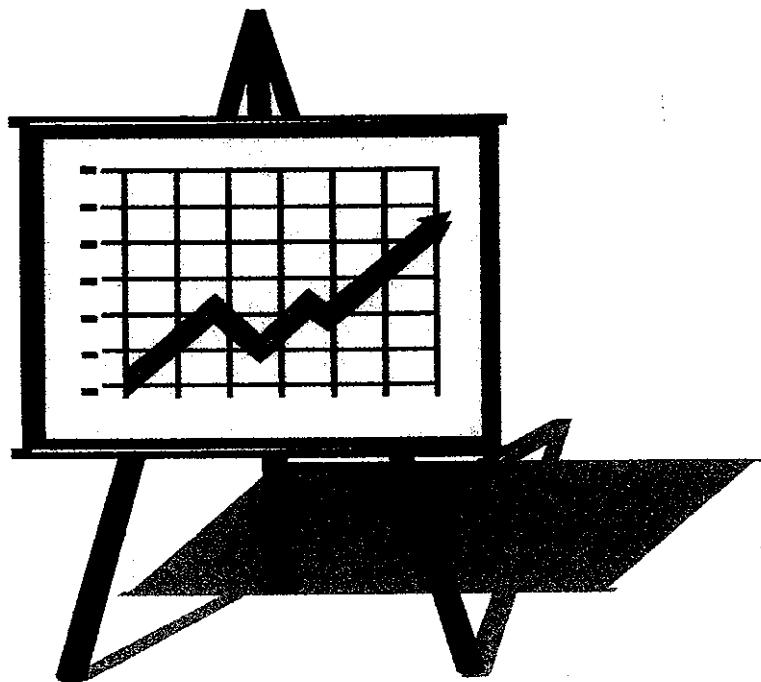

Office of Utilities Regulation

Jamaica Electricity Demand Forecast

2004 - 2024



OUR

OFFICE OF UTILITIES REGULATION

October 2004

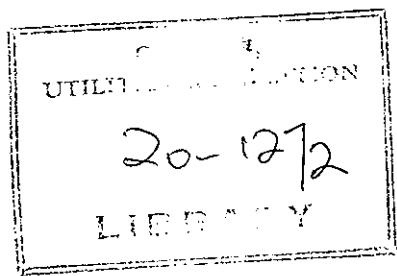


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1 EXECUTIVE SUMMARY

A graph showing the historical and forecasted peak demands is shown in Exhibit 1.1. Exhibit 1.2 is a table giving the energy and peak demand values. As shown, the expected average growth rate over the next twenty years for energy and system peak are 4.63% and 4.57% respectively.

The energy use projection was prepared using regression models developed based on historical relationships between the electricity use for each rate class and various economic variables. The latest available load research data was used to determine the load and coincidence factors which were then used to derive expected peak demands.

The forecast is based on the following assumptions for the population and macroeconomic variables:

- GDP Growth of 2.5% per annum;
- Mean population growth rate of 0.6%;
- Average household size decreasing gradually from 3.3 to 3.0 by 2017;
- Average inflation decreasing smoothly over time to just over 5% by 2017;
- Real per capita disposable income increasing by 11% per annum;
- Average net interest rates decreasing from 19.32% to 16.6% by 2017.

The regression models were built using Eviews 5, which is a specialized modeling software, and Microsoft Excel. The models were tested against historical data to check for accuracy.

More details on the development of the demand forecast are presented in subsequent chapters of this report.

Exhibit 1.1 Peak Demand

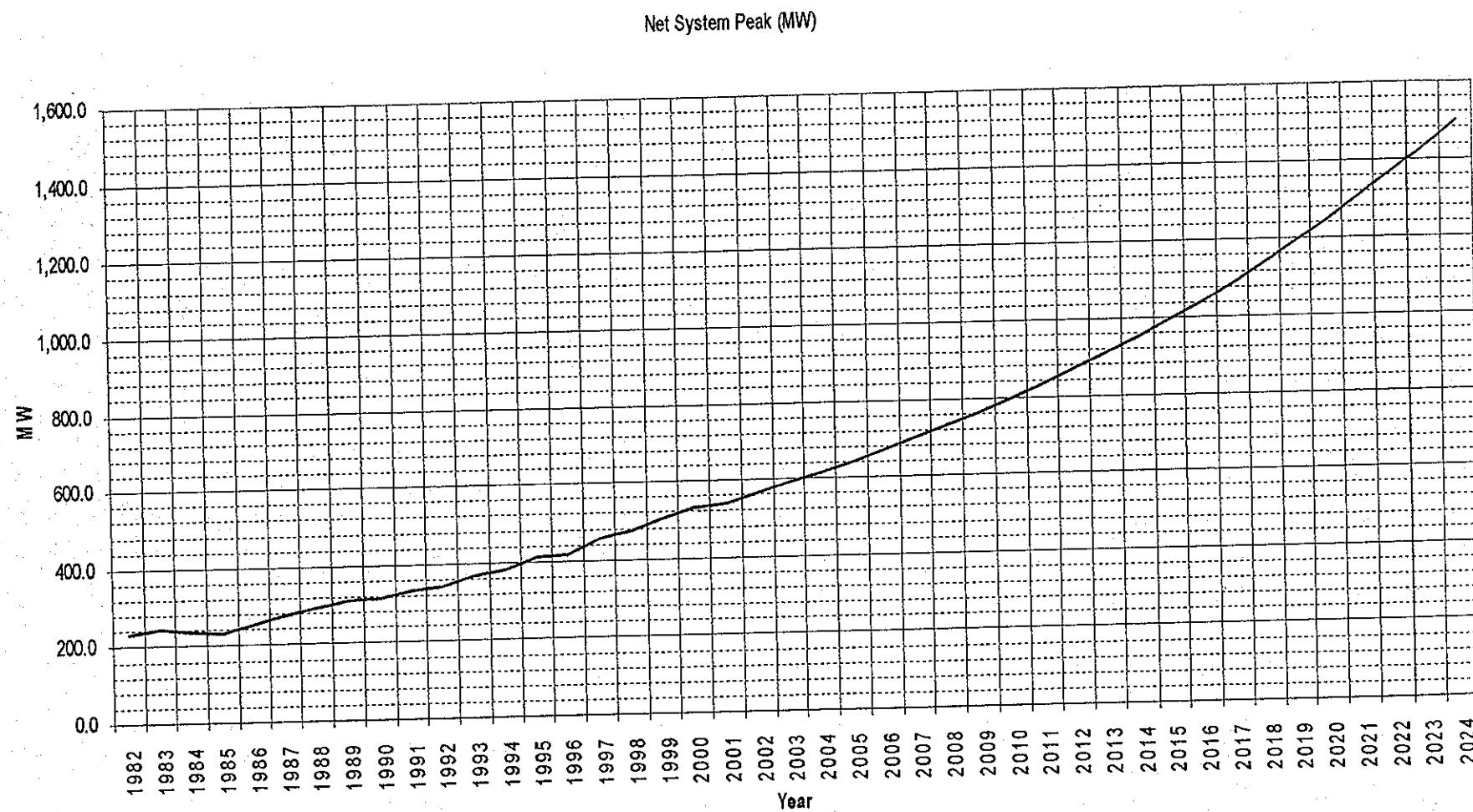


Exhibit 1.2 Energy and Peak Demand Projections

Year	Sales after Extraordinary Sales (MWh)	Sales After Reduction in Unbilled Supply (MWh)	Total Energy Delivered (Sales & Unbilled) (MWh)	Total Losses (MWh)	Losses as % of Net Generation	Net Generation (MWh)	Net Generation Growth Rate	Load Factor	Net System Peak (MW)	Peak Demand Growth Rate
1991	1,670,336	1,670,336	1,869,074	382,475	18.63%	2,052,811	2.22%	70.29%	333.4	5.04%
1992	1,692,485	1,692,485	1,966,568	460,256	21.38%	2,152,741	4.87%	71.57%	343.4	3.00%
1993	1,793,037	1,793,037	2,035,896	440,093	19.71%	2,233,130	3.73%	69.11%	368.9	7.43%
1994	1,869,114	1,869,114	2,118,713	455,202	19.58%	2,324,316	4.08%	69.82%	380.0	3.02%
1995	1,998,031	1,998,031	2,197,303	419,055	17.34%	2,417,086	3.99%	67.06%	411.5	8.27%
1996	2,146,848	2,146,848	2,320,680	409,985	16.03%	2,556,833	5.78%	69.77%	418.4	1.67%
1997	2,281,130	2,281,130	2,517,464	487,258	17.60%	2,768,388	8.27%	69.63%	453.9	8.49%
1998	2,446,189	2,446,189	2,669,455	492,347	16.75%	2,938,536	6.15%	70.72%	474.3	4.51%
1999	2,576,155	2,576,155	2,805,236	512,458	16.59%	3,088,613	5.11%	69.78%	505.3	6.52%
2000	2,738,995	2,738,995	2,998,896	561,190	17.09%	3,300,185	6.85%	71.04%	530.3	4.95%
2001	2,793,375	2,793,375	3,053,470	567,366	16.88%	3,360,741	1.83%	71.29%	538.2	1.48%
2002	2,896,547	2,896,547	3,206,285	628,358	17.83%	3,524,905	4.88%	71.36%	563.9	4.78%
2003	2,998,344	2,998,344	3,366,187	697,661	18.88%	3,696,005	4.85%	71.51%	590.0	4.64%
2004	3,135,817	3,154,447	3,470,351	725,370	18.85%	3,848,273	4.12%	71.54%	614.0	4.07%
2005	3,284,465	3,305,798	3,631,367	751,781	18.69%	4,022,868	4.54%	71.55%	641.9	4.53%
2006	3,439,462	3,463,688	3,799,009	778,988	18.53%	4,204,489	4.51%	71.56%	670.8	4.50%
2007	3,601,377	3,628,699	3,973,873	807,082	18.37%	4,393,774	4.50%	71.57%	700.8	4.48%
2008	3,770,790	3,801,424	4,136,558	836,153	18.21%	4,591,371	4.50%	71.59%	732.1	4.47%
2009	3,948,297	3,982,475	4,347,678	866,289	18.06%	4,797,936	4.50%	71.62%	764.7	4.46%
2010	4,134,516	4,172,483	4,547,864	897,576	17.90%	5,014,144	4.51%	71.65%	798.9	4.46%
2011	4,330,087	4,372,109	4,757,770	930,103	17.75%	5,240,692	4.52%	71.69%	834.5	4.47%
2012	4,535,685	4,582,044	4,978,075	963,960	17.60%	5,478,307	4.53%	71.72%	871.9	4.48%
2013	4,752,016	4,803,016	5,209,494	999,239	17.45%	5,727,745	4.55%	71.77%	911.1	4.49%
2014	4,979,829	5,035,794	5,452,773	1,036,035	17.30%	5,989,801	4.58%	71.81%	952.1	4.51%
2015	5,219,917	5,281,195	5,708,703	1,074,446	17.15%	6,265,315	4.60%	71.86%	995.3	4.53%
2016	5,473,121	5,540,086	5,978,117	1,114,575	17.00%	6,555,169	4.63%	71.92%	1040.5	4.55%
2017	5,740,337	5,813,391	6,261,900	1,156,529	16.86%	6,860,300	4.65%	71.97%	1088.1	4.57%
2018	6,022,521	6,102,094	6,560,987	1,200,422	16.72%	7,181,699	4.68%	72.03%	1138.2	4.60%
2019	6,320,695	6,407,249	6,876,374	1,246,371	16.57%	7,520,418	4.72%	72.09%	1190.8	4.63%
2020	6,635,947	6,729,981	7,209,119	1,294,502	16.43%	7,877,576	4.75%	72.16%	1246.3	4.66%
2021	6,969,447	7,071,494	7,560,347	1,344,947	16.29%	8,254,361	4.78%	72.22%	1304.7	4.69%
2022	7,322,443	7,433,078	7,931,256	1,397,844	16.16%	8,652,037	4.82%	72.29%	1366.2	4.72%
2023	7,696,275	7,816,116	8,323,120	1,453,342	16.02%	9,071,949	4.85%	72.37%	1431.1	4.75%
2024	8,092,376	8,222,089	8,737,297	1,511,596	15.89%	9,515,528	4.89%	72.44%	1499.4	4.78%
1982-2003	4.99%	4.99%	4.95%	4.82%	-0.13%	4.96%		0.38%	4.55%	
2004-2024	4.85%	4.91%	4.72%	3.74%	-0.85%	4.63%		0.06%	4.57%	

2 INTRODUCTION

2.1 GENERAL

Sound planning is critical or the efficient and effective development and operation of any business. For relatively small isolated electricity generation systems such as the one we have in Jamaica, adequate long term planning is even more important for the following reasons:

- Generating equipment require relatively long lead times (from decision to commissioning) depending on the nature of the technology and the procurement basis.
- The electricity generation industry is a high cost industry with both capital and operating costs being significantly higher than usual. This means:
 - Long lead times will be required to arrange financing for new projects; and
 - Small percentage differences in cost translate into large dollar values.
- Significant adverse economic and social effects usual result from poor planning.

Since generation planning is demand driven, it is essential to establish reasonably accurate demand projections as first step. Failure to do this will lead to under or over capacity resulting in excessive power outages or high tariffs respectively.

2.2 INFORMATION REQUIRED IN A DEMAND FORECAST

For generation planning purposes, a basic demand forecast must provide the following for the medium to long term:

- Total energy demand on the system for each year;
- Peak generating capacity required in each year;
- Expected load duration curves for each year.

Where seasonal fluctuations in demand are significant, this information should be broken down to a quarterly or monthly basis, depending on the extent of the variations.

2.3 IMPORTANCE OF A GOOD LOAD FORECAST

The dangers of grossly under- or over-estimating future energy and capacity requirements are well known in the power industry. Underestimation of demand can lead to under investment in additional capacity resulting in unreliable supply with the associated adverse economic and social effects. On the other hand, overestimation of demand can result in excessive investments in new capacity which, among other things, will result in higher tariffs being required if the utility is to stay viable.

2.4 REASONS WHY THE JPS FORECAST WAS NOT ACCEPTED

2.4.1 GENERAL

The demand forecast used by JPS in the preparation of their base case least cost plan was not justified based on the information provided by them. There were many inconsistencies regarding the energy and peak demand forecasts and supporting information presented and used. These are discussed below.

2.4.2 PEAK DEMAND AND ENERGY FORECAST

JPS indicated in the LCEP report that they were "presenting" a forecast of 3.3% but in fact used a forecast of 3.5% for growth in energy and peak demand. This was against the background that, as noted by JPS:

- Over the last decade, energy and peak output have been growing at approximately 5.0% per annum except for 2001 when reliability and other problems affected supply.
- JPS' most recent demand forecast report (of 2003) suggested continued growth in demand at 4.5% per annum.

The reasons given by JPS for using 3.5% were:

- Less than expected economic growth; and
- Dampening in demand due to success in loss reduction.

Based on the 2003 report, the JPS Low Demand forecast of 3.3% was based on 0% GDP growth, whereas the base forecast of 4.5% growth in demand assumed GDP growth of 3.0%. GDP has been growing at over 2.5% and economic projections are for this trend to continue. This would make the argument for a forecast closer to the base figure of 4.5% rather than to the low value of 3.3%.

The second reason given by JPS that losses are being reduced is also questionable as the latest reports indicate the opposite trend. Energy losses for the years 2001, 2002 and 2003 were reported to be 16.88%, 17.83% and 18.88% respectively. This indicates fairly significant increases in losses over a three year period.

2.4.3 SYSTEM LOAD FACTOR

JPS assumed a step change in system load factor going forward. The argument being made is that a structural change in the demand pattern has occurred. In the JPS report, the load factor for 2004 to 2012 based on the energy and peak demands presented was 73.85%.

It is possible that the structure of the demand is changing and this could affect the load factor. However, the load factor would also appear to be increasing if load shedding occurs during system peak demand hours.

2.4.4 DEMAND FIGURES USED IN WASP SIMULATIONS

Based on the WASP printout included in the JPS report, the actual load factor used was 73.97%. This is inconsistent with the implied figure of 73.85% based on the peak and energy forecast figures given on page 4 of the report. There is therefore an inconsistency between the forecast given in the document and that used in the WASP simulations.

There are other questions relating to the load factor used by JPS. Load factors in the report were as follows:

Period	Load Factor Reported/ Used by JPS
2001 to 2002	71.29%
2003 to 2017	73.97%

No explanation was given for this sudden change in load factor and expected constant value from 2003 to 2017.

The high generation load factor in 2003 may have been due to the fact that JPS was shedding load during peak demand periods. JPS has indeed confirmed that some load shedding had occurred and that a peak in excess of the reported net value of 571.3MW may have occurred.

The growth rates in minimum demand reported in the WASP output in the JPS report also warrant some explanation. The minimum, peak demand and energy growth rates in the JPS report were as follows:

Period	Growth in Minimum Load Reported/Used by JPS	Growth in Peak Load Reported/Used by JPS	Growth in Energy Requirement Reported/Used by JPS
2002	4.8%	4.8%	4.8%
2003	14.0%	1.3%	5.1%
2004-2017	3.5%	3.5%	3.5%

No data was obtained to support the reported sudden jump in minimum load in 2003 and the expected fall back to a constant growth rate of 3.5% for the subsequent years. Further, it appears unusual that while the minimum load was growing at 14% in 2003, the

peak load was growing at a mere 1.3% even though both reportedly grew by the same rate of 4.8% in 2002.

2.4.5 ENERGY VALUES USED IN WASP SIMULATIONS

The energy figures forecasted by JPS differed appreciably from those actually used in the WASP simulations. The comparisons are shown below.

Year	Energy Forecast (GWh)	Energy Used in Simulation (GWh)	Difference (GWh)
2004	3825.4	3831.3	5.9
2005	3959.2	3965.5	6.3
2006	4097.8	4104.1	6.3
2007	4241.2	4248.0	6.8
2008	4389.7	4397.0	7.3
2009	4543.3	4550.6	7.3
2010	4702.3	4710.0	7.7
2011	4866.9	4874.6	7.7
2012	5037.3	5045.6	8.3

The differences are not large enough to significantly affect the expansion plan but may indicate a difficulty in simulating the demand curve. If such a difficulty exists, it could lead to the demand forecast being oversimplified in order to facilitate easy simulations in the WASP. This could potentially compromise the integrity of the demand forecasting exercise¹.

¹ A spreadsheet model prepared for the review can be made available to assist JPS with load duration curve simulations in WASP.

3 METHODOLOGY

3.1 GENERAL APPROACH USED

The general methodology used in the preparation of the demand forecast is summarized in Exhibit 3.1 and the structure of the spreadsheet model developed specifically to perform the requisite computations is shown in Exhibit 3.2.

As shown, the four broad sets of activities involved in the forecast were as follows:

- Compile relevant historical data on electricity demand by rate category, the economy and population;
- Develop demand forecasting model by applying regression analyses to historical data compiled;
- Prepare projections for economic parameters which would be used as the basis for projecting electricity demand;
- Prepare energy and peak demand forecasts.

3.2 COMPILATION OF HISTORICAL DATA

The types of data typically required in electricity demand forecast was listed and discussed with OUR personnel. The data required included information on historical electricity consumption by rate category as well as economic and population parameters that usually correlate with electricity demand. More details on the data used are given in section 4.

Agreement was arrived at with OUR personnel as to how best to obtain the required data. The information was then compiled from the following major sources:

- The Statistical Institute of Jamaica (STATIN);
- The Planning Institute of Jamaica (PIOJ);
- The Jamaica Tourist Board;
- The records of the OUR;
- Jamaica Public Service Company Limited.

Once the required data was collected, checks were done to ensure internal consistency. This was especially necessary with regards to data on electricity consumption data. The checks also allowed some of the information to be more accurately represented through the elimination of rounding errors in some of the publications received.

The publications purchased from STATIN, PIOJ and the JTB were subsequently handed over to the OUR and is being kept in the organizations library.

Exhibit 3.1 Demand Forecast Methodology

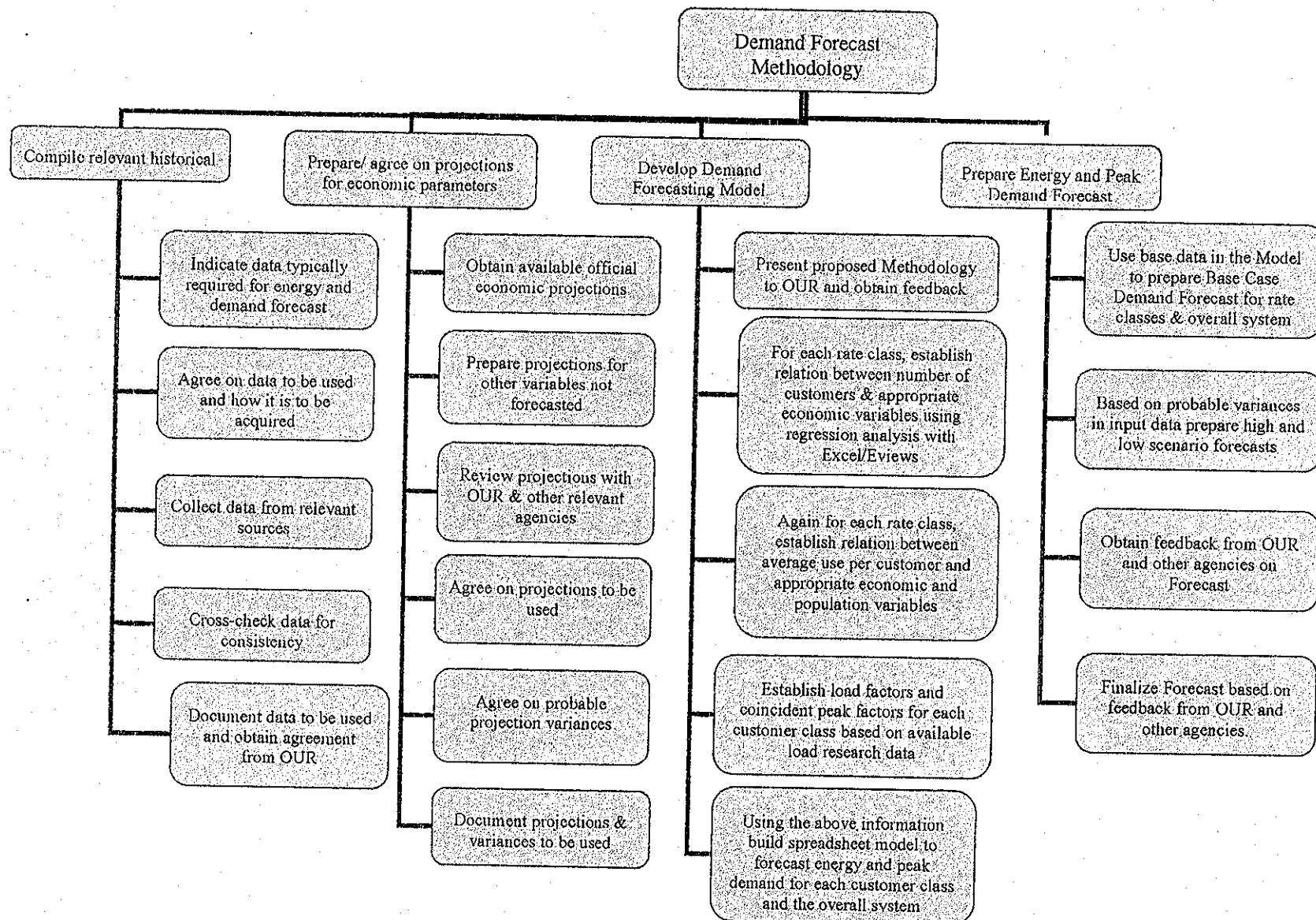
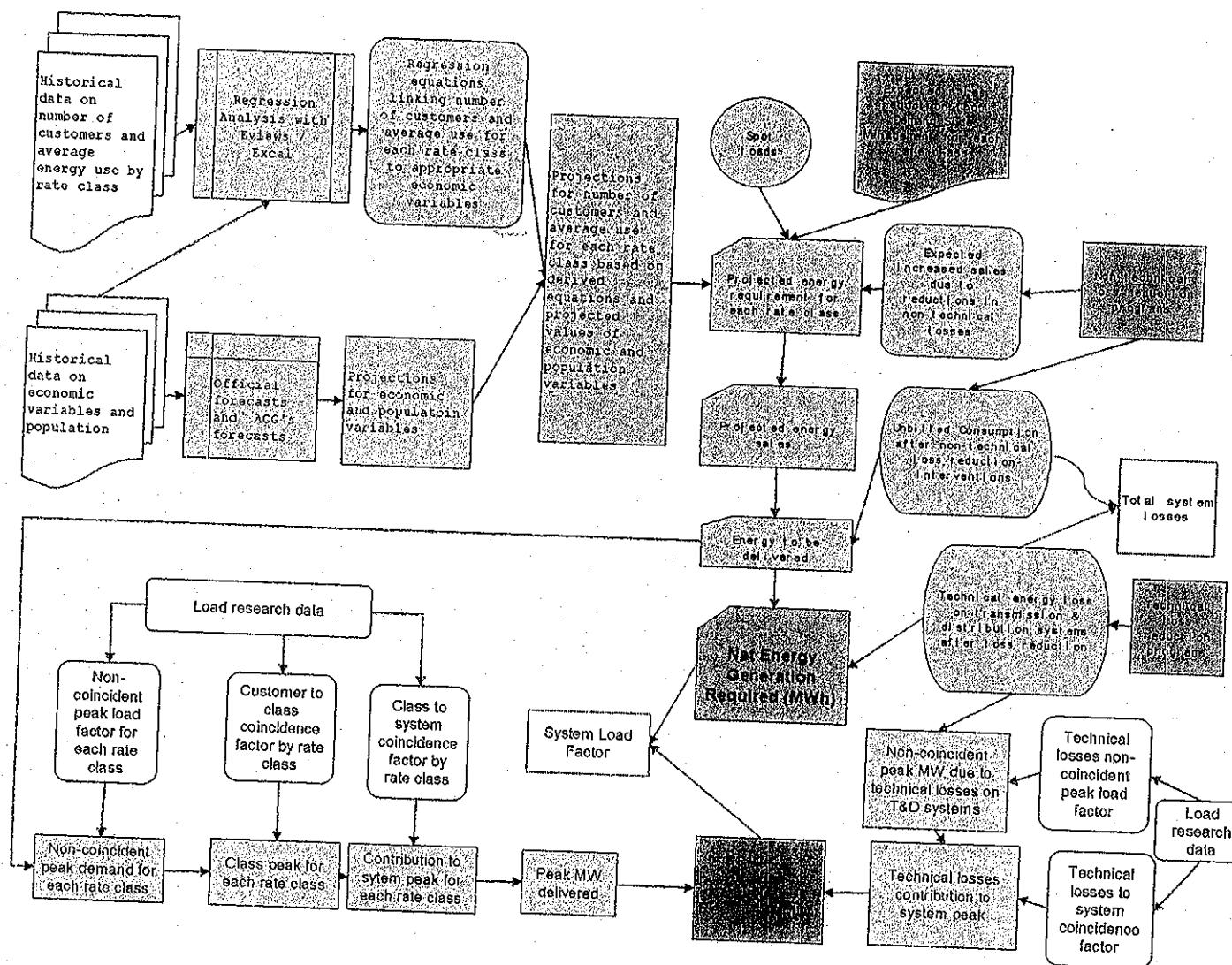


Exhibit 3.2 Demand Forecast Spreadsheet Model Structure



3.3 REGRESSION MODELING

The historical data was used to develop statistical relationships between energy consumption by rate category and relevant economic / population data. These relationships were determined through the use of regression analyses using Microsoft Excel and Eviews 5 software. Eviews 5 is a highly acclaimed software package that is widely used for econometric modeling. This software has been traditionally used by JPS for demand forecasting.

Relationships developed were tested by comparing historical energy consumption over the past twenty (20) years with what would have been forecasted by the regression models. In all instances, the fit was found to be very close, thus providing confidence in the use of the derived equations to forecast future energy consumption.

3.4 PROJECTION OF ECONOMIC AND POPULATION PARAMETERS

Since the essence of the forecast methodology is the correlation of electricity consumption with economic and population variables, it was necessary to prepare forecasts of these variables in order to determine future electricity demand based on the relationships developed from the regression analyses.

Official forecasts were used where these were available. In other cases, projections were made based on historical trends. Likely variances in these projections were used in developing high and low demand scenarios.

3.5 SPREADSHEET MODEL

The demand forecast spreadsheet model (structure shown in Exhibit 3.2 above) was developed in Microsoft Excel and allows significant flexibility. Regression analyses can either be done directly in Excel using the Data Analysis Tools feature or the analyses can be done externally and the coefficients inserted in the designated cells.

The spreadsheet allows easy change of any of the input variables with automatic update of the forecast. The model can therefore be easily updated to take into account revised outlook for the various economic and population variables.

4 DEMAND FORECAST RESULTS

The output from the model giving details of the input variables and the corresponding base case energy and peak demand forecasts is given in Appendix I. The information is self-explanatory.

5 APPENDIX I: INPUTS & OUTPUTS OF THE FORECAST MODEL

Input Data

Year	Mean Population	Growth Rate	Urban Population	Growth Rate	Urban Population/Total Popul.	Average Household Size	Growth Rate
1982	2,200,100	1.74%	1,055,542	2.12%	48.0%	4.1495	0.0%
1983	2,241,000	1.86%	1,079,147	2.24%	48.2%	4.1481	0.0%
1984	2,280,000	1.74%	1,101,993	2.12%	48.3%	4.1462	0.0%
1985	2,311,300	1.37%	1,121,258	1.75%	48.5%	4.1428	-0.1%
1986	2,336,100	1.07%	1,137,486	1.45%	48.7%	4.1374	-0.1%
1987	2,350,900	0.63%	1,148,932	1.01%	48.9%	4.1292	-0.2%
1988	2,356,600	0.24%	1,155,983	0.61%	49.1%	4.1178	-0.3%
1989	2,375,100	0.79%	1,169,372	1.16%	49.2%	4.1022	-0.4%
1990	2,403,000	1.17%	1,187,490	1.55%	49.4%	4.0810	-0.5%
1991	2,425,500	0.94%	1,203,048	1.31%	49.6%	4.0500	-0.8%
1992	2,407,700	-0.73%	1,199,876	-0.26%	49.8%	4.0142	-0.9%
1993	2,430,800	0.96%	1,217,125	1.44%	50.1%	3.9736	-1.0%
1994	2,454,800	0.99%	1,234,964	1.47%	50.3%	3.9284	-1.1%
1995	2,483,000	1.15%	1,255,067	1.63%	50.5%	3.8784	-1.3%
1996	2,509,900	1.08%	1,274,673	1.56%	50.8%	3.8238	-1.4%
1997	2,534,300	0.97%	1,293,161	1.45%	51.0%	3.7644	-1.6%
1998	2,557,000	0.90%	1,310,924	1.37%	51.3%	3.7004	-1.7%
1999	2,574,500	0.68%	1,326,148	1.16%	51.5%	3.6316	-1.9%
2000	2,589,500	0.58%	1,340,192	1.06%	51.8%	3.5582	-2.0%
2001	2,604,800	0.59%	1,354,496	1.07%	52.0%	3.4800	-2.2%
2002	2,618,800	0.54%	1,368,226	1.01%	52.2%	3.3972	-2.2%
2003	2,633,400	0.56%	1,382,371	1.03%	52.5%	3.3096	-2.2%
2004	2,648,081	0.56%	1,396,662	1.03%	52.7%	3.2514	-1.8%
2005	2,662,845	0.56%	1,411,100	1.03%	53.0%	3.2057	-1.4%
2006	2,677,690	0.56%	1,425,688	1.03%	53.2%	3.1697	-1.1%
2007	2,692,619	0.56%	1,440,427	1.03%	53.5%	3.1412	-0.9%
2008	2,707,630	0.56%	1,455,318	1.03%	53.7%	3.1186	-0.7%
2009	2,722,725	0.56%	1,470,363	1.03%	54.0%	3.1006	-0.6%
2010	2,737,905	0.56%	1,485,563	1.03%	54.3%	3.0863	-0.5%
2011	2,753,169	0.56%	1,500,921	1.03%	54.5%	3.0750	-0.4%
2012	2,768,518	0.56%	1,516,437	1.03%	54.8%	3.0659	-0.3%
2013	2,783,952	0.56%	1,532,114	1.03%	55.0%	3.0587	-0.2%
2014	2,799,473	0.56%	1,547,953	1.03%	55.3%	3.0529	-0.2%
2015	2,815,081	0.56%	1,563,956	1.03%	55.6%	3.0483	-0.2%
2016	2,830,775	0.56%	1,580,124	1.03%	55.8%	3.0446	-0.1%
2017	2,846,557	0.56%	1,596,459	1.03%	56.1%	3.0417	-0.1%
2018	2,862,426	0.56%	1,612,963	1.03%	56.3%	3.0393	-0.1%
2019	2,878,385	0.56%	1,629,638	1.03%	56.6%	3.0374	-0.1%
2020	2,894,432	0.56%	1,646,485	1.03%	56.9%	3.0359	0.0%
2021	2,910,568	0.56%	1,663,506	1.03%	57.2%	3.0347	0.0%
2022	2,926,795	0.56%	1,680,704	1.03%	57.4%	3.0338	0.0%
2023	2,943,112	0.56%	1,698,079	1.03%	57.7%	3.0330	0.0%
2024	2,959,520	0.56%	1,715,633	1.03%	58.0%	3.0324	0.0%

Input Data

Year	Real GDP (1996\$)	Growth Rate	Inflation Rate	Growth Rate	Real Per Capita Disposable Income (\$)	Growth Rate
1982	167,393	1.24%	6.5%	-45.4%	2,250	14.3%
1983	171,228	2.29%	11.3%	73.8%	2,603	15.7%
1984	169,765	-0.85%	27.8%	146.0%	2,751	5.7%
1985	161,874	-4.65%	26.0%	-6.5%	3,255	18.4%
1986	164,616	1.69%	14.8%	-43.1%	4,283	31.6%
1987	177,737	7.97%	6.7%	-54.7%	5,345	24.8%
1988	181,622	2.19%	8.3%	23.9%	6,999	30.9%
1989	194,411	7.04%	14.3%	72.3%	7,375	5.4%
1990	206,652	6.30%	22.0%	53.8%	9,847	33.5%
1991	208,380	0.84%	51.0%	131.8%	11,915	21.0%
1992	211,831	1.66%	77.3%	51.6%	18,054	51.5%
1993	217,050	2.46%	22.1%	-71.4%	37,797	109.4%
1994	219,187	0.98%	35.1%	58.8%	47,315	25.2%
1995	224,565	2.45%	19.9%	-43.3%	66,498	40.5%
1996	225,129	0.25%	26.4%	32.7%	75,536	13.6%
1997	222,707	-1.08%	9.7%	-63.3%	94,201	24.7%
1998	220,172	-1.14%	8.6%	-11.3%	98,951	5.0%
1999	222,083	0.87%	6.0%	-30.2%	106,265	7.4%
2000	223,770	0.76%	8.2%	36.7%	118,685	11.7%
2001	227,070	1.47%	7.0%	-14.6%	129,634	9.2%
2002	229,536	1.09%	7.1%	1.4%	141,289	9.0%
2003	234,730	2.26%	10.3%	45.1%	158,578	12.2%
2004	239,424	2.00%	10.3%	0.0%	175,862	10.9%
2005	245,410	2.50%	9.8%	-5.0%	195,944	11.4%
2006	251,545	2.50%	9.3%	-5.0%	218,273	11.4%
2007	257,834	2.50%	8.8%	-5.0%	243,096	11.4%
2008	264,280	2.50%	8.4%	-5.0%	270,689	11.4%
2009	270,887	2.50%	8.0%	-5.0%	301,358	11.3%
2010	277,659	2.50%	7.6%	-5.0%	335,441	11.3%
2011	284,600	2.50%	7.2%	-5.0%	373,314	11.3%
2012	291,715	2.50%	6.8%	-5.0%	415,395	11.3%
2013	299,008	2.50%	6.5%	-5.0%	462,147	11.3%
2014	306,483	2.50%	6.2%	-5.0%	514,084	11.2%
2015	314,146	2.50%	5.9%	-5.0%	571,774	11.2%
2016	321,999	2.50%	5.6%	-5.0%	635,851	11.2%
2017	330,049	2.50%	5.3%	-5.0%	707,016	11.2%
2018	338,300	2.50%	5.0%	-5.0%	786,048	11.2%
2019	346,758	2.50%	4.8%	-5.0%	873,809	11.2%
2020	355,427	2.50%	4.5%	-5.0%	971,257	11.2%
2021	364,313	2.50%	4.3%	-5.0%	1,079,455	11.1%
2022	373,420	2.50%	4.1%	-5.0%	1,199,581	11.1%
2023	382,756	2.50%	3.9%	-5.0%	1,332,943	11.1%
2024	392,325	2.50%	3.7%	-5.0%	1,480,990	11.1%

Input Data

Year	Cumulative Inflation Factor	Per Capita Disposable Income in 1980 \$	Growth Rate	US Inflation	Exchange Rate (J\$/US\$)	Growth Rate	Net Interest Rate	Growth Rate
1982	1.19	2,011	2.2%		1.75		15.74%	
1983	1.33	2,185	8.7%		1.78	1.7%	16.37%	4.0%
1984	1.70	2,074	-5.1%		4.82	170.8%	18.19%	11.1%
1985	2.14	1,920	-7.4%		5.50	14.1%	24.84%	36.6%
1986	2.45	2,005	4.4%		5.50	0.0%	24.41%	-1.7%
1987	2.62	2,180	8.7%		5.51	0.2%	25.21%	3.3%
1988	2.83	2,675	22.7%		5.49	-0.4%	24.88%	-1.3%
1989	3.24	2,603	-2.7%		5.75	4.7%	26.37%	6.0%
1990	3.95	3,040	16.8%		7.18	24.9%	34.17%	29.6%
1991	5.97	3,016	-0.8%		12.85	79.0%	35.61%	4.2%
1992	10.58	3,026	0.4%		23.01	79.1%	46.04%	29.3%
1993	12.92	3,573	18.1%		25.68	11.6%	49.60%	7.7%
1994	17.45	3,663	2.5%		33.35	29.9%	45.75%	-7.8%
1995	20.92	3,811	4.0%		35.54	6.6%	48.56%	6.1%
1996	26.44	3,610	-5.3%		37.02	4.2%	37.81%	-22.1%
1997	29.01	3,562	-1.3%		35.59	-3.9%	31.93%	-15.6%
1998	31.50	3,411	-4.2%		36.68	3.1%	30.08%	-5.8%
1999	33.40	3,373	-1.1%		39.33	7.2%	24.64%	-18.1%
2000	36.13	3,554	5.4%		43.32	10.1%	22.18%	-10.0%
2001	38.66	3,588	0.9%		46.19	6.6%	19.46%	-12.2%
2002	41.41	3,654	1.9%		48.73	5.5%	18.26%	-6.2%
2003	45.67	3,830	4.8%		58.24	19.5%	19.32%	5.8%
2004	50.38	3,850	0.5%	2.5%	62.67	7.6%	19.13%	-1.0%
2005	55.31	3,890	1.0%	2.5%	67.13	7.1%	18.94%	-1.0%
2006	60.45	3,947	1.5%	2.5%	71.58	6.6%	18.75%	-1.0%
2007	65.79	4,022	1.9%	2.5%	76.00	6.2%	18.56%	-1.0%
2008	71.30	4,115	2.3%	2.5%	80.36	5.7%	18.37%	-1.0%
2009	76.99	4,226	2.7%	2.5%	84.65	5.3%	18.19%	-1.0%
2010	82.82	4,357	3.1%	2.5%	88.84	4.9%	18.01%	-1.0%
2011	88.77	4,508	3.5%	2.5%	92.91	4.6%	17.83%	-1.0%
2012	94.84	4,679	3.8%	2.5%	96.84	4.2%	17.65%	-1.0%
2013	101.00	4,873	4.1%	2.5%	100.61	3.9%	17.47%	-1.0%
2014	107.23	5,090	4.5%	2.5%	104.21	3.6%	17.30%	-1.0%
2015	113.51	5,332	4.8%	2.5%	107.62	3.3%	17.12%	-1.0%
2016	119.82	5,602	5.1%	2.5%	110.84	3.0%	16.95%	-1.0%
2017	126.16	5,900	5.3%	2.5%	113.85	2.7%	16.78%	-1.0%
2018	132.50	6,231	5.6%	2.5%	116.66	2.5%	16.62%	-1.0%
2019	138.82	6,595	5.8%	2.5%	119.24	2.2%	16.45%	-1.0%
2020	145.11	6,997	6.1%	2.5%	121.61	2.0%	16.29%	-1.0%
2021	151.36	7,439	6.3%	2.5%	123.75	1.8%	16.12%	-1.0%
2022	157.56	7,925	6.5%	2.5%	125.67	1.6%	15.96%	-1.0%
2023	163.68	8,460	6.7%	2.5%	127.37	1.4%	15.80%	-1.0%
2024	169.72	9,048	6.9%	2.5%	128.86	1.2%	15.64%	-1.0%

Input Data

Year	Tourist Arrivals	Growth Rate	Tourist Room Nights	Growth Rate	Room Nights/ Stopovers
1982	467,763	15.11%	1,392,297	27.18%	2.98
1983	566,151	21.03%	1,616,575	16.11%	2.86
1984	603,436	6.59%	1,573,576	-2.66%	2.61
1985	571,713	-5.26%	1,413,608	-10.17%	2.47
1986	663,593	16.07%	1,589,641	12.45%	2.40
1987	738,827	11.34%	1,793,748	12.84%	2.43
1988	648,873	-12.18%	1,579,049	-11.97%	2.43
1989	829,288	27.80%	1,779,594	12.70%	2.15
1990	989,275	19.29%	1,973,397	10.89%	1.99
1991	1,006,804	1.77%	2,063,875	4.58%	2.05
1992	1,057,182	5.00%	2,288,637	10.89%	2.16
1993	1,105,382	4.56%	2,425,513	5.98%	2.19
1994	1,098,287	-0.64%	2,351,412	-3.06%	2.14
1995	1,147,001	4.44%	2,539,686	8.01%	2.21
1996	1,162,449	1.35%	2,512,564	-1.07%	2.16
1997	1,192,194	2.56%	2,636,769	4.94%	2.21
1998	1,225,287	2.78%	2,806,261	6.43%	2.29
1999	1,248,397	1.89%	2,844,524	1.36%	2.28
2000	1,322,690	5.95%	2,967,500	4.32%	2.24
2001	1,276,516	-3.49%	2,903,586	-2.15%	2.27
2002	1,266,366	-0.80%	2,830,601	-2.51%	2.24
2003	1,350,285	6.63%	2,972,201	5.00%	2.20
2004	1,382,718	2.40%	3,043,591	2.40%	2.20
2005	1,415,930	2.40%	3,116,696	2.40%	2.20
2006	1,449,939	2.40%	3,191,557	2.40%	2.20
2007	1,484,766	2.40%	3,268,216	2.40%	2.20
2008	1,520,429	2.40%	3,346,716	2.40%	2.20
2009	1,556,948	2.40%	3,427,102	2.40%	2.20
2010	1,594,345	2.40%	3,509,418	2.40%	2.20
2011	1,632,640	2.40%	3,593,712	2.40%	2.20
2012	1,671,855	2.40%	3,680,030	2.40%	2.20
2013	1,712,012	2.40%	3,768,422	2.40%	2.20
2014	1,753,133	2.40%	3,858,937	2.40%	2.20
2015	1,795,242	2.40%	3,951,625	2.40%	2.20
2016	1,838,363	2.40%	4,046,541	2.40%	2.20
2017	1,882,519	2.40%	4,143,736	2.40%	2.20
2018	1,927,735	2.40%	4,243,265	2.40%	2.20
2019	1,974,038	2.40%	4,345,185	2.40%	2.20
2020	2,021,453	2.40%	4,449,554	2.40%	2.20
2021	2,070,007	2.40%	4,556,429	2.40%	2.20
2022	2,119,727	2.40%	4,665,871	2.40%	2.20
2023	2,170,642	2.40%	4,777,942	2.40%	2.20
2024	2,222,779	2.40%	4,892,704	2.40%	2.20

Input Data

Year	Nominal LPG Price (c/25lb)	Nominal LPG (\$/25 lb)	Nominal LPG (\$/lb)	Growth Rate	Real LPG Price (\$/lb)	Growth Rate
1982	1,553	15.53	0.62	10.7%	0.58	16.3%
1983	1,707	17.07	0.68	10.0%	0.61	5.2%
1984	2,505	25.05	1.00	46.7%	0.78	27.8%
1985	2,933	29.33	1.17	17.1%	0.93	18.8%
1986	2,992	29.92	1.20	2.0%	1.04	11.9%
1987	2,933	29.33	1.17	-1.9%	1.10	5.5%
1988	3,625	36.25	1.45	23.6%	1.34	21.8%
1989	3,481	34.81	1.39	-4.0%	1.22	-9.0%
1990	6,888	68.88	2.76	97.9%	2.26	85.4%
1991	13,825	138.25	5.53	100.7%	3.66	62.2%
1992	15,767	157.67	6.31	14.0%	3.56	-2.9%
1993	20,396	203.96	8.16	29.4%	6.68	87.8%
1994	26,192	261.92	10.48	28.4%	7.75	16.1%
1995	31,310	313.10	12.52	19.5%	10.45	34.7%
1996	41,464	414.64	16.59	32.4%	13.12	25.6%
1997	42,200	422.00	16.88	1.8%	15.39	17.3%
1998	42,923	429.23	17.17	1.7%	15.81	2.7%
1999	44,165	441.65	17.67	2.9%	16.67	5.4%
2000	53,964	539.64	21.59	22.2%	19.95	19.7%
2001	61,962	619.62	24.78	14.8%	23.16	16.1%
2002	62,142	621.42	24.86	0.3%	23.21	0.2%
2003	77,750	777.50	31.10	25.1%	28.20	21.5%
2004	85,636	856.36	34.25	10.1%	31.06	10.1%
2005	93,881	938.81	37.55	9.6%	34.21	10.1%
2006	102,942	1,029.42	41.18	9.7%	37.67	10.1%
2007	112,901	1,129.01	45.16	9.7%	41.50	10.1%
2008	123,847	1,238.47	49.54	9.7%	45.70	10.1%
2009	135,881	1,358.81	54.35	9.7%	50.34	10.1%
2010	149,110	1,491.10	59.64	9.7%	55.45	10.1%
2011	163,656	1,636.56	65.46	9.8%	61.07	10.1%
2012	179,650	1,796.50	71.86	9.8%	67.26	10.1%
2013	197,238	1,972.38	78.90	9.8%	74.09	10.1%
2014	216,580	2,165.80	86.63	9.8%	81.60	10.1%
2015	237,854	2,378.54	95.14	9.8%	89.88	10.1%
2016	261,254	2,612.54	104.50	9.8%	98.99	10.1%
2017	286,993	2,869.93	114.80	9.9%	109.03	10.1%
2018	315,307	3,153.07	126.12	9.9%	120.09	10.1%
2019	346,457	3,464.57	138.58	9.9%	132.27	10.1%
2020	380,727	3,807.27	152.29	9.9%	145.69	10.1%
2021	418,434	4,184.34	167.37	9.9%	160.46	10.1%
2022	459,922	4,599.22	183.97	9.9%	176.74	10.1%
2023	505,574	5,055.74	202.23	9.9%	194.66	10.1%
2024	555,810	5,558.10	222.32	9.9%	214.41	10.1%

Input Data

Year	Rate 10 Customers	Growth Rate	Rate 10 Sales	Rate 10 Avg Use	Rate 10 Price (\$/kWh)	Growth Rate
1982	216,403		328,607	1.5185	0.28	
1983	220,669	2.0%	365,471	1.6562	0.32	15.2%
1984	222,895	1.0%	368,111	1.6515	0.56	75.1%
1985	226,123	1.4%	340,344	1.5051	0.63	12.3%
1986	231,871	2.5%	367,674	1.5857	0.55	-12.2%
1987	241,958	4.4%	417,116	1.7239	0.63	13.9%
1988	230,366	-4.8%	406,951	1.7665	0.52	-16.9%
1989	260,946	13.3%	467,951	1.7933	0.67	27.8%
1990	274,692	5.3%	525,084	1.9115	0.80	20.7%
1991	287,739	4.7%	533,164	1.8529	0.94	17.2%
1992	299,544	4.1%	535,622	1.7881	2.49	163.4%
1993	312,087	4.2%	567,762	1.8192	2.92	17.7%
1994	325,669	4.4%	617,587	1.8964	3.37	15.2%
1995	342,926	5.3%	684,137	1.9950	3.95	17.3%
1996	357,310	4.2%	763,883	2.1379	3.82	-3.2%
1997	376,140	5.3%	829,259	2.2047	3.56	-6.8%
1998	393,944	4.7%	926,296	2.3513	4.47	25.3%
1999	409,120	3.9%	1,007,442	2.4625	4.89	9.5%
2000	423,799	3.6%	1,046,822	2.4701	6.41	31.1%
2001	439,647	3.7%	1,065,426	2.4234	7.03	9.7%
2002	451,219	2.6%	1,103,133	2.4448	7.77	10.4%
2003	464,768	3.0%	1,106,691	2.3812	9.62	23.9%
2004					10.11	5.1%
2005					10.63	5.1%
2006					11.16	5.1%
2007					11.73	5.1%
2008					12.33	5.1%
2009					12.95	5.1%
2010					13.61	5.1%
2011					14.30	5.1%
2012					15.02	5.1%
2013					15.78	5.1%
2014					16.58	5.1%
2015					17.43	5.1%
2016					18.31	5.1%
2017					19.24	5.1%
2018					20.21	5.1%
2019					21.24	5.1%
2020					22.32	5.1%
2021					23.45	5.1%
2022					24.64	5.1%
2023					25.89	5.1%
2024					27.20	5.1%

Input Data

Year	Rate 20 Customers	Growth Rate	Rate 20 Sales	Rate 20 Use	Rate 20 Price	Growth Rate
1982	25,496		228,812	8.974	0.21	
1983	25,605	0.4%	268,286	10.478	0.22	7.8%
1984	23,224	-9.3%	253,802	10.928	0.39	72.2%
1985	22,981	-1.0%	248,018	10.792	0.45	15.6%
1986	25,149	9.4%	262,283	10.429	0.50	12.0%
1987	26,030	3.5%	301,541	11.584	0.52	4.6%
1988	24,783	-4.8%	291,152	11.748	0.51	-3.4%
1989	28,259	14.0%	342,293	12.113	0.49	-2.1%
1990	30,018	6.2%	389,933	12.990	0.60	20.9%
1991	31,558	5.1%	381,121	12.077	0.60	0.3%
1992	33,137	5.0%	387,834	11.704	2.11	251.9%
1993	35,138	6.0%	403,395	11.480	2.28	7.9%
1994	39,611	12.7%	436,293	11.014	3.03	32.7%
1995	41,673	5.2%	470,531	11.291	3.31	9.5%
1996	43,229	3.7%	500,834	11.586	3.71	12.0%
1997	46,129	6.7%	545,956	11.835	4.27	15.0%
1998	48,453	5.0%	589,070	12.158	4.91	15.0%
1999	50,282	3.8%	605,991	12.052	5.64	15.0%
2000	51,925	3.3%	598,314	11.523	6.49	15.0%
2001	53,358	2.8%	604,770	11.334	7.46	15.0%
2002	53,526	0.3%	618,071	11.547	8.58	15.0%
2003	52,579	-1.8%	652,358	12.407	9.87	15.0%
2004					10.37	5.1%
2005					10.90	5.1%
2006					11.45	5.1%
2007					12.03	5.1%
2008					12.64	5.1%
2009					13.28	5.1%
2010					13.96	5.1%
2011					14.66	5.1%
2012					15.41	5.1%
2013					16.19	5.1%
2014					17.01	5.1%
2015					17.87	5.1%
2016					18.78	5.1%
2017					19.73	5.1%
2018					20.73	5.1%
2019					21.78	5.1%
2020					22.89	5.1%
2021					24.05	5.1%
2022					25.27	5.1%
2023					26.55	5.1%
2024					27.90	5.1%

Input Data

Year	Rate 40 Customers	Increase	Growth Rate	Rate 40 Sales	Rate 40 Use	Growth Rate	Rate 40 Price	Growth Rate
1982	923			348,231	377.28		0.21	
1983	914	-9	-0.98%	359,903	393.77	4.4%	0.22	7.8%
1984	888	-26	-2.84%	356,905	401.92	2.1%	0.39	72.2%
1985	868	-20	-2.25%	366,336	422.05	5.0%	0.44	13.2%
1986	844	-24	-2.76%	381,835	452.41	7.2%	0.46	5.8%
1987	827	-17	-2.01%	425,112	514.04	13.6%	0.51	9.4%
1988	812	-15	-1.81%	411,579	506.87	-1.4%	0.52	3.1%
1989	813	1	0.12%	459,958	565.75	11.6%	0.47	-9.4%
1990	798	-15	-1.85%	478,153	599.19	5.9%	0.57	21.1%
1991	787	-11	-1.38%	426,166	541.51	-9.6%	0.72	26.1%
1992	777	-10	-1.27%	396,366	510.12	-5.8%	1.67	131.8%
1993	820	43	5.53%	443,810	541.23	6.1%	2.43	45.3%
1994	1155	335	40.91%	432,623	374.42	-30.8%	2.81	15.7%
1995	1109	-46	-4.02%	451,657	407.27	8.8%	3.32	18.0%
1996	1323	214	19.30%	471,563	356.43	-12.5%	3.21	-3.1%
1997	1280	-43	-3.25%	495,405	387.04	8.6%	3.66	13.9%
1998	1174	-106	-8.28%	517,076	440.44	13.8%	3.58	-2.3%
1999	1192	18	1.53%	520,592	436.74	-0.8%	4.16	16.2%
2000	1269	77	6.46%	573,476	451.91	3.5%	5.07	21.9%
2001	1308	39	3.07%	583,333	445.97	-1.3%	5.40	6.4%
2002	1356	48	3.67%	597,253	440.45	-1.2%	5.46	1.2%
2003	1384	28	2.06%	625,681	452.08	2.6%	6.52	19.4%
2004						5.1%	6.85	5.1%
2005						5.1%	7.19	5.1%
2006						5.1%	7.56	5.1%
2007						5.1%	7.94	5.1%
2008						5.1%	8.35	5.1%
2009						5.1%	8.77	5.1%
2010						5.1%	9.21	5.1%
2011						5.1%	9.68	5.1%
2012						5.1%	10.17	5.1%
2013						5.1%	10.69	5.1%
2014						5.1%	11.23	5.1%
2015						5.1%	11.80	5.1%
2016						5.1%	12.40	5.1%
2017						5.1%	13.03	5.1%
2018						5.1%	13.69	5.1%
2019						5.1%	14.38	5.1%
2020						5.1%	15.11	5.1%
2021						5.1%	15.88	5.1%
2022						5.1%	16.68	5.1%
2023						5.1%	17.53	5.1%
2024						5.1%	18.42	5.1%

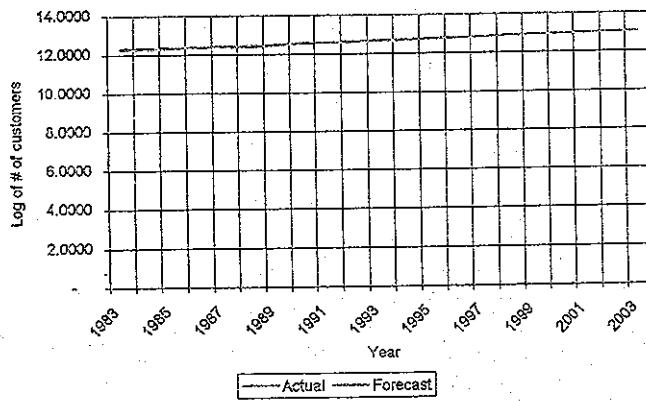
Input Data

Year	Rate 50 Customers	Increase	Growth Rate	Rate 50 Sales	Growth Rate	Rate 50 Use	Growth Rate	Rate 50 Price	Growth Rate
1982	22			138,639		6,301.8		0.21	
1983	22	0	0.0%	145,945	5.3%	6,633.9	5.3%	0.22	7.8%
1984	22	0	0.0%	142,378	-2.4%	6,471.7	-2.4%	0.39	72.2%
1985	22	0	0.0%	154,007	8.2%	7,000.3	8.2%	0.44	13.2%
1986	24	2	9.1%	171,576	11.4%	7,149.0	2.1%	0.46	5.8%
1987	24	0	0.0%	164,927	-3.9%	6,872.0	-3.9%	0.51	9.4%
1988	23	-1	-4.2%	145,888	-11.5%	6,343.0	-7.7%	0.52	3.1%
1989	23	0	0.0%	158,466	8.6%	6,889.8	8.6%	0.47	-9.4%
1990	31	8	34.8%	209,764	32.4%	6,766.6	-1.8%	0.57	21.1%
1991	58	27	87.1%	289,284	37.9%	4,987.7	-26.3%	0.67	17.7%
1992	69	11	19.0%	321,711	11.2%	4,662.5	-6.5%	1.49	121.9%
1993	74	5	7.2%	336,089	4.5%	4,541.7	-2.6%	2.25	50.8%
1994	76	2	2.7%	332,297	-1.1%	4,372.3	-3.7%	2.59	14.8%
1995	75	-1	-1.3%	339,916	2.3%	4,532.2	3.7%	3.05	18.0%
1996	77	2	2.7%	357,788	5.3%	4,646.6	2.5%	2.75	-9.9%
1997	80	3	3.9%	356,669	-0.3%	4,458.4	-4.1%	3.33	20.9%
1998	79	-1	-1.3%	358,842	0.6%	4,542.3	1.9%	3.47	4.3%
1999	86	7	8.9%	383,606	6.9%	4,460.5	-1.8%	3.82	10.1%
2000	93	7	8.1%	374,805	-2.3%	4,030.2	-9.6%	4.63	21.2%
2001	97	4	4.3%	385,023	2.7%	3,969.3	-1.5%	4.91	6.1%
2002	97	0	0.0%	421,390	9.4%	4,344.2	9.4%	4.96	1.0%
2003	101	4	4.1%	451,613	7.2%	4,471.4	2.9%	5.93	19.4%
2004								6.23	5.1%
2005								6.54	5.1%
2006								6.87	5.1%
2007								7.22	5.1%
2008								7.59	5.1%
2009								7.97	5.1%
2010								8.38	5.1%
2011								8.80	5.1%
2012								9.25	5.1%
2013								9.72	5.1%
2014								10.21	5.1%
2015								10.73	5.1%
2016								11.27	5.1%
2017								11.85	5.1%
2018								12.45	5.1%
2019								13.08	5.1%
2020								13.74	5.1%
2021								14.44	5.1%
2022								15.17	5.1%
2023								15.94	5.1%
2024								16.75	5.1%

Year	Ln Mean Population	Ln Household Size	Ln Number of Households	Forecasted Ln Number of Households	Forecasted Number of Households	Households Growth Rate	Eviews Forecast	Eviews Forecast Growth
1982	14.60	1.42	12,2849	12.0683	174,257			
1983	14.62	1.42	12,3044	12.2814	215,647	23.75%	215,647	
1984	14.64	1.42	12,3145	12.2655	212,249	-1.58%	223,467	3.63%
1985	14.65	1.42	12,3288	12.3504	231,043	8.85%	232,945	4.24%
1986	14.66	1.42	12,3539	12.3676	235,059	1.74%	242,378	4.05%
1987	14.67	1.42	12,3965	12.4051	244,050	3.82%	248,416	2.49%
1988	14.67	1.42	12,3474	12.4212	248,012	1.62%	250,572	0.87%
1989	14.68	1.41	12,4721	12.4273	249,532	0.61%	260,539	3.98%
1990	14.69	1.41	12,5234	12.5537	283,141	13.47%	276,796	6.24%
1991	14.70	1.40	12,5698	12,5634	285,888	0.97%	290,897	5.09%
1992	14.69	1.39	12,6100	12,5479	281,491	-1.54%	280,643	-3.52%
1993	14.70	1.38	12,6510	12,6305	305,745	8.62%	295,665	5.35%
1994	14.71	1.37	12,6936	12,6621	315,544	3.20%	312,087	5.55%
1995	14.72	1.36	12,7453	12,7309	338,032	7.13%	332,304	6.48%
1996	14.74	1.34	12,7864	12,7814	355,557	5.18%	352,805	6.17%
1997	14.75	1.33	12,8377	12,8309	373,597	5.07%	372,609	5.61%
1998	14.75	1.31	12,8840	12,8831	393,608	5.36%	392,154	5.25%
1999	14.76	1.29	12,9218	12,9207	408,676	3.83%	408,489	4.16%
2000	14.77	1.27	12,9570	12,9569	423,733	3.68%	423,484	3.67%
2001	14.77	1.25	12,9937	12,9934	439,482	3.72%	439,446	3.77%
2002	14.78	1.22	13,0197	13,0283	455,104	3.55%	455,011	3.54%
2003	14.78	1.20	13,0493	13,0598	469,699	3.21%	471,894	3.71%
2004	14.79	1.18	13,0833	13,0927	485,404	3.45%	488,197	3.45%
2005	14.79	1.16	13,1162	13,1262	501,941	3.35%	504,534	3.35%
2006	14.80	1.15	13,1483	13,1580	518,139	3.26%	520,981	3.26%
2007	14.81	1.14	13,1797	13,1896	534,764	3.19%	537,605	3.19%
2008	14.81	1.14	13,2105	13,2204	551,481	3.14%	554,463	3.14%
2009	14.82	1.13	13,2416	13,2509	568,561	3.09%	571,606	3.09%
2010	14.82	1.13	13,2711	13,2809	585,924	3.06%	589,078	3.06%
2011	14.83	1.12	13,3069	13,3108	603,679	3.03%	606,919	3.03%
2012	14.83	1.12	13,3306	13,3404	621,822	3.01%	625,163	3.01%
2013	14.84	1.12	13,3600	13,3699	640,407	2.99%	643,847	2.99%
2014	14.84	1.12	13,3893	13,3992	659,451	2.97%	662,995	2.97%
2015	14.85	1.11	13,4185	13,4284	678,989	2.96%	687,637	2.96%
2016	14.86	1.11	13,4476	13,4575	699,042	2.95%	702,798	2.95%
2017	14.86	1.11	13,4766	13,4865	719,637	2.95%	723,503	2.95%
2018	14.87	1.11	13,5056	13,5155	740,796	2.94%	744,776	2.94%
2019	14.87	1.11	13,5346	13,5444	762,542	2.94%	766,640	2.94%
2020	14.88	1.11	13,5635	13,5733	784,899	2.93%	789,116	2.93%
2021	14.88	1.11	13,5923	13,6022	807,887	2.93%	812,328	2.93%
2022	14.89	1.11	13,6212	13,6310	831,529	2.93%	835,997	2.93%
2023	14.89	1.11	13,6500	13,6598	855,848	2.92%	860,446	2.92%
2024	14.90	1.11	13,6788	13,6887	880,864	2.92%	885,597	2.92%

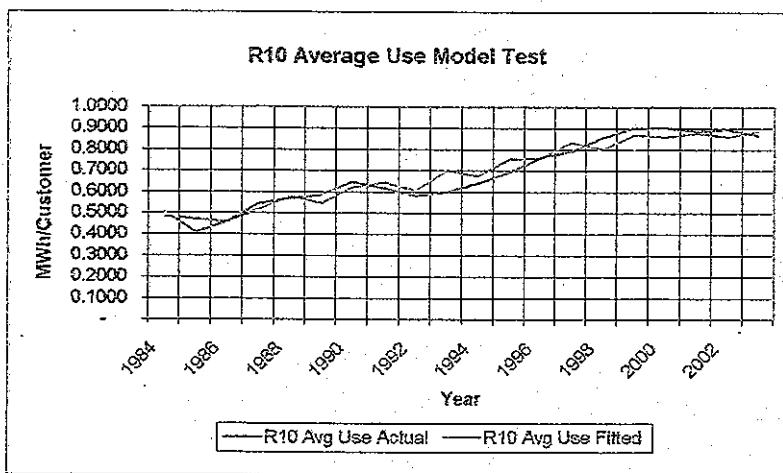
Coefficients for No. of R10 Customers			
MPOPL	5.17145		
AVHSZ	(0.29419)		
CONSTANT	(63.03695)		
AR(1)	0.54364		

Rate 10 # Customers Model Test

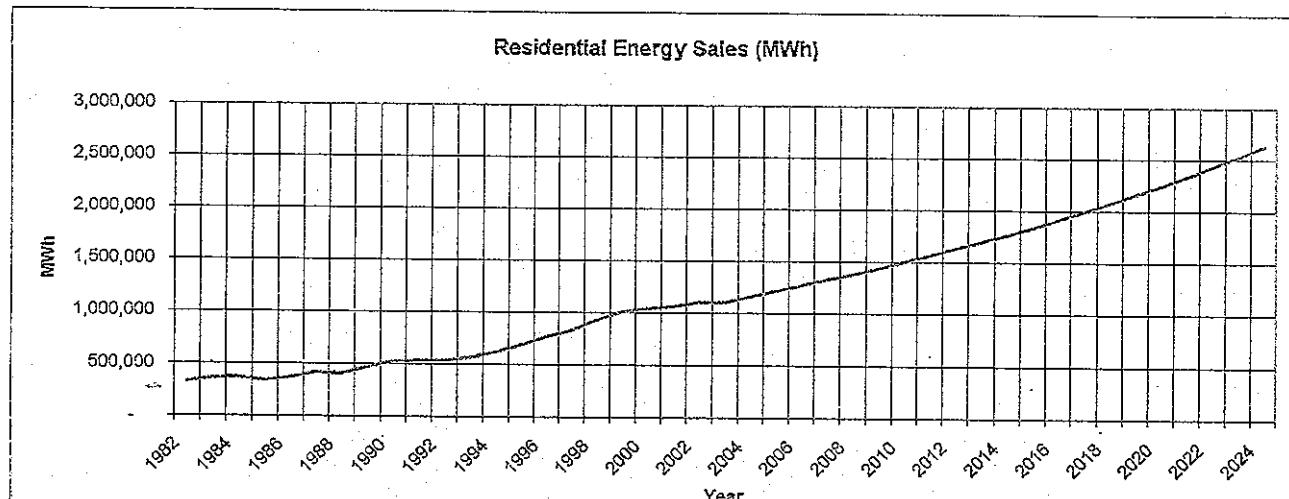


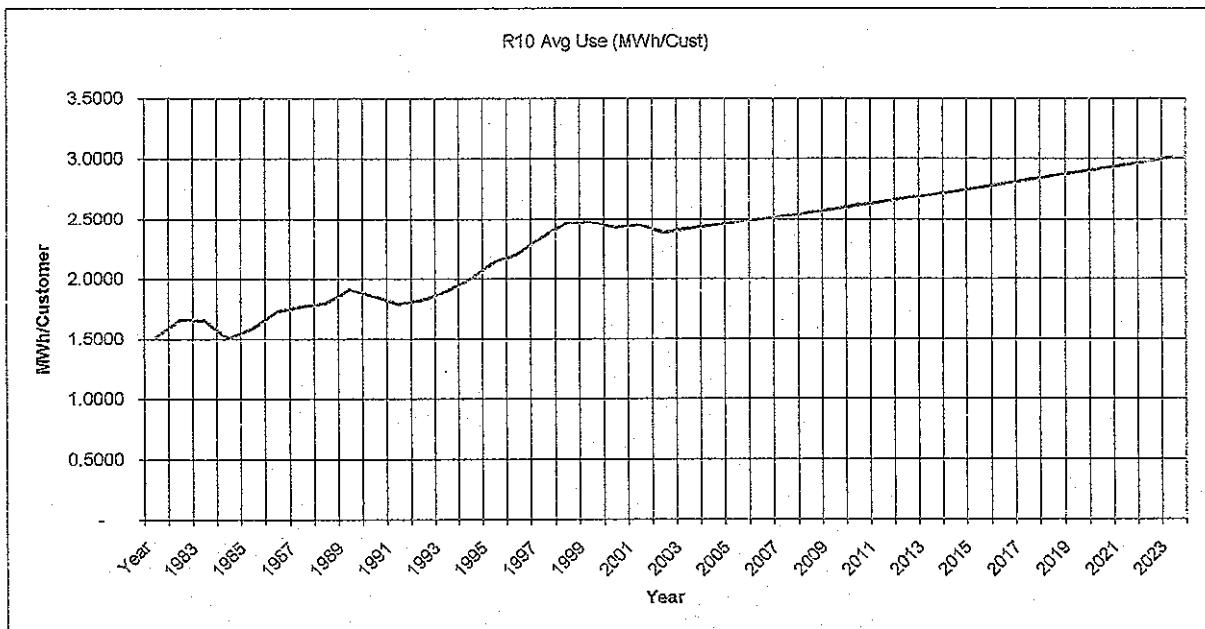
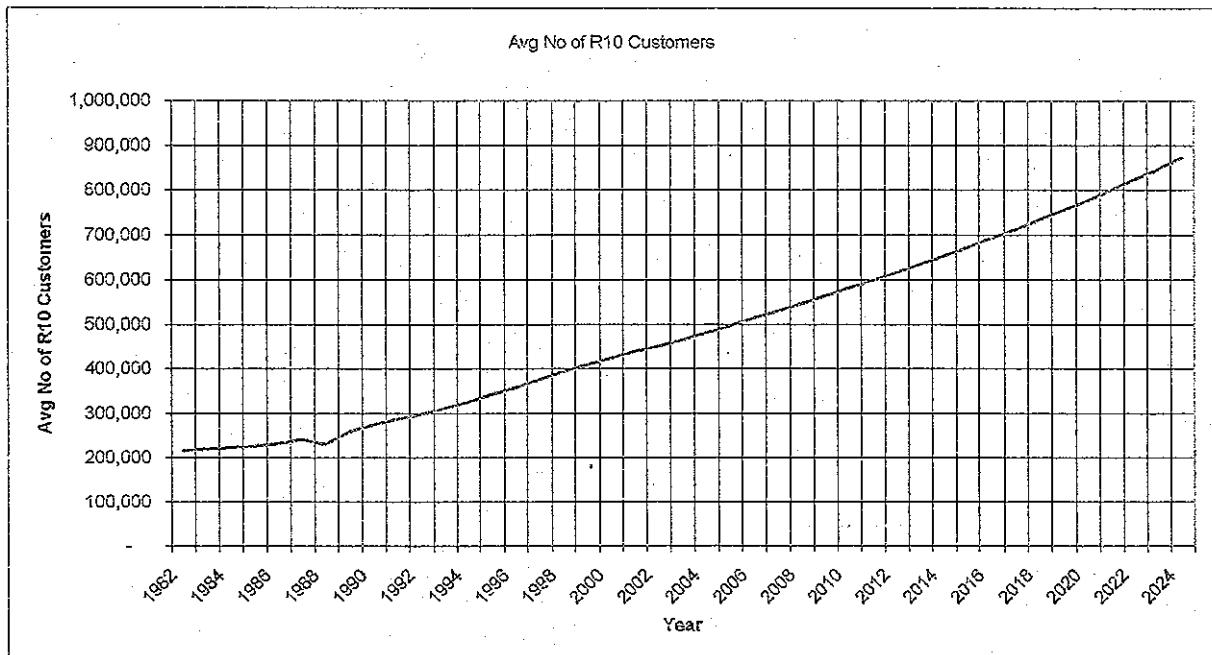
Year	Ln Per Capita Disposable Income	Ln Electricity price	Ln Real Price of LPG	Ln Average use per Customer	Forecast Ln Average use per Customer	Forecast of average use (MWh/cust)	Growth Rate	Eviews Forecast of Ln Avg Use	Eviews Forecast	Eviews Forecast Growth
1982	7.72	(1.28)	(0.54)	0.4177	0.4393	0.44				
1983	7.86	(1.14)	(0.49)	0.5045	0.4362	1.55				
1984	7.92	(0.58)	(0.24)	0.5017	0.4817	1.62	4.66%	0.47	1.59	
1985	8.09	(0.47)	(0.07)	0.4089	0.4693	1.60	-1.24%	0.47	1.61	0.81%
1986	8.36	(0.60)	0.04	0.4610	0.4573	1.58	-1.20%	0.51	1.65	3.37%
1987	8.58	(0.47)	0.10	0.5446	0.5178	1.68	6.24%	0.52	1.69	1.63%
1988	8.85	(0.65)	0.29	0.5690	0.5769	1.78	6.05%	0.56	1.75	3.67%
1989	8.91	(0.41)	0.20	0.5841	0.5456	1.73	-3.08%	0.56	1.75	-0.13%
1990	9.19	(0.22)	0.81	0.6479	0.6186	1.86	7.57%	0.58	1.78	1.77%
1991	9.39	(0.06)	1.30	0.6168	0.6423	1.90	2.40%	0.61	1.84	3.38%
1992	9.80	0.91	1.27	0.5812	0.6053	1.83	-3.63%	0.62	1.87	1.52%
1993	10.54	1.07	1.90	0.5984	0.6994	2.01	9.87%	0.69	2.00	7.28%
1994	10.76	1.21	2.05	0.6399	0.6728	1.96	-2.63%	0.73	2.08	3.96%
1995	11.10	1.37	2.35	0.6906	0.7556	2.13	8.64%	0.77	2.15	3.46%
1996	11.23	1.34	2.57	0.7598	0.7581	2.13	0.25%	0.79	2.21	2.56%
1997	11.45	1.27	2.73	0.7906	0.8333	2.30	7.81%	0.83	2.29	3.54%
1998	11.50	1.50	2.76	0.8550	0.8004	2.23	-3.23%	0.83	2.29	0.01%
1999	11.57	1.59	2.81	0.9012	0.8679	2.38	6.97%	0.83	2.30	0.43%
2000	11.68	1.86	2.99	0.9043	0.8596	2.36	-0.82%	0.83	2.30	0.10%
2001	11.77	1.95	3.14	0.8832	0.8771	2.40	1.76%	0.84	2.32	1.13%
2002	11.86	2.05	3.14	0.8940	0.8583	2.36	-1.85%	0.85	2.35	0.97%
2003	11.97	2.26	3.34	0.8676	0.8849	2.42	2.70%	0.86	2.35	0.24%
2004	12.08	2.31	3.44	0.8817	0.8631	2.37	1.42%	0.87	2.39	1.42%
2005	12.19	2.36	3.53	0.8929	0.8987	2.46	1.13%	0.88	2.41	1.13%
2006	12.29	2.41	3.63	0.9841	0.8957	2.45	1.13%	0.89	2.44	1.13%
2007	12.40	2.46	3.73	0.9153	0.9173	2.50	1.13%	0.90	2.47	1.13%
2008	12.51	2.51	3.82	0.9265	0.9231	2.52	1.12%	0.91	2.50	1.12%
2009	12.62	2.56	3.92	0.9376	0.9391	2.56	1.12%	0.93	2.52	1.12%
2010	12.72	2.61	4.02	0.9488	0.9485	2.58	1.12%	0.94	2.55	1.12%
2011	12.83	2.66	4.11	0.9599	0.9620	2.62	1.12%	0.95	2.58	1.12%
2012	12.94	2.71	4.21	0.9710	0.9729	2.65	1.12%	0.96	2.61	1.12%
2013	13.04	2.76	4.31	0.9820	0.9855	2.68	1.11%	0.97	2.64	1.11%
2014	13.15	2.81	4.44	0.9931	0.9970	2.71	1.11%	0.98	2.67	1.11%
2015	13.26	2.86	4.59	1.0041	1.0091	2.74	1.11%	0.99	2.70	1.11%
2016	13.36	2.91	4.60	1.0152	1.0208	2.78	1.11%	1.00	2.73	1.11%
2017	13.47	2.96	4.69	1.0262	1.0327	2.81	1.11%	1.01	2.76	1.11%
2018	13.57	3.01	4.79	1.0372	1.0445	2.84	1.11%	1.03	2.79	1.11%
2019	13.68	3.06	4.88	1.0452	1.0563	2.88	1.11%	1.04	2.82	1.11%
2020	13.79	3.11	4.98	1.0592	1.0681	2.91	1.10%	1.05	2.85	1.10%
2021	13.89	3.15	5.08	1.0701	1.0799	2.94	1.10%	1.06	2.88	1.10%
2022	14.00	3.20	5.17	1.0811	1.0917	2.98	1.10%	1.07	2.91	1.10%
2023	14.10	3.25	5.27	1.0920	1.1035	3.01	1.10%	1.08	2.94	1.10%
2024	14.21	3.30	5.37	1.1030	1.1152	3.05	1.10%	1.09	2.98	1.10%

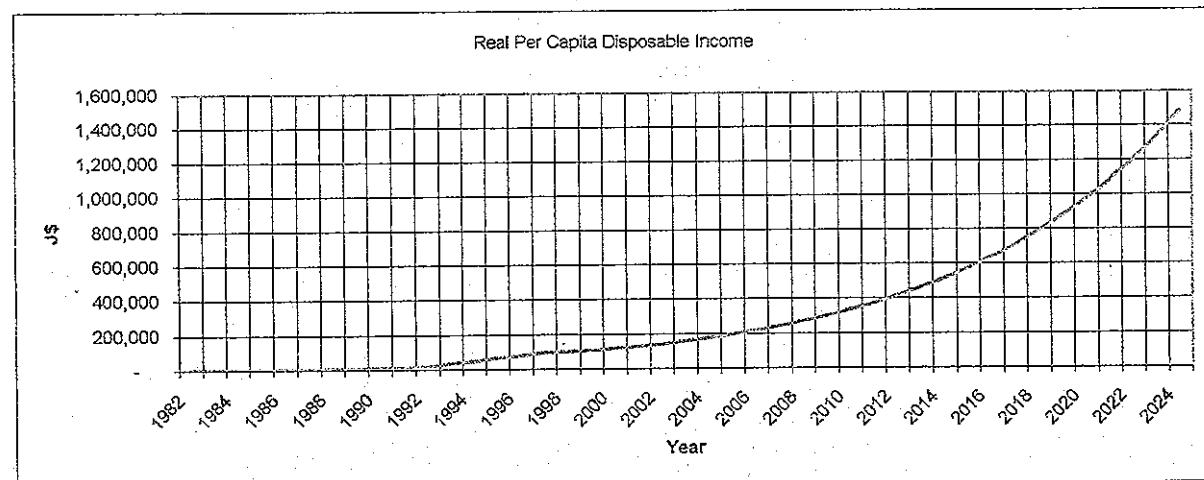
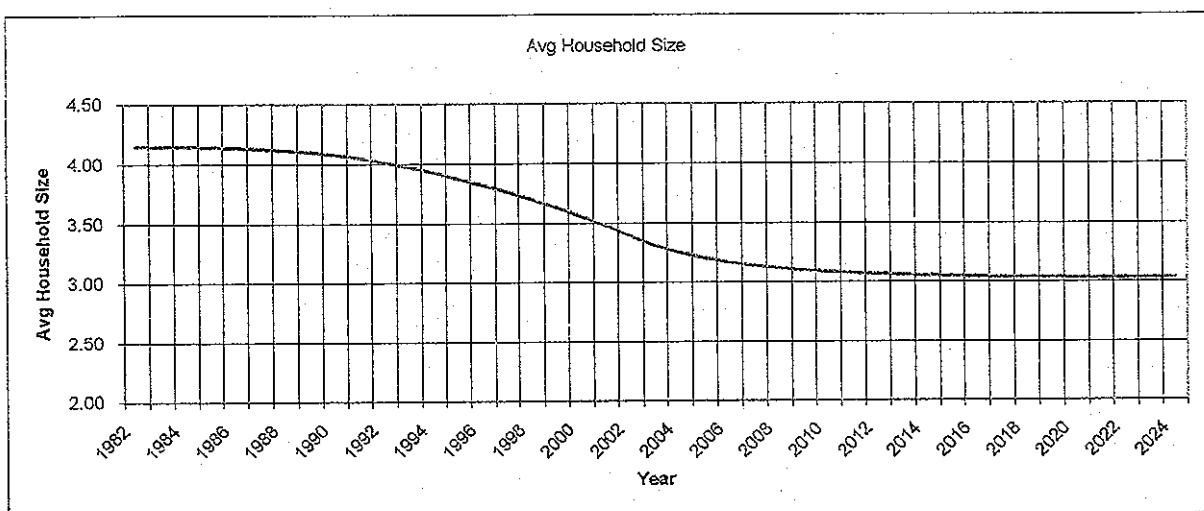
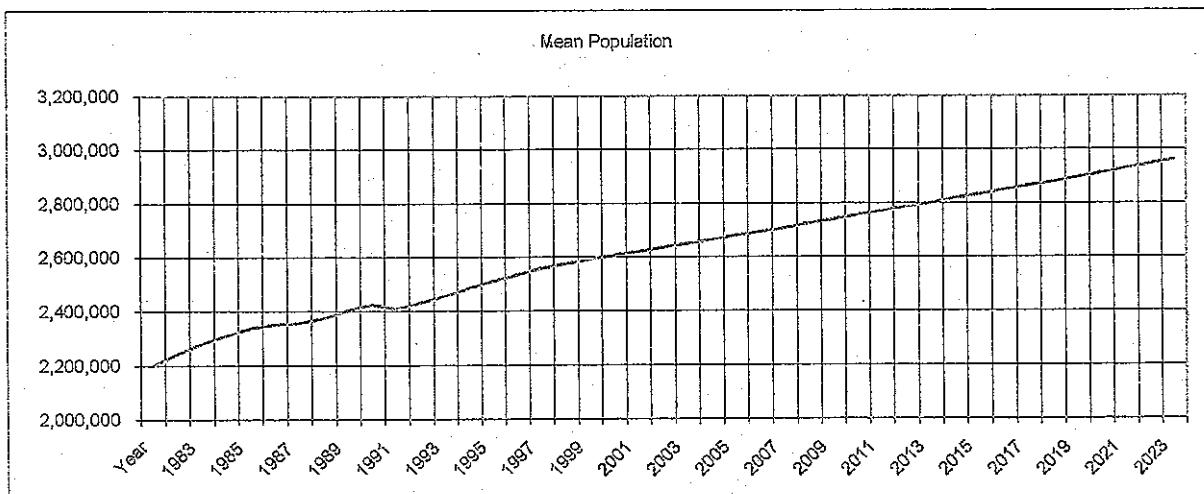
Coefficients for Average Use	
Disposable income	0.1073
Electricity price	(0.0469)
LPG Price	0.0342
Constant	(0.4306)
AR(1)	0.6400

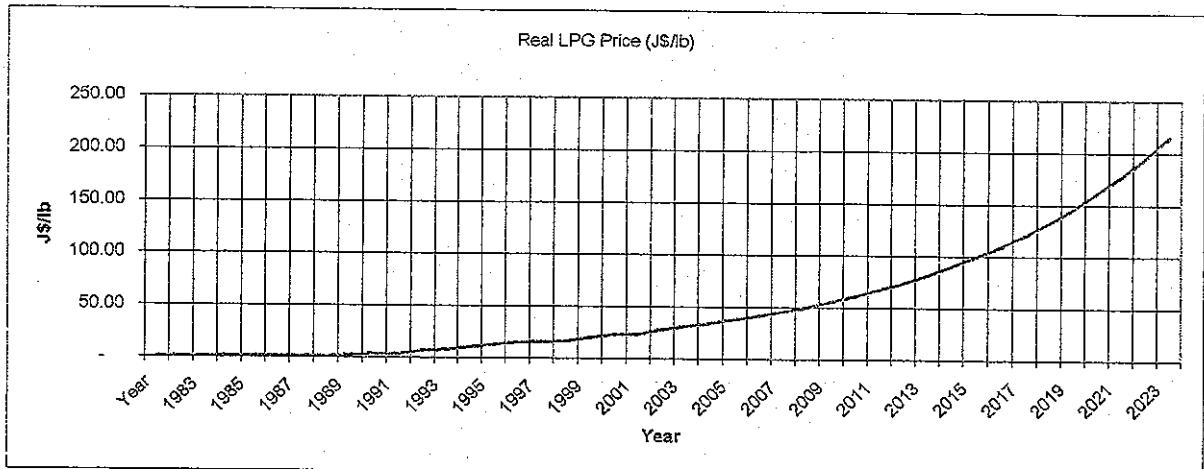
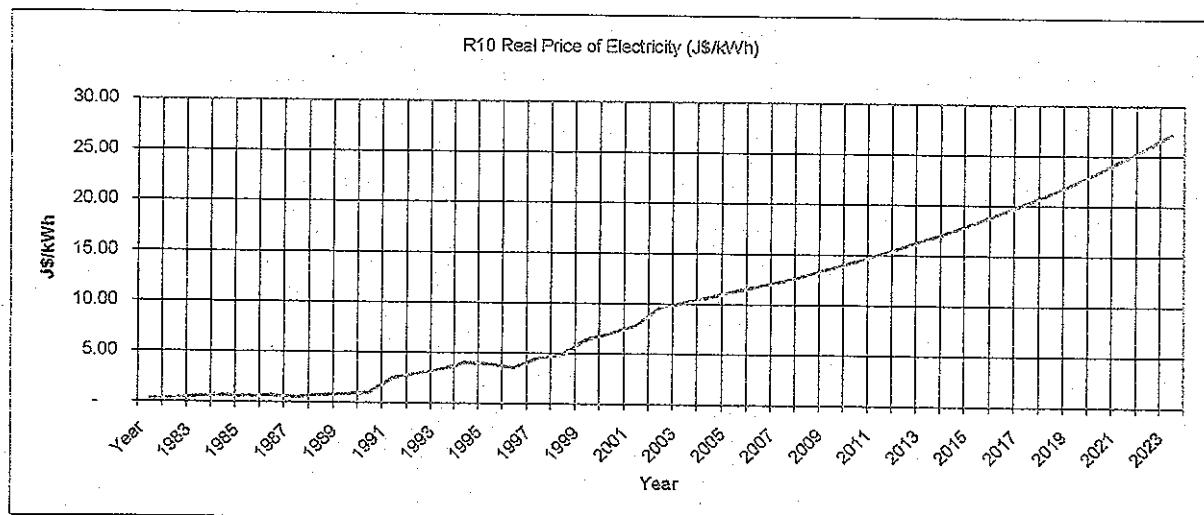


Year	Mean Population	Average Household Size	Base no. of R10 Customers	Extra-ordinary Changes	Average no. of Rate 10 Customers	Real Per Capita Disposable Income	R10 Real Price of Electricity (US\$/MWh)	R10 Real Price of Electricity Growth		Real LPG Price (US\$/lb)	LPG Price Growth	R10 Avg Use (MWh/Cust)	R10 Avg. Use Growth	R10 Sales (MWh)	R10 Sales Growth
1982	2,200,100	4.15	216,403		216,403	2,250	0.28	0.58	1,5185			328,607			
1983	2,241,000	4.15	220,669		220,669	2,603	0.32	15.24%	0.61	5.22%	1,6562	9.07%	265,471	11.22%	
1984	2,280,000	4.15	222,895		222,895	2,731	0.56	75.05%	0.78	27.77%	1,6915	-0.28%	368,111	0.72%	
1985	2,311,300	4.14	226,123		226,123	3,255	0.63	12.33%	0.93	18.79%	1,5051	-8.85%	340,344	-7.54%	
1986	2,336,100	4.14	231,871		231,871	4,283	0.55	-12.17%	1.04	11.94%	1,5857	5.35%	367,674	8.03%	
1987	2,350,900	4.13	241,958		241,958	5,345	0.63	13.88%	1.10	5.49%	1,7239	8.72%	417,116	13.45%	
1988	2,356,600	4.12	230,366		230,366	6,999	0.52	-16.92%	1.34	21.75%	1,7665	2.47%	406,951	-2.64%	
1989	2,375,100	4.10	260,946		260,946	7,375	0.67	27.79%	1.22	-9.01%	1,7933	1.51%	467,951	14.99%	
1990	2,403,000	4.08	274,692		274,692	9,847	0.80	20.74%	2.26	85.37%	1,9115	6.59%	525,084	12.21%	
1991	2,425,500	4.05	287,739		287,739	11,915	0.94	17.12%	3.66	52.18%	1,8529	-3.07%	533,164	1.54%	
1992	2,407,700	4.01	299,544		299,544	18,054	2.49	163.40%	3.56	-2.87%	1,7881	-3.50%	535,622	0.45%	
1993	2,430,800	3.97	312,087		312,087	37,797	2.92	17.63%	6.68	87.85%	1,8192	1.71%	567,762	6.00%	
1994	2,454,800	3.93	325,669		325,669	47,315	3.37	15.18%	7.75	16.05%	1,8964	4.24%	617,587	8.76%	
1995	2,483,000	3.88	342,926		342,926	66,498	3.95	1728%	10.45	34.70%	1,9950	5.20%	684,137	10.78%	
1996	2,509,900	3.82	357,310		357,310	75,536	3.82	-3.22%	13.12	25.62%	2,1379	7.16%	763,883	11.66%	
1997	2,534,300	3.76	376,140		376,140	94,201	3.56	-6.83%	15.39	17.27%	2,2047	3.12%	829,259	8.56%	
1998	2,557,000	3.70	393,944		393,944	98,951	4.47	23.34%	15.81	2.74%	2,3313	6.65%	926,295	11.70%	
1999	2,574,500	3.63	409,120		409,120	106,263	4.89	9.55%	16.67	5.42%	2,4625	4.73%	1,007,442	8.76%	
2000	2,589,300	3.56	423,799		423,799	118,685	6.41	31.08%	19.95	19.70%	2,4701	0.31%	1,046,822	3.91%	
2001	2,604,800	3.48	439,647		439,647	129,634	7.03	9.74%	23.16	16.11%	2,4234	-1.89%	1,085,426	1.78%	
2002	2,618,800	3.40	451,219		451,219	141,289	7.77	10.41%	23.21	2.00%	2,4448	0.88%	1,103,133	3.54%	
2003	2,633,400	3.31	464,768		464,768	158,578	9.62	23.92%	28.20	21.49%	2,3812	-2.60%	1,106,691	0.32%	
2004	2,648,081	3.25	480,825		480,825	175,862	10.11	5.07%	31.05	10.14%	2,4149	1.42%	1,161,169	4.92%	
2005	2,662,845	3.21	496,916		496,916	195,944	10.63	5.07%	34.21	10.14%	2,4422	1.13%	1,213,582	4.51%	
2006	2,677,690	3.17	513,114		513,114	218,273	11.16	5.07%	37.57	10.14%	2,4698	1.13%	1,267,271	4.42%	
2007	2,692,619	3.14	529,487		529,487	243,096	11.73	5.07%	41.50	10.14%	2,4976	1.13%	1,322,422	4.35%	
2008	2,707,630	3.12	546,090		546,090	270,689	12.33	5.07%	45.70	10.14%	2,5256	1.12%	1,379,209	4.29%	
2009	2,722,725	3.10	562,974		562,974	301,358	12.95	5.07%	50.34	10.14%	2,5539	1.12%	1,437,792	4.25%	
2010	2,737,905	3.09	580,183		580,183	335,441	13.61	5.07%	55.45	10.14%	2,5825	1.12%	1,498,325	4.21%	
2011	2,753,169	3.07	597,754		597,754	373,314	14.30	5.07%	61.07	10.14%	2,6114	1.12%	1,560,953	4.18%	
2012	2,768,518	3.07	615,725		615,725	415,395	15.02	5.07%	67.36	10.14%	2,6405	1.12%	1,625,816	4.16%	
2013	2,783,952	3.06	634,125		634,125	462,147	15.78	5.07%	74.99	10.14%	2,6899	1.11%	1,693,051	4.14%	
2014	2,799,473	3.05	652,984		652,984	514,084	16.58	5.07%	81.60	10.14%	2,6996	1.11%	1,762,794	4.12%	
2015	2,815,081	3.05	672,329		672,329	571,774	17.43	5.07%	89.88	10.14%	2,7296	1.11%	1,835,176	4.11%	
2016	2,830,775	3.04	692,186		692,186	635,851	18.31	5.07%	98.99	10.14%	2,7599	1.11%	1,910,333	4.10%	
2017	2,846,557	3.04	712,578		712,578	707,016	19.24	5.07%	109.03	10.14%	2,7904	1.11%	1,988,398	4.09%	
2018	2,862,426	3.04	733,530		733,530	786,048	20.21	5.07%	120.09	10.14%	2,8213	1.11%	2,069,508	4.08%	
2019	2,878,385	3.04	755,063		755,063	873,809	21.24	5.07%	132.27	10.14%	2,8525	1.11%	2,153,801	4.07%	
2020	2,894,432	3.04	777,200		777,200	971,257	22.32	5.07%	145.69	10.14%	2,8840	1.10%	2,241,418	4.07%	
2021	2,910,588	3.03	799,963		799,963	1,079,455	23.45	5.07%	160.46	10.14%	2,9158	1.10%	2,332,504	4.06%	
2022	2,926,795	3.03	823,373		823,373	1,199,581	24.64	5.07%	176.74	10.14%	2,9479	1.10%	2,427,208	4.06%	
2023	2,943,112	3.03	847,453		847,453	1,332,943	25.89	5.07%	194.66	10.14%	2,9803	1.10%	2,525,683	4.06%	
2024	2,959,520	3.03	872,224		872,224	1,480,990	27.20	5.07%	214.41	10.14%	3,0131	1.10%	2,628,087	4.05%	
avg growth	0.86%	-1.07%	3.71%		3.71%	22.46%	18.41%	#DIV/0!	20.29%	#DIV/0!	2.17%	#DIV/0!	5.95%		
1982-2003	0.56%	-0.35%	3.02%		3.02%	11.24%	5.07%	0.00%	10.14%	0.00%	1.11%	-1.27%	4.17%		
2004-2024															



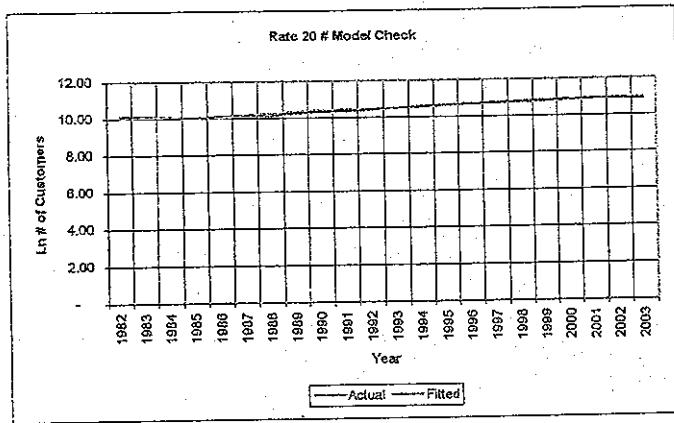






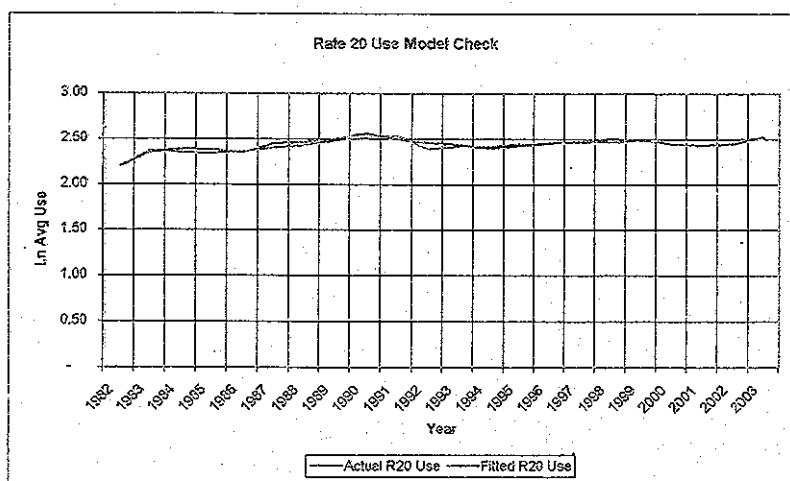
Year	Ln of Urban Population	Ln of interest rate	Ln of GDP	Ln No of R20 customers	Forecast of Ln of No. of R20 Customers	Forecast of No. of R20 Customers	Growth Rate
1982	6.96	(1.85)	12.03	10.15	10.02	22,528	
1983	6.98	(1.81)	12.05	10.15	10.09	24,094	6.95%
1984	7.00	(1.70)	12.04	10.05	10.11	24,483	1.62%
1985	7.02	(1.39)	11.99	10.04	10.04	22,827	-6.77%
1986	7.04	(1.41)	12.01	10.13	10.09	24,057	5.39%
1987	7.05	(1.38)	12.09	10.17	10.20	26,905	11.84%
1988	7.05	(1.39)	12.11	10.12	10.24	28,042	4.22%
1989	7.06	(1.33)	12.18	10.25	10.34	31,000	10.55%
1990	7.08	(1.07)	12.24	10.31	10.41	33,257	7.28%
1991	7.09	(1.03)	12.25	10.36	10.44	34,292	3.11%
1992	7.09	(0.78)	12.26	10.41	10.42	33,555	-2.15%
1993	7.10	(0.70)	12.29	10.47	10.47	35,223	4.97%
1994	7.12	(0.78)	12.30	10.59	10.52	37,147	5.46%
1995	7.13	(0.72)	12.32	10.64	10.58	39,219	5.58%
1996	7.15	(0.97)	12.32	10.67	10.65	42,079	7.25%
1997	7.16	(1.14)	12.31	10.74	10.69	43,782	4.05%
1998	7.18	(1.20)	12.30	10.79	10.71	44,738	2.18%
1999	7.19	(1.40)	12.31	10.83	10.77	47,638	6.48%
2000	7.20	(1.51)	12.32	10.86	10.82	49,874	4.69%
2001	7.21	(1.64)	12.33	10.88	10.88	52,882	6.03%
2002	7.22	(1.70)	12.34	10.89	10.92	55,206	4.40%
2003	7.23	(1.64)	12.37	10.87	10.96	57,496	4.15%
2004	7.24	(1.65)	12.39	10.92	11.01	60,263	4.81%
2005	7.25	(1.66)	12.41	10.97	11.06	63,552	5.46%
2006	7.26	(1.67)	12.44	11.02	11.11	67,021	5.46%
2007	7.27	(1.68)	12.46	11.08	11.17	70,680	5.46%
2008	7.28	(1.69)	12.48	11.13	11.22	74,538	5.46%
2009	7.29	(1.70)	12.51	11.18	11.27	78,666	5.46%
2010	7.30	(1.71)	12.53	11.24	11.33	82,897	5.46%
2011	7.31	(1.72)	12.56	11.29	11.38	87,422	5.46%
2012	7.32	(1.73)	12.58	11.34	11.43	92,194	5.46%
2013	7.33	(1.74)	12.61	11.40	11.48	97,226	5.46%
2014	7.34	(1.75)	12.63	11.45	11.54	102,533	5.46%
2015	7.35	(1.76)	12.66	11.50	11.59	108,130	5.46%
2016	7.37	(1.77)	12.68	11.55	11.64	114,032	5.46%
2017	7.38	(1.78)	12.71	11.61	11.70	120,257	5.46%
2018	7.39	(1.79)	12.73	11.66	11.75	126,821	5.46%
2019	7.40	(1.80)	12.76	11.71	11.80	133,743	5.46%
2020	7.41	(1.81)	12.78	11.77	11.86	141,044	5.46%
2021	7.42	(1.82)	12.81	11.82	11.91	148,743	5.46%
2022	7.43	(1.83)	12.83	11.87	11.96	156,862	5.46%
2023	7.44	(1.85)	12.86	11.93	12.02	165,424	5.46%
2024	7.45	(1.86)	12.88	11.98	12.07	174,454	5.46%

Coefficients for No. R20 Customers			
Constant	(19.343286)		
Urban Population	2.006610		
Interest Rate	(0.144304)		
GDP	1.257834		

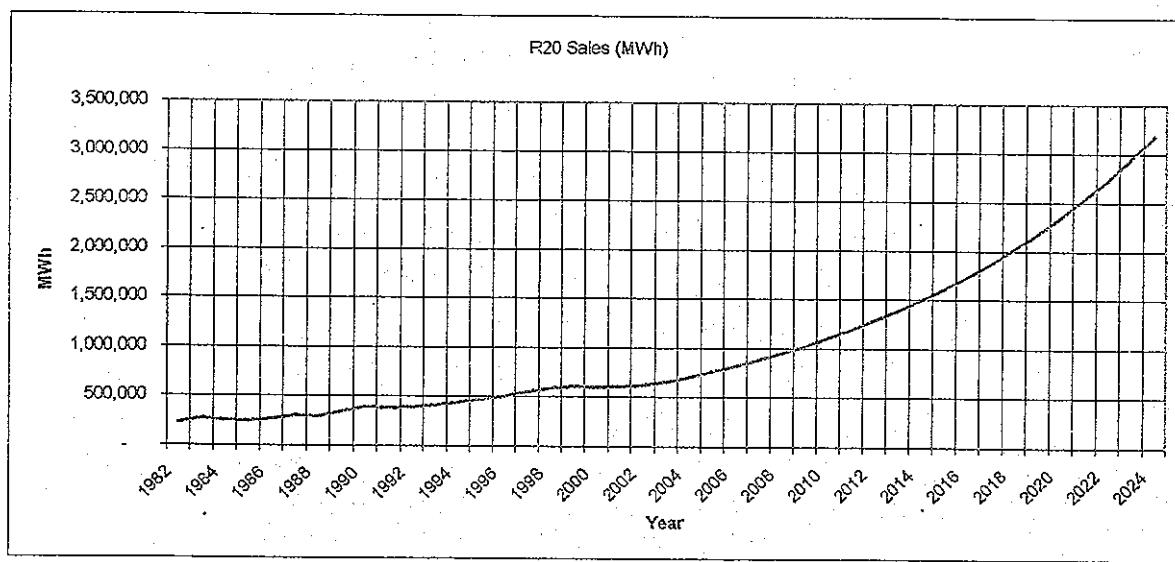


Year	Ln GDP	Ln Urban Population	Ln Real price of Electricity	Ln Average use per customer	Forecast of Ln Average Use	Forecast of Average Use (MWh)	Growth Rate
1982	12.03	6.96	(1.57)	2.19	2.19	8.97	
1983	12.05	6.98	(1.49)	2.35	2.38	10.76	19.90%
1984	12.04	7.00	(0.95)	2.39	2.35	10.45	-2.92%
1985	11.99	7.02	(0.81)	2.38	2.34	10.39	-0.55%
1986	12.01	7.04	(0.69)	2.34	2.36	10.59	1.94%
1987	12.09	7.05	(0.65)	2.45	2.40	11.07	4.48%
1988	12.11	7.05	(0.68)	2.46	2.43	11.33	2.40%
1989	12.18	7.06	(0.70)	2.49	2.48	11.92	5.21%
1990	12.24	7.08	(0.51)	2.56	2.51	12.29	3.08%
1991	12.25	7.09	(0.51)	2.49	2.53	12.61	2.65%
1992	12.26	7.09	0.75	2.46	2.39	10.91	-13.48%
1993	12.29	7.10	0.82	2.44	2.42	11.21	2.68%
1994	12.30	7.12	1.11	2.40	2.41	11.17	-0.31%
1995	12.32	7.13	1.20	2.42	2.44	11.49	2.84%
1996	12.32	7.15	1.31	2.45	2.46	11.67	1.55%
1997	12.31	7.16	1.45	2.47	2.46	11.72	0.49%
1998	12.30	7.18	1.59	2.50	2.46	11.76	0.33%
1999	12.31	7.19	1.73	2.49	2.47	11.85	0.78%
2000	12.32	7.20	1.87	2.44	2.48	11.92	0.56%
2001	12.33	7.21	2.01	2.43	2.49	12.02	0.86%
2002	12.34	7.22	2.15	2.45	2.49	12.10	0.61%
2003	12.37	7.23	2.29	2.52	2.50	12.23	1.12%
2004	12.39	7.24	2.34	2.54	2.52	12.49	2.08%
2005	12.41	7.25	2.39	2.56	2.55	12.77	2.29%
2006	12.44	7.26	2.44	2.58	2.57	13.06	2.29%
2007	12.46	7.27	2.49	2.61	2.59	13.36	2.29%
2008	12.48	7.28	2.54	2.63	2.62	13.67	2.29%
2009	12.51	7.29	2.59	2.65	2.64	13.98	2.29%
2010	12.53	7.30	2.64	2.67	2.66	14.30	2.29%
2011	12.56	7.31	2.69	2.70	2.68	14.63	2.29%
2012	12.58	7.32	2.73	2.72	2.71	14.96	2.29%
2013	12.61	7.33	2.78	2.74	2.73	15.30	2.29%
2014	12.63	7.34	2.83	2.77	2.75	15.65	2.29%
2015	12.66	7.35	2.88	2.79	2.77	16.01	2.29%
2016	12.68	7.37	2.93	2.81	2.80	16.38	2.29%
2017	12.71	7.38	2.98	2.83	2.82	16.75	2.29%
2018	12.73	7.39	3.03	2.86	2.84	17.14	2.29%
2019	12.76	7.40	3.08	2.88	2.86	17.53	2.29%
2020	12.78	7.41	3.13	2.90	2.89	17.93	2.29%
2021	12.81	7.42	3.18	2.92	2.91	18.34	2.29%
2022	12.83	7.43	3.23	2.95	2.93	18.76	2.29%
2023	12.86	7.44	3.28	2.97	2.95	19.19	2.29%
2024	12.88	7.45	3.33	2.99	2.98	19.63	2.29%

Coefficients for R20 Average Use	
Constant	(15.14834)
GDP	0.40826
Urban Population	1.77980
Electricity Price	(0.11664)

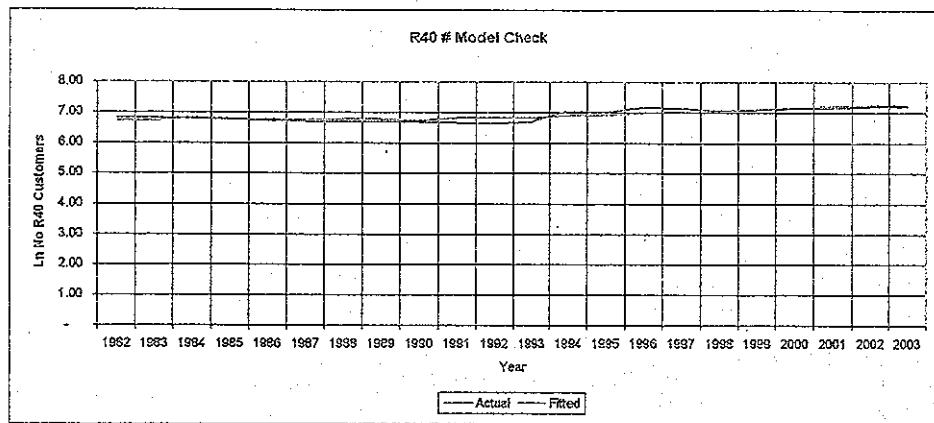


Year	Urban Population ('000)	Net Interest Rate (%)	GDP 1996 M\$	R20 Customers	Growth Rate	Real Price of LPG (J\$/lb)	LPG Price Growth Rate	R20 Real Price of Electricity	Growth Rate	R20 Avg. Energy Use (MWh/Cust)	Growth Rate	R20 Sales (MWh)	Growth Rate
1982	1,056	15.7%	167,393	25,496		0.58		0.21		8.97		228,612	
1983	1,079	16.4%	171,228	25,605	0.43%	0.61	5.2%	0.22	7.8%	10.48	16.75%	268,286	17.25%
1984	1,102	16.2%	169,765	23,224	-9.30%	0.78	27.8%	0.38	72.2%	10.93	4.30%	253,802	-5.40%
1985	1,121	24.8%	161,874	22,981	-1.05%	0.93	18.8%	0.45	15.6%	10.79	-1.25%	248,018	-2.28%
1986	1,137	24.4%	164,616	25,149	9.43%	1.04	11.9%	0.50	12.0%	10.43	-3.36%	262,283	5.75%
1987	1,149	25.2%	177,737	26,030	3.60%	1.10	5.5%	0.52	4.6%	11.68	11.05%	301,541	14.87%
1988	1,156	24.9%	181,622	24,783	-4.78%	1.34	21.8%	0.51	-3.4%	11.75	1.41%	291,162	-3.46%
1989	1,169	26.4%	194,411	28,259	14.03%	1.22	9.0%	0.48	-2.1%	12.11	3.10%	342,293	17.57%
1990	1,187	34.2%	205,652	30,018	6.22%	2.26	85.4%	0.60	20.8%	12.98	7.24%	389,933	13.92%
1991	1,203	35.6%	208,380	31,558	5.13%	3.66	62.2%	0.60	0.3%	12.08	-7.03%	381,121	-2.26%
1992	1,200	48.0%	211,631	33,137	5.00%	3.66	-2.9%	2.11	251.9%	11.70	-3.09%	387,834	1.76%
1993	1,217	49.6%	217,050	35,138	6.04%	6.68	87.8%	2.28	7.9%	11.48	-1.91%	403,395	4.01%
1994	1,235	45.8%	219,187	39,611	12.73%	7.75	16.1%	3.05	32.7%	11.01	-4.08%	436,293	8.16%
1995	1,255	48.6%	224,665	41,673	5.21%	10.45	34.7%	3.31	9.5%	11.29	2.51%	470,531	7.85%
1996	1,275	37.8%	225,129	43,229	3.73%	13.12	26.6%	3.71	12.0%	11.58	2.61%	500,834	6.44%
1997	1,293	31.9%	222,707	46,129	6.71%	15.39	17.3%	4.27	16.0%	11.84	2.16%	545,956	9.01%
1998	1,311	30.1%	220,172	48,453	5.04%	15.81	2.7%	4.91	15.0%	12.16	2.72%	589,070	7.90%
1999	1,326	24.6%	222,083	50,282	3.77%	16.67	5.4%	5.64	15.0%	12.05	-0.87%	605,991	2.87%
2000	1,340	22.2%	223,770	51,925	3.27%	19.95	19.7%	6.49	15.0%	11.52	-4.39%	588,314	-1.27%
2001	1,354	19.5%	227,070	53,358	2.76%	23.16	16.1%	7.46	16.0%	11.33	-1.64%	604,770	1.08%
2002	1,368	18.3%	229,536	53,526	0.31%	23.21	0.2%	8.58	16.0%	11.55	1.88%	618,071	2.20%
2003	1,382	19.3%	234,730	52,579	-1.77%	28.20	21.5%	9.87	15.0%	12.41	7.45%	652,358	5.55%
2004	1,397	18.1%	239,424	55,109	4.81%	31.06	10.1%	10.37	5.1%	12.67	2.08%	697,983	7.00%
2005	1,411	18.9%	245,410	58,117	5.46%	34.21	10.1%	10.90	5.1%	12.96	2.28%	752,930	7.87%
2006	1,426	18.7%	251,645	61,289	5.46%	37.67	10.1%	11.45	5.1%	13.25	2.28%	812,191	7.87%
2007	1,440	18.6%	257,834	64,635	5.46%	41.50	10.1%	12.03	5.1%	13.65	2.29%	876,116	7.87%
2008	1,455	18.4%	264,280	68,163	5.46%	45.70	10.1%	12.64	5.1%	13.86	2.29%	945,073	7.87%
2009	1,470	18.2%	270,667	71,884	5.46%	50.34	10.1%	13.28	5.1%	14.18	2.29%	1,019,457	7.87%
2010	1,486	18.0%	277,659	76,807	5.46%	55.45	10.1%	13.98	5.1%	14.51	2.28%	1,099,695	7.87%
2011	1,501	17.8%	284,600	79,945	5.46%	61.07	10.1%	14.66	5.1%	14.84	2.29%	1,186,249	7.87%
2012	1,516	17.6%	291,715	84,309	5.46%	67.26	10.1%	15.41	5.1%	15.18	2.29%	1,279,615	7.87%
2013	1,532	17.5%	299,008	88,911	5.46%	74.09	10.1%	16.19	5.1%	15.62	2.29%	1,380,330	7.87%
2014	1,548	17.3%	306,483	93,764	5.46%	81.60	10.1%	17.01	5.1%	15.88	2.29%	1,488,971	7.87%
2015	1,564	17.1%	314,146	98,883	5.46%	88.88	10.1%	17.87	5.1%	16.24	2.29%	1,606,164	7.87%
2016	1,580	17.0%	321,999	104,280	5.46%	98.99	10.1%	18.78	5.1%	16.61	2.29%	1,732,580	7.87%
2017	1,596	16.8%	330,049	109,972	5.46%	109.03	10.1%	19.73	5.1%	16.99	2.29%	1,868,947	7.87%
2018	1,613	16.6%	339,300	115,975	5.46%	120.09	10.1%	20.73	5.1%	17.38	2.29%	2,016,046	7.87%
2019	1,630	16.5%	346,758	122,305	5.46%	132.27	10.1%	21.78	5.1%	17.78	2.29%	2,174,723	7.87%
2020	1,646	16.3%	355,427	128,982	5.46%	145.69	10.1%	22.89	5.1%	18.19	2.29%	2,345,889	7.87%
2021	1,664	16.1%	364,313	136,022	5.46%	160.46	10.1%	24.05	5.1%	18.60	2.29%	2,530,527	7.87%
2022	1,681	16.0%	373,420	143,447	5.46%	176.74	10.1%	25.27	5.1%	19.03	2.29%	2,729,697	7.87%
2023	1,698	15.8%	382,756	151,277	5.46%	194.66	10.1%	26.55	5.1%	19.46	2.29%	2,944,543	7.87%
2024	1,716	15.6%	392,325	159,534	5.46%	214.41	10.1%	27.90	5.1%	19.81	2.28%	3,176,300	7.87%
avg growth 1982-2003	1.29%	0.98%	1,626%	3.51%		20.29%		20.17%		1.55%		5.12%	
avg growth 2004-2024	1.03%	-1.00%	2.50%	5.46%		10.14%		5.07%		2.29%		7.87%	



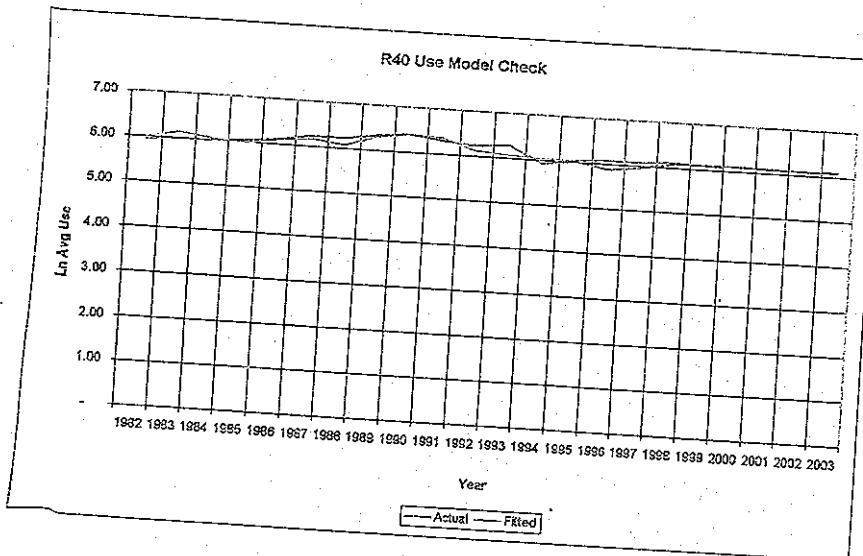
Year	Ln GDP (1996 J\$ M)	Ln Net Interest Rate (%)	Ln Avg Exchange Rate (J\$/US\$)	Ln Base No. of rate 40 customers	Forecasted Ln No. of Rate 40 Customers	Base No. of rate 40 customers	Growth Rate
1982	12.03	(1.85)	0.56	6.83	6.71	823	
1983	12.05	(1.81)	0.58	6.82	6.71	819	-0.55%
1984	12.04	(1.70)	1.57	6.79	6.83	926	13.14%
1985	11.99	(1.39)	1.70	6.77	6.74	849	-8.33%
1986	12.01	(1.41)	1.70	6.74	6.75	857	0.87%
1987	12.09	(1.38)	1.71	6.72	6.76	860	0.44%
1988	12.11	(1.39)	1.70	6.70	6.77	867	0.77%
1989	12.18	(1.33)	1.75	6.70	6.77	869	0.16%
1990	12.24	(1.07)	1.97	6.68	6.73	838	-3.49%
1991	12.25	(1.03)	2.55	6.67	6.81	909	8.44%
1992	12.26	(0.78)	3.14	6.66	6.83	922	1.43%
1993	12.29	(0.70)	3.25	6.71	6.82	920	-0.16%
1994	12.30	(0.78)	3.51	7.05	6.89	986	7.15%
1995	12.32	(0.72)	3.57	7.01	6.89	982	-0.43%
1996	12.32	(0.97)	3.61	7.19	6.98	1,071	9.03%
1997	12.31	(1.14)	3.57	7.15	7.02	1,121	4.65%
1998	12.30	(1.20)	3.60	7.07	7.04	1,145	2.19%
1999	12.31	(1.40)	3.67	7.08	7.12	1,236	7.91%
2000	12.32	(1.51)	3.77	7.15	7.17	1,299	5.16%
2001	12.33	(1.64)	3.83	7.18	7.22	1,372	5.60%
2002	12.34	(1.70)	3.89	7.21	7.25	1,415	3.13%
2003	12.37	(1.64)	4.06	7.23	7.27	1,435	1.47%
2004	12.39	(1.65)	4.14	7.29	7.29	1,463	1.88%
2005	12.41	(1.66)	4.21	7.31	7.31	1,490	1.89%
2006	12.44	(1.67)	4.27	7.32	7.32	1,518	1.82%
2007	12.46	(1.68)	4.33	7.34	7.34	1,544	1.75%
2008	12.48	(1.69)	4.39	7.36	7.36	1,570	1.69%
2009	12.51	(1.70)	4.44	7.38	7.38	1,596	1.62%
2010	12.53	(1.71)	4.49	7.39	7.39	1,621	1.56%
2011	12.56	(1.72)	4.53	7.41	7.41	1,645	1.51%
2012	12.58	(1.73)	4.57	7.42	7.42	1,669	1.45%
2013	12.61	(1.74)	4.61	7.43	7.43	1,692	1.40%
2014	12.63	(1.75)	4.65	7.45	7.45	1,715	1.35%
2015	12.66	(1.76)	4.68	7.46	7.46	1,737	1.30%
2016	12.68	(1.77)	4.71	7.47	7.47	1,759	1.26%
2017	12.71	(1.78)	4.73	7.48	7.48	1,781	1.22%
2018	12.73	(1.79)	4.76	7.50	7.50	1,802	1.18%
2019	12.76	(1.80)	4.78	7.51	7.51	1,822	1.14%
2020	12.78	(1.81)	4.80	7.52	7.52	1,842	1.10%
2021	12.81	(1.82)	4.82	7.53	7.53	1,862	1.07%
2022	12.83	(1.83)	4.83	7.54	7.54	1,881	1.03%
2023	12.86	(1.85)	4.85	7.55	7.55	1,900	1.00%
2024	12.88	(1.86)	4.86	7.56	7.56	1,918	0.97%

Coefficients for No. R40 Customers			
Constant	3.780739		
GDP (1996 J\$ M)	0.187564		
Net Interest Rate (%)	(0.317798)		
Avg Exchange Rate (J\$/US\$)	0.159138		

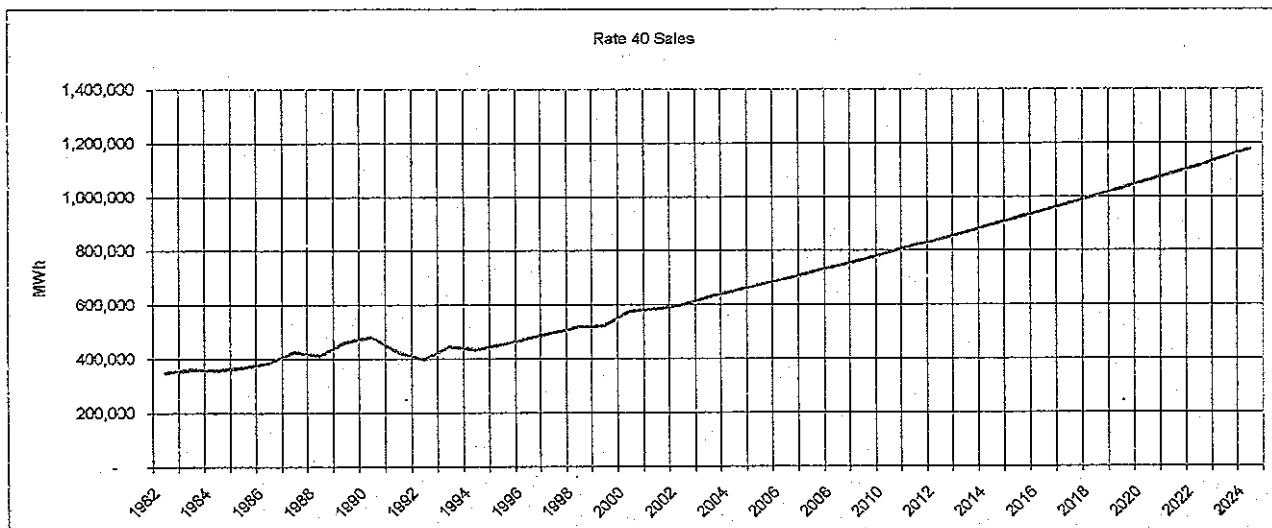


year	Ln Tourist Stopover	Ln Urban Population ('000)	Ln Real price of electricity to rate 40 (J\$/kWh)	Ln Average Use (MWh/Cust)	Forecasted Ln Average Use	Forecasted Average Use	Growth Rate
1982	13.06	6.96	(1.57)	5.93	5.99	398	
1983	13.25	6.98	(1.49)	5.98	6.13	461	16.05%
1984	13.31	7.00	(0.95)	6.00	6.04	421	-8.77%
1985	13.26	7.02	(0.83)	6.05	5.99	398	-5.36%
1986	13.41	7.04	(0.77)	6.11	6.10	446	11.97%
1987	13.51	7.05	(0.68)	6.24	6.17	476	6.79%
1988	13.38	7.05	(0.65)	6.23	6.07	432	-9.32%
1989	13.63	7.06	(0.75)	6.34	6.30	543	25.71%
1990	13.80	7.08	(0.56)	6.40	6.39	596	9.75%
1991	13.82	7.09	(0.33)	6.29	6.33	572	-4.01%
1992	13.87	7.09					
1993	13.92	7.10	0.51	6.23	6.12	456	-20.26%
1994	13.91	7.12	0.89	6.29	6.06	429	-6.07%
1995	13.95	7.13	1.03	5.93	6.03	416	-2.97%
1996	13.97	7.15	1.20	6.01	6.03	417	0.31%
1997	13.99	7.16	1.17	5.88	6.07	434	4.13%
1998	14.02	7.16	1.30	5.96	6.07	433	-0.20%
1999	14.04	7.18	1.27	6.09	6.12	454	4.70%
2000	14.10	7.20	1.42	6.08	6.10	446	-1.67%
2001	14.06	7.21	1.62	6.11	6.10	445	-0.39%
2002	14.05	7.22	1.69	6.10	6.07	431	-3.09%
2003	14.12	7.23	1.70	6.09	6.07	433	0.40%
2004	14.14	7.24	1.87	6.11	6.08	436	0.71%
2005	14.16	7.25	1.92	6.13	6.09	443	1.64%
2006	14.19	7.26	1.97	6.15	6.11	450	1.64%
2007	14.21	7.27	2.02	6.16	6.13	457	1.64%
2008	14.23	7.28	2.07	6.18	6.14	465	1.64%
2009	14.26	7.29	2.12	6.20	6.16	473	1.64%
2010	14.28	7.30	2.17	6.21	6.17	480	1.64%
2011	14.31	7.31	2.22	6.23	6.19	488	1.64%
2012	14.33	7.32	2.27	6.24	6.21	496	1.64%
2013	14.35	7.33	2.32	6.26	6.22	504	1.64%
2014	14.38	7.34	2.37	6.28	6.24	513	1.64%
2015	14.40	7.35	2.42	6.29	6.26	521	1.64%
2016	14.42	7.37	2.47	6.31	6.27	530	1.64%
2017	14.45	7.38	2.52	6.33	6.29	538	1.64%
2018	14.47	7.39	2.57	6.34	6.30	547	1.64%
2019	14.50	7.40	2.62	6.36	6.32	556	1.64%
2020	14.52	7.41	2.67	6.37	6.34	565	1.64%
2021	14.54	7.42	2.72	6.39	6.35	574	1.64%
2022	14.57	7.43	2.76	6.41	6.37	584	1.64%
2023	14.59	7.44	2.81	6.42	6.39	593	1.64%
2024	14.61	7.45	2.86	6.44	6.40	603	1.64%
			2.91	6.46	6.42	613	1.64%

Coefficients for No. R40 Customers
 Constant (13.593773)
 GDP (1996 J\$ M) 0.744842
 Net Interest Rate (%) 1.346080
 Avg Exchange Rate (J\$/USS) (0.308274)



Year	GDP (1996 J\$ M)	Net Interest Rate (%)	Avg Exchange Rate (J\$/US\$)	Base No. of rate 40 customers	Growth Rate	Incremental Customers (Reclass, etc.)	Avg no of rate 40 customers	Growth Rate	Tourist Stopover	Urban Population ('000)	Real price of electricity to rate 40 (J\$/kWh)	Average Use (MWh/Cust)	Growth Rate	Rate 40 Sales (MMJ\$)	Growth Rate
1982	167,393	15.7%	1.75	923			923		497,763	1,058	0.21	377.28		348,231	
1983	171,228	16.4%	1.76	914	-1.0%		914	-1.0%	566,151	1,079	0.22	393.77	4.37%	359,908	3.4%
1984	169,765	18.2%	4.82	888	-2.8%		888	-2.8%	603,436	1,102	0.38	401.92	2.07%	356,505	-0.8%
1985	161,674	24.8%	5.50	668	-2.3%		888	-2.3%	571,713	1,121	0.44	422.05	5.01%	366,338	2.6%
1986	164,616	24.4%	5.50	844	-2.8%		844	-2.8%	663,593	1,137	0.46	452.41	7.19%	381,835	4.2%
1987	177,737	25.2%	5.51	827	-2.0%		827	-2.0%	738,827	1,149	0.51	514.04	13.62%	425,112	11.3%
1988	181,622	24.9%	5.49	812	-1.8%		812	-1.8%	648,873	1,158	0.52	506.67	-1.39%	411,578	-3.2%
1989	184,411	26.4%	5.75	813	0.1%		813	0.1%	829,288	1,169	0.47	565.75	11.62%	459,958	11.8%
1990	206,652	34.2%	7.18	798	-1.8%		798	-1.8%	589,275	1,187	0.57	589.19	5.31%	478,163	4.0%
1991	208,580	33.6%	12.85	787	-1.4%		787	-1.4%	1,006,804	1,203	0.72	541.51	-9.63%	426,166	-10.9%
1992	211,831	48.0%	23.01	777	-1.3%		777	-1.3%	1,057,182	1,200	1.67	510.12	-5.80%	396,366	-7.0%
1993	217,050	49.6%	25.68	820	5.5%		820	5.5%	1,105,382	1,217	2.43	541.23	6.10%	443,610	12.0%
1994	219,187	45.8%	33.35	1155	40.9%		1155	40.9%	1,098,287	1,235	2.81	374.42	-30.62%	432,623	-2.5%
1995	224,555	48.6%	35.54	1108	-4.0%		1108	-4.0%	1,147,001	1,255	3.32	407.27	8.77%	451,657	4.4%
1996	225,129	37.8%	37.02	1323	19.3%		1323	19.3%	1,162,449	1,275	3.21	356.43	-12.48%	471,563	4.4%
1997	222,707	31.9%	35.59	1280	-3.3%		1280	-3.3%	1,182,194	1,283	3.56	387.04	8.59%	495,405	5.1%
1998	220,172	30.1%	36.68	1174	-6.3%		1174	-6.3%	1,225,287	1,311	3.58	440.44	13.89%	517,076	4.4%
1999	222,083	24.6%	39.33	1192	1.5%		1192	1.5%	1,246,397	1,325	4.16	435.74	-0.84%	520,592	0.7%
2000	223,770	22.2%	43.32	1269	6.5%		1269	6.5%	1,322,690	1,340	5.07	451.91	3.47%	573,476	10.2%
2001	227,070	19.5%	46.19	1308	3.1%		1308	3.1%	1,276,516	1,354	5.40	445.97	-1.31%	583,333	1.7%
2002	229,536	18.3%	48.73	1356	3.7%		1355	3.7%	1,266,366	1,368	5.48	440.45	-1.24%	597,253	2.4%
2003	234,730	19.3%	58.24	1384	2.1%		1384	2.1%	1,350,285	1,382	6.52	452.08	2.64%	625,681	4.8%
2004	239,424	19.1%	62.67	1410	1.8%	0	1410	1.8%	1,382,718	1,397	6.85	459.50	1.64%	647,872	3.5%
2005	245,410	18.6%	67.13	1437	1.8%	0	1437	1.8%	1,415,930	1,411	7.13	467.04	1.64%	670,987	3.6%
2006	251,545	18.7%	71.58	1483	1.8%	0	1483	1.8%	1,448,839	1,426	7.56	474.70	1.64%	694,396	3.5%
2007	257,834	18.6%	76.00	1488	1.8%	0	1488	1.8%	1,484,768	1,440	7.94	482.49	1.64%	718,144	3.4%
2008	264,280	18.4%	80.36	1514	1.7%	0	1514	1.7%	1,520,429	1,455	8.35	490.40	1.64%	742,231	3.4%
2009	270,887	18.2%	84.65	1538	1.6%	0	1538	1.6%	1,556,948	1,470	8.77	498.45	1.64%	766,652	3.3%
2010	277,659	18.0%	88.84	1562	1.6%	0	1562	1.6%	1,594,345	1,485	9.21	506.63	1.64%	791,410	3.2%
2011	284,600	17.8%	92.91	1586	1.5%	0	1586	1.5%	1,632,640	1,501	9.58	514.94	1.64%	816,511	3.2%
2012	291,715	17.6%	96.84	1609	1.5%	0	1609	1.5%	1,671,855	1,515	10.17	523.39	1.64%	841,956	3.1%
2013	299,003	17.5%	100.61	1631	1.4%	0	1631	1.4%	1,712,012	1,532	10.69	531.88	1.64%	867,752	3.1%
2014	306,483	17.3%	104.21	1653	1.4%	0	1653	1.4%	1,753,133	1,548	11.23	540.70	1.64%	893,805	3.0%
2015	314,146	17.1%	107.62	1675	1.3%	0	1675	1.3%	1,795,242	1,564	11.80	549.57	1.64%	920,418	3.0%
2016	321,999	17.0%	110.84	1696	1.3%	0	1696	1.3%	1,838,363	1,580	12.40	558.59	1.64%	947,302	2.5%
2017	330,049	16.8%	113.85	1717	1.2%	0	1717	1.2%	1,882,519	1,596	13.03	567.76	1.64%	974,561	2.9%
2018	338,300	16.6%	116.66	1737	1.2%	0	1737	1.2%	1,927,735	1,613	13.69	577.07	1.64%	1,002,202	2.8%
2019	346,758	16.5%	119.24	1756	1.1%	0	1756	1.1%	1,974,038	1,630	14.38	586.54	1.64%	1,030,236	2.8%
2020	355,427	16.3%	121.61	1776	1.1%	0	1776	1.1%	2,021,453	1,646	15.11	596.16	1.64%	1,058,668	2.8%
2021	364,313	16.1%	123.75	1795	1.1%	0	1795	1.1%	2,070,007	1,664	15.88	605.84	1.64%	1,087,511	2.7%
2022	373,420	16.0%	125.67	1813	1.0%	0	1813	1.0%	2,119,727	1,681	16.68	615.68	1.64%	1,116,772	2.7%
2023	382,756	15.8%	127.37	1831	1.0%	0	1831	1.0%	2,170,642	1,698	17.53	625.99	1.64%	1,146,461	2.7%
2024	392,325	15.6%	128.86	1849	1.0%	0	1849	1.0%	2,222,779	1,716	18.42	636.26	1.64%	1,176,588	2.6%
avg growth 1982-2003	1.62%	0.98%	18.16%	1,95%		#DIV/0!	1.95%		5.18%	1.29%	17.82%	0.87%		2.83%	
avg growth 2004-2024	2.50%	-1.00%	3.67%	1.37%		#DIV/0!	1.37%		2.40%	1.03%	5.07%	1.64%		3.03%	

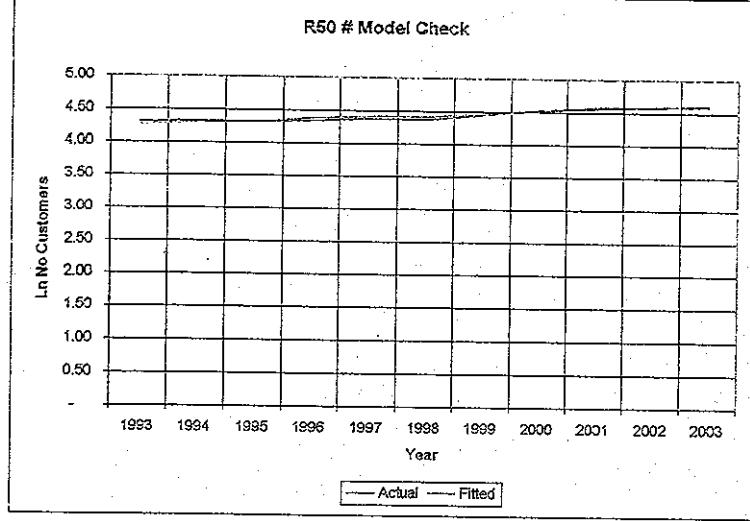


Year	Ln GDP (1996 J\$ M)	Ln Net Interest Rate (%)	Ln Avg Exchange Rate (J\$/US\$)	Ln Base No. of rate 50 customers	Forecasted Ln No. of Rate 50 Customers	Base No. of rate 50 customers	Growth Rate
1982	12.03	(1.85)	0.56	3.09	4.22	68	
1983	12.05	(1.81)	0.58	3.09	4.24	69	1.61%
1984	12.04	(1.70)	1.57	3.09	4.21	67	-3.02%
1985	11.99	(1.39)	1.70	3.09	4.07	59	-12.39%
1986	12.01	(1.41)	1.70	3.18	4.10	60	2.48%
1987	12.09	(1.38)	1.71	3.18	4.18	66	8.86%
1988	12.11	(1.39)	1.70	3.14	4.21	68	2.97%
1989	12.18	(1.33)	1.75	3.14	4.28	72	7.07%
1990	12.24	(1.07)	1.97	3.43	4.29	73	1.22%
1991	12.25	(1.03)	2.55	4.06	4.30	73	0.31%
1992	12.26	(0.78)	3.14	4.23	4.26	71	-3.86%
1993	12.29	(0.70)	3.25	4.30	4.27	72	1.20%
1994	12.30	(0.78)	3.51	4.33	4.30	74	3.33%
1995	12.32	(0.72)	3.57	4.32	4.32	75	1.53%
1996	12.32	(0.97)	3.61	4.34	4.38	80	6.60%
1997	12.31	(1.14)	3.57	4.38	4.41	82	2.81%
1998	12.30	(1.20)	3.60	4.37	4.41	82	0.08%
1999	12.31	(1.40)	3.67	4.45	4.47	87	6.09%
2000	12.32	(1.51)	3.77	4.53	4.50	90	3.58%
2001	12.33	(1.64)	3.83	4.57	4.55	95	5.09%
2002	12.34	(1.70)	3.89	4.57	4.58	96	2.92%
2003	12.37	(1.64)	4.06	4.62	4.60	99	1.44%
2004	12.39	(1.65)	4.14	4.62	4.62	102	2.71%
2005	12.41	(1.66)	4.21	4.66	4.66	105	3.32%
2006	12.44	(1.67)	4.27	4.69	4.69	109	3.31%
2007	12.46	(1.68)	4.33	4.72	4.72	112	3.31%
2008	12.48	(1.69)	4.39	4.75	4.75	116	3.31%
2009	12.51	(1.70)	4.44	4.79	4.79	120	3.31%
2010	12.53	(1.71)	4.49	4.82	4.82	124	3.31%
2011	12.56	(1.72)	4.53	4.85	4.85	128	3.30%
2012	12.58	(1.73)	4.57	4.88	4.88	132	3.30%
2013	12.61	(1.74)	4.61	4.92	4.92	137	3.30%
2014	12.63	(1.75)	4.65	4.95	4.95	141	3.30%
2015	12.66	(1.76)	4.68	4.98	4.98	146	3.30%
2016	12.68	(1.77)	4.71	5.01	5.01	151	3.30%
2017	12.71	(1.78)	4.73	5.05	5.05	155	3.29%
2018	12.73	(1.79)	4.76	5.08	5.08	161	3.29%
2019	12.76	(1.80)	4.78	5.11	5.11	166	3.29%
2020	12.78	(1.81)	4.80	5.14	5.14	171	3.29%
2021	12.81	(1.82)	4.82	5.18	5.18	177	3.29%
2022	12.83	(1.83)	4.83	5.21	5.21	183	3.29%
2023	12.86	(1.85)	4.85	5.24	5.24	189	3.29%
2024	12.88	(1.85)	4.86	5.27	5.27	195	3.29%

Coefficients for No. R50 Customers

Constant	(10.762155)
GDP (1996 J\$ M)	1.208104
Net Interest Rate (%)	(0.242259)
Avg Exchange Rate (J\$/US\$)	0.006260

R50 # Model Check

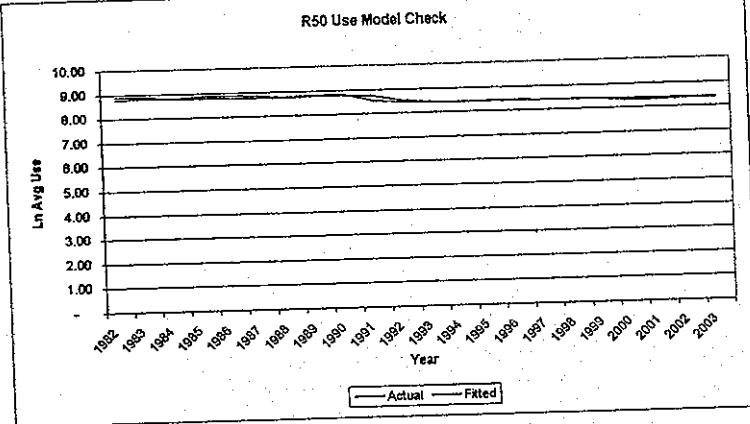


Year	Ln Urban Population	Ln Real price of electricity to rate 50 (J\$/kWh)	Ln Average Use (MWh/Cust)	Forecasted Ln Average Use	Forecasted Average Use	Growth Rate
1982	13.87	(1.57)	8.75	8.86	7,075	
1983	13.89	(1.49)	8.80	8.87	7,146	1.00%
1984	13.91	(0.95)	8.78	8.76	6,359	-11.01%
1985	13.93	(0.83)	8.85	8.75	6,299	-0.95%
1986	13.94	(0.77)	8.87	8.75	6,327	0.45%
1987	13.95	(0.68)	8.84	8.74	6,262	-1.04%
1988	13.96	(0.65)	8.76	8.74	6,263	0.02%
1989	13.97	(0.75)	8.84	8.78	6,532	4.30%
1990	13.99	(0.56)	8.82	8.75	6,337	-2.98%
1991	14.00	(0.40)	8.51	8.73	6,175	-2.56%
1992	14.00	0.40	8.45	8.51	4,973	-19.47%
1993	14.01	0.81	8.42	8.42	4,543	-8.64%
1994	14.03	0.95	8.38	8.40	4,466	-1.69%
1995	14.04	1.12	8.42	8.38	4,368	-2.21%
1996	14.06	1.01	8.44	8.43	4,586	5.01%
1997	14.07	1.20	8.40	8.40	4,445	-3.07%
1998	14.09	1.24	8.42	8.41	4,478	0.73%
1999	14.10	1.34	8.40	8.40	4,433	-0.99%
2000	14.11	1.53	8.30	8.36	4,272	-3.64%
2001	14.12	1.59	8.29	8.36	4,265	-0.15%
2002	14.13	1.60	8.38	8.37	4,313	1.11%
2003	14.14	1.78	8.41	8.34	4,174	0.07%
2004	14.15	1.83	8.41	8.34	4,177	0.07%
2005	14.16	1.88	8.41	8.34	4,180	0.07%
2006	14.17	1.93	8.41	8.34	4,183	0.07%
2007	14.18	1.98	8.41	8.34	4,187	0.07%
2008	14.19	2.03	8.41	8.34	4,190	0.07%
2009	14.20	2.08	8.41	8.34	4,193	0.07%
2010	14.21	2.13	8.41	8.34	4,196	0.07%
2011	14.22	2.18	8.41	8.34	4,199	0.07%
2012	14.23	2.22	8.41	8.34	4,202	0.07%
2013	14.24	2.27	8.41	8.34	4,205	0.07%
2014	14.25	2.32	8.41	8.34	4,208	0.07%
2015	14.26	2.37	8.41	8.34	4,211	0.07%
2016	14.27	2.42	8.42	8.35	4,214	0.07%
2017	14.28	2.47	8.42	8.35	4,218	0.07%
2018	14.29	2.52	8.42	8.35	4,221	0.07%
2019	14.30	2.57	8.42	8.35	4,224	0.07%
2020	14.31	2.62	8.42	8.35	4,227	0.07%
2021	14.32	2.67	8.42	8.35	4,230	0.07%
2022	14.33	2.72	8.42	8.35	4,233	0.07%
2023	14.35	2.77	8.42	8.35	4,236	0.07%
2024	14.36	2.82	8.42	8.35	4,236	0.07%

Coefficients for R50 Average Use

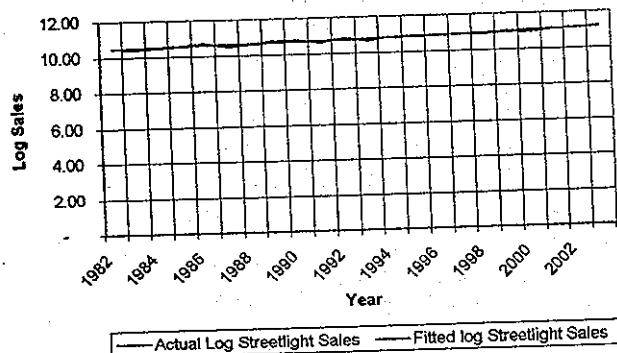
Constant (10.367395)
 Urban Population 1.356401
 Real price of electricity to rate 50 (J\$/kWh) (0.267071)

R50 Use Model Check



year	Log Urban Population	Log Household Size	Actual Log Streetlight Sales	Fitted log Streetlight Sales	Forecast Streetlight Sales	Growth
1982	13.87	1.42	10.45	10.43	33,780	
1983	13.89	1.42	10.40	10.47	35,324	4.57%
1984	13.91	1.42	10.49	10.51	36,855	4.33%
1985	13.93	1.42	10.56	10.55	38,185	3.61%
1986	13.94	1.42	10.68	10.58	39,344	3.04%
1987	13.95	1.42	10.49	10.60	40,206	2.19%
1988	13.96	1.42	10.57	10.62	40,793	1.46%
1989	13.97	1.41	10.76	10.64	41,874	2.65%
1990	13.99	1.41	10.76	10.68	43,366	3.56%
1991	14.00	1.40	10.61	10.71	44,786	3.27%
1992	14.00	1.39	10.84	10.71	44,867	0.18%
1993	14.01	1.38	10.64	10.75	46,547	3.75%
1994	14.03	1.37	10.83	10.79	48,368	3.91%
1995	14.04	1.36	10.85	10.83	50,475	4.36%
1996	14.06	1.34	10.87	10.87	52,664	4.34%
1997	14.07	1.33	10.89	10.91	54,890	4.23%
1998	14.09	1.31	10.91	10.95	57,193	4.20%
1999	14.10	1.29	10.98	10.99	59,417	3.89%
2000	14.11	1.27	10.94	11.03	61,686	3.82%
2001	14.12	1.25	11.09	11.07	64,142	3.98%
2002	14.13	1.22	11.12	11.11	66,726	4.03%
2003	14.14	1.20	11.20	11.15	69,553	4.24%
2004	14.15	1.18	11.23	11.18	72,017	3.54%
2005	14.16	1.16	11.26	11.22	74,355	3.25%
2006	14.17	1.15	11.29	11.25	76,595	3.01%
2007	14.18	1.14	11.32	11.27	78,760	2.83%
2008	14.19	1.14	11.35	11.30	80,868	2.68%
2009	14.20	1.13	11.37	11.33	82,937	2.56%
2010	14.21	1.13	11.40	11.35	84,981	2.46%
2011	14.22	1.12	11.42	11.37	87,010	2.39%
2012	14.23	1.12	11.45	11.40	89,035	2.33%
2013	14.24	1.12	11.47	11.42	91,064	2.28%
2014	14.25	1.12	11.49	11.44	93,105	2.24%
2015	14.26	1.11	11.51	11.46	95,162	2.21%
2016	14.27	1.11	11.53	11.48	97,242	2.19%
2017	14.28	1.11	11.55	11.51	99,348	2.17%
2018	14.29	1.11	11.58	11.53	101,483	2.15%
2019	14.30	1.11	11.60	11.55	103,652	2.14%
2020	14.31	1.11	11.62	11.57	105,857	2.13%
2021	14.32	1.11	11.64	11.59	108,100	2.12%
2022	14.33	1.11	11.66	11.61	110,383	2.11%
2023	14.35	1.11	11.68	11.63	112,709	2.11%
2024	14.36	1.11	11.70	11.65	115,080	2.10%

Streetlight Model Test



SUMMARY OUTPUT

Regression Statistics
 Multiple R 0.95088
 R Square 0.90416
 Adjusted R Square 0.89408
 Standard Error 0.07368
 Observations 22.00000

		df	SS	MS	F	Significance F
Regression		2.00000	0.97321	0.48661	#####	0.00000
Residual		19.00000	0.10315	0.00543		
Total		21.00000	1.07637			
			Standard	t Stat	P-value	Lower 95%
Intercept	(16.28613)	8.36226	(1.94757)	#####	(33.78854)	1.21629
Log Urban Popula	2.00799	0.54198	3.70488	#####	0.87360	3.14237
Log Household Si	(0.79843)	0.60392	(1.32207)	#####	(2.06246)	0.46560
					Upper	Upper

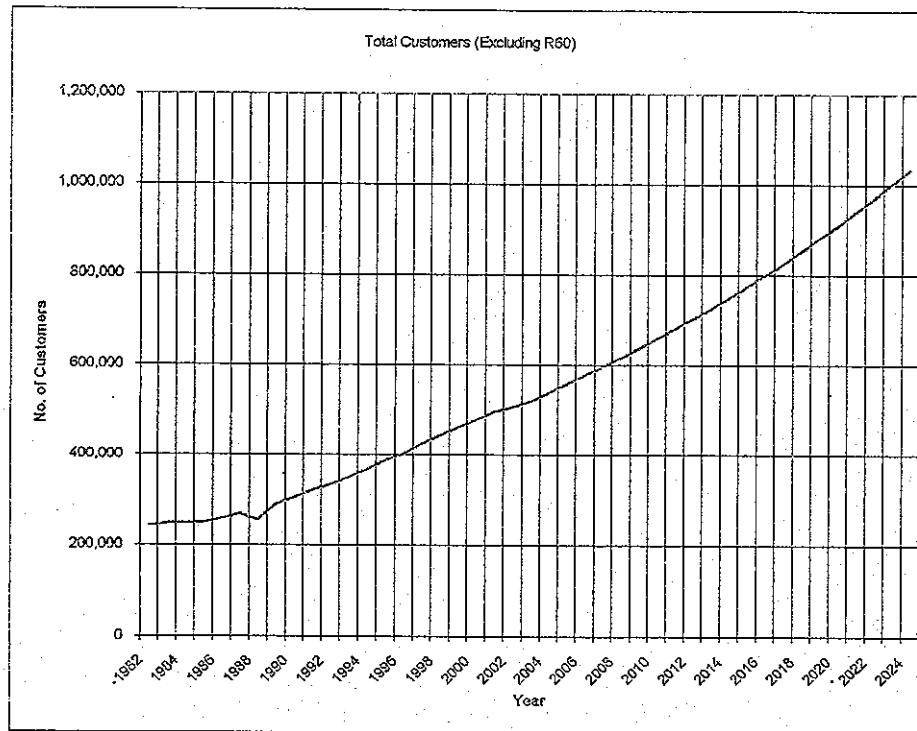
RESIDUAL OUTPUT

Observation	Predicted Y	Residuals	Standard Residuals
1	10.42763	0.02134	0.30454
2	10.47231	(0.07208)	(1.02851)
3	10.51474	(0.02413)	(0.34435)
4	10.55020	0.01185	0.16902
5	10.58010	0.09652	1.37718
6	10.60178	(0.11312)	(1.61401)
7	10.61627	(0.04347)	(0.62023)
8	10.64243	0.11609	1.65641
9	10.67744	0.08746	1.24792
10	10.70966	(0.09811)	(1.39989)
11	10.71146	0.12718	1.81462
12	10.74823	(0.10325)	(1.47324)
13	10.78659	0.03945	-0.56289
14	10.82923	0.02572	0.36702
15	10.87168	0.00220	0.03143
16	10.91309	(0.01930)	(0.27536)
17	10.95419	(0.04083)	(0.58250)
18	10.99234	(0.01515)	(0.21617)
19	11.02981	(0.08663)	(1.23604)
20	11.06886	0.02570	0.36665
21	11.10835	0.01433	0.20444
22	11.14985	0.04823	0.68814

Total Customers

YEAR	RATE 10 Customers	R10 Growth Rate	RATE 20 Customers	R20 Growth Rate	RATE 40 Customers	R40 Growth Rate	RATE 50 Customers	R50 Growth Rate	Total Customers (Excluding R60)	Customers Growth Rate
1982	216,403		25,496		923		22		242,844	
1983	220,669	1.97%	25,605	0.43%	914	-0.98%	22	0.00%	247,210	1.80%
1984	222,895	1.01%	23,224	-9.30%	888	-2.84%	22	0.00%	247,029	-0.07%
1985	226,123	1.45%	22,981	-1.05%	868	-2.23%	22	0.00%	249,994	1.20%
1986	231,871	2.54%	25,149	9.43%	844	-2.76%	24	9.09%	257,888	3.16%
1987	241,958	4.35%	26,030	3.50%	827	-2.01%	24	0.00%	268,839	4.25%
1988	230,368	-4.79%	24,783	-4.79%	812	-1.81%	23	-4.17%	255,984	-4.78%
1989	260,946	13.27%	28,259	14.03%	813	0.12%	23	0.00%	290,041	13.30%
1990	274,692	5.27%	30,018	6.22%	798	-1.85%	31	34.78%	305,539	5.34%
1991	267,739	4.75%	31,558	5.13%	787	-1.38%	38	87.10%	320,142	4.78%
1992	259,544	4.10%	33,137	5.00%	777	-1.27%	69	18.97%	333,527	4.18%
1993	312,097	4.19%	35,158	6.04%	820	5.53%	74	7.25%	348,119	4.38%
1994	325,669	4.35%	39,611	12.73%	1,155	40.91%	76	2.70%	366,511	5.28%
1995	342,926	5.30%	41,673	5.21%	1,109	-4.02%	75	-1.32%	385,783	5.26%
1996	357,310	4.19%	43,229	3.73%	1,323	19.30%	77	2.67%	401,939	4.19%
1997	376,140	5.27%	46,129	6.71%	1,280	-3.25%	80	3.90%	423,629	5.40%
1998	383,844	4.73%	48,453	5.04%	1,174	-8.28%	79	-1.35%	443,650	4.73%
1999	409,120	3.85%	50,282	3.77%	1,192	1.53%	86	8.86%	460,680	3.84%
2000	423,799	3.59%	51,925	3.27%	1,269	6.46%	93	8.14%	477,085	3.56%
2001	439,647	3.74%	53,358	2.76%	1,308	3.07%	97	4.30%	494,410	3.63%
2002	451,219	2.63%	53,526	0.31%	1,356	3.67%	97	0.00%	506,198	2.38%
2003	464,768	3.00%	52,579	-1.77%	1,384	2.06%	101	4.12%	518,832	2.50%
2004	480,825	3.45%	55,109	4.81%	1,410	1.88%	104	2.71%	537,448	3.39%
2005	496,916	3.35%	58,117	5.46%	1,437	1.89%	107	3.32%	556,576	3.56%
2006	513,114	3.26%	61,269	5.45%	1,463	1.82%	111	3.31%	575,977	3.49%
2007	528,487	3.19%	64,635	5.46%	1,488	1.75%	114	3.31%	595,724	3.43%
2008	546,090	3.14%	68,163	5.46%	1,514	1.69%	118	3.31%	615,885	3.38%
2009	562,974	3.09%	71,884	5.46%	1,538	1.62%	122	3.31%	636,518	3.35%
2010	580,183	3.06%	75,807	5.46%	1,562	1.56%	126	3.31%	657,678	3.32%
2011	597,754	3.03%	79,945	5.46%	1,585	1.51%	130	3.30%	679,416	3.31%
2012	615,725	3.01%	84,309	5.46%	1,609	1.45%	135	3.30%	701,777	3.29%
2013	634,125	2.99%	88,911	5.46%	1,631	1.40%	139	3.30%	724,805	3.28%
2014	652,984	2.97%	93,764	5.46%	1,653	1.33%	144	3.30%	748,545	3.28%
2015	672,329	2.96%	98,883	5.46%	1,675	1.30%	148	3.30%	773,035	3.27%
2016	692,186	2.95%	104,280	5.46%	1,696	1.26%	153	3.30%	796,315	3.27%
2017	712,578	2.95%	109,972	5.46%	1,717	1.22%	158	3.29%	824,425	3.27%
2018	733,530	2.94%	115,975	5.46%	1,737	1.18%	164	3.29%	851,405	3.27%
2019	755,063	2.94%	122,305	5.46%	1,756	1.14%	169	3.29%	879,294	3.28%
2020	777,200	2.93%	128,982	5.46%	1,776	1.10%	174	3.29%	908,132	3.28%
2021	799,963	2.93%	136,022	5.46%	1,795	1.07%	180	3.29%	937,960	3.28%
2022	823,373	2.93%	143,447	5.46%	1,813	1.03%	186	3.29%	968,819	3.29%
2023	847,453	2.92%	151,277	5.46%	1,831	1.00%	192	3.29%	1,000,753	3.30%
2024	872,224	2.92%	159,534	5.46%	1,849	0.97%	199	3.29%	1,033,806	3.30%
avg.growth 1982-2003	3.71%		3.51%		1.95%		7.53%		3.68%	
avg.growth 2004-2024	3.02%		5.46%		1.37%		3.10%		3.32%	

Total Customers (Excluding R60)



Year	R10 Sales (MWh)	R20 Sales (MWh)	R40 Sales (MWh)	R50 Sales (MWh)	R60 Sales (MWh)	Base Sales (MWh)	Base Sales Growth Rate
1982	328,607	228,812	348,231	138,639	34,509	1,078,798	
1983	365,471	268,286	359,903	145,945	32,867	1,172,472	8.68%
1984	368,111	253,802	356,905	142,378	35,976	1,157,172	-1.30%
1985	340,344	248,018	366,336	154,007	38,640	1,147,345	-0.85%
1986	367,674	262,283	381,835	171,576	43,331	1,226,699	6.92%
1987	417,116	301,541	425,112	164,927	35,906	1,344,602	9.61%
1988	406,951	291,152	411,579	145,888	39,058	1,294,628	-3.72%
1989	467,951	342,293	459,958	158,466	47,029	1,475,697	13.99%
1990	525,084	389,933	478,153	209,764	47,330	1,650,264	11.83%
1991	533,164	381,121	426,166	289,284	40,601	1,670,336	1.22%
1992	535,622	387,834	396,366	321,711	50,952	1,692,485	1.33%
1993	567,762	403,395	443,810	336,089	41,981	1,793,037	5.94%
1994	617,587	436,293	432,623	332,297	50,314	1,869,114	4.24%
1995	684,137	470,531	451,657	339,916	51,790	1,998,031	6.90%
1996	763,883	500,834	471,563	357,788	52,780	2,146,848	7.45%
1997	829,259	545,956	495,405	356,669	53,841	2,281,130	6.25%
1998	926,296	589,070	517,076	358,842	54,905	2,446,189	7.24%
1999	1,007,442	605,991	520,592	383,606	58,524	2,576,155	5.31%
2000	1,046,822	598,314	573,476	374,805	56,567	2,649,984	2.87%
2001	1,065,426	604,770	583,333	385,023	65,812	2,704,364	2.05%
2002	1,103,133	618,071	597,253	421,390	67,689	2,807,536	3.82%
2003	1,106,691	652,358	625,681	451,613	72,990	2,909,333	3.63%
2004	1,161,169	697,993	647,872	464,197	75,575	3,046,806	4.73%
2005	1,213,582	752,930	670,967	479,946	78,029	3,195,454	4.88%
2006	1,267,271	812,191	694,390	496,219	80,380	3,350,451	4.85%
2007	1,322,422	876,116	718,144	513,031	82,651	3,512,366	4.83%
2008	1,379,209	945,073	742,231	530,402	84,864	3,681,779	4.82%
2009	1,437,792	1,019,457	766,652	548,350	87,035	3,859,286	4.82%
2010	1,498,325	1,099,695	791,410	566,894	89,179	4,045,505	4.83%
2011	1,560,953	1,186,249	816,511	586,055	91,309	4,241,076	4.83%
2012	1,625,816	1,279,615	841,956	605,852	93,434	4,446,674	4.85%
2013	1,693,051	1,380,330	867,752	626,308	95,564	4,663,005	4.87%
2014	1,762,794	1,488,971	893,905	647,443	97,705	4,890,818	4.89%
2015	1,835,176	1,606,164	920,419	669,282	99,865	5,130,906	4.91%
2016	1,910,333	1,732,580	947,302	691,848	102,047	5,384,110	4.93%
2017	1,988,398	1,868,947	974,560	715,164	104,257	5,651,326	4.96%
2018	2,069,508	2,016,046	1,002,202	739,256	106,498	5,933,510	4.99%
2019	2,153,801	2,174,723	1,030,236	764,150	108,774	6,231,684	5.03%
2020	2,241,418	2,345,889	1,058,669	789,873	111,087	6,546,936	5.06%
2021	2,332,504	2,530,527	1,087,511	816,453	113,441	6,880,436	5.09%
2022	2,427,208	2,729,697	1,116,772	843,918	115,838	7,233,432	5.13%
2023	2,525,683	2,944,543	1,146,461	872,298	118,279	7,607,264	5.17%
2024	2,628,087	3,176,300	1,176,589	901,623	120,766	8,003,365	5.21%
1982- 2003	5.95%	5.12%	2.83%	5.78%	3.63%	4.84%	
2004- 2024	4.17%	7.87%	3.03%	3.38%	2.37%	4.95%	

Year	Extraordinary Sales (Carib Cement) (MWh)	Sales after Extraordinary Sales (MWh)	Growth Rate	Base Unbilled Consumption as % of Sales (MWh)	Base Unbilled Consumption (MWh)	Unbilled Supply as % of Sales after Loss Reduction
1982		1,078,798		13.07%	140,946	13.07%
1983		1,172,472	8.68%	13.78%	161,521	13.78%
1984		1,157,172	-1.30%	13.48%	155,968	13.48%
1985		1,147,345	-0.85%	14.24%	163,342	14.24%
1986		1,226,699	6.92%	13.28%	162,937	13.28%
1987		1,344,602	9.61%	13.97%	187,887	13.97%
1988		1,294,628	-3.72%	17.25%	223,327	17.25%
1989		1,475,697	13.99%	16.77%	247,466	16.77%
1990		1,650,264	11.83%	10.70%	176,500	10.70%
1991		1,670,336	1.22%	11.90%	198,738	11.90%
1992		1,692,485	1.33%	16.19%	274,082	16.19%
1993		1,793,037	5.94%	13.54%	242,859	13.54%
1994		1,869,114	4.24%	13.35%	249,599	13.35%
1995		1,998,031	6.90%	9.97%	199,271	9.97%
1996		2,146,848	7.45%	8.10%	173,832	8.10%
1997		2,281,130	6.25%	10.36%	236,334	10.36%
1998		2,446,189	7.24%	9.13%	223,266	9.13%
1999		2,576,155	5.31%	8.89%	229,081	8.89%
2000	89,011	2,738,995	6.32%	9.49%	259,901	9.49%
2001	89,011	2,793,375	1.99%	9.31%	260,095	9.31%
2002	89,011	2,896,547	3.69%	10.69%	309,738	10.69%
2003	89,011	2,998,344	3.51%	12.27%	367,843	12.27%
2004	89,011	3,135,817	4.58%	12.27%	384,709	11.08%
2005	89,011	3,284,465	4.74%	12.27%	402,945	10.97%
2006	89,011	3,439,462	4.72%	12.27%	421,961	10.86%
2007	89,011	3,601,377	4.71%	12.27%	441,825	10.75%
2008	89,011	3,770,790	4.70%	12.27%	462,609	10.64%
2009	89,011	3,948,297	4.71%	12.27%	484,386	10.54%
2010	89,011	4,134,516	4.72%	12.27%	507,231	10.43%
2011	89,011	4,330,087	4.73%	12.27%	531,225	10.33%
2012	89,011	4,535,685	4.75%	12.27%	556,448	10.22%
2013	89,011	4,752,016	4.77%	12.27%	582,988	10.12%
2014	89,011	4,979,829	4.79%	12.27%	610,936	10.02%
2015	89,011	5,219,917	4.82%	12.27%	640,391	9.92%
2016	89,011	5,473,121	4.85%	12.27%	671,454	9.82%
2017	89,011	5,740,337	4.88%	12.27%	704,237	9.72%
2018	89,011	6,022,521	4.92%	12.27%	738,856	9.63%
2019	89,011	6,320,695	4.95%	12.27%	775,437	9.53%
2020	89,011	6,635,947	4.99%	12.27%	814,112	9.43%
2021	89,011	6,969,447	5.03%	12.27%	855,027	9.34%
2022	89,011	7,322,443	5.06%	12.27%	898,333	9.25%
2023	89,011	7,696,275	5.11%	12.27%	944,196	9.15%
2024	89,011	8,092,376	5.15%	12.27%	992,790	9.06%
1982- 2003		4.99%		-0.30%	4.67%	-0.30%
2004- 2024		4.85%		0.00%	4.85%	-1.00%

Year	Unbilled Supply after Loss Reduction (MWh)	Unbilled Supply as % of Net Generation	Additional Sales Due to Reduction in Unbilled Supply (MWh)	Sales After Reduction in Unbilled Supply (MWh)	DSM Savings as % of Sales after reduction in Unbilled	Additional DSM Savings (MWh)
1982	140,946	10.53%	-	1,078,798	0.00%	-
1983	161,521	11.04%	-	1,172,472	0.00%	-
1984	155,968	10.83%	-	1,157,172	0.00%	-
1985	163,342	11.37%	-	1,147,345	0.00%	-
1986	162,937	10.69%	-	1,226,699	0.00%	-
1987	187,887	11.18%	-	1,344,602	0.00%	-
1988	223,327	13.45%	-	1,294,628	0.00%	-
1989	247,466	13.12%	-	1,475,697	0.00%	-
1990	176,500	8.79%	-	1,650,264	0.00%	-
1991	198,738	9.68%	-	1,670,336	0.00%	-
1992	274,082	12.73%	-	1,793,037	0.00%	-
1993	242,859	10.88%	-	1,869,114	0.00%	-
1994	249,599	10.74%	-	1,998,031	0.00%	-
1995	199,271	8.24%	-	2,146,848	0.00%	-
1996	173,832	6.80%	-	2,281,130	0.00%	-
1997	236,334	8.54%	-	2,446,189	0.00%	-
1998	223,266	7.60%	-	2,576,155	0.00%	-
1999	229,081	7.42%	-	2,738,995	0.00%	-
2000	259,901	7.88%	-	2,793,375	0.00%	-
2001	260,095	7.74%	-	2,896,547	0.00%	-
2002	309,738	8.79%	-	2,998,344	0.00%	-
2003	367,843	9.95%	-	3,154,447	1.00%	31,544
2004	347,449	9.03%	18,630	3,305,798	1.05%	34,711
2005	360,280	8.96%	21,333	3,463,688	1.10%	38,187
2006	373,509	8.88%	24,226	3,628,699	1.16%	42,007
2007	387,181	8.81%	27,322	3,801,424	1.22%	46,207
2008	401,340	8.74%	30,634	3,982,475	1.28%	50,828
2009	416,031	8.67%	34,177	4,172,483	1.34%	55,915
2010	431,296	8.60%	37,968	4,372,109	1.41%	61,520
2011	447,180	8.53%	42,022	4,582,044	1.48%	67,698
2012	463,729	8.46%	46,359	4,803,016	1.55%	74,511
2013	480,988	8.40%	51,000	5,035,794	1.63%	82,028
2014	499,006	8.33%	55,965	5,281,195	1.71%	90,326
2015	517,834	8.27%	61,278	5,540,086	1.80%	99,492
2016	537,523	8.20%	66,966	5,813,391	1.89%	109,620
2017	558,129	8.14%	73,054	6,102,094	1.98%	120,817
2018	579,710	8.07%	79,573	6,407,249	2.08%	133,202
2019	602,327	8.01%	86,555	6,729,981	2.18%	146,907
2020	626,045	7.95%	94,034	7,071,494	2.29%	162,080
2021	650,933	7.89%	102,047	7,433,078	2.41%	178,886
2022	677,063	7.83%	110,635	7,816,116	2.53%	197,509
2023	704,513	7.77%	119,841	8,222,089	2.65%	218,157
2024	733,364	7.71%	129,713			
1982- 2003	4.67%			4.99%		
2004- 2024	3.81%		10.19%	4.91%		

Peak Demand

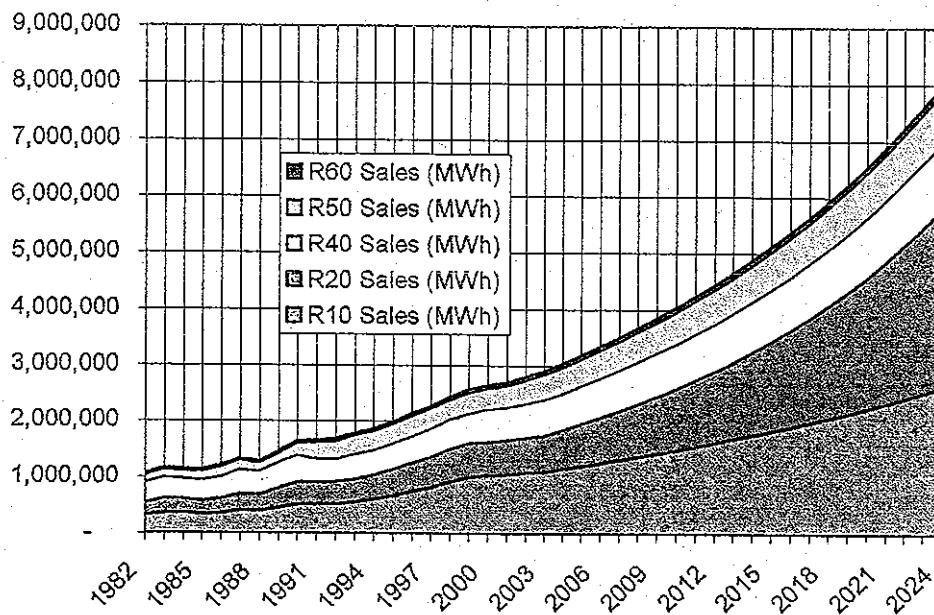
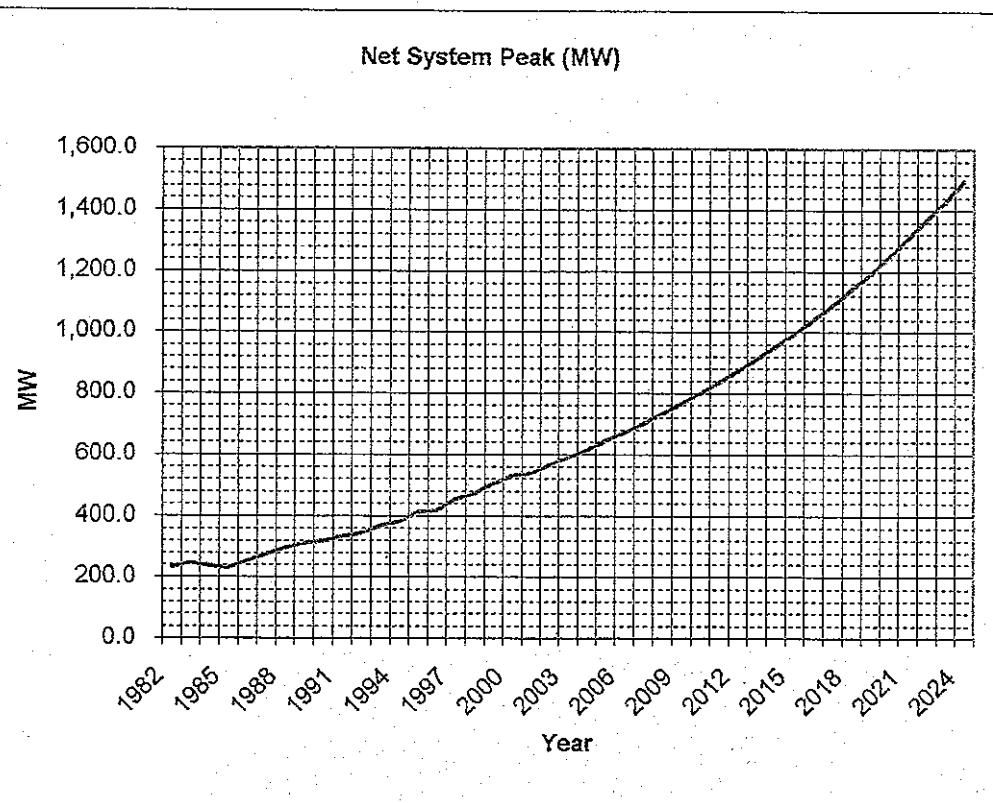
Year	Net Sales (after Reduction in Unbilled & DSM) (MWh)	Total Energy Delivered (Sales & Unbilled) (MWh)
1982	1,078,798	1,219,744
1983	1,172,472	1,333,993
1984	1,157,172	1,313,140
1985	1,147,345	1,310,687
1986	1,226,699	1,389,636
1987	1,344,602	1,532,489
1988	1,294,628	1,517,955
1989	1,475,697	1,723,163
1990	1,650,264	1,826,764
1991	1,670,336	1,869,074
1992	1,692,485	1,966,568
1993	1,793,037	2,035,896
1994	1,869,114	2,118,713
1995	1,998,031	2,197,303
1996	2,146,848	2,320,680
1997	2,281,130	2,517,464
1998	2,446,189	2,669,455
1999	2,576,155	2,805,236
2000	2,738,995	2,998,896
2001	2,793,375	3,053,470
2002	2,896,547	3,206,285
2003	2,998,344	3,366,187
2004	3,122,903	3,470,351
2005	3,271,087	3,631,367
2006	3,425,501	3,799,009
2007	3,586,692	3,973,873
2008	3,755,217	4,156,558
2009	3,931,647	4,347,678
2010	4,116,568	4,547,864
2011	4,310,589	4,757,770
2012	4,514,346	4,978,075
2013	4,728,505	5,209,494
2014	4,953,767	5,452,773
2015	5,190,869	5,708,703
2016	5,440,594	5,978,117
2017	5,703,771	6,261,900
2018	5,981,277	6,560,987
2019	6,274,047	6,876,374
2020	6,583,074	7,209,119
2021	6,909,414	7,560,347
2022	7,254,193	7,931,256
2023	7,618,607	8,323,120
2024	8,003,933	8,737,297
1982– 2003	4.99%	4.95%
2004– 2024	4.82%	4.72%

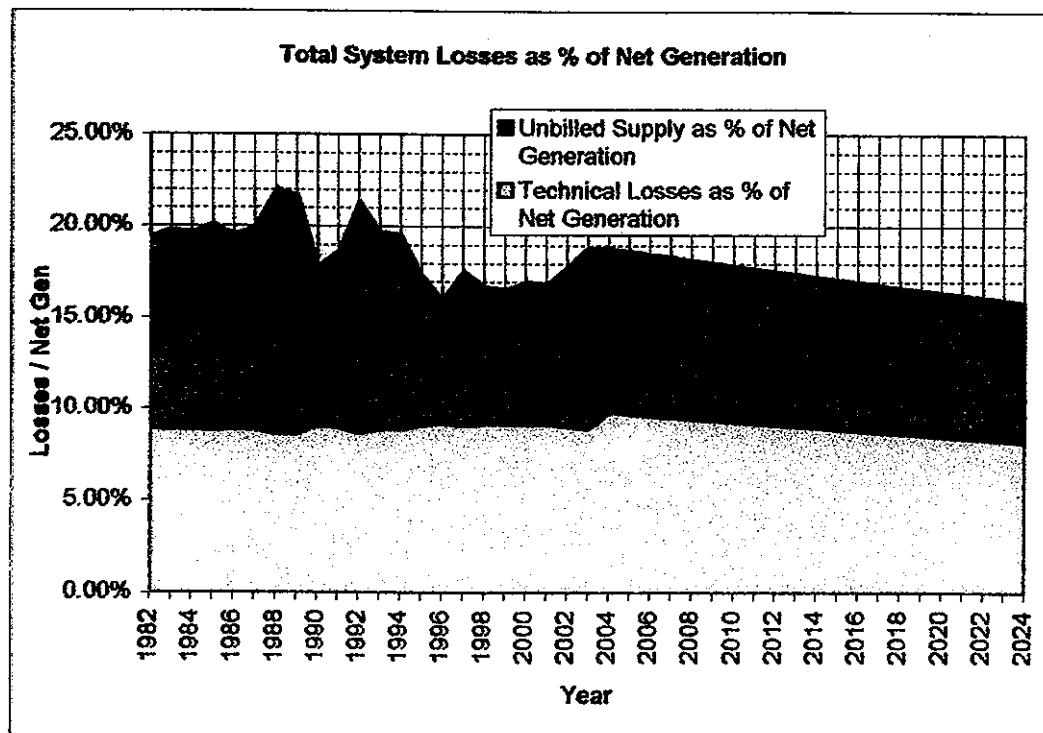
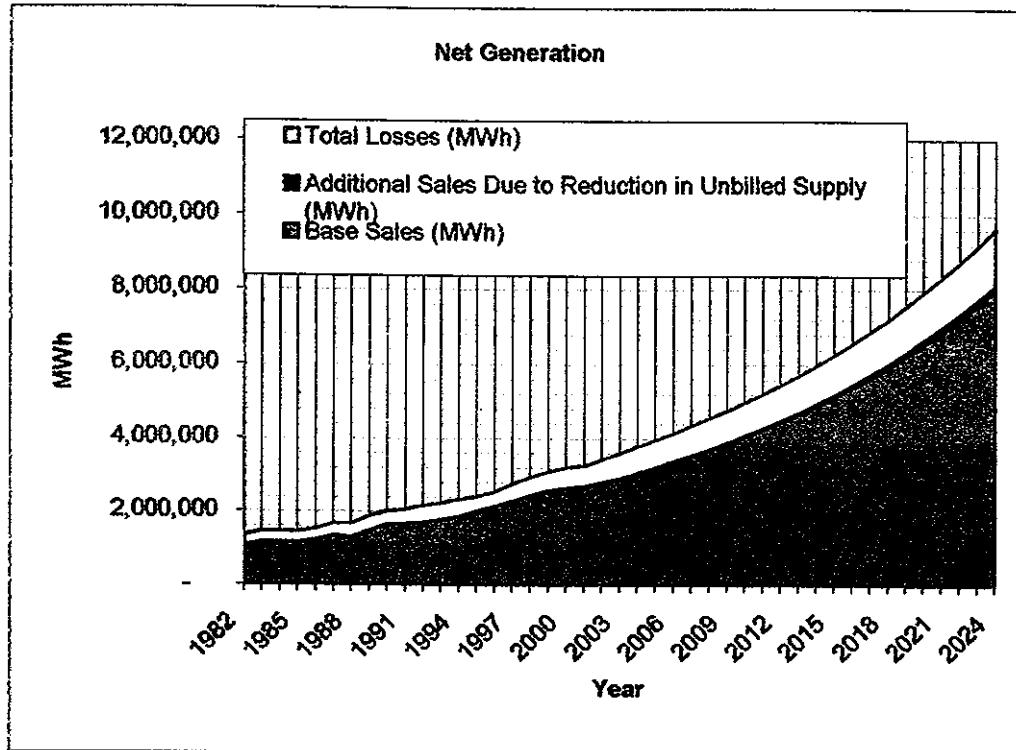
Peak Demand

Year	Technical Losses as % of Energy Delivered (MWh)	Calculated Technical Losses (MWh)	Technical Losses as % of Net Generation	Total Losses (MWh)	Total Losses as % of Sales	Losses as % of Net Generation
1982	11.00%	118,668	8.87%	259,614	24.07%	19.40%
1983	11.00%	128,972	8.82%	290,493	24.78%	19.86%
1984	11.00%	127,289	8.84%	283,257	24.48%	19.66%
1985	11.00%	126,208	8.78%	289,550	25.24%	20.15%
1986	11.00%	134,937	8.85%	297,874	24.28%	19.54%
1987	11.00%	147,906	8.80%	335,793	24.97%	19.98%
1988	11.00%	142,409	8.58%	365,736	28.25%	22.03%
1989	11.00%	162,327	8.61%	409,793	27.77%	21.73%
1990	11.00%	181,529	9.04%	358,029	21.70%	17.83%
1991	11.00%	183,737	8.95%	382,475	22.90%	18.63%
1992	11.00%	186,173	8.65%	460,256	27.19%	21.38%
1993	11.00%	197,234	8.83%	440,093	24.54%	19.71%
1994	11.00%	205,603	8.85%	455,202	24.35%	19.58%
1995	11.00%	219,783	9.09%	419,055	20.97%	17.34%
1996	11.00%	236,153	9.24%	409,985	19.10%	16.03%
1997	11.00%	250,924	9.06%	487,258	21.36%	17.60%
1998	11.00%	269,081	9.16%	492,347	20.13%	16.75%
1999	11.00%	283,377	9.17%	512,458	19.89%	16.59%
2000	11.00%	301,289	9.13%	561,190	20.49%	17.00%
2001	11.00%	307,271	9.14%	567,366	20.31%	16.88%
2002	11.00%	318,620	9.04%	628,358	21.69%	17.83%
2003	11.00%	329,818	8.92%	697,661	23.27%	18.88%
2004	10.89%	377,921	9.82%	725,370	23.23%	18.85%
2005	10.78%	391,501	9.73%	751,781	22.98%	18.69%
2006	10.67%	405,479	9.64%	778,988	22.74%	18.53%
2007	10.57%	419,901	9.56%	807,082	22.50%	18.37%
2008	10.46%	434,813	9.47%	836,153	22.27%	18.21%
2009	10.36%	450,258	9.38%	866,289	22.03%	18.06%
2010	10.25%	466,280	9.30%	897,576	21.80%	17.90%
2011	10.15%	482,923	9.21%	930,103	21.58%	17.75%
2012	10.05%	500,231	9.13%	963,960	21.35%	17.60%
2013	9.95%	518,251	9.05%	999,239	21.13%	17.45%
2014	9.85%	537,028	8.97%	1,036,035	20.91%	17.30%
2015	9.75%	556,612	8.88%	1,074,446	20.70%	17.15%
2016	9.65%	577,052	8.80%	1,114,575	20.49%	17.00%
2017	9.56%	598,400	8.72%	1,156,529	20.28%	16.86%
2018	9.46%	620,711	8.64%	1,200,422	20.07%	16.72%
2019	9.37%	644,044	8.56%	1,246,371	19.87%	16.57%
2020	9.27%	668,457	8.49%	1,294,502	19.66%	16.43%
2021	9.18%	694,014	8.41%	1,344,947	19.47%	16.29%
2022	9.09%	720,781	8.33%	1,397,844	19.27%	16.16%
2023	9.00%	748,829	8.25%	1,453,342	19.08%	16.02%
2024	8.91%	778,232	8.18%	1,511,596	18.89%	15.89%
1982- 2003	0.00%	4.99%	0.03%	4.82%	-0.16%	-0.13%
2004- 2024	-1.00%	3.68%	-0.91%	3.74%	-1.03%	-0.85%

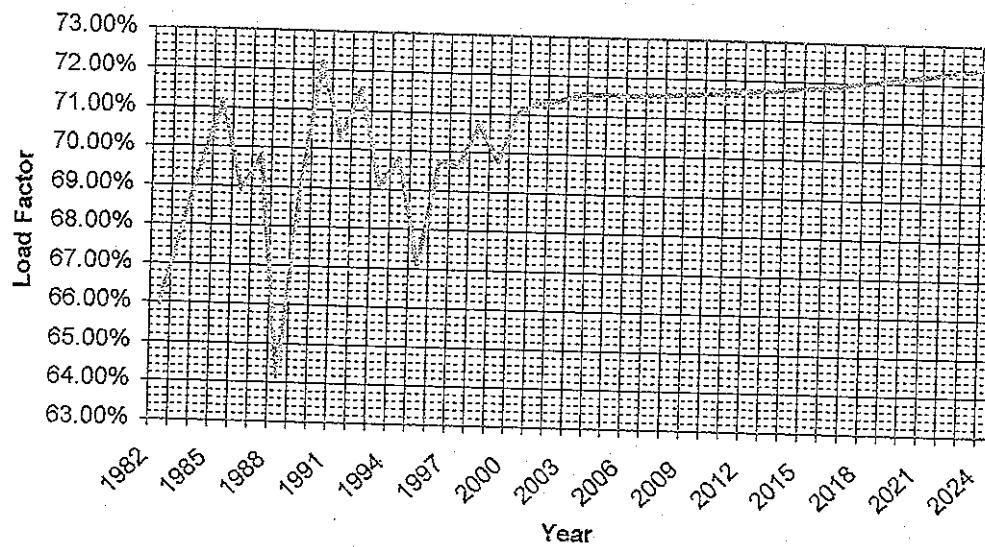
Peak Demand

Year	Net Generation (MWh)	Net Generation Growth Rate	Load Factor	Net System Peak (MW)	Peak Demand Growth Rate
1982	1,338,412		65.97%	231.6	
1983	1,462,965	9.31%	67.83%	246.2	6.30%
1984	1,440,429	-1.54%	69.62%	236.2	-4.06%
1985	1,436,895	-0.25%	71.19%	230.4	-2.46%
1986	1,524,573	6.10%	68.90%	252.6	9.64%
1987	1,680,395	10.22%	69.81%	274.8	8.79%
1988	1,660,364	-1.19%	64.11%	295.7	7.59%
1989	1,885,490	13.56%	68.95%	312.1	5.58%
1990	2,008,293	6.51%	72.23%	317.4	1.68%
1991	2,052,811	2.22%	70.29%	333.4	5.04%
1992	2,152,741	4.87%	71.57%	343.4	3.00%
1993	2,233,130	3.73%	69.11%	368.9	7.43%
1994	2,324,316	4.08%	69.82%	380.0	3.02%
1995	2,417,086	3.99%	67.06%	411.5	8.27%
1996	2,556,833	5.78%	69.77%	418.4	1.67%
1997	2,768,388	8.27%	69.63%	453.9	8.49%
1998	2,938,536	6.15%	70.72%	474.3	4.51%
1999	3,088,613	5.11%	69.78%	505.3	6.52%
2000	3,300,185	6.85%	71.04%	530.3	4.95%
2001	3,360,741	1.83%	71.29%	538.2	1.48%
2002	3,524,905	4.88%	71.36%	563.9	4.78%
2003	3,696,005	4.85%	71.51%	590.0	4.64%
2004	3,848,273	4.12%	71.54%	614.0	4.07%
2005	4,022,868	4.54%	71.55%	641.9	4.53%
2006	4,204,489	4.51%	71.56%	670.8	4.50%
2007	4,393,774	4.50%	71.57%	700.8	4.48%
2008	4,591,371	4.50%	71.59%	732.1	4.47%
2009	4,797,936	4.50%	71.62%	764.7	4.46%
2010	5,014,144	4.51%	71.65%	798.9	4.46%
2011	5,240,692	4.52%	71.69%	834.5	4.47%
2012	5,478,307	4.53%	71.72%	871.9	4.48%
2013	5,727,745	4.55%	71.77%	911.1	4.49%
2014	5,989,801	4.58%	71.81%	952.1	4.51%
2015	6,265,315	4.60%	71.86%	995.3	4.53%
2016	6,555,169	4.63%	71.92%	1040.5	4.55%
2017	6,860,300	4.65%	71.97%	1088.1	4.57%
2018	7,181,699	4.68%	72.03%	1138.2	4.60%
2019	7,520,418	4.72%	72.09%	1190.8	4.63%
2020	7,877,576	4.75%	72.16%	1246.3	4.66%
2021	8,254,361	4.78%	72.22%	1304.7	4.69%
2022	8,652,037	4.82%	72.29%	1366.2	4.72%
2023	9,071,949	4.85%	72.37%	1431.1	4.75%
2024	9,515,528	4.89%	72.44%	1499.4	4.78%
1982- 2003	4.96%		0.38%	4.55%	
2004- 2024	4.63%		0.06%	4.57%	

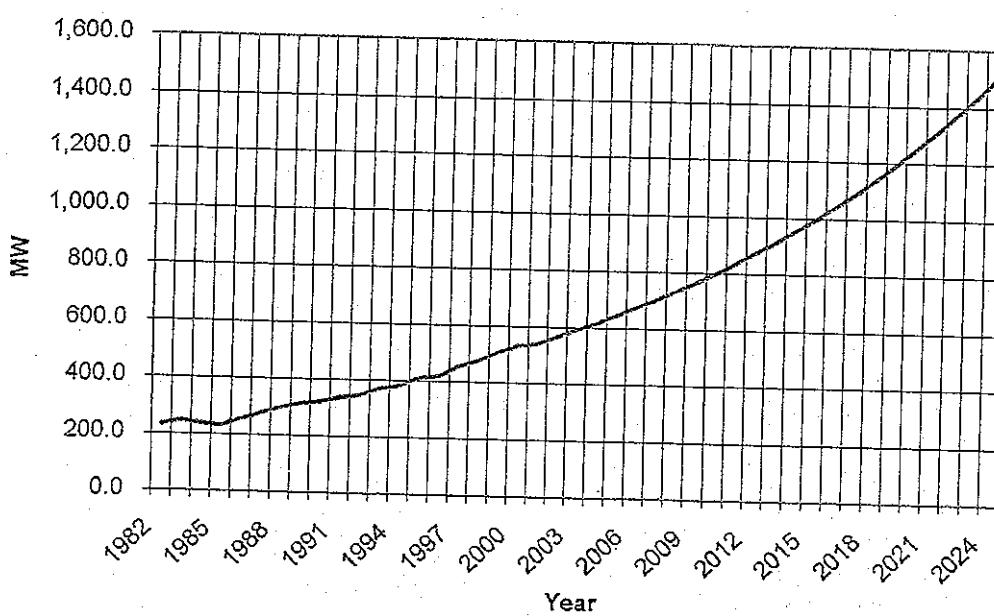
Base Energy Sales**Net System Peak (MW)**



System Load Factor



System Net Peak Generation Requirement



YEAR	R10 Sales (MWh)	R10 NCP Load Factor	R10 NCP (MW)	R10 Customer to Class Coincidence Factor	R10 Class Peak (MW)	R10 Class to System Coincidence Factor	R10 Contribution to System Peak (MW)
1982	328,607	21.0%	178.6	45.0%	80.4	83.0%	66.7
1983	365,471	21.0%	198.7	45.0%	89.4	83.0%	74.2
1984	368,111	21.0%	200.1	45.0%	90.0	83.0%	74.7
1985	340,344	21.0%	185.0	45.0%	83.3	83.0%	69.1
1986	367,674	21.0%	199.9	45.0%	89.9	83.0%	74.7
1987	417,116	21.0%	226.7	45.0%	102.0	83.0%	84.7
1988	406,951	21.0%	221.2	45.0%	99.5	83.0%	82.6
1989	467,951	21.0%	254.4	45.0%	114.5	83.0%	95.0
1990	525,084	21.0%	285.4	45.0%	128.4	83.0%	106.6
1991	533,164	21.0%	289.8	45.0%	130.4	83.0%	108.3
1992	535,622	21.0%	291.2	45.0%	131.0	83.0%	108.7
1993	567,762	21.0%	308.6	45.0%	138.9	83.0%	115.3
1994	617,587	21.0%	335.7	45.0%	151.1	83.0%	125.4
1995	684,137	21.0%	371.9	45.0%	167.4	83.0%	138.9
1996	763,883	21.0%	415.2	45.0%	186.9	83.0%	155.1
1997	829,259	21.0%	450.8	45.0%	202.9	83.0%	168.4
1998	926,296	21.0%	503.5	45.0%	226.6	83.0%	188.1
1999	1,007,442	21.0%	547.6	45.0%	246.4	83.0%	204.5
2000	1,046,822	21.0%	569.0	45.0%	256.1	83.0%	212.5
2001	1,065,426	21.0%	579.2	45.0%	260.6	83.0%	216.3
2002	1,103,133	21.0%	599.7	45.0%	269.8	83.0%	224.0
2003	1,106,691	21.0%	601.6	45.0%	270.7	83.0%	224.7
2004	1,161,169	21.0%	631.2	45.0%	284.0	83.0%	235.8
2005	1,213,582	21.0%	659.7	45.0%	296.9	83.0%	246.4
2006	1,267,271	21.0%	688.9	45.0%	310.0	83.0%	257.3
2007	1,322,422	21.0%	718.9	45.0%	323.5	83.0%	268.5
2008	1,379,209	21.0%	749.7	45.0%	337.4	83.0%	280.0
2009	1,437,792	21.0%	781.6	45.0%	351.7	83.0%	291.9
2010	1,498,325	21.0%	814.5	45.0%	366.5	83.0%	304.2
2011	1,560,953	21.0%	848.5	45.0%	381.8	83.0%	316.9
2012	1,625,816	21.0%	883.8	45.0%	397.7	83.0%	330.1
2013	1,693,051	21.0%	920.3	45.0%	414.2	83.0%	343.7
2014	1,762,794	21.0%	958.2	45.0%	431.2	83.0%	357.9
2015	1,835,176	21.0%	997.6	45.0%	448.9	83.0%	372.6
2016	1,910,333	21.0%	1038.5	45.0%	467.3	83.0%	387.9
2017	1,988,398	21.0%	1080.9	45.0%	486.4	83.0%	403.7
2018	2,069,508	21.0%	1125.0	45.0%	506.2	83.0%	420.2
2019	2,153,801	21.0%	1170.8	45.0%	526.9	83.0%	437.3
2020	2,241,418	21.0%	1218.4	45.0%	548.3	83.0%	455.1
2021	2,332,504	21.0%	1267.9	45.0%	570.6	83.0%	473.6
2022	2,427,208	21.0%	1319.4	45.0%	593.7	83.0%	492.8
2023	2,525,683	21.0%	1373.0	45.0%	617.8	83.0%	512.8
2024	2,628,087	21.0%	1428.6	45.0%	642.9	83.0%	533.6

YEAR	R20 Sales (MWh)	R20 NCP Load Factor	R20 NCP (MW)	R20 Customer to Class Coincidence Factor	R20 Class Peak (MW)	R20 Class to System Coincidence Factor	R20 Contribution to System Peak (MW)
1982	228,812	25.0%	104.5	49.0%	51.2	61.0%	31.2
1983	268,286	25.0%	122.5	49.0%	60.0	61.0%	36.6
1984	253,802	25.0%	115.9	49.0%	56.8	61.0%	34.6
1985	248,018	25.0%	113.3	49.0%	55.5	61.0%	33.9
1986	262,283	25.0%	119.8	49.0%	58.7	61.0%	35.8
1987	301,541	25.0%	137.7	49.0%	67.5	61.0%	41.2
1988	291,152	25.0%	132.9	49.0%	65.1	61.0%	39.7
1989	342,293	25.0%	156.3	49.0%	76.6	61.0%	46.7
1990	389,933	25.0%	178.1	49.0%	87.2	61.0%	53.2
1991	381,121	25.0%	174.0	49.0%	85.3	61.0%	52.0
1992	387,834	25.0%	177.1	49.0%	86.8	61.0%	52.9
1993	403,395	25.0%	184.2	49.0%	90.3	61.0%	55.1
1994	436,293	25.0%	199.2	49.0%	97.6	61.0%	59.5
1995	470,531	25.0%	214.9	49.0%	105.3	61.0%	64.2
1996	500,834	25.0%	228.7	49.0%	112.1	61.0%	68.4
1997	545,956	25.0%	249.3	49.0%	122.2	61.0%	74.5
1998	589,070	25.0%	269.0	49.0%	131.8	61.0%	80.4
1999	605,991	25.0%	276.7	49.0%	135.6	61.0%	82.7
2000	598,314	25.0%	273.2	49.0%	133.9	61.0%	81.7
2001	604,770	25.0%	276.2	49.0%	135.3	61.0%	82.5
2002	618,071	25.0%	282.2	49.0%	138.3	61.0%	84.4
2003	652,358	25.0%	297.9	49.0%	146.0	61.0%	89.0
2004	697,993	25.0%	318.7	49.0%	156.2	61.0%	95.3
2005	752,930	25.0%	343.8	49.0%	168.5	61.0%	102.8
2006	812,191	25.0%	370.9	49.0%	181.7	61.0%	110.9
2007	876,116	25.0%	400.1	49.0%	196.0	61.0%	119.6
2008	945,073	25.0%	431.5	49.0%	211.5	61.0%	129.0
2009	1,019,457	25.0%	465.5	49.0%	228.1	61.0%	139.1
2010	1,099,695	25.0%	502.1	49.0%	246.1	61.0%	150.1
2011	1,186,249	25.0%	541.7	49.0%	265.4	61.0%	161.9
2012	1,279,615	25.0%	584.3	49.0%	286.3	61.0%	174.6
2013	1,380,330	25.0%	630.3	49.0%	308.8	61.0%	188.4
2014	1,488,971	25.0%	679.9	49.0%	333.1	61.0%	203.2
2015	1,606,164	25.0%	733.4	49.0%	359.4	61.0%	219.2
2016	1,732,580	25.0%	791.1	49.0%	387.7	61.0%	236.5
2017	1,868,947	25.0%	853.4	49.0%	418.2	61.0%	255.1
2018	2,016,046	25.0%	920.6	49.0%	451.1	61.0%	275.2
2019	2,174,723	25.0%	993.0	49.0%	486.6	61.0%	296.8
2020	2,345,889	25.0%	1071.2	49.0%	524.9	61.0%	320.2
2021	2,530,527	25.0%	1155.5	49.0%	566.2	61.0%	345.4
2022	2,729,697	25.0%	1246.4	49.0%	610.8	61.0%	372.6
2023	2,944,543	25.0%	1344.5	49.0%	658.8	61.0%	401.9
2024	3,176,300	25.0%	1450.4	49.0%	710.7	61.0%	433.5

YEAR	R40 Sales (MWh)	R40 NCP Load Factor	R40 NCP (MW)	R40 Customer to Class Coincidence Factor	R40 Class Peak (MW)	R40 Class to System Coincidence Factor	R40 Contribution to System Peak (MW)
1982	348,231	35.2%	112.9	52.0%	58.7	78.0%	45.8
1983	359,903	35.2%	116.7	52.0%	60.7	78.0%	47.3
1984	356,905	35.2%	115.7	52.0%	60.2	78.0%	46.9
1985	366,336	35.2%	118.8	52.0%	61.8	78.0%	48.2
1986	381,835	35.2%	123.8	52.0%	64.4	78.0%	50.2
1987	425,112	35.2%	137.9	52.0%	71.7	78.0%	55.9
1988	411,579	35.2%	133.5	52.0%	69.4	78.0%	54.1
1989	459,958	35.2%	149.2	52.0%	77.6	78.0%	60.5
1990	478,153	35.2%	155.1	52.0%	80.6	78.0%	62.9
1991	426,166	35.2%	138.2	52.0%	71.9	78.0%	56.1
1992	396,366	35.2%	128.5	52.0%	66.8	78.0%	52.1
1993	443,810	35.2%	143.9	52.0%	74.8	78.0%	58.4
1994	432,623	35.2%	140.3	52.0%	73.0	78.0%	56.9
1995	451,657	35.2%	146.5	52.0%	76.2	78.0%	59.4
1996	471,563	35.2%	152.9	52.0%	79.5	78.0%	62.0
1997	495,405	35.2%	160.7	52.0%	83.5	78.0%	65.2
1998	517,076	35.2%	167.7	52.0%	87.2	78.0%	68.0
1999	520,592	35.2%	168.8	52.0%	87.8	78.0%	68.5
2000	573,476	35.2%	186.0	52.0%	96.7	78.0%	75.4
2001	583,333	35.2%	189.2	52.0%	98.4	78.0%	76.7
2002	597,253	35.2%	193.7	52.0%	100.7	78.0%	78.6
2003	625,681	35.2%	202.9	52.0%	105.5	78.0%	82.3
2004	647,872	35.2%	210.1	52.0%	109.3	78.0%	85.2
2005	670,967	35.2%	217.6	52.0%	113.2	78.0%	88.3
2006	694,390	35.2%	225.2	52.0%	117.1	78.0%	91.3
2007	718,144	35.2%	232.9	52.0%	121.1	78.0%	94.5
2008	742,231	35.2%	240.7	52.0%	125.2	78.0%	97.6
2009	766,652	35.2%	248.6	52.0%	129.3	78.0%	100.8
2010	791,410	35.2%	256.7	52.0%	133.5	78.0%	104.1
2011	816,511	35.2%	264.8	52.0%	137.7	78.0%	107.4
2012	841,956	35.2%	273.1	52.0%	142.0	78.0%	110.7
2013	867,752	35.2%	281.4	52.0%	146.3	78.0%	114.1
2014	893,905	35.2%	289.9	52.0%	150.7	78.0%	117.6
2015	920,419	35.2%	298.5	52.0%	155.2	78.0%	121.1
2016	947,302	35.2%	307.2	52.0%	159.8	78.0%	124.6
2017	974,560	35.2%	316.1	52.0%	164.3	78.0%	128.2
2018	1,002,202	35.2%	325.0	52.0%	169.0	78.0%	131.8
2019	1,030,236	35.2%	334.1	52.0%	173.7	78.0%	135.5
2020	1,058,669	35.2%	343.3	52.0%	178.5	78.0%	139.3
2021	1,087,511	35.2%	352.7	52.0%	183.4	78.0%	143.0
2022	1,116,772	35.2%	362.2	52.0%	188.3	78.0%	146.9
2023	1,146,461	35.2%	371.8	52.0%	193.3	78.0%	150.8
2024	1,176,589	35.2%	381.6	52.0%	198.4	78.0%	154.8

YEAR	R50 Sales (incl cement) (MWh)	R50 NCP Load Factor	R50 NCP (MW)	R50 Customer to Class Coincidence Factor	R50 Class Peak (MW)	R50 Class to System Coincidence Factor	R50 Contribution to System Peak (MW)
1982	138,639	48.0%	33.0	62.0%	20.4	84.0%	17.2
1983	145,945	48.0%	34.7	62.0%	21.5	84.0%	18.1
1984	142,378	48.0%	33.9	62.0%	21.0	84.0%	17.6
1985	154,007	48.0%	36.6	62.0%	22.7	84.0%	19.1
1986	171,576	48.0%	40.8	62.0%	25.3	84.0%	21.3
1987	164,927	48.0%	39.2	62.0%	24.3	84.0%	20.4
1988	145,888	48.0%	34.7	62.0%	21.5	84.0%	18.1
1989	158,466	48.0%	37.7	62.0%	23.4	84.0%	19.6
1990	209,764	48.0%	49.9	62.0%	30.9	84.0%	26.0
1991	289,284	48.0%	68.8	62.0%	42.7	84.0%	35.8
1992	321,711	48.0%	76.5	62.0%	47.4	84.0%	39.8
1993	336,089	48.0%	79.9	62.0%	49.6	84.0%	41.6
1994	332,297	48.0%	79.0	62.0%	49.0	84.0%	41.2
1995	339,916	48.0%	80.8	62.0%	50.1	84.0%	42.1
1996	357,788	48.0%	85.1	62.0%	52.8	84.0%	44.3
1997	356,669	48.0%	84.8	62.0%	52.6	84.0%	44.2
1998	358,842	48.0%	85.3	62.0%	52.9	84.0%	44.4
1999	383,606	48.0%	91.2	62.0%	56.6	84.0%	47.5
2000	463,816	48.0%	110.3	62.0%	68.4	84.0%	57.4
2001	474,034	48.0%	112.7	62.0%	69.9	84.0%	58.7
2002	510,401	48.0%	121.4	62.0%	75.3	84.0%	63.2
2003	540,624	48.0%	128.6	62.0%	79.7	84.0%	67.0
2004	553,208	48.0%	131.6	62.0%	81.6	84.0%	68.5
2005	568,957	48.0%	135.3	62.0%	83.9	84.0%	70.5
2006	585,230	48.0%	139.2	62.0%	86.3	84.0%	72.5
2007	602,042	48.0%	143.2	62.0%	88.8	84.0%	74.6
2008	619,413	48.0%	147.3	62.0%	91.3	84.0%	76.7
2009	637,361	48.0%	151.6	62.0%	94.0	84.0%	78.9
2010	655,905	48.0%	156.0	62.0%	96.7	84.0%	81.2
2011	675,066	48.0%	160.5	62.0%	99.5	84.0%	83.6
2012	694,863	48.0%	165.3	62.0%	102.5	84.0%	86.1
2013	715,319	48.0%	170.1	62.0%	105.5	84.0%	88.6
2014	736,454	48.0%	175.1	62.0%	108.6	84.0%	91.2
2015	758,293	48.0%	180.3	62.0%	111.8	84.0%	93.9
2016	780,859	48.0%	185.7	62.0%	115.1	84.0%	96.7
2017	804,175	48.0%	191.3	62.0%	118.6	84.0%	99.6
2018	828,267	48.0%	197.0	62.0%	122.1	84.0%	102.6
2019	853,161	48.0%	202.9	62.0%	125.8	84.0%	105.7
2020	878,884	48.0%	209.0	62.0%	129.6	84.0%	108.9
2021	905,464	48.0%	215.3	62.0%	133.5	84.0%	112.1
2022	932,929	48.0%	221.9	62.0%	137.6	84.0%	115.6
2023	961,309	48.0%	228.6	62.0%	141.7	84.0%	119.1
2024	990,634	48.0%	235.6	62.0%	146.1	84.0%	122.7

YEAR	R60 Sales (MWh)	R60 NCP Load Factor	R60 NCP (MW)	R60 Customer to Class Coincidence Factor	R60 Class Peak (MW)	R60 Class to System Coincidence Factor	R60 Contribution to System Peak (MW)
1982	34,509	59.1%	6.7	100.0%	6.7	100.0%	6.7
1983	32,867	59.1%	6.3	100.0%	6.3	100.0%	6.3
1984	35,976	59.1%	6.9	100.0%	6.9	100.0%	6.9
1985	38,640	59.1%	7.5	100.0%	7.5	100.0%	7.5
1986	43,331	59.1%	8.4	100.0%	8.4	100.0%	8.4
1987	35,906	59.1%	6.9	100.0%	6.9	100.0%	6.9
1988	39,058	59.1%	7.5	100.0%	7.5	100.0%	7.5
1989	47,029	59.1%	9.1	100.0%	9.1	100.0%	9.1
1990	47,330	59.1%	9.1	100.0%	9.1	100.0%	9.1
1991	40,601	59.1%	7.8	100.0%	7.8	100.0%	7.8
1992	50,952	59.1%	9.8	100.0%	9.8	100.0%	9.8
1993	41,981	59.1%	8.1	100.0%	8.1	100.0%	8.1
1994	50,314	59.1%	9.7	100.0%	9.7	100.0%	9.7
1995	51,790	59.1%	10.0	100.0%	10.0	100.0%	10.0
1996	52,780	59.1%	10.2	100.0%	10.2	100.0%	10.2
1997	53,841	59.1%	10.4	100.0%	10.4	100.0%	10.4
1998	54,905	59.1%	10.6	100.0%	10.6	100.0%	10.6
1999	58,524	59.1%	11.3	100.0%	11.3	100.0%	11.3
2000	56,567	59.1%	10.9	100.0%	10.9	100.0%	10.9
2001	65,812	59.1%	12.7	100.0%	12.7	100.0%	13.1
2002	67,689	59.1%	13.1	100.0%	13.1	100.0%	14.1
2003	72,990	59.1%	14.1	100.0%	14.1	100.0%	14.6
2004	75,575	59.1%	14.6	100.0%	14.6	100.0%	15.1
2005	78,029	59.1%	15.1	100.0%	15.1	100.0%	15.5
2006	80,380	59.1%	15.5	100.0%	15.5	100.0%	16.0
2007	82,651	59.1%	16.0	100.0%	16.0	100.0%	16.4
2008	84,864	59.1%	16.4	100.0%	16.4	100.0%	16.8
2009	87,035	59.1%	16.8	100.0%	16.8	100.0%	17.2
2010	89,179	59.1%	17.2	100.0%	17.2	100.0%	17.6
2011	91,309	59.1%	17.6	100.0%	17.6	100.0%	18.0
2012	93,434	59.1%	18.0	100.0%	18.0	100.0%	18.5
2013	95,564	59.1%	18.5	100.0%	18.5	100.0%	18.9
2014	97,705	59.1%	18.9	100.0%	18.9	100.0%	19.3
2015	99,865	59.1%	19.3	100.0%	19.3	100.0%	19.7
2016	102,047	59.1%	19.7	100.0%	19.7	100.0%	20.1
2017	104,257	59.1%	20.1	100.0%	20.1	100.0%	20.6
2018	106,498	59.1%	20.6	100.0%	20.6	100.0%	21.0
2019	108,774	59.1%	21.0	100.0%	21.0	100.0%	21.4
2020	111,087	59.1%	21.4	100.0%	21.4	100.0%	21.9
2021	113,441	59.1%	21.9	100.0%	21.9	100.0%	22.4
2022	115,838	59.1%	22.4	100.0%	22.4	100.0%	22.8
2023	118,279	59.1%	22.8	100.0%	22.8	100.0%	23.3
2024	120,766	59.1%	23.3	100.0%	23.3	100.0%	23.3

YEAR	Base System Sales (MWh)	Growth Rate	Peak Contribution from Sales	Growth Rate	Base Sales Load Factor	Unbilled Supply as % of Total Losses	Unbilled Supply as % of Sales	Unbilled Supply as % of Net Generation
1982	1,078,798	8.68%	168	8.95%	73.48%	54.3%	13.1%	10.5%
1983	1,172,472	-1.30%	183	-0.92%	73.31%	55.6%	13.8%	11.0%
1984	1,157,172	-0.85%	181	-1.79%	73.02%	55.1%	13.5%	10.8%
1985	1,147,345	6.92%	178	7.10%	73.72%	56.4%	14.2%	11.4%
1986	1,226,699	9.61%	190	9.90%	73.59%	54.7%	13.3%	10.7%
1987	1,344,602	-3.72%	209	-3.35%	73.40%	56.0%	14.0%	11.2%
1988	1,294,628	4.24%	202	14.26%	73.12%	61.1%	17.3%	13.5%
1989	1,475,597	13.99%	231	11.65%	72.95%	60.4%	16.8%	13.1%
1990	1,650,264	11.83%	258	8.03%	73.06%	49.3%	10.7%	8.8%
1991	1,670,336	1.22%	260	1.35%	73.34%	52.0%	11.9%	9.7%
1992	1,692,485	1.33%	264	5.67%	73.32%	59.6%	16.2%	12.7%
1993	1,793,037	5.94%	278	5.13%	73.51%	55.2%	13.5%	10.9%
1994	1,869,114	4.24%	293	7.49%	72.89%	54.8%	13.4%	10.7%
1995	1,998,031	6.90%	315	8.06%	72.49%	47.6%	10.0%	8.2%
1996	2,146,848	7.45%	340	8.06%	72.08%	42.4%	8.1%	6.8%
1997	2,281,130	6.25%	363	6.66%	71.81%	48.5%	10.4%	8.5%
1998	2,446,189	7.24%	392	7.97%	71.32%	45.3%	9.1%	7.6%
1999	2,576,155	5.31%	415	5.88%	70.94%	44.7%	8.9%	7.4%
2000	2,738,995	6.32%	438	5.66%	71.39%	46.3%	9.5%	7.9%
2001	2,793,375	1.99%	447	2.06%	71.34%	45.8%	9.3%	7.7%
2002	2,896,547	3.69%	463	3.62%	71.39%	49.3%	10.7%	8.8%
2003	2,998,344	3.51%	477	3.00%	71.74%	52.7%	12.3%	10.0%
2004	3,135,817	4.58%	499	4.67%	71.69%	47.9%	11.1%	9.0%
2005	3,284,465	4.74%	523	4.73%	71.70%	47.9%	11.0%	9.0%
2006	3,439,462	4.72%	547	4.69%	71.71%	47.9%	10.9%	8.9%
2007	3,601,377	4.71%	573	4.67%	71.74%	48.0%	10.8%	8.8%
2008	3,770,790	4.70%	600	4.66%	71.77%	48.0%	10.6%	8.7%
2009	3,948,297	4.71%	628	4.65%	71.81%	48.0%	10.5%	8.7%
2010	4,134,516	4.72%	657	4.65%	71.85%	48.1%	10.4%	8.6%
2011	4,330,087	4.73%	687	4.66%	71.90%	48.1%	10.3%	8.5%
2012	4,535,685	4.75%	720	4.67%	71.95%	48.1%	10.2%	8.5%
2013	4,752,016	4.77%	753	4.69%	72.01%	48.1%	10.1%	8.4%
2014	4,979,829	4.79%	789	4.71%	72.07%	48.2%	10.0%	8.3%
2015	5,219,917	4.82%	826	4.73%	72.13%	48.2%	9.9%	8.3%
2016	5,473,121	4.85%	865	4.75%	72.20%	48.2%	9.8%	8.2%
2017	5,740,337	4.88%	907	4.78%	72.27%	48.3%	9.7%	8.1%
2018	6,022,521	4.92%	950	4.81%	72.34%	48.3%	9.6%	8.1%
2019	6,320,695	4.95%	996	4.84%	72.42%	48.3%	9.5%	8.0%
2020	6,635,947	4.99%	1,045	4.87%	72.50%	48.4%	9.4%	7.9%
2021	6,969,447	5.03%	1,096	4.90%	72.59%	48.4%	9.3%	7.9%
2022	7,322,443	5.06%	1,150	4.94%	72.68%	48.4%	9.2%	7.8%
2023	7,696,275	5.11%	1,207	4.97%	72.77%	48.5%	9.2%	7.8%
2024	8,092,376	5.15%	1,268	5.01%	72.86%	48.5%	9.1%	7.7%

YEAR	Unbilled Supply (after loss red) (MWh)	Unbilled Supply NCP Load Factor	Unbilled Supply NCP (MW)	Unbilled Supply Customer to Class Coincidence Factor	Unbilled Supply Class Peak (MW)	Unbilled Supply Class to System Coincidence Factor	Unbilled Supply Contribution to System Peak (MW)
1982	140,946	23.9%	67.4	47.1%	31.7	76.0%	24.1
1983	161,521	23.9%	77.2	47.1%	36.4	76.0%	27.7
1984	155,968	23.9%	74.6	47.1%	35.1	76.0%	26.7
1985	163,342	23.9%	78.1	47.1%	36.8	76.0%	28.0
1986	162,937	23.9%	77.9	47.1%	36.7	76.0%	27.9
1987	187,887	23.9%	89.8	47.1%	42.3	76.0%	32.2
1988	223,327	23.9%	106.8	47.1%	50.3	76.0%	38.2
1989	247,466	23.9%	118.3	47.1%	55.7	76.0%	42.4
1990	176,500	23.9%	84.4	47.1%	39.7	76.0%	30.2
1991	198,738	23.9%	95.0	47.1%	44.8	76.0%	34.0
1992	274,082	23.9%	131.0	47.1%	61.7	76.0%	46.9
1993	242,859	23.9%	116.1	47.1%	54.7	76.0%	41.6
1994	249,599	23.9%	119.3	47.1%	56.2	76.0%	42.7
1995	199,271	23.9%	95.3	47.1%	44.9	76.0%	34.1
1996	173,832	23.9%	83.1	47.1%	39.1	76.0%	29.8
1997	236,334	23.9%	113.0	47.1%	53.2	76.0%	40.5
1998	223,266	23.9%	106.7	47.1%	50.3	76.0%	38.2
1999	229,081	23.9%	109.5	47.1%	51.6	76.0%	39.2
2000	259,901	23.9%	124.3	47.1%	58.5	76.0%	44.5
2001	260,095	23.9%	124.4	47.1%	58.6	76.0%	44.5
2002	309,738	23.9%	148.1	47.1%	69.8	76.0%	53.0
2003	367,843	23.9%	175.9	47.1%	82.8	76.0%	63.0
2004	347,449	23.9%	166.1	47.1%	78.2	76.0%	59.5
2005	360,280	23.9%	172.3	47.1%	81.1	76.0%	61.7
2006	373,509	23.9%	178.6	47.1%	84.1	76.0%	63.9
2007	387,181	23.9%	185.1	47.1%	87.2	76.0%	66.3
2008	401,340	23.9%	191.9	47.1%	90.4	76.0%	68.7
2009	416,031	23.9%	198.9	47.1%	93.7	76.0%	71.2
2010	431,296	23.9%	206.2	47.1%	97.1	76.0%	73.8
2011	447,180	23.9%	213.8	47.1%	100.7	76.0%	76.6
2012	463,729	23.9%	221.7	47.1%	104.4	76.0%	79.4
2013	480,988	23.9%	230.0	47.1%	108.3	76.0%	82.3
2014	499,006	23.9%	238.6	47.1%	112.4	76.0%	85.4
2015	517,834	23.9%	247.6	47.1%	116.6	76.0%	88.6
2016	537,523	23.9%	257.0	47.1%	121.0	76.0%	92.0
2017	558,129	23.9%	266.9	47.1%	125.7	76.0%	95.5
2018	579,710	23.9%	277.2	47.1%	130.5	76.0%	99.2
2019	602,327	23.9%	288.0	47.1%	135.6	76.0%	103.1
2020	626,045	23.9%	299.3	47.1%	141.0	76.0%	107.2
2021	650,933	23.9%	311.2	47.1%	146.6	76.0%	111.4
2022	677,063	23.9%	323.7	47.1%	152.5	76.0%	115.9
2023	704,513	23.9%	336.8	47.1%	158.7	76.0%	120.6
2024	733,364	23.9%	350.6	47.1%	165.1	76.0%	125.5

YEAR	Additional Sales Due to Reduction in Unbilled (MWh)	Additional Sales from Unbilled NCP Load Factor	Additional Sales From Unbilled NCP (MW)	Additional Sales from Unbilled Customer to Class Coincidence Factor	Additional Sales from Unbilled Class Peak (MW)	Additional Sales from Unbilled Class to System Coincidence Factor	Additional Sales from Unbilled Contribution to System Peak (MW)
1982	-	23.9%	0.00	47.1%	0.00	76.0%	0.00
1983	-	23.9%	0.00	47.1%	0.00	76.0%	0.00
1984	-	23.9%	0.00	47.1%	0.00	76.0%	0.00
1985	-	23.9%	0.00	47.1%	0.00	76.0%	0.00
1986	-	23.9%	0.00	47.1%	0.00	76.0%	0.00
1987	-	23.9%	0.00	47.1%	0.00	76.0%	0.00
1988	-	23.9%	0.00	47.1%	0.00	76.0%	0.00
1989	-	23.9%	0.00	47.1%	0.00	76.0%	0.00
1990	-	23.9%	0.00	47.1%	0.00	76.0%	0.00
1991	-	23.9%	0.00	47.1%	0.00	76.0%	0.00
1992	-	23.9%	0.00	47.1%	0.00	76.0%	0.00
1993	-	23.9%	0.00	47.1%	0.00	76.0%	0.00
1994	-	23.9%	0.00	47.1%	0.00	76.0%	0.00
1995	-	23.9%	0.00	47.1%	0.00	76.0%	0.00
1996	-	23.9%	0.00	47.1%	0.00	76.0%	0.00
1997	-	23.9%	0.00	47.1%	0.00	76.0%	0.00
1998	-	23.9%	0.00	47.1%	0.00	76.0%	0.00
1999	-	23.9%	0.00	47.1%	0.00	76.0%	0.00
2000	-	23.9%	0.00	47.1%	0.00	76.0%	0.00
2001	-	23.9%	0.00	47.1%	0.00	76.0%	0.00
2002	-	23.9%	0.00	47.1%	0.00	76.0%	0.00
2003	-	23.9%	0.00	47.1%	0.00	76.0%	0.00
2004	18,630	23.9%	8.91	47.1%	4.20	76.0%	3.19
2005	21,333	23.9%	10.20	47.1%	4.80	76.0%	3.65
2006	24,226	23.9%	11.58	47.1%	5.46	76.0%	4.15
2007	27,322	23.9%	13.06	47.1%	6.15	76.0%	4.68
2008	30,634	23.9%	14.65	47.1%	6.90	76.0%	5.24
2009	34,177	23.9%	16.34	47.1%	7.70	76.0%	5.85
2010	37,968	23.9%	18.15	47.1%	8.55	76.0%	6.50
2011	42,022	23.9%	20.09	47.1%	9.46	76.0%	7.19
2012	46,359	23.9%	22.17	47.1%	10.44	76.0%	7.94
2013	51,000	23.9%	24.38	47.1%	11.48	76.0%	8.73
2014	55,965	23.9%	26.76	47.1%	12.60	76.0%	9.58
2015	61,278	23.9%	29.30	47.1%	13.80	76.0%	10.49
2016	66,966	23.9%	32.02	47.1%	15.08	76.0%	11.46
2017	73,054	23.9%	34.93	47.1%	16.45	76.0%	12.51
2018	79,573	23.9%	38.05	47.1%	17.92	76.0%	13.62
2019	86,555	23.9%	41.38	47.1%	19.49	76.0%	14.82
2020	94,034	23.9%	44.96	47.1%	21.18	76.0%	16.10
2021	102,047	23.9%	48.79	47.1%	22.98	76.0%	17.47
2022	110,635	23.9%	52.90	47.1%	24.91	76.0%	18.94
2023	119,841	23.9%	57.30	47.1%	26.99	76.0%	20.52
2024	129,713	23.9%	62.02	47.1%	29.21	76.0%	22.21

YEAR	Sales After Reduction in Unbilled Supply (MWh)	Growth Rate	Peak Contribution from Sales after Reduction in Unbilled	Growth Rate	Sales & Unbilled Load Factor
1982	1,078,798		168		73.48%
1983	1,172,472	8.68%	183	8.95%	73.31%
1984	1,157,172	-1.30%	181	-0.92%	73.02%
1985	1,147,345	-0.85%	178	-1.79%	73.72%
1986	1,226,699	6.92%	190	7.10%	73.59%
1987	1,344,602	9.61%	209	9.90%	73.40%
1988	1,294,628	-3.72%	202	-3.35%	73.12%
1989	1,475,697	13.99%	231	14.26%	72.95%
1990	1,650,264	11.83%	258	11.65%	73.06%
1991	1,670,336	1.22%	260	0.83%	73.34%
1992	1,692,485	1.33%	264	1.35%	73.32%
1993	1,793,037	5.94%	278	5.67%	73.51%
1994	1,869,114	4.24%	293	5.13%	72.89%
1995	1,998,031	6.90%	315	7.49%	72.49%
1996	2,146,848	7.45%	340	8.06%	72.08%
1997	2,281,130	6.25%	363	6.66%	71.81%
1998	2,446,189	7.24%	392	7.97%	71.32%
1999	2,576,155	5.31%	415	5.88%	70.94%
2000	2,738,995	6.32%	438	5.66%	71.39%
2001	2,793,375	1.99%	447	2.06%	71.34%
2002	2,896,547	3.69%	463	3.62%	71.39%
2003	2,998,344	3.51%	477	3.00%	71.74%
2004	3,154,447	5.21%	503	5.34%	71.66%
2005	3,305,798	4.80%	527	4.79%	71.66%
2006	3,463,688	4.78%	552	4.75%	71.68%
2007	3,628,699	4.76%	578	4.73%	71.70%
2008	3,801,424	4.76%	605	4.72%	71.73%
2009	3,982,475	4.76%	634	4.71%	71.76%
2010	4,172,483	4.77%	663	4.71%	71.80%
2011	4,372,109	4.78%	695	4.72%	71.85%
2012	4,582,044	4.80%	728	4.73%	71.90%
2013	4,803,016	4.82%	762	4.75%	71.95%
2014	5,035,794	4.85%	798	4.76%	72.00%
2015	5,281,195	4.87%	837	4.79%	72.06%
2016	5,540,086	4.90%	877	4.81%	72.13%
2017	5,813,391	4.93%	919	4.84%	72.19%
2018	6,102,094	4.97%	964	4.86%	72.26%
2019	6,407,249	5.00%	1,011	4.89%	72.34%
2020	6,729,981	5.04%	1,061	4.93%	72.41%
2021	7,071,494	5.07%	1,114	4.96%	72.49%
2022	7,433,078	5.11%	1,169	4.99%	72.58%
2023	7,816,116	5.15%	1,228	5.03%	72.66%
2024	8,222,089	5.19%	1,290	5.06%	72.75%

YEAR	General DSM Savings (MWh)	General DSM NCP Load Factor	General DSM NCP (MW)	General DSM Customer to Class Coincidence Factor	General DSM Class Peak (MW)	General DSM Class to System Coincidence Factor	General DSM Reduction of System Peak (MW)
1982	0	31.1%	0.0	52.1%	0.0	77.4%	0.0
1983	0	30.7%	0.0	51.7%	0.0	77.0%	0.0
1984	0	30.8%	0.0	51.8%	0.0	77.3%	0.0
1985	0	31.3%	0.0	52.2%	0.0	77.4%	0.0
1986	0	31.4%	0.0	52.4%	0.0	77.5%	0.0
1987	0	30.7%	0.0	51.7%	0.0	77.1%	0.0
1988	0	30.6%	0.0	51.7%	0.0	77.1%	0.0
1989	0	30.5%	0.0	51.7%	0.0	77.0%	0.0
1990	0	30.6%	0.0	51.7%	0.0	77.0%	0.0
1991	0	31.1%	0.0	52.0%	0.0	77.3%	0.0
1992	0	31.5%	0.0	52.4%	0.0	77.5%	0.0
1993	0	31.4%	0.0	52.1%	0.0	77.4%	0.0
1994	0	31.0%	0.0	52.1%	0.0	77.3%	0.0
1995	0	30.7%	0.0	51.8%	0.0	77.3%	0.0
1996	0	30.5%	0.0	51.7%	0.0	77.4%	0.0
1997	0	30.2%	0.0	51.4%	0.0	77.2%	0.0
1998	0	29.8%	0.0	51.2%	0.0	77.2%	0.0
1999	0	29.7%	0.0	51.1%	0.0	77.3%	0.0
2000	0	30.2%	0.0	51.4%	0.0	77.7%	0.0
2001	0	30.3%	0.0	51.5%	0.0	77.8%	0.0
2002	0	30.4%	0.0	51.6%	0.0	77.8%	0.0
2003	0	30.6%	0.0	51.7%	0.0	77.8%	0.0
2004	31,544	30.5%	11.8	51.7%	6.1	77.7%	4.7
2005	34,711	30.4%	13.0	51.6%	6.7	77.5%	5.2
2006	38,187	30.3%	14.4	51.5%	7.4	77.4%	5.7
2007	42,007	30.2%	15.9	51.5%	8.2	77.2%	6.3
2008	46,207	30.1%	17.5	51.4%	9.0	77.0%	6.9
2009	50,828	30.0%	19.3	51.3%	9.9	76.9%	7.6
2010	55,915	29.9%	21.4	51.3%	11.0	76.7%	8.4
2011	61,520	29.8%	23.6	51.2%	12.1	76.5%	9.2
2012	67,698	29.7%	26.0	51.2%	13.3	76.4%	10.2
2013	74,511	29.6%	28.7	51.1%	14.7	76.2%	11.2
2014	82,028	29.5%	31.8	51.0%	16.2	76.0%	12.3
2015	90,326	29.4%	35.1	51.0%	17.9	75.8%	13.6
2016	99,492	29.3%	38.8	50.9%	19.8	75.6%	14.9
2017	109,620	29.2%	42.9	50.9%	21.8	75.4%	16.5
2018	120,817	29.1%	47.4	50.8%	24.1	75.2%	18.1
2019	133,202	29.0%	52.4	50.8%	26.6	75.0%	20.0
2020	146,907	28.9%	58.0	50.7%	29.4	74.8%	22.0
2021	162,080	28.8%	64.3	50.6%	32.5	74.6%	24.3
2022	178,886	28.7%	71.2	50.6%	36.0	74.4%	26.8
2023	197,509	28.6%	78.8	50.5%	39.8	74.2%	29.6
2024	218,157	28.5%	87.4	50.5%	44.1	74.0%	32.6

YEAR	Net Sales (MWh)	Net Sales Growth Rate	Peak Contribution from Net Sales (MW)	Growth Rate	Sales, Unbilled & DSM Load Factor	Technical Losses as % of Total Losses	Technical Losses as % of Sales	Technical Losses as % of Net Generation	Technical Losses (MWh)
1982	1,078,798		168		73.48%	45.71%	11.00%	8.87%	118,668
1983	1,172,472	8.68%	183	8.95%	73.31%	44.40%	11.00%	8.82%	128,972
1984	1,157,172	-1.30%	181	-0.92%	73.02%	44.94%	11.00%	8.84%	127,289
1985	1,147,345	-0.85%	178	-1.79%	73.72%	43.59%	11.00%	8.78%	126,208
1986	1,226,699	6.92%	190	7.10%	73.59%	45.30%	11.00%	8.85%	134,937
1987	1,344,602	9.61%	209	9.90%	73.40%	44.05%	11.00%	8.80%	147,906
1988	1,294,628	-3.72%	202	-3.35%	73.12%	38.94%	11.00%	8.58%	142,409
1989	1,475,697	13.99%	231	14.26%	72.95%	39.61%	11.00%	8.61%	162,327
1990	1,650,264	11.83%	258	11.65%	73.06%	50.70%	11.00%	9.04%	181,529
1991	1,670,336	1.22%	260	0.83%	73.34%	48.04%	11.00%	8.95%	183,737
1992	1,692,485	1.33%	264	1.35%	73.32%	40.45%	11.00%	8.65%	186,173
1993	1,793,037	5.94%	278	5.67%	73.51%	44.82%	11.00%	8.83%	197,234
1994	1,869,114	4.24%	293	5.13%	72.89%	45.17%	11.00%	8.85%	205,603
1995	1,998,031	6.90%	315	7.49%	72.49%	52.45%	11.00%	9.09%	219,783
1996	2,146,848	7.45%	340	8.06%	72.08%	57.60%	11.00%	9.24%	236,153
1997	2,281,130	6.25%	363	6.66%	71.81%	51.50%	11.00%	9.06%	250,924
1998	2,446,189	7.24%	392	7.97%	71.32%	54.65%	11.00%	9.16%	269,081
1999	2,576,155	5.31%	415	5.88%	70.94%	55.30%	11.00%	9.17%	283,377
2000	2,738,995	6.32%	438	5.66%	71.39%	53.69%	11.00%	9.13%	301,289
2001	2,793,375	1.99%	447	2.06%	71.34%	54.16%	11.00%	9.14%	307,271
2002	2,896,547	3.69%	463	3.62%	71.39%	50.71%	11.00%	9.04%	318,620
2003	2,998,344	3.51%	477	3.00%	71.74%	47.27%	11.00%	8.92%	329,818
2004	3,122,903	4.15%	498	4.34%	71.61%	52.10%	12.05%	9.82%	377,921
2005	3,271,087	4.75%	521	4.74%	71.62%	52.08%	11.92%	9.73%	391,501
2006	3,425,501	4.72%	546	4.70%	71.63%	52.05%	11.79%	9.64%	405,479
2007	3,586,692	4.71%	571	4.68%	71.65%	52.03%	11.66%	9.56%	419,901
2008	3,755,217	4.70%	598	4.66%	71.68%	52.00%	11.53%	9.47%	434,813
2009	3,931,647	4.70%	626	4.65%	71.71%	51.98%	11.40%	9.38%	450,258
2010	4,116,568	4.70%	655	4.65%	71.75%	51.95%	11.28%	9.30%	466,280
2011	4,310,589	4.71%	685	4.65%	71.79%	51.92%	11.15%	9.21%	482,923
2012	4,514,346	4.73%	717	4.66%	71.84%	51.89%	11.03%	9.13%	500,231
2013	4,728,505	4.74%	751	4.67%	71.89%	51.86%	10.91%	9.05%	518,251
2014	4,953,767	4.76%	786	4.69%	71.94%	51.83%	10.78%	8.97%	537,028
2015	5,190,869	4.79%	823	4.70%	72.00%	51.80%	10.66%	8.88%	556,612
2016	5,440,594	4.81%	862	4.72%	72.06%	51.77%	10.54%	8.80%	577,052
2017	5,703,771	4.84%	903	4.74%	72.12%	51.74%	10.42%	8.72%	598,400
2018	5,981,277	4.87%	946	4.77%	72.19%	51.71%	10.31%	8.64%	620,711
2019	6,274,047	4.89%	991	4.79%	72.26%	51.67%	10.19%	8.56%	644,044
2020	6,583,074	4.93%	1,039	4.82%	72.34%	51.64%	10.07%	8.49%	668,457
2021	6,909,414	4.96%	1,089	4.85%	72.41%	51.60%	9.96%	8.41%	694,014
2022	7,254,193	4.99%	1,142	4.87%	72.49%	51.56%	9.84%	8.33%	720,781
2023	7,618,607	5.02%	1,198	4.90%	72.58%	51.52%	9.73%	8.25%	748,829
2024	8,003,933	5.06%	1,257	4.93%	72.66%	51.48%	9.62%	8.18%	778,232

YEAR	Technical Losses NCP Load Factor	Technical Losses NCP (MW)	Technical Losses Customer to Class Coincidence Factor	Total Losses Class Peak (MW)	Technical Losses Class to System Coincidence Factor	Technical Losses Contribution to System Peak (MW)
1982	31.1%	43.5	52.1%	22.7	77.4%	17.5
1983	30.7%	48.0	51.7%	24.8	77.0%	19.1
1984	30.8%	47.2	51.8%	24.5	77.3%	18.9
1985	31.3%	46.0	52.2%	24.0	77.4%	18.6
1986	31.4%	49.1	52.4%	25.7	77.5%	19.9
1987	30.7%	55.0	51.7%	28.4	77.1%	21.9
1988	30.6%	53.1	51.7%	27.5	77.1%	21.2
1989	30.5%	60.8	51.7%	31.4	77.0%	24.2
1990	30.6%	67.8	51.7%	35.0	77.0%	27.0
1991	31.1%	67.4	52.0%	35.0	77.3%	27.1
1992	31.5%	67.4	52.4%	35.4	77.5%	27.4
1993	31.4%	71.8	52.1%	37.4	77.4%	28.9
1994	31.0%	75.6	52.1%	39.4	77.3%	30.4
1995	30.7%	81.6	51.8%	42.3	77.3%	32.7
1996	30.5%	88.4	51.7%	45.7	77.4%	35.3
1997	30.2%	95.0	51.4%	48.8	77.2%	37.7
1998	29.8%	103.1	51.2%	52.8	77.2%	40.7
1999	29.7%	108.9	51.1%	55.7	77.3%	43.1
2000	30.2%	113.9	51.4%	58.5	77.7%	45.4
2001	30.3%	115.7	51.5%	59.6	77.8%	46.4
2002	30.4%	119.5	51.6%	61.6	77.8%	48.0
2003	30.6%	122.9	51.7%	63.6	77.8%	49.5
2004	30.5%	141.4	51.7%	73.1	77.7%	56.7
2005	30.4%	147.0	51.6%	75.9	77.5%	58.8
2006	30.3%	152.8	51.5%	78.7	77.4%	60.9
2007	30.2%	158.8	51.5%	81.7	77.2%	63.1
2008	30.1%	165.0	51.4%	84.8	77.0%	65.3
2009	30.0%	171.4	51.3%	88.0	76.9%	67.7
2010	29.9%	178.1	51.3%	91.3	76.7%	70.1
2011	29.8%	185.1	51.2%	94.8	76.5%	72.6
2012	29.7%	192.4	51.2%	98.4	76.4%	75.2
2013	29.6%	200.0	51.1%	102.2	76.2%	77.9
2014	29.5%	207.9	51.0%	106.1	76.0%	80.7
2015	29.4%	216.2	51.0%	110.2	75.8%	83.6
2016	29.3%	224.9	50.9%	114.6	75.6%	86.6
2017	29.2%	234.0	50.9%	119.1	75.4%	89.8
2018	29.1%	243.6	50.8%	123.8	75.2%	93.1
2019	29.0%	253.6	50.8%	128.7	75.0%	96.6
2020	28.9%	264.1	50.7%	133.9	74.8%	100.2
2021	28.8%	275.1	50.6%	139.3	74.6%	104.0
2022	28.7%	286.7	50.6%	145.1	74.4%	108.0
2023	28.6%	298.8	50.5%	151.0	74.2%	112.1
2024	28.5%	311.6	50.5%	157.3	74.0%	116.5

YEAR	Net Generation (MWh)	Growth Rate	Calculated System Peak (MW)	Growth Rate	Calc. Net Generation Load Factor	Total Losses (MWh)
1982	1,338,412		209.3		73.02%	259,614
1983	1,462,965		229.3	9.60%	72.82%	290,493
1984	1,440,429	-1.54%	226.5	-1.23%	72.59%	283,257
1985	1,436,895	-0.25%	224.2	-1.01%	73.15%	289,550
1986	1,524,573	6.10%	238.1	6.18%	73.10%	297,874
1987	1,680,395	10.22%	263.2	10.54%	72.89%	335,793
1988	1,660,364	-1.19%	261.5	-0.63%	72.48%	365,736
1989	1,885,490	13.56%	297.5	13.76%	72.35%	409,793
1990	2,008,293	6.51%	315.0	5.89%	72.77%	358,029
1991	2,052,811	2.22%	321.1	1.92%	72.99%	362,475
1992	2,152,741	4.87%	337.8	5.22%	72.74%	460,256
1993	2,233,130	3.73%	349.0	3.30%	73.05%	440,093
1994	2,324,316	4.08%	365.9	4.85%	72.52%	455,202
1995	2,417,086	3.99%	381.5	4.26%	72.33%	419,055
1996	2,556,833	5.78%	405.1	6.19%	72.06%	409,985
1997	2,768,388	8.27%	440.8	8.82%	71.70%	487,258
1998	2,938,536	6.15%	470.5	6.74%	71.30%	492,347
1999	3,088,613	5.11%	496.8	5.60%	70.96%	512,458
2000	3,300,185	6.85%	527.9	6.25%	71.36%	561,190
2001	3,360,741	1.83%	537.9	1.89%	71.32%	567,366
2002	3,524,905	4.88%	564.2	4.89%	71.32%	628,358
2003	3,696,005	4.85%	589.5	4.49%	71.57%	697,661
2004	3,848,273	4.12%	614.0	4.16%	71.54%	725,370
2005	4,022,868	4.54%	641.9	4.53%	71.55%	751,781
2006	4,204,489	4.51%	670.8	4.50%	71.56%	778,988
2007	4,393,774	4.50%	700.8	4.48%	71.57%	807,082
2008	4,591,371	4.50%	732.1	4.47%	71.59%	836,153
2009	4,797,936	4.50%	764.7	4.46%	71.62%	866,289
2010	5,014,144	4.51%	798.9	4.46%	71.65%	897,576
2011	5,240,692	4.52%	834.5	4.47%	71.69%	930,103
2012	5,478,307	4.53%	871.9	4.48%	71.72%	963,960
2013	5,727,745	4.55%	911.1	4.49%	71.77%	999,239
2014	5,989,801	4.58%	952.1	4.51%	71.81%	1,036,035
2015	6,265,315	4.60%	995.3	4.53%	71.86%	1,074,446
2016	6,555,169	4.63%	1040.5	4.55%	71.92%	1,114,575
2017	6,860,300	4.65%	1088.1	4.57%	71.97%	1,156,529
2018	7,181,699	4.68%	1138.2	4.60%	72.03%	1,200,422
2019	7,520,418	4.72%	1190.8	4.63%	72.09%	1,246,371
2020	7,877,576	4.75%	1246.3	4.66%	72.16%	1,294,502
2021	8,254,361	4.78%	1304.7	4.69%	72.22%	1,344,947
2022	8,652,037	4.82%	1366.2	4.72%	72.29%	1,397,844
2023	9,071,949	4.85%	1431.1	4.75%	72.37%	1,453,342
2024	9,515,528	4.89%	1499.4	4.78%	72.44%	1,511,596

YEAR	Total Losses NCP Load Factor	Total Losses NCP (MW)	Total Losses Customer to Class Coincidence Factor	Total Losses Class Peak (MW)	Total Losses Class to System Coincidence Factor	Total Losses Contribution to System Peak (MW)
1982	26.7%	111	49.0%	54	76.6%	42
1983	26.5%	125	48.9%	61	76.4%	47
1984	26.5%	122	48.9%	60	76.5%	46
1985	26.6%	124	49.0%	61	76.5%	47
1986	26.8%	127	49.1%	62	76.6%	48
1987	26.5%	145	48.8%	71	76.4%	54
1988	26.1%	160	48.6%	78	76.4%	59
1989	26.1%	179	48.7%	87	76.4%	67
1990	26.9%	152	49.2%	75	76.5%	57
1991	26.9%	162	49.1%	80	76.6%	61
1992	26.5%	198	48.9%	97	76.6%	74
1993	26.7%	188	49.0%	92	76.6%	71
1994	26.7%	195	49.0%	96	76.6%	73
1995	27.0%	177	49.3%	87	76.6%	67
1996	27.3%	172	49.4%	85	76.7%	65
1997	26.7%	208	49.1%	102	76.6%	78
1998	26.8%	210	49.1%	103	76.6%	79
1999	26.8%	218	49.1%	107	76.7%	82
2000	26.9%	238	49.1%	117	76.8%	90
2001	27.0%	240	49.2%	118	76.9%	91
2002	26.8%	268	49.1%	131	76.9%	101
2003	26.7%	299	49.0%	146	76.8%	112
2004	26.9%	308	49.2%	151	76.8%	116
2005	26.9%	319	49.2%	157	76.7%	120
2006	26.8%	331	49.1%	163	76.7%	125
2007	26.8%	344	49.1%	169	76.6%	129
2008	26.7%	357	49.1%	175	76.5%	134
2009	26.7%	370	49.1%	182	76.4%	139
2010	26.7%	384	49.0%	188	76.4%	144
2011	26.6%	399	49.0%	196	76.3%	149
2012	26.6%	414	49.0%	203	76.2%	155
2013	26.5%	430	49.0%	211	76.1%	160
2014	26.5%	446	48.9%	219	76.0%	166
2015	26.4%	464	48.9%	227	75.9%	172
2016	26.4%	482	48.9%	236	75.8%	179
2017	26.4%	501	48.9%	245	75.7%	185
2018	26.3%	521	48.8%	254	75.6%	192
2019	26.3%	542	48.8%	264	75.5%	200
2020	26.2%	563	48.8%	275	75.4%	207
2021	26.2%	586	48.8%	286	75.3%	215
2022	26.1%	610	48.7%	298	75.2%	224
2023	26.1%	636	48.7%	310	75.1%	233
2024	26.1%	662	48.7%	322	75.0%	242

YEAR	ENS (MWh)	ENS NCP Load Factor	ENS NCP (MW)	ENS Customer to Class Coincidence Factor	ENS Class Peak (MW)	ENS Class to System Coincidence Factor	ENS Contribution to System Peak (MW)
1982	0	59.1%	0.0	100.0%	0.0	100.0%	0.0
1983	0	59.1%	0.0	100.0%	0.0	100.0%	0.0
1984	0	59.1%	0.0	100.0%	0.0	100.0%	0.0
1985	0	59.1%	0.0	100.0%	0.0	100.0%	0.0
1986	0	59.1%	0.0	100.0%	0.0	100.0%	0.0
1987	0	59.1%	0.0	100.0%	0.0	100.0%	0.0
1988	0	59.1%	0.0	100.0%	0.0	100.0%	0.0
1989	0	59.1%	0.0	100.0%	0.0	100.0%	0.0
1990	0	59.1%	0.0	100.0%	0.0	100.0%	0.0
1991	0	59.1%	0.0	100.0%	0.0	100.0%	0.0
1992	0	59.1%	0.0	100.0%	0.0	100.0%	0.0
1993	0	59.1%	0.0	100.0%	0.0	100.0%	0.0
1994	0	59.1%	0.0	100.0%	0.0	100.0%	0.0
1995	0	59.1%	0.0	100.0%	0.0	100.0%	0.0
1996	0	59.1%	0.0	100.0%	0.0	100.0%	0.0
1997	0	59.1%	0.0	100.0%	0.0	100.0%	0.0
1998	0	59.1%	0.0	100.0%	0.0	100.0%	0.0
1999	0	59.1%	0.0	100.0%	0.0	100.0%	0.0
2000	0	59.1%	0.0	100.0%	0.0	100.0%	0.0
2001	0	59.1%	0.0	100.0%	0.0	100.0%	0.0
2002	0	59.1%	0.0	100.0%	0.0	100.0%	0.0
2003	0	59.1%	0.0	100.0%	0.0	100.0%	0.0
2004	0	59.1%	0.0	100.0%	0.0	100.0%	0.0
2005	0	59.1%	0.0	100.0%	0.0	100.0%	0.0
2006	0	59.1%	0.0	100.0%	0.0	100.0%	0.0
2007	0	59.1%	0.0	100.0%	0.0	100.0%	0.0
2008	0	59.1%	0.0	100.0%	0.0	100.0%	0.0
2009	0	59.1%	0.0	100.0%	0.0	100.0%	0.0
2010	0	59.1%	0.0	100.0%	0.0	100.0%	0.0
2011	0	59.1%	0.0	100.0%	0.0	100.0%	0.0
2012	0	59.1%	0.0	100.0%	0.0	100.0%	0.0
2013	0	59.1%	0.0	100.0%	0.0	100.0%	0.0
2014	0	59.1%	0.0	100.0%	0.0	100.0%	0.0
2015	0	59.1%	0.0	100.0%	0.0	100.0%	0.0
2016	0	59.1%	0.0	100.0%	0.0	100.0%	0.0
2017	0	59.1%	0.0	100.0%	0.0	100.0%	0.0
2018	0	59.1%	0.0	100.0%	0.0	100.0%	0.0
2019	0	59.1%	0.0	100.0%	0.0	100.0%	0.0
2020	0	59.1%	0.0	100.0%	0.0	100.0%	0.0
2021	0	59.1%	0.0	100.0%	0.0	100.0%	0.0
2022	0	59.1%	0.0	100.0%	0.0	100.0%	0.0
2023	0	59.1%	0.0	100.0%	0.0	100.0%	0.0
2024	0	59.1%	0.0	100.0%	0.0	100.0%	0.0

YEAR	Total Losses as % of Net Generation	Required Net Generation (MWh)	Growth Rate	Required Peak Generation (MW)	Growth Rate	Required Net Generation Load Factor	Calc LF less Actual
1982	19.40%	1,338,412		209		73.02%	7.05%
1983	19.86%	1,462,965		229	9.60%	72.82%	4.99%
1984	19.66%	1,440,429	-1.54%	227	-1.23%	72.59%	2.97%
1985	20.15%	1,436,895	-0.25%	224	-1.01%	73.15%	1.96%
1986	19.54%	1,524,573	6.10%	238	6.18%	73.10%	4.20%
1987	19.98%	1,680,395	10.22%	263	10.54%	72.89%	3.08%
1988	22.03%	1,660,364	-1.19%	262	-0.63%	72.48%	8.37%
1989	21.73%	1,885,490	13.56%	298	13.76%	72.35%	3.39%
1990	17.83%	2,008,293	6.51%	315	5.89%	72.77%	0.54%
1991	18.63%	2,052,811	2.22%	321	1.92%	72.99%	2.70%
1992	21.38%	2,152,741	4.87%	338	5.22%	72.74%	1.18%
1993	19.71%	2,233,130	3.73%	349	3.30%	73.05%	3.95%
1994	19.58%	2,324,316	4.08%	366	4.85%	72.52%	2.70%
1995	17.34%	2,417,086	3.99%	381	4.26%	72.33%	5.28%
1996	16.03%	2,556,833	5.78%	405	6.19%	72.06%	2.29%
1997	17.60%	2,768,388	8.27%	441	8.82%	71.70%	2.07%
1998	16.75%	2,938,536	6.15%	470	6.74%	71.30%	0.58%
1999	16.59%	3,088,613	5.11%	497	5.60%	70.96%	1.18%
2000	17.00%	3,300,185	6.85%	528	6.25%	71.36%	0.32%
2001	16.88%	3,360,741	1.83%	538	1.89%	71.32%	0.04%
2002	17.83%	3,524,905	4.88%	564	4.89%	71.32%	-0.04%
2003	18.88%	3,696,005	4.85%	590	4.49%	71.57%	0.06%
2004	18.85%	3,848,273	4.12%	614	4.16%	71.54%	0.00%
2005	18.69%	4,022,868	4.54%	642	4.53%	71.55%	0.00%
2006	18.53%	4,204,489	4.51%	671	4.50%	71.56%	0.00%
2007	18.37%	4,393,774	4.50%	701	4.48%	71.57%	0.00%
2008	18.21%	4,591,371	4.50%	732	4.47%	71.59%	0.00%
2009	18.06%	4,797,936	4.50%	765	4.46%	71.62%	0.00%
2010	17.90%	5,014,144	4.51%	799	4.46%	71.65%	0.00%
2011	17.75%	5,240,692	4.52%	835	4.47%	71.69%	0.00%
2012	17.60%	5,478,307	4.53%	872	4.48%	71.72%	0.00%
2013	17.45%	5,727,745	4.55%	911	4.49%	71.77%	0.00%
2014	17.30%	5,989,801	4.58%	952	4.51%	71.81%	0.00%
2015	17.15%	6,265,315	4.60%	995	4.53%	71.86%	0.00%
2016	17.00%	6,555,169	4.63%	1,041	4.55%	71.92%	0.00%
2017	16.86%	6,860,300	4.65%	1,088	4.57%	71.97%	0.00%
2018	16.72%	7,181,699	4.68%	1,138	4.60%	72.03%	0.00%
2019	16.57%	7,520,418	4.72%	1,191	4.63%	72.09%	0.00%
2020	16.43%	7,877,576	4.75%	1,246	4.66%	72.16%	0.00%
2021	16.29%	8,254,361	4.78%	1,305	4.69%	72.22%	0.00%
2022	16.16%	8,652,037	4.82%	1,366	4.72%	72.29%	0.00%
2023	16.02%	9,071,949	4.85%	1,431	4.75%	72.37%	0.00%
2024	15.89%	9,515,528	4.89%	1,499	4.78%	72.44%	0.00%

JPS Sales data

Year	Month	RATE 10	RATE 20	RATE 40	RATE 50	RATE 60	OTHER	TOTAL
1990	Jan	47,109	30,542	42,511	12,836	2,913	153	136,064
1990	Feb	41,487	28,893	39,916	16,817	2,951	446	130,510
1990	Mar	43,221	37,177	47,425	13,652	2,892	1,118	145,485
1990	Apr	40,669	28,231	38,413	14,594	2,871	140	124,918
1990	May	41,969	33,068	41,796	16,209	2,581	769	136,392
1990	Jun	41,995	36,805	48,877	16,735	3,235	350	147,997
1990	Jul	44,046	29,535	32,231	18,568	2,906	983	128,269
1990	Aug	45,796	33,425	40,791	20,250	2,906	1,691	144,859
1990	Sep	45,280	33,878	40,709	19,593	2,929	1,490	143,879
1990	Oct	40,486	32,404	37,893	22,872	2,900	1,971	138,526
1990	Nov	46,029	35,107	34,995	19,245	2,891	1,640	139,907
1990	Dec	46,997	30,868	32,596	18,393	2,902	1,702	133,458
1991	Jan	41,471	30,632	35,624	19,952	2,971	368	131,018
1991	Feb	44,979	27,953	32,394	19,981	2,934	142	128,383
1991	Mar	40,358	33,942	34,878	21,948	2,931	252	134,309
1991	Apr	46,642	31,399	39,489	24,307	2,925	418	145,180
1991	May	42,040	37,272	35,738	24,318	2,937	708	143,013
1991	Jun	44,756	23,495	30,035	21,739	2,916	364	123,305
1991	Jul	42,108	27,705	55,510	28,154	2,918	968	157,363
1991	Aug	49,152	38,931	26,891	28,715	2,927	388	147,004
1991	Sep	45,228	36,430	39,750	26,733	2,939	351	151,431
1991	Oct	46,684	30,635	36,014	23,577	2,919	438	140,267
1991	Nov	43,944	32,929	29,642	25,749	1,840	718	134,822
1991	Dec	45,802	29,798	30,201	24,111	3,991	338	134,241
1992	Jan	47,637	34,818	33,316	24,075	2,930	69	142,845
1992	Feb	44,757	28,663	31,344	27,312	2,740	268	135,084
1992	Mar	43,632	28,904	34,460	24,469	3,115	364	134,944
1992	Apr	42,698	26,925	32,751	26,690	2,760	3,400	135,224
1992	May	42,945	35,995	32,611	25,265	3,189	3,414	143,419
1992	Jun	42,781	39,773	36,657	26,789	2,933	3,955	152,888
1992	Jul	45,401	28,370	38,052	27,316	2,953	1,871	143,963
1992	Aug	46,999	32,126	36,223	28,790	2,958	113	147,209
1992	Sep	45,539	35,015	37,686	33,129	2,769	128	154,266
1992	Oct	46,201	33,153	27,945	27,785	3,024	591	138,699
1992	Nov	42,983	32,799	27,149	25,862	2,960	1,183	132,936
1992	Dec	44,049	31,293	28,172	24,229	2,949	316	131,008
1993	Jan	45,054	33,353	28,380	28,520	2,607	564	138,478
1993	Feb	43,676	28,267	29,291	24,582	3,263	244	129,323
1993	Mar	42,720	31,543	49,382	26,955	2,908	178	153,686
1993	Apr	49,353	30,653	33,653	28,684	3,054	140	145,537
1993	May	46,182	32,679	31,103	27,195	2,968	184	140,311
1993	Jun	45,582	30,783	38,870	26,753	2,967	266	145,221
1993	Jul	48,273	36,737	43,681	29,997	2,952	200	161,840
1993	Aug	49,554	34,745	48,275	30,357	3,064	997	166,992
1993	Sep	49,859	37,189	35,285	28,331	2,997	672	154,333
1993	Oct	48,143	35,452	37,431	28,984	3,035	191	153,236
1993	Nov	49,213	36,238	35,885	28,382	2,986	1,094	153,798
1993	Dec	50,153	35,756	32,574	27,349	2,993	1,457	150,282

JPS Sales data

1994	Jan	53,171	36,800	35,255	28,726	3,116	3,763	160,831
1994	Feb	49,078	33,678	34,909	25,753	3,034	5,072	151,524
1994	Mar	50,315	36,874	35,054	26,804	3,045	2,225	154,317
1994	Apr	52,382	35,149	38,920	28,335	2,983	1,055	158,824
1994	May	50,407	34,794	36,001	28,627	2,977	943	153,749
1994	Jun	50,677	36,111	37,331	29,784	3,048	333	157,284
1994	Jul	52,901	39,472	37,821	28,485	2,983	99	161,761
1994	Aug	51,958	37,744	37,706	28,423	3,011	36	158,878
1994	Sep	51,700	37,429	36,658	28,724	2,995	77	157,583
1994	Oct	51,804	36,811	37,065	28,929	3,015	334	157,958
1994	Nov	51,684	35,444	36,260	27,228	2,861	272	153,749
1994	Dec	51,510	35,987	29,643	22,479	2,979	58	142,656
1995	Jan	57,378	37,278	41,428	32,245	3,070	59	171,458
1995	Feb	52,913	32,834	33,318	27,029	3,024	363	149,481
1995	Mar	54,262	38,869	38,222	27,996	3,039	4,264	166,652
1995	Apr	51,586	33,418	35,662	28,696	3,002	1,410	153,774
1995	May	54,394	38,021	38,665	28,647	3,008	122	162,857
1995	Jun	56,947	38,965	40,162	28,610	3,081	721	168,486
1995	Jul	60,608	41,205	39,904	28,854	2,997	226	173,794
1995	Aug	58,050	42,344	40,091	29,508	3,035	1,224	174,252
1995	Sep	60,655	43,785	39,138	29,484	3,120	257	176,439
1995	Oct	60,962	41,341	35,674	27,231	3,065	595	168,868
1995	Nov	58,867	43,057	37,348	29,028	3,057	1,854	173,211
1995	Dec	57,515	39,414	32,045	22,588	3,004	4,193	158,759
1996	Jan	69,404	41,257	40,145	31,241	3,092	4,283	189,422
1996	Feb	60,054	38,800	36,239	27,532	3,042	2,130	167,797
1996	Mar	60,536	40,780	37,619	27,410	2,990	336	169,671
1996	Apr	60,800	39,253	37,879	26,788	3,422	100	168,242
1996	May	59,359	44,285	39,471	29,214	4,293	477	177,099
1996	Jun	59,230	36,773	40,124	29,292	2,341	276	168,036
1996	Jul	63,297	43,756	40,462	30,286	2,509	242	180,552
1996	Aug	66,900	47,619	47,087	30,315	2,997	262	195,180
1996	Sep	64,601	43,532	39,528	34,851	3,022	210	185,744
1996	Oct	65,185	42,314	39,746	30,092	5,840	99	183,276
1996	Nov	68,811	44,989	40,597	34,730	5,766	809	195,702
1996	Dec	65,706	37,476	32,666	26,037	3,959	283	166,127
1997	Jan	70,523	41,236	37,798	30,294	3,978	173	184,002
1997	Feb	59,106	38,185	50,093	27,657	4,024	2,471	181,536
1997	Mar	63,815	40,060	24,547	28,856	4,132	410	161,820
1997	Apr	64,422	51,478	40,909	29,384	4,123	124	190,440
1997	May	66,451	41,715	45,997	31,097	4,101	160	189,521
1997	Jun	68,163	43,803	40,102	29,775	4,126	259	186,228
1997	Jul	69,324	46,846	43,315	30,561	4,097	414	194,557
1997	Aug	75,604	54,896	46,111	31,307	4,284	328	212,530
1997	Sep	73,385	43,904	42,185	30,167	4,104	151	193,896
1997	Oct	72,355	50,010	41,533	28,708	3,979	18	196,603
1997	Nov	75,105	46,822	41,323	29,258	4,115	25	196,648
1997	Dec	71,006	47,001	41,492	29,605	4,135	110	193,349

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1998	Jan	81,184	48,069	41,284	28,226	4,023	72	202,858
1998	Feb	72,789	43,527	36,788	26,058	4,180	93	183,435
1998	Mar	69,187	44,367	42,142	33,470	4,191	184	193,541
1998	Apr	76,264	49,698	43,168	28,052	4,195	86	201,463
1998	May	72,544	47,282	41,783	28,551	4,217	539	194,916
1998	Jun	73,823	50,636	45,143	30,692	4,117	241	204,652
1998	Jul	81,176	52,681	47,185	35,084	4,243	258	220,627
1998	Aug	81,746	52,560	48,710	32,071	4,239	941	220,267
1998	Sep	78,121	49,736	42,274	28,950	4,034	588	203,703
1998	Oct	79,397	51,159	45,598	30,650	4,248	439	211,491
1998	Nov	80,872	49,999	40,185	28,530	4,250	952	204,788
1998	Dec	79,193	49,356	42,816	28,508	4,309	266	204,448
1999	Jan	100,284	50,881	42,143	27,567	4,262	379	225,516
1999	Feb	76,992	44,625	40,724	25,777	4,242	494	192,854
1999	Mar	73,666	44,596	40,417	27,014	4,245	1,120	191,058
1999	Apr	86,897	52,436	46,678	30,820	4,248	490	221,569
1999	May	75,535	47,995	43,701	34,434	4,263	1,156	207,084
1999	Jun	80,362	51,777	43,133	30,596	4,250	140	210,258
1999	Jul	86,798	53,531	46,347	33,397	4,247	87	224,407
1999	Aug	89,444	56,111	46,780	32,597	4,256	1,500	230,688
1999	Sep	84,144	52,193	43,718	35,250	4,259	772	220,336
1999	Oct	82,826	51,765	43,826	34,403	4,266	567	217,653
1999	Nov	85,419	50,924	40,442	35,653	4,267	501	217,206
1999	Dec	85,075	49,157	42,683	36,098	4,269	244	217,526
2000	Jan	89,088	50,299	42,044	39,271	4,270	0	224,972
2000	Feb	80,227	45,399	43,712	38,096	4,293	4	211,731
2000	Mar	81,669	45,950	46,937	38,075	4,287	1,229	218,147
2000	Apr	81,321	48,042	47,357	34,979	4,275	410	216,384
2000	May	82,457	47,725	47,577	40,815	4,280	493	223,347
2000	Jun	91,054	53,988	50,292	39,326	4,282	577	239,519
2000	Jul	91,281	52,320	52,212	41,685	4,281	824	242,603
2000	Aug	94,700	54,395	55,588	41,298	4,292	892	251,165
2000	Sep	88,073	51,928	47,706	38,009	4,192	89	229,997
2000	Oct	90,655	50,935	48,412	38,208	4,397	424	233,031
2000	Nov	88,852	50,581	47,725	38,623	4,289	27	230,097
2000	Dec	87,445	46,752	43,914	35,431	4,289	171	218,002
2001	Jan	92,569	49,324	47,314	40,484	4,304	43	234,038
2001	Feb	82,424	44,543	43,421	37,843	4,295	10	212,536
2001	Mar	83,846	47,384	48,552	35,793	4,357	68	220,000
2001	Apr	88,225	49,185	47,149	36,639	4,745	255	226,198
2001	May	84,267	48,553	50,735	41,474	4,605	209	229,843
2001	Jun	91,569	52,844	50,380	41,718	4,754	1,963	243,228
2001	Jul	89,134	50,697	49,947	39,271	4,755	1,378	235,182
2001	Aug	97,746	57,277	56,066	45,162	4,757	153	261,161
2001	Sep	86,526	50,523	49,184	39,471	4,757	639	231,100
2001	Oct	88,387	53,115	49,055	39,863	4,778	1,548	236,746
2001	Nov	94,636	52,548	47,755	38,805	4,736	2,282	240,762
2001	Dec	86,097	48,777	43,775	37,511	4,737	1,684	222,581

JPS Sales data

2002	Jan	94,263	51,829	48,967	41,421	4,739	185	241,404
2002	Feb	89,826	46,452	45,874	38,451	4,739	503	225,845
2002	Mar	83,328	48,448	46,891	41,489	4,743	791	225,690
2002	Apr	91,705	51,183	50,406	42,187	4,749	79	240,309
2002	May	86,291	53,243	52,792	46,630	4,749	122	243,827
2002	Jun	91,711	50,246	47,296	39,574	4,755	693	234,275
2002	Jul	88,417	52,529	51,095	43,119	4,754	1,534	241,448
2002	Aug	99,895	57,196	56,781	46,070	4,764	1,092	265,798
2002	Sep	99,505	52,414	49,804	41,881	2,981	1,166	247,751
2002	Oct	92,631	49,913	49,944	43,826	6,647	1,545	244,506
2002	Nov	95,749	53,857	56,456	45,084	4,845	1,280	257,271
2002	Dec	89,812	50,761	40,947	40,669	4,923	1,310	228,422
2003	Jan	97,039	54,699	50,005	44,698	4,941	769	252,151
2003	Feb	88,465	47,697	49,070	41,557	4,940	1,093	232,822
2003	Mar	86,079	50,628	49,296	41,645	4,941	454	233,043
2003	Apr	83,534	52,623	54,754	47,941	4,963	1,630	245,445
2003	May	93,985	55,086	54,662	44,586	4,989	544	253,852
2003	Jun	93,568	55,065	51,909	44,647	5,013	1,423	251,625
2003	Jul	91,377	58,365	52,405	45,832	5,016	943	253,938
2003	Aug	101,670	63,428	56,580	46,797	4,893	2,495	275,863
2003	Sep							
2003	Oct							
2003	Nov							
2003	Dec							