
1997	107				
1998	121				
1999	121				
2000	70				
2001	75				
2002	38				
2003	113				
2004	164				
2005	114				
2006	65				
2007	1,068				
2008	432				
2009	406				
2010	356				
2011	216	227	205	238	195
2012	216	227	205	238	195
2013	216	227	205	238	195
2014	216	227	205	238	195
2015	216	227	205	238	195
2016	216	227	205	238	195
2017	216	227	205	238	195
2018	216	227	205	238	195
2019	216	227	205	238	195
2020	216	227	205	238	195
2021	216	227	205	238	195
2022	216	227	205	238	195
2023	216	227	205	238	195
2024	216	227	205	238	195
2025	216	227	205	238	195

ANNUAL GROWTH RATES					
1995-2000	-6.9%				
2000-2005	10.2%				
2005-2010	25.6%				
2010-2015	-9.5%	-8.6%	-10.4%	-7.8%	-11.4%
2015-2020	0.0%	0.0%	0.0%	0.0%	0.0%
2020-2025	0.0%	0.0%	0.0%	0.0%	0.0%
2010-2025	-3.3%	-3.0%	-3.6%	-2.7%	-3.9%

Appendix D
Econometric Model Specifications

MEADE COUNTY RECC

2011 LOAD FORECAST

MODEL SPECIFICATIONS

RURAL SUMMER COINCIDENT PEAK DEMAND - LONG-TERM FORECAST

Dependent Variable: Rural Summer CP Demand

Model Type: Econometric

Model Specification:

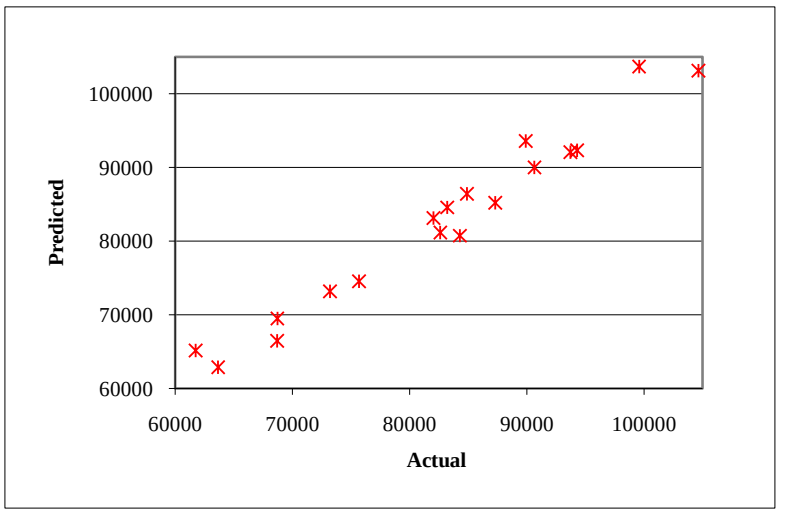
Variable	Description	Value	Standard Err.	t-Statistic	p-Value
INT	Intercept	(83,735)	17,733	(4.7)	0.03%
Rural_kWh	Rural kWh Purchased	0.1784	0.0142	12.6	0.00%
Max_Temp	Maximum Temperature	997.1326	177.8734	5.6	0.01%
Binary_Variable_2009	Binary variable 2009	(5,528.6067)	2,449.9850	(2.3)	4.05%
AR	Autoregressive term	0.435	0.254	1.7	10.87%

Summary Model Statistics:

R-Squared	0.972360994
Adjusted R-Squared	0.964464135
Durbin-Watson Statistic	1.73979272
Mean Abs. % Err. (MAPE)	2.27%

Adjusted Observations	19
Deg. of Freedom for Error	14
F-Statistic	123
Prob (F-Statistic)	0%
Bayesian Information Criterian (BIC)	16.11
Model Sum of Squares	3,041,937,646
Sum of Squared Errors	86,465,966
Mean Squared Error	6,176,140.44
Std. Error of Regression	2,485.18
Mean Abs. Dev. (MAD)	1,834.76

Predicted vs. Actual



MEADE COUNTY RECC

2011 LOAD FORECAST

MODEL SPECIFICATIONS

RURAL WINTER COINCIDENT PEAK DEMAND - LONG-TERM FORECAST

Dependent Variable: Rural Winter CP Demand

Model Type: Econometric

Model Specification:

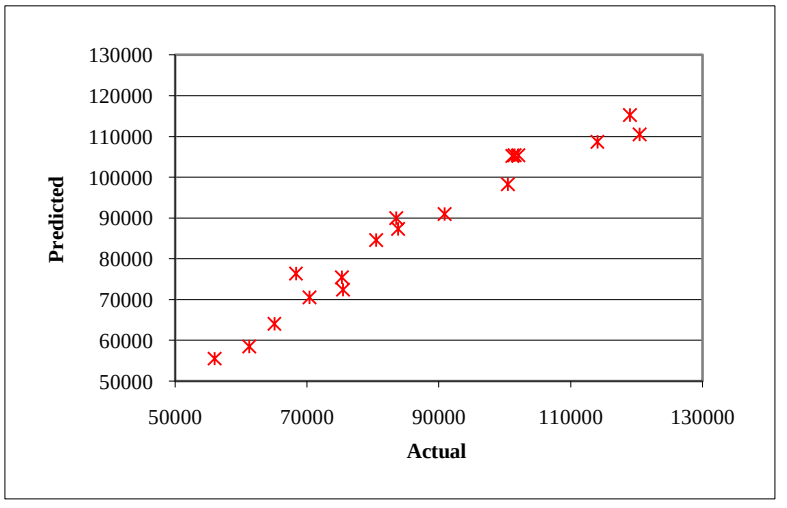
Variable	Description	Value	Standard Err.	t-Statistic	p-Value
INT	Intercept	(15,816)	5,776	(2.7)	1.46%
Rural_kWh	Rural kWh Purchased	0.2734	0.0153	17.9	0.00%
Min_Temp	Minimum Temperature	(463.3183)	171.5573	(2.7)	1.57%
Binary_Variable_2009	Binary variable 2009	18,072.367	5,206.083	3.5	0.31%

Summary Model Statistics:

R-Squared	0.962473223
Adjusted R-Squared	0.955436952
Durbin-Watson Statistic	1.401007336
Mean Abs. % Err. (MAPE)	3.95%

Adjusted Observations	20
Deg. of Freedom for Error	16
F-Statistic	137
Prob (F-Statistic)	0%
Bayesian Information Criterian (BIC)	17.33
Model Sum of Squares	9,496,788,157
Sum of Squared Errors	370,279,237
Mean Squared Error	23,142,452.28
Std. Error of Regression	4,810.66
Mean Abs. Dev. (MAD)	3,378.39

Predicted vs. Actual



MEADE COUNTY RECC

2011 LOAD FORECAST

MODEL SPECIFICATIONS

RESIDENTIAL CONSUMERS - LONG-TERM FORECAST

Dependent Variable: Residential Consumers

Model Type: Econometric

Model Specification:

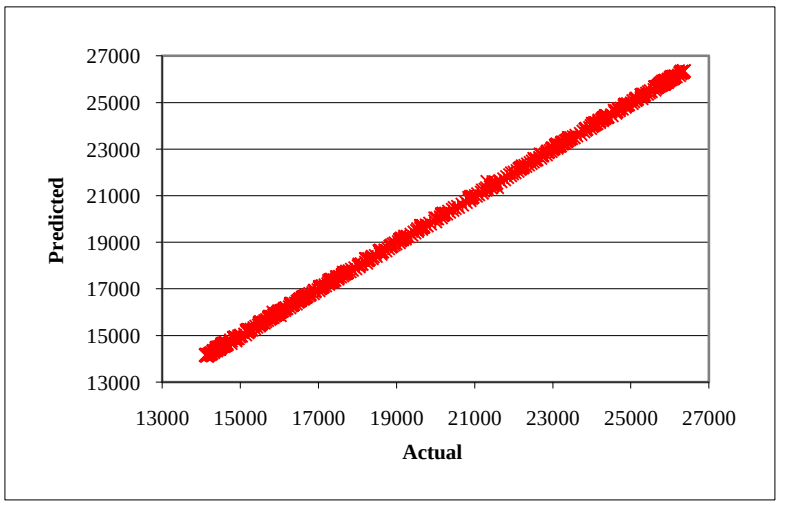
Variable	Description	Value	Standard Err.	t-Statistic	p-Value
INT	Intercept	(198)	64	(3.1)	0.23%
HH	Households	30.125	8.881	3.4	0.08%
AR	Autoregressive Term	0.985	0.005	205.0	0.00%

Summary Model Statistics:

R-Squared	0.999893154
Adjusted R-Squared	0.999892575
Durbin-Watson Statistic	1.833019889
Mean Abs. % Err. (MAPE)	0.16%

Adjusted Observations	372
Deg. of Freedom for Error	369
F-Statistic	1,726,597
Prob (F-Statistic)	0%
Bayesian Information Criterian (BIC)	7.45
Model Sum of Squares	5,729,367,950
Sum of Squared Errors	612,226
Mean Squared Error	1,659.15
Std. Error of Regression	40.73
Mean Abs. Dev. (MAD)	29.84

Predicted vs. Actual



MEADE COUNTY RECC

2011 LOAD FORECAST

MODEL SPECIFICATIONS

RESIDENTIAL USE - LONG-TERM FORECAST

Dependent Variable: Residential Use

Model Type: Econometric

Model Specification:

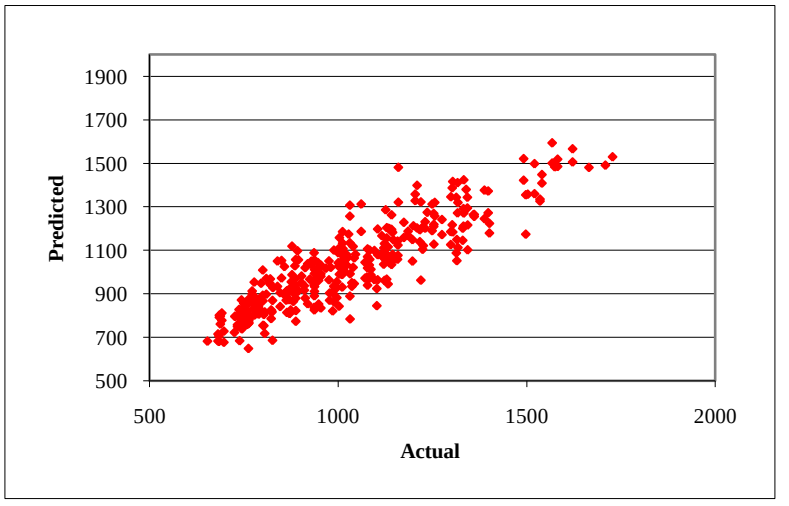
Variable	Description	Value	Standard Err.	t-Statistic	p-Value
CONST	Intercept	(560.09)	166	(3.4)	0.09%
SAEData.Base_Index	Base Index	1,195.132	171.319	7.0	0.00%
SAEData.SH_Index	Space Heating Index	24.749	1.075	23.0	0.00%
SAEData.AC_Index	Air Conditioning Index	41.616	2.516	16.5	0.00%

Summary Model Statistics:

R-Squared	0.768417529
Adjusted R-Squared	0.7644701
Durbin-Watson Statistic	1.667450418
Mean Abs. % Err. (MAPE)	8.83%

Adjusted Observations	180
Deg. of Freedom for Error	176
F-Statistic	195
Prob (F-Statistic)	0%
Bayesian Information Criterian (BIC)	9.60
Model Sum of Squares	7,844,449
Sum of Squared Errors	2,364,127
Mean Squared Error	13,432.54
Std. Error of Regression	115.90
Mean Abs. Dev. (MAD)	91.36

Predicted vs. Actual



MEADE COUNTY RECC

2011 LOAD FORECAST

MODEL SPECIFICATIONS

SMALL COMMERCIAL CONSUMERS - LONG-TERM FORECAST

Dependent Variable: Small Commercial Consumers

Model Type: Econometric

Model Specification:

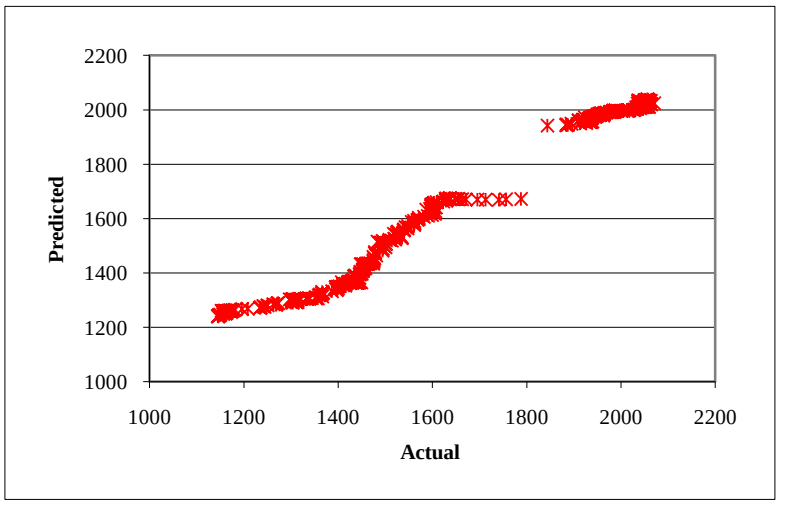
Variable	Description	Value	Standard Err.	t-Statistic	p-Value
CONST	Intercept	242	38	6.4	0.00%
Monthly.EmpHHIndex	Employment per Household	93.288	1.995	46.8	0.00%
Monthly.Ind2002	Lag of Dependent Variable	-267.5078123	8.243130471	-32.45221136	0.00%

Summary Model Statistics:

R-Squared	0.976438623
Adjusted R-Squared	0.976291823
Durbin-Watson Statistic	0.104822889
Mean Abs. % Err. (MAPE)	2.52%

Adjusted Observations	324
Deg. of Freedom for Error	321
F-Statistic	6,651
Prob (F-Statistic)	0%
Bayesian Information Criterian (BIC)	7.66
Model Sum of Squares	26,918,865
Sum of Squared Errors	649,550
Mean Squared Error	2,023.52
Std. Error of Regression	44.98
Mean Abs. Dev. (MAD)	37.38

Predicted vs. Actual



MEADE COUNTY RECC

2011 LOAD FORECAST

MODEL SPECIFICATIONS

SMALL COMMERCIAL USE - LONG-TERM FORECAST

Dependent Variable: Small Commercial Use

Model Type: Econometric

Model Specification:

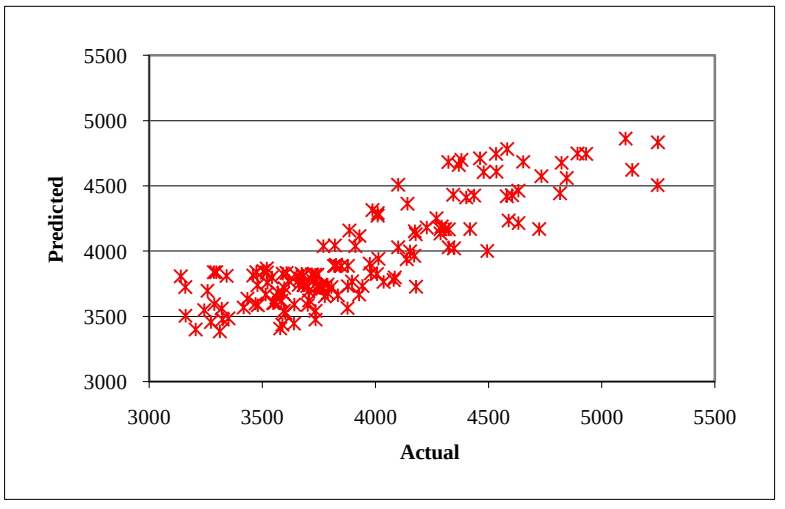
Variable	Description	Value	Standard Err.	t-Statistic	p-Value
CONST	Intercept	1,903	793	2.4	1.75%
Monthly.RetSalespHH	Retail Sales per Household	93.796	49.527	1.9	5.98%
CommData.HDD	Heating Degree Days	0	0	1.9	6.20%
CommData.CDD	Cooling Degree Days	1	0	5.9	0.00%
SCUSE_LT.Expr1	Lag of Heating Degree Days	0	0	2.9	0.42%
SCUSE_LT.Expr2	Lag of Cooling Degree Days	2	0	9.9	0.00%
SCUSE_LT.LagDep(1)	Lag of Dependent Variable	0	0	7.1	0.00%

Summary Model Statistics:

R-Squared	0.728137182
Adjusted R-Squared	0.71927209
Durbin-Watson Statistic	2.285569356
Mean Abs. % Err. (MAPE)	4.99%

Adjusted Observations	191
Deg. of Freedom for Error	184
F-Statistic	82
Prob (F-Statistic)	0%
Bayesian Information Criterian (BIC)	11.16
Model Sum of Squares	2.96E+07
Sum of Squared Errors	11,044,051
Mean Squared Error	60,022.02
Std. Error of Regression	244.99
Mean Abs. Dev. (MAD)	195.59

Predicted vs. Actual



MEADE COUNTY RECC

2011 LOAD FORECAST

MODEL SPECIFICATIONS

RESIDENTIAL CONSUMERS - SHORT-TERM FORECAST

Dependent Variable: Residential Consumers

Model Type: Econometric

Model Specification:

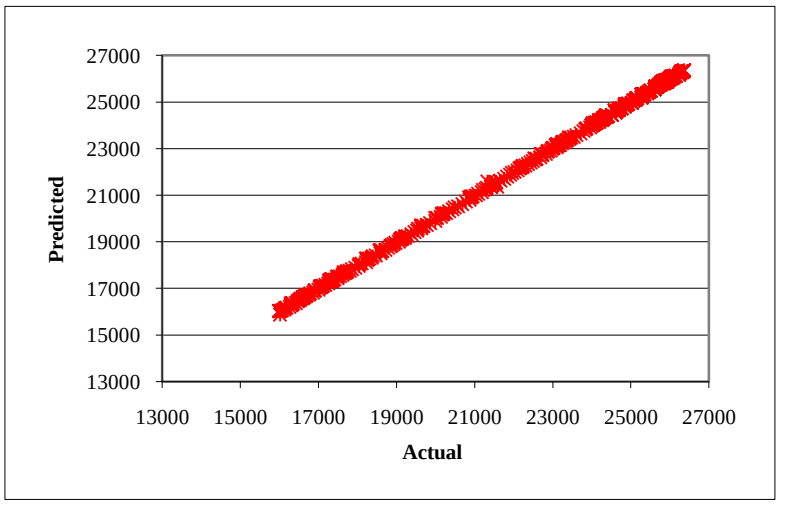
Variable	Description	Value	Standard Err.	t-Statistic	p-Value
INT	Intercept	236	127	1.9	6.79%
RCON_ST.LagDep(1)	Lag Term	0.992	0.005	196.7	0.00%

Summary Model Statistics:

R-Squared	0.997885437
Adjusted R-Squared	0.99785965
Durbin-Watson Statistic	1.831661735
Mean Abs. % Err. (MAPE)	0.10%

Adjusted Observations	84
Deg. of Freedom for Error	82
F-Statistic	38,697
Prob (F-Statistic)	0%
Bayesian Information Criterian (BIC)	7.10
Model Sum of Squares	43,198,459
Sum of Squared Errors	91,539
Mean Squared Error	1,116.33
Std. Error of Regression	33.41
Mean Abs. Dev. (MAD)	26.13

Predicted vs. Actual



MEADE COUNTY RECC

2011 LOAD FORECAST

MODEL SPECIFICATIONS

RESIDENTIAL USE - SHORT-TERM FORECAST

Dependent Variable: Residential Use

Model Type: Econometric

Model Specification:

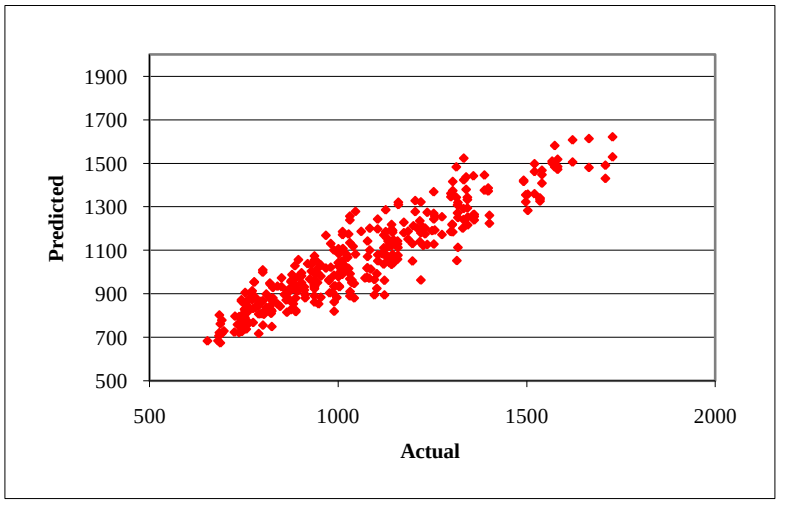
Variable	Description	Value	Standard Err.	t-Statistic	p-Value
CONST	Intercept	100.72	86	1.2	24.62%
ResData.Trend1		1.00	0	4.5	0.00%
ResData.CDD		1.04	0	11.3	0.00%
ResData.HDD		0.604	0.042	14.4	0.00%
RUSE_ST.Expr1		0.736	0.092	8.0	0.00%
RUSE_ST.Expr2		0.426	0.042	10.0	0.00%

Summary Model Statistics:

R-Squared	0.857915547
Adjusted R-Squared	0.852277275
Durbin-Watson Statistic	1.775188206
Mean Abs. % Err. (MAPE)	6.80%

Adjusted Observations	132
Deg. of Freedom for Error	126
F-Statistic	152
Prob (F-Statistic)	0%
Bayesian Information Criterian (BIC)	9.32
Model Sum of Squares	7,092,625
Sum of Squared Errors	1,174,651
Mean Squared Error	9,322.63
Std. Error of Regression	96.55
Mean Abs. Dev. (MAD)	72.70

Predicted vs. Actual



MEADE COUNTY RECC

2011 LOAD FORECAST

MODEL SPECIFICATIONS

SMALL COMMERCIAL CONSUMERS - SHORT-TERM FORECAST

Dependent Variable: Small Commercial Consumers

Model Type: Econometric

Model Specification:

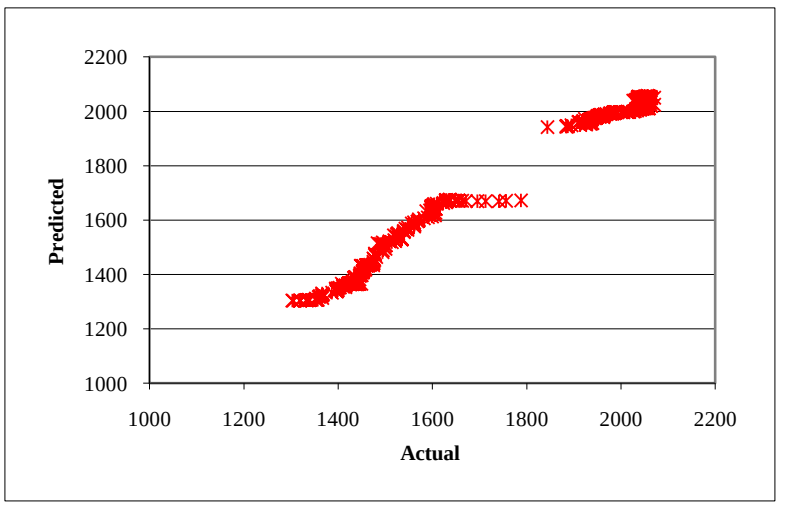
Variable	Description	Value	Standard Err.	t-Statistic	p-Value
CONST	Intercept	1,262	223	5.6	0.00%
Monthly.EmpHHIndex		41.2323274	11.7346035	3.513738441	0.10%

Summary Model Statistics:

R-Squared	0.211604602
Adjusted R-Squared	0.194465572
Durbin-Watson Statistic	0.87779232
Mean Abs. % Err. (MAPE)	0.35%

Adjusted Observations	48
Deg. of Freedom for Error	46
F-Statistic	12
Prob (F-Statistic)	0%
Bayesian Information Criterian (BIC)	4.52
Model Sum of Squares	1,002
Sum of Squared Errors	3,734
Mean Squared Error	81.17
Std. Error of Regression	9.01
Mean Abs. Dev. (MAD)	7.20

Predicted vs. Actual



MEADE COUNTY RECC

2011 LOAD FORECAST

MODEL SPECIFICATIONS

SMALL COMMERCIAL USE - SHORT-TERM FORECAST

Dependent Variable: Small Commercial Use

Model Type: Econometric

Model Specification:

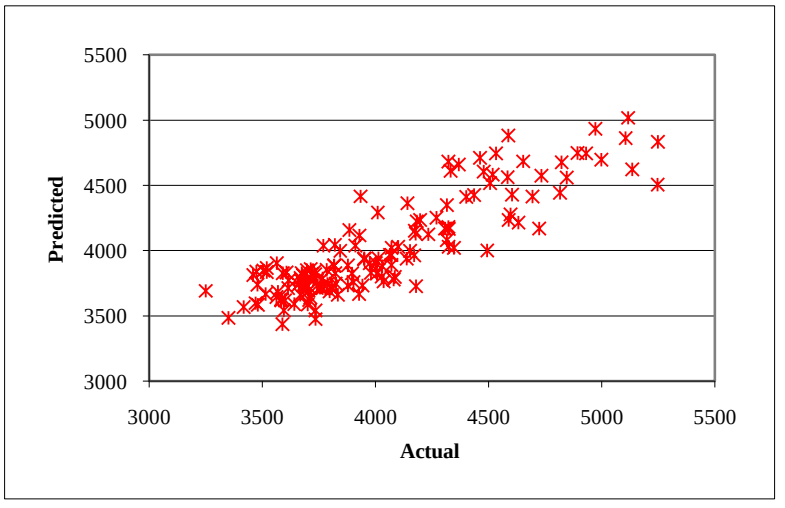
Variable	Description	Value	Standard Err.	t-Statistic	p-Value
CONST	Intercept	3,190	819	3.9	0.03%
CommData.Trnd		0.566	1.931	0.3	77.11%
CommData.HDD	Heating Degree Days	0	0	3.5	0.10%
CommData.CDD	Cooling Degree Days	2	0	6.6	0.00%
SCUSE_ST.Expr2	Lag of Heating Degree Days	0	0	0.7	51.08%
SCUSE_ST.Expr1	Lag of Dependent Variable	1	0	5.2	0.00%

Summary Model Statistics:

R-Squared	0.8232464
Adjusted R-Squared	0.802204305
Durbin-Watson Statistic	2.168012772
Mean Abs. % Err. (MAPE)	3.15%

Adjusted Observations	48
Deg. of Freedom for Error	42
F-Statistic	39
Prob (F-Statistic)	0%
Bayesian Information Criterian (BIC)	10.76
Model Sum of Squares	6.49E+06
Sum of Squared Errors	1,393,280
Mean Squared Error	33,173.34
Std. Error of Regression	182.14
Mean Abs. Dev. (MAD)	126.85

Predicted vs. Actual



JACKSON PURCHASE ENERGY CORPORATION
2011 LOAD FORECAST
MODEL SPECIFICATIONS

RURAL SUMMER COINCIDENT PEAK DEMAND - LONG-TERM FORECAST

Dependent Variable: Rural Summer CP Demand

Model Type: Econometric

Model Specification:

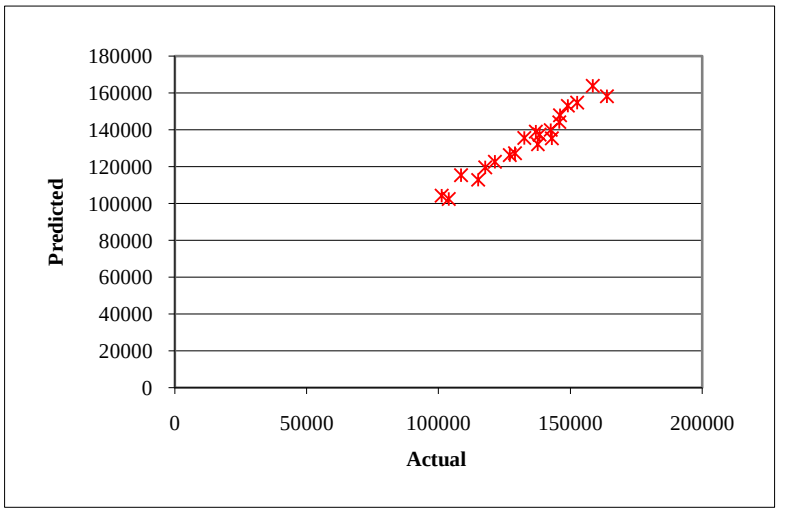
Variable	Description	Value	Standard Err.	t-Statistic	p-Value
INT	Intercept	(106,212)	34,384	(3.1)	0.67%
Jackson.Rural_MWH	Rural kWh Purchased	0.2083	0.0111	18.8	0.00%
Jackson.MAXTMP	Autoregressive term	1,220.665	341.160	3.6	0.23%

Summary Model Statistics:

R-Squared	0.955
Adjusted R-Squared	0.950
Durbin-Watson Statistic	1.700
Mean Abs. % Err. (MAPE)	2.31%

Adjusted Observations	20
Deg. of Freedom for Error	17
F-Statistic	182
Prob (F-Statistic)	0%
Bayesian Information Criterian (BIC)	16.87
Model Sum of Squares	5,764,850,758
Sum of Squared Errors	269,890,126
Mean Squared Error	15,875,889.79
Std. Error of Regression	3,984.46
Mean Abs. Dev. (MAD)	3,087.70

Predicted vs. Actual



JACKSON PURCHASE ENERGY CORPORATION
2011 LOAD FORECAST
MODEL SPECIFICATIONS

RURAL WINTER COINCIDENT PEAK DEMAND - LONG-TERM FORECAST

Dependent Variable: Rural Winter CP Demand

Model Type: Econometric

Model Specification:

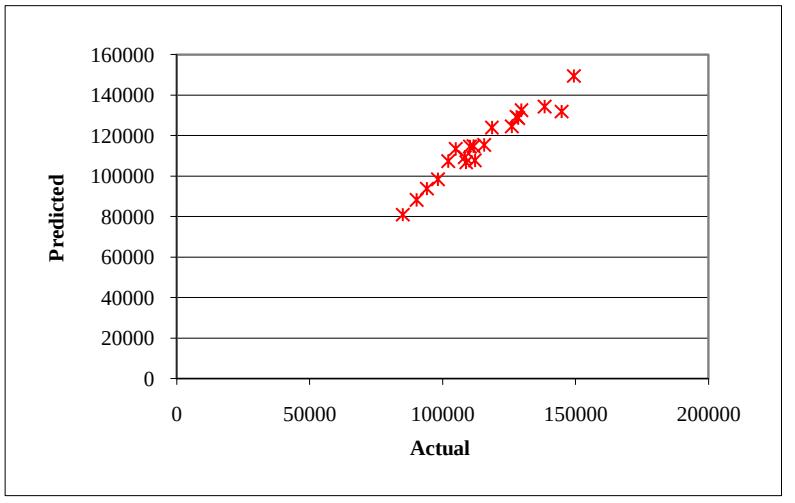
Variable	Description	Value	Standard Err.	t-Statistic	p-Value
INT	Intercept	7,399	8,306	0.9	38.62%
Jackson.Rural_MWH	Rural kWh Purchased	0.1896	0.0146	13.0	0.00%
Jackson.MINTMP	Minimum Temperature	(573.9484)	178.9880	(3.2)	0.55%
Binary_Variables.Year2009	Binary variable 2009	16,699.254	5,335.924	3.1	0.65%

Summary Model Statistics:

R-Squared	0.933
Adjusted R-Squared	0.920
Durbin-Watson Statistic	1.488
Mean Abs. % Err. (MAPE)	2.79%

Adjusted Observations	20
Deg. of Freedom for Error	16
F-Statistic	74
Prob (F-Statistic)	0%
Bayesian Information Criterian (BIC)	17.41
Model Sum of Squares	5,522,880,694
Sum of Squared Errors	399,018,034
Mean Squared Error	24,938,627.11
Std. Error of Regression	4,993.86
Mean Abs. Dev. (MAD)	3,205.62

Predicted vs. Actual



JACKSON PURCHASE ENERGY CORPORATION
2011 LOAD FORECAST
MODEL SPECIFICATIONS

RESIDENTIAL CONSUMERS - LONG-TERM FORECAST

Dependent Variable: Residential Consumers

Model Type: Econometric

Model Specification:

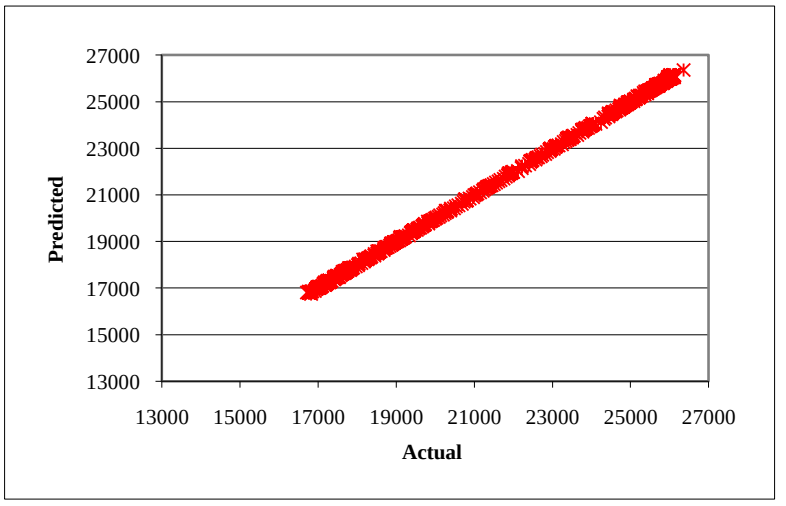
Variable	Description	Value	Standard Err.	t-Statistic	p-Value
INT	Intercept	381,300	4,680,085	0.1	93.51%
HH	Households	352.307	152.620	2.3	2.15%
AR	Autoregressive Term	1.000	0.001	1,451.7	0.00%

Summary Model Statistics:

R-Squared	0.9999
Adjusted R-Squared	0.9999
Durbin-Watson Statistic	1.7457
Mean Abs. % Err. (MAPE)	0.12%

Adjusted Observations	371
Deg. of Freedom for Error	368
F-Statistic	1,664,340
Prob (F-Statistic)	0%
Bayesian Information Criterian (BIC)	7.10
Model Sum of Squares	3,869,729,954
Sum of Squared Errors	427,815
Mean Squared Error	1,162.54
Std. Error of Regression	34.10
Mean Abs. Dev. (MAD)	26.20

Predicted vs. Actual



JACKSON PURCHASE ENERGY CORPORATION
2011 LOAD FORECAST
MODEL SPECIFICATIONS

RESIDENTIAL USE - LONG-TERM FORECAST

Dependent Variable: Residential Use

Model Type: Econometric

Model Specification:

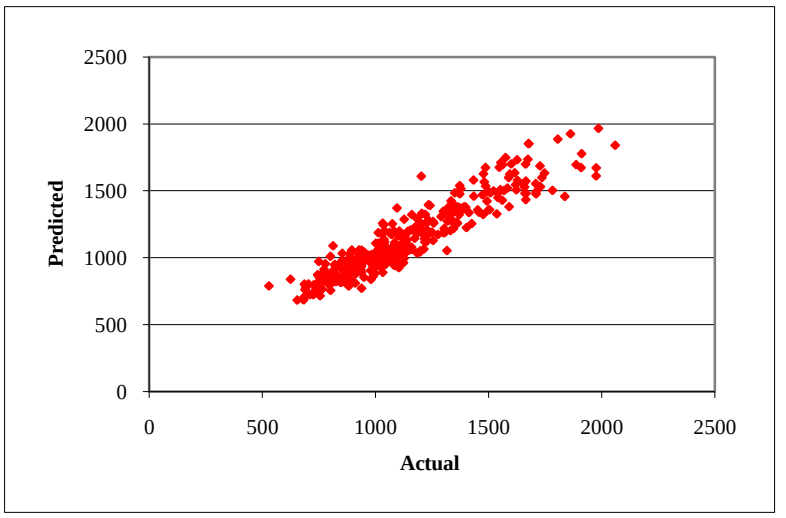
Variable	Description	Value	Standard Err.	t-Statistic	p-Value
CONST	Intercept	(927.17)	297	(3.1)	0.22%
SAEData.Base_Index	Base Index	1,502.184	301.573	5.0	0.00%
SAEData.SH_Index	Space Heating Index	36.586	1.691	21.6	0.00%
SAEData.AC_Index	Air Conditioning Index	51.220	7.366	7.0	0.00%
ResData.D02		(267.971)	41.357	(6.5)	0.00%
ResData.D05		215.218	51.715	4.2	0.01%
ResData.D06		364.405	83.980	4.3	0.00%
ResData.D07		449.389	101.270	4.4	0.00%
ResData.D08		393.465	98.173	4.0	0.01%
ResData.D09		163.447	61.125	2.7	0.83%

Summary Model Statistics:

R-Squared	0.853
Adjusted R-Squared	0.843
Durbin-Watson Statistic	2.169
Mean Abs. % Err. (MAPE)	8.05%

Adjusted Observations	156
Deg. of Freedom for Error	146
F-Statistic	94
Prob (F-Statistic)	0%
Bayesian Information Criterian (BIC)	10.00
Model Sum of Squares	14,426,543
Sum of Squared Errors	2,494,726
Mean Squared Error	17,087.17
Std. Error of Regression	130.72
Mean Abs. Dev. (MAD)	97.82

Predicted vs. Actual



JACKSON PURCHASE ENERGY CORPORATION
2011 LOAD FORECAST
MODEL SPECIFICATIONS

SMALL COMMERCIAL CONSUMERS - LONG-TERM FORECAST

Dependent Variable: Small Commercial Consumers

Model Type: Econometric

Model Specification:

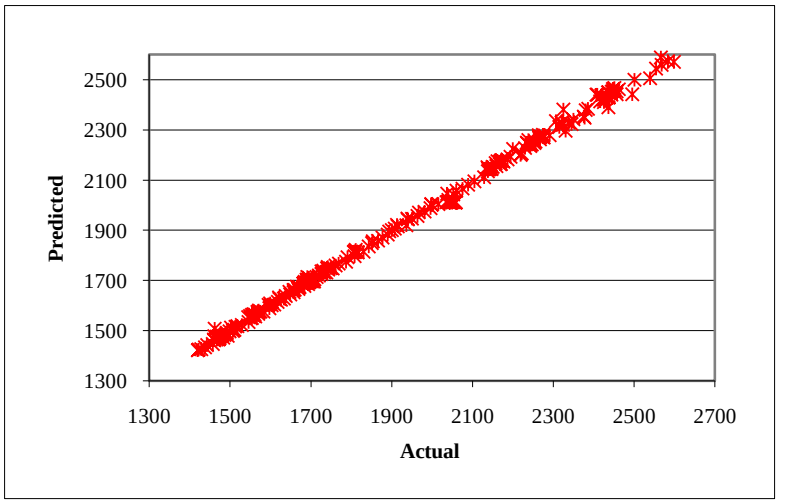
Variable	Description	Value	Standard Err.	t-Statistic	p-Value
CONST	Intercept	(1,261)	3,279	(0.4)	70.08%
CommData.Empl	Employment per Household	16.497	17.732	0.9	35.29%
AR(1)	Autoregressive Term	1.001667639	0.001933743	517.9941637	0.00%

Summary Model Statistics:

R-Squared	0.9993
Adjusted R-Squared	0.9993
Durbin-Watson Statistic	2.3007
Mean Abs. % Err. (MAPE)	0.43%

Adjusted Observations	311
Deg. of Freedom for Error	308
F-Statistic	227,866
Prob (F-Statistic)	0%
Bayesian Information Criterian (BIC)	5.30
Model Sum of Squares	87,432,716
Sum of Squared Errors	59,090
Mean Squared Error	191.85
Std. Error of Regression	13.85
Mean Abs. Dev. (MAD)	9.76

Predicted vs. Actual



JACKSON PURCHASE ENERGY CORPORATION

2011 LOAD FORECAST

MODEL SPECIFICATIONS

SMALL COMMERCIAL USE - LONG-TERM FORECAST

Dependent Variable: Small Commercial Use

Model Type: Econometric

Model Specification:

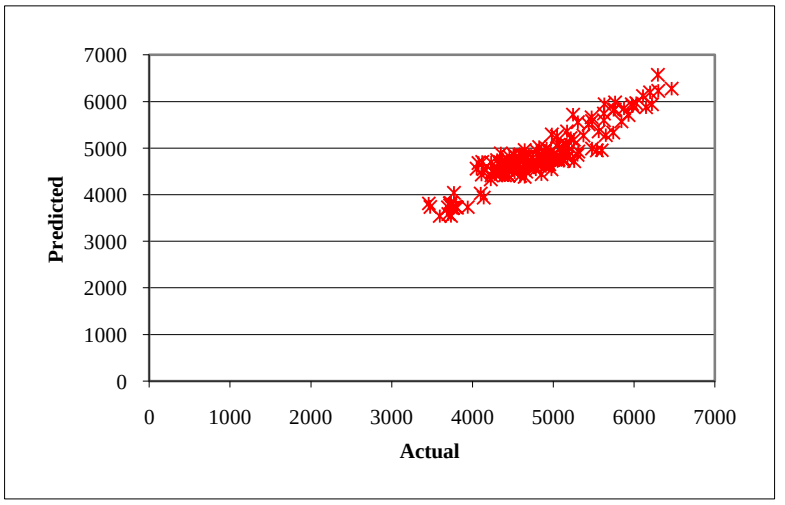
Variable	Description	Value	Standard Err.	t-Statistic	p-Value
CONST	Intercept	2,951	662	4.5	0.00%
Monthly.RetSalespEmp	Retail Sales per Employment	36.312	19.488	1.9	6.49%
CommData.HDD	Heating Degree Days	1	0	7.8	0.00%
CommData.CDD	Cooling Degree Days	4	0	18.7	0.00%

Summary Model Statistics:

R-Squared	0.787
Adjusted R-Squared	0.782
Durbin-Watson Statistic	2.141
Mean Abs. % Err. (MAPE)	4.40%

Adjusted Observations	120
Deg. of Freedom for Error	116
F-Statistic	143
Prob (F-Statistic)	0%
Bayesian Information Criterian (BIC)	11.31
Model Sum of Squares	3.08E+07
Sum of Squared Errors	8,323,214
Mean Squared Error	71,751.85
Std. Error of Regression	267.87
Mean Abs. Dev. (MAD)	214.05

Predicted vs. Actual



JACKSON PURCHASE ENERGY CORPORATION
2011 LOAD FORECAST
MODEL SPECIFICATIONS

RESIDENTIAL CONSUMERS - SHORT-TERM FORECAST

Dependent Variable: Residential Consumers

Model Type: Econometric

Model Specification:

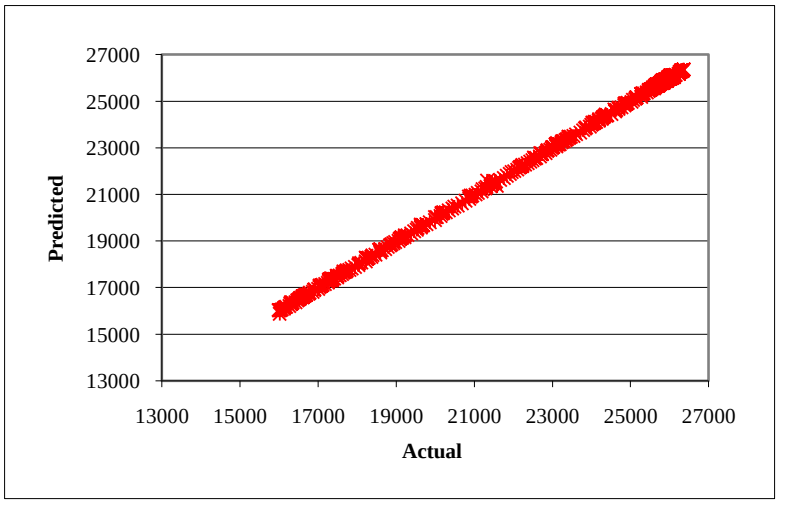
Variable	Description	Value	Standard Err.	t-Statistic	p-Value
INT	Intercept	1,310	599	2.2	3.28%
RCON_ST.LagDep(1)	Lag Term	0.950	0.023	41.1	0.00%

Summary Model Statistics:

R-Squared	0.9667
Adjusted R-Squared	0.9662
Durbin-Watson Statistic	2.5182
Mean Abs. % Err. (MAPE)	0.10%

Adjusted Observations	60
Deg. of Freedom for Error	58
F-Statistic	1,686
Prob (F-Statistic)	0%
Bayesian Information Criterian (BIC)	7.23
Model Sum of Squares	2,091,911
Sum of Squared Errors	71,967
Mean Squared Error	1,240.82
Std. Error of Regression	35.23
Mean Abs. Dev. (MAD)	25.19

Predicted vs. Actual



JACKSON PURCHASE ENERGY CORPORATION
2011 LOAD FORECAST
MODEL SPECIFICATIONS

RESIDENTIAL USE - SHORT-TERM FORECAST

Dependent Variable: Residential Use

Model Type: Econometric

Model Specification:

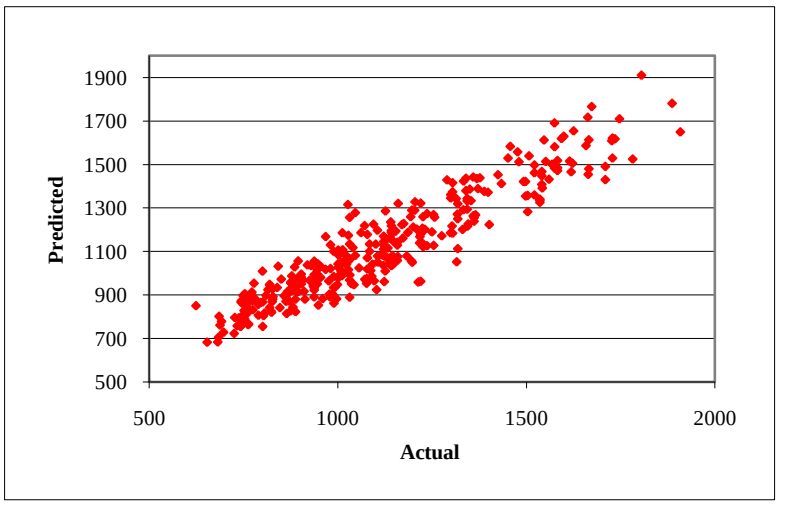
Variable	Description	Value	Standard Err.	t-Statistic	p-Value
CONST	Intercept	443.99	199	2.2	2.85%
ResData.Trend1	Trend Variable	0.39	0	0.8	43.20%
ResData.CDD	Heating Degree Days	1.08	0	20.5	0.00%
ResData.HDD	Cooling Degree Days	2.477	0.107	23.1	0.00%

Summary Model Statistics:

R-Squared	0.877
Adjusted R-Squared	0.872
Durbin-Watson Statistic	2.680
Mean Abs. % Err. (MAPE)	7.00%

Adjusted Observations	84
Deg. of Freedom for Error	80
F-Statistic	190
Prob (F-Statistic)	0%
Bayesian Information Criterian (BIC)	9.55
Model Sum of Squares	6,840,493
Sum of Squared Errors	958,793
Mean Squared Error	11,984.91
Std. Error of Regression	109.48
Mean Abs. Dev. (MAD)	86.38

Predicted vs. Actual



JACKSON PURCHASE ENERGY CORPORATION
2011 LOAD FORECAST
MODEL SPECIFICATIONS

SMALL COMMERCIAL CONSUMERS - SHORT-TERM FORECAST

Dependent Variable: Small Commercial Consumers

Model Type: Econometric

Model Specification:

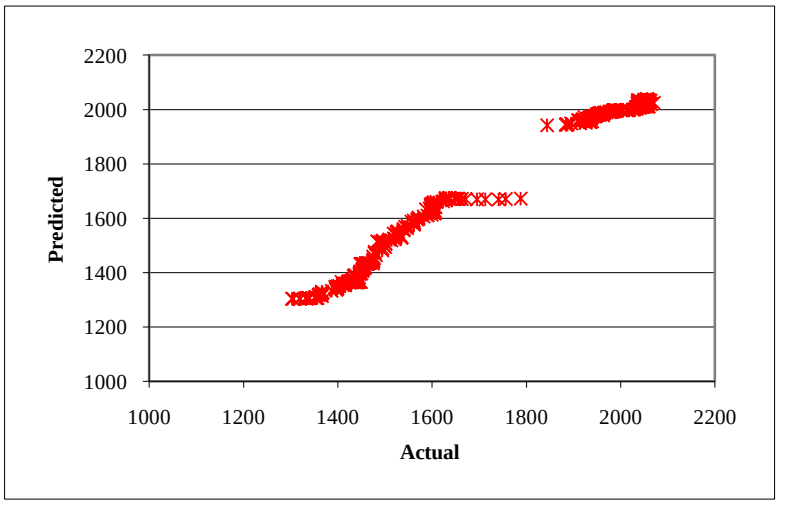
Variable	Description	Value	Standard Err.	t-Statistic	p-Value
CONST	Intercept	(1,024)	1,505	(0.7)	49.95%
Monthly.EmpHHIndex	Households	127.1126073	47.19990868	2.693068925	0.98%

Summary Model Statistics:

R-Squared	0.136
Adjusted R-Squared	0.117
Durbin-Watson Statistic	0.136
Mean Abs. % Err. (MAPE)	1.52%

Adjusted Observations	48
Deg. of Freedom for Error	46
F-Statistic	7
Prob (F-Statistic)	1%
Bayesian Information Criterian (BIC)	8.14
Model Sum of Squares	22,086
Sum of Squared Errors	140,080
Mean Squared Error	3,045.21
Std. Error of Regression	55.18
Mean Abs. Dev. (MAD)	45.79

Predicted vs. Actual



JACKSON PURCHASE ENERGY CORPORATION

2011 LOAD FORECAST

MODEL SPECIFICATIONS

SMALL COMMERCIAL USE - SHORT-TERM FORECAST

Dependent Variable: Small Commercial Use

Model Type: Econometric

Model Specification:

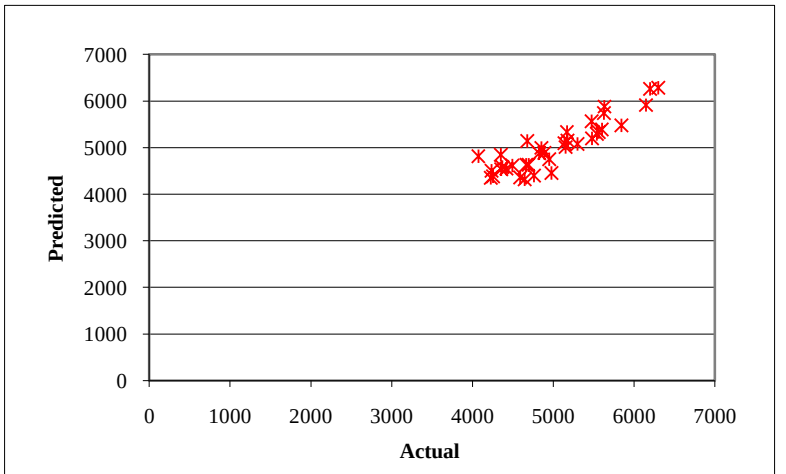
Variable	Description	Value	Standard Err.	t-Statistic	p-Value
CONST	Intercept	3,943	118	33.4	0.00%
CommData.HDD	Heating Degree Days	1	0	7.2	0.00%
CommData.CDD	Cooling Degree Days	4	0	11.6	0.00%

Summary Model Statistics:

R-Squared	0.806
Adjusted R-Squared	0.794
Durbin-Watson Statistic	2.170
Mean Abs. % Err. (MAPE)	4.31%

Adjusted Observations	36
Deg. of Freedom for Error	33
F-Statistic	68
Prob (F-Statistic)	0%
Bayesian Information Criterian (BIC)	11.43
Model Sum of Squares	1.02E+07
Sum of Squared Errors	2,469,089
Mean Squared Error	74,820.87
Std. Error of Regression	273.53
Mean Abs. Dev. (MAD)	208.44

Predicted vs. Actual



KENERGY CORP
2011 LOAD FORECAST
MODEL SPECIFICATIONS

RURAL SUMMER COINCIDENT PEAK DEMAND - LONG-TERM FORECAST

Dependent Variable: Rural Summer CP Demand

Model Type: Econometric

Model Specification:

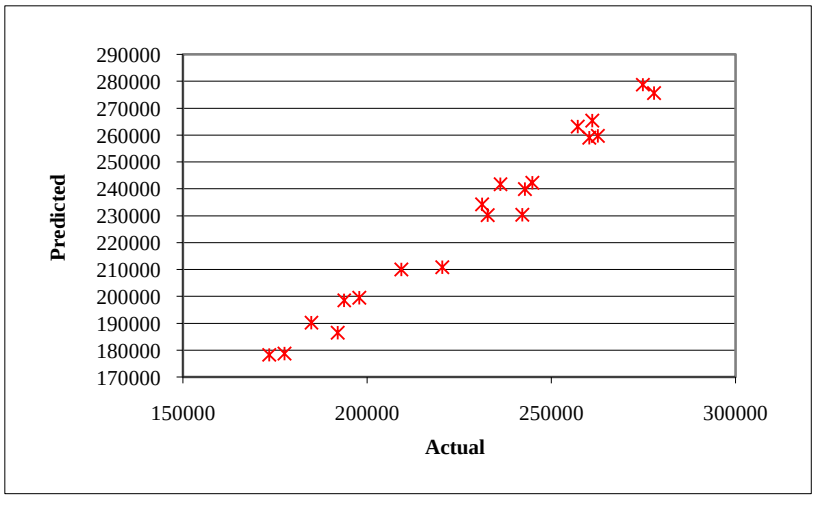
Variable	Description	Value	Standard Err.	t-Statistic	p-Value
INT	Intercept	(161,269)	45,123	(3.6)	0.23%
Rural_MWH	Rural MWH Purchased	0.2050	0.0077	26.5	0.00%
MAXTMP	Maximum Temperature	1,861.848	452.136	4.1	0.07%

Summary Model Statistics:

R-Squared	0.976627683
Adjusted R-Squared	0.973877999
Durbin-Watson Statistic	1.648079015
Mean Abs. % Err. (MAPE)	1.85%

Adjusted Observations	20
Deg. of Freedom for Error	17
F-Statistic	355
Prob (F-Statistic)	0%
Bayesian Information Criterian (BIC)	17.46
Model Sum of Squares	20,357,133,979
Sum of Squared Errors	487,179,909
Mean Squared Error	28,657,641.71
Std. Error of Regression	5,353.28
Mean Abs. Dev. (MAD)	4,135.80

Predicted vs. Actual



KENERGY CORP
2011 LOAD FORECAST
MODEL SPECIFICATIONS

RURAL WINTER COINCIDENT PEAK DEMAND - LONG-TERM FORECAST

Dependent Variable: Rural Winter CP Demand

Model Type: Econometric

Model Specification:

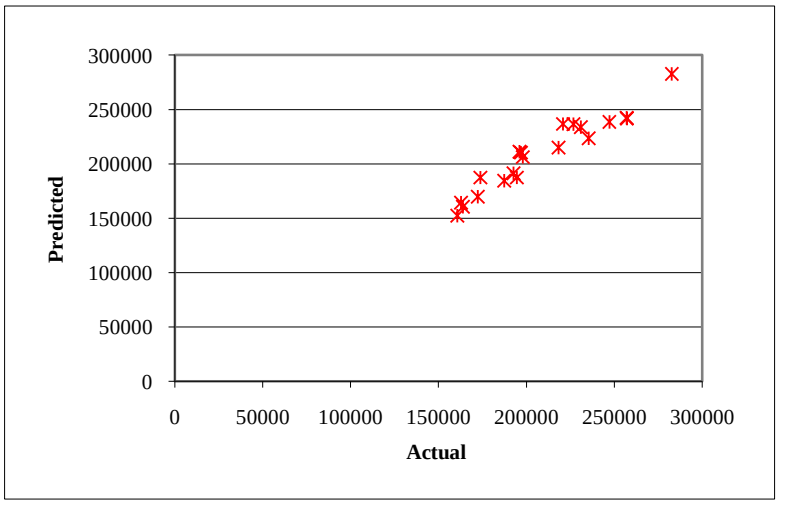
Variable	Description	Value	Standard Err.	t-Statistic	p-Value
INT	Intercept	12,680	16,500	0.8	45.34%
Rural_kWh	Rural kWh Purchased	0.1913	0.0162	11.8	0.00%
Min_Temp	Minimum Temperature	(816.9727)	383.3404	(2.1)	4.89%
Binary_Variable_2009	Binary variable 2009	41,720.245	11,466.806	3.6	0.22%

Summary Model Statistics:

R-Squared	0.921929569
Adjusted R-Squared	0.907291364
Durbin-Watson Statistic	1.887898253
Mean Abs. % Err. (MAPE)	3.84%

Adjusted Observations	20
Deg. of Freedom for Error	16
F-Statistic	63
Prob (F-Statistic)	0%
Bayesian Information Criterian (BIC)	18.94
Model Sum of Squares	21,845,256,457
Sum of Squared Errors	1,849,890,313
Mean Squared Error	115,618,144.54
Std. Error of Regression	10,752.59
Mean Abs. Dev. (MAD)	8,013.70

Predicted vs. Actual



KENERGY CORP
2011 LOAD FORECAST
MODEL SPECIFICATIONS

RESIDENTIAL CONSUMERS - LONG-TERM FORECAST

Dependent Variable: Residential Consumers

Model Type: Econometric

Model Specification:

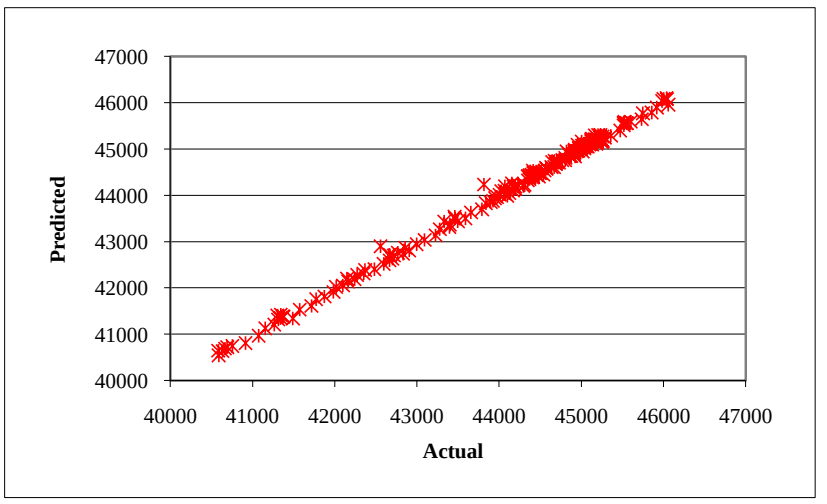
Variable	Description	Value	Standard Err.	t-Statistic	p-Value
INT	Intercept	(17,368,873)	41,646,873,083	(0.0)	99.97%
Monthly_Indicators.PreReclass	Pre Residential Class	446.241	318.131	1.4	16.25%
Monthly_Indicators.PostReclass	Post Residential Class	410.628	318.069	1.3	19.84%
AR	Autoregressive Term	1.000	0.004	258.8	0.00%

Summary Model Statistics:

R-Squared	0.997450297
Adjusted R-Squared	0.997406588
Durbin-Watson Statistic	1.827368177
Mean Abs. % Err. (MAPE)	0.11%

Adjusted Observations	179
Deg. of Freedom for Error	175
F-Statistic	22,820
Prob (F-Statistic)	0%
Bayesian Information Criterian (BIC)	8.63
Model Sum of Squares	348,899,890
Sum of Squared Errors	891,865
Mean Squared Error	5,096.37
Std. Error of Regression	71.39
Mean Abs. Dev. (MAD)	50.12

Predicted vs. Actual



KENERGY CORP
2011 LOAD FORECAST
MODEL SPECIFICATIONS

RESIDENTIAL USE - LONG-TERM FORECAST

Dependent Variable: Residential Use

Model Type: Econometric

Model Specification:

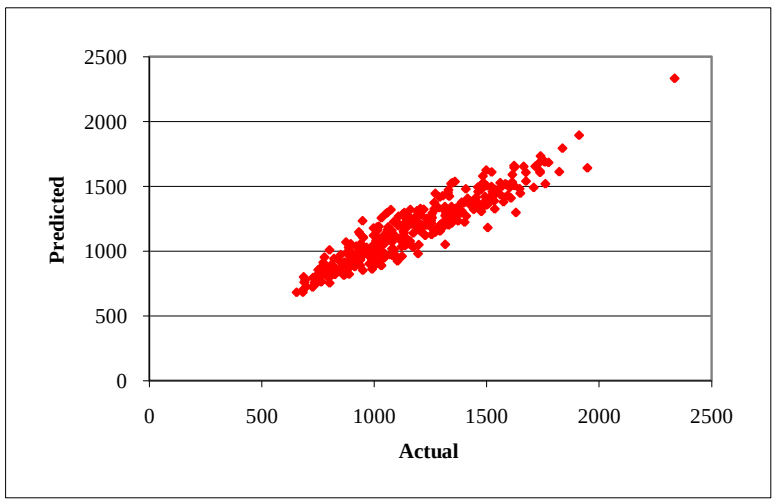
Variable	Description	Value	Standard Err.	t-Statistic	p-Value
CONST	Intercept	(681.28)	276	(2.5)	1.46%
SAEData.Base_Indx	Base Index	1,543.451	285.984	5.4	0.00%
SAEData.SH_Indx	Space Heating Index	22.760	1.311	17.4	0.00%
SAEData.AC_Indx	Air Conditioning Index	56.904	3.115	18.3	0.00%
Monthly_Indicators.Dum_Dec01	Dummy Variable	1,034.279	109.155	9.5	0.00%
AR(1)	Autoregressive term	0.349	0.078	4.5	0.00%

Summary Model Statistics:

R-Squared	0.812925333
Adjusted R-Squared	0.807518551
Durbin-Watson Statistic	1.763776822
Mean Abs. % Err. (MAPE)	7.19%

Adjusted Observations	179
Deg. of Freedom for Error	173
F-Statistic	150
Prob (F-Statistic)	0%
Bayesian Information Criterian (BIC)	9.63
Model Sum of Squares	9,967,474
Sum of Squared Errors	2,293,768
Mean Squared Error	13,258.77
Std. Error of Regression	115.15
Mean Abs. Dev. (MAD)	90.66

Predicted vs. Actual



KENERGY CORP
2011 LOAD FORECAST
MODEL SPECIFICATIONS

SMALL COMMERCIAL CONSUMERS - LONG-TERM FORECAST

Dependent Variable: Small Commercial Consumers

Model Type: Econometric

Model Specification:

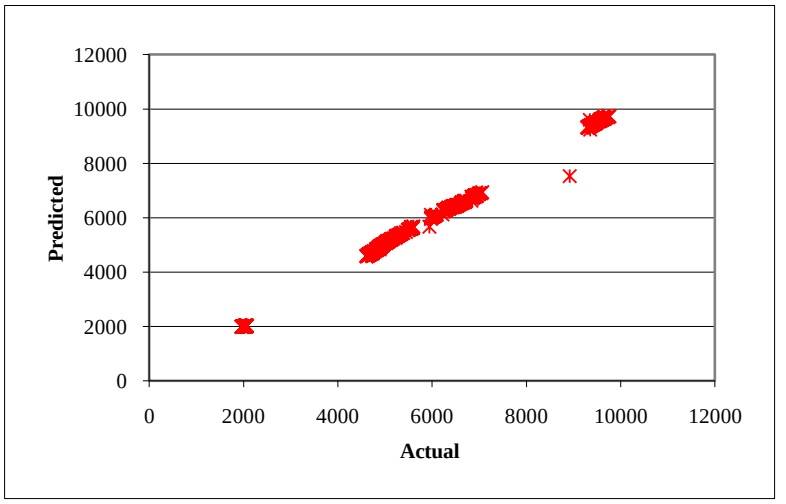
Variable	Description	Value	Standard Err.	t-Statistic	p-Value
CONST	Intercept	(1,810)	379	(4.8)	0.00%
Monthly.EmpHHIndex	Employment per Household	49	8	5.9	0.00%
Monthly.Reclass	Reclassification	578	71	8.2	0.00%
SCON_LT.LagDep(1)	Lag of Dependent Variable	0.827	0.022	38.1	0.00%
MA(1)		0.432673404	0.0618966	6.990261236	0.00%

Summary Model Statistics:

R-Squared	0.996636635
Adjusted R-Squared	0.996582167
Durbin-Watson Statistic	1.737942771
Mean Abs. % Err. (MAPE)	0.80%

Adjusted Observations	252
Deg. of Freedom for Error	247
F-Statistic	18,298
Prob (F-Statistic)	0%
Bayesian Information Criterian (BIC)	9.46
Model Sum of Squares	857,608,663
Sum of Squared Errors	2,894,185
Mean Squared Error	11,717.35
Std. Error of Regression	108.25
Mean Abs. Dev. (MAD)	51.29

Predicted vs. Actual



KENERGY CORP

2011 LOAD FORECAST

MODEL SPECIFICATIONS

SMALL COMMERCIAL USE - LONG-TERM FORECAST

Dependent Variable: Small Commercial Use

Model Type: Econometric

Model Specification:

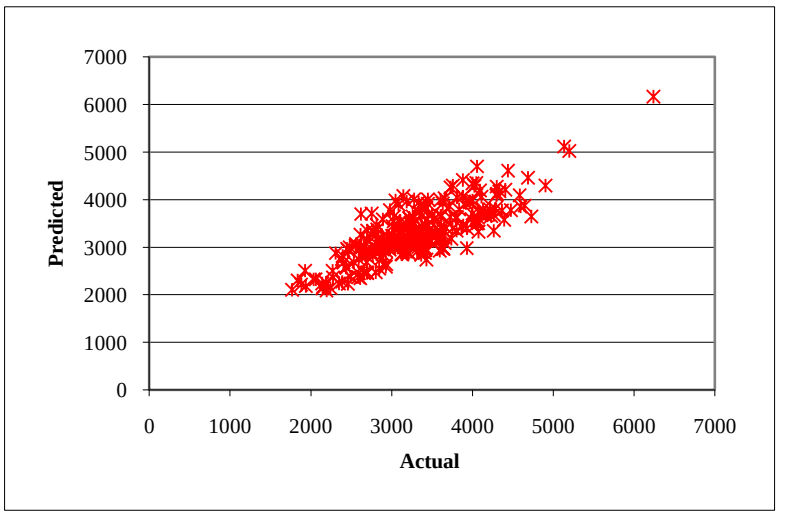
Variable	Description	Value	Standard Err.	t-Statistic	p-Value
CONST	Intercept	2,505	286	8.8	0.00%
ResData.Trend1	Residential Data Trend	0.950	0.934	1.0	31.05%
CommData.HDD	Heating Degree Days	1	0	6.4	0.00%
CommData.CDD	Cooling Degree Days	3	0	10.9	0.00%
CommData.BAD		(5,164)	365	(14.2)	0.00%
Monthly.Reclass	Reclassification data	(881)	152	(5.8)	0.00%
Monthly.Ind_Dec00		1,977	401	4.9	0.00%
Monthly.Ind_Jan01		1,131	395	2.9	0.46%
Monthly.Ind_Jul01		856	365	2.3	2.00%
AR(1)	Autoregressive Term	0	0	6.5	0.00%

Summary Model Statistics:

R-Squared	0.721508279
Adjusted R-Squared	0.711108173
Durbin-Watson Statistic	1.67196717
Mean Abs. % Err. (MAPE)	9.70%

Adjusted Observations	251
Deg. of Freedom for Error	241
F-Statistic	69
Prob (F-Statistic)	0%
Bayesian Information Criterian (BIC)	12.15
Model Sum of Squares	9.85E+07
Sum of Squared Errors	38,017,171
Mean Squared Error	157,747.60
Std. Error of Regression	397.17
Mean Abs. Dev. (MAD)	313.63

Predicted vs. Actual



KENERGY CORP
2011 LOAD FORECAST
MODEL SPECIFICATIONS

RESIDENTIAL CONSUMERS - SHORT-TERM FORECAST

Dependent Variable: Residential Consumers

Model Type: Econometric

Model Specification:

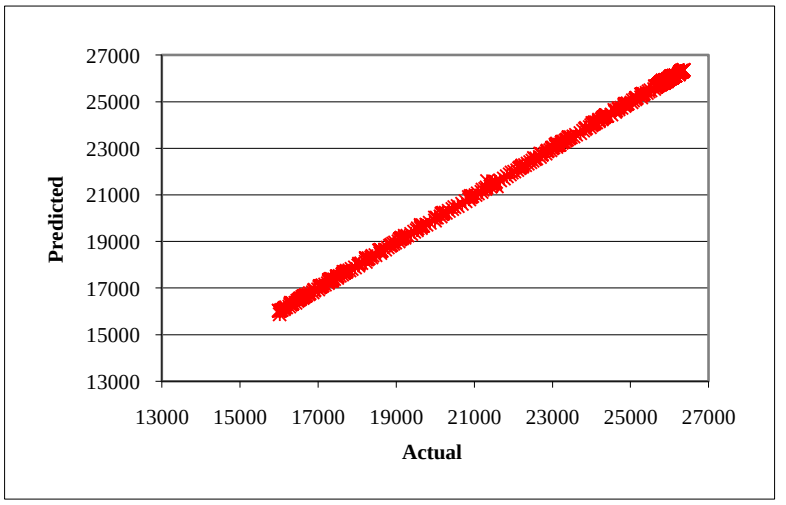
Variable	Description	Value	Standard Err.	t-Statistic	p-Value
INT	Intercept	41,729	1,745	23.9	0.00%
ResData.Trend1		8	4	2.0	5.76%
AR(1)	Lag Term	0.860	0.071	12.1	0.00%

Summary Model Statistics:

R-Squared	0.92927634
Adjusted R-Squared	0.926061628
Durbin-Watson Statistic	1.685575726
Mean Abs. % Err. (MAPE)	0.08%

Adjusted Observations	47
Deg. of Freedom for Error	44
F-Statistic	289
Prob (F-Statistic)	0%
Bayesian Information Criterian (BIC)	7.94
Model Sum of Squares	1,353,299
Sum of Squared Errors	102,994
Mean Squared Error	2,340.78
Std. Error of Regression	48.38
Mean Abs. Dev. (MAD)	35.52

Predicted vs. Actual



KENERGY CORP
2011 LOAD FORECAST
MODEL SPECIFICATIONS

RESIDENTIAL USE - SHORT-TERM FORECAST

Dependent Variable: Residential Use

Model Type: Econometric

Model Specification:

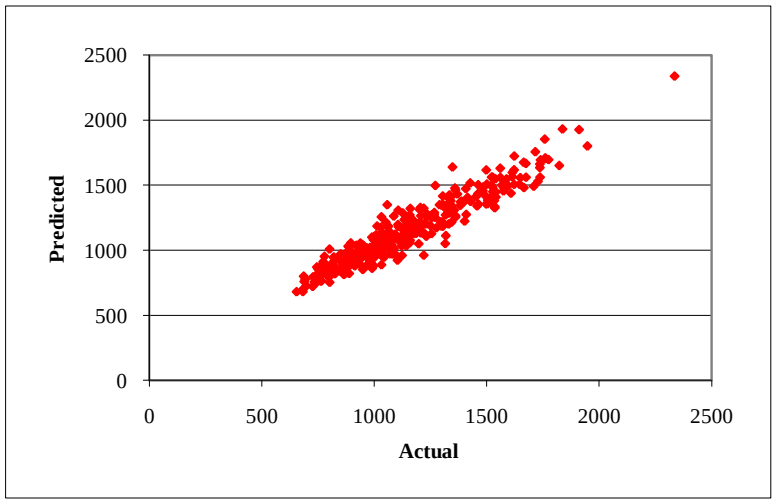
Variable	Description	Value	Standard Err.	t-Statistic	p-Value
CONST	Intercept	221.54	80	2.8	0.64%
ResData.Trend1	Residential Data	1.31	0	6.4	0.00%
ResData.CDD	Cooling Degree Days	1.73	0	20.5	0.00%
ResData.HDD	Heating Degree Days	0.766	0.039	19.8	0.00%
RUSE_ST.Expr1		0.503	0.084	6.0	0.00%
RUSE_ST.Expr2		0.145	0.039	3.7	0.03%
Monthly_Indicators.Dum_Dec01		1,036.100	90.415	11.5	0.00%

Summary Model Statistics:

R-Squared	0.897179845
Adjusted R-Squared	0.892244477
Durbin-Watson Statistic	1.079923353
Mean Abs. % Err. (MAPE)	5.12%

Adjusted Observations	132
Deg. of Freedom for Error	125
F-Statistic	182
Prob (F-Statistic)	0%
Bayesian Information Criterian (BIC)	9.17
Model Sum of Squares	8,566,382
Sum of Squared Errors	981,739
Mean Squared Error	7,853.91
Std. Error of Regression	88.62
Mean Abs. Dev. (MAD)	66.28

Predicted vs. Actual



KENERGY CORP
2011 LOAD FORECAST
MODEL SPECIFICATIONS

SMALL COMMERCIAL CONSUMERS - SHORT-TERM FORECAST

Dependent Variable: Small Commercial Consumers

Model Type: Econometric

Model Specification:

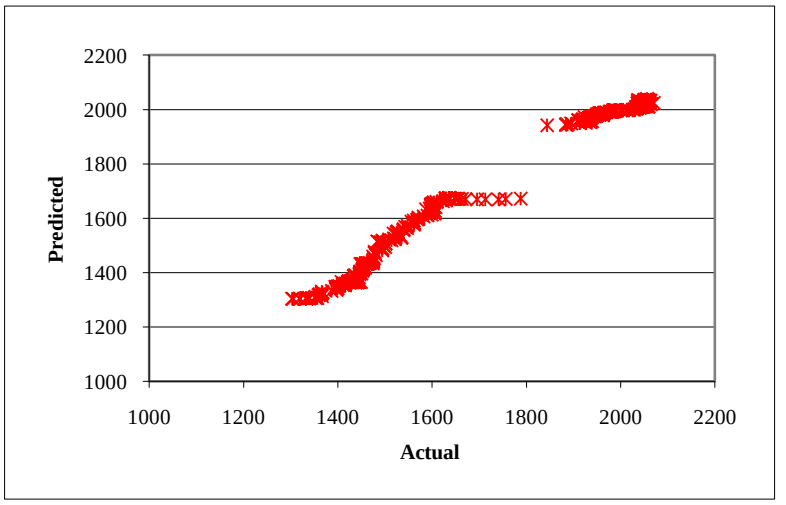
Variable	Description	Value	Standard Err.	t-Statistic	p-Value
CONST	Intercept	170	280	0.6	54.55%
SCON_ST.LagDep(1)		0.982955419	0.029205757	33.65622132	0.00%

Summary Model Statistics:

R-Squared	0.96097532
Adjusted R-Squared	0.960126957
Durbin-Watson Statistic	1.86197221
Mean Abs. % Err. (MAPE)	0.13%

Adjusted Observations	48
Deg. of Freedom for Error	46
F-Statistic	1,133
Prob (F-Statistic)	0%
Bayesian Information Criterian (BIC)	5.74
Model Sum of Squares	313,938
Sum of Squared Errors	12,749
Mean Squared Error	277.15
Std. Error of Regression	16.65
Mean Abs. Dev. (MAD)	12.73

Predicted vs. Actual



KENERGY CORP

2011 LOAD FORECAST

MODEL SPECIFICATIONS

SMALL COMMERCIAL USE - SHORT-TERM FORECAST

Dependent Variable: Small Commercial Use

Model Type: Econometric

Model Specification:

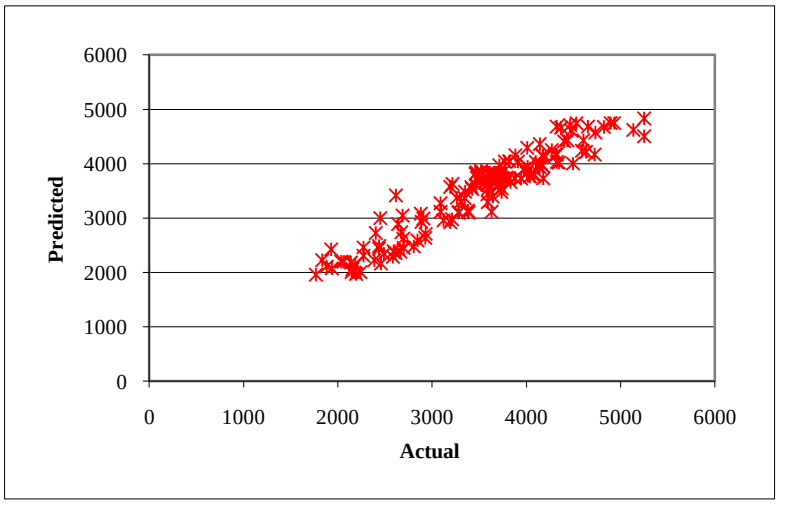
Variable	Description	Value	Standard Err.	t-Statistic	p-Value
CONST	Intercept	1,857	160	11.6	0.00%
CommData.HDD	Heating Degree Days	1	0	4.9	0.00%
CommData.CDD	Cooling Degree Days	4	0	8.4	0.00%
AR(1)	Autoregressive term	1	0	3.1	0.28%

Summary Model Statistics:

R-Squared	0.745123752
Adjusted R-Squared	0.731221411
Durbin-Watson Statistic	1.425817324
Mean Abs. % Err. (MAPE)	8.23%

Adjusted Observations	59
Deg. of Freedom for Error	55
F-Statistic	54
Prob (F-Statistic)	0%
Bayesian Information Criterian (BIC)	11.42
Model Sum of Squares	1.19E+07
Sum of Squared Errors	4,071,106
Mean Squared Error	74,020.12
Std. Error of Regression	272.07
Mean Abs. Dev. (MAD)	218.29

Predicted vs. Actual



Appendix E
Weather Normalization

BIG RIVERS ELECTRIC CORPORATION

2011 LOAD FORECAST

NATIVE REQUIREMENTS - Actual vs. Weather Normalized

		Native System Energy Requirements (MWh)		Peak Demand (MW)	
Year	Month	Actual	Weather Normalized	Actual	Weather Normalized
2006	1	277,659	311,974	501	557
2006	2	268,204	261,823	527	506
2006	3	259,604	260,562	482	496
2006	4	221,233	226,542	416	420
2006	5	242,349	246,155	503	490
2006	6	277,493	285,057	593	599
2006	7	313,299	312,823	631	635
2006	8	322,137	314,520	629	632
2006	9	238,914	264,404	478	503
2006	10	248,768	238,733	472	463
2006	11	255,857	257,785	477	481
2006	12	288,620	306,714	593	598
2007	1	298,892	310,578	585	595
2007	2	298,575	274,279	610	590
2007	3	250,441	269,031	466	477
2007	4	239,323	228,922	442	435
2007	5	256,757	245,925	505	508
2007	6	284,246	281,266	558	563
2007	7	305,658	319,737	591	598
2007	8	347,855	297,365	660	623
2007	9	270,809	250,019	573	558
2007	10	250,135	237,004	526	496
2007	11	256,066	254,821	494	494
2007	12	294,176	303,115	520	561
2008	1	328,880	324,171	619	621
2008	2	293,019	283,719	555	570
2008	3	272,584	271,464	535	541
2008	4	229,843	228,191	443	444
2008	5	235,264	248,585	477	484
2008	6	287,388	277,581	562	567
2008	7	309,715	312,053	616	620
2008	8	300,016	312,168	595	604
2008	9	257,096	253,331	566	558
2008	10	242,631	239,296	443	438
2008	11	264,279	254,606	519	505
2008	12	319,606	317,054	612	602
2009	1	306,021	296,395	673	647
2009	2	242,396	248,380	547	533
2009	3	250,312	263,151	540	528
2009	4	223,252	214,143	439	442
2009	5	232,513	237,521	444	450
2009	6	287,834	270,948	611	597
2009	7	277,537	314,215	559	579
2009	8	295,999	317,322	606	622
2009	9	279,124	280,081	541	572
2009	10	261,287	258,631	458	550
2009	11	257,656	270,786	468	483
2009	12	317,422	311,343	583	615
2010	1	347,251	325,973	628	606
2010	2	298,566	275,070	588	588
2010	3	260,426	265,640	513	518
2010	4	221,439	230,270	415	425
2010	5	254,496	243,540	527	518
2010	6	313,945	284,101	627	625
2010	7	332,973	311,489	631	629
2010	8	337,930	303,174	663	633
2010	9	266,002	255,588	570	551
2010	10	229,475	235,963	435	415
2010	11	263,668	265,341	485	488
2010	12	347,894	324,612	652	631