Technical Appendix 2

FORECAST MODEL DESCRIPTIONS, EQUATIONS, STATISTICAL TEST RESULTS & FORECAST RESULTS

Louisville Gas & Electric

2005 IRP

A SUBSIDIARY OF

LG&ENERGY®

2005 – 2019 Energy Forecast

April 2005

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LOUISVILLE GAS & ELECTRIC COMPANY
ENERGY FORECAST 2005 – 2019

INTRODUCTION

Louisville Gas and Electric (LG&E) provides electrical service to customers primarily in four counties in Kentucky around the City of Louisville: Bullitt, Jefferson, Meade, and Oldham counties. LG&E serves the following retail customer classes: Residential, Commercial, Industrial, Public Authority, and Street Lighting.

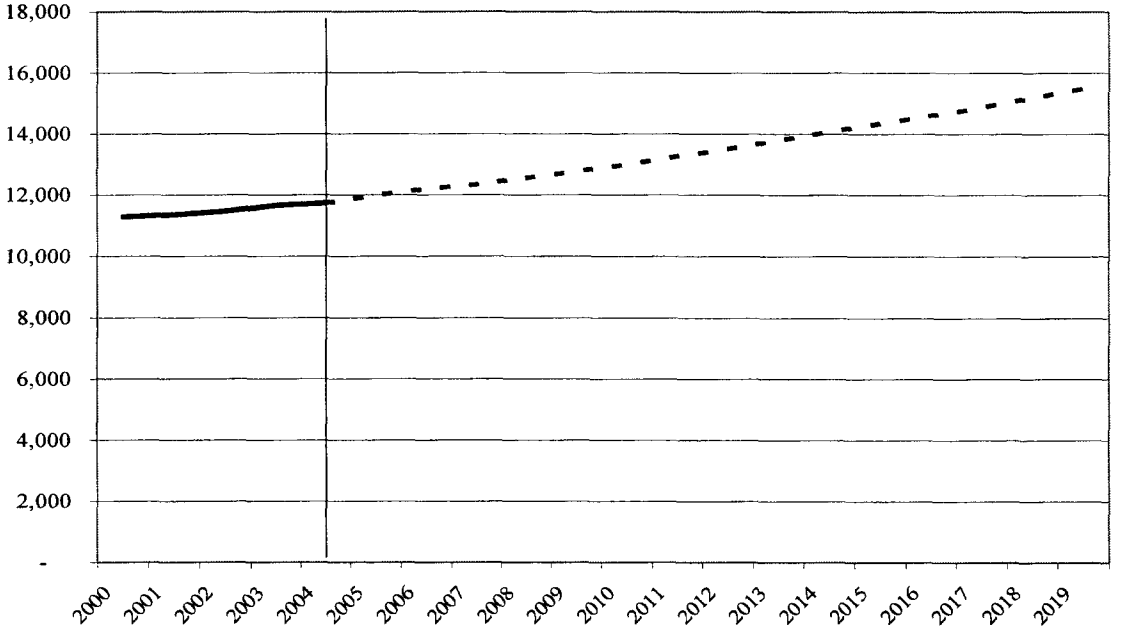
Forecasting energy sales is essential for the Company's operational planning and control. The forecast becomes the basis for the decisions regarding construction of facilities, such as power plants, transmission and distribution lines, and substations, all of which are vital to providing reliable service. The energy forecast also becomes the basis for estimating revenues, which in turn are used in the development of annual operating budgets and medium-term financial forecasts.

The desired outcome of the forecasting process is a reasonable estimate upon which strategies and goals can logically be based so that the company's mission of providing adequate and reliable electric service to its customers at the lowest reasonable cost can be attained.

2005-2019 ENERGY FORECAST SUMMARY

Graph LGE-1 presents weather-normalized sales since 2000 and the 2005 to 2019 energy forecast. From 2000 to 2004, LG&E sales grew at an average growth rate of 1.0 percent on a weather-normalized basis. Large Commercial sales grew at an annual average rate of 1.9 percent, followed by Residential, Small Commercial, and Public Authority at 1.6, 0.8, and 0.7 percent respectively. Industrial sales declined over the 2000-2004 time period by -0.2 percent, annually.

GRAPH LGE-1
LG&E COMPANY SALES: HISTORY & FORECAST (GWh)
(2000-2004 Weather Normalized Actual)



Total LG&E energy sales over 2005-2009 are forecast to grow at a 1.7 percent average annual rate. The forecast averages 1.9 percent growth over the fifteen-year forecast horizon. Table LGE-1 shows the five and fifteen-year average annual sales growth rates for each class along with their relative share of 2004 weather-normalized sales.

TABLE LGE-1
FIVE AND FIFTEEN YEAR GROWTH RATES BY SECTOR AND 2004 CLASS PERCENTAGE OF TOTAL SALES

Class	Percent of 2004 Sales	Average Annual Growth 2005- 2009	Average Annual Growth Rate 2005-2019
Residential	33.6	2.2	2.3
Small Commercial	11.9	1.9	1.9
Large Commercial	25.8	2.0	2.0
Large Industrial	28.1	0.3	1.2
Street Lighting	0.5	0.4	0.4
LG&E Total	100.0	1.6	1.9

Table LGE-2 presents energy forecast for total customers and sales with their corresponding growth rate through 2019. Energy sales are expected to grow at an average annual rate of 1.6 percent in the 2005-2009 period and by 1.9 percent in the 2005-2019 period. Table LGE-3 presents the LG&E energy forecast by class. Over the first five years of the energy forecast, sales growth by sector is forecast to be strongest in Residential, which is forecast to grow at an average annual rate of 2.2 percent. Large Commercial follows at 2.0 percent, closely followed by Small Commercial at 1.9 percent. Large Industrial and Street Lighting are forecast to grow at 0.3 and 0.4 percent respectively. A similar pattern emerges over the fifteen-year forecast period with the Residential class growing at an annual average rate of 2.3 percent. This is followed by Large Commercial at 2.0 percent and then by Small Commercial at 1.9 percent. Large Industrial grows at an annual average of 1.2 percent while Street Lighting grows at a 0.4 percent annual rate.

TABLE LGE- 2
TOTAL LG&E CUSTOMER AND BILLED SALES FORECAST (GWh)

Year	Customers [1]	% Growth in Customers	Energy Forecast (GWh)	% Growth in Energy Sales
2005	391,424	0.6%[2]	11,983	2.1%[3]
2006	396,532	1.3%	12,188	1.7%
2007	401,735	1.3%	12,331	1.2%
2008	407,048	1.3%	12,549	1.8%
2009	412,422	1.3%	12,764	1.7%
2010	417,803	1.3%	12,989	1.8%
2011	423,095	1.3%	13,257	2.1%
2012	428,338	1.2%	13,505	1.9%
2013	433,533	1.2%	13,797	2.2%
2014	438,673	1.2%	14,069	2.0%
2015	443,764	1.2%	14,340	1.9%
2016	448,841	1.1%	14,597	1.8%
2017	453,916	1.1%	14,874	1.9%
2018	459,003	1.1%	15,183	2.1%
2019	464,044	1.1%	15,487	2.0%

[1] Does not include street lighting
[2] Based on 2004 customer count of 389,196.
[3] Based on 2004 weather-normalized sales of 11,735 GWh.

TABLE LGE- 3
LG&E FORECASTED SALES BY CLASS AND TOTAL ENERGY REQUIREMENTS (GWh)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Residential	3,949	4,018	4,122	4,228	4,312	4,387	4,505	4,595	4,715	4,813	4,920	5,017	5,128	5,267	5,396
Small Commercial	1,450	1,477	1,506	1,536	1,566	1,597	1,628	1,659	1,693	1,726	1,759	1,791	1,825	1,860	1,896
Large Commercial	3,155	3,220	3,282	3,343	3,418	3,489	3,556	3,626	3,700	3,774	3,846	3,918	3,991	4,066	4,143
Large Industrial	3,358	3,402	3,350	3,371	3,397	3,444	3,496	3,553	3,617	3,684	3,742	3,798	3,857	3,917	3,978
Street Lighting	70	71	71	71	71	72	72	72	72	72	73	73	73	73	74
Total LG&E															
Billed	11,982	12,188	12,331	12,549	12,764	12,989	13,257	13,505	13,797	14,069	14,340	14,597	14,874	15,183	15,487
Used	11,991	12,193	12,337	12,566	12,766	12,997	13,270	13,514	13,812	14,079	14,349	14,605	14,881	15,197	15,506
Requirements	12,657	12,870	13,024	13,266	13,478	13,722	14,011	14,269	14,584	14,865	15,151	15,421	15,713	16,047	16,374

KEY CHANGES/DRIVERS IN THE FORECAST

Changes in the Energy Forecast are typically driven by three main factors:

- updating the historical period used in the model estimation process;
- changes in the forecast of normal weather;
- changes in the forecasts of the economic and demographic assumptions used to develop the forecast.

Sales History

The 2005 IRP forecast was completed in January 2004 and took into account the actual sales performance through October 2003.

Changes in Weather Assumptions

In order to forecast electricity sales, assumptions are made regarding the weather over the forecast horizon. LG&E assumes a twenty-year (1983-2002) average of heating degree days (HDD) and cooling degree days (CDD) as a reasonable representation of the likely weather conditions to be experienced on average over the forecast horizon. Louisville, Kentucky is the location where weather is measured[1]. For the 2005 energy forecast, 4,147 HDD (on a 65-degree base) are assumed to represent normal heating weather for the LG&E service territory. At the time of the 2002 IRP, the normal Louisville weather assumption was 4,184 HDD. For cooling, the 2005 energy forecast assumes 1,553 CDD (on a 65-degree base) for normal weather. At the time of the 2002 IRP, the normal Louisville weather assumption was 1,527 CDD.

Changes in Economic and Demographic Assumptions

National Macroeconomic Assumptions

See KU Technical Appendix for a summary of key assumptions made in Global Insight's August 2003 Long-Term Macro Forecast, used by the Companies as macroeconomic background for the energy sales forecast in the 2005 IRP.

1 Specifically the Louisville Standiford Field weather station.

LG&E Service Territory Economic and Demographic Forecasts

Service territory level economic and demographic forecasts are derived for LG&E Energy via an employment driven model (STEM) in which forecasts of sector level value-added output, employment, income, and population are generated for five regions that correspond to LG&E Energy's service territories (including one region associated with LG&E). The national forecast received from Global Insight provides the inputs for CBER to generate a state forecast. This forecast in turn provides the inputs to the geographic specific regional models. Region 4 of the model represents the economy of the Louisville metropolitan area.[2]

Demographic Forecasts

Demographic forecasts of population and households are critical to the accurate forecasting of Residential sales and indirectly contribute to the forecasting of Commercial sales through the influence on Commercial customer growth. LG&E utilizes the population and household forecast generated by STEM.

Forecasts of population in STEM are made using a cohort-component model, the same type of model utilized in Bureau of Census (and U of L) forecasts. These models utilize birth, survival, and migration rates to forecast population. The STEM continues to use birth and survival data from the Center for Urban and Economic Research (CUER) at the University of Louisville. The major difference between the Bureau of Census and STEM approaches is in the estimation of migration rates. Migration behavior in the Census models is based on past migration rates, while migration behavior in STEM is a function of economic growth in the service territory. As a result, with a fast growing economy, it is possible that migration rates in the forecast period can exceed past rates, leading to faster growth in population. The population forecasts are developed by county, and as such are only an approximation of population specific to LG&E's service territory.

Population forecasts from the STEM model call for a steady increase in population, but at a slower rate than the national population forecast. Annual population growth is forecast to average 0.5 percent over the next five years in LG&E's service territory counties, and to continue to average 0.6 percent growth over the fifteen-year

2 The counties included in Region 4 are Bullitt, Hardin, Henry, Nelson, Oldham, Shelby, Spencer, Jefferson and Meade counties in Kentucky and Clark, Floyd, Harrison and Scott counties in Indiana.

forecast horizon. As nationally, the LG&E service territory is forecast to have an aging population. Since older persons tend to live in smaller households, this aging of the population implies fewer persons per household. This drop in household size implies that the number of households should grow even faster than the population. This is indeed the case for the 2005 energy forecast. The forecast of households in the LG&E service territory will grow at a 0.8 percent annual rate over the entire forecast horizon (2005-2019).

ENERGY FORECAST DESCRIPTIONS

LG&E RESIDENTIAL

The Residential sales forecast is prepared as follows:

1. Forecast of the number of Residential customers;
2. Forecast of use-per-customer.

Methodology

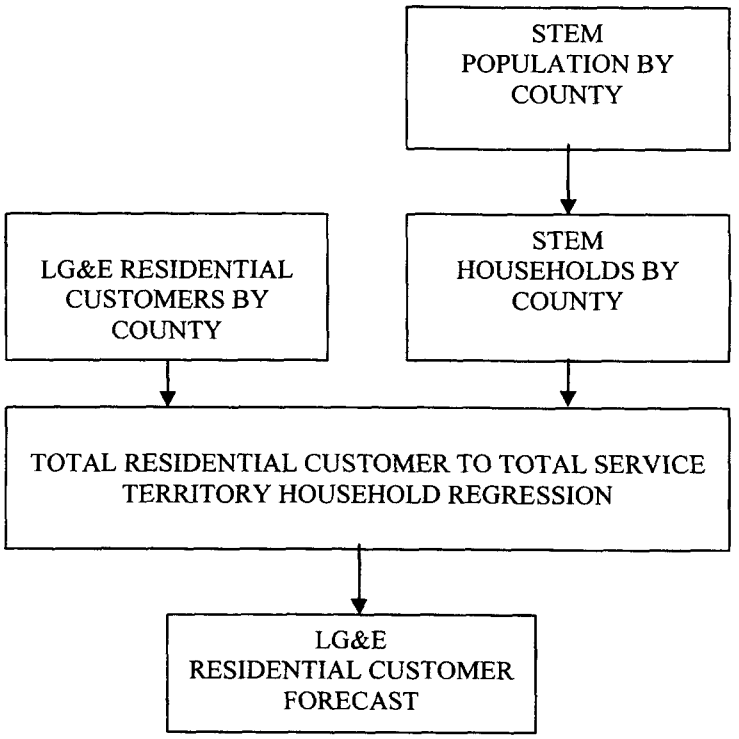
Customer Forecast Methodology

The 2005 LG&E Residential customer forecast is developed using a combination of medium-term and long-term modeling. The primary driver for each model is the LG&E service territory population forecast and the conversion of population into a service territory household forecast. Residential customers are then regressed against households to develop the forecast. The forecast of total Residential customers begins with a county-level population forecast that is generated by STEM. The forecast of total Residential customers begins with a county-level population forecast that is generated by STEM, which utilizes birth and mortality rate data from the Center for Urban and Economic Studies (CUER) at the University of Louisville.

Migration is also an important factor in the Kentucky population forecast. The natural rate of population increase for Kentucky is declining because birth rates are stabilizing or declining, and death rates are increasing as the population ages. Migration has also proven more difficult to forecast than the components of the natural growth rate. Historically, Kentucky has had periods of out-migration of young adults as well as influxes of workers and families or the settling of retirees.

For the medium-term model, monthly customers from January 1996 through October, 2003 were regressed against estimated monthly service territory county households. While every customer was assumed to represent a household, the household series in the model was at an aggregated county level, thus the customer series is regarded as a share of the total county households, rather than as a one-to-one relationship. For purposes of modeling the LG&E service territory customers, a four-county history and forecast consisting of Jefferson, Oldham, Bullitt and Hardin Counties adequately represents the service territory households. Figure LGE-1 illustrates the process used to forecast Residential customers.

FIGURE LGE-1
RESIDENTIAL CUSTOMER FORECAST



Use-per-Customer Forecast Methodology

Statistically-adjusted end-use (SAE) models are used to model monthly use-per-customer for each Residential class. These combine the rigor of an econometric model that relates monthly usage to weather, seasonal variables, and economic conditions, and also incorporate key aspects of traditional end-use modeling. Refer to Technical

Appendix 1, Volume 2 (page 15) for discussion of methodology used in residential use-per-customer forecasting.

FORECAST RESULTS - SUMMARY

The forecasts of Residential customers, average use-per-customer, and sales for the total Residential sector are shown in Table LGE-4. Residential sales grew at a compound average growth rate of 1.6 percent from 2000 to 2004 on a billed weather-normalized basis. From 2005-2019, Residential sales are forecast to grow at a compound average growth rate of 2.6 percent. From 2005-2009, Residential sales are forecast to grow at an average annual rate of 2.2 percent. Table LGE-5 presents the weather-normalized historical use-per-customer and forecast for the summer and winter seasons. Graphs 2 and 3 plot the actual historic data along with the forecast of use-per-customer values for the summer and winter seasons. From 2000 to 2004, summer[3] use-per-customer declined at an average annual rate of -0.4 percent on a weather-normalized basis. Summer use-per-customer is forecast to increase at an average annual rate of only 1.0 percent over the 2005 to 2009 period and at an average annual rate of 1.1 percent over the 2005 to 2019 period. The moderate growth reflects increasing efficiencies in air conditioning and refrigeration on energy consumption. The average efficiency for central air conditioning and heat pumps is increasing at an annual rate of 1.6 percent while the efficiencies for refrigerators and miscellaneous electric appliances are increasing at an annual rate of 3.0 percent and 2.7 percent, respectively.[4]

The actual winter use-per-customer grew at an average annual rate of 1.2 percent from 2000 to 2004. The winter use-per-customer is forecast to increase at an average annual rate of 0.9 percent over the 2005-2009 period and to increase at an average annual rate of 1.1 percent for the 2005 to 2019 period.

3 Summer includes May – October.
4 Efficiency data is from the EIA.

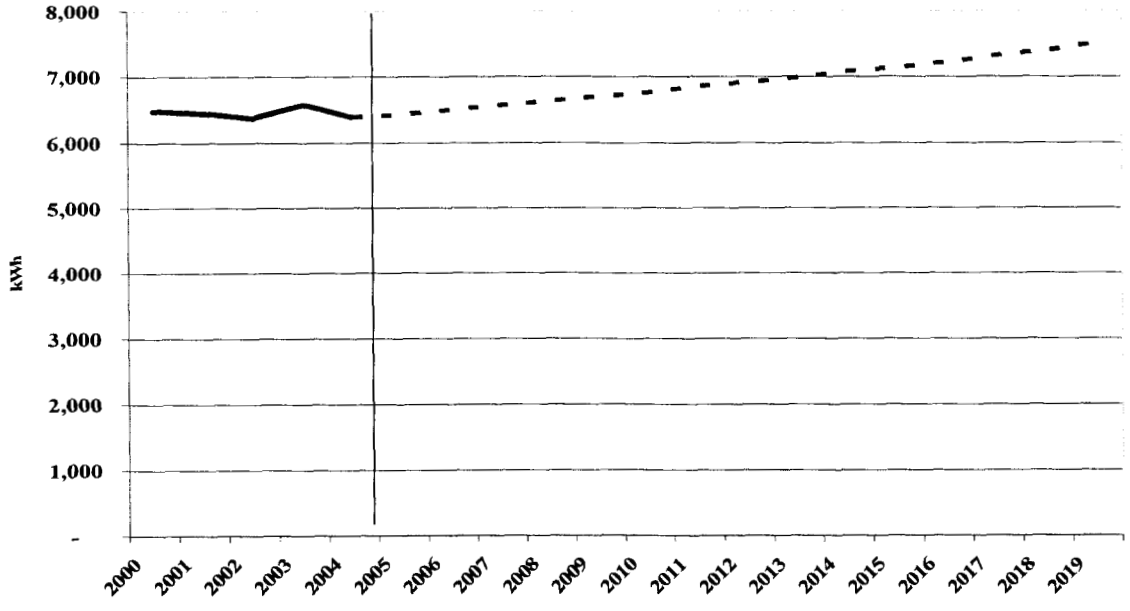
TABLE LGE- 4
TOTAL LG&E RESIDENTIAL CUSTOMER, USE-PER-CUSTOMER, AND ENERGY SALES HISTORY & FORECAST
(2000-2004 Weather Normalized Actual)

Year	Customers	Use-per-Customer (kWh)	Energy Sales (GWh)
2000	325,658	11,387	3,709
2001	330,031	11,418	3,770
2002	334,329	11,413	3,816
2003	337,768	11,712	3,957
2004	342,188	11,533	3,947
2005	346,258	11,404	3,949
2006	350,518	11,461	4,018
2007	354,853	11,614	4,122
2008	359,241	11,768	4,228
2009	363,685	11,856	4,312
2010	368,208	11,914	4,387
2011	372,667	12,088	4,505
2012	377,061	12,185	4,595
2013	381,390	12,360	4,715
2014	385,650	12,479	4,813
2015	389,842	12,618	4,920
2016	394,004	12,731	5,017
2017	398,147	12,879	5,128
2018	402,289	13,091	5,267
2019	406,370	13,277	5,396

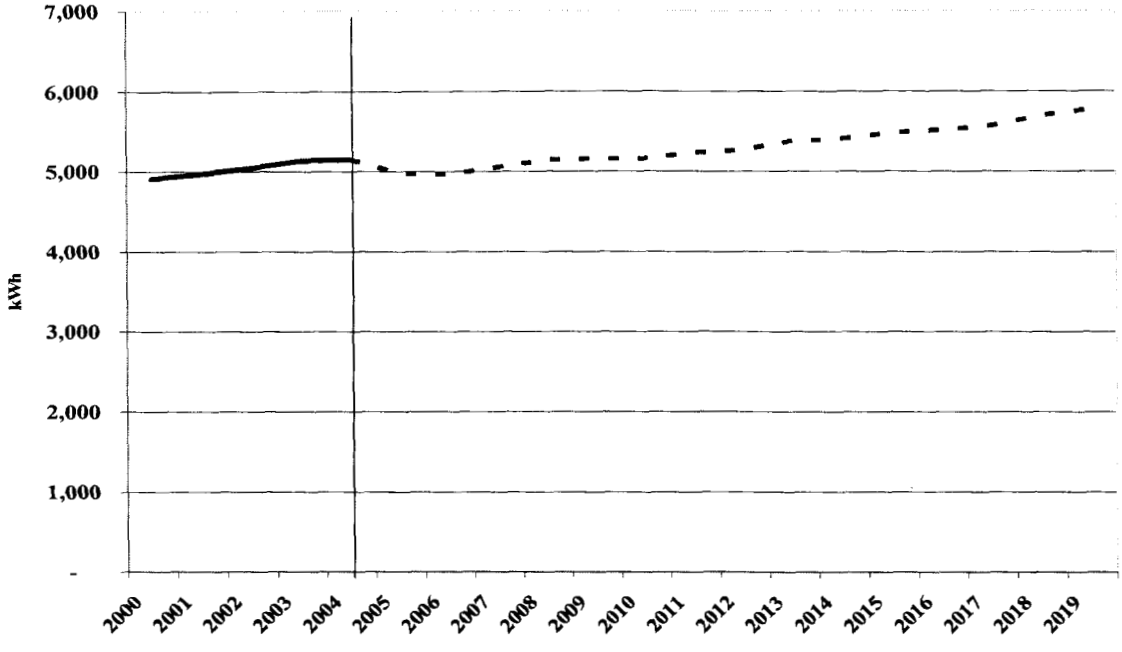
TABLE LGE- 5
LG&E RESIDENTIAL CLASS SEASONAL USE-PER-CUSTOMER (kWh)
HISTORY & FORECAST
(2000-2004 Weather Normalized Actual)

	Winter (kWh)	Summer (kWh)
2000	4,908	6,479
2001	4,968	6,451
2002	5,039	6,374
2003	5,136	6,576
2004	5,147	6,386
2005	4,972	6,432
2006	4,959	6,502
2007	5,051	6,563
2008	5,138	6,630
2009	5,157	6,699
2010	5,156	6,758
2011	5,233	6,855
2012	5,270	6,915
2013	5,376	6,984
2014	5,402	7,076
2015	5,483	7,135
2016	5,516	7,215
2017	5,562	7,317
2018	5,696	7,395
2019	5,771	7,506

GRAPH: LGE-2
LG&E RESIDENTIAL SUMMER USE-PER-CUSTOMER
HISTORY & FORECAST (2000-2004 Weather Normalized Actual)



GRAPH: LGE-3
LG&E RESIDENTIAL WINTER USE-PER-CUSTOMER
HISTORY & FORECAST (2000-2004 Weather Normalized Actual)



RESIDENTIAL CUSTOMER MODEL

Results

The LG&E medium-term Residential customer forecast equation is given by:

$$RESCUST = \beta * HDLGEEM + \varepsilon_t$$

Where:

RESCUST = Residential customers
HDLGEEM = LG&E service territory households
ε_t = error terms

Given the nature of the data, a Durbin-Watson test for serial correlation among the error terms is included and indicated the presence of negative serial correlation, so a first-order autoregressive process (AR(1)) was added. This takes the form,

$$\varepsilon_t = \rho * \varepsilon_{t-1} + \nu_t \qquad \text{and } \nu_t \sim IN(0,\sigma^2)$$

Where

ρ = measures the correlation structure of the errors

ν_t = presumed to be serially uncorrelated and normally distributed.

Estimation of this equation yielded the following (t-statistics are in parentheses):

$$RESCUST = \underset{(1041)}{0.8456}\ HDLGEEM$$

$$\varepsilon_t = \underset{(-21.97)}{-0.927} * \varepsilon_{t-1} + \nu_t$$

Model Statistics:

R^2: 0.999
D-W Stat: 1.91
MAPE: 0.04 percent

For the long-term forecast, a regression of annual customer numbers against service territory households is utilized, with the incremental growth after 2009 applied to the forecast for 2009.

Residential electricity use-per-customer is forecast using a statistically-adjusted end-use model (SAE) methodology. Refer to Technical Appendix 1, Volume 2 (page 31) for a complete description. Table LGE-4 displays the weather-normalized historical sales, use-per-customer, and customers for the residential class along with the forecasts of each.

The estimated equation is given by (t-statistics in parentheses):

Use-per-customer = 1.49*Xcool + 1.44*Xheat + 0.068*Xother - 199.65*Jun03
(41.82) (19.52) (53.14) (-7.95)

+ 59.96*Jan + 21.38*Feb + 31..82*Dec + 57.64*Summer
(3.67) (1.69) (2.55) (4.33)

Where:

XOther	=	Other Use-per-Customer
XHeat	=	Heat Use-per-Customer
XCool	=	Cool Use-per-Customer
Jan	=	January Binary Variable
Feb	=	February Binary Variable
Summer	=	Summer Binary Variable
Dec	=	December Binary Variable
Jun03	=	June 2003

Model Statistics:

Adj. R^2	=	0.99
DW Test	=	2.07
AR(1) parm	=	0.37

CUSTOMER FORECAST RESULTS

Over the next five years, the rate of population growth in the LG&E Service Territory is forecast to be below that for the nation. Annual population growth is forecast to average 0.5 percent over the next five years in the LG&E Service Territory.

In the medium-term (2005-2009), population is forecast to grow at a 0.5 percent annual rate, somewhat slower than a national population annual forecast growth rate of 1.3 percent. Over the same period, households are expected to increase at a 0.8 percent average annual rate. The Residential customer average annual growth rate over the 2005-2009 is estimated to be 1.2 percent, tracking above the households. Over the fifteen-year forecast horizon, population is forecast to increase at an average annual rate of 0.6 percent and households at 0.8 percent. Residential customers are forecast to continue to track slightly above households at the 1.2 percent average annual rate of growth. Graph LGE-4 shows the number of historical customers and forecast. Table LGE-6 shows the historic service territory households and customers and forecast.

GRAPH LGE-4
RESIDENTIAL CUSTOMERS: HISTORY & FORECAST

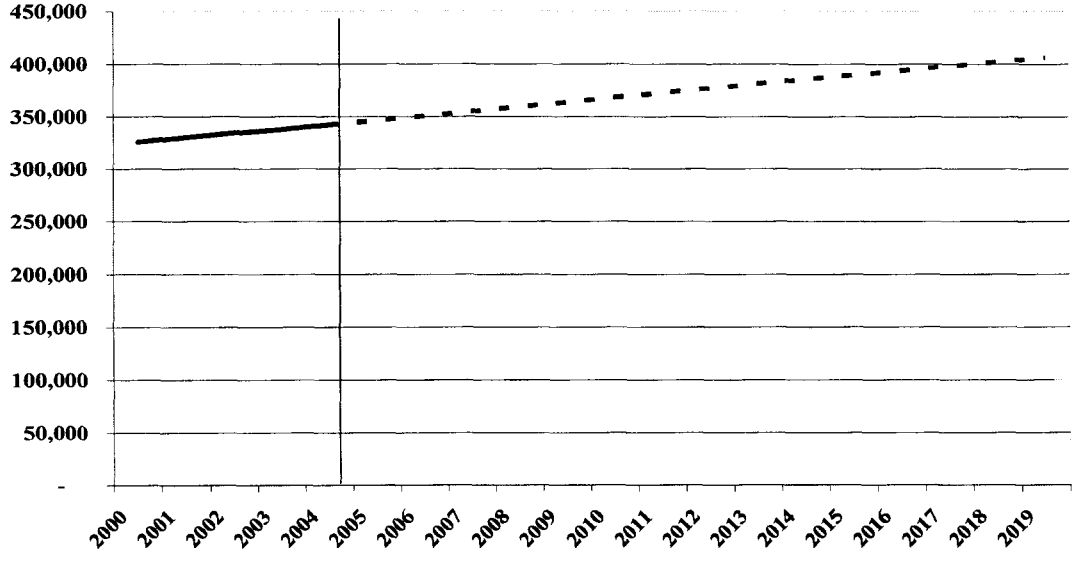


TABLE LGE - 6
TOTAL LG&E SERVICE TERRITORY HOUSEHOLDS
AND RESIDENTIAL CUSTOMERS – HISTORY & FORECAST

Year	Service Territory Households	Residential Customers
2000	386,353	325,658
2001	390,894	330,031
2002	395,093	334,329
2003	398,854	337,768
2004	402,545	342,188
2005	406,105	346,258
2006	409,461	350,518
2007	412,567	354,853
2008	415,551	359,241
2009	418,569	363,685
2010	421,729	368,208
2011	425,033	372,667
2012	428,418	377,061
2013	431,852	381,390
2014	435,328	385,650
2015	438,850	389,842
2016	442,417	394,004
2017	446,011	398,147
2018	449,624	402,289
2019	453,260	406,370

SMALL COMMERCIAL

Over the 2000-2004 period, weather-normalized Small Commercial sales increased at a 0.7 percent average annual growth rate.

Small Commercial sales were forecast using a combination of medium-term and long-term models. In the medium term, an additional distinction was made for revenue forecasting purposes between Public Authority and non-Public Authority sales. In this section, first the medium-term forecasts for the non-Public Authority and the Public Authority Small Commercial sectors are discussed. Then, the long-term forecast for Small Commercial is discussed as a combination of Public Authority and non-Public

Authority sales. In the long-term, the economic and demographic impacts on the Small Commercial class are assumed to be the same between the non-Public Authority and Public Authority sectors.

Non-Public Authority Small Commercial

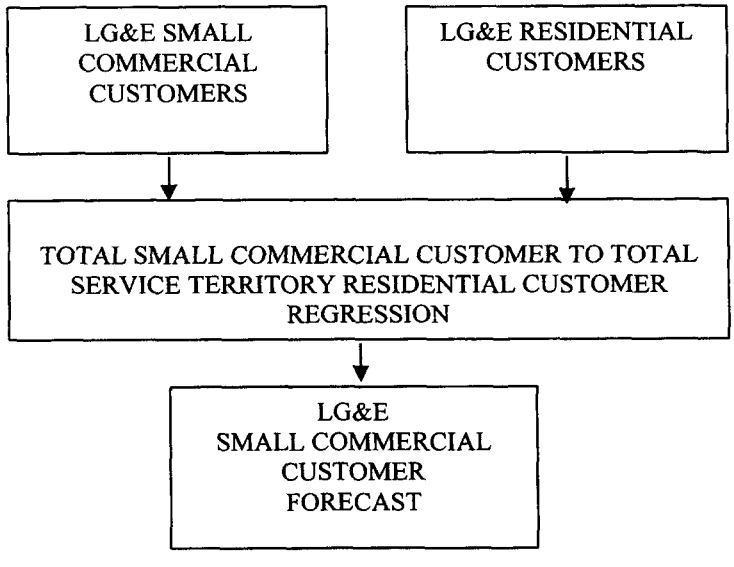
The medium-term non-Public Authority Small Commercial sales forecast is based on:

1. Forecast of the number of Small Commercial customers;
2. Forecast of energy use-per-customer.

Customer Forecast

The 2005 LG&E Small Commercial customer forecast is developed using a combination of medium-term (five-year) and long-term (fifteen-year) modeling. The primary driver for the medium-term model is the number of LG&E service territory Residential customers. The annual total number of Residential customers is forecast based on the household projections provided by STEM, as described in the previous section. Similarly, for the Small Commercial customers, a simple regression model is performed, where Small Commercial customers are regressed on the LG&E service territory Residential customers. Figure LGE-2 illustrates the process used to forecast Small Commercial customers.

FIGURE LGE-2
SMALL COMMERCIAL CUSTOMER FORECAST



For the medium-term model, monthly customers from January 1997 through October 2003 are regressed against Residential customers. The details of this regression analysis are shown below (the t-statistics for the variable are shown in parenthesis):

$$\underset{}{\text{COMTOTCUS}} = \underset{(92.594)}{0.112842\ \text{RESCUST}} + \underset{(57.059)}{[\text{AR}(1)=0.96520]}$$

Where:

COMTOTCUS = Total Small Commercial customers
RESCUST = Residential Customers

Model Statistics:

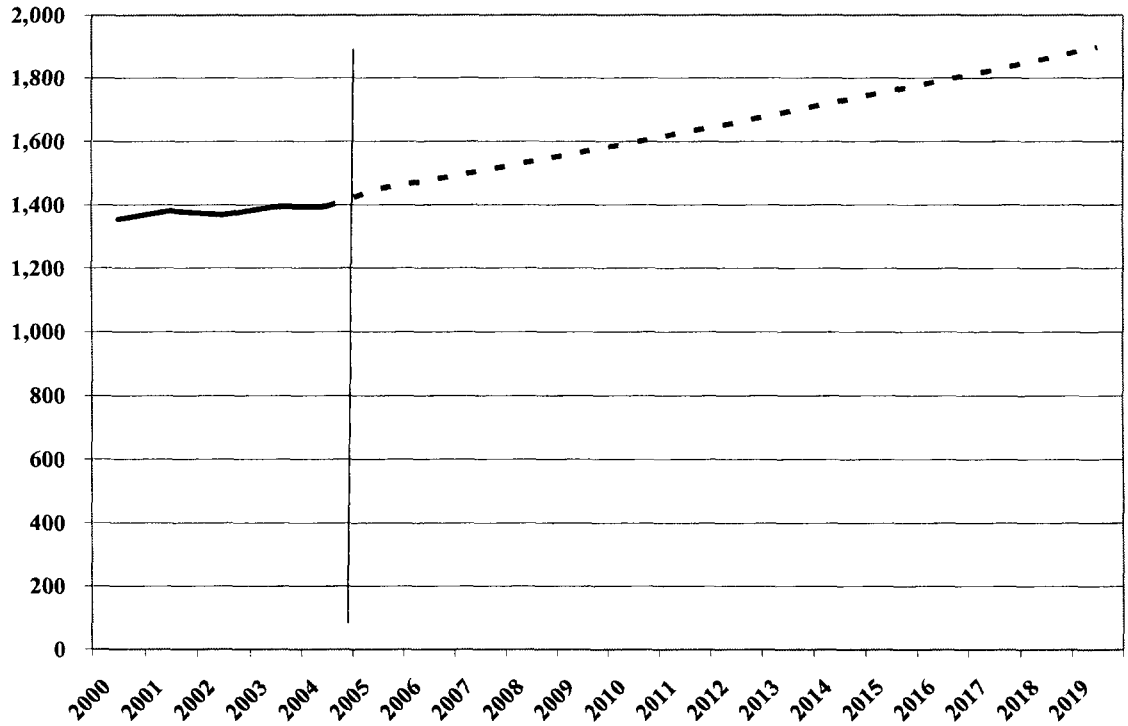
R^2: 0.995
D-W Stat: 2.435
MAPE: 0.29 percent

For the long-term forecast, an annual population to Small Commercial customer historical ratio is utilized, with the incremental growth after 2009 applied to the forecast for 2009 and onwards.

Forecast Results

For the medium-term forecast, LG&E Residential customers are expected to increase at a 1.2 percent average annual rate. The Small Commercial customer average annual growth rate is estimated to be 2.0 percent, tracking above the Residential customers. Over the fifteen-year forecast horizon, population is estimated to increase at an average 0.5 percent and Residential customers at 1.2 percent. Small Commercial customers continue to track above Residential customers at a 1.8 percent average annual rate of growth. Graph LGE-5 shows historical and forecast customer numbers.

GRAPH LGE-5
LG&E SMALL COMMERCIAL (Non-Public Authority)
CUSTOMER NUMBERS HISTORY & FORECAST



Small Commercial Use-per-Customer Forecast

Small Commercial sales are forecast first on a per-customer basis, then multiplied by monthly customers to determine total monthly sales. A multiple regression model using six years of historical data (1998:1to 2003:11) was specified. The details of the model are shown below (the t-statistic for each variable is shown in parenthesis):

SMCOMKWHPC = 2,298 + 0.4406*JANHDD + 0.3359*FEBHDD
(51.46) (13.72) (9.25)

+ 0.258902*MARHDD + 0.203687*APRHDD + 2.195439*MAYCDD
(5.683341) (2.623547) (6.798268)

+ 2.845166*JUNCDD + 2.7760670*JULCDD + 2.578406*AUGCDD
(21.62200) (37.56261) (36.87324)

+ 2.857614*SEPCDD + 2.596160*OCTCDD + 0.128311*NOVHDD
(33.98622) (11.43419) (1.499525)

+ 0.384257*DECHDD + 15.74630*LOGTREND97 + [AR(1)=0.683800]
(8.642156) (1.562561) (7.519158)

WHERE:

SMCOMKWHPC	=	Small Commercial use-per-customer
JANHDD	=	January Heating Degree Days Interaction Variable
FEBHDD	=	February Heating Degree Day Interaction Variable
MARHDD	=	March Heating Degree Day Interaction Variable
APRHDD	=	April Heating Degree Day Interaction Variable
MAYCDD	=	May Cooling Degree Day Interaction Variable
JUNECDD	=	June Cooling Degree Day Interaction Variable
JULYCDD	=	July Cooling Degree Day Interaction Variable
AUGCDD	=	August Cooling Degree Day Interaction Variable
SEPCDD	=	September Cooling Degree Day Interaction Variable
OCTCDD	=	October Cooling Degree Day Interaction Variable
NOVHDD	=	November Heating Degree Day Interaction Variable
LOGTREND97	=	Log of trend term from 1997
AR(1)	=	Autoregressive term of order one.

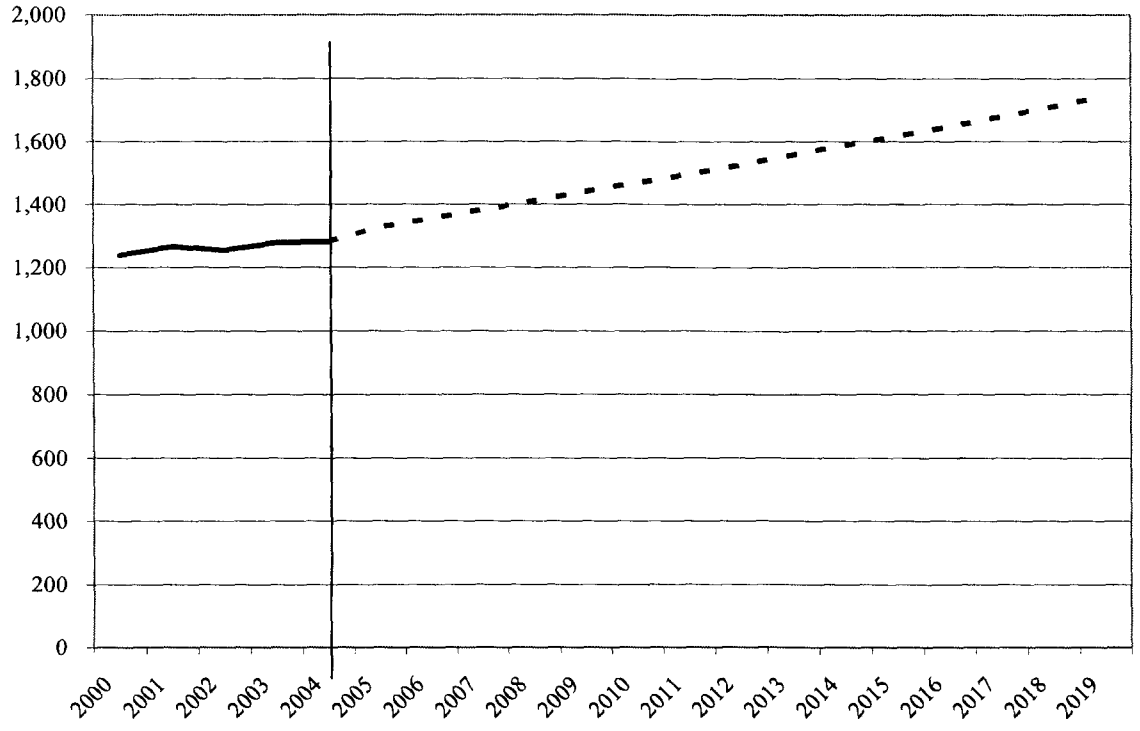
Model Statistics:
$R^2 = 0.9877$
DW-Stat = 2.2225

Table LGE-7 shows the forecast of Small Commercial customers, sales and use-per-customer. Graph LGE-6 shows weather-normalized historical sales and forecast. From 2000-2004, sales grew at an average annual rate of 0.8 percent. The 2005-2009 average annual growth rate forecast for GWh sales is 2.0 percent and for 2005-2019, the average annual growth rate for GWh sales is also 2.0 percent.

TABLE LGE- 7
TOTAL LG&E SMALL COMMERCIAL (Non-Public Authority) CUSTOMERS, SALES AND USE-PER-CUSTOMER: HISTORY & FORECAST
(2000-2004 Weather Normalized Actual)

Year	Customers	Energy Sales (GWh)	Use-per-Customer (MWh)
2000	36,467	1,239	34.0
2001	37,509	1,266	33.7
2002	38,541	1,254	32.5
2003	38,531	1,279	33.2
2004	38,340	1,281	33.4
2005	39,839	1,329	33.4
2006	40,600	1,355	33.4
2007	41,385	1,382	33.4
2008	42,229	1,411	33.4
2009	43,082	1,440	33.4
2010	43,783	1,468	33.5
2011	44,510	1,497	33.6
2012	45,253	1,526	33.7
2013	46,010	1,557	33.8
2014	46,779	1,587	33.9
2015	47,563	1,617	34.0
2016	48,362	1,647	34.1
2017	49,174	1,678	34.1
2018	49,997	1,711	34.2
2019	50,833	1,744	34.3

GRAPH LGE-6
LG&E SMALL COMMERCIAL (Non-Public Authority) ENERGY SALES HISTORY AND FORECAST - GWh
(2000-2004 Weather Normalized Actual)



Public Authority Small Commercial

The medium-term Public Authority Small Commercial sales forecast is based on :

1. Forecast of the number of Public Authority customers;
2. Forecast of water heating;
3. Forecast of energy use-per-customer

Public Authority Customer Forecast

Public Authority customers are forecast using a model that relates increases in the number of customers to growth in the number of total Commercial customers in the Company's service. A simple regression model is performed using 6 years of historical data (1998:1 to 2003:10). An AR(1) term is added to correct for serial correlation. The total Public Authority customer forecast is then allocated to Small Commercial, Large Commercial, and Industrial Classes on the basis of recent historical percentages. The details

of this regression analysis are shown below (the t-statistic for each variable is shown in parenthesis):

$$\underset{}{\text{PATOTCUS}} = \underset{(51.396)}{0.56586\ \text{COMTOTCUS}} + \underset{(26.176)}{[\text{AR}(1)=0.93105]}$$

Where:

PATOTCUS	= Total Public Authority customers
COMTOTCUS	= Total Commercial Customers
AR(1)	= Autoregressive of Order One Term

Model Statistics:

R^2: 0.7476
D-W Stat: 2.41
MAPE: 0.55 percent

Public Authority Small Commercial Water Heating Forecast

The water-heating load is forecast using a five-year compound average growth rate. This rate for the five years from 2000 to 2004 was found to be -0.4 percent. The annual sales obtained are allocated between the twelve months based on the five-year average of monthly usage to get the monthly forecast.

Table LGE-8 shows the monthly allocation factors applied in the monthly forecast of outdoor lighting and water heating.

TABLE LGE- 8
SMALL COMMERCIAL MONTHLY
ALLOCATION FOR WATER HEATING

Month	Water Heating
1	10.95%
2	9.39%
3	9.52%
4	9.32%
5	9.28%
6	8.04%
7	7.06%
8	6.61%
9	6.33%
10	7.12%
11	7.35%
12	9.04%
Total	100.00 %

Public Authority Small Commercial Use-per-Customer Forecast

To forecast Public Authority Small Commercial use-per-customer, a multiple regression model using six years of historical data (1997:1 to 2003:11) was specified. The details of the model are shown below (the t-statistic for each variable is shown in parenthesis):

PAGSTOTKWHPC = 3.971583 + 0.001255*HDD + 0.000412*JANHDD
(28.70863) (4.041874) (1.906065)

+ 0.000483*FEBHDD + 0.000677*MARHDD + 0.005778*MAYCDD
(2.073335) (2.820201) (3.242367)

+ 0.005175*JUNCDD + 0.003488*JULCDD + 0.004140*AUGCDD
(6.458685) (7.741903) (9.732913)

+ 0.006505*SEPCDD + 0.007982*OCTCDD + [AR (1) = 0.214445]
(12.56728) (6.468032) (1.828788)

Where:

PAGSTOTKWHPC	=	Public Authority General Service Total use-per-customer
HDD	=	Heating Degree Days
MARHDD	=	March Heating Degree Days Interaction Variable
MAYCDD	=	May Cooling Degree Day Interaction Variable
JUNECDD	=	June Cooling Degree Day Interaction Variable
JULYCDD	=	July Cooling Degree Day Interaction Variable
AUGCDD	=	August Cooling Degree Day Interaction Variable
SEPCDD	=	September Cooling Degree Day Interaction Variable
OCTCDD	=	October Cooling Degree Day Interaction Variable
AR(1)	=	Autoregressive term of order one.

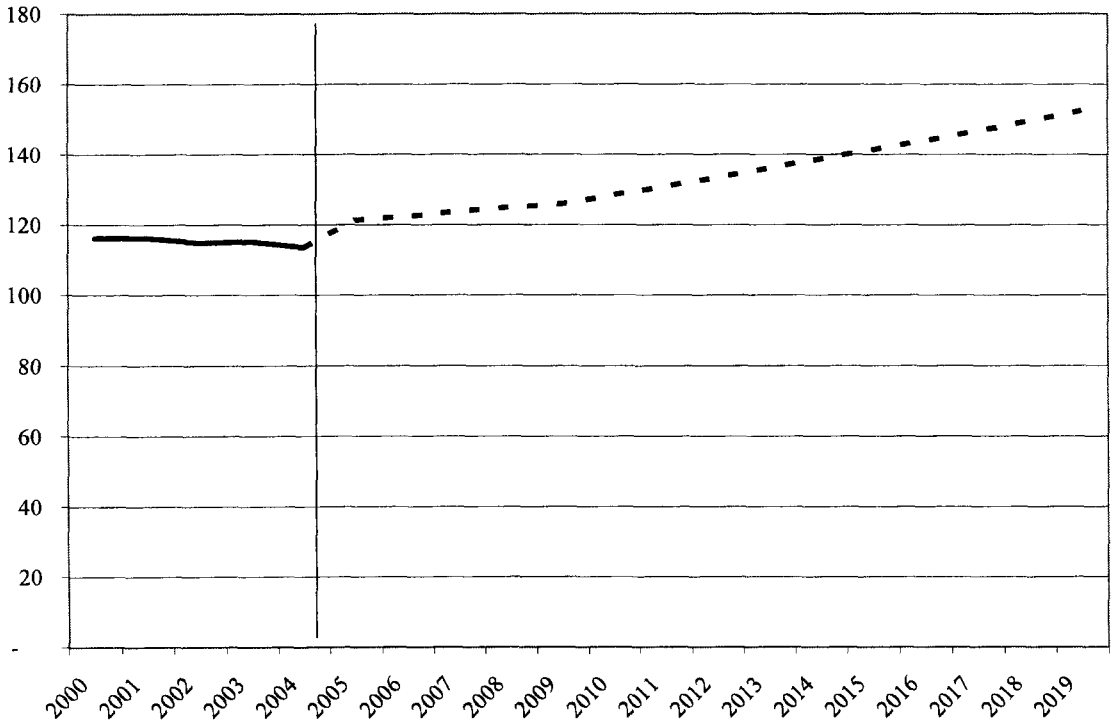
Model Statistics:
$R^2 = 0.80326$
DW-Stat = 2.03

The above model is used for the medium-term sales forecast. Beyond 2009, the sales forecast for the Public Authority class is based on economic and demographic growth rates pertaining to the LG&E service territory provided by STEM. The history and forecast of Public Authority Small Commercial customers, sales and use-per-customer are shown in Table LGE-9 and Graph LGE-7.

TABLE LGE- 9
TOTAL LG&E PUBLIC AUTHORITY SMALL COMMERCIAL CUSTOMERS, SALES AND USE-PER-CUSTOMER: HISTORY & FORECASTS
(2000-2004 Weather Normalized Actual)

Year	Customers	Energy Sales (GWh)	Use-per-Customer (MWh)
2000	1,853	116	62.7
2001	1,945	116	59.7
2002	1,921	115	59.7
2003	1,958	115	58.8
2004	1,973	113	57.5
2005	2,008	121	60.4
2006	2,026	122	60.3
2007	2,044	124	60.5
2008	2,062	125	60.6
2009	2,080	126	60.5
2010	2,170	128	59.1
2011	2,204	131	59.4
2012	2,240	133	59.5
2013	2,277	136	59.7
2014	2,315	139	59.9
2015	2,353	141	60.1
2016	2,393	144	60.2
2017	2,433	147	60.3
2018	2,474	149	60.4
2019	2,516	152	60.6

GRAPH LGE-7
PUBLIC AUTHORITY SMALL COMMERCIAL
HISTORY & FORECAST (GWh)
(2000-2004 Weather Normalized Actual)



Small Commercial Long-Term Forecast

Beyond 2009, the sales forecast for the Small Commercial sector does not differentiate between the non-Public Authority and Public Authority sectors. It is forecasted jointly as a function of economic and demographic variables pertaining to the LG&E service territory provided by the STEM model.

In the long-term model, annual Small Commercial energy sales are segmented into base usage, space-heating usage and air-conditioning usage by assuming the minimum-usage month's sales as the base usage of the class in each month of the year. The base usage amount is then subtracted from each month's total energy sales to the class.

The main drivers of the Small Commercial model are the real price of electricity by season, service industry employment, cooling and heating degree-days, and a long-term trend variable.

The estimated use-per-customer model coefficients reflect a slightly increasing trend in base (non-weather-sensitive) usage in Small Commercial customers. The details of the long-term relationship are shown below:

Small Commercial (or General Service) Energy Sales:

GSMWH = GSNWS + GSACS + GSESHS + GSNESHS

1) Non-weather-sensitive energy sales

GSNWS = GSNWSPC * GSCUST

$$\ln(GSNWSPC) = 8.51196 + 0.66663*\ln(SERVEMP/GSCUST)$$
$$(8.972) \qquad (1.829)$$

$R^2 = 0.9020$
D.W. = 2.1916
$\rho_1 = 0.6854$

2) Air-conditioning energy sales

GSACS = GSACSPC * GSCUST

$$\ln(GSACSPC) = -0.02988*\ln(GSSUMPR) + 0.67886*\ln(SERVEMP/GSCUST) + 0.91777*\ln(CDD)$$
$$(-0.239) \qquad (2.317) \qquad (9.114)$$

$R^2 = 0.8327$
D.W. = 2.0484
$\rho_1 = 0.5136$

3) Electric space-heating energy sales

GSESHS = GSESHSPC * GSESHCUST

$$\ln(GSESHSPC) = 3.22131 + 0.87749*\ln(HDD) - 0.08226*\ln(TREND)$$
$$(2.696) \qquad (6.193) \qquad (-5.464)$$

$R^2 = 0.8796$
D.W. = 1.7081

4) Non-electric space-heating energy sales

$$GSNESHS = GSNESHSPC * GSNESHCUST$$

$$\ln(GSNESHSPC) = -0.80163*\ln(GSWINPR) + 1.1915*\ln(HDD)$$
$$(-1.785) \qquad (3.863)$$

$R^2 = 0.5318$
D.W. = 1.41
$\rho_1 = 0.5587$

Where,

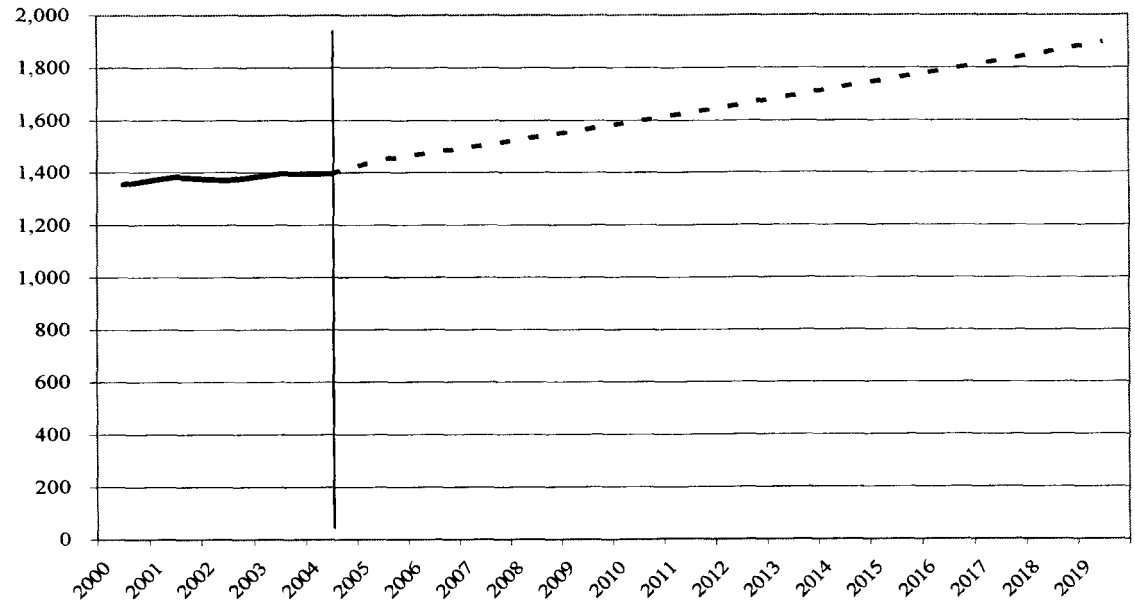
GSMWH	=	Total energy sales to General Service customers in MWh.
GSNWS	=	Non-weather-sensitive (or base) energy sales to general service customers.
GSACS	=	Air-conditioning energy sales to General Service (or Small Commercial/industrial) customers.
GSNESHS	=	Space-heating energy sales to General Service non-electric space-heating customers.
GSNWSPC	=	General Service non-weather-sensitive energy sales per customer.
GSCUST	=	Total number of General Service customers.
SERVEMP	=	Service industry employment.
GSACSPC	=	General Service air-conditioning energy sales per customer.
GSSUMPR	=	Real price of electricity during the summer months for General Service customers.
GSESHSPC	=	General Service electric space-heating energy sales per customer.
GSESHCUST	=	Number of electric space-heating General Service customers.
GSNESHSPC	=	General Service space-heating energy sales per non-electric space-heating customer.
GSNESHCUST	=	Number of non-electric space-heating General Service customers.
GSWINPR	=	Real price of electricity during the winter months for General Service customers.
HDD	=	Heating Degree Days.
CDD	=	Cooling Degree Days.
TREND	=	Time variable equal to year minus 1980 (start year).

Table LGE-10 shows the history and long-term forecast for the Small Commercial class of customers and Graph LGE-8 shows the energy history and forecast.

TABLE LGE- 10
TOTAL LG&E SMALL COMMERCIAL ENERGY SALES
HISTORY & FORECAST (GWh)
(2000-2004 Weather Normalized Actual)

Year	Energy Sales
2000	1,355
2001	1,382
2002	1,369
2003	1,395
2004	1,394
2005	1,450
2006	1,477
2007	1,506
2008	1,536
2009	1,566
2010	1,597
2011	1,628
2012	1,659
2013	1,693
2014	1,726
2015	1,759
2016	1,791
2017	1,825
2018	1,860
2019	1,896

GRAPH LGE-8
LG&E TOTAL SMALL COMMERCIAL ENERGY SALES
HISTORY & FORECAST (GWh)
(2000-2004 Weather Normalized Actual)



LARGE COMMERCIAL

As is the case in the Small Commercial sector, Large Commercial sales are forecast using a combination of medium-term and long-term models. In the medium term, an additional distinction is made for revenue forecasting purposes between Public Authority and non-Public Authority sales. In this section, first the medium-term forecasts for the non-Public Authority and the Public Authority Large Commercial sectors are discussed. Then the long-term forecast for Large Commercial is discussed as a combination of Public Authority and non-Public Authority sales. In the long-term, the economic and demographic impacts on the Large Commercial class are assumed to be the same for both the non-Public Authority and Public Authority sectors.

Non-Public Authority Large Commercial

The Non-Public Authority Large Commercial sales forecast is based on:

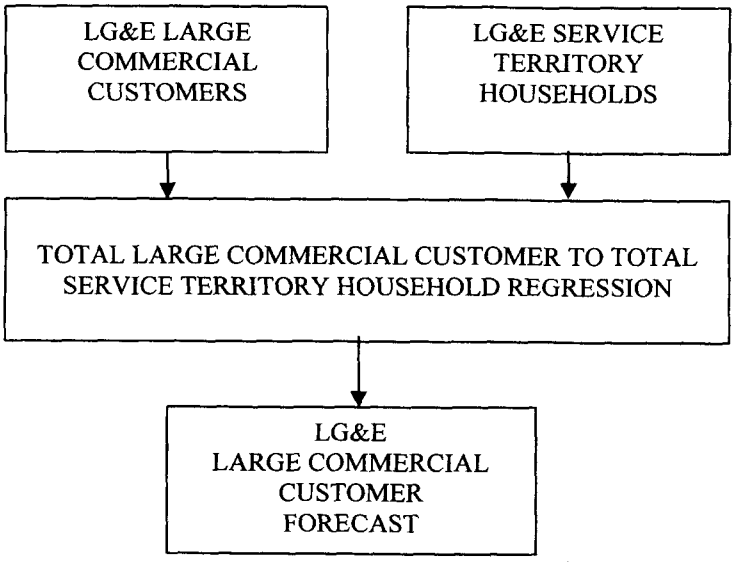
1. Forecast of the number of large Commercial customers;
2. Forecast of energy use-per-customer; and

3. For one large customer, a forecast of specific sales growth initiatives.

Customer Forecast

Customer numbers are forecast using a model that relates the number of customers to the number of households in the Company's service territory. The forecast of the annual number of Large Commercial customers is based on the household projections provided by STEM. Figure LGE-3 illustrates the process used to forecast Large Commercial customers.

FIGURE LGE-3
LARGE COMMERCIAL CUSTOMER FORECAST



A simple regression model is performed where the number of Large Commercial customers is regressed on the number of LG&E service territory households to obtain a forecast model. The details of this regression analysis are shown below (the t-statistic for each variable is shown in parenthesis):

$$\underset{}{\text{LGCOMCUS}} = \underset{(219.584)}{0.00511\ \text{HDLGEEM}} + \underset{(4.385)}{[\text{AR}(1)=0.5586]}$$

Where:

LGCOMCUS	= Total large Commercial customers
HDLGEEM	= LG&E Service Territory Households
AR(1)	= Autoregressive of Order One Term

Model Statistics:

R^2: 0.7146
D-W Stat: 1.81

Large Commercial Use-per-Customer Forecast:

To forecast use-per-customer, a multiple regression model using six years of historical data (1997:1 to 2003:10) was specified. The details of the model are shown below (the t-statistic for each variable is shown in parenthesis):

LGCOMKWHPC = 62944.44 + 9.131003*HDD + 2.273869*JANHDD
(27.0015) (4.0286) (1.9016)

+ 48.76169*MAYCDD + 67.45355*JUNCDD + 60.25961*JULCDD
(3.4564) (8.3025) (13.0863)

+ 52.93255*AUGCDD + 57.66655*SEPCDD + 65.22582*OCTCDD
(12.6826) (12.0502) (5.0034)

+ [AR(1)=0.815106]
(9.5400)

Where:

LGCOMKWHPC	=	Large Commercial KWh per customer
HDD	=	Heating Degree Days
JANHDD	=	January Heating Degree Days Interaction Variable
MAYCDD	=	May Cooling Degree Day Interaction Variable
JUNECDD	=	June Cooling Degree Day Interaction Variable
JULYCDD	=	July Cooling Degree Day Interaction Variable
AUGCDD	=	August Cooling Degree Day Interaction Variable
SEPCDD	=	September Cooling Degree Day Interaction Variable
OCTCDD	=	October Cooling Degree Day Interaction Variable
AR(1)	=	Autoregressive term of order one.

Model Statistics
R^2 = 0.9307
DW-Stat = 2.28

The results of the use-per-customer model are multiplied by monthly customers to create the medium-term (2005 to 2009) sales forecast. Beyond 2009 the sales forecast is based on economic and demographic growth rates pertaining to the LG&E service territory provided by STEM.

Large Customer Expansion

The forecast for one large customer was developed on an individual basis. This forecast is based on recent history of sales and demand along with direct communications with the customer regarding the outlook for energy consumption.

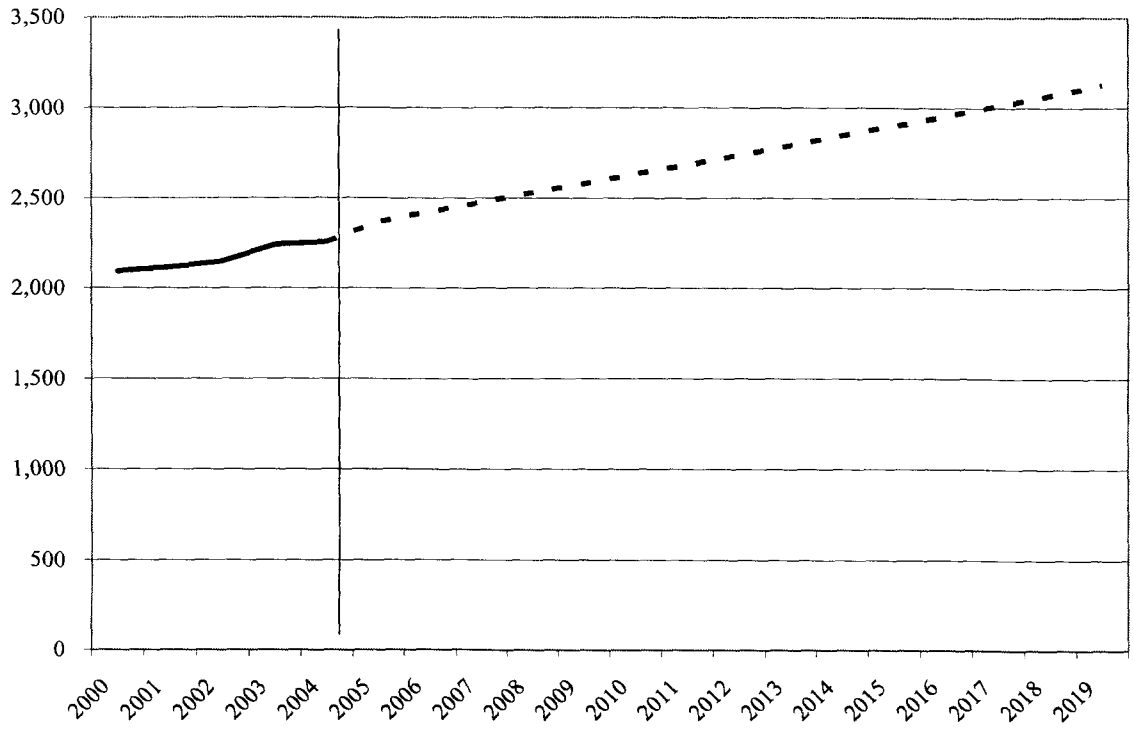
Forecast Results

A summary of the forecast of customers, average use-per-customer and energy sales is shown in Table LGE-11. Historical sales and forecast are shown graphically in Graph LGE-9. From 2000-2004 sales grew at an average annual rate of 1.9 percent. The 2005-2009 average annual growth rate for sales is 2.2 percent. For 2005 to 2019, the annual average growth rate for sales is 2.0 percent.

TABLE LGE-11
TOTAL LG&E LARGE COMMERCIAL (Non-Public Authority) CUSTOMERS, SALES AND USE-PER-CUSTOMER: HISTORY & FORECAST
(2000-2004 Weather Normalized Actual)

Year	Customers	Energy Sales (GWh)	Use-Per-Customer (MWh)
2000	2,107	2,092	992.8
2001	2,264	2,114	933.9
2002	2,352	2,146	905.3
2003	2,432	2,241	923.5
2004	2,463	2,255	912.4
2005	2,569	2,367	921.5
2006	2,633	2,424	920.5
2007	2,693	2,478	920.1
2008	2,751	2,530	919.8
2009	2,806	2,579	919.2
2010	2,869	2,633	917.6
2011	2,934	2,683	914.6
2012	3,000	2,736	912.0
2013	3,067	2,792	910.2
2014	3,136	2,847	907.9
2015	3,207	2,901	904.7
2016	3,279	2,956	901.5
2017	3,353	3,011	898.0
2018	3,428	3,068	895.0
2019	3,505	3,126	892.0

GRAPH LGE-9
LG&E LARGE COMMERCIAL (Non-Public Authority) ENERGY SALES HISTORY & FORECAST (GWh)
(2000-2004 Weather Normalized Actual)



Public Authority Large Commercial

The medium-term Public Authority Large Commercial sales forecast is based on:

1. Forecast of number of Public Authority Large Commercial customers;
2. Forecast of use-per-customer;
3. For one individual customer, a forecast of specific sales growth initiatives.

Public Authority Large Customer Expansion

The forecast for one large customer was developed on an individual basis. This forecast is based on recent sales history along with communications with the customer regarding its outlook for energy consumption.

Public Authority Large Commercial: Use-per-Customer Forecast

To forecast use-per-customer (base, cooling and heating) load, a multiple regression model using six years of historical data (1998:1 to 2003:10) was specified. The details of the model are shown below (the t-stats for the variable are shown in parenthesis):

PALGCOMPC = 152.7289 + 0.011837*HDD + 0.011540*JANHDD
(41.5803) (1.8179) (2.8096)

+ 0.009519*MARHDD + 0.092296*MAYCDD
(2.1348) (2.1656)

+ 0.131224*JUNCDD + 0.122049*JULCDD + 0.134987*AUGCDD
(6.4763) (10.5120) (12.2947)

+ 0.182035*SEPCDD + 0.163452*OCTCDD + 0.021707*DECHDD
(14.0545) (5.5353) (4.0960)

+ [AR(1)=0.541264]
(5.3939)

Where:

PALGCOMPC	=	Public Authority Large Commercial use-per-customer
JANHDD	=	January Heating Degree Days Interaction Variable
FEBHDD	=	February Heating Degree Days Interaction Variable
MARHDD	=	March Heating Degree Days Interaction Variable
APRHDD	=	April Heating Degree Days Interaction Variable
MAYCDD	=	May Cooling Degree Day Interaction Variable
JUNECDD	=	June Cooling Degree Day Interaction Variable
JULYCDD	=	July Cooling Degree Day Interaction Variable
AUGCDD	=	August Cooling Degree Day Interaction Variable
SEPCDD	=	September Cooling Degree Day Interaction Variable
OCTCDD	=	October Cooling Degree Day Interaction Variable
NOVHDD	=	November Heating Degree Day Interaction Variable
DECHDD	=	December Heating Degree Day Interaction Variable
AR(1)	=	Autoregressive term of order one.

Model Statistics:
R^2 = 0.8890
DW-Stat = 2.264

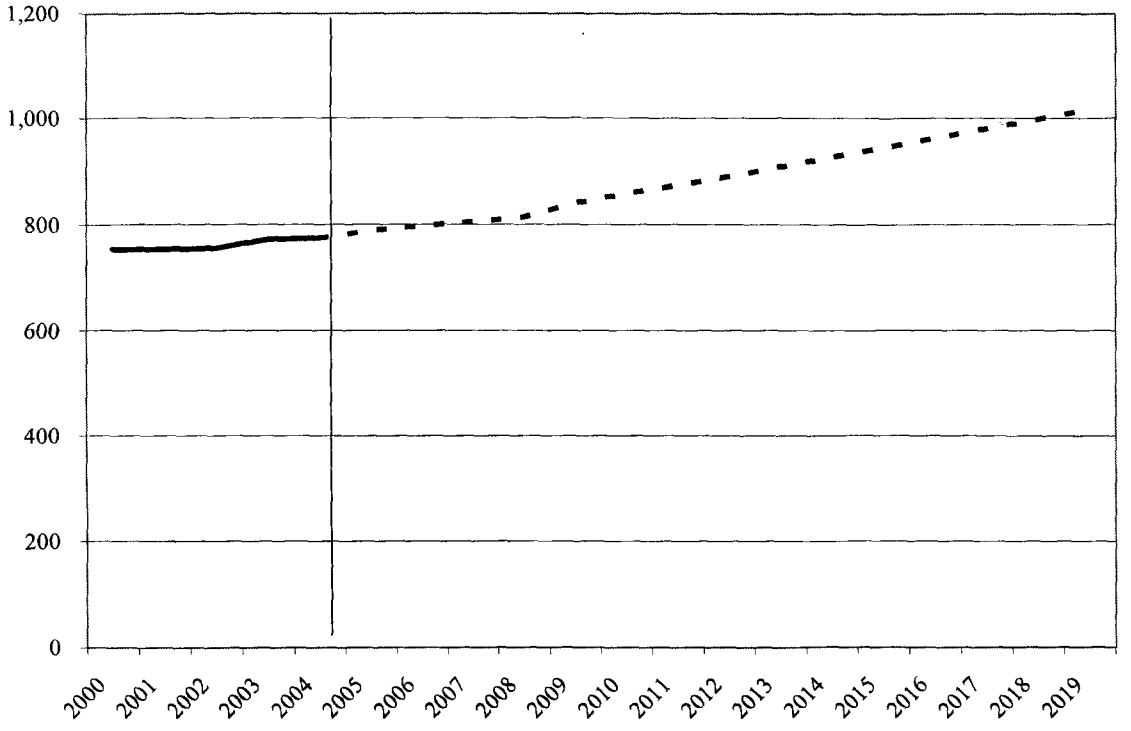
The above model is used for the medium-term (2005 to 2009) sales forecast. Beyond 2009, the sales forecast for the Public Authority class is based on economic and demographic growth rates pertaining to the LG&E service territory provided by STEM.

The history and forecast of Public Authority large Commercial customers, sales and use-per-customer are shown in Table LGE-12 and Graph LGE-10.

TABLE LGE- 12
TOTAL LG&E PUBLIC AUTHORITY LARGE COMMERCIAL CUSTOMERS, SALES, AND USE-PER-CUSTOMER: HISTORY & FORECAST
(2000-2004 Weather Normalized Actual)

Year	Customers	Energy Sales (GWh)	Use-Per-Customer (MWh)
2000	251	752	3,010
2001	263	752	2,877
2002	265	754	2,858
2003	275	771	2,810
2004	279	774	2,874
2005	284	788	2,778
2006	287	797	2,779
2007	290	804	2,775
2008	293	813	2,777
2009	295	839	2,848
2010	306	857	2,801
2011	310	873	2,813
2012	315	890	2,826
2013	320	908	2,841
2014	325	926	2,854
2015	330	944	2,865
2016	335	962	2,874
2017	340	980	2,883
2018	345	998	2,893
2019	350	1,017	2,902

GRAPH LGE-10
PUBLIC AUTHORITY LARGE COMMERCIAL SALES
HISTORY & FORECAST (GWh)
(2000-2004 Weather Normalized Actual)



Large Commercial Long-Term Forecast

Beyond 2009, the sales forecast for the Large Commercial does not differentiate between the non-Public Authority and Public Authority; the economic and demographic impacts on the Large Commercial class as whole are assumed to be the same. The sector is forecast jointly as a function of, economic and demographic variables pertaining to the LG&E service territory provided by STEM. The long-term Large Commercial energy sales forecast model is a single-equation model. The variables included in the model are the real price of electricity, non-manufacturing employment, cooling degree-days and a long-term trend variable. A positive coefficient estimated for the long-term trend variable implies that the net impact of the increasing trend in base load and the decreasing trend in weather-sensitive sales will be a slight increase in total use-per-customer. The details of the long-term relationship are shown below:

Large Commercial Energy Sales

$$\ln(LCMWH) = 12.22404 - 0.11900*\ln(LCPRICE) + 0.68892*\ln(NMFGEMP) + 0.06978*\ln(CDD) + 0.08483*\ln(TREND)$$

(7.198) (-2.436) (5.779) (4.782) (8.696)

$R^2 = 0.9987$
D.W. = 2.8591

Where,

LCMWH	=	Annual total energy sales to large Commercial customers
LCPRICE	=	Real price of electricity for large Commercial customers.
NMFGEMP	=	Non-manufacturing employment.
CDD	=	Cooling Degree Days.
TREND	=	Time variable equal to year minus 1980 (start year).

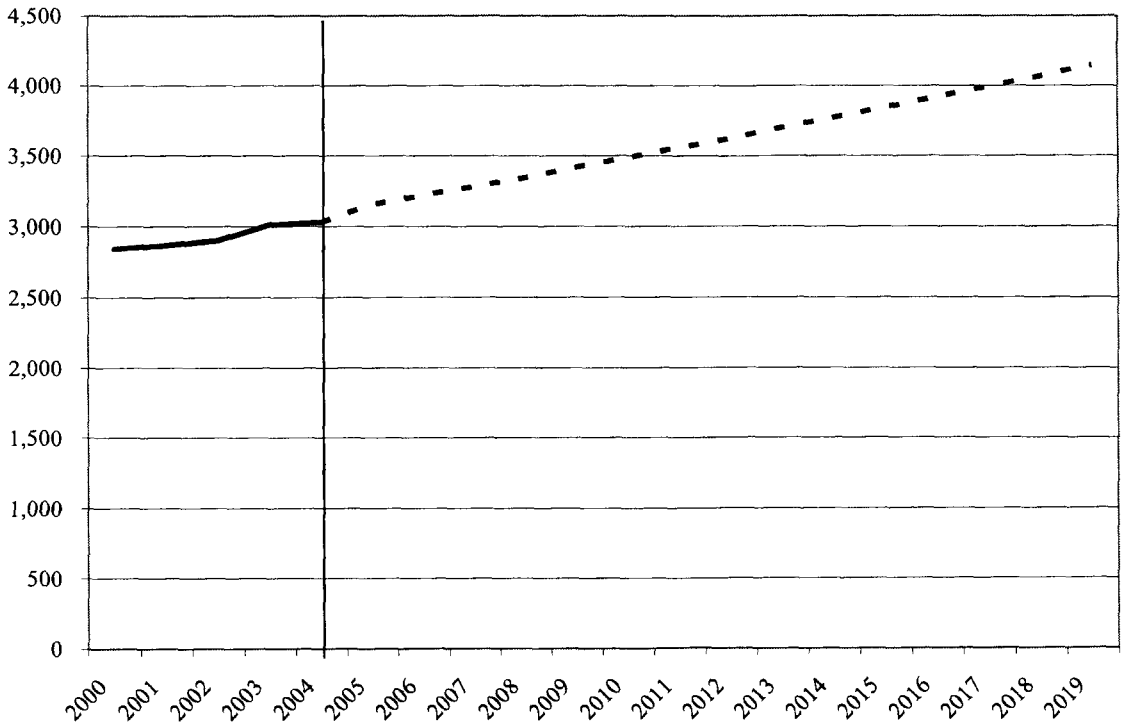
Table LGE-13 shows the sales history and long-term forecast for the Large Commercial class of customers -- Graph LGE-11 displays the sales history and forecast.

TABLE LGE- 13
TOTAL LG&E LARGE COMMERCIAL SALES
HISTORY & FORECAST
(2000-2004 Weather Normalized Actual)

Year	Energy Sales (GWh)
2000	2,843
2001	2,866
2002	2,900
2003	3,011
2004	3,028
2005	3,155
2006	3,220
2007	3,282
2008	3,343
2009	3,418
2010	3,489
2011	3,556
2012	3,626
2013	3,700
2014	3,774
2015	3,846
2016	3,918
2017	3,991
2018	4,066
2019	4,143

Over the 2000-2004 period, total Large Commercial weather-normalized energy sales increased at an average annual rate of 1.6 percent. The forecast for sales is an average annual growth rate of 2.0 percent over the medium- and long-term forecast horizons.

GRAPH LGE-11
LG&E TOTAL LARGE COMMERCIAL ENERGY SALES
HISTORY & FORECAST (GWh) – 2000-2004 Weather Normalized Actual



INDUSTRIAL

Industrial sales are forecast using a combination of medium-term and long-term models. In the medium term, an additional distinction is made for revenue forecasting purposes between Public Authority and non-Public Authority sales. In the long-term, the economic and demographic impacts on the Industrial sector are assumed to be the same between the non-Public Authority and Public Authority sectors.

The Industrial sales forecast is comprised of:

1. Individual forecasts of the energy requirements of the 25 largest industrial customers;
2. Forecast of the Residual energy requirements of the industrial class; and
3. Forecast of Public Authority Industrial class energy;

Large Industrial Forecast

The Large Industrial LG&E customers are individually forecasted. The forecasts for these customers are developed based on recent history in sales and demand and on communications with each customer regarding the outlook for future operations. From 2000-2004, sales to the Large Industrials have been declining at an average annual rate of -1.8 percent (2000 and 2001 alone showed an average decline of -3.1 percent annually). In total, sales to these large customers are forecast to decline at -0.8 percent annually over the period 2005-2009. These customers are generally mature facilities where expansion opportunities are limited and efficiency measures curtail sales.

Small Industrial Forecast ("Residual" industrial sales)

The Small Industrial customers are forecast using a multiple regression model based on eight years of historical data (1996:1 to 2003:11). The details of the model are shown below (the t-stats for the variable are shown in parenthesis):

$$\begin{aligned} \text{OTHINDKWH} = {} & 6264.589 + 645.6603*\text{IPINDEX} + 19.5198*\text{CDD} \\ & (2.2896) \qquad (3.2043) \qquad (3.3077) \\ & + 13.8294*\text{SEPCDD} + [\text{AR}(1)=0.565675] \\ & (2.4669) \qquad (6.4142) \end{aligned}$$

Where:

OTHINDKWH	=	Other Industrial kWh
IPINDEX	=	U.S. Industrial Production Index
CDD	=	Cooling Degree Days
SEPCDD	=	September Cooling Degree Day Interaction Variable
AR(1)	=	Autoregressive term of order one.

Model Statistics:
R^2 = 0.6269
DW-Stat = 2.52

From 2000-2004, sales to the Small Industrials grew at an average annual rate of 2.7 percent. In total, sales to these Small Industrial customers are forecast to grow at an average growth rate of 0.4 percent over the period 2005-2009. In the long-term, 2005-2019, sales grow at a average growth rate of 3.0 percent.

Public Authority Industrial Load Forecast

The Public Authority Industrial load is forecast by applying a compound growth rate based on the most recent five year sales history to each year of the forecast – this growth rate was computed to be 2.7 percent. Once the annual forecast is computed, it is allocated for twelve months across the year based on a ten-year average monthly allocation factor. This is shown below in Table LGE - 14.

TABLE LG&E- 14
PUBLIC AUTHORITY INDUSTRIAL
MONTHLY ALLOCATION FACTOR (MAF)

Month	MAF
1	8.01%
2	7.74%
3	7.66%
4	8.24%
5	8.20%
6	9.03%
7	9.56%
8	9.29%
9	8.97%
10	7.86%
11	7.60%
12	8.01%
Total	100.00 %

Long-Term Industrial Forecast

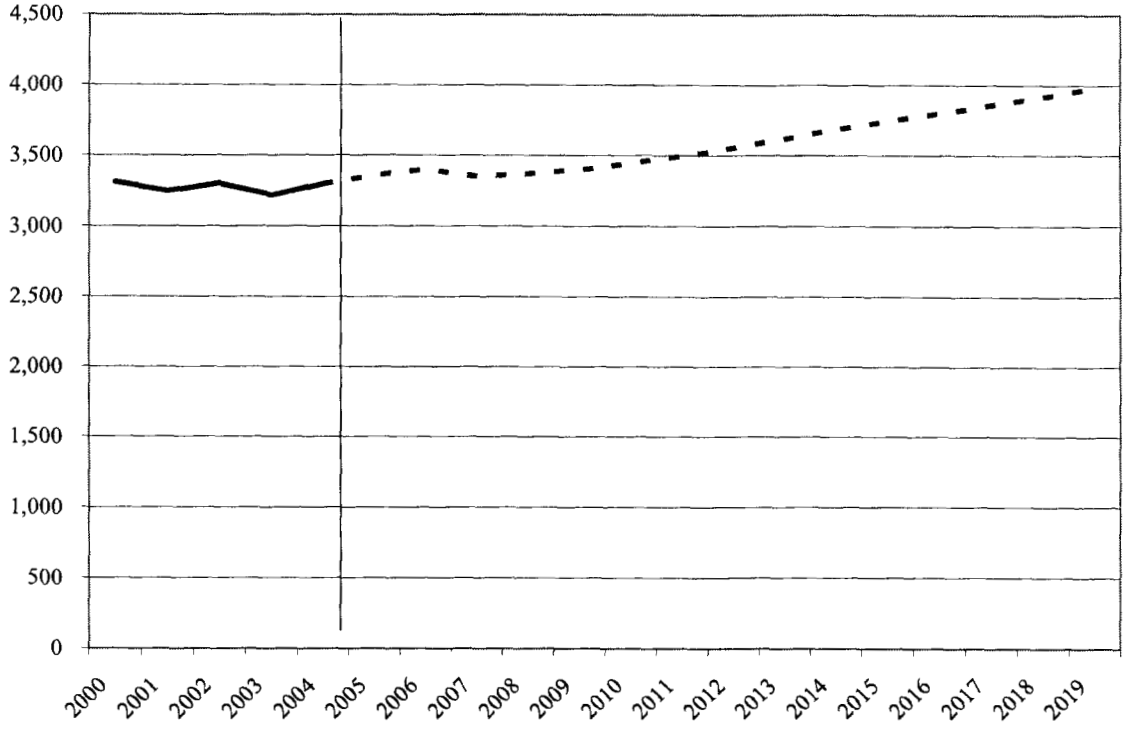
Beyond 2009, the sales forecast for the Industrial class does not differentiate between the non-Public Authority Industrial and Public Authority Industrial.

The history and forecast of total Industrial class sales are shown in Table LGE-15 and Graph LGE-12.

TABLE LGE- 15
TOTAL LG&E INDUSTRIAL CUSTOMER ENERGY SALES
HISTORY & FORECAST
(2000-2004 Not Weather Normalized)

Year	Energy Sales (GWh)
2000	3,312
2001	3,248
2002	3,301
2003	3,218
2004	3,297
2005	3,358
2006	3,402
2007	3,350
2008	3,371
2009	3,397
2010	3,444
2011	3,496
2012	3,553
2013	3,617
2014	3,684
2015	3,742
2016	3,798
2017	3,857
2018	3,917
2019	3,978

GRAPH LGE-12
LG&E TOTAL INDUSTRIAL ENERGY SALES
HISTORY & FORECAST (GWh)
(2000-2004 Not Weather Normalized)



STREET LIGHTING

The Street Lighting load is forecast by applying the most recent five-year sales history of annual compound growth rate to each year of the forecast. The average annual growth rate, from 2000-2004, is computed to be 0.4 percent. Once the annual forecast is computed, it is allocated across the twelve months in the year based on a five-year average monthly allocation factor. This is shown below in Table LGE-16.

TABLE LGE- 16
STREET LIGHTING MONTHLY
ALLOCATION FACTOR (MAF)

Month	MAF
1	10.03 %
2	7.90 %
3	7.69 %
4	9.16 %
5	7.12 %
6	6.76 %
7	7.12 %
8	7.72 %
9	8.12 %
10	8.84 %
11	9.45 %
12	10.09 %
Total	100.00 %

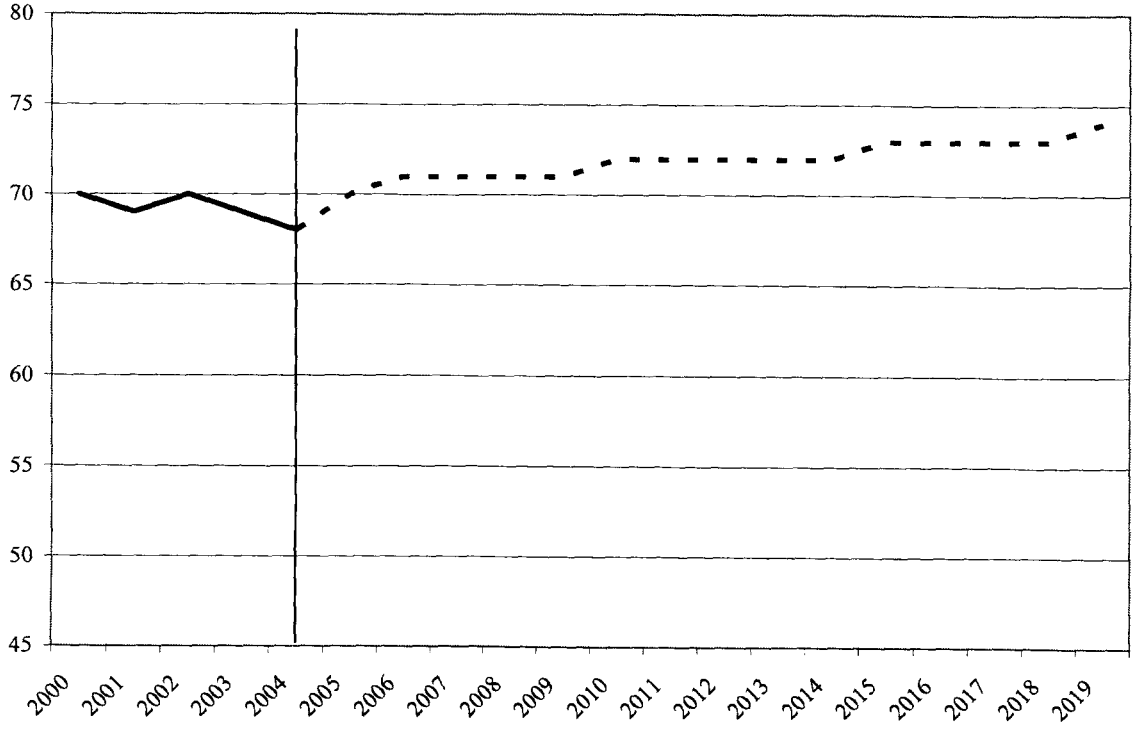
The above methodology was used for the medium-term sales forecast. Beyond 2009, the rate of increase in Street Lighting energy sales is forecast by using the ratio of the Street Lighting energy sales growth rate to the Residential customer growth rate averaged over the years of 1998 - 2003. Therefore, future annual growth rates for Street Lighting energy sales are estimated by multiplying the projected annual growth rates of Residential customers by the Street Lighting growth ratio.

The history and forecast of Street Lighting sales are shown in Table LGE-17 and Graph LGE-13.

TABLE LGE- 17
LG&E STREET LIGHTING ENERGY SALES
HISTORY & FORECAST
(2000-2004 Not Weather Normalized)

Year	Energy Sales (GWh)
2000	70
2001	69
2002	70
2003	69
2004	68
2005	70
2006	71
2007	71
2008	71
2009	71
2010	72
2011	72
2012	72
2013	72
2014	72
2015	73
2016	73
2017	73
2018	73
2019	74

GRAPH LGE-13
LG&E STREET LIGHTING ENERGY SALES HISTORY & FORECAST (GWh)
(2000-2004 Not Weather Normalized)



UNCERTAINTY ANALYSIS

To address uncertainty, a probabilistic simulation is run on the historic year-over-year growth for each utility's as-billed, weather-normalized energy sales, and a lower and an upper bound is identified based on the 33rd and 67th percentile values, respectively. To develop a "low growth" sales scenario, the year-over-year growth in the base case forecast is decreased by the percent difference between the 33rd and 50th percentile values of the historical growth rate distribution. For a "high growth" sales scenario, the base year-over-year growth is increased by the percent difference between the 67th and 50th percentile values. The low and high year-over-year growth rates are then applied to the 2003 weather-normalized actual energy sales to produce the "low" and "high" energy sales forecast cases. The distribution of monthly sales in the low and high scenarios is the same as in the base case forecast.

2005-2019 ENERGY FORECAST COMPARISONS

Graph LGE-14 illustrates the forecast bandwidth created by the three cases for total LG&E energy sales. The base energy forecast increases at an average annual rate of 1.6 percent over the first five years and 1.8 percent over the fifteen-year horizon. The high case increases at an average annual rate of 2.1 percent over the first five years and 2.4 percent over the fifteen-year horizon. The low scenario increases at an average annual rate of 1.1 percent over the first five years and 1.3 percent over the fifteen-year period.

In 2009, the High case is 387 GWh greater than the Base forecast while the Low case is 348 GWh below. For the year 2019, the High energy forecast is 1,337 GWh higher than the Base forecast while the Low energy forecast is 1,202 GWh below the Base forecast. Table LGE-18 presents the annual Base, High, and Low energy forecast values.

GRAPH LGE-14
BASE, HIGH AND LOW ENERGY SALES FORECASTS (GWh)

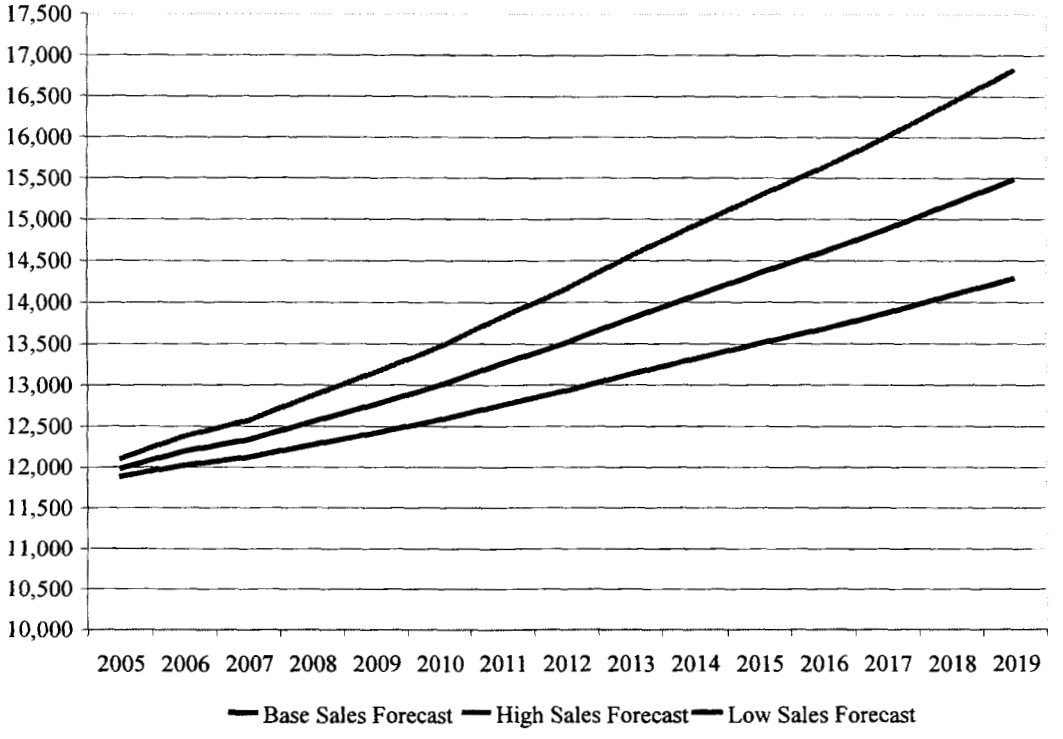


TABLE LGE- 18
LG&E BASE, HIGH AND LOW ENERGY SALES FORECAST (GWh)

Year	Base Sales Forecast	High Sales Forecast	Low Sales Forecast
2005	11,983	12,097	11,880
2006	12,188	12,374	12,021
2007	12,330	12,566	12,119
2008	12,549	12,861	12,269
2009	12,765	13,152	12,417
2010	12,988	13,453	12,570
2011	13,258	13,817	12,755
2012	13,506	14,151	12,925
2013	13,796	14,543	13,125
2014	14,069	14,911	13,312
2015	14,339	15,275	13,497
2016	14,597	15,623	13,674
2017	14,874	15,997	13,865
2018	15,183	16,414	14,076
2019	15,488	16,825	14,285