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COMMISSION

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STAFF REPORT

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Introduction

This California Energy Commission staff report documents the electricity, peak, and natural gas demand forecasts for the State of California and for each utility planning area within the state. These forecasts were prepared in support of the *2003 Integrated Energy Policy Report* (IEPR). An overview of the forecast results and key assumptions is found in Chapter Two of the *Electricity and Natural Gas Trends Report*. The purpose of this report is to document the methods, key assumptions, and results of the final demand forecasts. Detailed forecast results are found in the appendices at the end of this report. All appendices will also be available for downloading in spreadsheet format from the Energy Commission website at [<http://www.energy.ca.gov/energypolicy/documents/index.html>]. Further detail on model methodologies may be found in *California Energy Demand: 1995-2015, Volume II Electricity Demand Forecasting Models*, July 1995 (Publication Number 300-95-005).

The final demand forecast for the IEPR incorporates several changes as a result of comments received on the draft forecast presented at the February 25, 2003 workshop. First, staff revised the electricity rate forecasts based on comments from utilities. Staff also updated the investor-owned utilities' (IOUs) 2003 rates to reflect recent changes.

Second, demand side management (DSM) savings included in the forecast were changed to assume that the current level of funding persists through 2011, as authorized by the legislature.

Finally, staff reduced the impact of personal income in the calculation of the miscellaneous end use consumption starting in 1996 in the residential sector. This change was made to all service areas to better match historic growth in residential consumption. Previously, growth in personal income in the late 1990s produced a backcast that grew much faster than actual consumption. The use per household now grows at essentially the historic rate. Staff also updated the county-level personal income forecast. The combined effect of all changes is to reduce average annual demand growth by 0.5 percent per year over the next ten years.

Overview of Demand Forecast Methods

The Energy Commission forecasts energy demand for five major economic sectors, eight electric utility areas and four natural gas utility areas. Each model develops a forecast using a complex series of calculations that simultaneously consider economic factors, population, weather characteristics, changes in energy utilization, regulatory conditions, and recorded consumption. The models forecast electricity and natural gas use simultaneously to produce consistent total energy forecasts. End use forecasting models are used for the three largest sectors (residential, commercial and industrial). Generally, these models calculate electricity consumption as the sum of electricity requirements from all end uses. The requirements for each end use are determined as the product of the number of customers having the electricity using equipment and the annual consumption per unit. The calibrated and aggregated results of the sector forecasts serve as inputs to the hourly load forecasting model to determine system peak.

The aggregate demand for energy services increases with growth in economic activity and population and as new forms of energy service become available. The forecasts are driven by projections of sector specific economic and demographic variables that have been found to best characterize the need for energy services. County or regional forecasts are translated into utility planning or service area forecasts. The Energy Commission has developed several models that provide the economic and demographic variables used to drive the sector models. Examples are the housing model for the residential sector and floor space model for the commercial building model.

Geographic and Sectoral Data Disaggregation

Forecasts are developed and reported for eight electric service/planning areas and four natural gas distribution regions (**Table 1**). A planning area denotes a geographic region of an electric investor-owned utility which includes municipalities and irrigation districts not served directly by the larger investor-owned utility. An electric service area denotes a geographic area for which a single utility provides electric distribution services. Natural gas planning areas include municipal gas utilities.

The geographic areas and weather zones covered by these service areas are very diverse. Smaller municipal utilities and irrigation districts as well as Sacramento Municipal Utility District (SMUD) have very compact and homogeneous climates. The larger areas contain very diverse climates. Residential and commercial energy consumption patterns are influenced by weather, therefore, these two sectors are modeled by climate zone and results aggregated to the utility service/planning area. The number of climate zones in a given area depends upon the diversity of climate within the area and the availability of suitable weather stations.

The Pacific Gas and Electric (PG&E) area covers the majority of California north of Bakersfield. This includes large portions of the hot central valleys as well as the highly populated and cool coastal San Francisco bay area. For forecasting purposes PG&E is represented by five distinct weather stations (Ukiah, Sacramento, Fresno, San Jose and San Francisco).

Southern California Edison (SCE) covers the majority of the state from Bakersfield south. SCE is represented by four distinct weather stations (Fresno, Long Beach, Burbank and Riverside).

Los Angeles Department of Water and Power (LADWP) encompasses the city of Los Angeles as well as part of the Owen's Valley. This service area has both coastal and inland regions and is represented by Long Beach and Burbank as weather stations.

The San Diego Gas and Electric (SDG&E) service territory includes all of San Diego County as well as a small part of southern Orange County. Currently, SDG&E is represented by San Diego's Lindbergh Field. Staff is evaluating a combination of San Diego, Miramar and El Cajon for future forecasting purposes.

**Table 1
Utilities within Forecasting Areas**

Planning/Service Area	Utilities Included	
Electric Areas		
Pacific Gas and Electric (PG&E)	PG&E Alameda Biggs Calaveras Gridley Healdsburg Lassen MUD Lodi Lompoc Merced Modesto	Palo Alto Plumas - Sierra Redding Roseville San Francisco Shasta Silicon Valley Tuolumne Turlock Irrigation District Ukiah USBR-CVP
Sacramento Municipal Utility District (SMUD)	SMUD	
Southern California Edison (SCE)	Anaheim Anza Azusa Banning Colton MWD	Riverside Southern California Edison Southern California Water USBR-Parker Davis Valley Electric Vernon
Los Angeles Department of Water and Power (LADWP)	LADWP	
San Diego Gas and Electric (SDG&E)	SDG&E, Escondido	
Cities of Burbank, Glendale, and Pasadena (BGP)	Burbank Glendale Pasadena	
Other Planning Area (OTHER)	PacifiCorp Sierra Pacific Surprise Valley	Truckee-Donner PUD Imperial Irrigation District (IID)
Department of Water Resources (DWR)	DWR	
Natural Gas Distribution Areas		
PG&E	PG&E Electric Planning Area SMUD	
SDG&E	SDG&E	
Southern California Gas Company (SCG)	SCG SCE, LADWP, BGP Electric Planning Areas	
OTHER	Washington Water Southwest Gas Corporation	

SMUD has the most homogeneous weather of the major utilities. The service area encompasses Sacramento County and is represented by Sacramento Executive Airport.

The data can also be aggregated across regions consistent with congestion zones associated with the electricity transmission grid operated by the California Independent System Operator (CAISO). The CAISO service territory currently includes the majority of the state with the

exception of LADWP, SMUD and few other small areas. Staff has used a combination of the above nine weather stations weighted by the representative residential air conditioning saturations to approximate the daily summer temperature facing the CAISO region. **Appendix B** and **Appendix D** include forecast tables aggregated by CAISO congestion zone.

Forecast Data Sources and Assumptions

Disaggregate end use models require extensive data. Four classes of data are required to establish useful disaggregate forecasting models. First, consumer characteristics data such as end use appliance saturations, dwelling size and age, occupants' income and demographic makeup, and utility bills are important. Second, aggregate consumption data for the nonresidential sectors classified by the Standard Industrial Classification (SIC) code devised by the federal government. Third, disaggregate economic and demographic projections at a level of detail matching the customer sectors of the energy forecasting models. Each of these will be discussed separately. Finally, data or estimates of energy impacts from building and appliances standards or efficiency programs are needed to account for conservation effects on demand.

Consumer Characteristics

Consumer characteristics data include information on consumers' appliance and equipment holdings, building characteristics, conservation measures and behavior, demographic and operation characteristics of firms, and load shifting opportunities and behavior. This information helps explain evolving energy use patterns by identifying factors that influence customers' choices of how much energy to consume as well as what options were available when they made their choices.

A wealth of data exist describing consumers but only utilities have the ability to link together customer characteristics with utility bills. Thus, the principal focus of activity regarding consumer characteristics is to obtain customer survey data from utilities in a usable, timely manner. In the past, Energy Commission staff assisted the utilities in designing customer surveys and post-collection data editing. Estimates of appliance and equipment saturations and end use intensities from these surveys are incorporated in the residential and commercial models. Currently, the Energy Commission is managing customer surveys for the residential and commercial sectors that will allow updating of customer characteristics for the next IEPR forecast.

Energy Consumption Data

Electricity and natural gas consumption data by SIC code has proved to be an invaluable source of basic energy usage for the nonresidential sector. Supplied on a quarterly basis for individual months by every utility in the state, this data allows use of planning area customer sector models where no matches in rate classification by all affected utilities would be possible. Quarterly Fuel and Energy Report (QFER) data supplied by utilities by 3- or 4-digit SIC code is processed by

Energy Commission staff into various customer groupings. This now includes improved reporting of self generation by utilities.

Economic/Demographic and Fuel Price Projections

An essential input into the staff forecasting models are appropriate economic, demographic, and fuel price projections for each planning area. Several translation models convert usual economic and demographic data into the actual "energy driver variables" which are used in the model to forecast energy usage. For example, in the commercial building sector, the key energy driver is floor space by building type, while the economic and demographic variables are employment of various types, taxable sales, and various groupings of population. A different mix of each of these "econ/demo" variables has been found useful in projecting each building type's floor space additions through historic analysis of additions and econ/demo variables. **Table 2** lists these drivers by sector and the variables from which they are developed for each sector.

Table 2
Translation of Economic and Demographic Variables

Sector	Energy Driver	Econ/Demo
Residential	a. Households, by type b. Income per capita c. Persons per household, by type d. Fuel prices	a. Population, by residential and group quarters b. Income per capita c. Persons by household
Commercial	a. Floor space, by building type b. Fuel prices	a. (1) Employment, by type (2) Taxable sales (3) Population, by age grouping
Industrial	a. Value of shipments, by industry c. Fuel prices	a. Value of shipments, by industry
Agriculture	a. Total agricultural production b. Surface/ground water split c. Dairy and livestock production d. Electricity and diesel price e. Rainfall and weather data	a. Total number of homes b. Per capita income

For the 2003-2013 forecasts, the Energy Commission used the September 2002 University of California, Los Angeles (UCLA) Anderson Forecast in combination with the 2002 Global Insight forecast. UCLA forecasts economic conditions for the state as a whole, including forecasts of personal income, and employment for detailed commercial and industrial sectors. To develop economic forecasts for the Energy Commission's utility areas, county-level income and industrial production projections from Global Insight are used in combination with the UCLA statewide forecast.

The California Department of Finance (DOF) June 2001 *Interim County Population Projections* were used to develop projections of household population and persons per household, along with DOF's E-5 County/State Population and Housing Estimates.

The base case forecast assumes that stronger economic growth will resume in late 2003, followed by steady growth, but at a lower rate than previous recoveries. To quantify the potential impact on demand of unanticipated economic trends, the Energy Commission developed several scenarios to support evaluation of risks to infrastructure and supply adequacy.

The high economic growth scenario models the effects of a more robust economy on energy demand. Over the last twenty years, the average annual post-recession employment growth rate has averaged about 1 percent higher than the growth rate assumed in the baseline employment forecast. To model the effects of a stronger recovery on energy demand, the employment forecast was accelerated to achieve a new forecast with an annual growth of slightly more than 1 percent higher for the years 2004-2007. Other economic drivers for the sector forecasts were also accelerated by one or two years for similar results. After 2007, the baseline forecast trend resumes. Conversely, to develop a low economic growth scenario, the forecasted growth beginning in 2004 is delayed by one to two years so that growth on average is slightly more than 1 percent lower than the baseline economic forecast. **Appendix G, Table G-2** documents the major economic drivers for the scenarios at statewide level. Electricity demand scenario forecast results are presented at the end of **Appendix B** and **Appendix D**, and natural gas results in **Appendix E**

Energy price projections are an important input into any energy demand forecast. The prices used for this forecast are in **Appendix G**. This forecast used the February draft end user natural gas price projections prepared by the Fuels Resources Office. The final natural gas price forecast is documented in *Natural Gas Market Assessment* (Publication number 100-03-006). Electricity retail rate projections are prepared for use by demand forecasting staff by the Electricity Analysis Office. More detail on the final rate forecast is published in *California IOU Retail Electricity Price Outlook 2003-2013* (Publication number 100-03-003).

DSM Quantification

A major effort of Energy Commission forecasting has been to account for the influence of conservation and energy efficiency that is "reasonably expected to occur" (RETO) in an internally consistent manner. Since 1985 the Energy Commission has distinguished between savings impacts that are reasonably expected to occur (committed RETO) and savings that are likely to occur (uncommitted RETO) if current trends in funding and policy continue to contribute additional savings from future year programs. The uncommitted DSM forecast of load impacts from programs or other actions was then included on the resource side, to allow comparison of DSM to other resource options.

While program proposals and budgets still require annual approval by the California Public Utilities Commission (CPUC), the IOU Public Goods Charge programs have been authorized by the legislature through 2011, and because this spending is required by statute and CPUC policy, they are included in the baseline forecast. Staff has not included 2005 building standards in the forecast because they still require adoption.

The methodology to project savings from conservation and load management programs has required extensive effort over numerous forecast cycles. Effort has been devoted to developing forecasting models capable of endogenously quantifying the savings of major individual programs and savings due to market forces.

Attribution of Savings

Most building and appliance standards are modeled within the sector forecast models. The models account for building decay, equipment replacement and estimates of market-induced impacts. The large number of current and prospective conservation and efficiency programs modeled requires substantial effort to quantify individually, and these conservation quantification runs were not done as part of the 2003 IERP. A major focus in preparation for the next IERP will be review and updating of standards modeling and conducting an updated conservation quantification analysis.

Attribution of savings from standards is guided by the principle that program savings are determined in the reverse order of introduction. This chronological sequencing approach requires that a series of model runs be made. As an example, let A, B, and C denote three runs of a sector model characterizing the combined influence of two programs, a single program introduced first, and no programs, respectively. The difference between runs A and B quantifies the savings from the last program introduced. This convention makes the estimate for the second program conditional upon the first. The difference between runs B and C quantifies the savings from the first program introduced. This example is complicated several fold in actual practice due to the large number of programs.

A significant complication of implementing this convention is the attribution of savings to market forces, including direct consumer price response. Extending the previous example further, let run D denote a case with fuel prices constant at the level of some reference year. Runs A, B and C used fuel price assumptions from the baseline forecast. Market savings are quantified as the difference between runs C and D. This is a straightforward extension of the previous example. Unfortunately, savings quantified using runs A, B, and C are conditional upon the market savings, which depend upon the fuel price assumptions of the baseline forecast. Changes in such fuel price assumptions, all other effects held constant, change the savings quantified for each program. High fuel prices lead to lower program savings and lower fuel prices lead to higher program savings.

The impacts from many DSM programs sponsored by utilities, state government, local government and other organizations are also estimated directly within the end use models. However, because of the large number of programs and the extreme difficulty in attributing impacts to particular programs, no attempt is made to attribute impacts through an iterative process. Estimated savings by program are obtained directly from utilities and public agencies. At the aggregate, the utility and program estimates are used to gauge the impacts included within the end use models.

Estimates of impacts calculated outside the sector models are the product of a four step process. First, first year impacts are assigned a useful measure life. Second, a degradation factor is applied to each year of the useful life to account for poor maintenance or equipment failure. Third, adjustments are made to distinguish between program-induced and market effects. The final results are aggregated and provided to the summary model where they are used to evaluate the sector forecasts. **Appendix K** contains the cumulative utility program savings forecast based on reported annual savings through 2001. Complete data were not yet available for 2002; staff estimated incremental savings based on utility energy efficiency program plans, and extended this annual impact through 2011.

Sector Energy Forecasts

The aggregate demand for energy services increases with growth in economic activity and population, and as new forms of energy service become available. The Energy Commission energy demand forecasts are driven by projections of sector specific economic and demographic variables. **Table 3** shows the coverage and end use detail of each sector model.

Table 3
End Use Characteristics of Sectoral Models

Sector	Customers Groups Included	End Uses Covered
Residential	All residential electricity and natural gas, by 3 housing types	21 major appliance and space conditioning categories
Commercial Building	All building related electricity and natural gas use in SIC codes 50-96 by 11 building types	10 equipment and space conditioning categories
Other commercial (TCU)	All electricity and natural gas used by 14 industries in SIC codes 40-49, (ex. 422, 494, 497), 752, and 97	none
Street Lighting	street lighting electricity	street lights
Manufacturing and Mining Industries	All electricity and natural gas used by 33 2-digit and 3-digit manufacturing SIC codes. 7 extraction and construction industries in SIC codes 10-17	none
Agriculture	All electricity and natural gas used by SIC codes 01,02, 08,and 09, covering crops, livestock, forestry, hunting and commodities	irrigation pumping building heating crop drying
Water Supply	All electricity used by the water supply industry of SIC codes 494 and 497	water supply pumping

Residential Consumption Forecast

Energy forecasts for the residential sector are made with a detailed end use model. The three primary components of the model are households, appliance saturations, and average annual

energy use per appliance by vintage. Energy use for an end use category is determined by the product of total households, appliance saturation and energy use per appliance.

Residences are grouped into three different housing types—single family, multi-family and mobile homes. Residences are further classified by vintage. Vintage is determined by the California building standard in effect when the residence was built. For each housing type, some combination of electricity and/or natural gas consumption occurs in 24 individual end uses (**Table 4**). In most cases, the end uses do not necessarily represent distinct appliance types. Electric space heating, for example, is one end use category, but includes three types of heating appliances—baseboard heaters, central heating systems, and heat pumps. Other end uses, such as refrigerators and freezers, do characterize individual appliance end uses.

Table 4
Residential End Use and Fuel Type Classifications

End-Use	Description	Electric	Gas
Central A/C	Whole house air conditioning systems	X	X
Room A/C	Window air conditioners	X	
Evap. A/C	Evaporative coolers	X	
Space Heat	Heat pumps, baseboard heaters and central heating systems	X	X
Furnace Fan	Central heating and cooling furnace fans	X	
Hot Water – DW	Water heating for dishwashers	X	X
Hot Water - CW	Water heating for clothes washer	X	X
Water Heater	Basic water heating for all other uses	X	X
Refrigeration	Refrigerators	X	
Freezer	Stand alone freezers	X	
Color Television	Major household appliance	X	
Cooking	Stove tops and ovens—excludes microwaves	X	X
Dishwasher	Dishwasher motor only	X	
Clothes Dryer	Clothes dryer	X	X
Clothes Washer	Washing machine motor	X	
Solar Backup	Backup for solar water heating systems	X	X
Solar Pumps	Pumps on solar water heating systems	X	
Water Bed	Heating element for water beds	X	
Miscellaneous	Miscellaneous uses including lighting, small appliances and electronics	X	X
Pool Pump	Swimming pool water pump	X	
Pool Heater	Water heating for swimming pools	X	X
Pool Backup	Backup for pool's solar water heating system, including pump	X	X
Tub Pump	Hot tub water pump	X	
Tub Water Heat	Water heating for hot tubs	X	X

End use consumption is estimated for each combination of housing type, fuel type, and climate zone. The three main components of the residential model are households, appliance stock, and unit energy consumption (UEC).

The household component provides projections of person per household (PPHH), per capita income (PCI) by climate zone, and housing stock by climate zone and housing type. Housing stock projections are used to calculate appliance stocks. Historical stock calculations are based on census data and utility appliance saturation surveys. Projected stocks are based on computed retention factors, saturations in new homes and free market marginal saturations (the appliance saturation in new homes). Person per household and per capita income are used to calculate unit energy consumption for some appliances.

The UEC component estimates average UECs for the purchase year. These UECs are based upon average consumption in the base year, new equipment efficiencies, persons per household, and energy efficiency retrofit programs. For space conditioning end uses, the thermal integrity of dwellings is also taken into account.

Commercial Sector Forecast

The commercial end use forecasting model models total energy consumption by commercial buildings as the sum of energy consumption of individual end uses for twelve building types. End use energy consumption is determined by the amount of floor space, the proportion of floor space receiving an end use energy service, and the type, efficiency and use of energy using equipment.

Each building type aggregates energy consumption resulting from economic activity surrounding the selling and distribution of final goods and services. **Table 5** displays a breakdown of the twelve building types by SIC code. A forecast of floor space is developed for each building type within each planning area. The floor space is forecast econometrically using F.W. Dodge construction data on building additions, floor space saturations from survey data, and the economic driver found to best predict economic trends for that building type. For example, school age population is the economic driver for schools.

Table 5
Commercial Building Classifications

Building Type	SIC Codes Included
Small Office < 30,000 Square Feet	071,074, 076, 078, 60-61, 62-67, 73
Restaurants	58
Retail Stores	52, 53, 55-57 (554), 59 (592)*
Food/Liquor Stores	54, 592
Warehouses	42 (421,422,423), 50, 51 (514)
Refrigerated Warehouses	4222, 514
Schools	821, 835
Colleges/Trades	822, 824, 829
Health Care	805-809, 836
Hotel/Motel	70 (703)
Miscellaneous	072, 075, 554, 703, 72, 75, 78, 79, 823, 84, 92 (925)
Large Office >= 30,000 Square Feet	801-804, 81, 83 (836), 87, 89, 91, 93-96, 972

*Excluded industry subgroups in parentheses.

For each building type, energy consumption occurs within ten different end uses. **Table 6** displays the end uses and their corresponding fuel types.

Table 6
Commercial End Use and Fuel Type Classifications

End-Use	Description	Electricity	Natural Gas
Space Heat	Combinations of packaged and system space heat	X	X
Space Cooling	Combinations of packaged and system cooling	X	X
Ventilation	Ventilation systems	X	
Water heating	Water heaters and system boilers	X	X
Cooking	Major cooking appliances	X	X
Refrigeration	Major refrigeration systems and stand alone units	X	X
Indoor Lighting	Lighting systems, does not include desktop lamps	X	
Outdoor Lighting	Lighting systems	X	
Office Equipment	Faxes, computers, copiers, etc.	X	
Misc. Equipment	Miscellaneous plug load, including small refrigerators, desktop lamps, and other non-system energy using equipment.	X	X

The model keeps track of both building and equipment vintages as well as equipment replacement rates. All post 1978 floor space subject to the provisions of Title 24 enters the energy equation with modified marginal end use intensities. New equipment in older buildings is replaced with higher efficiency equipment as the Title 20 standards phase-in.

Energy prices affect energy use in two ways. In the short run, users' options are limited to reducing their uses of energy services, switching to different fuel (unlikely in the commercial building sector), and implementing low cost conservation measures such as insulation, solar films, shade screens, delamping, etc. In the long run, a wider variety of options are available. In addition to the short run options, for existing buildings the users can replace inefficient equipment with more efficient ones, in new buildings the users can choose different energy service and/or commercial service technologies, switch fuels, and implement costlier conservation measures. The model keeps track of the retirement and replacement of buildings and equipment by vintage through decay functions. Thus, the energy use effects of the replacement of decayed equipment with newer and more efficient ones can be estimated.

Industrial Sector

The Energy Commission uses the Industrial End Use Forecasting Model (INFORM) originally developed by the Electric Policy Research Institute (EPRI). The model allows accounting for energy use trends, price effects, and exogenous improvement in efficiency by end use and industry. The largest end uses are process energy, motors, and lighting. The key driver for the energy forecast is the value of shipments forecast developed by staff from UCLA and Global Insight inputs. Price response is modeled using a three year average energy price in which an energy price index for each industry is calculated based on their relative use of electricity, natural gas, and petroleum products.

Table 7
Industrial Sector Definitions By SIC Code

SIC	Industry
Mining	
10	Metal Mining
13	Oil and Gas Extraction
14	Mining and Quarrying of Non-Metallic Minerals
Manufacturing - Process Industries	
15	Construction
203	Canned, Frozen, Preserved Fruits, Vegetables, and Food Specialties
206	Sugar and Confectionery Products
24	Lumber and Wood Products
261	Pulp Mills
262-3	Paper and Paperboard Mills
29	Petroleum Refining and Related Industries
321-3	Glass and Glassware
324	Cement
Manufacturing - Assembly Industries	
20x	Food and Kindred Products (Except 203 and 206)
22	Textile Mill Products
23	Apparel and Other Textile Products
25	Furniture and Fixtures
26x	Paper and Allied Products (Except Pulp, Paper, and Paperboard Mills 261-263)
27	Printing and Publishing
28	Chemicals and Allied Products
308	Plastics Products
30x	Rubber Products
31	Leather and Leather Products
32x	Stone and Clay Products
33	Primary Metal Industries
34	Fabricated Metal Products
357	Computers and Office Equipment
35x	Industrial Machinery and Equipment (Except 357)
366	Communications Equipment
367	Electronic Components and Accessories
36x	Electronic and Other Electric Equipment (Except 366, 367)
37	Transportation Equipment
38	Instruments and Related Products
39	Miscellaneous Manufacturing

Agriculture and Water Pumping

The agricultural electricity usage model is divided into four sectors: (1) groundwater pumping, (2) surface water pumping, (3) dairy and livestock production, and (4) urban water usage. Irrigation water pumping for crop production is the most important electricity use. Four separate econometric models have been developed to forecast energy consumption in these four sectors. These models are applied to energy consumption in the PG&E, SCE, and SDG&E planning areas.

In the groundwater and surface water pumping models the amount of energy usage is forecast on the basis of the amount of total agricultural production (field crops, vegetables and lemons, and fruits and nuts), price of electricity, the amount of rainfall, and other variables deemed necessary to account for possible structural breaks in the relationships.

In the dairy and livestock sector, energy consumption is related to the amounts of dairy and livestock production, price of electricity, and other variables to take account of possible regime shifts. The levels of these input variables are forecast separately by relating them to economic and demographic variables such as real household income.

Historically there has been a strong correlation between energy usage by urban households and the total number of homes in different planning areas. This correlation is used to forecast energy consumption in this sector using econometric models.

For other smaller planning areas simpler time-series models, such as trend analysis, are employed to forecast energy usage.

TCU and Street lighting

The Transportation, Communication and Utilities (TCU) category includes SIC codes 40-49, with exceptions, 97 and 752 (**Table 4-1**). SICs 40-49 consists of establishments providing such services as passenger and freight transportation, communications services, electricity, gas, steam, water or sanitary services, and the United States Postal Service. These industries have establishments that have activities, workers, and physical facilities distributed over an extensive geographic area. Electricity and natural gas energy use is primarily in offices, passenger and cargo terminals, maintenance facilities, for pumping, broadcasting, transmission and distribution.

SIC 97 consists of government establishments engaged in national security and international affairs. Energy use is primarily for offices and process activities such as metal fabrication of structural assemblies, components for ships and aircraft, and operation of electronic equipment. SIC 752 consists of establishments primarily engaged in the temporary parking of automobiles.

The TCU forecast model is an accounting model. There are two growth factors for each industry: one for a driving variable and one for energy intensity. The driving variable is the ratio of selected industry growth variables in a future year to the base year. The majority of TCU industries are driven by the growth factor for the number of jobs in that industry. Examples of

other driving variables include growth factor of the number of households for SIC 489, growth factor of the petroleum refining production index for SIC 46 and growth factor of the total population for SIC 495. Energy intensity is the ratio of the energy demand per unit of growth variable for a future year compared to the base year. It accounts for increases in electricity demand as industrial activity becomes more energy intensive.

**Table 8
TCU Drivers**

SIC	Driver Variable
40 (Railroad Transport)	The number of jobs in SIC 40.
411 (Rapid Transit)	Total population.
412-417 (Other Local Transportation)	The number of jobs in SIC 41.
752 (Automobile Parking)	Square footage of commercial parking garage floor space.
421,423 (Trucking And Courier Services)	The number of jobs in SIC 42.
43 (U.S. Postal Service)	The number of jobs in SIC 43.
441-448 (Water Transportation)	The number of jobs in SIC 44.
449 (Water Transportation/Marine Services)	The number of jobs in SIC 44.
451-452 (Certified And Noncertified Air Transport)	The number of jobs in SIC 45.
458 (Air Transport Fields And Terminals)	The number of jobs in SIC 45.
46 (Petroleum Pipelines)	The number of jobs in SIC 46.
47 (Transportation Services)	The number of jobs in SIC 47.
481 (Telephone Communications)	Total number of non-agricultural wage and salary jobs.
482 (Telegraph Communications)	The number of jobs in SIC 48.
483 (Radio And TV Broadcasting)	Total number of households.
484 & 489 (Cable TV)	Total number of households.
491-493, & 496 (Elec. & Gas Services, Steam Supply)	The number of jobs in SIC 49.
495 (Sewerage Facilities)	Total population.
97 (National Defense)	The total number of Federal Defense jobs.

The street lighting energy model presumes a fixed linear relationship between the number of households and "basic" street lighting electricity consumption. Basic forecasted electricity consumption is reduced by projected conservation in street lighting (luminaire replacement with more efficient bulbs). These conservation savings are calculated using estimates of utility and municipal street lighting retrofit program expenditures in the planning area.

Energy Requirements Summary Model

Individual sectoral model energy demand forecasts are combined in the Energy Requirements Summary Model to calculate final planning area total forecasts. The summary model adjusts the sectoral forecasts for weather, adds or subtracts minor conservation program savings, and calibrates the adjusted results to historical consumption.

Weather adjustments are made to the residential and commercial building models because these models forecast (and backcast) on the basis of long-run normal weather. The raw sectoral model backcast and recorded energy consumption are not directly comparable due to the influence of

abnormal weather on actual consumption. Energy demand for weather sensitive end uses is adjusted to accommodate the deviation between actual weather and normal weather for each climate zone in the planning area. After this step, the adjusted forecast and the actual consumption data match closely.

Minor adjustments to the weather adjusted raw backcast and forecast are performed to account for the influence of conservation programs that have not been incorporated into the structure or input data used within the sectoral models.

Finally, the adjusted sectoral results are calibrated based on the differences between the adjusted results and estimates of actual consumption. This calibration is based upon a uniformly weighted multi-year scaling factor. The period 1980-2001 is used for deriving calibration factors for most utilities and most sectors. Consumption estimates are based upon sales in the utility planning area and private supply (principally self-generation) data as submitted to the Energy Commission by each utility via the *Quarterly Fuel and Energy Report* (QFER). Special reliance is placed upon the SIC forms which allow aggregation of individual business activities to control total definitions which exactly match the customer sector model.

Electricity consumption needs that are met by self-generation or distributed generation reduce the demands on the grid. After several years of no growth, privately supplied energy appears to be increasing. This is a result of the energy crisis, changes in the regulatory environment, and higher rates, but it is not clear this more favorable environment will continue. To account for increases in private supply in the forecast, peak load and consumption for 2002 and 2003 were estimated by sector and planning area based on data from PG&E, SCE and SDG&E on new interconnect activity in their territories. After 2003, privately supplied load is assumed to grow at the same rate as the corresponding sector forecast for each utility. This conservative estimate is used because of the uncertainty of regulatory policy such as exit fees on the economic attractiveness of self generation.

Peak Demand Model

The Energy Commission uses the Hourly Electric Load Model (HELM) to forecast peak based on the end use electricity demand projections of the individual energy models. Projecting peak load is more difficult than projecting energy consumption because instantaneous electricity requirements change constantly. Appliances are used more during the day than in the middle of the night (hour), lights are on more in the winter than in the summer (season), and refrigerators run more often in hot weather (temperature). Moreover, recorded data for customer load consists only of system load; relatively little sector load information is known exactly.

HELM forecasts hourly end use demand for every day of the year. Peak days and peak hours within peak days are then determined by seeking the maximum from many individual hourly load forecasts. This method allows peak load to be directly determined from energy forecasts rather than constrained to follow past consumption patterns.

For the residential and commercial building sectors, end uses are divided into weather-varying (space heating and air conditioning) and season-varying (all others) groups. The estimates of average daily electricity consumption for each season varying end uses are based on analysis of past utility sales. For example, daily refrigerator consumption is about twenty percent higher (lower) than average in the summer (winter). Daily weather sensitive end use demand is distributed to each day and hour according to weather conditions and space conditioning equipment operating schedules. Summation of each end use load at any given hour produces an overall customer level load.

Industrial, other commercial, agriculture, and street lighting loads are forecasted by individual industry. Annual electricity sales are allocated to the day being forecast using utility billing data and load curves that distribute daily electricity to hourly loads. In most cases (food processing is one exception) industrial load curves are assumed to have the same shape during all weekdays of each month. The model currently assumes that industry operating patterns of shifts, weekdays versus weekends, will not change throughout the forecast period.

The hourly load model described above operates in the same manner in both backcasting and forecasting modes. Customer loads are adjusted to represent system load by adding transmission and distribution losses. For example, in the PG&E planning area, the loss factor is 1.076. Peak demand is simply the maximum hourly load (summed over all sectors) on the peak day—usually a summer day—for each forecast year adjusted for transmission and distribution losses. In the backcast mode, the weather from the actual peak event (1980-2002) is fed into the model for the corresponding year. In the forecast mode, HELM uses a synthetic weather year developed by a ranked-average methodology from 30 years of historic weather data.

Load and Temperature

In addition to the peak demand forecast for normal weather, the Energy Commission has developed several hot weather demand scenarios for varying degrees of hotter than average temperatures. To account for summer heat buildup, staff uses a three-day moving average of the maximum temperatures to correlate with the system summer loads. This moving average is calculated as 60 percent of the current day's maximum temperature, 30 percent of the previous day's maximum temperature and 10 percent of the second previous day's maximum temperature.

The baseline peak demand forecast assumes average temperatures—temperatures that are expected to occur, on average, in one out of every two years (one-in-two). To account for warmer than average temperatures, temperature sensitivities for 1-in-five, -ten, -twenty and -forty weather conditions are applied to the baseline peak demand forecast. Temperatures are weighted based on distribution of air conditioning throughout the state.

Figure 1 shows the statewide temperature thresholds for the 1-10, 1-in-20, and 1-in-40 scenarios, with maximum temperatures typically in late July to mid-August. However, the state can be thought of as three temperature regions; north, south and San Diego. San Diego has been differentiated from the rest of southern California due to its mild climate. **Figures 2 and 3** provide the average (1-in-2) daily summer temperatures as well as the 1-10, 1-in-20, and 1-in-40 maximum temperature thresholds for the north and south regions respectively. Figures 2 and 3 show the temperatures in the south region are more likely to be hotter later in the summer period than in the north region.

More detailed information on historic temperatures and load can be found in **Appendix L**.

Figure 1
Statewide Daily 3-Day Moving Average Temperature Thresholds

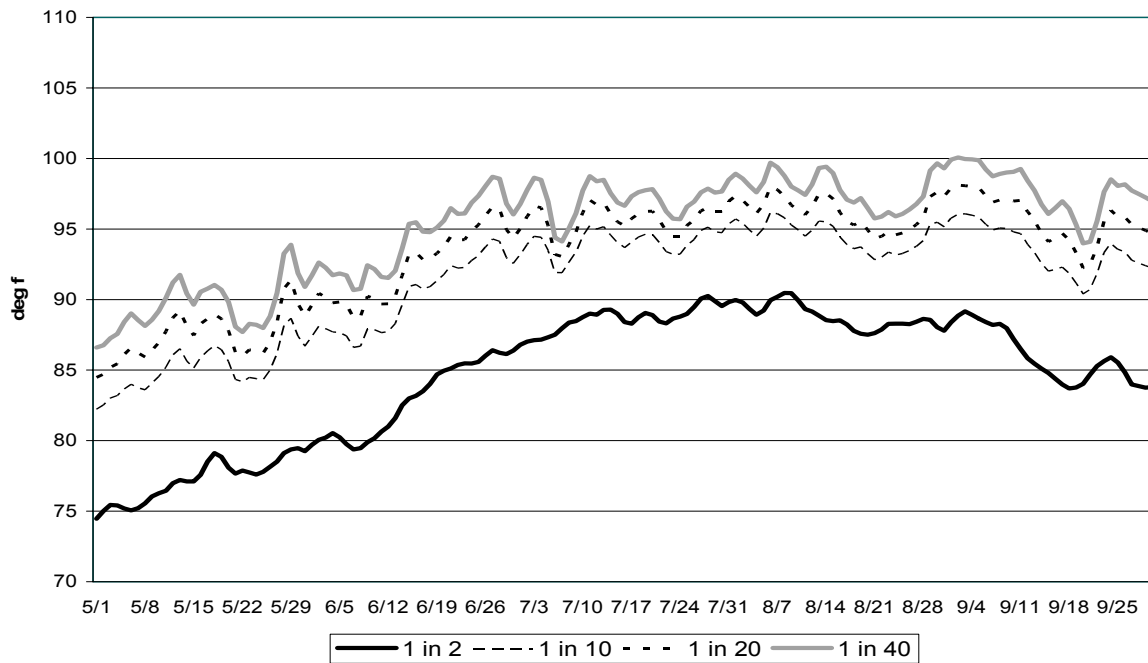


Figure 2
North Region Daily 3-Day Moving Average Temperature Thresholds

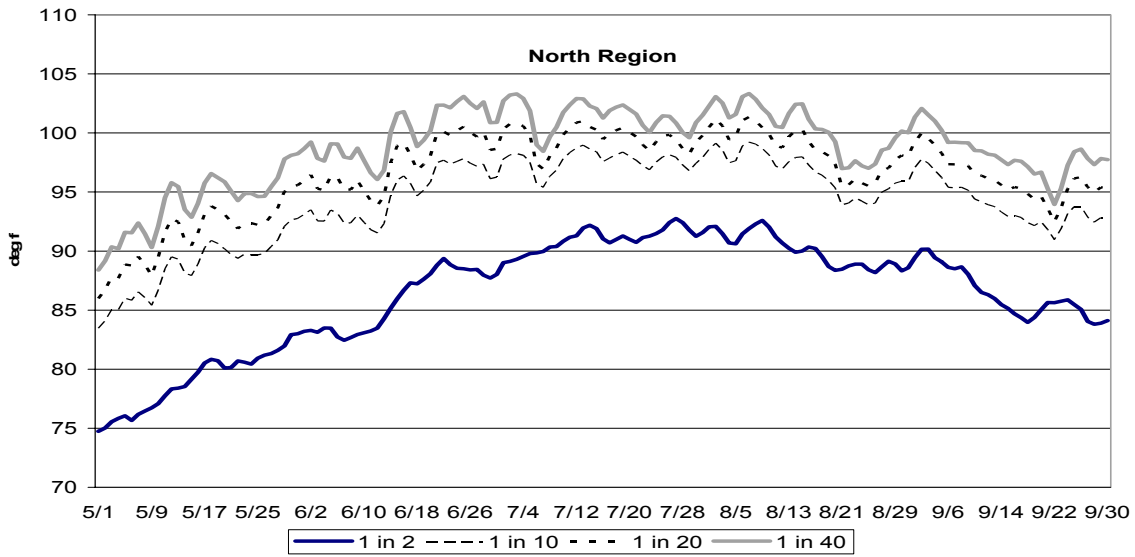
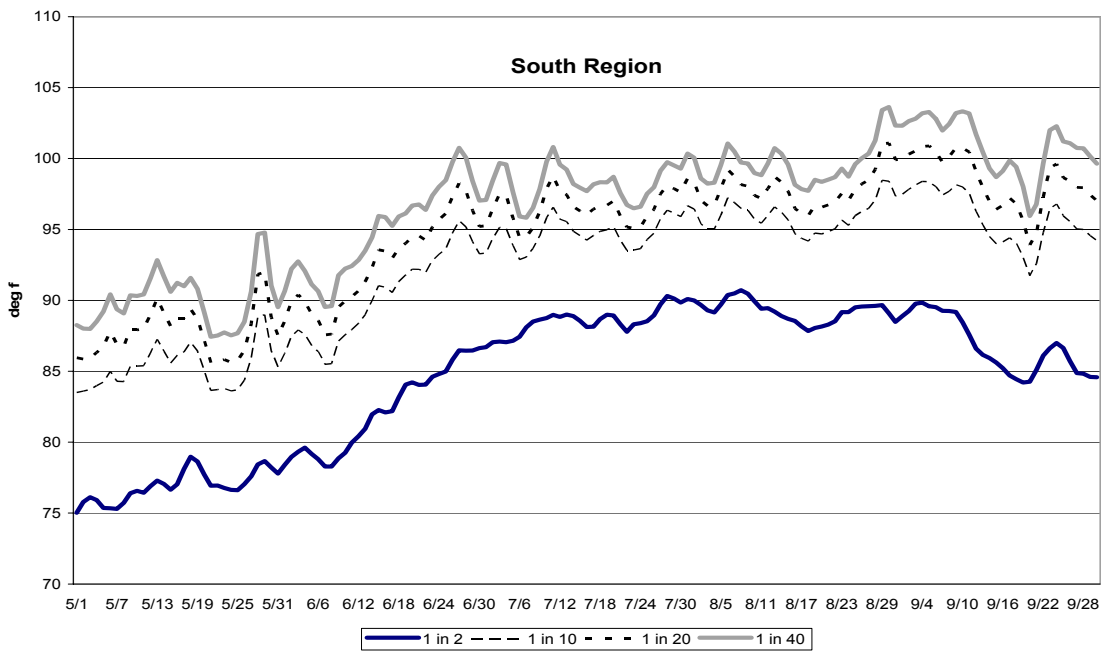


Figure 3
South Region Daily 3-Day Moving Average Temperature Thresholds



Overview of Appendices

Appendix A: Electricity Consumption by Sector

This appendix provides recorded and forecast electricity consumption by sector and by utility. **Table A-11** shows sales by customer category: direct access, IOU, or municipal.

Appendix B: Net Energy for Load

This appendix provides recorded and forecast net energy for load by utility and by CAISO Zone.

Appendix C: Peak Demand by Sector

This appendix provides recorded and forecast peak demand, before losses, by sector and by utility.

Appendix D: System Peak Demand

This appendix provides recorded and forecast system peak demand by utility, and tables showing the CAISO congestion zone forecast for normal and hot weather and economic scenarios.

Appendix E: Natural Gas Consumption

This appendix provides recorded and forecast natural gas consumption by sector and by utility.

Appendix F: Economic and Demographic Drivers

This appendix includes the forecasts of population, households, employment, industrial shipments, and personal income used for the forecast.

Appendix G: Energy Price Forecasts

This appendix includes the electricity rate and natural gas price forecasts used.

Appendix H: Detailed Residential Sector Forecast

This appendix includes consumption and appliance saturations by end use for selected years.

Appendix I: Detailed Commercial Sector Forecast

This appendix includes electricity consumption and use per square foot by end use and building type, and the forecast of floor space stock and additions.

Appendix J: Detailed Industrial, Agriculture, and TCU Sector Forecast

This appendix reports the electricity forecast by SIC and planning area, for select years.

Appendix K: Conservation Savings

This appendix includes cumulative energy savings forecast through 2013 from both building and appliance standards, and savings through 2013 from energy efficiency programs funded through 2001.

Appendix L: Load and Temperature

This appendix includes temperature data used to develop hot weather scenarios, and data and charts for five years of CAISO loads and maximum temperatures.

Table A-1
Staff's Outlook for the PG&E Planning Area
Electricity Consumption by Sector (GWh)

Year	Residential	Commercial	Industrial	Mining	Agricultural	Other	Electric Vehicles	Total Consumption
1980	21,424	16,723	16,565	2,006	5,743	3,736	0	66,197
1981	21,632	17,732	15,677	2,482	6,318	3,812	0	67,653
1982	21,116	17,818	14,909	2,955	5,237	4,007	0	66,043
1983	21,858	18,790	15,725	3,155	4,879	4,091	0	68,497
1984	22,883	19,716	16,442	3,454	6,319	4,527	0	73,341
1985	23,292	20,434	16,918	3,776	6,319	4,877	0	75,617
1986	23,180	21,023	17,344	3,192	5,301	4,355	0	74,394
1987	24,278	22,583	17,993	3,171	6,048	4,889	0	78,962
1988	25,041	23,749	18,869	3,247	6,398	4,838	0	82,141
1989	25,389	25,246	19,201	3,215	6,482	4,996	0	84,529
1990	25,844	26,411	19,727	3,221	6,518	5,085	0	86,806
1991	26,308	26,734	19,405	3,360	5,893	5,230	0	86,929
1992	26,412	27,681	19,439	3,395	6,083	5,316	0	88,326
1993	26,781	28,059	19,775	3,352	5,855	5,419	0	89,239
1994	27,013	28,204	19,883	3,368	5,778	5,336	0	89,582
1995	27,080	28,882	20,872	3,104	5,385	5,440	0	90,763
1996	28,120	29,909	20,686	3,500	5,728	5,521	0	93,464
1997	28,599	31,624	21,839	3,623	5,980	5,413	0	97,078
1998	29,596	30,334	22,131	3,262	5,105	5,255	0	95,682
1999	30,521	32,630	21,697	3,085	6,008	5,265	0	99,205
2000	31,646	33,896	21,810	3,085	6,007	5,537	0	101,980
2001	29,792	32,142	22,270	3,086	6,036	5,421	0	98,748
2002	30,360	32,381	20,308	2,951	6,197	5,372	1	97,570
2003	30,780	32,886	20,258	2,948	6,288	5,434	3	98,597
2004	31,360	34,125	20,340	2,939	6,623	5,548	6	100,940
2005	31,989	34,770	21,070	2,955	6,674	5,647	9	103,115
2006	32,631	35,489	21,519	2,967	6,737	5,746	13	105,101
2007	33,301	35,999	21,741	2,935	6,767	5,840	16	106,599
2008	34,154	36,851	22,011	2,942	6,790	5,931	20	108,699
2009	34,833	37,309	22,111	2,934	6,810	6,032	24	110,053
2010	35,557	37,945	22,258	2,906	6,835	6,124	30	111,655
2011	36,116	38,451	22,461	2,942	6,849	6,229	40	113,087
2012	36,716	38,986	22,604	2,910	6,866	6,309	50	114,441
2013	37,310	39,306	22,716	2,878	6,852	6,385	60	115,507

Annual Growth Rates (%)

1980-1990	1.9	4.7	1.8	4.9	1.3	3.1		2.7
1990-2000	2.0	2.5	1.0	-0.4	-0.8	0.9		1.6
2000-2003	-0.9	-1.0	-2.4	-1.5	1.5	-0.6		-1.1
2003-2008	2.1	2.3	1.7	0.0	1.5	1.8	46.1	2.0
2008-2013	1.8	1.3	0.6	-0.4	0.2	1.5	24.6	1.2
2003-2013	1.9	1.8	1.2	-0.2	0.9	1.6	34.9	1.6

**Table A-2
Staff's Outlook for the SMUD Area
Electricity Consumption by Sector (GWh)**

Year	Residential	Commercial	Industrial	Mining	Agricultural	Other	Electric Vehicles	Total Consumption
1980	2,587	1,988	269	54	112	340	0	5,350
1981	2,794	2,055	272	62	122	387	0	5,693
1982	2,781	2,088	264	63	108	377	0	5,681
1983	2,910	2,120	301	68	94	462	0	5,954
1984	3,086	2,234	376	76	113	475	0	6,360
1985	3,193	2,452	499	86	115	536	0	6,881
1986	3,107	2,673	542	87	102	503	0	7,014
1987	3,229	3,004	443	99	115	529	0	7,419
1988	3,326	3,044	542	90	106	567	0	7,677
1989	3,359	3,134	639	86	98	612	0	7,927
1990	3,611	3,214	683	88	108	654	0	8,358
1991	3,603	3,151	692	95	120	688	0	8,349
1992	3,626	3,277	718	64	131	679	0	8,496
1993	3,636	3,290	696	64	134	615	0	8,435
1994	3,662	3,287	689	66	146	568	0	8,418
1995	3,604	3,340	683	74	140	616	0	8,458
1996	3,808	3,411	732	80	151	624	0	8,805
1997	3,839	3,537	731	86	164	649	0	9,006
1998	3,959	3,537	779	83	125	640	0	9,123
1999	3,966	3,650	822	88	162	639	0	9,326
2000	4,135	3,698	811	88	147	612	0	9,491
2001	3,960	3,825	771	90	145	542	0	9,334
2002	4,059	3,895	685	90	159	541	0	9,429
2003	4,105	3,975	679	91	162	550	1	9,563
2004	4,173	4,049	688	93	165	558	2	9,729
2005	4,248	4,116	710	93	168	567	4	9,906
2006	4,322	4,167	726	93	171	577	5	10,060
2007	4,396	4,208	750	94	174	587	6	10,214
2008	4,486	4,255	773	94	177	596	8	10,388
2009	4,563	4,305	794	92	180	605	9	10,548
2010	4,643	4,357	810	90	183	615	12	10,710
2011	4,714	4,409	830	89	185	625	16	10,869
2012	4,788	4,459	846	87	188	634	20	11,022
2013	4,864	4,505	861	84	191	643	23	11,172

Annual Growth Rates (%)

1980-1990	3.4	4.9	9.8	4.9	-0.4	6.8		4.6
1990-2000	1.4	1.4	1.7	0.0	3.2	-0.7		1.3
2000-2003	-0.2	2.4	-5.7	1.0	3.1	-3.5		0.3
2003-2008	1.8	1.4	2.6	0.6	1.8	1.6	46.1	1.7
2008-2013	1.6	1.1	2.2	-2.1	1.6	1.5	24.6	1.5
2003-2013	1.7	1.3	2.4	-0.8	1.7	1.6	34.9	1.6

**Table A-3
Staff's Outlook for the SCE Area
Electricity Consumption by Sector (GWh)**

Year	Residential	Commercial	Industrial	Mining	Agricultural	Other	Electric Vehicles	Total Consumption
1980	16,965	16,778	16,827	2,735	3,500	2,819	0	59,624
1981	17,710	17,475	16,938	2,860	3,753	2,859	0	61,594
1982	17,389	17,243	15,732	2,703	3,231	3,202	0	59,501
1983	18,205	18,037	16,399	2,623	3,423	3,319	0	62,006
1984	19,395	19,286	16,833	3,034	4,616	3,444	0	66,608
1985	19,751	19,882	17,257	3,046	4,667	3,601	0	68,203
1986	19,877	20,845	17,588	2,801	4,623	3,762	0	69,496
1987	20,894	22,025	18,548	2,752	4,816	3,965	0	72,999
1988	22,124	23,137	19,694	2,793	4,868	4,082	0	76,698
1989	22,620	24,354	19,922	2,803	4,359	4,360	0	78,417
1990	23,684	25,702	19,716	2,827	5,240	4,505	0	81,673
1991	23,039	25,585	19,151	2,738	5,231	4,480	0	80,223
1992	24,210	26,835	19,287	2,539	4,443	4,727	0	82,041
1993	23,362	26,800	18,961	2,474	4,871	4,664	0	81,133
1994	24,190	26,785	18,714	2,309	5,355	5,447	0	82,800
1995	24,097	27,097	19,146	2,366	4,482	5,667	0	82,855
1996	24,738	28,252	19,742	2,648	5,048	5,300	0	85,728
1997	25,270	29,574	20,458	2,593	5,231	5,256	0	88,382
1998	25,749	29,488	20,293	2,577	5,192	5,136	0	88,434
1999	25,726	30,339	22,252	2,730	5,163	4,804	0	91,013
2000	27,980	32,401	23,207	2,805	5,154	4,949	0	96,496
2001	26,132	31,298	20,326	2,596	5,270	4,883	0	90,506
2002	26,353	31,519	18,927	2,495	5,450	4,669	6	89,418
2003	26,746	32,059	18,809	2,501	5,572	4,715	17	90,419
2004	27,245	33,445	19,067	2,505	5,742	4,776	34	92,813
2005	27,789	34,468	19,879	2,523	5,864	4,832	50	95,406
2006	28,382	35,223	20,535	2,536	5,981	4,910	70	97,637
2007	28,970	35,517	20,916	2,515	6,110	4,983	90	99,100
2008	29,719	35,914	21,179	2,523	6,244	5,053	112	100,745
2009	30,317	36,215	21,345	2,522	6,381	5,124	134	102,038
2010	30,955	36,502	21,554	2,502	6,520	5,194	168	103,395
2011	31,513	36,912	21,847	2,533	6,653	5,272	224	104,956
2012	32,088	37,512	22,022	2,509	6,790	5,340	280	106,541
2013	32,651	37,684	22,193	2,484	6,898	5,407	336	107,654

Annual Growth Rates (%)

1980-1990	3.4	4.4	1.6	0.3	4.1	4.8		3.2
1990-2000	1.7	2.3	1.6	-0.1	-0.2	0.9		1.7
2000-2003	-1.5	-0.4	-6.8	-3.8	2.6	-1.6		-2.1
2003-2008	2.1	2.3	2.4	0.2	2.3	1.4	46.1	2.2
2008-2013	1.9	1.0	0.9	-0.3	2.0	1.4	24.6	1.3
2003-2013	2.0	1.6	1.7	-0.1	2.2	1.4	34.9	1.8

Table A-4
Staff's Outlook for the LADWP Area
Electricity Consumption by Sector (GWh)

Year	Residential	Commercial	Industrial	Mining	Agricultural	Other	Electric Vehicles	Total Consumption
1980	5,357	6,975	3,746	322	113	1,155	0	17,669
1981	5,587	7,293	3,781	349	137	1,192	0	18,340
1982	5,529	7,263	3,722	348	125	1,197	0	18,184
1983	5,794	7,457	3,697	389	112	1,273	0	18,722
1984	6,157	8,009	3,829	365	156	1,261	0	19,777
1985	6,092	8,180	3,723	359	145	1,260	0	19,760
1986	6,033	8,604	3,731	312	137	1,276	0	20,094
1987	6,222	9,010	3,649	301	157	1,434	0	20,772
1988	6,482	9,279	3,761	267	202	1,449	0	21,439
1989	6,601	9,350	3,698	229	180	1,497	0	21,555
1990	6,835	9,769	3,534	199	156	1,479	0	21,971
1991	6,620	9,606	3,553	204	133	1,518	0	21,635
1992	7,000	9,832	3,400	179	155	1,487	0	22,052
1993	6,726	10,381	3,349	170	130	1,641	0	22,396
1994	6,723	9,894	3,210	190	150	1,639	0	21,805
1995	6,788	10,342	3,242	314	140	1,699	0	22,526
1996	6,917	10,056	3,604	346	175	1,660	0	22,758
1997	7,106	10,472	3,316	323	179	1,771	0	23,166
1998	7,183	10,396	3,356	323	173	1,572	0	23,004
1999	7,140	10,484	3,329	283	223	1,600	0	23,058
2000	7,519	10,787	3,312	270	181	1,733	0	23,803
2001	7,313	10,445	3,195	263	173	1,876	0	23,265
2002	7,177	10,971	3,089	254	181	1,773	2	23,448
2003	7,227	11,153	3,100	255	183	1,778	6	23,703
2004	7,296	11,329	3,112	255	184	1,783	13	23,972
2005	7,380	11,461	3,217	256	185	1,787	19	24,306
2006	7,479	11,549	3,268	257	186	1,803	27	24,570
2007	7,572	11,616	3,256	256	187	1,817	35	24,739
2008	7,704	11,684	3,231	256	189	1,828	43	24,935
2009	7,799	11,755	3,172	255	190	1,839	52	25,062
2010	7,899	11,813	3,165	253	192	1,851	65	25,239
2011	7,989	11,880	3,174	256	193	1,870	86	25,448
2012	8,078	11,942	3,153	254	194	1,879	108	25,609
2013	8,166	12,072	3,135	252	197	1,888	130	25,839

Annual Growth Rates (%)

1980-1990	2.5	3.4	-0.6	-4.7	3.2	2.5		2.2
1990-2000	1.0	1.0	-0.6	3.1	1.5	1.6		0.8
2000-2003	-1.3	1.1	-2.2	-1.9	0.3	0.9		-0.1
2003-2008	1.3	0.9	0.8	0.1	0.7	0.6	46.1	1.0
2008-2013	1.2	0.7	-0.6	-0.4	0.9	0.6	24.6	0.7
2003-2013	1.2	0.8	0.1	-0.1	0.8	0.6	34.9	0.9

**Table A-5
Staff's Outlook for the SDG&E Area
Electricity Consumption by Sector (GWh)**

Year	Residential	Commercial	Industrial	Mining	Agricultural	Other	Electric Vehicles	Total Consumption
1980	3,879	3,618	936	68	195	1,033	0	9,729
1981	3,848	3,682	988	77	229	1,051	0	9,875
1982	3,858	3,661	957	80	197	1,070	0	9,823
1983	3,909	3,827	963	89	197	1,089	0	10,073
1984	4,056	4,214	1,098	104	241	1,047	0	10,760
1985	4,249	4,411	1,143	107	215	1,053	0	11,180
1986	4,323	4,830	1,164	111	226	1,015	0	11,670
1987	4,638	5,088	1,243	100	215	1,084	0	12,367
1988	4,928	5,254	1,357	102	240	1,356	0	13,237
1989	5,144	5,597	1,418	136	254	1,379	0	13,929
1990	5,421	5,985	1,550	180	240	1,422	0	14,798
1991	5,333	5,889	1,531	170	207	1,510	0	14,641
1992	5,609	6,429	1,575	163	213	1,550	0	15,540
1993	5,549	6,435	1,538	128	212	1,588	0	15,451
1994	5,729	6,548	1,540	112	233	1,629	0	15,791
1995	5,734	6,690	1,509	136	229	1,625	0	15,923
1996	5,935	7,016	1,696	139	258	1,557	0	16,601
1997	6,123	7,377	1,593	123	283	1,633	0	17,132
1998	6,319	7,777	1,604	113	218	1,599	0	17,630
1999	6,453	8,099	1,781	109	241	1,629	0	18,312
2000	6,513	8,137	2,261	141	244	1,495	0	18,791
2001	6,116	8,019	1,752	116	233	1,587	0	17,822
2002	6,549	8,437	1,442	116	265	1,564	1	18,374
2003	6,682	8,570	1,441	114	274	1,580	2	18,663
2004	6,826	8,800	1,467	113	284	1,606	4	19,099
2005	6,985	8,996	1,520	113	293	1,629	5	19,541
2006	7,137	9,204	1,571	112	301	1,656	8	19,988
2007	7,292	9,329	1,616	112	308	1,680	10	20,347
2008	7,488	9,550	1,665	112	315	1,705	12	20,847
2009	7,646	9,662	1,709	113	320	1,729	15	21,194
2010	7,801	9,761	1,745	113	324	1,747	18	21,510
2011	7,935	9,887	1,793	113	328	1,767	24	21,847
2012	8,076	10,078	1,824	113	332	1,786	31	22,240
2013	8,218	10,154	1,854	113	337	1,807	37	22,518

Annual Growth Rates (%)

1980-1990	3.4	5.2	5.2	10.2	2.1	3.2		4.3
1990-2000	1.9	3.1	3.8	-2.4	0.2	0.5		2.4
2000-2003	0.9	1.7	-14.0	-6.7	3.9	1.9		-0.2
2003-2008	2.3	2.2	2.9	-0.4	2.8	1.5	46.1	2.2
2008-2013	1.9	1.2	2.2	0.1	1.4	1.2	24.6	1.6
2003-2013	2.1	1.7	2.6	-0.1	2.1	1.3	34.9	1.9

**Table A-6
Staff's Outlook for the BGP Area
Electricity Consumption by Sector (GWh)**

Year	Residential	Commercial	Industrial	Mining	Agricultural	Other	Electric Vehicles	Total Consumption
1980	616	1,058	591	12	12	85	0	2,374
1981	641	1,122	584	12	9	84	0	2,452
1982	647	1,123	522	12	9	86	0	2,399
1983	681	1,108	506	21	21	95	0	2,433
1984	730	1,207	560	18	32	97	0	2,644
1985	715	1,272	557	22	32	100	0	2,699
1986	714	1,273	554	23	30	102	0	2,695
1987	735	1,284	569	23	34	110	0	2,754
1988	783	1,344	569	29	36	100	0	2,861
1989	785	1,331	532	32	37	96	0	2,813
1990	858	1,425	497	39	33	99	0	2,951
1991	797	1,408	392	37	29	97	0	2,759
1992	842	1,552	369	38	28	102	0	2,931
1993	825	1,680	316	39	28	108	0	2,996
1994	839	1,689	288	42	30	110	0	2,999
1995	862	1,785	245	44	33	116	0	3,084
1996	875	1,877	224	47	29	100	0	3,152
1997	889	1,921	229	40	28	128	0	3,236
1998	896	1,973	233	49	27	120	0	3,298
1999	876	1,974	220	35	27	107	0	3,240
2000	903	2,023	204	46	27	118	0	3,320
2001	902	1,976	191	51	28	128	0	3,275
2002	894	2,070	177	50	29	123	0	3,343
2003	898	2,101	178	50	29	124	1	3,380
2004	904	2,137	182	50	29	125	1	3,429
2005	911	2,162	189	50	29	127	2	3,471
2006	920	2,178	195	50	29	129	3	3,504
2007	928	2,175	198	50	29	131	4	3,516
2008	941	2,173	200	50	29	132	5	3,530
2009	949	2,173	201	50	29	134	6	3,542
2010	958	2,171	202	50	29	136	7	3,555
2011	967	2,171	205	50	29	138	10	3,570
2012	975	2,171	205	50	29	140	12	3,582
2013	983	2,168	206	49	29	142	14	3,592

Annual Growth Rates (%)

1980-1990	3.4	3.0	-1.7	12.3	10.6	1.5		2.2
1990-2000	0.5	3.6	-8.5	1.5	-2.2	1.8		1.2
2000-2003	-0.2	1.3	-4.4	2.8	3.2	1.7		0.6
2003-2008	0.9	0.7	2.3	0.1	0.0	1.3	46.1	0.9
2008-2013	0.9	0.0	0.6	-0.3	0.0	1.4	24.6	0.4
2003-2013	0.9	0.3	1.5	-0.1	0.0	1.4	34.9	0.6

**Table A-7
Staff's Outlook for the Other Area
Electricity Consumption by Sector (GWh)**

Year	Residential	Commercial	Industrial	Mining	Agricultural	Other	Electric Vehicles	Total Consumption
1980	1,253	782	242	15	273	113	0	2,677
1981	1,282	825	236	14	297	128	0	2,781
1982	1,253	815	178	16	270	127	0	2,660
1983	1,221	792	150	21	276	135	0	2,595
1984	1,257	818	184	26	296	141	0	2,722
1985	1,235	840	175	27	333	159	0	2,770
1986	1,218	863	181	39	289	168	0	2,758
1987	1,272	895	161	28	307	210	0	2,872
1988	1,349	937	182	33	318	237	0	3,055
1989	1,418	965	184	35	305	298	0	3,205
1990	1,414	977	162	41	383	333	0	3,310
1991	1,443	1,002	154	42	332	350	0	3,323
1992	1,526	1,087	141	69	342	349	0	3,513
1993	1,545	1,128	149	76	317	387	0	3,602
1994	1,618	1,201	152	60	320	407	0	3,758
1995	1,606	1,221	155	62	349	426	0	3,819
1996	1,772	1,217	171	62	362	400	0	3,983
1997	1,721	1,264	173	59	364	391	0	3,972
1998	1,685	1,294	175	50	363	344	0	3,911
1999	1,802	1,362	173	52	381	239	0	4,009
2000	1,917	1,442	179	59	400	231	0	4,227
2001	1,909	1,423	171	46	425	256	0	4,230
2002	1,944	1,378	159	42	400	273	0	4,196
2003	1,977	1,399	151	42	409	284	0	4,262
2004	2,011	1,449	150	43	417	312	0	4,381
2005	2,045	1,482	152	43	424	319	0	4,466
2006	2,080	1,517	154	43	431	355	0	4,580
2007	2,116	1,545	155	44	438	342	0	4,639
2008	2,152	1,585	154	44	445	360	0	4,740
2009	2,189	1,610	154	43	452	379	0	4,828
2010	2,226	1,642	153	43	459	456	0	4,979
2011	2,264	1,668	153	43	466	507	0	5,100
2012	2,303	1,695	152	42	473	593	0	5,257
2013	2,342	1,712	151	41	479	689	0	5,415

Annual Growth Rates (%)

1980-1990	1.2	2.2	-3.9	10.9	3.5	11.4	2.1
1990-2000	3.1	4.0	1.0	3.6	0.4	-3.6	2.5
2000-2003	1.0	-1.0	-5.5	-10.4	0.7	7.2	0.3
2003-2008	1.7	2.5	0.4	0.7	1.7	4.9	2.2
2008-2013	1.7	1.6	-0.4	-1.2	1.5	13.8	2.7
2003-2013	1.7	2.0	0.0	-0.2	1.6	9.3	2.4

**Table A-8
Staff's Outlook for the DWR Area
Electricity Consumption by Sector (GWh)**

Year	Residential	Commercial	Industrial	Mining	Agricultural	Other	Electric Vehicles	Total Consumption
1980	0	0	0		3,354	0	0	3,354
1981	0	0	0		5,264	0	0	5,264
1982	0	0	0		5,192	0	0	5,192
1983	0	0	0		2,497	0	0	2,497
1984	0	0	0		3,349	0	0	3,349
1985	0	0	0		5,410	0	0	5,410
1986		0	0		5,031	0	0	5,031
1987	0	0	0		4,734	0	0	4,734
1988	0	0	0		5,928	0	0	5,928
1989	0	0	0		7,413	0	0	7,413
1990	0	0	0		8,171	0	0	8,171
1991	0	0	0		4,400	0	0	4,400
1992	0	0	0		4,088	0	0	4,088
1993	0	0	0		4,372	0	0	4,372
1994	0	0	0		4,946	0	0	4,946
1995	0	0	0		3,562	0	0	3,562
1996	0	0	0		5,146	0	0	5,146
1997	0	0	0		5,504	0	0	5,504
1998	0	0	0		3,421	0	0	3,421
1999	0	0	0		5,490	0	0	5,490
2000	0	0	0		5,490	0	0	5,490
2001	0	0	0		6,349	0	0	6,349
2002	0	0	0		7,889	0	0	7,889
2003	0	0	0		7,889	0	0	7,889
2004	0	0	0		7,889	0	0	7,889
2005	0	0	0		7,889	0	0	7,889
2006	0	0	0		7,889	0	0	7,889
2007	0	0	0		7,889	0	0	7,889
2008	0	0	0		7,889	0	0	7,889
2009	0	0	0		7,889	0	0	7,889
2010	0	0	0		7,889	0	0	7,889
2011	0	0	0		7,889	0	0	7,889
2012	0	0	0		7,889	0	0	7,889
2013	0	0	0		7,889	0	0	7,889

Annual Growth Rates (%)

1980-1990	9.3	9.3
1990-2000	-3.9	-3.9
2000-2003	12.8	12.8
2003-2008	0.0	0.0
2008-2013	0.0	0.0
2003-2013	0.0	0.0

**Table A-9
Staff's Outlook for California
Electricity Consumption by Sector (GWh)**

	Residential	Commercial	Industrial	Mining	Agricultural	Other	Electric Vehicles	Total Consumption
1980	52,082	47,922	39,177	5,212	13,301	9,282	0	166,976
1981	53,495	50,184	38,474	5,856	16,130	9,514	0	173,653
1982	52,574	50,011	36,285	6,177	14,369	10,067	0	169,483
1983	54,577	52,130	37,740	6,365	11,499	10,465	0	172,778
1984	57,564	55,483	39,323	7,077	15,122	10,993	0	185,561
1985	58,528	57,472	40,273	7,423	17,236	11,588	0	192,520
1986	58,452	60,111	41,105	6,565	15,738	11,182	0	193,153
1987	61,267	63,889	42,605	6,473	16,425	12,221	0	202,879
1988	64,033	66,745	44,973	6,561	18,096	12,628	0	213,036
1989	65,316	69,975	45,595	6,537	19,127	13,238	0	219,787
1990	67,667	73,482	45,869	6,595	20,849	13,577	0	228,038
1991	67,142	73,375	44,878	6,646	16,345	13,873	0	222,259
1992	69,225	76,693	44,928	6,447	15,483	14,210	0	226,987
1993	68,424	77,773	44,784	6,304	15,918	14,421	0	227,624
1994	69,774	77,609	44,476	6,146	16,957	15,136	0	230,098
1995	69,770	79,357	45,852	6,100	14,321	15,590	0	230,990
1996	72,164	81,737	46,855	6,821	16,898	15,162	0	239,636
1997	73,547	85,769	48,339	6,848	17,733	15,241	0	247,476
1998	75,387	84,798	48,571	6,457	14,624	14,666	0	244,503
1999	76,482	88,538	50,273	6,383	17,694	14,284	0	253,653
2000	80,612	92,384	51,783	6,493	17,652	14,674	0	263,599
2001	76,124	89,129	48,676	6,248	18,659	14,691	0	253,528
2002	77,337	90,650	44,788	5,997	20,570	14,314	10	253,667
2003	78,416	92,142	44,616	6,001	20,806	14,465	30	256,476
2004	79,815	95,334	45,006	5,997	21,333	14,707	60	262,252
2005	81,348	97,455	46,739	6,032	21,526	14,909	90	268,099
2006	82,951	99,326	47,967	6,059	21,725	15,176	125	273,329
2007	84,575	100,389	48,631	6,005	21,903	15,380	160	277,043
2008	86,644	102,012	49,212	6,021	22,077	15,606	200	281,773
2009	88,295	103,029	49,487	6,011	22,251	15,842	240	285,155
2010	90,040	104,191	49,888	5,957	22,432	16,124	300	288,931
2011	91,498	105,379	50,463	6,026	22,593	16,408	400	292,767
2012	93,024	106,842	50,808	5,965	22,761	16,682	500	296,582
2013	94,534	107,601	51,117	5,900	22,873	16,960	600	299,586

Annual Growth Rates (%)

1980-1990	2.7	4.4	1.6	2.4	4.6	3.9		3.2
1990-2000	1.8	2.3	1.2	-0.2	-1.7	0.8		1.5
2000-2003	-0.9	-0.1	-4.8	-2.6	5.6	-0.5		-0.9
2003-2008	2.0	2.1	2.0	0.1	1.2	1.5	46.1	1.9
2008-2013	1.8	1.1	0.8	-0.4	0.7	1.7	24.6	1.2
2003-2013	1.9	1.6	1.4	-0.2	1.0	1.6	34.9	1.6

**Table A-10
Staff's Outlook for California
Electricity Consumption by Utility (GWh)**

	PG&E	SMUD	SCE	LADWP	SDG&E	BGP	OTH	DWR	TOTAL
1980	66,197	5,350	59,624	17,669	9,729	2,374	2,677	3,354	166,976
1981	67,653	5,693	61,594	18,340	9,875	2,452	2,781	5,264	173,653
1982	66,043	5,681	59,501	18,184	9,823	2,399	2,660	5,192	169,483
1983	68,497	5,954	62,006	18,722	10,073	2,433	2,595	2,497	172,778
1984	73,341	6,360	66,608	19,777	10,760	2,644	2,722	3,349	185,561
1985	75,617	6,881	68,203	19,760	11,180	2,699	2,770	5,410	192,520
1986	74,394	7,014	69,496	20,094	11,670	2,695	2,758	5,031	193,153
1987	78,962	7,419	72,999	20,772	12,367	2,754	2,872	4,734	202,879
1988	82,141	7,677	76,698	21,439	13,237	2,861	3,055	5,928	213,036
1989	84,529	7,927	78,417	21,555	13,929	2,813	3,205	7,413	219,787
1990	86,806	8,358	81,673	21,971	14,798	2,951	3,310	8,171	228,038
1991	86,929	8,349	80,223	21,635	14,641	2,759	3,323	4,400	222,259
1992	88,326	8,496	82,041	22,052	15,540	2,931	3,513	4,088	226,987
1993	89,239	8,435	81,133	22,396	15,451	2,996	3,602	4,372	227,624
1994	89,582	8,418	82,800	21,805	15,791	2,999	3,758	4,946	230,098
1995	90,763	8,458	82,855	22,526	15,923	3,084	3,819	3,562	230,990
1996	93,464	8,805	85,728	22,758	16,601	3,152	3,983	5,146	239,636
1997	97,078	9,006	88,382	23,166	17,132	3,236	3,972	5,504	247,476
1998	95,682	9,123	88,434	23,004	17,630	3,298	3,911	3,421	244,503
1999	99,205	9,326	91,013	23,058	18,312	3,240	4,009	5,490	253,653
2000	101,980	9,491	96,496	23,803	18,791	3,320	4,227	5,490	263,599
2001	98,748	9,334	90,506	23,265	17,822	3,275	4,230	6,349	253,528
2002	97,570	9,429	89,418	23,448	18,374	3,343	4,196	7,889	253,667
2003	98,597	9,563	90,419	23,703	18,663	3,380	4,262	7,889	256,476
2004	100,940	9,729	92,813	23,972	19,099	3,429	4,381	7,889	262,252
2005	103,115	9,906	95,406	24,306	19,541	3,471	4,466	7,889	268,099
2006	105,101	10,060	97,637	24,570	19,988	3,504	4,580	7,889	273,329
2007	106,599	10,214	99,100	24,739	20,347	3,516	4,639	7,889	277,043
2008	108,699	10,388	100,745	24,935	20,847	3,530	4,740	7,889	281,773
2009	110,053	10,548	102,038	25,062	21,194	3,542	4,828	7,889	285,155
2010	111,655	10,710	103,395	25,239	21,510	3,555	4,979	7,889	288,931
2011	113,087	10,869	104,956	25,448	21,847	3,570	5,100	7,889	292,767
2012	114,441	11,022	106,541	25,609	22,240	3,582	5,257	7,889	296,582
2013	115,507	11,172	107,654	25,839	22,518	3,592	5,415	7,889	299,586

Annual Growth Rates (%)

1980-1990	2.7	4.6	3.2	2.2	4.3	2.2	2.1	9.3	3.2
1990-2000	1.6	1.3	1.7	0.8	2.4	1.2	2.5	-3.9	1.5
2000-2003	-1.1	0.3	-2.1	-0.1	-0.2	0.6	0.3	12.8	-0.9
2003-2008	2.0	1.7	2.2	1.0	2.2	0.9	2.2	0.0	1.9
2008-2013	1.2	1.5	1.3	0.7	1.6	0.4	2.7	0.0	1.2
2003-2013	1.6	1.6	1.8	0.9	1.9	0.6	2.4	0.0	1.6

**Table A-11
Staff's Outlook for California
Retail Sales by Utility (GWh)**

Year	PG&E			SMUD	SCE			LADWP	SDG&E		BGP	OTH	DWR	TOTAL
	PG&E Customers	Municipal Sales in PG&E	Direct Access Sales in PG&E		SCE Customers	Municipal Sales in SCE	Direct Access Sales in SCE		SDG&E Customers	Direct Access Sales in SDG&E				
1990	69,445	13,369	0	8,358	70,464	7,901	0	20,953	14,331	0	2,951	3,310	8,171	219,254
1991	69,571	13,214	0	8,349	69,072	7,787	0	20,457	14,171	0	2,759	3,323	4,400	213,103
1992	70,671	13,467	0	8,496	71,087	7,545	0	20,945	15,093	0	2,931	3,513	4,088	217,837
1993	70,654	13,382	0	8,435	69,791	7,654	0	21,259	15,036	0	2,996	3,602	4,372	217,180
1994	70,733	13,350	0	8,418	71,117	7,952	0	20,308	15,381	0	2,999	3,758	4,946	218,962
1995	71,797	13,467	0	8,458	71,548	7,577	0	20,939	15,524	0	3,084	3,819	3,562	219,774
1996	73,273	13,746	0	8,805	73,766	8,029	0	21,228	16,046	0	3,152	3,983	5,146	227,174
1997	76,241	14,327	0	9,006	76,057	8,300	0	21,605	16,748	0	3,236	3,972	5,504	234,995
1998	70,121	14,364	5,559	9,123	70,097	8,189	6,161	21,412	13,609	3,641	3,298	3,911	3,421	232,905
1999	71,251	14,564	7,958	9,326	69,388	8,782	8,819	21,434	12,719	5,211	3,240	4,009	5,490	242,192
2000	73,387	15,039	8,396	9,491	74,130	9,108	9,304	22,146	12,926	5,498	3,320	4,227	5,490	252,464
2001	75,681	14,110	3,761	9,334	74,286	8,631	4,168	21,575	15,000	2,463	3,275	4,230	6,349	242,861
2002	69,950	13,925	8,321	9,429	65,450	8,537	11,088	21,724	14,394	3,423	3,343	4,196	7,889	241,668
2003	70,706	14,065	8,320	9,563	66,225	8,649	11,087	21,979	14,592	3,423	3,380	4,262	7,889	244,139
2004	72,496	14,455	8,427	9,729	68,146	8,896	11,267	22,248	14,947	3,498	3,429	4,381	7,889	249,809
2005	74,205	14,756	8,537	9,906	70,266	9,140	11,451	22,582	15,304	3,575	3,471	4,466	7,889	255,549
2006	75,748	15,033	8,647	10,060	72,054	9,352	11,638	22,846	15,666	3,654	3,504	4,580	7,889	260,671
2007	76,879	15,231	8,760	10,214	73,126	9,506	11,828	23,015	15,938	3,735	3,516	4,639	7,889	264,276
2008	78,530	15,509	8,873	10,388	74,365	9,673	12,021	23,211	16,348	3,818	3,530	4,740	7,889	268,895
2009	79,535	15,685	8,989	10,548	75,272	9,816	12,218	23,338	16,604	3,902	3,542	4,828	7,889	272,165
2010	80,751	15,895	9,106	10,710	76,234	9,963	12,417	23,515	16,826	3,989	3,555	4,979	7,889	275,829
2011	81,814	16,086	9,225	10,869	77,383	10,124	12,621	23,724	17,068	4,078	3,570	5,100	7,889	279,551
2012	82,812	16,262	9,345	11,022	78,550	10,287	12,827	23,885	17,363	4,168	3,582	5,257	7,889	283,252
2013	83,569	16,389	9,468	11,172	79,289	10,402	13,038	24,115	17,541	4,261	3,592	5,415	7,889	286,139

Annual Growth Rates (%)

1980-1990	2.4	2.3		4.6	2.8	3.0		1.7	3.9		2.2	2.1	9.3	2.8
1990-2000	0.6	1.2		1.3	0.5	1.4		0.6	-1.0		1.2	2.5	-3.9	1.4
2000-2003	-1.2	-2.2	-0.3	0.3	-3.7	-1.7	6.0	-0.3	4.1	-14.6	0.6	0.3	12.8	-1.1
2003-2008	2.1	2.0	1.3	1.7	2.3	2.3	1.6	1.1	2.3	2.2	0.9	2.2	0.0	2.0
2008-2013	1.3	1.1	1.3	1.5	1.3	1.5	1.6	0.8	1.4	2.2	0.4	2.7	0.0	1.3
2003-2013	1.7	1.5	1.3	1.6	1.8	1.9	1.6	0.9	1.9	2.2	0.6	2.4	0.0	1.6

Historic data through 2001

Retail Sales = Consumption minus private supply

**Table B-1
Staff's Outlook for the PG&E Area
Net Energy for Load (GWh)**

Year	Total Consumption	Net Losses	Gross Generation	Private Supply	Net Energy for Load
1980	66,197	6,294	72,492	631	71,861
1981	67,653	6,433	74,087	638	73,449
1982	66,043	6,270	72,313	728	71,585
1983	68,497	6,485	74,982	948	74,034
1984	73,341	6,957	80,298	874	79,424
1985	75,617	7,161	82,778	1,024	81,754
1986	74,394	6,980	81,374	1,686	79,688
1987	78,962	7,317	86,279	2,742	83,537
1988	82,141	7,559	89,700	3,402	86,298
1989	84,529	7,746	92,275	3,843	88,432
1990	86,806	7,950	94,757	3,992	90,764
1991	86,929	7,947	94,877	4,145	90,732
1992	88,326	8,077	96,403	4,188	92,215
1993	89,239	8,067	97,307	5,203	92,104
1994	89,582	8,072	97,654	5,498	92,156
1995	90,763	8,185	98,948	5,498	93,450
1996	93,464	8,354	101,817	6,445	95,373
1997	97,078	8,695	105,772	6,510	99,262
1998	95,682	8,644	104,327	5,639	98,688
1999	99,205	9,002	108,207	5,433	102,775
2000	101,980	9,295	111,275	5,158	106,117
2001	98,748	8,981	107,728	5,196	102,532
2002	97,570	8,851	106,421	5,375	101,046
2003	98,597	8,937	107,534	5,506	102,027
2004	100,940	9,156	110,096	5,561	104,535
2005	103,115	9,360	112,474	5,617	106,858
2006	105,101	9,545	114,646	5,673	108,973
2007	106,599	9,683	116,283	5,730	110,553
2008	108,699	9,880	118,579	5,787	112,792
2009	110,053	10,004	120,057	5,845	114,212
2010	111,655	10,152	121,807	5,903	115,904
2011	113,087	10,284	123,371	5,962	117,409
2012	114,441	10,408	124,850	6,022	118,828
2013	115,507	10,505	126,012	6,082	119,930

Annual Growth Rates (%)

1980-1990	2.7	2.4	2.7	20.3	2.4
1990-2000	1.6	1.6	1.6	2.6	1.6
2000-2003	-1.1	-1.3	-1.1	2.2	-1.3
2003-2008	2.0	2.0	2.0	1.0	2.0
2008-2013	1.2	1.2	1.2	1.0	1.2
2003-2013	1.6	1.6	1.6	1.0	1.6

**Table B-2
Staff's Outlook for the SMUD Area
Net Energy for Load (GWh)**

Year	Total Consumption	Net Losses	Gross Generation	Private Supply	Net Energy for Load
1980	5,350	342	5,693	0	5,693
1981	5,693	364	6,057	0	6,057
1982	5,681	364	6,044	0	6,044
1983	5,954	381	6,335	0	6,335
1984	6,360	407	6,767	0	6,767
1985	6,881	440	7,322	0	7,322
1986	7,014	449	7,463	0	7,463
1987	7,419	475	7,894	0	7,894
1988	7,677	491	8,168	0	8,168
1989	7,927	507	8,434	0	8,434
1990	8,358	535	8,893	0	8,893
1991	8,349	534	8,884	0	8,884
1992	8,496	544	9,040	0	9,040
1993	8,435	540	8,974	0	8,974
1994	8,418	539	8,957	0	8,957
1995	8,458	541	8,999	0	8,999
1996	8,805	564	9,369	0	9,369
1997	9,006	576	9,583	0	9,583
1998	9,123	584	9,707	0	9,707
1999	9,326	597	9,923	0	9,923
2000	9,491	607	10,098	0	10,098
2001	9,334	597	9,931	0	9,931
2002	9,429	603	10,033	0	10,033
2003	9,563	612	10,175	0	10,175
2004	9,729	623	10,351	0	10,351
2005	9,906	634	10,540	0	10,540
2006	10,060	644	10,704	0	10,704
2007	10,214	654	10,868	0	10,868
2008	10,388	665	11,053	0	11,053
2009	10,548	675	11,223	0	11,223
2010	10,710	685	11,395	0	11,395
2011	10,869	696	11,565	0	11,565
2012	11,022	705	11,727	0	11,727
2013	11,172	715	11,886	0	11,886

Annual Growth Rates (%)

1980-1990	4.6	4.6	4.6	4.6
1990-2000	1.3	1.3	1.3	1.3
2000-2003	0.3	0.3	0.3	0.3
2003-2008	1.7	1.7	1.7	1.7
2008-2013	1.5	1.5	1.5	1.5
2003-2013	1.6	1.6	1.6	1.6

**Table B-3
Staff's Outlook for the SCE Area
Net Energy for Load (GWh)**

Year	Total Consumption	Net Losses	Gross Generation	Private Supply	Net Energy for Load
1980	59,624	4,035	63,659	289	63,370
1981	61,594	4,168	65,763	296	65,467
1982	59,501	4,013	63,514	492	63,022
1983	62,006	4,154	66,161	914	65,247
1984	66,608	4,454	71,063	1,103	69,960
1985	68,203	4,550	72,753	1,286	71,467
1986	69,496	4,629	74,124	1,428	72,696
1987	72,999	4,842	77,841	1,790	76,051
1988	76,698	5,010	81,709	3,019	78,690
1989	78,417	5,115	83,532	3,199	80,333
1990	81,673	5,329	87,002	3,308	83,694
1991	80,223	5,226	85,449	3,363	82,086
1992	82,041	5,347	87,388	3,408	83,979
1993	81,133	5,266	86,399	3,689	82,711
1994	82,800	5,377	88,176	3,730	84,446
1995	82,855	5,380	88,235	3,730	84,505
1996	85,728	5,562	91,290	3,933	87,357
1997	88,382	5,736	94,119	4,026	90,092
1998	88,434	5,742	94,177	3,987	90,190
1999	91,013	5,915	96,928	4,023	92,904
2000	96,496	6,293	102,789	3,954	98,835
2001	90,506	5,922	96,428	3,422	93,006
2002	89,418	5,785	95,203	4,344	90,859
2003	90,419	5,845	96,264	4,459	91,805
2004	92,813	6,005	98,818	4,503	94,315
2005	95,406	6,178	101,584	4,548	97,036
2006	97,637	6,327	103,964	4,594	99,371
2007	99,100	6,423	105,523	4,640	100,883
2008	100,745	6,532	107,277	4,686	102,591
2009	102,038	6,617	108,655	4,733	103,922
2010	103,395	6,706	110,101	4,780	105,320
2011	104,956	6,809	111,764	4,828	106,936
2012	106,541	6,913	113,454	4,876	108,578
2013	107,654	6,986	114,639	4,925	109,714

Annual Growth Rates (%)

1980-1990	3.2	2.8	3.2	27.6	2.8
1990-2000	1.7	1.7	1.7	1.8	1.7
2000-2003	-2.1	-2.4	-2.2	4.1	-2.4
2003-2008	2.2	2.2	2.2	1.0	2.2
2008-2013	1.3	1.4	1.3	1.0	1.4
2003-2013	1.8	1.8	1.8	1.0	1.8

**Table B-4
Staff's Outlook for the LADWP Area
Net Energy for Load (GWh)**

Year	Total Consumption	Net Losses	Gross Generation	Private Supply	Net Energy for Load
1980	17,669	2,385	20,055	0	20,055
1981	18,340	2,476	20,816	0	20,816
1982	18,184	2,455	20,639	0	20,639
1983	18,722	2,496	21,219	230	20,989
1984	19,777	2,624	22,401	339	22,062
1985	19,760	2,625	22,385	317	22,068
1986	20,094	2,656	22,749	423	22,326
1987	20,772	2,738	23,510	488	23,022
1988	21,439	2,797	24,236	720	23,516
1989	21,555	2,787	24,341	913	23,428
1990	21,971	2,829	24,800	1,018	23,782
1991	21,635	2,762	24,396	1,178	23,218
1992	22,052	2,828	24,880	1,107	23,773
1993	22,396	2,870	25,266	1,137	24,129
1994	21,805	2,742	24,547	1,497	23,050
1995	22,526	2,827	25,352	1,587	23,765
1996	22,758	2,866	25,623	1,530	24,093
1997	23,166	2,917	26,083	1,561	24,522
1998	23,004	2,891	25,894	1,592	24,302
1999	23,058	2,894	25,952	1,624	24,328
2000	23,803	2,990	26,793	1,657	25,136
2001	23,265	2,913	26,177	1,690	24,487
2002	23,448	2,933	26,380	1,724	24,656
2003	23,703	2,967	26,670	1,724	24,946
2004	23,972	3,004	26,976	1,724	25,252
2005	24,306	3,049	27,354	1,724	25,630
2006	24,570	3,084	27,654	1,724	25,930
2007	24,739	3,107	27,846	1,724	26,122
2008	24,935	3,133	28,069	1,724	26,345
2009	25,062	3,151	28,213	1,724	26,489
2010	25,239	3,174	28,413	1,724	26,689
2011	25,448	3,203	28,651	1,724	26,927
2012	25,609	3,224	28,834	1,724	27,110
2013	25,839	3,255	29,094	1,724	27,370

Annual Growth Rates (%)

1980-1990	2.2	1.7	2.1		1.7
1990-2000	0.8	0.6	0.8	5.0	0.6
2000-2003	-0.1	-0.3	-0.2	1.3	-0.3
2003-2008	1.0	1.1	1.0	0.0	1.1
2008-2013	0.7	0.8	0.7	0.0	0.8
2003-2013	0.9	0.9	0.9	0.0	0.9

**Table B-5
Staff's Outlook for the SDG&E Area
Net Energy for Load (GWh)**

Year	Total Consumption	Net Losses	Gross Generation	Private Supply	Net Energy for Load
1980	9,729	690	10,419	0	10,419
1981	9,875	700	10,575	0	10,575
1982	9,823	696	10,519	11	10,508
1983	10,073	711	10,784	50	10,734
1984	10,760	753	11,512	144	11,368
1985	11,180	775	11,955	250	11,705
1986	11,670	806	12,476	307	12,169
1987	12,367	845	13,212	447	12,765
1988	13,237	901	14,139	524	13,615
1989	13,929	952	14,881	502	14,379
1990	14,798	1,016	15,814	466	15,348
1991	14,641	1,005	15,646	470	15,176
1992	15,540	1,070	16,610	446	16,164
1993	15,451	1,066	16,517	415	16,102
1994	15,791	1,091	16,881	410	16,472
1995	15,923	1,101	17,024	400	16,624
1996	16,601	1,138	17,738	555	17,184
1997	17,132	1,187	18,319	384	17,935
1998	17,630	1,223	18,853	381	18,472
1999	18,312	1,271	19,583	381	19,202
2000	18,791	1,306	20,097	367	19,731
2001	17,822	1,238	19,060	358	18,701
2002	18,374	1,263	19,637	557	19,080
2003	18,663	1,277	19,940	648	19,292
2004	19,099	1,308	20,407	654	19,753
2005	19,541	1,339	20,879	661	20,218
2006	19,988	1,370	21,358	668	20,690
2007	20,347	1,395	21,742	674	21,068
2008	20,847	1,430	22,276	681	21,595
2009	21,194	1,454	22,647	688	21,960
2010	21,510	1,476	22,985	695	22,291
2011	21,847	1,499	23,346	702	22,645
2012	22,240	1,527	23,767	709	23,058
2013	22,518	1,546	24,064	716	23,349

Annual Growth Rates (%)

1980-1990	4.3	3.9	4.3		3.9
1990-2000	2.4	2.5	2.4	-2.4	2.5
2000-2003	-0.2	-0.7	-0.3	20.9	-0.7
2003-2008	2.2	2.3	2.2	1.0	2.3
2008-2013	1.6	1.6	1.6	1.0	1.6
2003-2013	1.9	1.9	1.9	1.0	1.9

**Table B-6
Staff's Outlook for the BGP Area
Net Energy for Load (GWh)**

Year	Total Consumption	Net Losses	Gross Generation	Private Supply	Net Energy for Load
1980	2,374	152	2,526	0	2,526
1981	2,452	157	2,609	0	2,609
1982	2,399	154	2,552	0	2,552
1983	2,433	156	2,588	0	2,588
1984	2,644	169	2,813	0	2,813
1985	2,699	173	2,872	0	2,872
1986	2,695	172	2,868	0	2,868
1987	2,754	176	2,930	0	2,930
1988	2,861	183	3,044	0	3,044
1989	2,813	180	2,993	0	2,993
1990	2,951	189	3,140	0	3,140
1991	2,759	177	2,936	0	2,936
1992	2,931	188	3,118	0	3,118
1993	2,996	192	3,188	0	3,188
1994	2,999	192	3,190	0	3,190
1995	3,084	197	3,282	0	3,282
1996	3,152	202	3,353	0	3,353
1997	3,236	207	3,443	0	3,443
1998	3,298	211	3,509	0	3,509
1999	3,240	207	3,447	0	3,447
2000	3,320	212	3,533	0	3,533
2001	3,275	210	3,485	0	3,485
2002	3,343	214	3,557	0	3,557
2003	3,380	216	3,597	0	3,597
2004	3,429	219	3,648	0	3,648
2005	3,471	222	3,693	0	3,693
2006	3,504	224	3,728	0	3,728
2007	3,516	225	3,741	0	3,741
2008	3,530	226	3,755	0	3,755
2009	3,542	227	3,769	0	3,769
2010	3,555	227	3,782	0	3,782
2011	3,570	228	3,799	0	3,799
2012	3,582	229	3,811	0	3,811
2013	3,592	230	3,822	0	3,822

Annual Growth Rates (%)

1980-1990	2.2	2.2	2.2	2.2
1990-2000	1.2	1.2	1.2	1.2
2000-2003	0.6	0.6	0.6	0.6
2003-2008	0.9	0.9	0.9	0.9
2008-2013	0.4	0.4	0.4	0.4
2003-2013	0.6	0.6	0.6	0.6

**Table B-7
Staff's Outlook for the Other Area
Net Energy for Load (GWh)**

Year	Total Consumption	Net Losses	Gross Generation	Private Supply	Net Energy for Load
1980	2,677	343	3,020	0	3,020
1981	2,781	356	3,137	0	3,137
1982	2,660	341	3,001	0	3,001
1983	2,595	332	2,928	0	2,928
1984	2,722	348	3,071	0	3,071
1985	2,770	355	3,124	0	3,124
1986	2,758	353	3,111	0	3,111
1987	2,872	368	3,240	0	3,240
1988	3,055	391	3,446	0	3,446
1989	3,205	410	3,615	0	3,615
1990	3,310	424	3,733	0	3,733
1991	3,323	425	3,748	0	3,748
1992	3,513	450	3,963	0	3,963
1993	3,602	461	4,063	0	4,063
1994	3,758	481	4,239	0	4,239
1995	3,819	489	4,308	0	4,308
1996	3,983	510	4,493	0	4,493
1997	3,972	508	4,481	0	4,481
1998	3,911	501	4,412	0	4,412
1999	4,009	513	4,522	0	4,522
2000	4,227	541	4,768	0	4,768
2001	4,230	541	4,771	0	4,771
2002	4,196	537	4,734	0	4,734
2003	4,262	546	4,807	0	4,807
2004	4,381	561	4,942	0	4,942
2005	4,466	572	5,038	0	5,038
2006	4,580	586	5,167	0	5,167
2007	4,639	594	5,233	0	5,233
2008	4,740	607	5,347	0	5,347
2009	4,828	618	5,445	0	5,445
2010	4,979	637	5,617	0	5,617
2011	5,100	653	5,753	0	5,753
2012	5,257	673	5,930	0	5,930
2013	5,415	693	6,108	0	6,108

Annual Growth Rates (%)

1980-1990	2.1	2.1	2.1	2.1
1990-2000	2.5	2.5	2.5	2.5
2000-2003	0.3	0.3	0.3	0.3
2003-2008	2.2	2.2	2.2	2.2
2008-2013	2.7	2.7	2.7	2.7
2003-2013	2.4	2.4	2.4	2.4

**Table B-8
Staff's Outlook for the DWR Area
Net Energy for Load (GWh)**

Year	Total Consumption	Net Losses	Gross Generation	Private Supply	Net Energy for Load
1980	3,354	127	3,481	0	3,481
1981	5,264	200	5,464	0	5,464
1982	5,192	197	5,389	0	5,389
1983	2,497	95	2,592	0	2,592
1984	3,349	127	3,476	0	3,476
1985	5,410	206	5,616	0	5,616
1986	5,031	191	5,222	0	5,222
1987	4,734	180	4,913	0	4,913
1988	5,928	225	6,154	0	6,154
1989	7,413	282	7,694	0	7,694
1990	8,171	311	8,482	0	8,482
1991	4,400	167	4,567	0	4,567
1992	4,088	155	4,243	0	4,243
1993	4,372	166	4,538	0	4,538
1994	4,946	188	5,133	0	5,133
1995	3,562	135	3,698	0	3,698
1996	5,146	196	5,342	0	5,342
1997	5,504	209	5,713	0	5,713
1998	3,421	130	3,551	0	3,551
1999	5,490	209	5,699	0	5,699
2000	5,490	209	5,699	0	5,699
2001	6,349	269	6,619	0	6,619
2002	7,889	335	8,224	0	8,224
2003	7,889	335	8,224	0	8,224
2004	7,889	335	8,224	0	8,224
2005	7,889	335	8,224	0	8,224
2006	7,889	335	8,224	0	8,224
2007	7,889	335	8,224	0	8,224
2008	7,889	335	8,224	0	8,224
2009	7,889	335	8,224	0	8,224
2010	7,889	335	8,224	0	8,224
2011	7,889	335	8,224	0	8,224
2012	7,889	335	8,224	0	8,224
2013	7,889	335	8,224	0	8,224

Annual Growth Rates (%)

1980-1990	9.3	9.3	9.3	9.3
1990-2000	-3.9	-3.9	-3.9	-3.9
2000-2003	12.8	17.1	13.0	13.0
2003-2008	0.0	0.0	0.0	0.0
2008-2013	0.0	0.0	0.0	0.0
2003-2013	0.0	0.0	0.0	0.0

TABLE B-9
Staff's Outlook for the State
Net Energy for Load (GWh)

Year	Total Consumption	Net Losses	Gross Generation	Private Supply	Net Energy for Load
1980	166,976	14,369	181,345	920	180,425
1981	173,653	14,855	188,508	934	187,574
1982	169,483	14,488	183,971	1,231	182,740
1983	172,778	14,810	187,588	2,142	185,446
1984	185,561	15,840	201,401	2,460	198,941
1985	192,520	16,284	208,805	2,877	205,928
1986	193,153	16,235	209,388	3,844	205,544
1987	202,879	16,941	219,821	5,467	214,354
1988	213,036	17,558	230,595	7,665	222,930
1989	219,787	17,979	237,766	8,457	229,309
1990	228,038	18,582	246,620	8,784	237,836
1991	222,259	18,244	240,503	9,156	231,347
1992	226,987	18,658	245,645	9,149	236,495
1993	227,624	18,628	246,252	10,444	235,809
1994	230,098	18,680	248,778	11,136	237,642
1995	230,990	18,856	249,846	11,216	238,631
1996	239,636	19,390	259,026	12,462	246,564
1997	247,476	20,036	267,512	12,481	255,031
1998	244,503	19,926	264,429	11,598	252,830
1999	253,653	20,608	274,262	11,461	262,800
2000	263,599	21,453	285,052	11,135	273,917
2001	253,528	20,671	274,199	10,667	263,533
2002	253,667	20,521	274,188	12,000	262,189
2003	256,476	20,735	277,211	12,337	264,874
2004	262,252	21,210	283,462	12,443	271,019
2005	268,099	21,688	289,787	12,550	277,237
2006	273,329	22,115	295,444	12,658	282,786
2007	277,043	22,416	299,459	12,768	286,692
2008	281,773	22,807	304,580	12,878	291,702
2009	285,155	23,080	308,234	12,990	295,245
2010	288,931	23,393	312,325	13,102	299,222
2011	292,767	23,706	316,473	13,216	303,257
2012	296,582	24,015	320,597	13,331	307,266
2013	299,586	24,264	323,850	13,447	310,403

Annual Growth Rates (%)

1980-1990	3.2	2.6	3.1	25.3	2.8
1990-2000	1.5	1.4	1.5	2.4	1.4
2000-2003	-0.9	-1.1	-0.9	3.5	-1.1
2003-2008	1.9	1.9	1.9	0.9	1.9
2008-2013	1.2	1.2	1.2	0.9	1.3
2003-2013	1.6	1.6	1.6	0.9	1.6

Table B-10
Staff's Outlook for the State
1 IN 2 Net Energy for Load by CAISO Congestion Zone with Municipal Sales and Direct Access
(GWh)

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Growth Rate (%)	
														2001-2006	2001-2013
PG&E North	87,761	87,409	88,125	90,125	92,104	93,966	95,328	97,257	98,482	99,940	101,243	102,468	103,422	1.38	1.38
PG&E Direct Access	4,122	9,119	9,119	9,236	9,356	9,477	9,600	9,725	9,852	9,980	10,110	10,242	10,376	18.12	8.00
PG&E Sales	68,175	63,028	63,592	65,046	66,576	68,013	69,034	70,535	71,440	72,539	73,502	74,402	75,084	-0.05	0.81
Muni Sales	15,464	15,262	15,415	15,843	16,172	16,476	16,693	16,997	17,190	17,421	17,630	17,823	17,962	1.28	1.26
PG&E San Francisco	5,828	5,266	5,455	5,761	5,906	5,973	6,059	6,176	6,254	6,346	6,422	6,499	6,559	0.49	0.99
Dept of Water Resources - North	1,048	1,302	1,302	1,302	1,302	1,302	1,302	1,302	1,302	1,302	1,302	1,302	1,302	4.44	1.83
North of Path 15	94,637	93,977	94,882	97,188	99,312	101,241	102,689	104,735	106,038	107,587	108,967	110,269	111,283	1.36	1.36
Path 26 Pacific Gas & Electric - South	8,943	8,371	8,448	8,649	8,848	9,034	9,166	9,359	9,476	9,619	9,744	9,861	9,949	0.20	0.89
Path 26 - Dept of Water Resources	1,731	2,151	2,151	2,151	2,151	2,151	2,151	2,151	2,151	2,151	2,151	2,151	2,151	4.44	1.83
Total Path 26	10,674	10,522	10,599	10,800	10,999	11,185	11,317	11,510	11,628	11,770	11,895	12,012	12,100	0.94	1.05
Southern California Edison	93,006	90,859	91,805	94,315	97,036	99,371	100,883	102,591	103,922	105,320	106,936	108,578	109,714	1.33	1.39
SCE Sales	79,337	69,900	70,728	72,780	75,044	76,953	78,098	79,421	80,390	81,418	82,645	83,891	84,681	-0.61	0.54
Muni Sales	9,217	9,118	9,237	9,501	9,762	9,988	10,153	10,331	10,483	10,641	10,813	10,987	11,109	1.62	1.57
SCE Direct Access	4,451	11,842	11,841	12,033	12,230	12,429	12,632	12,839	13,048	13,262	13,479	13,700	13,924	22.80	9.97
Pasadena Water and Power Dept	1,193	1,217	1,231	1,249	1,264	1,276	1,280	1,285	1,290	1,295	1,300	1,305	1,308	1.36	0.77
San Diego Gas & Electric	18,701	19,080	19,292	19,753	20,218	20,690	21,068	21,595	21,960	22,291	22,645	23,058	23,349	2.04	1.87
SDG&E Sales	16,064	15,414	15,626	16,006	16,389	16,777	17,068	17,507	17,781	18,019	18,278	18,594	18,785	0.87	1.31
SDG&E Direct Access	2,638	3,666	3,666	3,746	3,829	3,913	4,000	4,088	4,179	4,272	4,367	4,464	4,564	8.21	4.67
Dept of Water Resources - South	3,839	4,771	4,771	4,771	4,771	4,771	4,771	4,771	4,771	4,771	4,771	4,771	4,771	4.44	1.83
South of Path 15	116,739	115,928	117,099	120,087	123,289	126,108	128,002	130,242	131,943	133,676	135,652	137,712	139,141	1.56	1.47
Sacramento Municipal Utilities District	9,931	10,033	10,175	10,351	10,540	10,704	10,868	11,053	11,223	11,395	11,565	11,727	11,886	1.51	1.51
Los Angeles Department of Water and Power	24,487	24,656	24,946	25,252	25,630	25,930	26,122	26,345	26,489	26,689	26,927	27,110	27,370	1.15	0.93
Burbank Public Service Dept	1,117	1,140	1,153	1,170	1,184	1,195	1,199	1,204	1,209	1,213	1,218	1,222	1,225	1.36	0.77
Glendale Public Service Dept	1,175	1,199	1,212	1,230	1,245	1,257	1,261	1,266	1,270	1,275	1,280	1,285	1,288	1.36	0.77
Imperial Irrigation District	3,078	3,185	3,272	3,360	3,449	3,539	3,629	3,716	3,801	3,889	3,976	4,062	4,148	2.83	2.52
Far North & East Sierra	1,693	1,549	1,535	1,582	1,589	1,628	1,604	1,631	1,644	1,728	1,777	1,868	1,960	-0.79	1.23
Non ISO	41,482	41,762	42,294	42,944	43,637	44,253	44,683	45,214	45,637	46,189	46,743	47,274	47,879	1.30	1.20
Total CAISO	231,982	220,427	222,580	228,075	233,599	238,533	242,008	246,487	249,608	253,034	256,514	259,993	262,524	0.56	1.04
Total State	263,533	262,189	264,874	271,019	277,237	282,786	286,692	291,702	295,245	299,222	303,257	307,266	310,403	1.42	1.37

Historic data through 2002
SMUD is included in ISO total through 2001.

Table B-11
Staff's High Demand Scenario for the State
1 IN 2 Net Energy for Load by CAISO Congestion Zone with Municipal Sales and Direct Access
(GWh)

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Growth Rate (%)	
														2001-2006	2001-2013
PG&E North Total	87,761	87,409	88,125	91,129	93,864	96,606	98,672	100,334	101,374	102,760	103,958	105,196	106,220	1.94	1.60
PG&E Direct Access	4,122	9,119	9,119	9,236	9,356	9,477	9,600	9,725	9,852	9,980	10,110	10,242	10,376	18.12	8.00
PG&E Sales	68,175	63,028	63,592	65,892	68,056	70,223	71,827	73,092	73,846	74,884	75,764	76,675	77,416	0.59	1.06
Muni Sales	15,464	15,262	15,415	16,001	16,452	16,906	17,244	17,516	17,676	17,896	18,084	18,278	18,428	1.80	1.47
PG&E San Francisco	5,828	5,266	5,455	5,804	5,965	6,092	6,220	6,316	6,383	6,469	6,539	6,616	6,680	0.89	1.14
Dept of Water Resources - North	1,048	1,302	1,302	1,302	1,302	1,302	1,302	1,302	1,302	1,302	1,302	1,302	1,302	4.44	1.83
North of Path 15	94,637	93,977	94,882	98,236	101,131	104,000	106,193	107,951	109,059	110,531	111,799	113,114	114,203	1.90	1.58
Path 26 Pacific Gas & Electric - South	8,943	8,371	8,448	8,756	9,036	9,316	9,524	9,688	9,786	9,920	10,034	10,153	10,248	0.82	1.14
Path 26 - Dept of Water Resources	1,731	2,151	2,151	2,151	2,151	2,151	2,151	2,151	2,151	2,151	2,151	2,151	2,151	4.44	1.83
Total Path 26	10,674	10,522	10,599	10,907	11,187	11,467	11,675	11,839	11,937	12,072	12,186	12,304	12,399	1.44	1.26
Southern California Edison	93,006	90,859	91,805	95,276	98,683	101,791	104,103	105,659	106,865	108,147	109,590	111,264	112,465	1.82	1.60
SCE Sales	79,337	69,900	70,728	73,667	76,565	79,185	81,066	82,247	83,102	84,021	85,089	86,365	87,215	-0.04	0.79
Muni Sales	9,217	9,118	9,237	9,575	9,888	10,177	10,405	10,574	10,715	10,864	11,022	11,199	11,326	2.00	1.73
SCE Direct Access	4,451	11,842	11,841	12,033	12,230	12,429	12,632	12,839	13,048	13,262	13,479	13,700	13,924	22.80	9.97
Pasadena Water and Power Dept	1,193	1,217	1,231	1,257	1,280	1,299	1,312	1,317	1,321	1,325	1,329	1,333	1,337	1.73	0.96
San Diego Gas & Electric	18,701	19,080	19,292	19,928	20,545	21,156	21,684	22,177	22,533	22,847	23,185	23,604	23,905	2.50	2.07
SDG&E Sales	16,064	15,414	15,626	16,182	16,716	17,242	17,685	18,089	18,354	18,575	18,819	19,140	19,342	1.43	1.56
SDG&E Direct Access	2,638	3,666	3,666	3,746	3,829	3,913	4,000	4,088	4,179	4,272	4,367	4,464	4,564	8.21	4.67
Dept of Water Resources - South	3,839	4,771	4,771	4,771	4,771	4,771	4,771	4,771	4,771	4,771	4,771	4,771	4,771	4.44	1.83
South of Path 15	116,739	115,928	117,099	121,232	125,279	129,017	131,870	133,923	135,490	137,089	138,875	140,972	142,478	2.02	1.67
Sacramento Municipal Utilities District	9,931	10,033	10,175	10,432	10,683	10,909	11,128	11,297	11,466	11,632	11,799	11,966	12,132	1.90	1.68
Los Angeles Department of Water and Power	24,487	24,656	24,946	25,458	26,000	26,462	26,817	27,018	27,158	27,331	27,533	27,715	27,984	1.56	1.12
Burbank Public Service Dept	1,117	1,140	1,153	1,178	1,199	1,217	1,229	1,233	1,238	1,241	1,245	1,249	1,253	1.73	0.96
Glendale Public Service Dept	1,175	1,199	1,212	1,238	1,261	1,280	1,292	1,297	1,301	1,304	1,309	1,313	1,317	1.73	0.96
Imperial Irrigation District	3,078	3,185	3,272	3,360	3,449	3,539	3,629	3,716	3,801	3,889	3,976	4,062	4,148	2.83	2.52
Far North & East Sierra	1,693	1,549	1,535	1,618	1,664	1,707	1,745	1,757	1,759	1,801	1,850	1,942	2,035	0.16	1.55
Non CAISO	41,482	41,762	42,294	43,283	44,256	45,114	45,841	46,318	46,722	47,199	47,711	48,246	48,868	1.69	1.37
Total CAISO	231,982	230,459	232,755	240,807	248,280	255,393	260,866	265,011	267,951	271,324	274,658	278,356	281,211	1.94	1.62
Total State	263,533	262,189	264,874	273,658	281,853	289,598	295,579	300,032	303,207	306,890	310,571	314,636	317,948	1.90	1.58

TABLE B-12
Staff's Low Demand Scenario for the State
1 IN 2 Net Energy for Load by CAISO Congestion Zone with Municipal Sales and Direct Access
(GWh)

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Growth Rate (%)	
														2001-2006	2003-2013
PG&E North Total	87,761	87,409	88,125	89,628	90,937	92,212	92,846	94,307	95,443	97,032	98,439	99,659	100,756	0.99	1.35
PG&E Direct Access	4,122	9,119	9,119	9,236	9,356	9,477	9,600	9,725	9,852	9,980	10,110	10,242	10,376	18.12	1.30
PG&E Sales	68,175	63,028	63,592	64,635	65,608	66,552	66,957	68,052	68,882	70,087	71,141	72,036	72,832	-0.48	1.37
Muni Sales	15,464	15,262	15,415	15,757	15,974	16,183	16,289	16,529	16,710	16,965	17,188	17,381	17,547	0.91	1.30
PG&E San Francisco	5,828	5,266	5,455	5,731	5,835	5,867	5,949	6,012	6,074	6,166	6,240	6,316	6,389	0.13	1.59
Dept of Water Resources - North	1,048	1,302	1,302	1,302	1,302	1,302	1,302	1,302	1,302	1,302	1,302	1,302	1,302	4.44	0.00
North of Path 15	94,637	93,977	94,882	96,661	98,074	99,381	100,097	101,621	102,819	104,499	105,981	107,278	108,447	0.98	1.35
Path 26 Pacific Gas & Electric - South	8,943	8,371	8,448	8,596	8,723	8,846	8,901	9,044	9,152	9,308	9,444	9,561	9,664	-0.22	1.35
Path 26 - Dept of Water Resources	1,731	2,151	2,151	2,151	2,151	2,151	2,151	2,151	2,151	2,151	2,151	2,151	2,151	4.44	0.00
Total Path 26	10,674	10,522	10,599	10,747	10,874	10,998	11,052	11,195	11,303	11,459	11,596	11,712	11,815	0.60	1.09
Southern California Edison	93,006	90,859	91,805	93,695	95,593	97,109	97,898	99,422	100,789	102,198	103,767	105,443	106,788	0.87	1.52
SCE Sales	79,337	69,900	70,728	72,210	73,717	74,869	75,346	76,494	77,494	78,528	79,712	80,989	81,971	-1.15	1.49
Muni Sales	9,217	9,118	9,237	9,452	9,646	9,810	9,919	10,089	10,247	10,408	10,577	10,754	10,892	1.25	1.66
SCE Direct Access	4,451	11,842	11,841	12,033	12,230	12,429	12,632	12,839	13,048	13,262	13,479	13,700	13,924	22.80	1.63
Pasadena Water and Power Dept	1,193	1,217	1,231	1,242	1,249	1,252	1,249	1,255	1,260	1,264	1,270	1,275	1,280	0.98	0.39
San Diego Gas & Electric	18,701	19,080	19,292	19,610	19,947	20,260	20,492	20,942	21,276	21,589	21,932	22,335	22,639	1.61	1.61
SDG&E Sales	16,064	15,414	15,626	15,863	16,118	16,347	16,493	16,853	17,097	17,318	17,565	17,871	18,075	0.35	1.47
SDG&E Direct Access	2,638	3,666	3,666	3,746	3,829	3,913	4,000	4,088	4,179	4,272	4,367	4,464	4,564	8.21	2.21
Dept of Water Resources - South	3,839	4,771	4,771	4,771	4,771	4,771	4,771	4,771	4,771	4,771	4,771	4,771	4,771	4.44	0.00
South of Path 15	116,739	115,928	117,099	119,317	121,560	123,392	124,410	126,389	128,096	129,823	131,739	133,823	135,478	1.11	1.47
Sacramento Municipal Utilities District	9,931	10,033	10,175	10,319	10,456	10,562	10,661	10,812	10,980	11,149	11,317	11,478	11,641	1.24	1.35
Los Angeles Department of Water and Power	24,487	24,656	24,946	25,106	25,314	25,422	25,449	25,640	25,810	26,000	26,227	26,438	26,758	0.75	0.70
Burbank Public Service Dept	1,117	1,140	1,153	1,163	1,170	1,173	1,171	1,175	1,180	1,184	1,189	1,194	1,200	0.98	0.39
Glendale Public Service Dept	1,175	1,199	1,212	1,223	1,230	1,233	1,230	1,235	1,241	1,245	1,250	1,256	1,261	0.98	0.39
Imperial Irrigation District	3,078	3,185	3,272	3,360	3,449	3,539	3,629	3,716	3,801	3,889	3,976	4,062	4,148	2.83	2.40
Far North & East Sierra	1,693	1,549	1,535	1,555	1,546	1,527	1,504	1,521	1,504	1,512	1,522	1,528	1,530	-2.04	-0.03
Non CAISO	41,482	41,762	42,294	42,726	43,165	43,457	43,644	44,099	44,515	44,979	45,483	45,956	46,538	0.93	0.96
Total CAISO	231,982	220,427	222,580	226,726	230,508	233,770	235,559	239,205	242,218	245,781	249,316	252,813	255,739	0.15	1.40
Total State	263,533	262,189	264,874	269,452	273,673	277,227	279,204	283,304	286,733	290,760	294,799	298,769	302,277	1.02	1.33

**Table C-1
Staff's Outlook for the PG&E Area
End Use Peak Demand by Sector (MW)**

Year	Residential			Commercial			Industrial				Agr.	TCU & Street-lighting	Electric Vehicles	Total End-use Load		
	Base Load	Weather Sensitive	Total	Base Load	Weather Sensitive	Total	Process	Assembly	Mining	Total Industrial				Base Load	Weather Sensitive	Total
1990	3647	2767	6414	3266	1525	4791	1555	1254	394	3202	1306	489	0	11911	4292	16203
1991	3685	2936	6620	3210	1339	4549	1222	1203	410	2835	1029	492	0	11251	4275	15526
1992	3978	1372	5350	3710	1483	5193	1632	1302	436	3369	1095	536	0	12689	2856	15544
1993	4067	1824	5890	3791	1560	5351	1708	1315	433	3457	1180	552	0	13047	3384	16431
1994	4207	1584	5791	3905	1302	5207	1803	1330	447	3579	1272	559	0	13521	2886	16408
1995	5082	2097	7179	3300	1489	4789	1787	1072	416	3274	1329	621	0	13606	3586	17192
1996	4309	2720	7029	4100	1731	5831	1831	1399	453	3683	1074	572	0	13738	4451	18189
1997	4562	1980	6542	4326	1885	6211	1972	1556	486	4015	1227	572	0	14702	3865	18567
1998	5066	2134	7200	4691	1804	6495	2052	1694	452	4198	1027	616	0	15599	3938	19537
1999	5191	1755	6946	4743	1708	6451	1943	1602	418	3963	1386	671	0	15955	3462	19417
2000	5010	2659	7668	4478	1900	6378	1779	1532	388	3699	1257	656	0	15099	4559	19658
2001	4483	2883	7366	3989	1956	5945	1752	1424	354	3530	1123	590	0	13715	4839	18554
2002	4844	2854	7698	4438	2000	6438	1913	1287	372	3572	1195	660	0	14709	4854	19563
2003	4793	2823	7616	4394	1966	6359	1822	1288	362	3472	1178	651	0	14487	4788	19275
2004	4893	2869	7762	4566	2021	6587	1790	1329	361	3480	1261	665	1	14866	4890	19756
2005	5001	2914	7915	4655	2050	6705	1851	1380	363	3593	1268	677	1	15195	4964	20159
2006	5112	2933	8046	4755	2081	6836	1891	1412	364	3667	1278	689	2	15503	5014	20517
2007	5227	2961	8188	4825	2103	6929	1898	1452	361	3711	1280	700	2	15745	5064	20809
2008	5370	2990	8359	4943	2142	7086	1882	1518	361	3761	1281	711	3	16069	5132	21201
2009	5485	3019	8504	5007	2162	7168	1852	1574	360	3786	1282	724	4	16287	5181	21468
2010	5606	3051	8657	5095	2190	7284	1844	1611	356	3811	1286	735	5	16537	5240	21777
2011	5700	3074	8775	5165	2211	7375	1830	1657	361	3848	1286	748	6	16752	5285	22038
2012	5800	3102	8902	5239	2234	7472	1820	1696	357	3873	1287	758	8	16964	5336	22300
2013	5899	3132	9031	5283	2246	7529	1807	1732	353	3891	1279	767	9	17129	5378	22507

Annual Growth Rates (%)

1990-2000	3.2	-0.4	1.8	3.2	2.2	2.9	1.4	2.0	-0.1	1.5	-0.4	3.0		2.4	0.6	2.0
2000-2003	-1.5	2.0	-0.2	-0.6	1.1	-0.1	0.8	-5.6	-2.3	-2.1	-2.2	-0.3		-1.4	1.7	-0.7
2003-2008	2.3	1.2	1.9	2.4	1.7	2.2	0.6	3.3	-0.1	1.6	1.7	1.8		2.1	1.4	1.9
2008-2013	1.9	0.9	1.6	1.3	1.0	1.2	-0.8	2.7	-0.5	0.7	0.0	1.5	24.6	1.3	0.9	1.2
2003-2013	2.1	1.0	1.7	1.9	1.3	1.7	-0.1	3.0	-0.3	1.1	0.8	1.7		1.7	1.2	1.6

**Table C-2
Staff's Outlook for the SMUD Area
End Use Peak Demand by Sector (MW)**

Year	Residential			Commercial			Industrial				Agr.	TCU & Street-lighting	Electric Vehicles	Total End-use Load		
	Base Load	Weather Sensitive	Total	Base Load	Weather Sensitive	Total	Process	Assembly	Mining	Total Industrial				Base Load	Weather Sensitive	Total
1990	427	647	1074	395	282	677	48	73	20	141	19	101	0	1084	929	2013
1991	396	689	1085	372	270	643	38	79	21	138	18	103	0	1027	960	1987
1992	419	626	1045	397	216	613	43	86	15	144	20	106	0	1087	842	1929
1993	432	662	1094	408	198	606	43	88	15	147	21	101	0	1107	861	1968
1994	418	624	1042	389	189	578	36	93	16	144	21	90	0	1061	814	1875
1995	522	718	1241	370	144	514	44	72	11	126	36	122	0	1177	862	2039
1996	436	979	1416	318	198	516	39	64	10	112	31	102	0	999	1177	2177
1997	487	672	1158	447	324	771	42	107	22	172	24	114	0	1244	996	2240
1998	534	896	1429	381	283	664	40	85	12	137	36	123	0	1211	1179	2390
1999	574	790	1364	530	268	798	48	142	25	216	27	126	0	1473	1058	2531
2000	568	686	1254	532	333	864	48	132	25	205	26	117	0	1448	1018	2466
2001	481	827	1307	454	245	699	34	107	21	162	22	89	0	1207	1072	2279
2002	544	907	1451	533	275	807	40	102	24	165	25	101	0	1368	1182	2549
2003	519	868	1388	512	262	774	37	96	23	155	24	97	0	1307	1130	2437
2004	529	883	1413	522	265	786	36	98	23	158	24	98	0	1331	1148	2479
2005	541	897	1438	531	267	798	37	102	23	162	25	100	1	1359	1165	2524
2006	552	903	1455	537	269	807	38	104	23	165	25	102	1	1383	1172	2555
2007	564	909	1473	543	271	814	39	108	23	170	25	104	1	1407	1181	2587
2008	577	918	1496	549	273	822	40	112	23	175	26	106	1	1433	1191	2625
2009	589	927	1516	555	275	830	40	116	23	179	26	107	2	1459	1202	2661
2010	601	937	1538	562	277	839	41	119	22	182	27	109	2	1483	1214	2697
2011	612	945	1557	569	280	848	41	123	22	186	27	111	3	1508	1225	2733
2012	623	955	1578	575	282	857	41	126	21	189	27	113	3	1530	1237	2767
2013	635	964	1599	581	284	865	41	130	21	192	28	115	4	1553	1249	2802

Annual Growth Rates (%)

1990-2000	2.9	0.6	1.6	3.0	1.7	2.5	0.0	6.1	2.0	3.8	3.0	1.5		2.9	0.9	2.0
2000-2003	-3.0	8.2	3.4	-1.2	-7.7	-3.6	-8.5	-10.2	-3.0	-8.9	-1.9	-6.3		-3.3	3.5	-0.4
2003-2008	2.2	1.1	1.5	1.4	0.9	1.2	1.6	3.2	0.5	2.4	1.4	1.8		1.9	1.1	1.5
2008-2013	1.9	1.0	1.3	1.2	0.8	1.0	0.8	2.9	-2.1	1.8	1.3	1.7	32.0	1.6	0.9	1.3
2003-2013	2.0	1.1	1.4	1.3	0.8	1.1	1.2	3.0	-0.8	2.1	1.3	1.7		1.7	1.0	1.4

**Table C-3
Staff's Outlook for the SCE Area
End Use Peak Demand by Sector (MW)**

Year	Residential			Commercial			Industrial				Agr.	TCU & Street-lighting	Electric Vehicles	Total End-use Load		
	Base Load	Weather Sensitive	Total	Base Load	Weather Sensitive	Total	Process	Assembly	Mining	Total Industrial				Base Load	Weather Sensitive	Total
1990	3388	2107	5495	3603	3070	6674	1018	1872	434	3324	755	631	0	11702	5177	16879
1991	3152	1817	4969	3627	2815	6442	986	1826	430	3243	725	638	0	11385	4632	16017
1992	3575	1970	5545	4025	3104	7129	1055	1944	410	3409	803	698	0	12511	5075	17585
1993	2987	2464	5452	3422	2614	6036	934	1713	366	3013	670	629	0	10721	5078	15799
1994	4315	2902	7217	3625	1916	5540	1076	1703	366	3144	782	628	0	12493	4818	17311
1995	4238	2867	7105	3524	1812	5336	1045	1676	358	3079	718	621	0	12180	4679	16860
1996	4233	3181	7413	3595	2020	5615	1024	1701	389	3115	732	605	0	12279	5201	17480
1997	4341	3384	7724	3700	2232	5931	1019	1827	386	3232	733	716	0	12722	5615	18338
1998	4654	3290	7944	3883	2431	6314	1055	1888	400	3342	783	721	0	13383	5721	19104
1999	4778	2887	7665	3959	1838	5797	1055	1910	390	3355	830	710	0	13631	4725	18356
2000	3931	2602	6533	4312	3049	7361	1063	2012	389	3464	851	749	0	13307	5651	18958
2001	3682	2095	5777	4020	2686	6706	958	1911	386	3256	798	690	0	12446	4781	17227
2002	3721	2048	5770	4188	2928	7116	964	1732	377	3073	827	695	0	12505	4976	17481
2003	3723	2593	6316	4196	3388	7584	933	1707	373	3013	833	692	1	12458	5981	18439
2004	3793	2648	6441	4376	3522	7899	923	1754	373	3050	860	701	2	12782	6170	18952
2005	3869	2699	6568	4508	3623	8131	961	1829	376	3166	878	709	3	13133	6322	19455
2006	3954	2729	6683	4604	3699	8303	989	1892	378	3259	895	720	5	13437	6428	19865
2007	4039	2763	6802	4642	3720	8362	995	1939	375	3309	913	731	6	13640	6483	20123
2008	4145	2799	6944	4694	3753	8447	991	1981	376	3348	933	741	7	13867	6552	20419
2009	4231	2836	7067	4733	3776	8509	977	2018	376	3371	953	751	9	14048	6612	20659
2010	4322	2874	7196	4770	3797	8568	974	2051	373	3398	973	762	11	14236	6672	20908
2011	4402	2911	7314	4824	3832	8656	970	2098	378	3445	992	773	15	14452	6743	21195
2012	4485	2951	7435	4902	3884	8786	967	2126	374	3467	1012	783	19	14668	6835	21503
2013	4566	2991	7557	4924	3895	8819	963	2154	370	3488	1028	792	22	14820	6887	21707

Annual Growth Rates (%)

1990-2000	1.5	2.1	1.7	1.8	-0.1	1.0	0.4	0.7	-1.1	0.4	1.2	1.7		1.3	0.9	1.2
2000-2003	-1.8	-0.1	-1.1	-0.9	3.6	1.0	-4.2	-5.3	-1.4	-4.5	-0.7	-2.6		-2.2	1.9	-0.9
2003-2008	2.2	1.5	1.9	2.3	2.1	2.2	1.2	3.0	0.2	2.1	2.3	1.4		2.2	1.8	2.1
2008-2013	2.0	1.3	1.7	1.0	0.7	0.9	-0.6	1.7	-0.3	0.8	2.0	1.4	25.7	1.3	1.0	1.2
2003-2013	2.1	1.4	1.8	1.6	1.4	1.5	0.3	2.4	-0.1	1.5	2.1	1.4		1.8	1.4	1.6

**Table C-4
Staff's Outlook for the LADWP Area
End Use Peak Demand by Sector (MW)**

Year	Residential			Commercial			Industrial				Agr.	TCU & Street-lighting	Electric Vehicles	Total End-use Load		
	Base Load	Weather Sensitive	Total	Base Load	Weather Sensitive	Total	Process	Assembly	Mining	Total Industrial				Base Load	Weather Sensitive	Total
1990	918	592	1510	1566	669	2235	292	507	58	856	16	302	0	3659	1261	4920
1991	833	818	1651	1480	542	2022	276	456	56	788	16	295	0	3411	1360	4771
1992	903	648	1551	1587	681	2268	289	471	53	813	17	308	0	3628	1329	4957
1993	749	637	1386	1351	707	2059	237	367	40	644	15	274	0	3034	1344	4378
1994	787	870	1657	1440	663	2104	253	354	46	653	16	287	0	3182	1534	4716
1995	778	692	1470	1455	766	2222	231	371	73	675	16	283	0	3207	1458	4665
1996	834	751	1585	1566	597	2163	292	380	81	754	17	295	0	3466	1348	4814
1997	809	740	1550	1482	1230	2712	237	361	71	668	17	301	0	3277	1971	5248
1998	820	650	1470	1452	1361	2813	234	359	70	663	17	296	0	3248	2011	5259
1999	970	650	1620	1703	621	2324	271	410	73	753	20	350	0	3796	1271	5067
2000	901	620	1521	1594	833	2427	251	363	61	676	19	344	0	3533	1453	4986
2001	765	577	1342	1394	849	2242	211	365	59	636	16	295	0	3105	1425	4530
2002	748	586	1334	1439	950	2389	212	332	57	601	16	285	0	3089	1536	4624
2003	813	642	1455	1578	1030	2608	229	360	62	651	17	309	0	3367	1673	5040
2004	821	644	1465	1603	1037	2640	224	369	62	655	17	310	1	3407	1682	5088
2005	831	647	1478	1622	1042	2664	232	382	62	675	17	310	1	3457	1689	5146
2006	843	646	1489	1634	1042	2677	234	390	62	686	17	314	2	3496	1689	5185
2007	854	646	1500	1644	1042	2685	228	396	62	686	18	316	3	3521	1688	5208
2008	869	646	1515	1653	1040	2694	222	403	62	686	18	319	3	3548	1686	5234
2009	880	647	1527	1664	1040	2703	211	407	62	680	18	321	4	3566	1686	5252
2010	892	647	1539	1672	1038	2710	208	411	61	680	18	323	5	3590	1686	5276
2011	903	649	1551	1682	1037	2719	205	418	62	685	18	327	6	3620	1686	5306
2012	913	650	1563	1691	1036	2727	201	422	61	683	18	329	8	3642	1686	5328
2013	924	652	1576	1708	1039	2747	197	425	61	682	18	330	9	3672	1691	5363
Annual Growth Rates (%)																
1990-2000	-0.2	0.5	0.1	0.2	2.2	0.8	-1.5	-3.3	0.5	-2.3	1.5	1.3		-0.3	1.4	0.1
2000-2003	-3.4	1.2	-1.5	-0.3	7.4	2.4	-3.0	-0.3	0.2	-1.3	-3.0	-3.6		-1.6	4.8	0.4
2003-2008	1.3	0.1	0.8	0.9	0.2	0.6	-0.7	2.2	0.1	1.1	0.7	0.6		1.0	0.2	0.8
2008-2013	1.2	0.2	0.8	0.7	0.0	0.4	-2.4	1.1	-0.3	-0.1	0.9	0.7	24.6	0.7	0.1	0.5
2003-2013	1.3	0.2	0.8	0.8	0.1	0.5	-1.5	1.7	-0.1	0.5	0.8	0.7		0.9	0.1	0.6

**Table C-5
Staff's Outlook for the SDG&E Area
End Use Peak Demand by Sector (MW)**

Year	Residential			Commercial			Industrial				Agr.	TCU & Street-lighting	Electric Vehicles	Total End-use Load		
	Base Load	Weather Sensitive	Total	Base Load	Weather Sensitive	Total	Process	Assembly	Mining	Total Industrial				Base Load	Weather Sensitive	Total
1990	731	197	928	798	519	1317	12	250	42	305	25	205	0	2064	716	2780
1991	786	143	930	893	421	1315	11	269	42	322	26	235	0	2263	565	2828
1992	767	230	997	875	631	1506	11	264	39	314	26	233	0	2215	861	3076
1993	699	180	880	822	484	1306	10	234	27	272	23	216	0	2032	665	2697
1994	774	289	1063	891	592	1483	11	257	26	294	26	241	0	2226	881	3107
1995	795	229	1025	922	532	1454	12	258	33	303	27	247	0	2294	761	3055
1996	801	247	1048	929	539	1467	14	284	33	331	27	232	0	2320	785	3105
1997	842	368	1210	935	698	1633	14	273	30	317	29	249	0	2372	1066	3438
1998	961	373	1334	1043	606	1649	17	341	34	392	31	289	0	2716	979	3695
1999	1027	18	1045	1110	418	1528	19	372	34	425	35	303	0	2899	436	3335
2000	906	225	1131	950	518	1467	17	309	29	355	31	245	0	2487	743	3230
2001	826	180	1006	887	428	1315	16	284	28	328	27	232	0	2301	608	2909
2002	842	428	1270	922	591	1513	16	233	28	278	29	235	0	2306	1019	3325
2003	903	464	1366	984	624	1608	17	245	30	291	31	249	0	2458	1088	3546
2004	922	476	1399	1011	635	1646	16	250	29	296	33	253	0	2515	1112	3626
2005	944	490	1434	1033	645	1678	16	259	29	305	34	257	0	2573	1134	3707
2006	965	498	1463	1057	655	1712	17	268	29	314	35	261	1	2632	1152	3785
2007	986	506	1492	1072	660	1731	17	276	29	321	35	265	1	2681	1166	3846
2008	1012	514	1526	1097	671	1768	17	284	29	330	36	269	1	2746	1185	3931
2009	1034	522	1556	1110	675	1785	17	292	29	338	37	273	1	2793	1197	3990
2010	1055	529	1584	1121	679	1800	17	298	29	345	37	276	1	2835	1208	4043
2011	1073	536	1609	1136	684	1820	17	307	29	353	38	279	2	2881	1219	4100
2012	1092	542	1635	1158	693	1851	17	312	29	359	38	282	2	2931	1235	4167
2013	1111	550	1661	1167	695	1862	18	317	29	364	39	285	3	2969	1245	4215

Annual Growth Rates (%)

1990-2000	2.2	1.4	2.0	1.8	0.0	1.1	3.4	2.1	-3.7	1.5	1.8	1.8		1.9	0.4	1.5
2000-2003	-0.1	27.2	6.5	1.2	6.5	3.1	-1.7	-7.4	1.2	-6.4	1.0	0.5		-0.4	13.6	3.2
2003-2008	2.3	2.1	2.2	2.2	1.4	1.9	0.6	3.0	-0.4	2.5	2.8	1.6		2.2	1.7	2.1
2008-2013	1.9	1.3	1.7	1.2	0.7	1.0	0.5	2.2	0.1	2.0	1.4	1.2	24.6	1.6	1.0	1.4
2003-2013	2.1	1.7	2.0	1.7	1.1	1.5	0.6	2.6	-0.1	2.3	2.1	1.4		1.9	1.4	1.7

**Table C-6
Staff's Outlook for the BGP Area
End Use Peak Demand by Sector (MW)**

Year	Residential			Commercial			Industrial				Agr.	TCU & Street-lighting	Electric Vehicles	Total End-use Load		
	Base Load	Weather Sensitive	Total	Base Load	Weather Sensitive	Total	Process	Assembly	Mining	Total Industrial				Base Load	Weather Sensitive	Total
1990	122	184	306	228	118	345	5	88	10	104	3	15	0	471	302	773
1991	111	183	294	222	109	330	4	64	9	77	2	14	0	426	292	718
1992	114	192	307	231	136	367	4	62	10	76	2	15	0	438	329	767
1993	109	154	263	227	110	337	4	50	9	64	2	14	0	415	264	679
1994	107	206	314	232	140	372	4	44	10	58	2	13	0	414	346	760
1995	113	162	276	260	138	397	5	38	10	53	2	14	0	443	300	743
1996	117	182	299	270	112	382	4	37	12	52	2	14	0	455	294	749
1997	113	167	280	268	192	460	4	36	10	50	2	19	0	451	359	810
1998	121	152	273	281	220	501	4	38	12	53	3	18	0	476	372	848
1999	120	142	262	277	194	471	3	36	9	48	3	16	0	464	336	800
2000	120	146	266	280	174	454	3	31	10	45	3	18	0	465	320	785
2001	103	130	233	245	154	399	2	28	11	41	3	18	0	410	284	694
2002	104	145	249	266	171	437	3	26	11	40	3	18	0	430	316	746
2003	114	159	273	294	188	483	3	29	12	44	3	20	0	475	347	822
2004	115	159	274	300	190	490	3	30	12	44	3	20	0	482	350	831
2005	116	160	276	303	191	495	3	31	12	45	3	20	0	488	351	839
2006	117	159	276	305	192	497	3	31	12	46	3	20	0	492	351	843
2007	118	159	277	305	192	497	3	32	12	47	3	21	0	494	351	845
2008	120	159	279	305	191	495	3	32	12	47	3	21	0	496	349	845
2009	121	158	279	305	190	495	3	32	12	47	3	21	0	497	349	846
2010	122	158	281	305	190	494	3	32	12	48	3	22	1	500	348	848
2011	123	158	282	305	189	493	3	33	12	48	3	22	1	502	347	849
2012	124	158	283	304	188	493	3	33	12	48	3	22	1	503	347	850
2013	125	159	284	304	187	492	3	33	12	48	3	23	1	504	346	850
Annual Growth Rates (%)																
1990-2000	-0.2	-2.3	-1.4	2.1	4.0	2.8	-4.9	-9.9	0.0	-8.1	-0.2	2.0		-0.1	0.6	0.2
2000-2003	-1.5	2.8	0.9	1.7	2.7	2.1	-2.6	-2.5	4.6	-0.8	0.6	2.9		0.7	2.7	1.6
2003-2008	0.9	0.0	0.4	0.7	0.2	0.5	2.2	2.3	0.2	1.7	0.0	1.4		0.9	0.1	0.6
2008-2013	0.9	0.0	0.4	0.0	-0.3	-0.2	1.1	0.5	-0.3	0.3	0.0	1.5		0.3	-0.2	0.1
2003-2013	0.9	0.0	0.4	0.3	-0.1	0.2	1.7	1.4	-0.1	1.0	0.0	1.5		0.6	0.0	0.3

TABLE C-7
Staff's Outlook for the State
End Use Peak Demand by Utility (MW)

Year	PG&E	SMUD	SCE	LADWP	SDG&E	BGP	DWR	Other	Total
1990	16,203	2,013	16,879	4,920	2,780	773	227	756	44,550
1991	15,526	1,987	16,017	4,771	2,828	718	375	759	42,980
1992	15,544	1,929	17,585	4,957	3,076	767	242	802	44,902
1993	16,431	1,968	15,799	4,378	2,697	679	208	822	42,982
1994	16,408	1,875	17,311	4,716	3,107	760	88	858	45,122
1995	17,192	2,039	16,860	4,665	3,055	743	236	872	45,662
1996	18,189	2,177	17,480	4,814	3,105	749	398	909	47,821
1997	18,567	2,240	18,338	5,248	3,438	810	237	907	49,785
1998	19,537	2,390	19,104	5,259	3,695	848	236	893	51,961
1999	19,417	2,531	18,356	5,067	3,335	800	236	915	50,658
2000	19,658	2,466	18,958	4,986	3,230	785	236	965	51,283
2001	18,554	2,279	17,227	4,530	2,909	694	124	966	47,284
2002	19,563	2,549	17,481	4,624	3,325	746	322	971	49,582
2003	19,275	2,437	18,439	5,040	3,546	822	322	990	50,871
2004	19,756	2,479	18,952	5,088	3,626	831	322	1,018	52,073
2005	20,159	2,524	19,455	5,146	3,707	839	322	1,041	53,192
2006	20,517	2,555	19,865	5,185	3,785	843	322	1,068	54,139
2007	20,809	2,587	20,123	5,208	3,846	845	322	1,083	54,823
2008	21,201	2,625	20,419	5,234	3,931	845	322	1,106	55,682
2009	21,468	2,661	20,659	5,252	3,990	846	322	1,129	56,328
2010	21,777	2,697	20,908	5,276	4,043	848	322	1,166	57,037
2011	22,038	2,733	21,195	5,306	4,100	849	322	1,196	57,739
2012	22,300	2,767	21,503	5,328	4,167	850	322	1,236	58,472
2013	22,507	2,802	21,707	5,363	4,215	850	322	1,278	59,043

Annual Growth Rates (%)

1990-2000	2.0	2.0	1.2	0.1	1.5	0.2	0.4	2.5	1.4
2000-2001	-5.6	-7.6	-9.1	-9.1	-9.9	-11.6	-47.4	0.1	-7.8
2000-2003	-0.7	-0.4	-0.9	0.4	3.2	1.6	10.9	0.8	-0.3
2003-2008	1.9	1.5	2.1	0.8	2.1	0.6	0.0	2.2	1.8
2008-2013	1.2	1.3	1.2	0.5	1.4	0.1	0.0	2.9	1.2
2003-2013	1.6	1.4	1.6	0.6	1.7	0.3	0.0	2.6	1.5

**Table C-8
Staff's Outlook for the State
End Use Peak Demand by Sector (MW)**

Year	Residential			Commercial			Industrial				Agr.	Other	Electric Vehicles	Total End-use Load		
	Base Load	Weather Sensitive	Total	Base Load	Weather Sensitive	Total	Process	Assembly	Mining	Total Industrial				Base Load	Weather Sensitive	Total
1990	9234	6493	15727	9856	6184	16040	2929	4045	958	7933	2351	2499	0	31874	12677	44550
1991	8963	6587	15550	9804	5497	15301	2538	3897	968	7403	2191	2534	0	30896	12084	42980
1992	9755	5040	14795	10826	6251	17077	3035	4128	963	8126	2206	2698	0	33611	11291	44902
1993	9043	5921	14964	10020	5674	15695	2937	3768	891	7596	2118	2608	0	31386	11596	42982
1994	10607	6476	17083	10482	4802	15284	3182	3781	910	7873	2206	2675	0	33843	11278	45122
1995	11529	6767	18296	9830	4881	14711	3123	3487	901	7511	2364	2780	0	34014	11648	45662
1996	10731	8060	18791	10778	5196	15975	3204	3864	977	8046	2281	2729	0	34565	13256	47821
1997	11154	7311	18465	11158	6561	17719	3288	4161	1005	8454	2269	2878	0	35913	13872	49785
1998	12157	7494	19651	11731	6705	18436	3401	4406	980	8786	2132	2956	0	37762	14199	51961
1999	12660	6241	18901	12322	5047	17369	3339	4472	949	8760	2537	3091	0	39369	11289	50658
2000	11436	6938	18373	12145	6806	18951	3161	4380	902	8443	2421	3095	0	37539	13743	51283
2001	10340	6692	17032	10989	6318	17307	2973	4120	860	7954	2113	2880	0	34275	13010	47284
2002	10804	6968	17772	11785	6915	18700	3148	3712	869	7729	2416	2965	0	35698	13883	49582
2003	10866	7549	18414	11958	7459	19416	3040	3725	860	7625	2408	3006	1	35864	15007	50871
2004	11074	7680	18754	12377	7671	20049	2993	3830	860	7683	2520	3064	4	36722	15351	52073
2005	11302	7807	19109	12653	7819	20471	3100	3982	865	7947	2546	3113	6	37567	15625	53192
2006	11543	7869	19412	12893	7938	20831	3171	4098	869	8138	2574	3174	11	38333	15807	54139
2007	11788	7944	19732	13031	7987	21018	3180	4202	862	8244	2596	3219	13	38891	15932	54823
2008	12093	8025	20118	13241	8070	21311	3154	4330	864	8347	2618	3272	15	39586	16096	55682
2009	12339	8110	20449	13373	8117	21491	3101	4440	862	8402	2640	3326	20	40100	16227	56328
2010	12598	8197	20796	13525	8171	21695	3086	4523	854	8463	2665	3393	25	40669	16368	57037
2011	12814	8273	21087	13679	8232	21912	3066	4636	864	8566	2685	3456	33	41233	16506	57739
2012	13039	8358	21396	13868	8318	22186	3049	4715	855	8619	2707	3523	41	41797	16675	58472
2013	13260	8448	21709	13967	8348	22314	3029	4790	846	8665	2716	3591	48	42247	16796	59043

Annual Growth Rates (%)

1990-2000	2.2	0.7	1.6	2.1	1.0	1.7	0.8	0.8	-0.6	0.6	0.3	2.2		1.6	0.8	1.4
2000-2003	-1.7	2.9	0.1	-0.5	3.1	0.8	-1.3	-5.3	-1.6	-3.3	-0.2	-1.0		-1.5	3.0	-0.3
2003-2008	2.2	1.2	1.8	2.1	1.6	1.9	0.7	3.1	0.1	1.8	1.7	1.7		2.0	1.4	1.8
2008-2013	1.9	1.0	1.5	1.1	0.7	0.9	-0.8	2.0	-0.4	0.8	0.7	1.9	26.2	1.3	0.9	1.2
2003-2013	2.0	1.1	1.7	1.6	1.1	1.4	0.0	2.5	-0.2	1.3	1.2	1.8	47.3	1.7	1.1	1.5

Other includes TCU, Streetlighting, and the Other planning area
Agriculture includes all DWR

**Table D-1
Staff's Outlook for the PG&E Area
Peak Demand (MW)**

Year	Total End Use Load	Net Losses	Gross Generation	Private Supply	Peak Demand	Load Factor (%)
1990	16,203	1,525	17,728	478	17,250	60.1
1991	15,526	1,459	16,985	488	16,497	62.8
1992	15,544	1,462	17,006	473	16,533	63.7
1993	16,431	1,546	17,977	488	17,489	60.1
1994	16,408	1,518	17,926	753	17,173	61.3
1995	17,192	1,593	18,785	769	18,016	59.2
1996	18,189	1,687	19,876	799	19,077	57.1
1997	18,567	1,721	20,288	829	19,459	58.2
1998	19,537	1,813	21,350	841	20,509	54.9
1999	19,417	1,801	21,218	849	20,369	57.6
2000	19,658	1,824	21,482	854	20,628	58.7
2001	18,554	1,717	20,271	858	19,413	60.3
2002	19,563	1,811	21,374	890	20,484	56.3
2003	19,275	1,781	21,056	912	20,145	57.8
2004	19,756	1,827	21,583	921	20,662	57.8
2005	20,159	1,865	22,024	930	21,094	57.8
2006	20,517	1,899	22,416	939	21,477	57.9
2007	20,809	1,926	22,736	949	21,787	57.9
2008	21,201	1,964	23,164	958	22,206	58.0
2009	21,468	1,988	23,456	968	22,488	58.0
2010	21,777	2,018	23,795	977	22,817	58.0
2011	22,038	2,042	24,080	987	23,092	58.0
2012	22,300	2,066	24,366	997	23,369	58.0
2013	22,507	2,085	24,592	1,007	23,585	58.0

Annual Growth Rates (%)

1990-2000	2.0	1.8	1.9	6.0	1.8
2000-2001	-5.6	-5.9	-5.6	0.5	-5.9
2000-2003	-0.7	-0.8	-0.7	2.2	-0.8
2003-2008	1.9	2.0	1.9	1.0	2.0
2008-2013	1.2	1.2	1.2	1.0	1.2
2003-2013	1.6	1.6	1.6	1.0	1.6

Historic data through 2002

**Table D-2
Staff's Outlook for the SMUD Area
Peak Demand (MW)**

Year	Total End Use Load	Net Losses	Gross Generation	Private Supply	Peak Demand	Load Factor (%)
1990	2,013	182	2,195	0	2,195	46.3
1991	1,987	179	2,166	0	2,166	46.8
1992	1,929	174	2,103	0	2,103	49.1
1993	1,968	178	2,146	0	2,146	47.7
1994	1,875	169	2,044	0	2,044	50.0
1995	2,039	184	2,223	0	2,223	46.2
1996	2,177	196	2,373	0	2,373	45.1
1997	2,240	202	2,442	0	2,442	44.8
1998	2,390	216	2,606	0	2,606	42.5
1999	2,531	228	2,759	0	2,759	41.1
2000	2,466	222	2,688	0	2,688	42.9
2001	2,279	206	2,485	0	2,485	45.6
2002	2,549	230	2,779	0	2,779	41.2
2003	2,437	220	2,657	0	2,657	43.7
2004	2,479	224	2,703	0	2,703	43.7
2005	2,524	228	2,752	0	2,752	43.7
2006	2,555	230	2,785	0	2,785	43.9
2007	2,587	233	2,821	0	2,821	44.0
2008	2,625	237	2,861	0	2,861	44.1
2009	2,661	240	2,901	0	2,901	44.2
2010	2,697	243	2,941	0	2,941	44.2
2011	2,733	247	2,979	0	2,979	44.3
2012	2,767	250	3,017	0	3,017	44.4
2013	2,802	253	3,055	0	3,055	44.4

Annual Growth Rates (%)

2000-2001	-7.6	-7.6	-7.6	-7.6
2000-2003	-0.4	-0.4	-0.4	-0.4
2003-2008	1.5	1.5	1.5	1.5
2008-2013	1.3	1.3	1.3	1.3
2003-2013	1.4	1.4	1.4	1.4

Historic data through 2002

**Table D-3
Staff's Outlook for the SCE Area
Peak Demand (MW)**

Year	Total End Use Load	Net Losses	Gross Generation	Private Supply	Peak Demand	Load Factor (%)
1990	16,879	1,246	18,125	478	17,647	54.1
1991	16,017	1,180	17,197	488	16,709	56.1
1992	17,585	1,301	18,886	473	18,413	52.1
1993	15,799	1,164	16,963	488	16,475	57.3
1994	17,311	1,274	18,585	541	18,044	53.4
1995	16,860	1,239	18,099	551	17,548	55.0
1996	17,480	1,286	18,766	559	18,207	54.8
1997	18,338	1,350	19,688	570	19,118	53.8
1998	19,104	1,408	20,512	577	19,935	51.6
1999	18,356	1,351	19,707	585	19,122	55.5
2000	18,958	1,395	20,353	596	19,757	57.1
2001	17,227	1,264	18,491	601	17,890	59.3
2002	17,481	1,279	18,760	655	18,105	57.3
2003	18,439	1,350	19,790	672	19,118	54.8
2004	18,952	1,389	20,341	679	19,662	54.8
2005	19,455	1,426	20,881	686	20,196	54.8
2006	19,865	1,457	21,322	692	20,629	55.0
2007	20,123	1,476	21,599	699	20,900	55.1
2008	20,419	1,498	21,917	706	21,211	55.2
2009	20,659	1,516	22,175	713	21,462	55.3
2010	20,908	1,534	22,442	721	21,721	55.4
2011	21,195	1,555	22,750	728	22,022	55.4
2012	21,503	1,578	23,081	735	22,346	55.5
2013	21,707	1,593	23,300	742	22,558	55.5

Annual Growth Rates (%)

2000-2001	-9.1	-9.4	-9.1	0.8	-9.4
2000-2003	-0.9	-1.1	-0.9	4.1	-1.1
2003-2008	2.1	2.1	2.1	1.0	2.1
2008-2013	1.2	1.2	1.2	1.0	1.2
2003-2013	1.6	1.7	1.6	1.0	1.7

Historic data through 2002

**Table D-4
Staff's Outlook for the LADWP Area
Peak Demand (MW)**

Year	Total End Use Load	Net Losses	Gross Generation	Private Supply	Peak Demand	Load Factor (%)
1990	4,920	0	4,920	117	4,803	56.5
1991	4,771	0	4,771	138	4,633	57.2
1992	4,957	0	4,957	151	4,806	56.5
1993	4,378	0	4,378	146	4,232	65.1
1994	4,716	0	4,716	191	4,525	58.1
1995	4,665	0	4,665	206	4,459	60.8
1996	4,814	0	4,814	209	4,605	59.7
1997	5,248	0	5,248	209	5,039	55.6
1998	5,259	0	5,259	209	5,050	54.9
1999	5,067	0	5,067	209	4,858	57.2
2000	4,986	538	5,524	180	5,344	53.7
2001	4,530	484	5,014	209	4,805	58.2
2002	4,624	495	5,119	209	4,910	57.3
2003	5,040	541	5,581	209	5,372	53.0
2004	5,088	546	5,635	209	5,426	53.1
2005	5,146	553	5,699	209	5,490	53.3
2006	5,185	557	5,742	209	5,533	53.5
2007	5,208	560	5,768	209	5,559	53.6
2008	5,234	563	5,797	209	5,588	53.8
2009	5,252	565	5,817	209	5,608	53.9
2010	5,276	568	5,843	209	5,634	54.1
2011	5,306	571	5,877	209	5,668	54.2
2012	5,328	573	5,902	209	5,693	54.4
2013	5,363	577	5,940	209	5,731	54.5

Annual Growth Rates (%)

2000-2001	-9.1	-10.1	-9.2	16.1	-10.1
2000-2003	0.4	0.2	0.3	5.1	0.2
2003-2008	0.8	0.8	0.8	0.0	0.8
2008-2013	0.5	0.5	0.5	0.0	0.5
2003-2013	0.6	0.6	0.6	0.0	0.6

Historic data through 2002

**Table D-5
Staff's Outlook for the SDG&E Area
Peak Demand (MW)**

Year	Total End Use Load	Net Losses	Gross Generation	Private Supply	Peak Demand	Load Factor (%)
1990	2,780	0	2,780	0	2,780	63.0
1991	2,828	0	2,828	0	2,828	61.3
1992	3,076	0	3,076	0	3,076	60.0
1993	2,697	0	2,697	0	2,697	68.2
1994	3,107	0	3,107	0	3,107	60.5
1995	3,055	0	3,055	0	3,055	62.1
1996	3,105	0	3,105	0	3,105	63.2
1997	3,438	0	3,438	0	3,438	59.6
1998	3,695	0	3,695	0	3,695	57.1
1999	3,335	0	3,335	0	3,335	65.7
2000	3,230	310	3,540	0	3,540	63.6
2001	2,909	279	3,189	0	3,189	67.0
2002	3,325	312	3,638	71	3,567	61.1
2003	3,546	333	3,880	74	3,806	57.9
2004	3,626	341	3,967	75	3,893	57.9
2005	3,707	349	4,056	75	3,980	58.0
2006	3,785	356	4,141	76	4,065	58.1
2007	3,846	362	4,208	77	4,131	58.2
2008	3,931	370	4,301	78	4,223	58.4
2009	3,990	376	4,366	79	4,287	58.5
2010	4,043	381	4,423	79	4,344	58.6
2011	4,100	386	4,486	80	4,406	58.7
2012	4,167	392	4,559	81	4,478	58.8
2013	4,215	397	4,611	82	4,530	58.8

Annual Growth Rates (%)

2000-2001	-9.9	-9.9	-9.9		-9.9
2000-2003	3.2	2.4	3.1		2.4
2003-2008	2.1	2.1	2.1	1.0	2.1
2008-2013	1.4	1.4	1.4	1.0	1.4
2003-2013	1.7	1.8	1.7	1.0	1.8

Historic data through 2002

**Table D-6
Staff's Outlook for the BGP Area
Peak Demand (MW)**

Year	Total End Use Load	Net Losses	Gross Generation	Private Supply	Peak Demand	Load Factor (%)
1990	773	39	812	0	812	44.1
1991	718	37	755	0	755	44.4
1992	767	39	806	0	806	44.2
1993	679	35	714	0	714	51.0
1994	760	39	799	0	799	45.6
1995	743	38	781	0	781	48.0
1996	749	38	787	0	787	48.6
1997	810	41	851	0	851	46.2
1998	848	43	891	0	891	44.9
1999	800	41	841	0	841	46.8
2000	785	40	825	0	825	48.9
2001	694	35	729	0	729	54.5
2002	746	38	784	0	784	51.8
2003	822	42	864	0	864	47.5
2004	831	42	874	0	874	47.7
2005	839	43	882	0	882	47.8
2006	843	43	887	0	887	48.0
2007	845	43	888	0	888	48.1
2008	845	43	888	0	888	48.3
2009	846	43	889	0	889	48.4
2010	848	43	891	0	891	48.4
2011	849	43	892	0	892	48.6
2012	850	43	893	0	893	48.7
2013	850	43	894	0	894	48.8

Annual Growth Rates (%)

2000-2001	-11.6	-11.6	-11.6	-11.6
2000-2003	1.6	1.6	1.6	1.6
2003-2008	0.6	0.6	0.6	0.6
2008-2013	0.1	0.1	0.1	0.1
2003-2013	0.3	0.3	0.3	0.3

Historic data through 2002

**Table D-7
Staff's Outlook for the Other Area
Peak Demand (MW)**

Year	Total End Use Load	Net Losses	Gross Generation	Private Supply	Peak Demand	Load Factor (%)
1990	756	45	801	0	801	53.2
1991	759	46	804	0	804	53.2
1992	802	48	850	0	850	53.2
1993	822	49	872	0	872	53.2
1994	858	51	909	0	909	53.2
1995	872	52	924	0	924	53.2
1996	909	55	964	0	964	53.2
1997	907	54	961	0	961	53.2
1998	893	54	947	0	947	53.2
1999	915	55	970	0	970	53.2
2000	965	58	1,023	0	1,023	53.2
2001	966	58	1,024	0	1,024	53.2
2002	971	58	1,029	0	1,029	52.5
2003	990	59	1,049	0	1,049	52.3
2004	1,018	61	1,079	0	1,079	52.3
2005	1,041	62	1,103	0	1,103	52.1
2006	1,068	64	1,132	0	1,132	52.1
2007	1,083	65	1,148	0	1,148	52.1
2008	1,106	66	1,172	0	1,172	52.1
2009	1,129	68	1,197	0	1,197	52.0
2010	1,166	70	1,236	0	1,236	51.9
2011	1,196	72	1,268	0	1,268	51.8
2012	1,236	74	1,310	0	1,310	51.7
2013	1,278	77	1,354	0	1,354	51.5

Annual Growth Rates (%)

2000-2001	0.1	0.1	0.1	0.1
2000-2003	0.8	0.8	0.8	0.8
2003-2008	2.2	2.2	2.2	2.2
2008-2013	2.9	2.9	2.9	2.9
2003-2013	2.6	2.6	2.6	2.6

Historic data through 2002

**Table D-8
Staff's Outlook for the DWR Area
Peak Demand (MW)**

Year	Total End Use Load	Losses	Coincident Peak Demand
1990	227	14	241
1991	375	22	397
1992	242	14	256
1993	208	12	220
1994	88	5	93
1995	236	14	250
1996	398	24	422
1997	237	14	251
1998	236	14	250
1999	236	14	250
2000	236	14	250
2001	124	7	131
2002	322	19	341
2003	322	19	341
2004	322	19	341
2005	322	19	341
2006	322	19	341
2007	322	19	341
2008	322	19	341
2009	322	19	341
2010	322	19	341
2011	322	19	341
2012	322	19	341
2013	322	19	341

Annual Growth Rates (%)

1990-2000	0.4	0.4	0.4
2000-2003	10.9	10.9	10.9
2003-2008	0.0	0.0	0.0
2008-2013	0.0	0.0	0.0
2003-2013	0.0	0.0	0.0

Historic data through 2002

**Table D-9
Staff's Outlook for California
Noncoincident Peak Demand (MW)**

Year	Total End Use Load	Net Losses	Gross Generation	Private Supply	CED 2003 Peak Demand	Load Factor (%)
1990	44,550	3,822	48,372	1,141	47,231	57.5
1991	42,980	3,625	46,605	1,176	45,429	58.1
1992	44,902	3,783	48,685	1,168	47,517	56.8
1993	42,982	3,614	46,596	1,185	45,411	59.3
1994	45,122	3,737	48,858	1,550	47,308	57.3
1995	45,662	3,782	49,443	1,589	47,854	56.9
1996	47,821	4,039	51,860	1,620	50,240	56.0
1997	49,785	4,125	53,910	1,660	52,250	55.7
1998	51,961	4,439	56,400	1,679	54,721	52.7
1999	50,658	4,347	55,005	1,712	53,293	56.3
2000	51,283	4,397	55,679	1,688	53,991	57.9
2001	47,284	4,046	51,331	1,706	49,625	60.6
2002	49,582	4,243	53,824	1,824	52,000	57.6
2003	50,871	4,346	55,218	1,867	53,351	56.7
2004	52,073	4,450	56,523	1,883	54,639	56.6
2005	53,192	4,545	57,737	1,900	55,837	56.7
2006	54,139	4,626	58,766	1,917	56,849	56.8
2007	54,823	4,685	59,508	1,934	57,574	56.8
2008	55,682	4,760	60,442	1,951	58,491	56.9
2009	56,328	4,815	61,143	1,969	59,174	57.0
2010	57,037	4,876	61,913	1,986	59,926	57.0
2011	57,739	4,935	62,674	2,004	60,670	57.1
2012	58,472	4,997	63,469	2,022	61,447	57.1
2013	59,043	5,045	64,088	2,040	62,048	57.1

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Annual Growth Rates (%)

1990-2000	1.4	1.4	1.4	4.0	1.3	0.1
2000-2001	-7.8	-8.0	-7.8	1.1	-8.1	4.7
2000-2003	-0.3	-0.4	-0.3	3.4	-0.4	-0.7
2003-2008	1.8	1.8	1.8	0.9	1.9	0.1
2008-2013	1.2	1.2	1.2	0.9	1.2	0.1
2003-2013	1.5	1.5	1.5	0.9	1.5	0.1

Historic data through 2002

Table D-10
Staff's Baseline Outlook for the State
1 IN 2 Electric Peak Demand by ISO Congestion Zone with Municipal Sales
(MW)

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Growth Rate (%)	
														2001-2006	2001-2013
PG&E North	16,653	17,706	17,371	17,792	18,160	18,496	18,763	19,124	19,367	19,650	19,887	20,125	20,311	2.12	1.67
PG&E Sales	13,719	14,615	14,332	14,664	14,971	15,253	15,477	15,782	15,986	16,225	16,424	16,625	16,784	2.14	1.69
Muni Sales	2,934	3,092	3,038	3,128	3,189	3,243	3,286	3,342	3,381	3,425	3,463	3,501	3,528	2.02	1.55
PG&E San Francisco	979	885	917	968	992	1,004	1,018	1,038	1,051	1,066	1,079	1,092	1,102	0.49	0.99
Dept of Water Resources - North	21	54	54	54	54	54	54	54	54	54	54	54	54	21.00	8.27
North of Path 15	17,653	18,645	18,341	18,814	19,206	19,553	19,835	20,215	20,472	20,770	21,020	21,271	21,467	2.07	1.64
Path 26 Pacific Gas & Electric - South	1,781	1,893	1,857	1,902	1,942	1,978	2,006	2,045	2,071	2,101	2,126	2,152	2,172	2.12	1.67
Path 26 - Dept of Water Resources	34	89	89	89	89	89	89	89	89	89	89	89	89	21.00	8.27
Total Path 26	1,815	1,982	1,947	1,992	2,031	2,067	2,095	2,134	2,160	2,190	2,216	2,241	2,261	2.63	1.85
Southern California Edison	17,890	18,105	19,118	19,662	20,196	20,629	20,900	21,211	21,462	21,721	22,022	22,346	22,558	2.89	1.95
SCE Sales	16,117	16,288	17,194	17,682	18,164	18,556	18,796	19,075	19,297	19,527	19,796	20,085	20,274	2.86	1.93
Muni Sales	1,773	1,817	1,923	1,981	2,032	2,074	2,103	2,136	2,165	2,194	2,227	2,261	2,284	3.18	2.13
Pasadena Water and Power Dept	257	277	305	308	311	313	313	313	314	314	315	315	315	3.98	1.71
San Diego Gas & Electric	3,147	3,567	3,806	3,893	3,980	4,065	4,131	4,223	4,287	4,344	4,406	4,478	4,530	5.25	3.08
Dept of Water Resources - South	76	198	198	198	198	198	198	198	198	198	198	198	198	21.00	8.27
South of Path 15	21,371	22,147	23,426	24,061	24,685	25,204	25,542	25,945	26,261	26,578	26,941	27,337	27,600	3.36	2.15
Sacramento Municipal Utilities District	2,485	2,779	2,657	2,703	2,752	2,785	2,821	2,861	2,901	2,941	2,979	3,017	3,055	2.31	1.73
Los Angeles Department of Water and Power	4,805	4,910	5,372	5,426	5,490	5,533	5,559	5,588	5,608	5,634	5,668	5,693	5,731	2.86	1.48
Burbank Public Service Dept	232	249	275	278	280	282	282	282	283	283	284	284	284	3.98	1.71
Glendale Public Service Dept	240	258	285	288	290	292	292	293	293	294	294	294	294	3.98	1.71
Imperial Irrigation District	725	750	770	791	812	833	854	875	895	915	936	956	976	2.82	2.51
Far North & East Sierra	299	279	279	288	291	299	294	297	302	321	332	354	378	0.02	1.99
Non ISO	8,786	9,226	9,637	9,773	9,915	10,024	10,102	10,196	10,282	10,388	10,493	10,598	10,719	2.67	1.67
Total ISO	43,324	42,774	43,714	44,866	45,922	46,824	47,472	48,295	48,892	49,538	50,177	50,849	51,329	1.57	1.42
Total State	49,625	52,000	53,351	54,639	55,837	56,849	57,574	58,491	59,174	59,926	60,670	61,447	62,048	2.76	1.88
Coincident Demand														0.55	1.34
Total ISO Coincident Demand	42,286	41,750	42,667	43,792	44,822	45,703	46,335	47,138	47,721	48,352	48,975	49,631	50,100	1.57	1.42
Total Statewide Coincident Demand	48,436	50,755	52,073	53,331	54,500	55,487	56,195	57,090	57,757	58,491	59,217	59,975	60,562	2.76	1.88

Historic data through 2002

SMUD is included in ISO total through 2001.

Table D-11
Staff's Outlook for the State
1 IN 5 Electric Peak Demand by CAISO Congestion Zone
(MW)

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Growth Rate (%)	
														2001-2006	2001-2013
Noncoincident Demand															
PG&E North	16,653	17,706	18,030	18,460	18,846	19,200	19,483	19,863	20,120	20,407	20,653	20,900	21,094	2.89	1.99
PG&E San Francisco	979	885	952	1,014	1,034	1,040	1,049	1,064	1,072	1,096	1,109	1,122	1,133	1.21	1.22
Dept of Water Resources - North	21	54	54	54	54	54	54	54	54	54	54	54	54	21.00	8.27
North of Path 15	17,653	18,645	19,036	19,527	19,934	20,294	20,586	20,981	21,246	21,557	21,816	22,077	22,280	2.83	1.96
Path 26 - Pacific Gas & Electric - South	1,781	1,893	1,928	1,974	2,015	2,053	2,083	2,124	2,151	2,182	2,208	2,235	2,255	2.89	1.99
Path 26 - Dept of Water Resources	34	89	89	89	89	89	89	89	89	89	89	89	89	21.00	8.27
Total Path 26	1,815	1,982	2,017	2,063	2,104	2,142	2,172	2,213	2,240	2,271	2,297	2,324	2,345	3.37	2.16
Southern California Edison	17,890	18,105	19,748	20,311	20,862	21,310	21,590	21,911	22,170	22,438	22,749	23,083	23,302	3.56	2.23
Pasadena Water and Power Dept	257	277	320	323	326	328	328	329	329	330	330	331	331	4.98	2.11
San Diego Gas & Electric	3,147	3,567	3,929	4,019	4,109	4,196	4,265	4,360	4,426	4,485	4,549	4,623	4,677	5.92	3.36
Dept of Water Resources - South	76	198	198	198	198	198	198	198	198	198	198	198	198	21.00	8.27
South of Path 15	21,371	22,147	24,195	24,851	25,496	26,032	26,381	26,798	27,123	27,451	27,826	28,235	28,507	4.03	2.43
Sacramento Municipal Utilities District	2,485	2,779	2,758	2,806	2,856	2,891	2,928	2,970	3,012	3,052	3,093	3,131	3,171	3.07	2.05
Los Angeles Department of Water and Power	4,805	4,910	5,635	5,692	5,759	5,804	5,831	5,861	5,883	5,911	5,946	5,972	6,012	3.85	1.89
Burbank Public Service Dept	232	249	288	291	294	296	296	296	297	297	298	298	298	4.98	2.11
Glendale Public Service Dept	240	258	299	302	305	306	307	307	307	308	308	309	309	4.98	2.11
Imperial Irrigation District	725	750	792	814	836	857	879	900	921	942	963	984	1,004	3.41	2.75
Far North & East Sierra	299	279	257	265	268	275	269	272	276	294	305	326	350	-1.66	1.33
Non ISO	8,786	9,226	10,029	10,169	10,317	10,429	10,510	10,607	10,695	10,804	10,912	11,019	11,144	3.49	2.00
Total CAISO Noncoincident Demand	43,324	42,774	45,249	46,441	47,534	48,469	49,139	49,991	50,610	51,279	51,940	52,636	53,132	2.27	1.72
Total State	49,625	52,000	55,277	56,611	57,851	58,898	59,649	60,598	61,305	62,083	62,852	63,655	64,276	3.49	2.18
Coincident Demand															
Total CAISO Coincident Demand	42,286	41,750	44,165	45,329	46,396	47,308	47,962	48,794	49,398	50,051	50,696	51,375	51,860	2.27	1.72
Total Statewide Coincident Demand	48,436	50,755	53,953	55,255	56,466	57,488	58,220	59,147	59,837	60,596	61,347	62,131	62,737	3.49	2.18

Historic data through 2002

SMUD is included in ISO total through 2001.

Table D-12
Staff's Baseline Outlook for the State
1 IN 10 Electric Peak Demand by CAISO Congestion Zone
(MW)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Growth Rate (%)	
																2001-2006	2001-2013
Noncoincident Demand																	
PG&E North	17,569	17,779	16,653	17,706	18,580	19,030	19,424	19,783	20,069	20,455	20,715	21,018	21,272	21,526	21,725	3.50	2.24
PG&E San Francisco	921	948	979	885	927	979	1,004	1,015	1,030	1,050	1,063	1,079	1,092	1,105	1,115	0.72	1.09
Dept of Water Resources - North	40	40	21	54	54	54	54	54	54	54	54	54	54	54	54	21.00	8.27
North of Path 15	18,530	18,767	17,653	18,645	19,561	20,064	20,482	20,853	21,153	21,559	21,832	22,151	22,417	22,685	22,894	3.39	2.19
Path 26 - Pacific Gas & Electric - South	1,879	1,901	1,781	1,893	1,987	2,035	2,077	2,115	2,146	2,187	2,215	2,247	2,274	2,302	2,323	3.50	2.24
Path 26 - Dept of Water Resources	65	65	34	89	89	89	89	89	89	89	89	89	89	89	89	21.00	8.27
Total Path 26	1,944	1,966	1,815	1,982	2,076	2,124	2,166	2,204	2,235	2,276	2,304	2,337	2,364	2,391	2,412	3.97	2.40
Southern California Edison	19,122	19,757	17,890	18,105	20,274	20,852	21,417	21,877	22,164	22,494	22,760	23,035	23,355	23,698	23,923	4.11	2.45
Pasadena Water and Power Dept	294	291	257	277	323	326	329	331	332	332	332	333	333	334	334	5.18	2.19
San Diego Gas & Electric	3,574	3,476	3,147	3,567	3,996	4,087	4,179	4,268	4,338	4,434	4,501	4,561	4,626	4,702	4,756	6.28	3.50
Dept of Water Resources - South	145	145	76	198	198	198	198	198	198	198	198	198	198	198	198	21.00	8.27
South of Path 15	23,135	23,669	21,371	22,147	24,791	25,463	26,124	26,674	27,031	27,458	27,792	28,127	28,512	28,931	29,210	4.53	2.64
Sacramento Municipal Utilities District	2,759	2,688	2,485	2,779	2,835	2,884	2,936	2,972	3,010	3,053	3,096	3,138	3,179	3,219	3,259	3.64	2.29
Los Angeles Department of Water and Power	5,407	5,344	4,805	4,910	5,689	5,746	5,813	5,860	5,887	5,917	5,939	5,967	6,002	6,029	6,069	4.05	1.97
Burbank Public Service Dept	268	262	232	249	291	294	297	298	299	299	299	300	300	301	301	5.18	2.19
Glendale Public Service Dept	279	272	240	258	301	305	308	309	310	310	310	311	311	312	312	5.18	2.19
Imperial Irrigation District	728	705	725	750	815	837	860	882	904	926	947	969	991	1,012	1,033	3.99	3.00
Far North & East Sierra	242	318	299	279	234	242	244	250	244	246	249	267	277	298	321	-3.48	0.61
Non ISO	9,683	9,589	8,786	9,226	10,165	10,308	10,457	10,571	10,653	10,751	10,841	10,952	11,061	11,170	11,296	3.77	2.12
Total CAISO Noncoincident Demand	46,369	45,124	43,324	42,774	46,428	47,651	48,772	49,731	50,419	51,293	51,928	52,615	53,293	54,007	54,517	2.80	1.93
Total State	53,293	53,991	49,625	52,000	56,593	57,958	59,229	60,302	61,072	62,044	62,769	63,566	64,354	65,177	65,812	3.97	2.38
Coincident Demand																	
Total CAISO Coincident Demand	45,258	44,043	42,286	41,750	45,316	46,510	47,604	48,540	49,212	50,065	50,685	51,355	52,017	52,714	53,211	2.80	1.93
Total Statewide Coincident Demand	52,016	52,699	48,436	50,755	55,238	56,571	57,811	58,858	59,609	60,559	61,266	62,044	62,813	63,616	64,236	3.97	2.38

Historic data through 2002
SMUD is included in ISO total through 2001.

Table D-13
Staff's Outlook for the State
1 IN 40 Electric Peak Demand by CAISO Congestion Zone
(MW)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Growth Rate (%)	
																2001-2006	2001-2013
Noncoincident Demand																	
PG&E North	17,569	19,555	18,312	19,463	19,088	19,543	19,952	20,327	20,626	21,028	21,301	21,604	21,864	22,127	22,331		2.11 1.67
PG&E San Francisco	921	962	1,001	912	952	1,014	1,034	1,040	1,049	1,064	1,072	1,096	1,109	1,122	1,133		0.77 1.04
Dept of Water Resources - North	40	40	21	54	54	54	54	54	54	54	54	54	54	54	54		21.00 8.27
North of Path 15	18,530	20,557	19,334	20,429	20,094	20,611	21,041	21,421	21,730	22,146	22,427	22,754	23,027	23,303	23,518		2.07 1.65
Path 26 - Pacific Gas & Electric - South	1,879	2,091	1,958	2,081	2,041	2,090	2,133	2,173	2,205	2,248	2,278	2,310	2,338	2,366	2,388		2.11 1.67
Path 26 - Dept of Water Resources	65	65	34	89	89	89	89	89	89	89	89	89	89	89	89		21.00 8.27
Total Path 26	1,944	2,156	1,992	2,170	2,130	2,179	2,223	2,263	2,295	2,338	2,367	2,399	2,427	2,455	2,477		2.58 1.83
Southern California Edison	19,122	21,496	19,464	19,699	20,800	21,392	21,973	22,445	22,739	23,077	23,351	23,633	23,960	24,312	24,543		2.89 1.95
Pasadena Water and Power Dept	294	311	275	296	326	329	332	334	335	335	335	336	336	337	337		3.98 1.71
San Diego Gas & Electric	3,574	3,686	3,337	3,783	4,036	4,128	4,221	4,310	4,381	4,479	4,546	4,607	4,673	4,749	4,803		5.25 3.08
Dept of Water Resources - South	145	145	76	198	198	198	198	198	198	198	198	198	198	198	198		21.00 8.27
South of Path 15	23,135	25,638	23,153	23,975	25,359	26,048	26,724	27,287	27,652	28,089	28,430	28,773	29,167	29,596	29,881		3.34 2.15
Sacramento Municipal Utilities District	2,759	2,946	2,724	3,046	2,912	2,962	3,016	3,053	3,091	3,136	3,180	3,223	3,265	3,306	3,348		2.31 1.73
Los Angeles Department of Water and Power	5,407	5,713	5,137	5,249	5,743	5,800	5,868	5,915	5,943	5,973	5,995	6,023	6,059	6,086	6,127		2.86 1.48
Burbank Public Service Dept	268	280	248	266	294	297	300	301	302	302	302	303	303	304	304		3.98 1.71
Glendale Public Service Dept	279	291	257	276	304	308	311	312	313	313	313	314	314	315	315		3.98 1.71
Imperial Irrigation District	728	767	789	816	838	861	883	906	929	952	974	996	1,018	1,040	1,062		2.82 2.51
Far North & East Sierra	242	256	235	213	211	218	220	226	218	220	223	241	250	270	292		-0.80 1.85
Non ISO	9,683	10,253	9,389	9,866	10,301	10,446	10,598	10,713	10,796	10,896	10,987	11,099	11,210	11,320	11,447		2.67 1.67
Total CAISO Noncoincident Demand	46,369	49,141	47,203	46,574	47,584	48,837	49,987	50,971	51,677	52,573	53,224	53,927	54,622	55,354	55,876		1.55 1.42
Total State	53,293	58,604	53,868	56,440	57,885	59,284	60,585	61,684	62,472	63,468	64,211	65,026	65,831	66,673	67,323		2.75 1.88
Coincident Demand																	
Total CAISO Coincident Demand	45,258	47,964	46,072	45,459	46,444	47,668	48,790	49,750	50,439	51,314	51,949	52,635	53,314	54,028	54,538		1.55 1.42
Total Statewide Coincident Demand	52,016	57,201	52,578	55,089	56,499	57,864	59,134	60,207	60,976	61,949	62,673	63,468	64,255	65,077	65,711		2.75 1.88

Historic data through 2002
SMUD is included in ISO total through 2001.

Table D-14
Staff's Low Demand Scenario for the State
1 IN 2 Electric Peak Demand by ISO Congestion Zone with Municipal Sales
(MW)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Growth Rate (%)	
																2001-2006	2001-2013
PG&E North	17,569	17,779	16,653	17,706	17,371	17,693	17,930	18,144	18,263	18,517	18,738	19,041	19,299	19,536	19,748	1.73	1.43
PG&E/Direct Access Sales	14,488	14,565	14,689	14,663	14,403	14,908	15,341	15,764	16,104	16,355	16,535	16,761	14,882	15,063	15,205	1.42	0.29
Muni Sales	3,160	3,197	2,934	3,092	3,038	3,111	3,150	3,184	3,204	3,246	3,281	3,329	3,370	3,407	3,439	1.65	1.33
PG&E San Francisco	921	948	979	885	917	963	980	986	1,000	1,010	1,021	1,036	1,049	1,061	1,074	0.13	0.77
Dept of Water Resources - North	40	40	21	54	54	54	54	54	54	54	54	54	54	54	54	21.00	8.27
North of Path 15	18,530	18,767	17,653	18,645	18,341	18,710	18,965	19,184	19,317	19,581	19,813	20,131	20,401	20,651	20,876	1.68	1.41
Path 26 Pacific Gas & Electric - South	1,879	1,901	1,781	1,893	1,857	1,892	1,917	1,940	1,953	1,980	2,004	2,036	2,063	2,089	2,111	1.73	1.43
Path 26 - Dept of Water Resources	65	65	34	89	89	89	89	89	89	89	89	89	89	89	89	21.00	8.27
Total Path 26	1,944	1,966	1,815	1,982	1,947	1,981	2,006	2,029	2,042	2,069	2,093	2,125	2,153	2,178	2,201	2.26	1.62
Southern California Edison	19,122	19,757	17,890	18,105	19,118	19,535	19,909	20,175	20,296	20,556	20,808	21,062	21,355	21,684	21,932	2.43	1.71
SCE / Direct Access Sales	17,192	17,771	16,117	16,288	17,194	17,565	17,900	18,137	18,240	18,470	18,692	18,917	19,178	19,472	19,695	2.39	1.68
Muni Sales	1,930	1,944	1,773	1,817	1,923	1,971	2,009	2,038	2,057	2,086	2,115	2,145	2,177	2,211	2,237	2.83	1.96
Pasadena Water and Power Dept	294	291	257	277	305	307	308	307	306	306	307	307	308	308	309	3.62	1.53
San Diego Gas & Electric	3,574	3,476	3,147	3,567	3,806	3,863	3,925	3,976	4,013	4,089	4,147	4,201	4,261	4,331	4,386	4.79	2.80
Dept of Water Resources - South	145	145	76	198	198	198	198	198	198	198	198	198	198	198	198	21.00	8.27
South of Path 15	23,135	23,669	21,371	22,147	23,426	23,903	24,339	24,656	24,813	25,150	25,459	25,768	26,121	26,521	26,824	2.90	1.91
Sacramento Municipal Utilities District	2,759	2,688	2,485	2,779	2,657	2,697	2,735	2,755	2,775	2,806	2,844	2,882	2,920	2,957	2,996	2.08	1.57
Los Angeles Department of Water and Power	5,407	5,344	4,805	4,910	5,372	5,395	5,422	5,426	5,418	5,440	5,465	5,490	5,522	5,552	5,602	2.46	1.29
Burbank Public Service Dept	268	262	232	249	275	276	277	277	276	276	276	277	277	278	278	3.62	1.53
Glendale Public Service Dept	279	272	240	258	285	286	287	287	286	286	286	287	287	288	288	3.62	1.53
Imperial Irrigation District	728	705	725	750	770	791	812	833	854	875	895	915	936	956	976	2.82	2.51
Far North & East Sierra	242	318	299	279	279	282	282	277	272	273	271	274	276	279	283	-1.50	-0.45
Non ISO	9,683	9,589	8,786	9,226	9,637	9,728	9,816	9,855	9,880	9,955	10,038	10,124	10,218	10,309	10,423	2.32	1.43
Total ISO	46,369	47,090	43,324	42,774	43,714	44,594	45,310	45,869	46,172	46,800	47,365	48,023	48,675	49,350	49,901	1.15	1.18
Total State	53,293	53,991	49,625	52,000	53,351	54,321	55,126	55,724	56,052	56,755	57,402	58,147	58,893	59,659	60,324	2.35	1.64
Coincident Demand																	
Total ISO Coincident Demand	45,258	45,962	42,286	41,750	42,667	43,526	44,225	44,771	45,067	45,679	46,230	46,873	47,510	48,168	48,706	1.15	1.18
Total Statewide Coincident Demand	52,016	52,699	48,436	50,755	52,073	53,021	53,806	54,390	54,710	55,396	56,028	56,755	57,483	58,231	58,879	2.35	1.64

Table D-15
Staff's High Scenario for the State
1 IN 2 Electric Peak Demand by ISO Congestion Zone with Municipal Sales
(MW)

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Growth Rate (%)	
														2001-2006	2001-2013
PG&E North	17,624	17,754	17,442	18,067											
PG&E Sales	16,653	17,706	17,371	17,995	18,513	19,018	19,424	19,723	19,934	20,201	20,420	20,661	20,862	2.69	1.90
Muni Sales	2,934	3,092	3,038	3,160	3,245	3,328	3,395	3,443	3,476	3,518	3,552	3,590	3,619	1.42	0.29
PG&E San Francisco	979	885	917	975	1,002	1,024	1,045	1,061	1,073	1,087	1,099	1,112	1,122	2.55	1.76
Dept of Water Resources - North	21	54	54	54	54	54	54	54	54	54	54	54	54	0.89	1.14
North of Path 15	17,653	18,645	18,341	19,025	19,569	20,096	20,523	20,838	21,060	21,342	21,572	21,827	22,039	21.00	8.27
Path 26 Pacific Gas & Electric - South	1,781	1,893	1,857	1,924	1,979	2,033	2,077	2,109	2,131	2,160	2,183	2,209	2,231	2.63	1.87
Path 26 - Dept of Water Resources	34	89	89	89	89	89	89	89	89	89	89	89	89	2.69	1.90
Total Path 26	1,815	1,982	1,947	2,013	2,069	2,123	2,166	2,198	2,221	2,249	2,273	2,298	2,320	21.00	8.27
Southern California Edison	17,890	18,105	19,118	19,856	20,532	21,118	21,548	21,822	22,054	22,289	22,562	22,891	23,115	3.18	2.07
SCE Sales	16,117	16,288	17,194	17,861	18,475	19,007	19,394	19,638	19,842	20,050	20,293	20,587	20,787	3.37	2.16
Muni Sales	1,773	1,817	1,923	1,995	2,057	2,111	2,154	2,184	2,211	2,239	2,269	2,304	2,328	3.35	2.14
Pasadena Water and Power Dept	257	277	305	310	315	318	321	320	321	321	321	322	322	3.55	2.29
San Diego Gas & Electric	3,147	3,567	3,806	3,929	4,048	4,161	4,258	4,343	4,404	4,457	4,516	4,588	4,642	4.34	1.88
Dept of Water Resources - South	76	198	198	198	198	198	198	198	198	198	198	198	198	5.74	3.29
South of Path 15	21,371	22,147	23,426	24,294	25,093	25,795	26,324	26,682	26,976	27,266	27,597	27,999	28,276	21.00	8.27
Sacramento Municipal Utilities District	2,485	2,779	2,657	2,722	2,785	2,832	2,879	2,914	2,954	2,992	3,030	3,069	3,108	3.84	2.36
Los Angeles Department of Water and Power	4,805	4,910	5,372	5,469	5,567	5,645	5,705	5,729	5,749	5,770	5,797	5,822	5,862	2.65	1.88
Burbank Public Service Dept	232	249	275	280	284	287	289	289	289	289	290	290	290	3.27	1.67
Glendale Public Service Dept	240	258	285	290	294	297	299	299	300	300	300	300	301	4.34	1.88
Imperial Irrigation District	725	750	770	791	812	833	854	875	895	915	936	956	976	2.82	2.51
Far North & East Sierra	299	279	279	296	308	316	325	325	327	337	348	370	395	1.15	2.36
Non ISO	8,786	9,226	9,637	9,847	10,049	10,210	10,351	10,432	10,514	10,604	10,701	10,807	10,931	3.05	1.84
Total ISO	43,324	42,774	43,714	45,332	46,731	48,013	49,013	49,718	50,257	50,857	51,441	52,124	52,635	2.08	1.64
Total State	49,625	52,000	53,351	55,178	56,780	58,223	59,365	60,150	60,771	61,461	62,142	62,931	63,566	3.25	2.08
Coincident Demand															
Total ISO Coincident Demand	42,286	41,750	42,667	44,246	45,611	46,864	47,839	48,528	49,054	49,639	50,210	50,876	51,374	2.08	1.64
Total Statewide Coincident Demand	48,436	50,755	52,073	53,857	55,420	56,829	57,943	58,710	59,316	59,989	60,654	61,424	62,043	3.25	2.08

**Table E-1
Staff's Outlook for the PG&E Planning Area
End Use Natural Gas Consumption by Sector (10⁶ Therms)**

Year	Residential	Commercial	Industrial	Mining	Agricultural	Transportation, Communication & Utilities	Total Consumption
1980	2,298	721	2,452	249	76	114	5,911
1981	2,079	676	2,339	228	65	118	5,505
1982	2,226	737	1,976	222	60	120	5,341
1983	2,093	706	1,293	59	53	109	4,313
1984	2,036	712	1,269	78	53	110	4,258
1985	2,236	736	1,714	240	56	116	5,098
1986	1,958	668	1,361	94	50	108	4,238
1987	2,034	707	1,566	153	57	110	4,627
1988	2,015	662	1,619	215	62	159	4,731
1989	2,168	727	1,525	227	70	121	4,838
1990	2,118	758	1,971	254	66	111	5,278
1991	2,169	746	1,735	431	61	120	5,262
1992	1,963	669	1,502	166	53	93	4,447
1993	2,126	708	1,717	99	44	94	4,788
1994	2,211	762	1,834	73	74	93	5,047
1995	1,966	697	1,959	79	60	72	4,834
1996	1,982	702	2,084	44	65	77	4,955
1997	1,978	715	1,992	167	70	95	5,017
1998	2,283	762	1,957	307	75	69	5,453
1999	2,422	880	1,766	243	94	67	5,473
2000	2,180	843	1,853	294	111	59	5,339
2001	1,970	685	1,870	304	60	76	4,964
2002	2,149	792	1,873	294	99	76	5,283
2003	2,163	799	1,907	299	100	77	5,344
2004	2,179	805	1,931	301	101	77	5,395
2005	2,195	813	1,988	306	102	78	5,482
2006	2,211	819	2,001	310	103	78	5,523
2007	2,230	823	1,983	310	104	79	5,528
2008	2,251	829	1,953	316	104	79	5,531
2009	2,272	833	1,897	319	104	79	5,505
2010	2,295	836	1,883	319	105	79	5,517
2011	2,315	840	1,870	327	105	79	5,536
2012	2,334	844	1,849	327	105	79	5,539
2013	2,355	847	1,831	327	105	80	5,545

Annual Growth Rates (%)

1980-1990	-0.8	0.5	-2.2	0.2	-1.5	-0.3	-1.1
1990-2000	0.3	1.1	-0.6	1.5	5.3	-6.2	0.1
2000-2003	-0.3	-1.8	1.0	0.5	-3.4	9.4	3.8
2003-2008	0.8	0.7	0.5	1.1	0.8	0.5	0.7
2008-2013	0.9	0.4	-1.3	0.7	0.2	0.2	0.0
2003-2013	0.9	0.6	-0.4	0.9	0.5	0.4	0.4

Excludes natural gas used for electric generation

**Table E-2
Staff's Outlook for the SCG Planning Area
End Use Natural Gas Consumption by Sector (10⁶ Therms)**

Year	Residential	Commercial	Industrial	Mining	Agricultural	Transportation, Communication & Utilities	Total Consumption
1980	3,184	800	2,105	927	65	87	7,168
1981	2,784	782	2,099	850	71	91	6,676
1982	3,006	835	1,779	800	61	96	6,577
1983	2,747	777	1,457	786	47	83	5,898
1984	2,545	744	1,347	830	52	81	5,599
1985	2,870	849	1,322	785	54	85	5,965
1986	2,507	775	1,251	942	44	81	5,600
1987	2,740	846	1,227	926	48	88	5,875
1988	2,741	905	1,529	1,173	53	84	6,487
1989	2,806	957	1,533	1,405	53	84	6,838
1990	2,687	952	1,280	1,761	57	70	6,806
1991	2,705	847	1,136	1,725	52	75	6,539
1992	2,694	794	1,066	1,643	52	80	6,329
1993	2,620	785	1,207	1,598	48	64	6,322
1994	2,666	831	1,230	1,543	57	64	6,390
1995	2,459	748	1,189	2,042	52	66	6,557
1996	2,482	750	1,635	2,168	61	78	7,174
1997	2,441	793	1,564	2,804	69	72	7,743
1998	2,812	852	1,730	2,872	72	78	8,416
1999	2,870	940	1,738	2,634	86	79	8,347
2000	2,692	916	1,705	2,465	90	71	7,939
2001	2,707	901	1,536	2,679	77	66	7,966
2002	2,617	919	1,519	2,584	87	65	7,792
2003	2,637	940	1,548	2,631	87	64	7,907
2004	2,658	965	1,581	2,642	87	63	7,996
2005	2,678	986	1,637	2,680	87	62	8,131
2006	2,701	1,008	1,662	2,712	87	62	8,232
2007	2,726	1,018	1,650	2,703	88	62	8,247
2008	2,753	1,028	1,638	2,744	88	62	8,312
2009	2,780	1,037	1,601	2,775	88	62	8,344
2010	2,809	1,047	1,601	2,776	88	62	8,382
2011	2,835	1,056	1,603	2,844	88	62	8,488
2012	2,861	1,065	1,594	2,840	88	62	8,510
2013	2,889	1,075	1,586	2,836	88	62	8,535

Annual Growth Rates (%)

1980-1990	-1.7	1.7	-4.9	6.6	-1.4	-2.1	-0.5
1990-2000	0.0	-0.4	2.9	3.4	4.8	0.1	1.6
2000-2003	-0.7	0.9	-3.2	2.2	-1.1	-3.4	-0.4
2003-2008	0.9	1.8	1.1	0.8	0.1	-0.7	1.0
2008-2013	1.0	0.9	-0.6	0.7	0.0	-0.1	0.5
2003-2013	0.9	1.4	0.2	0.8	0.1	-0.4	0.8

Excludes natural gas used for electric generation

**Table E-3
Staff's Outlook for the SDG&E Area
End Use Natural Gas Consumption by Sector (10⁶ Therms)**

Year	Residential	Commercial	Industrial	Mining	Agricultural	Transportation, Communication & Utilities	Total Consumption
1980	312	91	40	1	11	14	468
1981	288	87	39	1	9	14	437
1982	318	86	47	2	4	18	475
1983	296	87	28	2	6	14	432
1984	283	83	17	2	6	19	411
1985	327	100	24	2	6	16	476
1986	295	83	30	2	5	15	429
1987	331	81	38	2	6	16	475
1988	337	102	35	3	7	18	501
1989	342	105	34	4	7	24	517
1990	338	124	28	4	6	17	517
1991	335	118	34	4	3	23	516
1992	314	117	33	3	7	22	495
1993	327	105	53	3	7	18	512
1994	344	119	50	2	7	17	539
1995	316	125	53	1	7	18	522
1996	317	130	54	0	8	20	528
1997	316	128	56	0	8	20	529
1998	356	132	58	1	9	24	579
1999	382	144	59	1	10	21	617
2000	340	144	54	1	9	19	567
2001	344	144	45	1	7	18	560
2002	345	146	40	1	10	18	561
2003	349	149	41	1	10	18	568
2004	353	152	43	1	10	18	578
2005	357	155	46	1	10	18	587
2006	361	158	48	1	10	19	596
2007	365	159	49	1	10	19	604
2008	370	161	50	1	10	19	611
2009	374	162	51	1	10	19	618
2010	378	164	52	1	10	19	625
2011	382	165	54	1	10	20	632
2012	385	167	55	1	10	20	638
2013	390	168	56	1	10	20	644

Annual Growth Rates (%)

1980-1990	0.8	3.2	-3.6	14.4	-6.1	2.4	1.0
1990-2000	0.1	1.5	6.8	-16.1	5.1	1.0	0.9
2000-2003	0.8	1.0	-8.4	3.1	3.5	-1.1	0.8
2003-2008	1.2	1.6	4.1	0.8	0.1	0.7	1.5
2008-2013	1.1	0.9	1.9	1.2	0.0	0.8	1.1
2003-2013	1.1	1.2	3.0	1.0	0.1	0.8	1.3

Excludes natural gas used for electric generation

**Table E-4
Staff's Outlook for the Other Area
End Use Natural Gas Consumption by Sector (10⁶ Therms)**

Year	Residential	Commercial	Industrial	Mining	Agricultural	Transportation, Communication & Utilities	Total Consumption
1980	46	20	3	0	2	6	78
1981	43	16	3	0	2	2	66
1982	40	13	2	0	1	2	59
1983	33	15	2	0	1	1	52
1984	47	19	2	0	2	2	72
1985	59	20	2	1	2	2	85
1986	50	19	2	0	2	2	76
1987	62	15	2	0	1	1	81
1988	63	18	3	0	0	1	86
1989	69	17	3	1	1	1	91
1990	72	17	3	1	1	1	95
1991	61	21	4	1	1	1	88
1992	67	20	4	1	1	3	94
1993	72	22	4	0	1	3	102
1994	75	21	4	3	1	4	109
1995	71	20	4	4	0	3	103
1996	70	20	15	4	0	3	113
1997	76	21	17	4	0	3	121
1998	91	24	14	3	0	3	134
1999	86	22	17	4	0	3	132
2000	75	20	17	4	0	2	119
2001	78	21	15	2	0	2	119
2002	78	21	15	3	0	2	120
2003	79	21	15	3	0	2	121
2004	80	21	16	3	0	3	122
2005	80	22	16	3	0	3	123
2006	81	22	16	3	0	3	124
2007	81	22	16	3	0	3	125
2008	82	22	16	3	0	3	125
2009	82	22	16	3	0	3	126
2010	83	22	15	3	0	3	127
2011	84	22	15	3	0	3	127
2012	84	22	15	3	0	3	127
2013	85	23	15	3	0	3	128

Annual Growth Rates (%)

1980-1990	4.6	-1.7	-0.4	5.4	-12.6	-15.7	2.0
1990-2000	0.4	1.8	18.4	20.0	-11.5	8.9	2.3
2000-2003	1.7	1.8	-4.5	-10.5	9.7	-0.7	0.7
2003-2008	0.7	0.7	0.7	1.8	0.0	2.3	0.8
2008-2013	0.7	0.4	-1.5	-1.3	0.0	3.6	0.4
2003-2013	0.7	0.6	-0.4	0.2	0.0	3.0	0.6

Excludes natural gas used for electric generation

**Table E-5
Staff's Outlook for California
End Use Natural Gas Consumption by Sector (10⁶ Therms)**

	Residential	Commercial	Industrial	Mining	Agricultural	Transportation, Communication & Utilities	Total Consumption
1980	5,840	1,633	4,600	1,178	154	220	13,625
1981	5,195	1,560	4,480	1,079	147	224	12,685
1982	5,589	1,671	3,804	1,024	126	236	12,451
1983	5,169	1,585	2,780	846	108	208	10,696
1984	4,911	1,558	2,635	911	113	212	10,340
1985	5,493	1,705	3,062	1,027	118	219	11,624
1986	4,809	1,545	2,644	1,038	101	206	10,343
1987	5,167	1,649	2,834	1,083	111	215	11,058
1988	5,157	1,688	3,185	1,391	122	262	11,805
1989	5,385	1,806	3,094	1,638	131	230	12,283
1990	5,215	1,851	3,282	2,019	129	199	12,695
1991	5,270	1,732	2,909	2,159	116	219	12,405
1992	5,038	1,599	2,605	1,811	113	198	11,365
1993	5,145	1,621	2,982	1,700	99	180	11,726
1994	5,296	1,733	3,118	1,621	139	178	12,085
1995	4,812	1,591	3,206	2,127	120	160	12,015
1996	4,852	1,602	3,788	2,216	135	178	12,770
1997	4,811	1,658	3,629	2,974	148	190	13,410
1998	5,541	1,769	3,759	3,183	156	174	14,582
1999	5,760	1,987	3,580	2,883	190	170	14,569
2000	5,287	1,923	3,629	2,763	210	151	13,964
2001	5,099	1,751	3,466	2,986	144	163	13,609
2002	5,189	1,879	3,448	2,881	196	162	13,755
2003	5,228	1,909	3,512	2,933	197	162	13,940
2004	5,269	1,943	3,571	2,947	199	161	14,090
2005	5,310	1,975	3,687	2,989	200	161	14,322
2006	5,353	2,007	3,727	3,026	201	162	14,475
2007	5,402	2,022	3,699	3,017	202	162	14,503
2008	5,456	2,039	3,657	3,063	202	163	14,580
2009	5,509	2,054	3,566	3,098	202	163	14,593
2010	5,565	2,069	3,551	3,099	203	163	14,651
2011	5,614	2,084	3,542	3,175	203	164	14,783
2012	5,666	2,098	3,512	3,171	203	164	14,814
2013	5,718	2,113	3,487	3,166	203	164	14,852

Annual Growth Rates (%)

1980-1990	-1.1	1.3	-3.3	5.5	-1.8	-1.0	-0.7
1990-2000	0.1	0.4	1.0	3.2	5.0	-2.7	1.0
2000-2003	-0.4	-0.2	-1.1	2.0	-2.1	2.3	-0.1
2003-2008	0.9	1.3	0.8	0.9	0.5	0.1	0.9
2008-2013	0.9	0.7	-0.9	0.7	0.1	0.2	0.4
2003-2013	0.9	1.0	-0.1	0.8	0.3	0.2	0.6

Excludes natural gas used for electric generation

Table E-6
Staff's Outlook for California
End Use Natural Gas Consumption by Utility (10⁶ Therms)

	PG&E	SCG	SDG&E	OTHER	TOTAL
1980	5,911	7,168	468	78	13,625
1981	5,505	6,676	437	66	12,685
1982	5,341	6,577	475	59	12,451
1983	4,313	5,898	432	52	10,696
1984	4,258	5,599	411	72	10,340
1985	5,098	5,965	476	85	11,624
1986	4,238	5,600	429	76	10,343
1987	4,627	5,875	475	81	11,058
1988	4,731	6,487	501	86	11,805
1989	4,838	6,838	517	91	12,283
1990	5,278	6,806	517	95	12,695
1991	5,262	6,539	516	88	12,405
1992	4,447	6,329	495	94	11,365
1993	4,788	6,322	512	102	11,726
1994	5,047	6,390	539	109	12,085
1995	4,834	6,557	522	103	12,015
1996	4,955	7,174	528	113	12,770
1997	5,017	7,743	529	121	13,410
1998	5,453	8,416	579	134	14,582
1999	5,473	8,347	617	132	14,569
2000	5,339	7,939	567	119	13,964
2001	4,964	7,966	560	119	13,609
2002	5,283	7,792	561	120	13,755
2003	5,344	7,907	568	121	13,940
2004	5,395	7,996	578	122	14,090
2005	5,482	8,131	587	123	14,322
2006	5,523	8,232	596	124	14,475
2007	5,528	8,247	604	125	14,503
2008	5,531	8,312	611	125	14,580
2009	5,505	8,344	618	126	14,593
2010	5,517	8,382	625	127	14,651
2011	5,536	8,488	632	127	14,783
2012	5,539	8,510	638	127	14,814
2013	5,545	8,535	644	128	14,852

Annual Growth Rates (%)

1980-1990	-1.1	-0.5	1.0	2.0	-0.7
1990-2000	0.1	1.6	0.9	2.3	1.0
2000-2003	0.0	-0.1	0.1	0.5	-0.1
2003-2008	0.7	1.0	1.5	0.8	0.9
2008-2013	0.0	0.5	1.1	0.4	0.4
2003-2013	0.4	0.8	1.3	0.6	0.6

Excludes natural gas used for electric generation

Table E-7
Staff's High Demand Scenario for California
Natural Gas Consumption by Utility (10⁶ Therms)

Year	PG&E	SCG	SDG&E	OTHER	TOTAL
2001	4,964	7,966	560	119	13,609
2002	5,283	7,792	561	120	13,755
2003	5,344	7,907	568	121	13,940
2004	5,445	8,074	581	122	14,222
2005	5,560	8,235	592	124	14,511
2006	5,646	8,376	603	125	14,750
2007	5,671	8,453	614	126	14,863
2008	5,669	8,540	621	126	14,957
2009	5,630	8,529	628	127	14,914
2010	5,641	8,561	635	128	14,964
2011	5,654	8,595	641	128	15,017
2012	5,657	8,616	647	128	15,048
2013	5,664	8,642	654	129	15,089

Annual Growth Rates (%)

2001-2006	2.6	1.0	1.5	0.9	1.6
2006-2013	0.0	0.4	1.2	0.4	0.3
2003-2013	0.6	0.9	1.4	0.6	0.8

Table E-8
Staff's Low Demand Scenario for California
Natural Gas Consumption by Utility (10⁶ Therms)

Year	PG&E	SCG	SDG&E	OTHER	TOTAL
2001	4,964	7,966	560	119	13,609
2002	5,283	7,792	561	120	13,755
2003	5,344	7,907	568	121	13,940
2004	5,378	7,981	575	122	14,056
2005	5,427	8,049	582	123	14,181
2006	5,447	8,096	588	123	14,255
2007	5,419	8,096	594	124	14,232
2008	5,424	8,150	602	124	14,300
2009	5,414	8,151	609	125	14,300
2010	5,438	8,231	616	125	14,410
2011	5,465	8,307	622	126	14,519
2012	5,470	8,333	628	126	14,556
2013	5,484	8,431	635	127	14,677

Annual Growth Rates (%)

2001-2006	1.9	0.3	1.0	0.7	0.9
2006-2013	0.1	0.6	1.1	0.4	0.4
2003-2013	0.3	0.6	1.1	0.5	0.5

Table F-1
Statewide Economic and Demographic Inputs

YEAR	GDP Implicit Price Deflator Index (2001=100)	Population (000s)	GSP (Millions 2001\$)	Total Nonagricultural Employment (1,000s)	Real Personal Income (Millions 2001\$)	Industrial Shipments (Millions 2001\$)
1980	52	23,782		6,910	558,759	
1981	57	24,278		7,166	559,464	
1982	61	24,805		7,254	563,212	
1983	63	25,336		7,627	587,688	
1984	65	25,816		7,824	630,856	
1985	67	26,402		7,840	654,510	
1986	69	27,052	834	8,147	673,743	
1987	71	27,717	890	8,592	698,791	
1988	73	28,393	944	9,191	724,854	
1989	76	29,146	988	9,656	747,003	
1990	79	29,829	1,019	9,841	769,158	390,422
1991	82	30,458	1,003	9,978	759,148	384,786
1992	84	30,987	995	9,812	770,510	376,007
1993	86	31,314	987	9,917	765,944	365,416
1994	88	31,523	1,001	10,390	781,464	376,212
1995	90	31,711	1,035	10,770	812,076	399,259
1996	91	31,962	1,069	11,085	846,748	433,302
1997	93	32,452	1,131	11,471	884,825	465,256
1998	94	32,862	1,205	11,910	939,899	521,398
1999	96	33,417	1,302	12,237	981,550	581,264
2000	98	34,043	1,408	12,499	1,044,633	656,764
2001	100	34,711	1,420	12,359	1,029,623	613,108
2002	101	35,302	1,418	12,153	1,015,520	534,999
2003	103	35,893	1,452	12,045	1,033,154	549,062
2004	107	36,485	1,490	12,159	1,061,646	564,944
2005	110	37,076	1,529	12,421	1,099,412	588,868
2006	114	37,627	1,570	12,743	1,145,268	605,338
2007	117	38,178	1,609	13,129	1,187,694	618,106
2008	119	38,729	1,660	13,595	1,250,636	638,690
2009	121	39,280	1,713	13,991	1,291,456	658,798
2010	124	39,830	1,770	14,487	1,335,293	672,148
2011	126	40,314	1,827	14,697	1,370,640	687,037
2012	129	40,798	1,877	14,675	1,405,564	702,466
2013	131	41,281	1,927	14,896	1,439,505	717,645

Annual Growth Rates (%)

1980-1990	4.3	2.3		3.6	3.2	
1990-2000	2.1	1.3	3.3	2.4	3.1	5.3
2000-2001	2.2	2.0	0.8	-1.1	-1.4	-6.6
2000-2003	1.6	1.8	1.0	-1.2	-0.4	-5.8
2003-2008	3.0	1.5	2.7	2.5	3.9	3.1
2008-2013	2.0	1.3	3.0	1.8	2.9	2.4
2003-2013	2.5	1.4	2.9	2.1	3.4	2.7

**Table F-2
Statewide Economic and Demographic Inputs by Demand Scenario**

	Statewide Industrial Shipments (Millions 2001\$) (excludes SIC 15)			Statewide Nonfarm Employment (1000s Jobs)			Real Personal Income - (Billions 2001\$)		
	Baseline	Low Growth	High Growth	Baseline	Low Growth	High Growth	Baseline	Low Growth	High Growth
2003	446,089	446,089	446,089	14,896	14,896	14895.56	1,117	1,113	1,117
2004	455,805	451,478	473,445	15,247	15,069	15449.85	1,148	1,138	1,176
2005	469,773	457,920	501,876	15,591	15,243	16004.14	1,188	1,170	1,232
2006	477,284	463,460	529,411	15,988	15,417	16558.43	1,239	1,195	1,286
2007	494,754	467,231	554,493	16,404	15,591	17112.72	1,285	1,221	1,354
2008	515,926	473,094	571,979	16,753	15,988	17461.42	1,354	1,248	1,399
2009	535,695	489,981	585,426	17,113	16,404	17861.49	1,399	1,282	1,448
2010	548,810	511,926	600,210	17,461	16,753	18151.56	1,448	1,316	1,487
2011	567,227	533,669	615,899	17,861	17,113	18421.28	1,487	1,356	1,526
2012	582,360	546,602	632,042	18,152	17,461	18677.52	1,526	1,396	1,564
2013	597,057	564,800	649,146	18,421	17,861	18954.88	1,564	1,436	1,603

Annual Growth Rates (%)

2003-2	3.0	1.2	5.1	2.4	1.4	3.2	3.9	2.3	4.6
2008-2	3.0	3.6	2.6	1.9	2.2	1.7	2.9	2.8	2.8
2003-2	3.0	2.4	3.8	2.1	1.8	2.4	3.4	2.6	3.7

**Table F-3
Residential Forecast Demographic Inputs by Planning Area**

PG&E

Year	Household Population	Single Family Homes	Multi-family Homes	Mobile Homes	Total Homes	Persons per Household	Per Capita Income (77\$)
1980	8,584,530	2,146,878	927,033	196,666	3,270,576	2.63	10,665
1981	8,680,387	2,170,254	932,730	203,660	3,306,643	2.63	10,446
1982	8,795,961	2,191,026	938,844	208,829	3,338,699	2.64	10,355
1983	9,047,698	2,228,619	956,431	215,107	3,400,158	2.66	10,647
1984	9,283,228	2,265,948	981,331	221,779	3,469,059	2.68	11,236
1985	9,511,282	2,305,583	1,016,716	229,449	3,551,748	2.68	11,355
1986	9,718,568	2,353,407	1,045,299	236,454	3,635,160	2.67	11,402
1987	9,876,854	2,399,186	1,064,840	242,191	3,706,217	2.67	11,525
1988	10,047,184	2,451,589	1,074,788	248,193	3,774,571	2.66	11,766
1989	10,273,788	2,508,568	1,085,969	254,175	3,848,713	2.67	11,885
1990	10,450,149	2,549,154	1,092,694	255,572	3,897,420	2.68	12,003
1991	10,678,289	2,597,240	1,110,088	254,572	3,961,901	2.70	11,729
1992	10,874,633	2,638,295	1,119,867	253,577	4,011,739	2.71	11,809
1993	11,037,587	2,675,520	1,127,027	252,585	4,055,133	2.72	11,694
1994	11,125,465	2,710,352	1,133,753	251,598	4,095,704	2.72	11,922
1995	11,221,850	2,744,153	1,140,706	250,615	4,135,475	2.71	12,412
1996	11,331,594	2,776,430	1,147,668	249,637	4,173,735	2.72	12,932
1997	11,538,647	2,809,493	1,158,404	248,717	4,216,613	2.74	13,373
1998	11,685,349	2,844,388	1,173,193	247,800	4,265,381	2.74	14,045
1999	11,860,298	2,885,520	1,187,239	246,888	4,319,647	2.75	14,705
2000	12,069,552	2,922,124	1,202,580	245,979	4,370,683	2.76	15,557
2001	12,285,241	2,957,928	1,219,095	245,074	4,422,096	2.78	15,112
2002	12,519,186	3,008,719	1,233,314	250,198	4,492,231	2.79	14,300
2003	12,752,081	3,059,366	1,246,997	255,276	4,561,639	2.80	14,592
2004	12,984,878	3,108,751	1,259,816	260,200	4,628,767	2.81	15,100
2005	13,217,557	3,155,235	1,270,526	264,771	4,690,532	2.82	15,595
2006	13,427,236	3,199,491	1,280,038	269,075	4,748,605	2.83	16,079
2007	13,636,777	3,247,038	1,291,296	273,746	4,812,079	2.83	16,398
2008	13,846,171	3,295,371	1,302,672	278,483	4,876,526	2.84	16,845
2009	14,055,405	3,343,951	1,314,033	283,233	4,941,218	2.85	17,123
2010	14,264,508	3,392,814	1,325,334	287,996	5,006,144	2.85	17,432
2011	14,436,378	3,434,586	1,333,035	291,963	5,059,584	2.85	17,735
2012	14,608,042	3,476,640	1,340,744	295,949	5,113,333	2.86	17,970
2013	14,779,481	3,519,345	1,348,607	299,991	5,167,944	2.86	18,184

Annual Growth Rates (%)

1980-1990	2.0	1.7	1.7	2.7	1.8	0.2	1.2
1990-2000	1.5	1.4	1.0	-0.4	1.2	0.3	2.6
2000-2003	1.9	1.5	1.2	1.2	1.4	0.4	-2.1
2003-2008	1.7	1.5	0.9	1.8	1.3	0.3	2.9
2008-2013	1.3	1.3	0.7	1.5	1.2	0.1	1.5
2003-2013	1.5	1.4	0.8	1.6	1.3	0.2	2.2

**Table F-3
Residential Forecast Demographic Inputs by Planning Area**

SMUD

Year	Household Population	Single Family Homes	Multi-family Homes	Mobile Homes	Total Homes	Persons per Household	Per Capita Income (77\$)
1980	777,292	202,659	86,342	14,165	303,167	2.56	9,379
1981	780,352	205,428	86,295	14,724	306,447	2.55	9,003
1982	792,949	208,393	86,267	14,951	309,611	2.56	8,832
1983	825,773	214,416	87,495	15,418	317,329	2.60	9,015
1984	854,929	220,040	91,785	15,708	327,533	2.61	9,572
1985	895,717	227,802	101,544	15,863	345,209	2.60	10,014
1986	915,570	235,466	103,893	16,013	355,372	2.58	10,198
1987	931,931	241,647	106,363	16,129	364,140	2.56	10,280
1988	959,538	249,856	108,011	16,800	374,667	2.56	10,341
1989	992,208	260,622	109,042	17,388	387,052	2.56	10,589
1990	1,018,434	269,090	109,565	17,480	396,134	2.57	10,751
1991	1,051,318	279,603	110,844	17,439	407,886	2.58	10,467
1992	1,068,645	285,797	111,890	17,398	415,085	2.58	10,472
1993	1,083,912	291,420	112,376	17,357	421,153	2.57	10,255
1994	1,090,145	296,912	112,854	17,316	427,082	2.55	10,613
1995	1,095,153	302,462	113,151	17,275	432,887	2.53	11,061
1996	1,109,748	307,465	113,311	17,234	438,011	2.53	11,102
1997	1,123,820	309,426	113,585	17,178	440,189	2.55	11,430
1998	1,140,219	311,594	114,300	17,121	443,015	2.57	11,887
1999	1,179,071	316,456	116,069	17,065	449,589	2.62	11,927
2000	1,206,273	321,806	117,197	17,009	456,011	2.65	12,326
2001	1,238,624	328,058	118,711	16,953	463,722	2.67	11,821
2002	1,263,854	334,261	119,876	17,513	471,651	2.68	11,121
2003	1,289,085	340,522	121,054	18,079	479,654	2.69	11,290
2004	1,314,315	346,639	122,198	18,631	487,468	2.70	11,647
2005	1,339,546	352,529	123,293	19,162	494,984	2.71	11,928
2006	1,363,081	358,158	124,329	19,670	502,157	2.71	12,320
2007	1,386,617	364,068	125,427	20,203	509,698	2.72	12,536
2008	1,410,152	370,045	126,540	20,740	517,326	2.73	12,859
2009	1,433,687	376,082	127,665	21,283	525,029	2.73	13,063
2010	1,457,223	382,153	128,797	21,828	532,778	2.74	13,315
2011	1,478,085	387,642	129,801	22,321	539,764	2.74	13,560
2012	1,498,948	393,158	130,810	22,816	546,784	2.74	13,768
2013	1,519,811	398,750	131,835	23,318	553,903	2.74	13,980

Annual Growth Rates (%)

1980-1990	2.7	2.9	2.4	2.1	2.7	0.0	1.4
1990-2000	1.7	1.8	0.7	-0.3	1.4	0.3	1.4
2000-2003	2.2	1.9	1.1	2.1	1.7	0.5	-2.9
2003-2008	1.8	1.7	0.9	2.8	1.5	0.3	2.6
2008-2013	1.5	1.5	0.8	2.4	1.4	0.1	1.7
2003-2013	1.7	1.6	0.9	2.6	1.4	0.2	2.2

**Table F-3
Residential Forecast Demographic Inputs by Planning Area**

SCE

Year	Household Population	Single Family Homes	Multi-family Homes	Mobile Homes	Total Homes	Persons per Household	Per Capita Income (77\$)
1980	8,411,169	1,991,622	821,533	177,284	2,990,439	2.81	10,233
1981	8,494,336	2,011,806	829,332	181,251	3,022,389	2.81	10,078
1982	8,630,444	2,026,070	831,607	185,078	3,042,755	2.84	9,888
1983	8,905,228	2,062,768	844,779	189,258	3,096,805	2.88	10,062
1984	9,171,726	2,106,729	871,307	194,828	3,172,864	2.89	10,581
1985	9,462,927	2,149,377	911,061	200,029	3,260,467	2.90	10,773
1986	9,821,899	2,209,637	960,660	203,829	3,374,126	2.91	10,862
1987	10,114,279	2,262,989	990,557	205,863	3,459,410	2.92	11,063
1988	10,429,728	2,332,121	1,013,044	212,902	3,558,068	2.93	11,199
1989	10,709,887	2,398,105	1,027,374	216,862	3,642,342	2.94	11,245
1990	10,869,185	2,430,809	1,036,098	216,838	3,683,745	2.95	11,357
1991	11,117,050	2,474,023	1,055,784	216,095	3,745,902	2.97	10,888
1992	11,333,016	2,507,504	1,064,467	215,355	3,787,326	2.99	10,781
1993	11,439,024	2,538,996	1,068,495	214,617	3,822,108	2.99	10,531
1994	11,543,713	2,565,070	1,075,274	213,882	3,854,226	3.00	10,619
1995	11,628,352	2,592,331	1,080,057	213,150	3,885,538	2.99	10,876
1996	11,718,087	2,618,109	1,085,695	212,420	3,916,223	2.99	11,159
1997	11,883,259	2,642,259	1,091,683	211,477	3,945,419	3.01	11,439
1998	12,022,582	2,668,414	1,098,043	210,538	3,976,995	3.02	11,972
1999	12,234,124	2,695,922	1,106,688	209,602	4,012,213	3.05	12,113
2000	12,476,975	2,721,008	1,116,526	208,670	4,046,204	3.08	12,723
2001	12,733,623	2,747,873	1,124,907	207,742	4,080,522	3.12	12,320
2002	12,944,718	2,785,282	1,136,718	211,657	4,133,657	3.13	11,691
2003	13,162,491	2,825,700	1,149,906	215,866	4,191,472	3.14	11,955
2004	13,379,774	2,864,728	1,162,354	219,921	4,247,003	3.15	12,417
2005	13,596,559	2,898,958	1,171,936	223,447	4,294,341	3.17	12,866
2006	13,808,752	2,935,127	1,182,279	227,163	4,344,569	3.18	13,326
2007	14,020,450	2,976,743	1,195,561	231,459	4,403,763	3.18	13,599
2008	14,231,644	3,019,522	1,209,310	235,871	4,464,703	3.19	13,979
2009	14,442,323	3,063,273	1,223,343	240,375	4,526,992	3.19	14,215
2010	14,655,954	3,108,607	1,238,105	245,010	4,591,722	3.19	14,479
2011	14,850,355	3,149,672	1,250,296	249,170	4,649,138	3.19	14,709
2012	15,044,289	3,191,541	1,262,833	253,409	4,707,783	3.20	14,881
2013	15,237,745	3,234,824	1,275,973	257,791	4,768,588	3.20	15,039

Annual Growth Rates (%)

1980-1990	2.6	2.0	2.3	2.0	2.1	0.5	1.0
1990-2000	1.4	1.1	0.8	-0.4	0.9	0.4	1.1
2000-2003	1.8	1.3	1.0	1.1	1.2	0.6	-2.1
2003-2008	1.6	1.3	1.0	1.8	1.3	0.3	3.2
2008-2013	1.4	1.4	1.1	1.8	1.3	0.0	1.5
2003-2013	1.5	1.4	1.0	1.8	1.3	0.2	2.3

**Table F-3
Residential Forecast Demographic Inputs by Planning Area**

LADWP

Year	Household Population	Single Family Homes	Multi-family Homes	Mobile Homes	Total Homes	Persons per Household	Per Capita Income (77\$)
1980	2,910,607	564,463	576,619	0	1,141,082	2.55	10,378
1981	2,906,001	563,529	580,557	0	1,144,086	2.54	10,234
1982	2,946,350	562,365	580,798	0	1,143,163	2.58	10,035
1983	3,007,633	561,685	585,945	0	1,147,630	2.62	10,203
1984	3,054,757	562,010	595,374	0	1,157,384	2.64	10,688
1985	3,144,279	562,342	614,014	0	1,176,356	2.67	10,849
1986	3,234,166	563,178	631,665	0	1,194,843	2.71	10,908
1987	3,290,344	564,196	643,697	0	1,207,894	2.72	11,131
1988	3,350,965	565,410	652,205	0	1,217,615	2.75	11,253
1989	3,411,436	567,625	656,614	0	1,224,239	2.79	11,270
1990	3,427,208	567,438	656,823	0	1,224,261	2.80	11,540
1991	3,462,418	568,173	668,543	0	1,236,716	2.80	11,081
1992	3,497,960	568,558	676,945	0	1,245,502	2.81	10,975
1993	3,507,744	567,487	683,458	0	1,250,945	2.80	10,748
1994	3,490,169	570,418	684,561	0	1,254,979	2.78	10,800
1995	3,474,020	573,285	685,121	0	1,258,407	2.76	11,131
1996	3,479,584	576,141	685,761	0	1,261,903	2.76	11,469
1997	3,500,821	579,689	686,594	0	1,266,283	2.77	11,700
1998	3,534,564	582,989	688,280	0	1,271,269	2.78	12,301
1999	3,581,520	585,749	690,588	0	1,276,337	2.81	12,389
2000	3,635,849	587,246	692,156	0	1,279,402	2.84	12,814
2001	3,699,696	588,926	694,213	0	1,283,140	2.88	12,407
2002	3,722,136	590,882	698,088	0	1,288,971	2.89	11,831
2003	3,744,718	592,857	701,974	0	1,294,830	2.89	12,201
2004	3,767,443	594,848	705,871	0	1,300,719	2.90	12,773
2005	3,790,308	596,859	709,782	0	1,306,641	2.90	13,317
2006	3,813,315	598,885	713,705	0	1,312,590	2.91	13,834
2007	3,836,465	600,927	717,640	0	1,318,566	2.91	14,129
2008	3,859,760	602,986	721,586	0	1,324,572	2.91	14,533
2009	3,883,202	605,064	725,545	0	1,330,609	2.92	14,787
2010	3,906,787	607,157	729,516	0	1,336,673	2.92	15,066
2011	3,930,522	609,264	733,501	0	1,342,765	2.93	15,308
2012	3,954,404	611,387	737,498	0	1,348,885	2.93	15,486
2013	3,978,434	613,528	741,509	0	1,355,036	2.94	15,648

Annual Growth Rates (%)

1980-1990	1.6	0.1	1.3	0.7	0.9	1.1
1990-2000	0.6	0.3	0.5	0.4	0.2	1.1
2000-2003	1.0	0.3	0.5	0.4	0.6	-1.6
2003-2008	0.6	0.3	0.6	0.5	0.2	3.6
2008-2013	0.6	0.3	0.5	0.5	0.2	1.5
2003-2013	0.6	0.3	0.5	0.5	0.2	2.5

**Table F-3
Residential Forecast Demographic Inputs by Planning Area**

SDG&E

Year	Household Population	Single Family Homes	Multi-family Homes	Mobile Homes	Total Homes	Persons per Household	Per Capita Income (77\$)
1980	1,890,510	437,909	234,013	46,391	718,312	2.63	9,680
1981	1,913,432	443,191	235,905	46,806	725,903	2.64	9,630
1982	1,948,429	448,271	236,703	47,436	732,411	2.66	9,595
1983	2,033,614	461,176	242,903	48,045	752,124	2.70	9,845
1984	2,136,849	475,610	258,571	48,899	783,080	2.73	10,519
1985	2,235,849	490,876	277,898	50,420	819,194	2.73	10,832
1986	2,323,872	510,061	299,128	51,380	860,569	2.70	10,967
1987	2,388,259	528,118	309,313	52,841	890,272	2.68	11,104
1988	2,442,254	545,556	317,607	53,262	916,425	2.67	11,290
1989	2,495,064	558,817	320,491	54,086	933,395	2.67	11,392
1990	2,549,875	567,208	324,373	54,503	946,084	2.70	11,234
1991	2,604,755	579,522	330,139	54,382	964,042	2.70	10,977
1992	2,653,616	588,157	335,173	54,261	977,591	2.71	10,949
1993	2,670,770	596,402	337,933	54,140	988,476	2.70	10,839
1994	2,688,862	604,500	340,239	54,020	998,758	2.69	11,016
1995	2,699,011	612,160	342,906	53,900	1,008,967	2.68	11,333
1996	2,714,332	621,298	344,183	53,781	1,019,262	2.66	11,832
1997	2,780,840	630,679	348,009	53,743	1,032,431	2.69	12,221
1998	2,842,514	641,900	352,089	53,706	1,047,694	2.71	12,890
1999	2,908,551	652,564	358,696	53,668	1,064,929	2.73	13,330
2000	2,979,110	661,707	365,061	53,630	1,080,399	2.76	13,425
2001	3,051,090	670,763	370,789	53,593	1,095,144	2.79	13,020
2002	3,123,124	685,118	378,546	55,059	1,118,723	2.79	12,389
2003	3,190,177	697,067	384,998	56,313	1,138,378	2.80	12,611
2004	3,257,367	708,035	390,897	57,459	1,156,391	2.82	13,039
2005	3,324,697	718,403	396,448	58,539	1,173,390	2.83	13,459
2006	3,380,449	728,847	402,029	59,626	1,190,502	2.84	13,919
2007	3,436,312	739,588	407,788	60,746	1,208,122	2.84	14,261
2008	3,492,287	749,747	413,223	61,801	1,224,771	2.85	14,718
2009	3,548,371	759,372	418,360	62,798	1,240,530	2.86	15,030
2010	3,601,092	767,792	422,842	63,693	1,254,327	2.87	15,368
2011	3,645,744	774,805	426,507	64,433	1,265,745	2.88	15,695
2012	3,690,424	782,337	430,462	65,229	1,278,028	2.89	15,961
2013	3,735,131	790,627	434,841	66,108	1,291,576	2.89	16,211

Annual Growth Rates (%)

1980-1990	3.0	2.6	3.3	1.6	2.8	0.2	1.5
1990-2000	1.6	1.6	1.2	-0.2	1.3	0.2	1.8
2000-2003	2.3	1.8	1.8	1.6	1.8	0.5	-2.1
2003-2008	1.8	1.5	1.4	1.9	1.5	0.3	3.1
2008-2013	1.4	1.1	1.0	1.4	1.1	0.3	2.0
2003-2013	1.6	1.3	1.2	1.6	1.3	0.3	2.5

**Table F-3
Residential Forecast Demographic Inputs by Planning Area**

OTHER

Year	Household Population	Single Family Homes	Multi-family Homes	Mobile Homes	Total Homes	Persons per Household	Per Capita Income (77\$)
1980	279,043	71,297	14,400	13,682	99,379	2.81	8,701
1981	283,516	72,235	14,779	14,426	101,440	2.80	8,119
1982	287,332	72,892	14,971	14,997	102,860	2.79	8,003
1983	295,607	74,238	15,160	15,767	105,164	2.81	8,215
1984	303,749	75,722	15,756	16,725	108,203	2.81	8,478
1985	311,142	76,774	16,619	17,456	110,849	2.81	8,456
1986	319,997	78,405	17,500	18,233	114,138	2.80	8,540
1987	328,089	80,076	18,045	18,938	117,059	2.80	8,805
1988	341,569	82,979	18,535	20,074	121,588	2.81	9,058
1989	350,714	85,267	18,997	21,023	125,287	2.80	9,176
1990	359,986	86,818	19,585	21,089	127,492	2.82	9,108
1991	373,724	89,833	20,193	20,936	130,962	2.85	8,736
1992	384,251	92,447	20,360	20,784	133,591	2.88	8,597
1993	392,782	94,546	20,455	20,633	135,633	2.90	8,623
1994	395,920	96,370	20,708	20,482	137,560	2.88	8,703
1995	398,714	97,979	21,014	20,333	139,325	2.86	8,857
1996	402,487	99,361	21,105	20,184	140,649	2.86	8,896
1997	409,111	101,038	21,336	20,131	142,505	2.87	9,199
1998	411,463	102,791	21,703	20,079	144,573	2.85	9,723
1999	417,835	104,887	21,976	20,027	146,889	2.85	9,924
2000	426,820	106,763	22,302	19,975	149,040	2.86	10,538
2001	439,440	108,896	22,764	19,923	151,584	2.90	10,076
2002	454,919	112,288	23,418	20,324	156,031	2.92	9,407
2003	469,257	115,515	24,016	20,679	160,210	2.93	9,488
2004	483,528	118,650	24,595	21,023	164,268	2.94	9,723
2005	497,735	121,648	25,145	21,351	168,144	2.96	9,963
2006	511,817	124,602	25,693	21,676	171,971	2.98	10,224
2007	525,840	127,689	26,273	22,018	175,979	2.99	10,379
2008	539,807	130,824	26,861	22,366	180,051	3.00	10,613
2009	553,715	133,984	27,458	22,719	184,162	3.01	10,736
2010	567,496	137,133	28,056	23,071	188,260	3.01	10,888
2011	580,502	140,030	28,606	23,391	192,027	3.02	11,011
2012	593,458	142,932	29,158	23,713	195,803	3.03	11,088
2013	606,361	145,867	29,720	24,039	199,626	3.04	11,157

Annual Growth Rates (%)

1980-1990	2.6	2.0	3.1	4.4	2.5	0.1	0.5
1990-2000	1.7	2.1	1.3	-0.5	1.6	0.1	1.5
2000-2003	3.2	2.7	2.5	1.2	2.4	0.8	-3.4
2003-2008	2.8	2.5	2.3	1.6	2.4	0.5	2.3
2008-2013	2.4	2.2	2.0	1.5	2.1	0.3	1.0
2003-2013	2.6	2.4	2.2	1.5	2.2	0.4	1.6

**Table F-3
Residential Forecast Demographic Inputs by Planning Area**

BGP

Year	Household Population	Single Family Homes	Multi-family Homes	Mobile Homes	Total Homes	Persons per Household	Per Capita Income (77\$)
1980	330,752	75,767	64,773	337	140,877	2.35	10,381
1981	334,508	75,856	66,409	322	142,586	2.35	10,237
1982	341,963	75,891	67,315	300	143,506	2.38	10,039
1983	351,542	75,943	68,894	278	145,115	2.42	10,207
1984	359,077	76,033	71,560	256	147,850	2.43	10,693
1985	367,021	76,115	73,860	235	150,210	2.44	10,854
1986	374,085	76,197	76,185	214	152,596	2.45	10,914
1987	380,914	76,289	77,991	193	154,473	2.47	11,137
1988	386,985	76,390	79,577	172	156,139	2.48	11,258
1989	395,487	76,553	80,886	165	157,603	2.51	11,274
1990	397,991	76,555	81,890	142	158,587	2.51	11,545
1991	401,092	77,308	82,806	142	160,257	2.50	11,085
1992	404,632	78,026	83,139	142	161,307	2.51	10,979
1993	407,649	78,599	83,330	141	162,070	2.52	10,751
1994	409,348	79,180	83,497	141	162,818	2.51	10,804
1995	409,647	79,763	83,578	140	163,481	2.51	11,135
1996	409,976	80,208	83,595	140	163,943	2.50	11,473
1997	411,145	80,435	83,717	140	164,292	2.50	11,704
1998	413,794	80,630	83,856	140	164,626	2.51	12,305
1999	418,193	80,846	84,039	140	165,025	2.53	12,393
2000	423,649	80,960	84,162	139	165,261	2.56	12,817
2001	430,768	82,076	85,467	138	167,681	2.57	12,410
2002	433,407	82,375	85,747	227	168,350	2.57	11,834
2003	436,065	82,677	86,030	317	169,023	2.58	12,205
2004	438,742	82,980	86,314	406	169,699	2.59	12,778
2005	441,438	83,285	86,600	495	170,380	2.59	13,323
2006	444,153	83,591	86,888	584	171,063	2.60	13,840
2007	446,887	83,899	87,178	673	171,751	2.60	14,135
2008	449,641	84,209	87,470	762	172,442	2.61	14,539
2009	452,415	84,521	87,764	852	173,137	2.61	14,794
2010	455,207	84,835	88,060	941	173,836	2.62	15,073
2011	458,020	85,151	88,358	1,030	174,539	2.62	15,314
2012	460,853	85,468	88,658	1,119	175,245	2.63	15,492
2013	463,706	85,787	88,960	1,208	175,956	2.64	15,655

Annual Growth Rates (%)

1980-1990	1.9	0.1	2.4	-8.3	1.2	0.7	1.1
1990-2000	0.6	0.6	0.3	-0.2	0.4	0.2	1.1
2000-2003	1.0	0.7	0.7	31.6	0.8	0.2	-1.6
2003-2008	0.6	0.4	0.3	19.2	0.4	0.2	3.6
2008-2013	0.6	0.4	0.3	9.7	0.4	0.2	1.5
2003-2013	0.6	0.4	0.3	14.3	0.4	0.2	2.5

**Table F-4
Commercial Forecast Drivers by Planning Area**

PG&E

Year	Thousands of Persons						Millions of 2001 \$				
	Population 0-17	Population 65+	Total Emp.	Retail Emp.	Office Emp.	Wholesale Emp.	Personal Income	Restaurant Sales	Retail Sales	Food Sales	Total Sales
1980	1,706	936	3,566	625	1,728	199.76	226,525	9,322	76,880	6,562	117,261
1981	1,706	950	3,612	634	1,761	200.47	225,924	9,348	74,170	7,037	114,147
1982	1,699	971	3,578	628	1,759	194.75	227,997	9,315	71,120	7,033	108,651
1983	1,701	994	3,620	649	1,781	198.90	239,256	9,966	78,162	7,390	118,226
1984	1,707	1,015	3,793	686	1,854	210.10	256,906	10,496	83,274	7,576	129,083
1985	1,735	1,042	3,900	711	1,924	217.96	265,220	10,696	84,105	7,713	130,001
1986	1,767	1,072	3,964	734	1,974	220.80	271,141	10,777	83,812	7,606	129,669
1987	1,793	1,101	4,088	763	2,050	221.39	279,025	11,055	85,738	7,339	131,435
1988	1,823	1,133	4,246	800	2,121	243.23	290,555	11,293	88,467	7,298	137,727
1989	1,852	1,166	4,356	807	2,187	256.12	300,317	11,342	91,023	7,569	141,738
1990	1,929	1,217	4,466	819	2,268	259.66	309,571	11,350	90,920	7,495	141,877
1991	1,979	1,244	4,486	820	2,296	256.55	308,763	11,166	86,420	7,273	133,602
1992	2,028	1,270	4,471	810	2,326	248.21	316,785	10,936	85,668	7,139	132,708
1993	2,078	1,296	4,476	813	2,344	244.04	318,414	10,857	84,121	7,012	129,074
1994	2,127	1,322	4,521	831	2,378	242.27	327,066	10,982	85,175	6,713	131,767
1995	2,177	1,348	4,632	848	2,447	251.31	343,090	11,298	87,334	6,612	137,872
1996	2,226	1,375	4,797	873	2,525	264.39	361,164	11,706	90,703	6,794	144,763
1997	2,275	1,401	4,962	895	2,605	277.63	380,262	12,122	94,189	6,963	151,876
1998	2,325	1,427	5,136	912	2,714	285.66	404,215	12,513	97,466	6,924	155,965
1999	2,374	1,453	5,280	938	2,806	290.69	429,214	13,126	106,336	7,271	168,664
2000	2,424	1,479	5,507	976	2,956	293.86	462,122	14,009	117,268	7,647	186,841
2001	2,451	1,515	5,591	994	3,020	290.75	455,384	13,818	111,698	7,437	175,692
2002	2,479	1,551	5,576	1,011	3,042	291.92	448,726	13,685	109,441	7,289	175,140
2003	2,507	1,587	5,651	1,025	3,089	294.95	456,255	13,842	110,722	7,377	177,273
2004	2,534	1,622	5,767	1,044	3,164	296.98	468,338	14,091	112,737	7,515	180,639
2005	2,562	1,658	5,882	1,073	3,244	307.24	484,817	14,425	115,491	7,703	185,238
2006	2,590	1,694	6,020	1,097	3,325	315.28	504,386	14,812	118,660	7,917	190,591
2007	2,618	1,730	6,181	1,118	3,438	320.23	523,430	15,201	121,831	8,133	195,899
2008	2,645	1,766	6,315	1,140	3,532	325.41	551,583	15,776	126,493	8,447	203,744
2009	2,673	1,801	6,453	1,164	3,630	332.15	570,043	16,157	129,561	8,653	208,895
2010	2,701	1,837	6,593	1,185	3,728	342.19	589,848	16,559	132,842	8,876	214,403
2011	2,731	1,910	6,746	1,206	3,835	348.77	606,029	16,893	135,531	9,056	218,916
2012	2,760	1,982	6,859	1,225	3,917	355.92	621,990	17,215	138,175	9,234	223,363
2013	2,790	2,054	6,965	1,241	3,991	363.56	637,435	17,525	140,724	9,407	227,652

Annual Growth Rates (%)

1980-1990	1.2	2.7	2.3	2.7	2.8	2.7	3.2	2.0	1.7	1.3	1.9
1990-2000	2.3	2.0	2.1	1.8	2.7	1.2	4.1	2.1	2.6	0.2	2.8
2000-2003	1.1	2.4	0.9	1.6	1.5	0.1	-0.4	-0.4	-1.9	-1.2	-1.7
2003-2008	1.1	2.2	2.2	2.2	2.7	2.0	3.9	2.7	2.7	2.7	2.8
2008-2013	1.1	3.1	2.0	1.7	2.5	2.2	2.9	2.1	2.2	2.2	2.2
2003-2013	1.1	2.6	2.1	1.9	2.6	2.1	3.4	2.4	2.4	2.5	2.5

**Table F-4
Commercial Forecast Drivers by Planning Area**

SMUD

Year	Thousands of Persons						Millions of 2001 \$				
	Population 0-17	Population 65+	Total Emp.	Retail Emp.	Office Emp.	Wholesale Emp.	Personal Income	Restaurant Sales	Retail Sales	Food Sales	Total Sales
1980	153	74	323	58	195	13.87	17,755	808	6,865	721	9,971
1981	154	76	330	59	201	14.87	17,467	805	6,669	737	9,600
1982	156	78	331	59	204	14.89	17,694	822	6,633	729	9,331
1983	157	81	338	62	208	15.90	18,527	874	7,368	750	10,461
1984	158	83	355	66	215	17.90	20,080	909	7,913	767	11,497
1985	162	86	378	71	229	18.91	21,533	942	8,363	802	12,257
1986	167	90	399	74	240	18.93	22,629	985	8,570	824	12,709
1987	173	95	418	79	251	19.94	23,656	1,015	8,801	777	12,896
1988	178	99	436	83	263	20.96	24,577	1,022	8,958	785	13,414
1989	183	104	451	84	273	20.98	25,964	1,044	9,408	787	13,947
1990	193	110	472	86	287	22.00	27,298	1,054	9,761	810	14,372
1991	198	113	475	88	297	21.00	27,420	1,043	9,103	786	13,365
1992	203	115	466	81	297	20.00	27,857	1,008	8,910	770	13,088
1993	208	117	463	81	297	18.00	27,639	988	8,519	755	12,641
1994	213	120	475	82	306	18.00	28,738	1,019	8,840	725	13,222
1995	219	122	487	82	313	19.00	30,065	1,043	8,813	702	13,381
1996	224	125	498	83	320	20.00	30,559	1,046	8,971	712	13,592
1997	229	127	510	83	328	21.00	31,857	1,070	9,074	711	13,951
1998	234	129	531	84	341	21.00	33,614	1,116	9,467	697	14,579
1999	239	132	556	86	358	21.00	34,847	1,161	10,563	740	16,052
2000	244	134	572	90	366	22.00	36,821	1,205	11,408	780	17,171
2001	247	137	583	91	374	21.00	36,158	1,227	11,256	762	16,851
2002	251	140	583	92	379	21.00	35,472	1,210	10,965	742	16,709
2003	254	143	593	93	388	22.00	35,935	1,219	11,049	748	16,848
2004	257	146	611	95	402	22.00	36,816	1,238	11,221	760	17,130
2005	260	149	625	96	415	22.00	37,827	1,258	11,402	772	17,432
2006	263	152	645	99	431	23.00	39,493	1,297	11,749	795	17,993
2007	266	155	664	101	447	23.00	40,964	1,331	12,047	815	18,477
2008	269	158	680	103	460	24.00	43,168	1,381	12,499	845	19,209
2009	272	161	698	105	475	25.00	44,653	1,416	12,804	865	19,704
2010	275	165	716	107	489	25.00	46,326	1,456	13,155	888	20,270
2011	279	172	736	109	505	26.00	47,750	1,490	13,455	908	20,755
2012	282	179	753	111	517	26.00	49,224	1,525	13,769	929	21,260
2013	286	186	769	114	529	27.00	50,731	1,562	14,095	951	21,783

Annual Growth Rates (%)

1980-1990	2.3	4.1	3.9	3.9	3.9	4.7	4.4	2.7	3.6	1.2	3.7
1990-2000	2.4	2.0	1.9	0.5	2.5	0.0	3.0	1.3	1.6	-0.4	1.8
2000-2003	1.2	2.2	1.2	1.1	2.0	0.0	-0.8	0.4	-1.1	-1.4	-0.6
2003-2008	1.2	2.0	2.8	2.1	3.5	1.8	3.7	2.5	2.5	2.5	2.7
2008-2013	1.2	3.2	2.5	2.1	2.8	2.4	3.3	2.5	2.4	2.4	2.5
2003-2013	1.2	2.6	2.6	2.1	3.1	2.1	3.5	2.5	2.5	2.4	2.6

**Table F-4
Commercial Forecast Drivers by Planning Area**

SCE

Year	Thousands of Persons						Millions of 2001 \$				
	Population 0-17	Population 65+	Total Emp.	Retail Emp.	Office Emp.	Wholesale Emp.	Personal Income	Restaurant Sales	Retail Sales	Food Sales	Total Sales
1980	1,442	667	3,142	521	1,348	203.98	181,347	7,620	62,300	5,795	97,404
1981	1,464	675	3,191	533	1,377	205.86	182,036	7,641	60,608	5,597	95,775
1982	1,477	690	3,118	524	1,373	204.71	182,448	7,554	56,569	5,716	88,491
1983	1,489	705	3,145	528	1,400	211.89	189,274	8,075	61,050	5,973	94,356
1984	1,494	717	3,287	560	1,463	226.29	202,547	8,467	65,093	5,982	102,491
1985	1,512	731	3,397	581	1,523	233.85	210,010	8,670	66,717	5,943	105,498
1986	1,535	751	3,504	600	1,588	239.85	216,554	8,889	67,219	5,855	106,483
1987	1,541	767	3,617	620	1,650	243.13	225,672	9,171	70,194	5,396	110,309
1988	1,536	780	3,738	642	1,716	258.26	233,180	9,347	71,720	5,345	113,457
1989	1,528	793	3,820	650	1,779	268.77	238,884	9,432	73,549	5,559	116,503
1990	1,563	815	3,859	648	1,841	270.99	245,440	9,257	70,692	5,467	112,311
1991	1,610	831	3,768	623	1,854	257.12	240,339	8,891	65,049	5,156	102,209
1992	1,661	847	3,675	606	1,844	248.37	243,221	8,502	63,779	4,923	98,169
1993	1,703	859	3,604	599	1,845	236.88	239,523	8,294	61,191	4,680	95,140
1994	1,747	872	3,627	600	1,861	242.90	242,882	8,509	62,758	4,467	97,791
1995	1,788	884	3,681	614	1,891	248.71	250,423	8,609	62,824	4,403	98,577
1996	1,830	896	3,744	619	1,928	253.79	259,045	8,837	64,056	4,471	101,122
1997	1,880	912	3,848	632	1,974	263.71	269,936	9,154	66,027	4,618	105,266
1998	1,930	927	3,993	647	2,052	272.82	287,000	9,615	68,625	4,616	109,066
1999	1,975	941	4,089	665	2,114	278.82	295,245	10,112	74,147	4,755	116,099
2000	2,024	956	4,206	691	2,188	281.54	314,927	10,573	79,841	4,727	123,208
2001	2,046	979	4,262	706	2,232	278.42	311,200	10,654	77,831	4,663	119,279
2002	2,068	1,001	4,267	716	2,257	280.50	307,689	10,581	76,417	4,576	119,208
2003	2,089	1,024	4,347	732	2,308	287.02	313,849	10,735	77,521	4,641	121,016
2004	2,111	1,046	4,469	751	2,386	293.28	323,465	10,970	79,194	4,740	123,772
2005	2,130	1,068	4,579	768	2,461	300.35	335,543	11,257	81,245	4,861	127,170
2006	2,150	1,090	4,706	789	2,542	309.21	350,256	11,601	83,701	5,005	131,250
2007	2,172	1,112	4,830	805	2,627	315.83	363,417	11,906	85,861	5,131	134,848
2008	2,194	1,135	4,930	820	2,698	323.77	382,851	12,354	89,061	5,322	140,169
2009	2,216	1,158	5,034	837	2,773	330.75	395,472	12,645	91,120	5,442	143,602
2010	2,238	1,181	5,132	851	2,842	336.85	408,968	12,956	93,320	5,572	147,271
2011	2,243	1,229	5,229	862	2,911	343.36	418,553	13,165	94,797	5,658	149,770
2012	2,247	1,276	5,293	872	2,961	349.37	428,024	13,373	96,258	5,742	152,241
2013	2,252	1,324	5,352	879	3,006	355.69	437,167	13,573	97,670	5,823	154,629

Annual Growth Rates (%)

1980-1990	0.8	2.0	2.1	2.2	3.2	2.9	3.1	2.0	1.3	-0.6	1.4
1990-2000	2.6	1.6	0.9	0.6	1.7	0.4	2.5	1.3	1.2	-1.4	0.9
2000-2003	1.1	2.3	1.1	1.9	1.8	0.6	-0.1	0.5	-1.0	-0.6	-0.6
2003-2008	1.0	2.1	2.5	2.3	3.2	2.4	4.1	2.8	2.8	2.8	3.0
2008-2013	0.5	3.1	1.7	1.4	2.2	1.9	2.7	1.9	1.9	1.8	2.0
2003-2013	0.8	2.6	2.1	1.8	2.7	2.2	3.4	2.4	2.3	2.3	2.5

**Table F-4
Commercial Forecast Drivers by Planning Area**

LADWP

Year	Thousands of Persons						Millions of 2001 \$				
	Population 0-17	Population 65+	Total Emp.	Retail Emp.	Office Emp.	Wholesale Emp.	Personal Income	Restaurant Sales	Retail Sales	Food Sales	Total Sales
1980	589	295	1,439	216	615	105.73	74,950	3,147	25,899	2,327	41,247
1981	601	297	1,452	218	624	104.99	74,999	3,139	24,952	2,216	40,167
1982	611	303	1,411	212	618	103.86	75,123	3,080	22,984	2,248	36,655
1983	619	309	1,414	215	629	105.10	77,945	3,257	24,412	2,341	38,362
1984	623	313	1,462	227	653	111.10	82,952	3,417	25,867	2,348	41,201
1985	631	318	1,502	233	676	113.94	85,771	3,475	26,495	2,321	42,275
1986	642	325	1,542	240	699	116.38	88,205	3,573	26,523	2,284	42,409
1987	644	329	1,583	247	722	116.41	91,678	3,684	27,452	2,091	43,591
1988	640	332	1,616	256	747	117.26	93,940	3,761	27,936	2,068	44,458
1989	634	334	1,648	259	774	120.90	95,539	3,803	28,544	2,134	45,652
1990	647	341	1,658	259	796	119.77	98,902	3,730	27,534	2,087	44,156
1991	658	342	1,584	242	787	110.74	95,063	3,519	24,837	1,931	39,323
1992	665	340	1,498	229	759	101.45	93,966	3,273	23,835	1,798	36,411
1993	680	343	1,456	225	754	94.65	92,067	3,146	22,572	1,694	35,146
1994	694	345	1,452	222	755	96.63	92,411	3,219	23,049	1,607	35,925
1995	710	348	1,467	225	766	98.02	95,032	3,243	22,944	1,577	35,804
1996	725	351	1,485	226	778	99.02	97,851	3,325	23,247	1,588	36,221
1997	733	351	1,495	226	781	101.02	99,591	3,380	23,309	1,610	36,758
1998	742	351	1,515	228	793	103.06	104,596	3,501	23,642	1,584	37,349
1999	755	353	1,528	233	806	104.42	106,259	3,646	25,327	1,618	39,276
2000	764	353	1,547	240	822	104.33	110,995	3,761	27,068	1,622	41,241
2001	765	358	1,548	243	829	102.63	108,586	3,752	26,110	1,549	39,549
2002	765	362	1,536	244	831	102.13	106,318	3,691	25,384	1,505	39,138
2003	766	367	1,554	248	842	103.83	107,773	3,721	25,593	1,518	39,488
2004	767	371	1,588	253	865	105.94	110,446	3,781	26,000	1,542	40,159
2005	770	377	1,622	258	888	107.92	114,196	3,867	26,587	1,576	41,125
2006	773	382	1,662	264	915	110.20	118,600	3,965	27,251	1,615	42,225
2007	774	387	1,692	267	937	111.89	121,906	4,032	27,689	1,640	42,970
2008	774	391	1,712	269	954	113.17	127,183	4,144	28,441	1,684	44,227
2009	775	396	1,733	272	971	114.78	130,109	4,200	28,815	1,705	44,867
2010	776	400	1,751	274	986	116.03	133,254	4,262	29,224	1,729	45,564
2011	779	419	1,788	278	1,012	118.21	136,549	4,337	29,717	1,757	46,381
2012	783	437	1,813	281	1,030	120.37	139,731	4,409	30,189	1,784	47,163
2013	787	457	1,836	284	1,048	122.57	142,851	4,479	30,653	1,811	47,933

Annual Growth Rates (%)

1980-1990	0.9	1.5	1.4	1.8	2.6	1.3	2.8	1.7	0.6	-1.1	0.7
1990-2000	1.7	0.3	-0.7	-0.8	0.3	-1.4	1.2	0.1	-0.2	-2.5	-0.7
2000-2003	0.1	1.3	0.1	1.2	0.8	-0.2	-1.0	-0.4	-1.8	-2.2	-1.4
2003-2008	0.2	1.3	2.0	1.6	2.5	1.7	3.4	2.2	2.1	2.1	2.3
2008-2013	0.3	3.1	1.4	1.1	1.9	1.6	2.4	1.6	1.5	1.5	1.6
2003-2013	0.3	2.2	1.7	1.3	2.2	1.7	2.9	1.9	1.8	1.8	2.0

**Table F-4
Commercial Forecast Drivers by Planning Area**

SDG&E

Year	Thousands of Persons						Millions of 2001 \$				
	Population 0-17	Population 65+	Total Emp.	Retail Emp.	Office Emp.	Wholesale Emp.	Personal Income	Restaurant Sales	Retail Sales	Food Sales	Total Sales
1980	374	202	703	134	348	27.52	46,803	2,011	15,442	1,485	23,023
1981	379	205	722	135	360	29.75	47,836	2,053	15,685	1,448	23,290
1982	381	210	719	137	363	31.88	48,782	2,085	15,026	1,526	22,126
1983	384	214	734	143	372	35.19	51,105	2,286	16,585	1,646	24,055
1984	389	220	786	155	395	36.65	56,063	2,404	18,173	1,773	26,837
1985	398	227	838	162	421	40.05	59,303	2,556	19,489	1,832	28,691
1986	410	238	881	172	446	41.34	62,180	2,658	20,284	1,859	29,967
1987	420	249	930	182	474	46.56	65,228	2,778	21,454	1,674	31,145
1988	429	261	987	199	499	45.63	68,695	2,914	22,258	1,718	32,680
1989	438	275	1,027	206	520	47.09	72,042	2,943	23,050	1,844	34,224
1990	465	289	1,058	209	547	49.42	73,179	2,943	22,191	1,836	32,784
1991	482	295	1,058	206	563	47.43	73,165	2,883	20,647	1,751	30,166
1992	500	301	1,049	198	574	45.80	74,306	2,817	20,732	1,689	30,186
1993	517	307	1,050	202	579	46.01	74,083	2,785	20,399	1,628	29,476
1994	535	313	1,065	202	592	49.48	75,959	2,837	20,600	1,550	29,936
1995	553	320	1,097	202	611	53.06	78,594	2,934	20,722	1,530	30,597
1996	571	326	1,134	208	632	55.65	82,779	3,033	21,413	1,560	31,991
1997	588	331	1,187	212	657	58.19	87,351	3,146	22,513	1,615	34,226
1998	605	337	1,249	216	692	59.74	93,834	3,324	24,031	1,638	36,347
1999	622	343	1,304	223	726	61.11	98,948	3,494	26,245	1,713	39,385
2000	639	349	1,355	232	757	61.29	101,819	3,696	28,565	1,758	42,146
2001	651	356	1,388	236	781	61.36	100,739	3,732	28,128	1,698	41,326
2002	663	363	1,390	241	787	61.64	100,059	3,724	27,736	1,674	41,486
2003	675	371	1,412	246	801	63.13	101,778	3,767	28,057	1,693	42,003
2004	687	378	1,444	251	824	64.41	104,522	3,835	28,560	1,723	42,808
2005	698	385	1,479	257	851	65.80	108,265	3,928	29,253	1,764	43,916
2006	710	392	1,517	263	877	67.30	112,957	4,048	30,120	1,815	45,300
2007	721	399	1,560	270	909	69.70	117,731	4,172	31,031	1,870	46,744
2008	733	406	1,598	276	936	72.10	124,592	4,350	32,330	1,946	48,802
2009	745	413	1,638	283	965	73.50	129,298	4,473	33,226	2,000	50,223
2010	756	420	1,676	290	992	75.91	134,347	4,604	34,185	2,056	51,744
2011	765	430	1,720	295	1,022	77.32	138,589	4,716	34,992	2,104	53,024
2012	773	439	1,753	300	1,046	79.65	142,725	4,824	35,775	2,151	54,262
2013	781	449	1,785	306	1,067	81.10	146,766	4,930	36,539	2,195	55,471

Annual Growth Rates (%)

1980-1990	2.2	3.7	4.2	4.6	4.6	6.0	4.6	3.9	3.7	2.1	3.6
1990-2000	3.2	1.9	2.5	1.0	3.3	2.2	3.4	2.3	2.6	-0.4	2.5
2000-2003	1.9	2.1	1.4	2.1	1.9	1.0	0.0	0.6	-0.6	-1.2	-0.1
2003-2008	1.7	1.8	2.5	2.3	3.2	2.7	4.1	2.9	2.9	2.8	3.0
2008-2013	1.3	2.0	2.2	2.1	2.7	2.4	3.3	2.5	2.5	2.4	2.6
2003-2013	1.5	1.9	2.4	2.2	2.9	2.5	3.7	2.7	2.7	2.6	2.8

**Table F-4
Commercial Forecast Drivers by Planning Area**

OTHER

Year	Thousands of Persons						Millions of 2001 \$				
	Population 0-17	Population 65+	Total Emp.	Retail Emp.	Office Emp.	Wholesale Emp.	Personal Income	Restaurant Sales	Retail Sales	Food Sales	Total Sales
1980	29	17	40	7	22	1.13	2,880	133	1,009	127	1,416
1981	28	18	38	8	21	1.13	2,702	133	940	134	1,333
1982	28	18	36	7	19	1.13	2,658	124	852	131	1,187
1983	27	19	37	7	19	1.13	2,755	131	884	134	1,249
1984	27	19	39	8	20	1.40	2,918	136	912	133	1,310
1985	28	19	39	9	21	1.40	2,991	131	909	138	1,300
1986	28	20	40	9	21	1.55	3,081	134	928	133	1,317
1987	30	21	42	9	22	0.39	3,190	142	956	143	1,380
1988	31	22	46	9	24	0.38	3,314	147	999	150	1,481
1989	32	23	48	9	27	0.49	3,491	149	1,043	154	1,551
1990	32	23	50	9	28	0.64	3,628	152	1,047	153	1,582
1991	32	24	50	9	28	0.63	3,635	143	1,000	148	1,497
1992	32	24	52	10	29	0.62	3,686	142	1,000	143	1,487
1993	32	25	51	11	29	0.61	3,700	140	986	138	1,466
1994	32	25	54	12	32	0.60	3,813	141	986	128	1,478
1995	32	26	55	11	33	0.59	3,910	139	976	125	1,496
1996	32	26	57	13	34	0.67	4,020	137	978	123	1,477
1997	32	27	57	14	34	0.66	4,224	136	984	120	1,493
1998	33	27	60	14	36	0.65	4,416	134	985	117	1,491
1999	33	28	61	14	37	1.64	4,556	143	1,067	125	1,634
2000	33	28	64	14	39	1.64	4,838	146	1,124	126	1,743
2001	33	29	65	14	39	0.63	4,685	137	1,078	119	1,657
2002	33	29	65	14	40	0.62	4,591	133	1,050	117	1,643
2003	33	29	66	14	41	0.61	4,664	135	1,062	118	1,660
2004	33	30	67	14	42	0.61	4,780	138	1,081	119	1,692
2005	33	30	68	14	43	1.61	4,944	142	1,106	121	1,734
2006	34	31	70	15	44	1.60	5,155	146	1,139	125	1,787
2007	34	31	72	15	46	1.66	5,359	150	1,172	129	1,840
2008	34	31	74	15	46	1.65	5,651	156	1,218	133	1,915
2009	34	32	76	16	47	1.64	5,840	160	1,247	136	1,961
2010	34	32	77	16	51	1.63	6,044	163	1,276	138	2,011
2011	34	33	79	17	51	1.62	6,199	166	1,297	142	2,046
2012	35	34	81	17	52	1.62	6,400	171	1,331	144	2,101
2013	36	35	82	18	53	1.69	6,597	174	1,363	147	2,154

Annual Growth Rates (%)

1980-1990	1.0	3.1	2.3	3.3	2.3	-5.5	2.3	1.3	0.4	1.9	1.1
1990-2000	0.3	2.0	2.6	4.0	3.4	9.8	2.9	-0.4	0.7	-2.0	1.0
2000-2003	0.4	1.5	1.3	0.4	2.2	-27.9	-1.2	-2.5	-1.9	-2.2	-1.6
2003-2008	0.3	1.3	2.1	1.0	2.2	21.9	3.9	2.9	2.8	2.6	2.9
2008-2013	1.2	2.4	2.2	4.4	2.7	0.4	3.1	2.2	2.3	2.0	2.4
2003-2013	0.7	1.9	2.1	2.7	2.5	10.6	3.5	2.6	2.5	2.3	2.6

**Table F-4
Commercial Forecast Drivers by Planning Area**

BGP

Year	Thousands of Persons						Millions of 2001 \$				
	Population 0-17	Population 65+	Total Emp.	Retail Emp.	Office Emp.	Wholesale Emp.	Personal Income	Restaurant Sales	Retail Sales	Food Sales	Total Sales
1980	67	33	163	24	70	12.02	8,499	356	2,932	264	4,673
1981	68	34	165	25	71	11.93	8,500	355	2,824	251	4,548
1982	69	34	160	24	70	11.79	8,510	348	2,600	254	4,148
1983	70	35	160	24	71	11.93	8,826	368	2,761	265	4,340
1984	71	35	166	26	74	12.60	9,389	386	2,925	265	4,661
1985	71	36	170	26	76	12.89	9,682	392	2,988	262	4,770
1986	72	37	174	27	79	13.16	9,953	403	2,991	257	4,783
1987	73	37	179	28	81	13.16	10,343	415	3,095	235	4,915
1988	72	37	182	29	84	13.25	10,592	424	3,147	233	5,008
1989	71	38	186	29	87	13.65	10,766	428	3,214	240	5,139
1990	73	38	187	29	90	13.52	11,140	420	3,098	235	4,970
1991	74	39	179	27	89	12.56	10,762	398	2,809	218	4,448
1992	76	39	170	26	86	11.56	10,690	372	2,709	204	4,138
1993	78	39	166	26	86	10.83	10,518	359	2,576	193	4,011
1994	80	40	166	25	87	11.10	10,596	369	2,640	184	4,116
1995	82	40	169	26	88	11.33	10,962	374	2,644	182	4,127
1996	84	41	172	26	90	11.49	11,331	385	2,690	184	4,190
1997	85	41	174	26	91	11.79	11,604	393	2,713	187	4,279
1998	87	41	177	27	93	12.07	12,224	409	2,761	185	4,361
1999	89	41	179	27	95	12.29	12,481	428	2,972	190	4,609
2000	90	42	183	28	97	12.35	13,112	444	3,195	191	4,868
2001	91	42	183	29	98	12.19	12,871	444	3,092	183	4,684
2002	91	43	183	29	99	12.19	12,664	439	3,021	179	4,658
2003	92	44	186	30	101	12.45	12,901	445	3,061	181	4,723
2004	92	45	191	30	104	12.76	13,279	454	3,124	185	4,824
2005	93	46	196	31	107	13.08	13,819	468	3,215	190	4,973
2006	94	46	202	32	111	13.42	14,421	482	3,311	196	5,130
2007	94	47	206	32	114	13.69	14,888	492	3,379	200	5,244
2008	95	48	210	33	117	13.91	15,606	508	3,487	206	5,423
2009	96	49	214	33	120	14.18	16,040	517	3,550	210	5,527
2010	96	49	217	34	122	14.40	16,506	528	3,617	214	5,640
2011	97	52	222	34	126	14.72	16,972	539	3,691	218	5,760
2012	98	55	226	35	129	15.08	17,470	551	3,771	222	5,892
2013	99	57	231	36	132	15.44	17,959	563	3,851	227	6,021

Annual Growth Rates (%)

1980-1990	0.9	1.4	1.4	1.7	2.5	1.2	2.7	1.7	0.6	-1.2	0.6
1990-2000	2.2	0.8	-0.2	-0.3	0.8	-0.9	1.6	0.6	0.3	-2.0	-0.2
2000-2003	0.5	1.7	0.6	1.6	1.3	0.3	-0.5	0.1	-1.4	-1.8	-1.0
2003-2008	0.7	1.8	2.5	2.1	3.0	2.2	3.9	2.7	2.6	2.6	2.8
2008-2013	0.8	3.6	1.9	1.6	2.4	2.1	2.8	2.1	2.0	2.0	2.1
2003-2013	0.8	2.7	2.2	1.8	2.7	2.2	3.4	2.4	2.3	2.3	2.5

Table F-3
Industrial Shipments by SIC and Planning Area
(Millions of 2001 \$)

SIC	Planning Area																	Annual Growth Rates (%)		
		1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	1990-2000	2000-2003	2003-2013
10	BGP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11.1	4.4	3.1
13	BGP	17	27	13	16	15	16	16	16	17	17	17	17	17	17	17	17	-2.5	5.7	0.9
14	BGP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
15	BGP	1,473	1,393	1,899	1,958	1,795	1,811	1,844	1,856	1,905	1,908	1,871	1,856	1,848	1,836	1,822	1,813	2.6	-1.6	0.0
203	BGP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-0.7	4.3	3.7
206	BGP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
20x	BGP	420	423	497	493	516	527	535	554	567	582	596	611	621	633	644	653	1.7	2.0	2.2
22	BGP	14	20	40	36	36	35	35	37	38	40	42	44	45	47	48	49	10.9	-4.2	3.5
23	BGP	137	179	269	281	301	308	313	318	314	308	301	294	290	285	281	278	6.9	4.6	-1.0
24	BGP	20	15	18	17	17	16	17	18	19	19	19	20	20	20	21	21	-1.0	-3.4	2.5
25	BGP	70	66	92	86	85	84	90	95	95	98	100	102	104	107	109	112	2.7	-2.7	2.9
261	BGP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
262	BGP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-11.7	-4.6	0.6
26X	BGP	35	36	38	35	34	33	36	39	40	41	42	43	44	45	46	47	0.8	-3.7	3.6
27	BGP	475	417	447	421	414	426	439	456	471	469	464	462	461	459	457	456	-0.6	-1.6	0.7
28	BGP	350	369	484	464	458	495	542	592	633	660	675	684	701	715	727	739	3.3	0.8	4.1
29	BGP	6	5	5	5	5	5	5	5	5	5	5	4	4	4	4	4	-2.3	-0.1	-2.9
308	BGP	178	183	212	203	202	205	214	227	240	239	236	231	230	227	225	223	1.7	-1.1	0.9
30X	BGP	16	18	20	19	19	19	19	20	22	22	22	21	21	21	21	21	2.4	-1.8	1.3
31	BGP	4	5	6	5	5	5	6	7	7	7	7	7	7	7	7	7	2.4	-1.2	3.1
321	BGP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-26.4	-3.3	1.0
324	BGP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
32X	BGP	22	17	24	22	22	23	24	25	25	25	26	26	27	27	27	27	0.9	-1.2	1.6
33	BGP	65	58	72	68	67	67	69	73	77	78	80	83	85	86	88	90	1.0	-2.3	2.9
34	BGP	448	426	502	475	475	487	510	539	555	561	558	553	552	551	549	546	1.1	-1.0	1.2
357	BGP	34	98	633	524	339	344	331	332	320	333	368	400	412	431	451	471	34.0	-18.4	3.2
35X	BGP	202	201	271	253	213	200	203	210	214	221	225	226	227	228	229	231	2.9	-9.6	1.5
366	BGP	63	99	215	202	175	183	192	201	209	215	224	236	242	248	254	261	13.0	-5.1	3.6
367	BGP	80	139	299	259	191	228	262	297	324	348	412	473	516	563	614	663	14.1	-8.7	11.3
36X	BGP	330	344	416	385	343	326	338	357	373	381	392	399	403	406	409	413	2.3	-7.8	2.4
37	BGP	3,330	1,775	1,788	1,683	1,239	1,146	1,165	1,251	1,362	1,452	1,523	1,603	1,693	1,764	1,828	1,887	-6.0	-13.8	5.1
38	BGP	1,311	1,019	1,126	1,136	1,098	1,191	1,257	1,329	1,393	1,436	1,474	1,530	1,565	1,592	1,624	1,660	-1.5	1.9	3.4
39	BGP	48	58	86	81	80	82	86	90	97	95	92	89	88	87	85	84	6.1	-1.9	0.3
10	LADWP	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	11.1	4.4	3.1
13	LADWP	157	246	121	145	141	143	146	148	151	153	157	157	157	157	157	157	-2.5	5.7	0.9
14	LADWP	57	48	35	36	35	35	38	42	40	41	42	42	42	43	43	43	-4.7	-0.3	2.0
15	LADWP	4,690	4,435	6,047	6,234	5,714	5,766	5,872	5,910	6,065	6,075	5,957	5,909	5,884	5,847	5,801	5,772	2.6	-1.6	0.0
203	LADWP	203	178	190	192	207	216	223	235	243	254	265	277	286	294	303	310	-0.7	4.3	3.7
206	LADWP	28	24	29	29	31	32	32	33	34	35	36	37	37	38	38	39	0.2	3.2	2.0
20x	LADWP	5,564	5,342	6,006	5,928	6,186	6,289	6,346	6,549	6,665	6,822	6,950	7,104	7,199	7,309	7,415	7,509	0.8	1.5	1.8
22	LADWP	421	597	1,128	1,035	1,020	996	1,008	1,046	1,099	1,145	1,203	1,267	1,309	1,354	1,394	1,437	10.4	-4.1	3.7
23	LADWP	4,858	6,102	9,267	9,739	10,461	10,687	10,882	11,042	10,931	10,720	10,493	10,287	10,139	10,003	9,863	9,753	6.7	4.9	-0.9
24	LADWP	224	164	202	187	189	182	188	200	213	218	217	222	226	229	231	234	-1.0	-3.4	2.5
25	LADWP	1,044	900	1,180	1,120	1,101	1,101	1,175	1,248	1,251	1,281	1,309	1,346	1,369	1,403	1,437	1,471	1.2	-2.3	2.9
261	LADWP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
262	LADWP	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-11.7	-4.6	0.6
26X	LADWP	380	363	345	319	306	303	320	345	354	362	371	382	388	396	403	412	-1.0	-4.2	3.1
27	LADWP	3,649	3,111	3,267	3,091	3,055	3,156	3,258	3,401	3,523	3,527	3,506	3,507	3,513	3,510	3,506	3,509	-1.1	-1.1	1.1
28	LADWP	2,194	2,081	2,843	2,720	2,679	2,889	3,155	3,443	3,674	3,828	3,915	3,972	4,073	4,157	4,226	4,297	2.6	0.5	4.0
29	LADWP	3,000	2,397	2,381	2,288	2,320	2,376	2,400	2,519	2,559	2,384	2,261	2,040	1,979	1,929	1,847	1,772	-2.3	-0.1	-2.9
308	LADWP	748	700	645	607	595	591	606	630	653	640	622	601	590	576	564	554	-1.5	-2.8	-0.7
30X	LADWP	74	73	73	71	69	68	71	74	77	77	76	75	75	74	73	72	-0.1	-2.1	0.6
31	LADWP	230	234	291	268	281	280	308	337	362	372	368	374	376	377	378	379	2.4	-1.2	3.1
321	LADWP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-26.4	-3.3	1.0
324	LADWP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27.5	2.5	4.9
32X	LADWP	319	252	310	294	295	301	311	324	333	335	342	350	351	351	353	354	-0.3	-1.0	1.6
33	LADWP	953	737	822	772	756	756	771	807	842	857	871	889	906	920	934	947	-1.5	-2.8	2.3
34	LADWP	1,772	1,546	1,649	1,554	1,547	1,576	1,639	1,721	1,759	1,765	1,748	1,724	1,713	1,703	1,690	1,676	-0.7	-1.5	0.6

Table F-3
Industrial Shipments by SIC and Planning Area
(Millions of 2001 \$)

SIC	Planning Area	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	1990-2000	2000-2003	2003-2013	
357	LADWP	460	983	5,941	4,897	3,147	3,165	3,028	3,024	2,865	2,977	3,276	3,545	3,627	3,776	3,943	4,096	29.2	-18.9	2.6	
35X	LADWP	1,275	1,153	1,369	1,275	1,068	991	995	1,019	1,031	1,053	1,066	1,059	1,054	1,051	1,051	1,051	0.7	-10.2	0.6	
366	LADWP	220	387	784	743	646	678	713	752	785	810	848	899	924	950	978	1,005	13.5	-4.7	4.0	
367	LADWP	935	1,147	2,261	1,938	1,428	1,687	1,916	2,127	2,281	2,425	2,839	3,232	3,487	3,775	4,090	4,384	9.2	-9.3	10.0	
36X	LADWP	921	835	973	908	813	765	791	832	864	880	907	923	931	936	941	950	0.5	-7.7	2.2	
37	LADWP	6,221	3,033	2,833	2,678	1,932	1,749	1,764	1,891	2,063	2,201	2,309	2,431	2,570	2,679	2,777	2,867	-7.6	-14.9	5.1	
38	LADWP	3,511	2,586	2,691	2,691	2,589	2,785	2,920	3,077	3,214	3,304	3,391	3,525	3,602	3,661	3,734	3,816	-2.6	1.2	3.2	
39	LADWP	656	756	983	913	888	903	940	976	1,048	1,025	992	950	939	921	904	889	4.1	-2.8	-0.2	
10	OTHER	13	27	58	69	58	57	62	66	63	63	65	66	67	68	69	69	15.8	-0.6	1.9	
13	OTHER	6	12	17	18	17	17	18	19	20	21	22	22	22	22	23	23	10.6	1.5	2.7	
14	OTHER	105	121	219	228	210	211	229	241	228	227	229	231	232	231	230	230	7.6	-1.3	0.9	
15	OTHER	1,782	1,737	2,468	2,527	2,349	2,357	2,366	2,341	2,351	2,321	2,239	2,181	2,141	2,100	2,058	2,023	3.3	-1.5	-1.5	
203	OTHER	180	139	148	141	145	144	142	141	137	136	134	132	130	129	127	125	-1.9	-0.9	-1.4	
206	OTHER	391	307	452	460	495	516	531	559	576	599	619	641	655	670	684	696	1.5	4.5	3.0	
20x	OTHER	18	45	83	86	90	92	95	101	104	111	116	121	126	130	135	139	16.6	3.7	4.2	
22	OTHER	2	4	5	5	6	6	6	6	6	7	6	6	6	6	6	6	11.4	5.7	0.1	
23	OTHER	113	159	140	137	143	137	133	132	126	124	122	118	116	114	112	110	2.2	-0.7	-2.2	
24	OTHER	284	238	273	248	240	222	222	229	238	237	232	230	230	228	226	225	-0.4	-6.7	0.2	
25	OTHER	5	7	7	6	6	6	6	7	7	7	7	8	8	8	8	8	3.7	-3.9	3.0	
261	OTHER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
262	OTHER	44	42	23	22	21	20	21	23	24	25	25	26	26	26	27	27	-6.5	-3.6	2.8	
26X	OTHER	64	85	77	72	70	73	79	86	88	89	90	90	91	91	92	92	1.9	-1.7	2.3	
27	OTHER	130	313	518	505	508	535	574	624	678	708	727	750	773	792	809	826	14.8	1.1	4.4	
28	OTHER	53	57	74	70	70	73	79	85	89	91	94	94	96	98	99	100	3.3	-0.2	3.2	
29	OTHER	11	18	19	17	17	17	18	19	19	18	18	18	18	19	18	18	6.1	-4.0	0.7	
308	OTHER	60	104	143	138	138	142	151	163	175	179	180	179	181	181	181	182	9.1	-0.1	2.5	
30X	OTHER	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	1.1	4.5	4.5	
31	OTHER	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-8.8	-2.1	-0.4	
321	OTHER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
324	OTHER	23	24	38	36	37	38	40	42	43	44	45	46	46	46	47	47	5.1	-0.5	2.1	
32X	OTHER	73	47	58	53	51	51	52	53	53	52	52	52	51	50	49	49	-2.3	-4.3	-0.4	
33	OTHER	81	65	75	72	72	74	77	82	84	85	85	85	86	87	87	87	-0.8	-0.4	1.6	
34	OTHER	81	89	115	107	103	101	102	106	108	107	105	103	102	100	99	98	3.5	-4.1	-0.4	
357	OTHER	216	800	9,216	7,885	5,253	5,468	5,413	5,607	5,540	5,929	6,769	7,815	8,277	8,904	9,614	10,319	45.6	-16.0	6.6	
35X	OTHER	44	53	79	75	62	57	58	59	60	62	64	64	65	65	66	66	6.0	-10.0	1.4	
366	OTHER	8	16	53	50	42	45	47	50	52	54	58	62	65	67	70	72	21.4	-5.3	4.8	
367	OTHER	113	598	1,417	1,243	925	1,113	1,297	1,490	1,659	1,823	2,196	2,560	2,831	3,133	3,462	3,779	28.8	-7.7	13.0	
36X	OTHER	99	85	125	103	90	85	93	100	105	107	110	112	113	113	114	115	2.4	-12.1	3.0	
37	OTHER	102	44	38	36	29	28	28	30	33	35	37	38	40	42	43	45	-9.5	-9.6	4.9	
38	OTHER	29	128	244	253	247	268	286	303	320	337	352	370	382	394	406	419	23.7	3.1	4.6	
39	OTHER	15	29	30	27	26	27	28	29	31	31	30	29	29	29	29	29	7.0	-3.5	0.7	
10	PG&E	257	451	337	356	369	373	399	443	423	427	437	446	452	456	460	465	2.7	3.4	2.2	
13	PG&E	3,409	3,068	2,640	3,169	3,071	3,132	3,199	3,267	3,334	3,401	3,496	3,507	3,514	3,521	3,528	3,535	-2.5	5.9	1.2	
14	PG&E	421	511	588	585	563	554	587	644	607	604	604	600	596	591	585	579	3.4	-2.0	0.5	
15	PG&E	28,254	26,850	43,687	45,002	40,989	41,279	42,045	42,228	43,133	42,977	41,874	41,249	40,878	40,419	39,912	39,538	4.5	-1.9	-0.4	
203	PG&E	6,955	6,717	6,877	6,850	7,189	7,333	7,441	7,681	7,815	8,010	8,179	8,382	8,487	8,609	8,722	8,815	-0.1	2.2	1.9	
206	PG&E	1,451	1,361	1,463	1,438	1,513	1,531	1,545	1,582	1,606	1,638	1,669	1,705	1,723	1,744	1,763	1,779	0.1	1.5	1.5	
20x	PG&E	16,250	18,700	23,265	23,283	24,199	24,672	25,102	26,128	26,834	27,741	28,468	29,262	29,842	30,474	31,069	31,604	3.7	2.0	2.5	
22	PG&E	262	318	514	460	446	426	419	427	435	443	453	467	472	479	484	490	7.0	-6.1	1.4	
23	PG&E	1,368	1,735	2,075	2,107	2,180	2,154	2,128	2,095	2,015	1,915	1,812	1,725	1,656	1,592	1,532	1,481	4.3	1.3	-3.7	
24	PG&E	4,737	3,965	4,644	4,229	4,187	3,947	4,005	4,202	4,391	4,419	4,322	4,323	4,333	4,321	4,298	4,293	-0.2	-5.3	0.8	
25	PG&E	708	703	929	870	853	846	903	954	955	976	990	1,012	1,026	1,047	1,067	1,089	2.8	-3.1	2.6	
261	PG&E	149	59	44	39	38	36	37	37	38	37	36	35	33	32	30	29	27	-11.5	-6.3	-2.8
262	PG&E	223	299	324	294	288	284	300	327	332	336	340	347	348	350	352	353	3.8	-4.3	2.2	
26X	PG&E	2,225	2,322	2,329	2,111	2,001	1,968	2,075	2,235	2,283	2,331	2,371	2,427	2,459	2,495	2,533	2,574	0.5	-5.5	2.7	
27	PG&E	6,580	6,269	6,933	6,434	6,305	6,442	6,576	6,777	6,933	6,841	6,698	6,581	6,511	6,426	6,344	6,279	0.5	-2.4	-0.3	
28	PG&E	6,084	7,258	9,564	9,140	9,014	9,748	10,697	11,732	12,559	13,113	13,409	13,567	13,922	14,207	14,433	14,670	4.6	0.6	4.2	
29	PG&E	14,442	13,174	12,449	11,708	11,871	12,156	12,282	12,889	13,095	12,200	11,496	10,297	9,939	9,644	9,188	8,780	-1.5	-0.8	-3.2	
308	PG&E	1,873	1,945	2,288	2,191	2,193	2,229	2,334	2,477	2,615	2,613	2,580	2,526	2,516	2,488	2,462	2,443	2.0	-0.9	0.9	
30X	PG&E	270	293	375	367	365	367	388	417	445	453	456	457	461	463	464	466	3.3	-0.7	2.4	
31	PG&E	121	107	128	116	120	117	129	144	157	163	163	167	169	171	173	175	0.5	-3.0	4.1	

Table F-3
Industrial Shipments by SIC and Planning Area
(Millions of 2001 \$)

SIC	Planning Area	1990-2013													1990-2000	2000-2003	2003-2013			
		1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010				2011	2012	2013
321	PG&E	132	124	161	149	147	147	150	154	155	153	152	152	149	146	143	140	2.0	-2.9	-0.5
324	PG&E	205	195	304	286	291	300	313	334	346	352	362	372	375	378	380	383	4.0	-0.4	2.5
32X	PG&E	2,277	2,179	2,789	2,598	2,570	2,578	2,647	2,731	2,779	2,766	2,781	2,797	2,774	2,749	2,731	2,713	2.0	-2.6	0.5
33	PG&E	1,528	1,678	2,133	1,996	1,962	1,967	2,017	2,127	2,227	2,266	2,305	2,348	2,391	2,429	2,464	2,497	3.4	-2.7	2.4
34	PG&E	4,162	4,438	5,209	4,994	4,999	5,101	5,342	5,665	5,863	5,938	5,918	5,861	5,861	5,859	5,838	5,815	2.3	-0.7	1.3
357	PG&E	4,730	13,282	79,224	63,362	40,080	39,644	37,075	36,223	33,909	34,460	36,994	38,885	38,947	39,608	40,385	40,979	32.6	-20.6	0.3
35X	PG&E	3,456	5,705	8,808	8,222	6,878	6,481	6,639	6,977	7,203	7,466	7,664	7,798	7,871	7,957	8,060	8,169	9.8	-9.7	2.3
366	PG&E	2,535	5,034	11,712	11,050	9,704	10,214	10,732	11,311	11,810	12,116	12,589	13,176	13,473	13,764	14,086	14,394	16.5	-4.5	3.5
367	PG&E	8,413	15,429	31,077	26,282	19,269	22,735	25,915	28,873	30,995	32,789	38,174	43,111	46,334	49,929	53,844	57,464	14.0	-9.9	9.7
36X	PG&E	2,519	2,808	3,927	3,476	2,983	3,015	3,199	3,470	3,723	3,965	4,205	4,412	4,567	4,711	4,839	4,982	4.5	-8.4	5.2
37	PG&E	9,370	8,346	8,236	7,310	5,706	5,650	5,800	6,157	6,585	6,896	7,140	7,407	7,724	7,952	8,151	8,326	-1.3	-11.8	4.0
38	PG&E	8,790	9,969	14,584	15,324	15,187	16,780	17,989	19,265	20,363	21,202	21,950	22,892	23,565	24,102	24,707	25,363	5.2	4.8	4.2
39	PG&E	782	966	1,403	1,307	1,293	1,324	1,405	1,473	1,578	1,572	1,534	1,492	1,485	1,471	1,456	1,442	6.0	-1.9	0.9
10	SCE	58	124	168	177	186	191	210	235	226	231	238	243	248	252	255	258	11.1	4.4	3.1
13	SCE	1,870	2,934	1,450	1,733	1,679	1,713	1,741	1,769	1,798	1,826	1,873	1,875	1,876	1,877	1,878	1,879	-2.5	5.7	0.9
14	SCE	532	445	329	330	323	326	355	390	373	378	386	390	393	395	397	398	-4.7	-0.3	2.0
15	SCE	21,577	19,868	31,248	32,464	30,036	30,578	31,369	31,674	32,571	32,657	32,029	31,770	31,660	31,470	31,232	31,086	3.8	-0.7	0.2
203	SCE	2,585	2,400	2,424	2,419	2,564	2,635	2,693	2,802	2,878	2,975	3,068	3,178	3,243	3,316	3,384	3,445	-0.6	2.8	2.7
206	SCE	299	322	396	401	429	443	451	467	479	498	513	532	543	556	568	578	2.9	3.8	2.7
20x	SCE	7,220	7,516	9,116	9,063	9,513	9,740	9,912	10,303	10,569	10,889	11,170	11,480	11,695	11,931	12,158	12,361	2.4	2.2	2.4
22	SCE	1,024	1,449	2,945	2,696	2,648	2,582	2,616	2,706	2,836	2,944	3,080	3,226	3,322	3,425	3,517	3,614	11.1	-4.3	3.4
23	SCE	2,643	3,659	5,392	5,618	5,991	6,106	6,213	6,301	6,227	6,084	5,926	5,778	5,677	5,581	5,485	5,407	7.4	4.2	-1.2
24	SCE	2,415	1,772	2,259	2,093	2,103	2,009	2,064	2,187	2,317	2,360	2,344	2,381	2,415	2,435	2,449	2,471	-0.7	-3.8	2.1
25	SCE	2,884	2,816	3,970	3,741	3,660	3,640	3,882	4,110	4,113	4,206	4,294	4,412	4,484	4,592	4,698	4,809	3.2	-2.8	2.8
261	SCE	24	20	7	7	7	7	8	8	8	9	9	9	9	9	9	9	-10.9	-1.1	2.7
262	SCE	384	337	187	173	168	166	174	188	193	194	198	202	203	204	205	206	-6.9	-4.0	2.2
26X	SCE	3,770	3,885	4,128	3,840	3,695	3,686	3,918	4,260	4,388	4,518	4,643	4,803	4,905	5,013	5,128	5,247	0.9	-3.7	3.6
27	SCE	5,926	5,293	5,748	5,388	5,283	5,432	5,582	5,795	5,969	5,933	5,854	5,808	5,785	5,747	5,710	5,686	-0.3	-1.9	0.5
28	SCE	8,797	9,497	12,356	11,837	11,696	12,663	13,858	15,156	16,213	16,909	17,279	17,491	17,942	18,304	18,592	18,896	3.5	0.8	4.1
29	SCE	15,665	12,514	12,434	11,948	12,115	12,406	12,534	13,154	13,364	12,451	11,807	10,653	10,333	10,074	9,643	9,254	-2.3	-0.1	-2.9
308	SCE	4,834	5,039	5,991	5,742	5,732	5,825	6,101	6,487	6,856	6,842	6,765	6,634	6,610	6,540	6,475	6,431	2.2	-0.9	1.0
30X	SCE	955	1,104	1,228	1,190	1,172	1,164	1,211	1,280	1,352	1,359	1,355	1,341	1,343	1,336	1,330	1,326	2.5	-1.8	1.3
31	SCE	83	85	106	97	102	102	112	122	131	135	134	136	136	137	137	138	2.4	-1.2	3.1
321	SCE	18	50	62	59	58	57	59	60	62	62	62	62	62	61	60	59	13.4	-2.8	0.4
324	SCE	279	294	390	360	355	352	356	364	368	363	364	366	361	356	353	349	3.4	-3.4	-0.1
32X	SCE	2,841	2,281	3,155	2,975	2,989	3,041	3,146	3,279	3,379	3,398	3,464	3,538	3,547	3,552	3,565	3,576	1.1	-1.2	1.6
33	SCE	4,418	4,072	5,105	4,814	4,740	4,780	4,926	5,209	5,483	5,616	5,758	5,922	6,068	6,200	6,327	6,448	1.5	-2.2	3.0
34	SCE	8,557	8,285	9,924	9,406	9,410	9,646	10,116	10,706	11,044	11,166	11,120	11,024	11,015	11,006	10,966	10,922	1.5	-0.9	1.3
357	SCE	1,097	3,515	23,023	19,103	12,360	12,567	12,104	12,175	11,759	12,254	13,583	14,782	15,231	15,928	16,713	17,439	35.6	-18.3	3.3
35X	SCE	5,724	5,802	7,981	7,480	6,294	5,909	6,013	6,233	6,378	6,573	6,717	6,763	6,786	6,824	6,876	6,933	3.4	-9.5	1.6
366	SCE	1,181	1,794	3,974	3,736	3,237	3,385	3,533	3,703	3,848	3,949	4,112	4,330	4,430	4,535	4,650	4,762	12.9	-5.2	3.5
367	SCE	3,430	6,486	14,099	12,216	9,025	10,779	12,431	14,110	15,434	16,644	19,708	22,669	24,730	27,028	29,530	31,905	15.2	-8.6	11.5
36X	SCE	4,476	4,792	5,832	5,387	4,799	4,563	4,730	4,999	5,223	5,341	5,505	5,600	5,659	5,700	5,735	5,794	2.7	-7.9	2.4
37	SCE	29,222	15,854	16,196	15,239	11,252	10,443	10,638	11,424	12,434	13,255	13,901	14,630	15,453	16,100	16,679	17,214	-5.7	-13.6	5.1
38	SCE	12,422	9,792	10,997	11,118	10,757	11,694	12,361	13,080	13,715	14,144	14,525	15,073	15,424	15,686	16,002	16,356	-1.2	2.1	3.4
39	SCE	1,369	1,691	2,662	2,502	2,465	2,535	2,673	2,804	3,030	2,987	2,903	2,794	2,774	2,733	2,693	2,656	6.9	-1.6	0.5
10	SDG&E	1	0	5	5	6	6	6	7	7	7	8	8	8	8	8	8	19.5	6.9	3.3
13	SDG&E	18	31	21	22	21	22	21	20	20	19	19	19	19	18	18	18	1.7	0.9	-1.8
14	SDG&E	93	52	48	48	47	46	49	54	51	50	51	51	51	51	51	51	-6.5	-1.1	1.0
15	SDG&E	5,416	6,036	9,717	10,167	9,336	9,331	9,327	9,217	9,316	9,176	8,841	8,600	8,447	8,280	8,110	7,974	6.0	-1.3	-1.6
203	SDG&E	143	232	187	177	179	174	169	168	166	164	162	161	158	157	155	154	2.7	-2.3	-1.3
206	SDG&E	15	11	7	8	8	8	8	8	9	9	9	11	11	12	13	13	-7.1	3.2	4.5
20x	SDG&E	560	791	1,171	1,180	1,253	1,287	1,323	1,383	1,433	1,489	1,543	1,607	1,651	1,698	1,744	1,786	7.7	3.2	3.3
22	SDG&E	33	70	101	90	86	81	80	81	84	86	88	91	92	94	96	97	11.8	-7.1	1.8
23	SDG&E	286	436	683	700	736	735	736	733	715	691	668	646	630	615	601	589	9.1	2.5	-2.2
24	SDG&E	174	103	115	100	97	90	90	92	95	93	90	89	89	87	86	85	-4.1	-7.8	-0.5
25	SDG&E	179	219	400	380	377	378	407	435	441	457	474	492	506	523	541	558	8.4	-1.9	4.0
261	SDG&E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
262	SDG&E	1	1	1	1	1	1	1	1	1	1	1	2	2	2	3	3	3.5	-1.1	10.4
26X	SDG&E	88	122	187	173	166	166	177	193	200	209	218	227	234	242	249	257	7.8	-4.0	4.5
27	SDG&E	1,457	1,656	2,005	1,872	1,832	1,875	1,930	2,009	2,074	2,069	2,052	2,044	2,042	2,035	2,028	2,025	3.2	-2.2	0.8

Table F-3
Industrial Shipments by SIC and Planning Area
(Millions of 2001 \$)

SIC	Planning Area	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	1990-2000	2000-2003	2003-2013
28	SDG&E	1,043	1,355	2,182	2,066	2,019	2,171	2,352	2,550	2,714	2,812	2,852	2,864	2,922	2,964	2,995	3,029	7.7	-0.2	3.4
29	SDG&E	73	94	134	122	123	126	128	134	136	127	117	108	105	103	98	95	6.3	-2.1	-2.8
308	SDG&E	320	523	574	547	537	537	555	585	617	613	604	589	585	577	570	564	6.0	-2.2	0.5
30X	SDG&E	43	105	150	148	147	145	151	160	171	174	177	177	179	180	181	183	13.4	-1.1	2.3
31	SDG&E	26	22	33	31	33	33	36	40	42	45	46	48	49	50	51	52	2.5	0.0	4.8
321	SDG&E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-3.5	-3.3	13.1
324	SDG&E	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	-7.7	-3.3	1.4
32X	SDG&E	334	271	240	219	215	212	213	216	216	211	210	209	205	201	198	195	-3.2	-4.0	-0.8
33	SDG&E	125	129	144	136	132	132	135	141	147	152	154	158	161	164	167	170	1.4	-2.9	2.6
34	SDG&E	679	658	998	967	973	999	1,047	1,112	1,160	1,186	1,194	1,197	1,207	1,216	1,221	1,225	3.9	0.0	2.1
357	SDG&E	536	2,453	21,918	18,765	12,511	13,049	12,894	13,340	13,171	14,097	16,116	18,657	19,776	21,302	23,035	24,767	44.9	-15.9	6.6
35X	SDG&E	1,042	1,291	3,039	3,252	2,772	2,562	2,598	2,707	2,735	2,820	2,894	2,918	2,924	2,943	2,969	2,995	11.3	-5.5	1.6
366	SDG&E	301	563	1,126	1,061	905	944	976	1,014	1,047	1,071	1,111	1,163	1,185	1,209	1,236	1,261	14.1	-5.7	2.9
367	SDG&E	983	1,356	2,461	2,082	1,510	1,755	1,982	2,194	2,352	2,497	2,926	3,331	3,593	3,890	4,215	4,518	9.6	-10.7	9.9
36X	SDG&E	943	1,227	622	572	512	485	500	523	542	552	571	579	583	587	590	595	-4.1	-8.0	2.1
37	SDG&E	3,837	2,352	1,975	1,940	1,557	1,518	1,569	1,697	1,863	1,997	2,106	2,230	2,368	2,478	2,578	2,671	-6.4	-8.4	5.8
38	SDG&E	2,916	3,106	3,868	3,921	3,789	4,072	4,270	4,484	4,677	4,802	4,913	5,066	5,162	5,231	5,317	5,415	2.9	1.7	2.9
39	SDG&E	412	800	1,425	1,358	1,367	1,432	1,530	1,621	1,769	1,773	1,752	1,704	1,710	1,704	1,696	1,686	13.2	0.2	1.6
10	SMUD	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
13	SMUD	49	34	23	26	26	26	25	24	23	22	22	22	21	21	20	20	-7.3	4.5	-2.7
14	SMUD	26	23	31	32	31	31	33	36	35	35	35	36	36	36	37	37	1.8	-0.1	1.8
15	SMUD	2,737	2,461	3,402	3,411	3,018	2,935	2,882	2,776	2,736	2,635	2,490	2,388	2,308	2,230	2,157	2,096	2.2	-4.8	-3.3
203	SMUD	390	449	499	472	477	462	447	440	431	424	412	401	392	384	376	369	2.5	-2.5	-2.2
206	SMUD	96	69	57	52	52	49	46	45	43	41	39	38	36	35	34	33	-5.2	-4.4	-3.9
20x	SMUD	652	644	1,484	1,490	1,566	1,606	1,648	1,717	1,777	1,855	1,924	1,990	2,044	2,102	2,156	2,205	8.6	2.7	3.2
22	SMUD	17	4	27	26	27	26	27	27	29	30	32	33	35	36	37	38	4.7	-1.3	4.0
23	SMUD	51	52	64	62	64	62	62	62	60	58	56	54	52	51	50	49	2.3	-0.7	-2.4
24	SMUD	310	179	186	164	156	142	140	143	146	143	138	135	133	131	128	126	-5.0	-8.6	-1.2
25	SMUD	61	60	77	72	69	67	70	73	73	74	75	76	77	78	80	81	2.3	-4.6	2.0
261	SMUD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
262	SMUD	1	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	1.2	6.6	4.0
26X	SMUD	116	115	136	124	117	114	120	129	131	134	138	141	143	146	149	151	1.7	-5.9	2.9
27	SMUD	553	489	543	498	484	490	497	510	520	513	503	495	490	484	478	474	-0.2	-3.4	-0.3
28	SMUD	299	160	178	163	154	160	169	180	188	195	197	199	202	205	207	209	-5.0	-3.6	2.7
29	SMUD	23	21	22	17	17	17	18	18	19	17	16	15	14	14	13	13	-0.5	-7.4	-3.2
308	SMUD	53	80	110	105	104	105	110	117	123	123	122	120	119	118	117	117	7.6	-1.3	1.0
30X	SMUD	5	7	34	34	34	34	36	39	41	42	42	42	43	43	43	43	21.0	0.0	2.4
31	SMUD	1	0	1	1	1	1	1	1	2	2	2	2	2	2	2	2	0.1	4.5	2.7
321	SMUD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
324	SMUD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
32X	SMUD	93	88	103	93	89	87	86	87	87	85	84	83	81	79	78	76	0.9	-5.5	-1.3
33	SMUD	15	34	29	27	27	27	28	30	31	32	33	34	35	36	37	37	6.9	-1.7	3.2
34	SMUD	235	220	211	196	186	181	178	179	178	173	167	160	155	151	147	143	-1.1	-5.1	-2.3
357	SMUD	23	1,727	15,657	13,404	8,923	9,310	9,097	9,269	9,138	9,747	11,080	12,271	12,866	13,681	14,578	15,416	92.3	-15.9	5.2
35X	SMUD	112	135	232	223	190	180	187	198	205	215	224	234	239	245	252	258	7.6	-8.1	3.7
366	SMUD	88	23	19	16	12	11	11	10	9	9	8	8	8	7	7	7	-14.4	-15.3	-4.8
367	SMUD	52	177	555	483	357	423	486	553	610	666	798	924	1,016	1,120	1,232	1,339	26.7	-8.7	12.2
36X	SMUD	76	157	221	205	189	183	193	206	219	230	242	249	256	262	267	273	11.2	-6.1	4.1
37	SMUD	551	397	393	375	272	244	242	254	273	286	294	302	315	323	330	336	-3.3	-14.7	3.3
38	SMUD	42	94	198	207	205	225	239	256	270	283	295	308	318	326	336	345	16.7	4.2	4.4
39	SMUD	31	48	79	74	73	76	80	84	91	92	90	89	90	90	90	90	9.8	-1.5	1.7

Table F-3
Industrial Shipments by SIC and Planning Area
(Millions of 2001 \$)

SIC	Planning Area																1990-	2000-	2003-	
		1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2000	2003	2013
10	STATE	333	603	569	607	619	628	678	752	720	729	750	764	775	784	793	801	5.5	3.4	2.5
13	STATE	5,526	6,352	4,285	5,129	4,970	5,070	5,167	5,265	5,362	5,460	5,607	5,619	5,627	5,634	5,642	5,650	-2.5	5.8	1.1
14	STATE	1,234	1,199	1,250	1,259	1,209	1,203	1,292	1,407	1,334	1,335	1,347	1,350	1,351	1,347	1,343	1,338	0.1	-1.3	1.1
15	STATE	65,930	62,780	98,469	101,763	93,236	94,057	95,704	96,002	98,076	97,749	95,301	93,953	93,167	92,183	91,091	90,303	4.1	-1.5	-0.4
203	STATE	10,456	10,116	10,325	10,251	10,762	10,965	11,115	11,468	11,670	11,965	12,220	12,532	12,697	12,889	13,068	13,218	-0.1	2.0	1.9
206	STATE	2,281	2,094	2,404	2,389	2,528	2,579	2,614	2,694	2,746	2,820	2,885	2,963	3,006	3,054	3,100	3,138	0.5	2.4	2.0
20x	STATE	30,685	33,460	41,622	41,523	43,324	44,214	44,961	46,734	47,949	49,488	50,767	52,175	53,178	54,277	55,320	56,257	3.1	2.0	2.4
22	STATE	1,773	2,461	4,761	4,349	4,269	4,152	4,190	4,330	4,528	4,694	4,904	5,134	5,282	5,440	5,582	5,733	10.4	-4.5	3.3
23	STATE	9,456	12,322	17,890	18,646	19,876	20,191	20,468	20,682	20,388	19,900	19,377	18,903	18,560	18,242	17,924	17,668	6.6	4.1	-1.3
24	STATE	8,165	6,437	7,696	7,037	6,989	6,608	6,725	7,071	7,417	7,490	7,362	7,400	7,445	7,452	7,439	7,456	-0.6	-5.0	1.2
25	STATE	4,951	4,771	6,654	6,275	6,151	6,123	6,533	6,923	6,935	7,099	7,250	7,448	7,574	7,759	7,940	8,128	3.0	-2.7	2.9
261	STATE	173	79	51	47	45	43	45	47	45	45	44	42	41	40	38	37	-11.4	-5.5	-1.7
262	STATE	655	683	537	492	480	473	499	543	554	558	567	580	583	585	589	592	-2.0	-4.1	2.3
26X	STATE	6,678	6,927	7,240	6,674	6,388	6,343	6,724	7,287	7,484	7,685	7,871	8,113	8,265	8,427	8,600	8,780	0.8	-4.3	3.3
27	STATE	18,769	17,548	19,460	18,209	17,880	18,356	18,856	19,573	20,168	20,060	19,805	19,647	19,575	19,452	19,331	19,254	0.4	-1.9	0.5
28	STATE	18,820	20,776	27,680	26,460	26,089	28,200	30,852	33,738	36,071	37,608	38,421	38,870	39,858	40,650	41,279	41,941	3.9	0.6	4.0
29	STATE	33,219	28,224	27,444	26,103	26,469	27,104	27,383	28,737	29,196	27,202	25,631	22,959	22,161	21,502	20,487	19,576	-1.9	-0.4	-3.2
308	STATE	8,066	8,575	9,963	9,532	9,501	9,636	10,070	10,687	11,279	11,249	11,108	10,879	10,831	10,708	10,594	10,514	2.1	-1.1	0.9
30X	STATE	1,363	1,602	1,881	1,829	1,807	1,800	1,878	1,992	2,109	2,130	2,130	2,117	2,124	2,120	2,115	2,114	3.3	-1.5	1.6
31	STATE	466	453	564	519	543	539	593	651	701	725	721	734	740	745	748	753	1.9	-1.5	3.4
321	STATE	151	175	224	208	205	205	209	214	217	215	215	214	211	207	204	200	4.0	-2.9	-0.2
324	STATE	510	514	733	683	684	690	709	740	757	760	772	785	783	781	780	779	3.7	-2.0	1.2
32X	STATE	5,960	5,136	6,679	6,255	6,231	6,292	6,480	6,715	6,873	6,872	6,960	7,056	7,036	7,010	7,000	6,990	1.1	-2.0	1.1
33	STATE	7,185	6,771	8,380	7,885	7,756	7,802	8,023	8,469	8,891	9,086	9,287	9,519	9,732	9,922	10,103	10,275	1.5	-2.4	2.8
34	STATE	15,935	15,662	18,608	17,699	17,694	18,090	18,934	20,028	20,667	20,896	20,810	20,622	20,604	20,586	20,510	20,425	1.6	-0.9	1.2
357	STATE	7,095	22,859	155,612	127,940	82,613	83,548	79,941	79,970	76,700	79,797	88,186	96,356	99,135	103,630	108,718	113,486	36.2	-18.7	3.1
35X	STATE	11,855	14,340	21,778	20,780	17,477	16,380	16,693	17,403	17,828	18,411	18,855	19,063	19,165	19,313	19,502	19,703	6.3	-9.1	1.9
366	STATE	4,397	7,915	17,883	16,857	14,720	15,460	16,203	17,040	17,759	18,223	18,952	19,874	20,326	20,779	21,281	21,763	15.1	-4.7	3.5
367	STATE	14,006	25,333	52,169	44,503	32,705	38,720	44,290	49,644	53,655	57,194	67,053	76,301	82,506	89,438	96,988	104,054	14.1	-9.5	10.4
36X	STATE	9,364	10,249	12,117	11,035	9,729	9,422	9,844	10,487	11,048	11,456	11,932	12,273	12,512	12,715	12,895	13,122	2.6	-8.0	3.4
37	STATE	52,632	31,801	31,459	29,261	21,987	20,778	21,206	22,704	24,613	26,123	27,310	28,642	30,164	31,338	32,386	33,345	-5.0	-12.9	4.8
38	STATE	29,022	26,694	33,708	34,650	33,872	37,015	39,323	41,795	43,952	45,507	46,900	48,763	50,019	50,992	52,125	53,375	1.5	3.2	3.7
39	STATE	3,312	4,348	6,668	6,262	6,192	6,379	6,742	7,078	7,644	7,575	7,393	7,148	7,115	7,034	6,953	6,875	7.2	-1.5	0.8

Table G-1
Average Retail Electricity Rates by Planning Area
(nominal cents per kWh)
PG&E

Year	Residential	Commercial	Small Commercial	Medium Commercial	Industrial	Agricultural
1980	4.80	5.42			4.02	5.11
1981	6.09	6.96			5.07	5.99
1982	6.23	6.97			5.44	6.43
1983	6.18	7.06			6.00	6.72
1984	7.59	8.61			7.43	7.84
1985	8.32	9.61			8.28	9.02
1986	8.47	9.76			7.82	9.09
1987	7.81	8.65			5.93	7.36
1988	8.65	8.72			5.73	7.41
1989	9.92	9.48			6.25	8.75
1990	10.59	9.96			6.42	8.90
1991	11.40	10.47			6.81	9.53
1992	11.98	11.09			7.21	9.99
1993	12.27	11.12			7.01	11.15
1994	12.49	11.25			7.02	10.73
1995	11.57	10.39			6.37	10.53
1996	12.10	10.18			6.92	10.71
1997	12.10	10.18			6.92	13.21
1998	11.00		12.20	9.60	6.92	13.21
1999	11.00		12.20	9.60	6.92	13.21
2000	11.00		12.20	9.60	6.90	13.21
2001	12.00		16.84	14.05	10.00	15.85
2002	12.33		19.06	14.03	11.97	19.32
2003	12.87		19.48	14.45	12.40	19.75
2004	11.04		15.85	10.90	7.86	14.27
2005	11.15		16.06	10.97	7.92	14.50
2006	11.17		16.11	10.90	7.84	14.56
2007	11.31		16.35	11.03	7.98	14.84
2008	10.62		15.86	10.44	8.10	15.09
2009	10.77		16.08	10.56	8.19	15.29
2010	10.68		15.92	10.37	7.96	15.09
2011	10.81		16.12	10.48	8.02	15.27
2012	10.90		16.25	10.52	8.02	15.37
2013	11.34		16.93	10.96	8.35	16.00

Table G-2
Average Retail Electricity Rates by Planning Area
(nominal cents per kWh)
SMUD

Year	Residential	Commercial	Small Commercial	Medium Commercial	Industrial	Agricultural
1980	2.65	2.54			1.58	
1981	2.97	2.80			1.73	
1982	3.52	2.50			2.26	
1983	4.01	3.58			2.59	
1984	4.23	3.73			2.70	
1985	4.92	4.41			3.21	
1986	5.99	5.18			3.94	
1987	7.26	6.29			4.85	
1988	8.05	7.00			5.34	
1989	7.99	7.13			5.98	
1990	8.21	8.63			7.04	
1991	8.19	8.73			7.09	
1992	8.20	8.48			7.13	
1993	7.66	7.98			6.62	
1994	8.01	8.12			6.98	
1995	8.15	8.49			6.97	
1996	8.29	8.24			6.96	
1997	7.72	8.24			7.51	
1998	7.72		7.91	7.68	7.51	
1999	7.72		7.91	7.68	7.51	
2000	7.72		7.91	7.68	7.51	
2001	9.02		10.50	9.52	8.12	
2002	8.99		10.25	9.27	7.87	9.30
2003	10.20		10.28	9.40	7.54	9.54
2004	10.35		10.42	9.51	7.58	9.66
2005	10.61		10.69	9.76	7.77	9.91
2006	11.14		11.22	10.24	8.16	10.40
2007	11.60		11.69	10.67	8.50	10.83
2008	11.97		12.06	11.01	8.77	11.18
2009	12.32		12.41	11.33	9.02	11.50
2010	12.69		12.79	11.67	9.30	11.85
2011	13.05		13.15	12.00	9.56	12.19
2012	13.48		13.58	12.40	9.87	12.59
2013	13.98		14.08	12.85	10.24	13.05

Table G-3
Average Retail Electricity Rates by Planning Area
(nominal cents per kWh)
SCE

Year	Residential	Commercial	Small Commercial	Medium Commercial	Industrial	Agricultural
1980	6.23	6.62			5.44	6.50
1981	6.70	7.02			5.73	6.17
1982	7.53	7.89			6.69	7.50
1983	7.33	7.99			6.92	7.68
1984	7.54	8.18			7.19	7.68
1985	7.81	8.52			7.44	8.04
1986	8.06	8.83			7.63	8.39
1987	8.17	8.84			7.48	8.28
1988	9.00	9.10			7.23	8.84
1989	10.10	9.73			7.38	9.39
1990	10.72	9.97			7.25	9.16
1991	11.64	10.59			7.50	9.60
1992	12.13	10.80			7.45	10.02
1993	12.11	10.30			6.98	10.38
1994	12.34	10.44			7.17	10.52
1995	12.88	10.42			7.19	10.98
1996	12.76	9.46			8.05	9.60
1997	12.76	9.45			8.05	10.05
1998	11.60		11.20	10.00	8.05	10.05
1999	11.60		11.20	10.00	8.05	10.05
2000	11.60		11.20	10.00	8.10	10.05
2001	13.29		19.04	15.04	12.13	13.21
2002	13.12		17.79	15.04	11.76	13.11
2003	13.46		18.69	15.78	12.19	13.54
2004	11.95		15.66	11.89	8.59	10.27
2005	11.77		15.21	11.50	8.16	9.94
2006	11.92		15.41	11.70	8.26	10.10
2007	12.04		15.60	11.90	8.39	10.27
2008	11.34		14.88	12.04	8.47	10.39
2009	11.47		15.06	12.18	8.55	10.50
2010	11.64		15.27	12.34	8.65	10.64
2011	11.63		15.22	12.26	8.54	10.57
2012	11.42		14.87	11.91	8.17	10.28
2013	11.90		15.51	12.42	8.52	10.71

Table G-4
Average Retail Electricity Rates by Planning Area
(nominal cents per kWh)
LADWP

Year	Residential	Commercial	Small Commercial	Medium Commercial	Industrial	Agricultural
1980	6.24	5.62			4.75	
1981	6.53	6.30			5.42	
1982	6.36	6.25			5.51	
1983	6.11	5.95			5.31	
1984	6.39	6.15			5.51	
1985	6.82	6.60			5.97	
1986	7.01	6.82			6.16	
1987	7.39	7.18			6.43	
1988	7.96	7.68			6.70	
1989	8.54	8.16			6.99	
1990	8.89	8.57			6.97	
1991	8.98	8.17			7.08	
1992	9.19	8.60			7.57	
1993	9.85	8.95			8.29	
1994	9.97	9.74			8.05	
1995	9.84	9.07			7.99	
1996	9.83	9.07			8.02	
1997	10.43	9.31			7.43	
1998	10.43		10.84	9.59	7.43	
1999	10.43		10.84	9.59	7.43	
2000	10.43		10.84	9.59	7.43	
2001	10.43		10.84	9.59	7.43	
2002	10.44		10.84	9.58	7.42	
2003	10.44		10.84	9.55	7.41	n/a
2004	10.28		10.68	9.41	7.30	n/a
2005	10.65		11.06	9.74	7.56	n/a
2006	11.28		11.72	10.32	8.01	n/a
2007	11.84		12.30	10.84	8.40	n/a
2008	12.35		12.84	11.31	8.77	n/a
2009	12.77		13.27	11.69	9.07	n/a
2010	13.29		13.81	12.16	9.43	n/a
2011	13.75		14.28	12.58	9.76	n/a
2012	14.27		14.83	13.06	10.13	n/a
2013	14.93		15.52	13.67	10.60	n/a

Table G-5
Average Retail Electricity Rates by Planning Area
(nominal cents per kWh)
SDG&E

Year	Residential	Commercial	Small Commercial	Medium Commercial	Industrial	Agricultural
1980	7.96	9.23			7.37	8.38
1981	8.95	10.12			8.32	8.80
1982	11.32	11.35			10.83	10.98
1983	11.75	11.65			11.42	11.41
1984	11.41	12.26			11.65	11.03
1985	12.40	13.36			12.70	12.12
1986	11.31	12.34			10.35	10.63
1987	10.60	10.68			8.90	8.72
1988	10.73	9.57			7.52	8.29
1989	10.82	8.96			7.11	7.36
1990	10.44	8.74			6.97	7.48
1991	10.52	8.93			7.09	7.62
1992	10.72	8.99			7.12	7.87
1993	11.09	9.52			7.21	8.55
1994	10.69	9.43			7.07	8.82
1995	10.63	9.46			7.03	8.65
1996	12.12	9.61			7.12	8.73
1997	12.12	10.33			7.12	8.73
1998	11.02		10.33	10.33	7.09	8.69
1999	10.70		11.26	9.61	8.12	10.68
2000	14.08		14.05	13.30	12.48	13.42
2001	13.83		17.48	12.85	10.46	12.75
2002	13.84		15.94	12.82	11.37	14.76
2003	14.00		17.09	13.19	12.47	15.79
2004	13.19		16.17	12.15	11.25	14.95
2005	13.28		16.26	12.24	11.31	15.13
2006	13.27		16.21	12.19	11.24	15.17
2007	13.40		16.37	12.38	11.40	15.41
2008	12.32		15.15	12.09	11.10	15.17
2009	12.48		15.32	12.21	11.21	15.35
2010	12.71		15.60	12.44	11.41	15.63
2011	12.77		15.66	12.45	11.41	15.70
2012	12.58		15.34	12.09	11.04	15.40
2013	13.12		15.99	12.61	11.52	16.05

Table G-6
Average Retail Electricity Rates by Planning Area
(nominal cents per kWh)
BGP

Year	Residential	Commercial	Small Commercial	Medium Commercial	Industrial	Agricultural
1980	6.98	7.20			5.62	
1981	6.84	6.82			5.43	
1982	7.07	8.78			5.74	
1983	6.95	8.56			5.89	
1984	7.19	8.97			6.06	
1985	7.22	8.97			6.01	
1986	7.12	8.72			5.97	
1987	7.67	9.36			6.43	
1988	8.34	10.32			7.11	
1989	8.72	10.77			7.57	
1990	9.01	11.09			7.73	
1991	8.94	11.11			7.79	
1992	9.24	11.48			8.26	
1993	9.56	12.17			8.47	
1994	9.87	12.81			8.88	
1995	9.74	12.68			8.70	
1996	9.60	12.56			8.77	
1997	11.39	10.31			9.06	
1998	11.39		11.67	10.65	9.06	
1999	11.39		11.67	10.65	9.06	
2000	11.39		11.67	10.65	9.06	
2001	13.72		14.31	13.35	12.31	
2002	12.67		13.69	12.81	9.77	
2003	12.73		13.34	12.35	9.07	n/a
2004	12.75		13.25	12.26	9.08	n/a
2005	12.97		13.58	12.57	9.24	n/a
2006	13.60		14.28	13.20	9.64	n/a
2007	14.11		14.86	13.72	9.95	n/a
2008	14.56		15.36	14.17	10.23	n/a
2009	14.93		15.76	14.53	10.47	n/a
2010	15.37		16.25	14.97	10.74	n/a
2011	15.76		16.68	15.35	10.99	n/a
2012	16.21		17.17	15.80	11.28	n/a
2013	16.77		17.80	16.36	11.61	n/a

Table G-7
End Use Natural Gas Price Forecast
PG&E
Reference Case Price Forecast 02-21-03
2000 Dollars per MCF

Year	Res	Comm	Indust	Comm	Indust	TEOR	Cogen	EG	System PG&E
1990	6.73	6.64	5.87	3.80	4.13	3.08	3.82	3.82	4.89
1991	6.76	6.75	5.91	3.14	3.29	3.64	3.30	3.30	4.58
1992	6.50	7.10	5.29	3.04	2.43	2.86	3.01	3.01	4.14
1993	6.15	6.58	5.21	3.26	2.41	2.56	3.25	3.25	4.29
1994	6.40	6.62	5.10	3.16	2.15	2.14	2.43	2.43	3.87
1995	6.67	6.73	4.90	2.65	1.94	1.60	2.36	2.36	4.00
1996	6.02	6.01	4.94	3.41	2.42	2.10	2.48	2.48	4.04
1997	6.21	6.22	5.31	2.89	2.83	3.12	2.81	2.81	4.08
1998	6.18	7.45	4.33	3.32	2.66	2.47	2.63	2.63	4.14
1999	7.61	7.59	4.34	3.89	2.87	2.76	2.71	2.71	4.30
2000	8.96	8.95	6.53	6.08	5.31	5.15	5.24	5.23	6.40
2001	9.94	9.87	7.78	7.58	6.81	6.77	6.79	6.79	7.76
2002	6.75	6.68	4.49	4.06	3.24	3.22	3.22	3.22	4.42
2003	6.87	6.81	4.63	4.22	3.41	3.39	3.39	3.39	4.60
2004	6.99	6.93	4.74	4.32	3.51	3.50	3.49	3.49	4.71
2005	6.92	6.86	4.77	4.40	3.61	3.59	3.59	3.59	4.68
2006	7.01	6.95	4.87	4.50	3.70	3.70	3.68	3.68	4.74
2007	7.18	7.11	5.00	4.62	3.80	3.81	3.78	3.78	4.87
2008	7.13	7.07	5.02	4.65	3.85	3.86	3.83	3.83	4.88
2009	7.20	7.13	5.09	4.72	3.92	3.94	3.90	3.90	4.95
2010	7.27	7.21	5.17	4.79	3.99	4.02	3.97	3.97	5.03
2011	7.28	7.22	5.22	4.85	4.07	4.09	4.05	4.05	5.08
2012	7.30	7.24	5.27	4.91	4.14	4.16	4.12	4.12	5.14
2013	7.38	7.32	5.36	4.99	4.22	4.24	4.20	4.20	5.22
2014	7.36	7.30	5.40	5.05	4.30	4.31	4.28	4.28	5.27
2015	7.40	7.35	5.47	5.12	4.38	4.39	4.36	4.36	5.33
2016	7.46	7.40	5.54	5.19	4.46	4.47	4.44	4.44	5.41
2017	7.50	7.44	5.61	5.27	4.54	4.55	4.52	4.52	5.47
2018	7.54	7.48	5.68	5.34	4.63	4.63	4.61	4.61	5.54
2019	7.59	7.54	5.75	5.42	4.71	4.72	4.69	4.69	5.62
2020	7.66	7.60	5.83	5.51	4.80	4.81	4.78	4.78	5.70
2021	7.72	7.67	5.91	5.59	4.89	4.89	4.87	4.87	5.78
2022	7.79	7.73	5.99	5.68	4.98	4.98	4.96	4.96	5.87

Table G-8
End Use Natural Gas Price Forecast
SCG
Reference Case Price Forecast 02-21-03
2000 Dollars per MCF

Year	Core			Noncore					System Average
	Res	Comm	Indust	Comm	Indust	TEOR	Cogen	EG	
1990	6.71	7.10	6.28	4.48	3.98	3.54	3.85	3.85	4.75
1991	7.33	7.70	7.70	4.10	3.82	3.00	3.38	3.38	4.72
1992	7.56	8.00	7.21	5.64	4.23	3.18	3.29	3.29	5.21
1993	7.36	7.84	7.14	5.22	3.91	3.31	3.30	3.30	5.18
1994	7.25	7.54	7.01	3.48	3.08	2.60	2.77	2.77	4.90
1995	7.52	7.42	6.56	2.51	2.40	2.10	2.37	2.37	4.71
1996	7.08	6.46	5.54	2.95	2.80	2.56	3.09	3.09	4.78
1997	7.38	6.70	5.63	3.11	3.45	3.01	3.36	3.36	4.93
1998	7.34	6.00	5.05	2.95	3.06	2.92	2.96	2.96	4.78
1999	6.26	4.73	3.67	3.12	3.11	3.00	2.77	2.77	4.17
2000	8.46	6.91	5.16	5.18	5.18	5.12	5.04	5.04	6.10
2001	11.46	9.85	8.17	7.07	7.07	7.02	6.90	6.90	8.84
2002	6.69	5.18	3.60	3.43	3.43	3.38	3.22	3.22	4.34
2003	6.96	5.42	3.82	3.56	3.56	3.52	3.35	3.35	4.60
2004	6.94	5.44	3.89	3.63	3.63	3.60	3.43	3.43	4.58
2005	7.03	5.54	3.99	3.72	3.72	3.69	3.51	3.51	4.62
2006	7.02	5.58	4.07	3.80	3.80	3.77	3.61	3.61	4.68
2007	7.10	5.65	4.15	3.92	3.92	3.89	3.73	3.73	4.79
2008	7.14	5.71	4.23	4.01	4.01	3.98	3.82	3.82	4.86
2009	7.20	5.78	4.31	4.10	4.10	4.07	3.91	3.91	4.92
2010	7.24	5.84	4.39	4.18	4.18	4.15	3.99	3.99	5.00
2011	7.28	5.90	4.46	4.27	4.27	4.24	4.08	4.08	5.06
2012	7.41	6.03	4.59	4.36	4.36	4.33	4.17	4.17	5.17
2013	7.49	6.12	4.69	4.44	4.44	4.41	4.25	4.25	5.25
2014	7.59	6.22	4.79	4.53	4.53	4.50	4.34	4.34	5.34
2015	7.65	6.30	4.88	4.61	4.61	4.58	4.42	4.42	5.41
2016	7.72	6.38	4.98	4.69	4.69	4.67	4.50	4.50	5.49
2017	7.70	6.37	4.98	4.72	4.72	4.69	4.53	4.53	5.50
2018	7.88	6.55	5.17	4.86	4.86	4.83	4.67	4.67	5.66
2019	7.96	6.64	5.27	4.95	4.95	4.92	4.76	4.76	5.74
2020	8.02	6.72	5.36	5.03	5.03	5.00	4.83	4.83	5.82
2021	8.09	6.80	5.46	5.11	5.11	5.08	4.92	4.92	5.89
2022	8.16	6.88	5.55	5.19	5.19	5.16	5.00	5.00	5.97

Table G-9
End Use Natural Gas Price Forecast
SDG&E
Reference Case Price Forecast 02-21-03
2000 Dollars per MCF

Year	Res	Comm	Indust	Comm	Indust	TEOR	Cogen	EG	System Average
1990	6.74	6.71	6.39	4.63	4.63	-	3.89	3.89	5.06
1991	6.35	6.44	6.41	4.07	4.07	-	3.41	3.41	4.61
1992	6.77	6.99	7.08	4.22	4.22	-	3.36	3.36	4.94
1993	7.18	6.76	7.05	2.70	2.61	-	3.49	3.49	5.10
1994	7.22	5.79	6.33	3.77	4.08	-	3.19	3.19	5.00
1995	6.76	5.58	6.26	2.84	2.87	-	2.28	2.28	4.13
1996	6.83	5.91	6.70	3.29	2.94	-	2.66	2.66	4.56
1997	7.53	6.93	7.84	3.40	3.40	-	3.07	3.07	4.74
1998	7.37	6.28	7.28	2.79	2.79	-	2.78	2.78	4.39
1999	6.91	6.22	4.78	3.34	3.34	-	3.21	3.21	4.49
2000	8.61	8.08	6.48	5.53	5.53	-	5.02	5.02	6.23
2001	11.47	10.82	9.19	7.36	7.36	-	6.90	6.90	8.68
2002	6.98	6.32	4.68	3.79	3.79	-	3.27	3.27	4.54
2003	7.36	6.67	4.96	3.89	3.89	-	3.36	3.36	5.36
2004	7.26	6.61	4.97	3.92	3.92	-	3.45	3.45	5.51
2005	7.41	6.75	5.09	3.98	3.98	-	3.52	3.52	5.72
2006	7.34	6.70	5.12	4.06	4.06	-	3.62	3.62	5.63
2007	7.48	6.83	5.22	4.18	4.18	-	3.74	3.74	5.77
2008	7.62	6.96	5.33	4.29	4.29	-	3.84	3.84	5.86
2009	7.56	6.93	5.35	4.40	4.40	-	3.97	3.97	5.53
2010	7.47	6.87	5.36	4.46	4.46	-	4.05	4.05	5.54
2011	7.54	6.92	5.44	4.54	4.54	-	4.14	4.14	5.60
2012	7.74	7.11	5.60	4.64	4.65	-	4.19	4.19	5.75
2013	7.81	7.19	5.69	4.72	4.72	-	4.27	4.27	5.83
2014	7.93	7.30	5.79	4.81	4.81	-	4.36	4.36	5.93
2015	8.04	7.41	5.90	4.89	4.90	-	4.44	4.44	6.03
2016	8.09	7.47	5.98	4.97	4.97	-	4.52	4.52	6.10
2017	8.09	7.47	5.98	4.99	5.00	-	4.55	4.55	6.12
2018	8.28	7.66	6.17	5.14	5.14	-	4.69	4.69	6.29
2019	8.38	7.76	6.27	5.22	5.22	-	4.77	4.77	6.38
2020	8.43	7.82	6.35	5.30	5.30	-	4.83	4.83	6.44
2021	8.49	7.89	6.44	5.37	5.37	-	4.92	4.92	6.52
2022	8.55	7.96	6.52	5.45	5.45	-	5.00	5.00	6.60

**Table H-1
Residential Electric Consumption Summary by End Use - All Housing Types
PG&E**

End Use	Year	Housing Stock	Appliance Stock	Appliance Saturation	Average Appliance UEC	Marginal Appliance UEC	Total Energy Used (GWh)
CENTRAL A/C	1980	3,270,580	608,667	0.1861	2,331.60	2,331.70	1,419.10
	1990	3,897,420	960,679	0.2465	1,695.80	1,465.90	1,629.10
	2001	4,422,094	1,273,020	0.2879	1,385.20	1,264.40	1,763.30
	2004	4,628,767	1,392,235	0.3008	1,343.20	1,258.50	1,870.00
	2007	4,812,082	1,505,079	0.3128	1,288.20	1,046.50	1,938.80
	2013	5,167,946	1,731,104	0.3350	1,189.70	1,047.20	2,059.40
ROOM A/C	1980	3,270,577	306,685	0.0938	557.20	496.20	170.90
	1990	3,897,423	333,977	0.0857	476.20	425.40	159.00
	2001	4,422,095	342,732	0.0775	440.60	417.40	151.00
	2004	4,628,767	347,234	0.0750	435.90	416.20	151.40
	2007	4,812,079	350,864	0.0729	433.10	415.40	151.90
	2013	5,167,944	357,538	0.0692	430.90	414.50	154.00
EVAP A/C	1980	3,270,577	328,436	0.1004	712.10	712.10	233.90
	1990	3,897,423	348,110	0.0893	715.30	715.30	249.00
	2001	4,422,095	360,842	0.0816	711.30	711.30	256.70
	2004	4,628,767	372,211	0.0804	709.60	709.60	264.10
	2007	4,812,079	382,749	0.0795	708.40	708.40	271.10
	2013	5,167,944	403,353	0.0781	706.60	706.60	285.00
SPACE HEAT	1980	3,270,580	279,928	0.0856	7,221.90	7,221.90	2,021.60
	1990	3,897,420	330,233	0.0847	4,668.30	2,743.60	1,541.60
	2001	4,422,094	388,670	0.0879	3,284.20	2,367.30	1,276.40
	2004	4,628,767	412,085	0.0890	3,021.10	2,296.60	1,245.00
	2007	4,812,082	431,626	0.0897	2,815.50	2,243.50	1,215.20
	2013	5,167,946	467,967	0.0906	2,527.80	2,167.50	1,182.90
FURNACE FAN	1980	3,270,577	1,614,201	0.4936	361.60	0.00	583.70
	1990	3,897,423	1,963,958	0.5039	361.10	0.00	709.10
	2001	4,422,095	2,310,689	0.5225	361.20	0.00	834.60
	2004	4,628,767	2,443,750	0.5280	361.20	0.00	882.70
	2007	4,812,079	2,562,668	0.5326	361.20	0.00	925.60
	2013	5,167,944	2,794,919	0.5408	361.20	0.00	1,009.40
HTWATR DISHWASH	1980	3,270,577	188,125	0.0575	1,079.20	0.00	203.00
	1990	3,897,423	259,309	0.0665	1,013.70	0.00	262.90
	2001	4,422,094	319,026	0.0721	963.00	0.00	307.20
	2004	4,628,766	341,017	0.0737	959.20	0.00	327.20
	2007	4,812,079	360,807	0.0750	959.90	0.00	346.30
	2013	5,167,944	399,024	0.0772	963.80	0.00	384.50
HTWATR CLTHWASH	1980	3,270,577	313,015	0.0957	1,376.70	0.00	430.80
	1990	3,897,423	386,130	0.0991	1,124.10	0.00	434.00
	2001	4,422,094	429,944	0.0972	1,097.60	0.00	472.10
	2004	4,628,766	448,367	0.0969	1,094.30	0.00	490.60
	2007	4,812,079	464,770	0.0966	1,094.80	0.00	508.70
	2013	5,167,944	496,602	0.0961	1,099.60	0.00	545.90
WATER HT(BASIC)	1980	3,270,577	365,103	0.1116	2,921.70	2,724.00	1,066.80
	1990	3,897,423	421,648	0.1082	2,333.60	2,086.90	984.10
	2001	4,422,094	464,887	0.1051	2,162.30	2,082.40	1,005.30
	2004	4,628,766	484,128	0.1046	2,152.80	2,086.90	1,042.30
	2007	4,812,079	500,936	0.1041	2,152.60	2,092.30	1,078.20
	2013	5,167,944	533,334	0.1032	2,160.20	2,094.80	1,152.10
REFRIG	1980	3,270,577	3,792,678	1.1596	1,379.30	1,337.60	5,232.70
	1990	3,897,423	4,682,701	1.2015	1,247.50	1,051.00	5,841.40
	2001	4,422,094	5,132,381	1.1606	1,067.60	884.70	5,481.30
	2004	4,628,766	5,333,473	1.1522	1,031.20	887.00	5,499.90
	2007	4,812,079	5,509,060	1.1448	1,001.00	889.40	5,516.30
	2013	5,167,944	5,851,675	1.1323	959.30	892.70	5,614.60

**Table H-1
Residential Electric Consumption Summary by End Use - All Housing Types
PG&E**

End Use	Year	Housing Stock	Appliance Stock	Appliance Saturation	Average Appliance UEC	Marginal Appliance UEC	Total Energy Used (GWh)
FREEZER	1980	3,270,577	658,268	0.2013	1,346.20	1,237.90	885.90
	1990	3,897,423	861,327	0.2210	1,227.20	892.50	1,057.40
	2001	4,422,094	1,077,699	0.2437	1,072.10	892.50	1,155.30
	2004	4,628,766	1,154,911	0.2495	1,039.30	892.50	1,200.80
	2007	4,812,079	1,230,243	0.2557	1,012.70	892.50	1,246.00
	2013	5,167,944	1,384,944	0.2680	972.10	892.50	1,346.30
COLOR TV	1980	3,270,577	2,883,743	0.8817	416.10	316.00	1,200.70
	1990	3,897,423	3,782,748	0.9706	341.40	316.00	1,290.80
	2001	4,422,094	4,346,203	0.9828	328.90	316.00	1,428.30
	2004	4,628,766	4,558,350	0.9848	332.00	316.00	1,512.10
	2007	4,812,079	4,746,981	0.9865	338.20	316.00	1,606.50
	2013	5,167,944	5,111,450	0.9891	363.60	316.00	1,857.80
COOKING	1980	3,270,577	1,812,900	0.5543	695.30	695.30	1,261.10
	1990	3,897,423	2,429,274	0.6233	707.10	707.10	1,718.40
	2001	4,422,094	2,813,791	0.6363	732.80	732.80	2,061.80
	2004	4,628,766	2,956,339	0.6387	740.30	740.30	2,188.00
	2007	4,812,079	3,081,980	0.6405	748.00	748.00	2,305.10
	2013	5,167,944	3,324,729	0.6433	754.70	754.70	2,510.50
DISH WSH MOTOR	1980	3,270,577	1,623,858	0.4965	280.20	280.20	454.30
	1990	3,897,423	2,283,173	0.5858	270.80	256.80	618.40
	2001	4,422,094	2,927,533	0.6620	269.60	265.90	789.50
	2004	4,628,766	3,157,209	0.6821	270.70	268.00	854.70
	2007	4,812,079	3,365,577	0.6994	272.10	270.30	916.70
	2013	5,167,944	3,770,464	0.7296	273.70	271.80	1,031.20
CLOTHES DRYER	1980	3,270,577	1,746,662	0.5341	1,091.30	1,091.30	1,905.70
	1990	3,897,423	2,404,660	0.6170	1,109.70	1,109.70	2,668.30
	2001	4,422,094	2,834,028	0.6409	1,148.40	1,148.40	3,254.30
	2004	4,628,766	2,993,104	0.6466	1,159.30	1,159.30	3,469.10
	2007	4,812,079	3,136,372	0.6518	1,170.40	1,170.40	3,670.70
	2013	5,167,944	3,414,136	0.6606	1,179.70	1,179.70	4,028.30
SOLR WATER HEAT	1980	3,073,910	9,136	0.0030	730.20	636.10	6.70
	1990	3,641,850	14,931	0.0041	545.90	518.60	8.20
	2001	4,177,020	15,010	0.0036	541.00	523.70	8.10
	2004	4,368,567	15,097	0.0035	541.80	527.20	8.20
	2007	4,538,334	15,164	0.0033	542.60	530.70	8.20
	2013	4,867,953	15,292	0.0031	541.50	533.30	8.30
SOLR WATRHT PMP	1980	3,073,910	36,936	0.0120	472.50	472.50	17.50
	1990	3,641,850	50,985	0.0140	473.10	472.50	24.10
	2001	4,177,020	51,835	0.0124	472.50	472.50	24.50
	2004	4,368,567	52,322	0.0120	472.50	472.50	24.70
	2007	4,538,334	52,717	0.0116	472.50	472.50	24.90
	2013	4,867,953	53,473	0.0110	472.50	472.50	25.30
CLOTH WASH MTR	1980	3,270,577	2,716,933	0.8307	68.80	68.80	187.30
	1990	3,897,423	3,420,619	0.8777	70.20	70.20	241.10
	2001	4,422,094	3,951,895	0.8937	72.60	72.60	288.20
	2004	4,628,766	4,152,169	0.8970	73.40	73.40	305.60
	2007	4,812,079	4,332,354	0.9003	74.20	74.20	321.90
	2013	5,167,944	4,683,123	0.9062	75.00	75.00	350.60
WATER BED	1980	3,270,577	601,410	0.1839	1,524.60	1,484.70	917.00
	1990	3,897,423	695,040	0.1783	1,378.30	1,341.90	957.90
	2001	4,422,094	835,792	0.1890	1,365.50	1,341.90	1,141.50
	2004	4,628,766	886,692	0.1916	1,367.20	1,341.90	1,212.60
	2007	4,812,079	941,255	0.1956	1,369.30	1,341.90	1,289.10
	2013	5,167,944	1,062,893	0.2057	1,373.20	1,341.90	1,459.70

**Table H-1
Residential Electric Consumption Summary by End Use - All Housing Types
PG&E**

End Use	Year	Housing Stock	Appliance Stock	Appliance Saturation	Average Appliance UEC	Marginal Appliance UEC	Total Energy Used (GWh)
MISCELLANEOUS	1980	3,270,577	3,270,577	1.0000	1,169.40	0.00	3,825.20
	1990	3,897,423	3,897,423	1.0000	1,494.00	0.00	5,821.80
	2001	4,422,094	4,422,094	1.0000	1,963.40	0.00	8,683.10
	2004	4,628,766	4,628,766	1.0000	1,773.70	0.00	8,211.30
	2007	4,812,079	4,812,079	1.0000	1,931.60	0.00	9,295.00
	2013	5,167,944	5,167,944	1.0000	2,208.80	0.00	11,417.00
POOL PUMP	1980	3,270,577	207,642	0.0635	3,520.10	3,038.10	731.00
	1990	3,897,423	256,389	0.0658	3,098.30	2,537.00	794.40
	2001	4,422,094	299,117	0.0676	2,820.40	2,533.00	843.70
	2004	4,628,766	314,988	0.0681	2,764.00	2,531.30	870.80
	2007	4,812,079	329,462	0.0685	2,717.90	2,529.50	895.40
	2013	5,167,944	357,910	0.0693	2,647.90	2,526.10	947.90
POOL WATER HEAT	1980	3,270,577	6,541	0.0020	2,625.00	2,625.00	17.20
	1990	3,897,423	7,794	0.0020	2,625.00	2,625.00	20.50
	2001	4,422,094	8,344	0.0019	2,625.00	2,625.00	21.90
	2004	4,628,766	8,561	0.0019	2,625.00	2,625.00	22.50
	2007	4,812,079	8,756	0.0018	2,625.00	2,625.00	23.00
	2013	5,167,944	9,137	0.0018	2,625.00	2,625.00	24.00
POOL PUMP(SOLR)	1980	3,270,576	103,023	0.0315	0.00	0.00	0.00
	1990	3,897,421	66,256	0.0170	0.00	0.00	0.00
	2001	4,422,096	74,913	0.0169	0.00	0.00	0.00
	2004	4,628,768	74,541	0.0161	0.00	0.00	0.00
	2007	4,812,079	74,204	0.0154	0.00	0.00	0.00
	2013	5,167,945	73,740	0.0143	0.00	0.00	0.00
TUB PUMP	1980	2,146,878	107,344	0.0500	1,004.80	1,004.80	107.90
	1990	2,549,156	206,482	0.0810	1,004.80	1,004.80	207.50
	2001	2,957,926	294,145	0.0994	1,004.80	1,004.80	295.60
	2004	3,108,751	324,793	0.1045	1,004.80	1,004.80	326.40
	2007	3,247,038	353,129	0.1088	1,004.80	1,004.80	354.80
	2013	3,519,346	409,001	0.1162	1,004.80	1,004.80	411.00
TUB WATER HEAT	1980	2,146,878	12,345	0.0058	499.80	499.80	6.20
	1990	2,549,156	61,180	0.0240	499.80	499.80	30.60
	2001	2,957,926	125,559	0.0425	499.80	499.80	62.80
	2004	3,108,751	147,585	0.0475	499.80	499.80	73.80
	2007	3,247,038	168,000	0.0517	499.80	499.80	84.00
	2013	3,519,346	208,231	0.0592	499.80	499.80	104.10

**Table H-1
Residential Electric Consumption Summary by End Use - All Housing Types
SMUD**

End Use	Year	Housing Stock	Appliance Stock	Appliance Saturation	Average Appliance UEC	Marginal Appliance UEC	Total Energy Used (GWh)
CENTRAL A/C	1980	303,166	144,893	0.4779	1,695.30	1,695.30	245.60
	1990	396,134	254,092	0.6414	1,246.80	1,099.80	316.80
	2001	463,723	327,960	0.7072	1,114.70	1,028.30	365.60
	2004	487,469	352,426	0.7230	1,095.50	1,033.50	386.10
	2007	509,699	375,395	0.7365	1,061.60	865.10	398.50
	2013	553,902	420,913	0.7599	1,006.90	884.30	423.90
ROOM A/C	1980	303,166	85,187	0.2810	482.40	395.90	41.10
	1990	396,135	76,585	0.1933	451.90	397.30	34.60
	2001	463,722	75,725	0.1633	425.90	397.40	32.20
	2004	487,468	75,712	0.1553	422.90	397.50	32.00
	2007	509,698	75,671	0.1485	420.90	397.50	31.90
	2013	553,903	75,582	0.1365	422.00	397.70	31.90
EVAP A/C	1980	303,166	25,049	0.0826	401.20	401.20	10.00
	1990	396,135	18,586	0.0469	403.30	403.30	7.50
	2001	463,722	18,794	0.0405	403.30	403.30	7.60
	2004	487,468	19,145	0.0393	403.40	403.40	7.70
	2007	509,698	19,469	0.0382	403.40	403.40	7.90
	2013	553,903	20,114	0.0363	403.50	403.50	8.10
SPACE HEAT	1980	303,166	65,937	0.2175	7,924.00	7,924.00	522.50
	1990	396,134	108,679	0.2744	5,247.20	3,109.10	570.30
	2001	463,723	115,626	0.2494	4,745.10	2,939.60	548.60
	2004	487,469	118,735	0.2436	4,641.30	2,915.10	551.10
	2007	509,699	121,626	0.2386	4,548.30	2,893.50	553.20
	2013	553,902	127,379	0.2300	4,383.60	2,855.60	558.40
FURNACE FAN	1980	303,166	102,490	0.3381	314.80	0.00	32.30
	1990	396,135	154,724	0.3906	316.00	0.00	48.90
	2001	463,722	214,790	0.4632	316.20	0.00	67.90
	2004	487,468	235,014	0.4821	316.30	0.00	74.30
	2007	509,698	253,993	0.4983	316.30	0.00	80.30
	2013	553,903	291,687	0.5266	316.40	0.00	92.30
HTWATR DISHWASH	1980	303,166	45,749	0.1509	1,025.10	0.00	46.90
	1990	396,135	62,150	0.1569	934.60	0.00	58.10
	2001	463,722	81,695	0.1762	883.80	0.00	72.20
	2004	487,468	88,262	0.1811	881.70	0.00	77.80
	2007	509,698	94,461	0.1853	882.30	0.00	83.30
	2013	553,903	106,756	0.1927	886.00	0.00	94.60
HTWATR CLTHWASH	1980	303,166	65,313	0.2154	1,338.40	0.00	87.40
	1990	396,135	82,740	0.2089	1,068.10	0.00	88.40
	2001	463,722	99,685	0.2150	1,040.60	0.00	103.70
	2004	487,468	105,542	0.2165	1,040.40	0.00	109.80
	2007	509,698	111,015	0.2178	1,040.00	0.00	115.50
	2013	553,903	121,860	0.2200	1,043.50	0.00	127.20
WATER HT(BASIC)	1980	303,166	73,015	0.2408	2,795.20	2,610.60	204.10
	1990	396,135	87,163	0.2200	2,240.60	2,019.80	195.30
	2001	463,722	102,877	0.2219	2,087.10	2,024.40	214.70
	2004	487,468	108,648	0.2229	2,079.30	2,027.80	225.90
	2007	509,698	114,034	0.2237	2,078.70	2,031.10	237.00
	2013	553,903	124,713	0.2252	2,088.30	2,034.90	260.40
REFRIG	1980	303,166	371,447	1.2252	1,305.60	1,243.70	485.00
	1990	396,135	469,900	1.1862	1,167.00	978.20	548.50
	2001	463,722	533,071	1.1496	994.60	826.20	530.30
	2004	487,468	557,011	1.1427	960.80	828.50	535.30
	2007	509,698	579,211	1.1364	933.10	831.00	540.50
	2013	553,903	623,489	1.1256	894.70	833.90	557.70

**Table H-1
Residential Electric Consumption Summary by End Use - All Housing Types
SMUD**

End Use	Year	Housing Stock	Appliance Stock	Appliance Saturation	Average Appliance UEC	Marginal Appliance UEC	Total Energy Used (GWh)
FREEZER	1980	303,166	57,972	0.1912	1,326.40	1,214.40	76.90
	1990	396,135	78,271	0.1976	1,196.00	875.50	93.60
	2001	463,722	104,482	0.2253	1,030.90	875.50	107.70
	2004	487,468	112,784	0.2314	1,000.60	875.50	112.80
	2007	509,698	120,794	0.2370	976.30	875.50	117.90
	2013	553,903	136,844	0.2471	940.20	875.50	128.70
COLOR TV	1980	303,166	259,857	0.8572	400.10	310.00	103.90
	1990	396,135	391,684	0.9888	326.60	310.00	128.10
	2001	463,722	461,115	0.9944	316.40	310.00	145.90
	2004	487,468	485,111	0.9952	317.70	310.00	154.30
	2007	509,698	507,564	0.9958	322.10	310.00	163.40
	2013	553,903	552,122	0.9968	342.10	310.00	188.80
COOKING	1980	303,166	189,842	0.6262	660.60	660.60	125.40
	1990	396,135	268,514	0.6778	660.80	660.80	177.40
	2001	463,722	324,089	0.6989	686.80	686.80	222.70
	2004	487,468	342,780	0.7032	693.80	693.80	237.80
	2007	509,698	360,258	0.7068	700.00	700.00	252.20
	2013	553,903	394,875	0.7129	706.30	706.30	278.90
DISH WSH MOTOR	1980	303,166	191,285	0.6310	261.10	261.10	49.90
	1990	396,135	281,850	0.7115	247.10	235.90	69.60
	2001	463,722	363,927	0.7848	248.00	244.40	90.30
	2004	487,468	390,549	0.8012	249.70	246.80	97.40
	2007	509,698	415,636	0.8155	250.60	249.30	104.20
	2013	553,903	465,254	0.8400	252.40	251.10	117.40
CLOTHES DRYER	1980	303,166	208,418	0.6875	1,048.00	1,048.00	218.40
	1990	396,135	328,917	0.8303	1,037.60	1,037.60	341.30
	2001	463,722	382,673	0.8252	1,076.50	1,076.50	411.90
	2004	487,468	401,363	0.8234	1,086.40	1,086.40	435.90
	2007	509,698	418,580	0.8212	1,095.60	1,095.60	458.60
	2013	553,903	452,334	0.8166	1,104.10	1,104.10	499.40
SOLR WATER HEAT	1980	289,001	491	0.0017	649.80	599.30	0.30
	1990	378,655	1,054	0.0028	481.70	471.40	0.50
	2001	446,769	1,904	0.0043	477.30	474.50	0.90
	2004	468,837	2,163	0.0046	478.50	476.60	1.00
	2007	489,495	2,411	0.0049	479.40	477.90	1.20
	2013	530,585	2,907	0.0055	480.20	479.20	1.40
SOLR WATRHT PMP	1980	289,001	1,389	0.0048	463.50	463.50	0.60
	1990	378,655	4,635	0.0122	333.30	278.10	1.50
	2001	446,769	7,686	0.0172	299.40	278.10	2.30
	2004	468,837	8,625	0.0184	293.60	278.10	2.50
	2007	489,495	9,579	0.0196	289.00	278.10	2.80
	2013	530,585	11,569	0.0218	283.50	278.10	3.30
CLOTH WASH MTR	1980	303,166	270,003	0.8906	65.40	65.40	17.60
	1990	396,135	373,274	0.9423	65.80	65.80	24.40
	2001	463,722	442,360	0.9539	67.70	67.70	30.10
	2004	487,468	465,452	0.9548	68.50	68.50	31.90
	2007	509,698	487,048	0.9556	69.30	69.30	33.70
	2013	553,903	529,924	0.9567	69.40	69.40	36.90
WATER BED	1980	303,166	55,101	0.1818	1,498.20	1,455.70	82.50
	1990	396,135	86,864	0.2193	1,367.30	1,315.50	118.80
	2001	463,722	115,883	0.2499	1,326.30	1,315.60	153.70
	2004	487,468	124,679	0.2558	1,325.10	1,315.60	165.20
	2007	509,698	133,169	0.2613	1,326.10	1,315.60	176.60
	2013	553,903	150,234	0.2712	1,334.40	1,315.60	200.50

**Table H-1
Residential Electric Consumption Summary by End Use - All Housing Types
SMUD**

End Use	Year	Housing Stock	Appliance Stock	Appliance Saturation	Average Appliance UEC	Marginal Appliance UEC	Total Energy Used (GWh)
MISCELLANEOUS	1980	303,166	303,166	1.0000	1,285.80	0.00	389.80
	1990	396,135	396,135	1.0000	1,544.00	0.00	611.80
	2001	463,722	463,722	1.0000	1,601.00	0.00	742.30
	2004	487,468	487,468	1.0000	1,424.10	0.00	694.30
	2007	509,698	509,698	1.0000	1,529.00	0.00	779.40
	2013	553,903	553,903	1.0000	1,734.00	0.00	960.60
POOL PUMP	1980	303,166	25,721	0.0848	3,388.20	2,897.40	87.20
	1990	396,135	49,364	0.1246	2,755.90	2,442.00	136.10
	2001	463,722	65,291	0.1408	2,569.90	2,436.10	167.80
	2004	487,468	70,044	0.1437	2,539.90	2,435.00	177.90
	2007	509,698	74,602	0.1464	2,517.00	2,434.00	187.80
	2013	553,903	83,569	0.1509	2,484.30	2,432.20	207.60
POOL WATER HEAT	1980	303,166	1,516	0.0050	3,541.10	3,541.10	5.40
	1990	396,135	2,850	0.0072	3,541.10	3,541.10	10.10
	2001	463,722	4,011	0.0087	3,541.10	3,541.10	14.20
	2004	487,468	4,398	0.0090	3,541.10	3,541.10	15.60
	2007	509,698	4,768	0.0094	3,541.10	3,541.10	16.90
	2013	553,903	5,516	0.0100	3,541.10	3,541.10	19.50
POOL PUMP(SOLR)	1980	303,167	13,491	0.0445	0.00	0.00	0.00
	1990	396,134	11,641	0.0294	0.00	0.00	0.00
	2001	463,722	15,607	0.0337	0.00	0.00	0.00
	2004	487,468	16,476	0.0338	0.00	0.00	0.00
	2007	509,698	17,343	0.0340	0.00	0.00	0.00
	2013	553,903	19,132	0.0345	0.00	0.00	0.00
TUB PUMP	1980	202,659	19,861	0.0980	985.70	985.70	19.60
	1990	269,090	38,899	0.1446	985.70	985.70	38.30
	2001	328,058	56,787	0.1731	985.70	985.70	56.00
	2004	346,639	62,243	0.1796	985.70	985.70	61.40
	2007	364,068	67,554	0.1856	985.70	985.70	66.60
	2013	398,750	78,347	0.1965	985.70	985.70	77.20
TUB WATER HEAT	1980	202,659	11,653	0.0575	490.30	490.30	5.70
	1990	269,090	22,755	0.0846	490.30	490.30	11.20
	2001	328,058	30,920	0.0943	490.30	490.30	15.20
	2004	346,639	33,428	0.0964	490.30	490.30	16.40
	2007	364,068	35,791	0.0983	490.30	490.30	17.50
	2013	398,750	40,503	0.1016	490.30	490.30	19.90

Table H-1
Residential Electric Consumption Summary by End Use - All Housing Types
SCE

End Use	Year	Housing Stock	Appliance Stock	Appliance Saturation	Average Appliance UEC	Marginal Appliance UEC	Total Energy Used (GWh)
CENTRAL A/C	1980	2,990,440	609,058	0.2037	1,776.90	1,776.90	1,082.20
	1990	3,683,748	1,186,442	0.3221	1,350.10	1,205.50	1,601.80
	2001	4,080,521	1,619,480	0.3969	1,154.50	1,067.50	1,869.70
	2004	4,247,007	1,784,927	0.4203	1,124.80	1,063.80	2,007.80
	2007	4,403,767	1,948,795	0.4425	1,080.90	885.30	2,106.50
	2013	4,768,591	2,321,407	0.4868	990.30	879.70	2,298.80
ROOM A/C	1980	2,990,438	635,040	0.2124	508.90	419.90	323.20
	1990	3,683,744	562,013	0.1526	462.50	412.10	259.90
	2001	4,080,522	575,574	0.1411	434.50	410.50	250.00
	2004	4,247,004	577,826	0.1361	431.40	411.10	249.30
	2007	4,403,765	579,066	0.1315	430.40	411.90	249.20
	2013	4,768,589	581,425	0.1219	433.10	413.90	251.60
EVAP A/C	1980	2,990,438	308,000	0.1030	674.20	674.20	207.60
	1990	3,683,744	292,208	0.0793	772.60	772.60	225.80
	2001	4,080,522	313,949	0.0769	777.30	777.30	244.00
	2004	4,247,004	326,384	0.0769	779.10	779.10	254.30
	2007	4,403,765	338,352	0.0768	781.00	781.00	264.20
	2013	4,768,589	365,210	0.0766	784.00	784.00	286.30
SPACE HEAT	1980	2,990,440	275,121	0.0920	4,201.50	4,199.30	1,155.30
	1990	3,683,748	404,265	0.1097	2,375.40	1,466.60	960.30
	2001	4,080,521	456,328	0.1118	1,751.50	1,327.70	799.20
	2004	4,247,007	477,859	0.1125	1,639.90	1,303.90	783.60
	2007	4,403,767	498,035	0.1131	1,553.10	1,286.40	773.40
	2013	4,768,591	544,909	0.1143	1,419.30	1,251.80	773.30
FURNACE FAN	1980	2,990,438	1,064,640	0.3560	253.90	0.00	270.40
	1990	3,683,744	1,032,039	0.2802	254.00	0.00	262.20
	2001	4,080,522	997,454	0.2445	254.10	0.00	253.40
	2004	4,247,004	988,244	0.2327	254.10	0.00	251.10
	2007	4,403,765	979,131	0.2223	254.10	0.00	248.80
	2013	4,768,589	961,179	0.2016	254.20	0.00	244.30
HTWATR DISHWASH	1980	2,990,438	128,374	0.0429	1,049.50	0.00	134.70
	1990	3,683,744	250,700	0.0681	913.60	0.00	229.10
	2001	4,080,522	306,666	0.0752	889.80	0.00	272.80
	2004	4,247,004	326,486	0.0769	888.90	0.00	290.20
	2007	4,403,765	344,953	0.0783	891.50	0.00	307.60
	2013	4,768,589	385,942	0.0809	898.30	0.00	346.70
HTWATR CLTHWASH	1980	2,990,438	202,620	0.0678	1,402.80	0.00	284.30
	1990	3,683,744	335,570	0.0911	1,086.70	0.00	364.50
	2001	4,080,522	374,016	0.0917	1,079.00	0.00	403.70
	2004	4,247,004	389,397	0.0917	1,078.40	0.00	420.10
	2007	4,403,765	403,628	0.0917	1,081.80	0.00	436.70
	2013	4,768,589	436,457	0.0915	1,090.60	0.00	475.90
WATER HT(BASIC)	1980	2,990,438	255,989	0.0856	2,959.50	2,766.90	757.60
	1990	3,683,744	389,177	0.1057	2,376.10	2,188.50	924.50
	2001	4,080,522	424,665	0.1041	2,256.60	2,197.00	958.30
	2004	4,247,004	439,878	0.1036	2,252.40	2,202.00	990.80
	2007	4,403,765	453,861	0.1031	2,256.60	2,207.30	1,024.20
	2013	4,768,589	486,951	0.1021	2,269.70	2,207.30	1,105.30
REFRIG	1980	2,990,438	3,412,931	1.1413	1,576.80	1,521.10	5,382.30
	1990	3,683,744	4,347,231	1.1801	1,412.00	1,192.80	6,137.90
	2001	4,080,522	4,685,073	1.1482	1,219.20	1,004.80	5,713.80
	2004	4,247,004	4,853,025	1.1427	1,178.10	1,007.80	5,718.10
	2007	4,403,765	5,009,854	1.1376	1,144.10	1,010.00	5,732.20
	2013	4,768,589	5,386,684	1.1296	1,094.20	1,012.30	5,893.20

Table H-1
Residential Electric Consumption Summary by End Use - All Housing Types
SCE

End Use	Year	Housing Stock	Appliance Stock	Appliance Saturation	Average Appliance UEC	Marginal Appliance UEC	Total Energy Used (GWh)
FREEZER	1980	718,313	128,229	0.1785	1,348.70	1,237.90	173.00
	1990	946,084	186,745	0.1974	1,205.70	886.20	225.10
	2001	4,080,522	857,596	0.2102	1,120.90	945.30	961.50
	2004	4,247,004	918,617	0.2163	1,090.80	945.30	1,001.80
	2007	4,403,765	980,587	0.2227	1,064.60	945.30	1,044.00
	2013	4,768,589	1,120,042	0.2349	1,023.90	945.30	1,146.90
COLOR TV	1980	2,990,438	2,648,809	0.8858	445.10	337.10	1,179.20
	1990	3,683,744	3,622,440	0.9834	361.70	337.10	1,311.10
	2001	4,080,522	4,035,772	0.9890	350.40	337.10	1,412.60
	2004	4,247,004	4,204,295	0.9899	353.80	337.10	1,487.30
	2007	4,403,765	4,362,989	0.9907	362.10	337.10	1,577.90
	2013	4,768,589	4,729,707	0.9919	389.70	337.10	1,841.80
COOKING	1980	2,990,438	782,850	0.2618	784.50	784.50	613.90
	1990	3,683,744	1,047,624	0.2844	814.20	814.20	852.60
	2001	4,080,522	1,195,641	0.2930	855.80	855.80	1,023.40
	2004	4,247,004	1,248,061	0.2939	863.70	863.70	1,077.60
	2007	4,403,765	1,298,556	0.2949	871.90	871.90	1,132.20
	2013	4,768,589	1,412,965	0.2963	874.40	874.40	1,235.40
DISH WSH MOTOR	1980	2,990,438	1,508,509	0.5044	311.20	311.20	469.30
	1990	3,683,744	2,347,573	0.6373	308.50	294.90	724.60
	2001	4,080,522	2,925,289	0.7169	316.90	312.20	926.30
	2004	4,247,004	3,131,898	0.7374	318.40	315.40	997.20
	2007	4,403,765	3,327,886	0.7557	320.90	318.60	1,068.00
	2013	4,768,589	3,762,790	0.7891	321.00	319.60	1,208.90
CLOTHES DRYER	1980	2,990,438	760,133	0.2542	1,216.10	1,216.10	924.30
	1990	3,683,744	1,035,112	0.2810	1,251.70	1,251.70	1,295.20
	2001	4,080,522	1,235,088	0.3027	1,317.40	1,317.40	1,626.90
	2004	4,247,004	1,306,836	0.3077	1,328.70	1,328.70	1,736.20
	2007	4,403,765	1,376,241	0.3125	1,341.20	1,341.50	1,846.00
	2013	4,768,589	1,531,540	0.3212	1,345.30	1,345.30	2,060.40
SOLR WATER HEAT	1980	2,813,154	5,626	0.0020	600.00	525.90	3.40
	1990	3,466,906	14,903	0.0043	463.40	435.30	6.90
	2001	3,872,781	14,452	0.0037	452.90	438.90	6.60
	2004	4,027,083	14,321	0.0036	453.40	441.10	6.50
	2007	4,172,305	14,190	0.0034	454.50	444.10	6.50
	2013	4,510,797	13,934	0.0031	453.50	445.00	6.30
SOLR WATRHT PMP	1980	2,813,154	58,777	0.0209	504.00	504.00	29.60
	1990	3,466,906	107,156	0.0309	504.00	504.00	54.00
	2001	3,872,781	110,641	0.0286	504.00	504.00	55.80
	2004	4,027,083	112,191	0.0279	504.00	504.00	56.50
	2007	4,172,305	113,608	0.0272	504.00	504.00	57.30
	2013	4,510,797	117,113	0.0260	504.00	504.00	59.00
CLOTH WASH MTR	1980	2,990,438	2,535,531	0.8479	78.80	78.80	200.70
	1990	3,683,744	3,248,343	0.8818	83.00	83.00	269.40
	2001	4,080,522	3,695,816	0.9057	87.50	87.50	324.70
	2004	4,247,004	3,869,355	0.9111	88.30	88.30	343.20
	2007	4,403,765	4,032,992	0.9158	89.10	89.10	361.50
	2013	4,768,589	4,405,519	0.9239	90.00	90.00	396.10
WATER BED	1980	2,990,438	226,732	0.0758	1,617.20	1,582.20	366.70
	1990	3,683,744	406,308	0.1103	1,449.40	1,430.30	588.80
	2001	4,080,522	505,982	0.1240	1,442.50	1,430.50	729.70
	2004	4,247,004	541,982	0.1276	1,443.60	1,430.50	782.50
	2007	4,403,765	581,636	0.1321	1,445.50	1,430.40	840.80
	2013	4,768,589	677,184	0.1420	1,449.70	1,430.40	981.70

Table H-1
Residential Electric Consumption Summary by End Use - All Housing Types
SCE

End Use	Year	Housing Stock	Appliance Stock	Appliance Saturation	Average Appliance UEC	Marginal Appliance UEC	Total Energy Used (GWh)
MISCELLANEOUS	1980	2,990,438	2,990,438	1.0000	1,438.20	0.00	4,301.40
	1990	3,683,744	3,683,744	1.0000	1,950.00	0.00	7,182.20
	2001	4,080,522	4,080,522	1.0000	1,904.10	0.00	7,768.40
	2004	4,247,004	4,247,004	1.0000	1,831.60	0.00	7,778.70
	2007	4,403,765	4,403,765	1.0000	1,992.30	0.00	8,772.00
	2013	4,768,589	4,768,589	1.0000	2,245.50	0.00	10,707.40
POOL PUMP	1980	2,990,438	235,072	0.0786	3,775.90	3,367.20	887.70
	1990	3,683,744	375,095	0.1018	3,172.20	2,668.60	1,189.80
	2001	4,080,522	475,514	0.1165	2,898.30	2,664.00	1,378.10
	2004	4,247,004	508,550	0.1197	2,850.50	2,663.00	1,449.30
	2007	4,403,765	541,221	0.1229	2,811.10	2,662.00	1,521.30
	2013	4,768,589	613,349	0.1286	2,753.80	2,660.30	1,689.10
POOL WATER HEAT	1980	2,990,438	2,991	0.0010	2,800.00	2,800.00	8.40
	1990	3,683,744	7,368	0.0020	2,800.00	2,800.00	20.60
	2001	4,080,522	6,120	0.0015	2,800.00	2,800.00	17.10
	2004	4,247,004	5,898	0.0014	2,800.00	2,800.00	16.50
	2007	4,403,765	5,685	0.0013	2,800.00	2,800.00	15.90
	2013	4,768,589	5,362	0.0011	2,800.00	2,800.00	15.00
POOL PUMP(SOLR)	1980	2,990,439	35,885	0.0120	0.00	0.00	0.00
	1990	3,683,745	73,675	0.0200	0.00	0.00	0.00
	2001	4,080,523	106,601	0.0261	0.00	0.00	0.00
	2004	4,247,003	115,675	0.0272	0.00	0.00	0.00
	2007	4,403,763	124,604	0.0283	0.00	0.00	0.00
	2013	4,768,588	143,607	0.0301	0.00	0.00	0.00
TUB PUMP	1980	1,991,621	156,342	0.0785	823.20	823.20	128.70
	1990	2,430,808	427,822	0.1760	823.20	823.20	352.20
	2001	2,747,873	602,970	0.2194	823.20	823.20	496.40
	2004	2,864,728	656,730	0.2293	823.20	823.20	540.60
	2007	2,976,743	710,411	0.2387	823.20	823.20	584.80
	2013	3,234,824	826,074	0.2554	823.20	823.20	680.00
TUB WATER HEAT	1980	1,991,621	32,862	0.0165	533.10	533.10	17.50
	1990	2,430,808	126,402	0.0520	533.10	533.10	67.40
	2001	2,747,873	167,729	0.0610	533.10	533.10	89.40
	2004	2,864,728	182,323	0.0636	533.10	533.10	97.20
	2007	2,976,743	196,405	0.0660	533.10	533.10	104.70
	2013	3,234,824	228,336	0.0706	533.10	533.10	121.70

Table H-1
Residential Electric Consumption Summary by End Use - All Housing Types
LADWP

End Use	Year	Housing Stock	Appliance Stock	Appliance Saturation	Average Appliance UEC	Marginal Appliance UEC	Total Energy Used (GWh)
CENTRAL A/C	1980	1,141,082	182,032	0.1595	1,365.10	1,363.20	248.10
	1990	1,224,258	284,410	0.2323	1,026.40	885.40	291.70
	2001	1,283,140	326,591	0.2545	857.50	764.80	280.00
	2004	1,300,720	340,054	0.2614	831.90	759.20	282.90
	2007	1,318,565	353,654	0.2682	799.60	628.50	282.80
	2013	1,355,038	380,304	0.2807	746.00	623.40	283.70
ROOM A/C	1980	1,141,082	217,156	0.1903	482.30	398.70	104.70
	1990	1,224,260	251,056	0.2051	412.60	376.50	103.60
	2001	1,283,140	267,330	0.2083	379.30	364.50	101.40
	2004	1,300,720	270,475	0.2079	375.20	362.10	101.50
	2007	1,318,566	273,271	0.2073	372.70	359.90	101.80
	2013	1,355,037	278,249	0.2053	370.90	356.10	103.20
EVAP A/C	1980	1,141,082	39,517	0.0346	537.00	537.00	21.20
	1990	1,224,260	39,502	0.0323	506.50	506.50	20.00
	2001	1,283,140	41,871	0.0326	491.30	491.30	20.60
	2004	1,300,720	42,534	0.0327	488.60	488.60	20.80
	2007	1,318,566	43,205	0.0328	485.80	485.80	21.00
	2013	1,355,037	44,620	0.0329	480.30	480.30	21.40
SPACE HEAT	1980	1,141,082	111,664	0.0979	4,064.80	3,971.40	443.40
	1990	1,224,258	189,612	0.1549	2,681.00	1,536.10	490.80
	2001	1,283,140	235,990	0.1839	2,098.40	1,285.80	478.90
	2004	1,300,720	250,602	0.1927	1,984.10	1,237.20	481.30
	2007	1,318,565	265,238	0.2012	1,882.60	1,194.10	483.90
	2013	1,355,038	294,583	0.2174	1,711.20	1,121.30	489.40
FURNACE FAN	1980	1,141,082	294,821	0.2584	260.00	0.00	76.60
	1990	1,224,260	311,467	0.2544	264.70	0.00	82.40
	2001	1,283,140	325,622	0.2538	265.80	0.00	86.50
	2004	1,300,720	330,048	0.2537	266.30	0.00	87.90
	2007	1,318,566	334,582	0.2538	266.70	0.00	89.20
	2013	1,355,037	343,959	0.2538	267.70	0.00	92.10
HTWATR DISHWASH	1980	1,141,082	28,791	0.0252	1,027.30	0.00	29.60
	1990	1,224,260	45,156	0.0369	854.20	0.00	38.60
	2001	1,283,140	57,704	0.0450	811.70	0.00	46.80
	2004	1,300,720	61,423	0.0472	807.50	0.00	49.60
	2007	1,318,566	65,136	0.0494	806.30	0.00	52.50
	2013	1,355,037	72,534	0.0535	814.20	0.00	59.00
HTWATR CLTHWASH	1980	1,141,082	57,904	0.0507	1,345.30	0.00	77.90
	1990	1,224,260	78,976	0.0645	1,046.10	0.00	82.60
	2001	1,283,140	90,018	0.0702	1,011.00	0.00	91.00
	2004	1,300,720	93,449	0.0718	1,006.50	0.00	94.10
	2007	1,318,566	96,872	0.0735	1,005.80	0.00	97.50
	2013	1,355,037	103,644	0.0765	1,016.60	0.00	105.40
WATER HT(BASIC)	1980	1,141,082	76,723	0.0672	2,816.80	2,634.30	216.10
	1990	1,224,260	107,455	0.0878	2,192.70	1,999.70	235.60
	2001	1,283,140	116,047	0.0904	2,045.00	1,977.70	237.30
	2004	1,300,720	118,691	0.0913	2,034.30	1,978.70	241.40
	2007	1,318,566	121,354	0.0920	2,031.20	1,979.60	246.50
	2013	1,355,037	126,741	0.0935	2,049.60	1,985.30	259.70
REFRIG	1980	1,141,082	1,238,943	1.0858	1,413.30	1,437.40	1,751.20
	1990	1,224,260	1,384,448	1.1308	1,303.80	1,126.70	1,804.80
	2001	1,283,140	1,425,159	1.1107	1,140.60	947.50	1,625.50
	2004	1,300,720	1,439,837	1.1070	1,106.10	949.80	1,592.00
	2007	1,318,566	1,455,142	1.1036	1,076.50	951.50	1,566.70
	2013	1,355,037	1,487,496	1.0978	1,034.70	953.00	1,539.10

**Table H-1
Residential Electric Consumption Summary by End Use - All Housing Types
LADWP**

End Use	Year	Housing Stock	Appliance Stock	Appliance Saturation	Average Appliance UEC	Marginal Appliance UEC	Total Energy Used (GWh)
FREEZER	1980	1,141,082	145,077	0.1271	1,389.10	1,273.30	201.50
	1990	1,224,260	166,185	0.1357	1,294.50	911.50	215.10
	2001	1,283,140	190,290	0.1483	1,143.70	911.50	217.60
	2004	1,300,720	197,460	0.1518	1,110.10	911.50	219.20
	2007	1,318,566	204,714	0.1553	1,080.60	911.50	221.20
	2013	1,355,037	219,063	0.1617	1,033.40	911.50	226.30
	COLOR TV	1980	1,141,082	931,031	0.8159	453.30	325.10
1990		1,224,260	1,151,764	0.9408	360.30	325.10	414.60
2001		1,283,140	1,236,657	0.9638	349.20	325.10	432.00
2004		1,300,720	1,260,327	0.9689	356.10	325.10	449.10
2007		1,318,566	1,283,517	0.9734	367.80	325.10	472.50
2013		1,355,037	1,328,646	0.9805	399.20	325.10	530.60
COOKING		1980	1,141,082	217,552	0.1907	699.70	699.70
	1990	1,224,260	228,692	0.1868	715.90	715.90	163.70
	2001	1,283,140	263,933	0.2057	738.50	738.50	194.90
	2004	1,300,720	273,455	0.2102	743.10	743.10	203.20
	2007	1,318,566	282,909	0.2146	747.80	747.80	211.50
	2013	1,355,037	301,638	0.2226	757.00	757.00	228.30
	DISH WSH MOTOR	1980	1,141,082	457,965	0.4013	287.90	287.90
1990		1,224,260	559,802	0.4573	302.90	285.20	169.70
2001		1,283,140	676,596	0.5273	298.00	291.20	201.50
2004		1,300,720	709,578	0.5455	297.20	292.20	210.80
2007		1,318,566	742,284	0.5630	297.10	293.20	220.50
2013		1,355,037	806,865	0.5955	298.30	295.60	241.00
CLOTHES DRYER		1980	1,141,082	261,749	0.2294	1,006.10	1,006.10
	1990	1,224,260	299,453	0.2446	1,079.10	1,079.10	323.10
	2001	1,283,140	337,892	0.2633	1,106.70	1,106.70	373.90
	2004	1,300,720	348,759	0.2681	1,112.10	1,112.10	387.80
	2007	1,318,566	359,612	0.2727	1,117.50	1,117.50	401.80
	2013	1,355,037	381,037	0.2812	1,128.70	1,128.70	430.00
	SOLR WATER HEAT	1980	1,141,082	1,141	0.0010	558.20	483.80
1990		1,224,260	5,076	0.0042	396.00	383.70	2.00
2001		1,283,140	4,866	0.0038	386.80	381.80	1.90
2004		1,300,720	4,798	0.0037	387.10	382.80	1.90
2007		1,318,566	4,729	0.0036	387.30	383.50	1.80
2013		1,355,037	4,598	0.0034	388.00	385.30	1.80
SOLR WATRHT PMP		1980	1,141,082	2,846	0.0025	486.00	486.00
	1990	1,224,260	28,874	0.0236	486.00	486.00	14.00
	2001	1,283,140	28,569	0.0223	486.00	486.00	13.90
	2004	1,300,720	28,431	0.0219	486.00	486.00	13.80
	2007	1,318,566	28,299	0.0215	486.00	486.00	13.80
	2013	1,355,037	28,054	0.0207	486.00	486.00	13.60
	CLOTH WASH MTR	1980	1,141,082	878,372	0.7698	69.70	69.70
1990		1,224,260	946,971	0.7735	77.90	77.90	74.00
2001		1,283,140	1,042,854	0.8127	80.20	80.20	83.90
2004		1,300,720	1,070,758	0.8232	80.60	80.60	86.60
2007		1,318,566	1,098,266	0.8329	80.90	80.90	89.30
2013		1,355,037	1,151,858	0.8501	82.20	82.20	94.50
WATER BED		1980	1,141,082	69,733	0.0611	1,568.20	1,527.10
	1990	1,224,260	48,675	0.0398	1,454.20	1,380.20	70.80
	2001	1,283,140	56,966	0.0444	1,415.20	1,380.20	80.60
	2004	1,300,720	59,589	0.0458	1,413.70	1,380.20	84.30
	2007	1,318,566	62,252	0.0472	1,414.00	1,380.20	88.10
	2013	1,355,037	67,452	0.0498	1,417.40	1,380.20	95.60

**Table H-1
Residential Electric Consumption Summary by End Use - All Housing Types
LADWP**

End Use	Year	Housing Stock	Appliance Stock	Appliance Saturation	Average Appliance UEC	Marginal Appliance UEC	Total Energy Used (GWh)
MISCELLANEOUS	1980	1,141,082	1,141,082	1.0000	1,049.90	0.00	1,198.10
	1990	1,224,260	1,224,260	1.0000	1,691.20	0.00	2,070.50
	2001	1,283,140	1,283,140	1.0000	1,553.50	0.00	1,993.70
	2004	1,300,720	1,300,720	1.0000	1,499.00	0.00	1,949.70
	2007	1,318,566	1,318,566	1.0000	1,623.10	0.00	2,139.50
	2013	1,355,037	1,355,037	1.0000	1,857.40	0.00	2,516.70
POOL PUMP	1980	1,141,082	97,754	0.0857	3,674.90	3,408.20	359.20
	1990	1,224,260	153,293	0.1252	3,386.20	3,186.70	519.00
	2001	1,283,140	186,206	0.1451	3,271.20	3,183.90	609.00
	2004	1,300,720	194,984	0.1499	3,252.00	3,183.40	634.00
	2007	1,318,566	203,702	0.1545	3,236.70	3,183.00	659.30
	2013	1,355,037	220,957	0.1631	3,215.10	3,182.30	710.40
POOL WATER HEAT	1980	1,141,082	3,423	0.0030	2,700.00	2,700.00	9.20
	1990	1,224,260	1,224	0.0010	2,707.50	2,700.00	3.30
	2001	1,283,140	2,375	0.0019	2,700.00	2,700.00	6.40
	2004	1,300,720	2,706	0.0021	2,700.00	2,700.00	7.30
	2007	1,318,566	3,019	0.0023	2,700.00	2,700.00	8.10
	2013	1,355,037	3,592	0.0027	2,700.00	2,700.00	9.70
POOL PUMP(SOLR)	1980	1,141,081	21,110	0.0185	0.00	0.00	0.00
	1990	1,224,261	26,934	0.0220	0.00	0.00	0.00
	2001	1,283,140	34,908	0.0272	0.00	0.00	0.00
	2004	1,300,719	36,841	0.0283	0.00	0.00	0.00
	2007	1,318,566	38,739	0.0294	0.00	0.00	0.00
	2013	1,355,036	42,438	0.0313	0.00	0.00	0.00
TUB PUMP	1980	564,463	39,371	0.0698	793.80	793.80	31.30
	1990	567,437	77,739	0.1370	793.80	793.80	61.70
	2001	588,926	102,582	0.1742	793.80	793.80	81.40
	2004	594,848	109,228	0.1836	793.80	793.80	86.70
	2007	600,927	115,833	0.1928	793.80	793.80	91.90
	2013	613,528	128,919	0.2101	793.80	793.80	102.30
TUB WATER HEAT	1980	564,463	6,491	0.0115	514.10	514.10	3.30
	1990	567,437	21,563	0.0380	355.30	283.00	7.70
	2001	588,926	21,051	0.0358	325.10	283.00	6.80
	2004	594,848	20,906	0.0352	319.70	283.00	6.70
	2007	600,927	20,767	0.0346	314.30	283.00	6.50
	2013	613,528	20,505	0.0334	306.70	283.00	6.30

**Table H-1
Residential Electric Consumption Summary by End Use - All Housing Types
SDG&E**

End Use	Year	Housing Stock	Appliance Stock	Appliance Saturation	Average Appliance UEC	Marginal Appliance UEC	Total Energy Used (GWh)
CENTRAL A/C	1980	718,313	72,690	0.1012	1,266.90	1,266.90	92.10
	1990	946,085	182,670	0.1931	925.00	841.10	168.90
	2001	1,095,144	280,660	0.2563	812.90	764.60	228.10
	2004	1,156,392	315,483	0.2728	797.70	765.50	251.70
	2007	1,208,123	347,118	0.2873	770.40	638.60	267.50
	2013	1,291,578	403,745	0.3126	717.60	640.80	289.80
ROOM A/C	1980	718,313	80,907	0.1126	321.10	264.20	26.00
	1990	946,084	117,833	0.1246	279.00	259.50	32.90
	2001	1,095,145	130,788	0.1194	263.60	257.30	34.50
	2004	1,156,391	135,422	0.1171	262.30	256.60	35.50
	2007	1,208,122	139,491	0.1155	260.60	256.00	36.40
	2013	1,291,576	146,389	0.1133	260.70	255.20	38.10
EVAP A/C	1980	718,313	13,746	0.0191	210.00	210.00	2.90
	1990	946,084	13,283	0.0140	210.00	210.00	2.80
	2001	1,095,145	13,531	0.0124	210.00	210.00	2.80
	2004	1,156,391	14,310	0.0124	210.00	210.00	3.00
	2007	1,208,122	14,980	0.0124	210.00	210.00	3.10
	2013	1,291,576	16,093	0.0125	210.00	210.00	3.40
SPACE HEAT	1980	718,313	105,198	0.1465	3,324.30	3,324.30	349.70
	1990	946,085	237,639	0.2512	1,306.80	863.50	310.50
	2001	1,095,144	271,562	0.2480	992.60	789.50	269.60
	2004	1,156,392	286,124	0.2474	937.20	773.90	268.10
	2007	1,208,123	298,349	0.2470	894.40	762.60	266.80
	2013	1,291,578	317,904	0.2461	837.40	748.60	266.20
FURNACE FAN	1980	718,313	277,816	0.3868	233.40	0.00	64.80
	1990	946,084	364,644	0.3854	234.00	0.00	85.30
	2001	1,095,145	457,425	0.4177	234.10	0.00	107.10
	2004	1,156,391	493,961	0.4272	234.10	0.00	115.60
	2007	1,208,122	525,038	0.4346	234.10	0.00	122.90
	2013	1,291,576	575,683	0.4457	234.00	0.00	134.70
HTWATR DISHWASH	1980	718,313	43,643	0.0608	1,005.70	0.00	43.90
	1990	946,084	74,769	0.0790	873.80	0.00	65.40
	2001	1,095,145	92,723	0.0847	837.30	0.00	77.70
	2004	1,156,391	99,213	0.0858	837.50	0.00	83.10
	2007	1,208,122	104,747	0.0867	840.70	0.00	88.10
	2013	1,291,576	113,792	0.0881	855.40	0.00	97.30
HTWATR CLTHWASH	1980	718,313	70,175	0.0977	1,303.20	0.00	91.40
	1990	946,084	104,442	0.1104	1,017.40	0.00	106.30
	2001	1,095,145	116,324	0.1062	998.60	0.00	116.20
	2004	1,156,391	121,437	0.1050	999.70	0.00	121.40
	2007	1,208,122	125,665	0.1040	1,003.70	0.00	126.10
	2013	1,291,576	132,262	0.1024	1,021.00	0.00	135.00
WATER HT(BASIC)	1980	718,313	79,458	0.1106	2,797.70	2,591.50	222.30
	1990	946,084	103,666	0.1096	2,239.00	2,040.20	232.10
	2001	1,095,145	114,762	0.1048	2,091.80	2,029.20	240.10
	2004	1,156,391	119,729	0.1035	2,090.80	2,035.80	250.40
	2007	1,208,122	123,860	0.1025	2,097.00	2,041.00	259.70
	2013	1,291,576	130,368	0.1009	2,129.60	2,052.80	277.60
REFRIG	1980	718,313	792,838	1.1038	1,425.30	1,329.90	1,130.30
	1990	946,084	1,071,005	1.1320	1,246.60	1,041.30	1,334.70
	2001	1,095,145	1,210,784	1.1056	1,061.30	876.60	1,285.40
	2004	1,156,391	1,272,035	1.1000	1,023.90	878.60	1,302.10
	2007	1,208,122	1,322,884	1.0950	992.60	880.60	1,313.40
	2013	1,291,576	1,402,958	1.0862	950.70	883.20	1,333.80

**Table H-1
Residential Electric Consumption Summary by End Use - All Housing Types
SDG&E**

End Use	Year	Housing Stock	Appliance Stock	Appliance Saturation	Average Appliance UEC	Marginal Appliance UEC	Total Energy Used (GWh)
FREEZER	1980	718,313	128,229	0.1785	1,348.70	1,237.90	173.00
	1990	946,084	186,745	0.1974	1,205.70	886.20	225.10
	2001	1,095,145	243,695	0.2225	1,048.30	886.20	255.60
	2004	1,156,391	262,709	0.2272	1,018.80	886.20	267.60
	2007	1,208,122	281,780	0.2332	993.60	886.20	279.90
	2013	1,291,576	320,786	0.2484	955.50	886.20	306.60
COLOR TV	1980	718,313	624,062	0.8688	408.80	316.00	254.90
	1990	946,084	913,934	0.9660	335.00	316.00	306.60
	2001	1,095,145	1,073,215	0.9800	324.10	316.00	347.80
	2004	1,156,391	1,135,938	0.9823	325.90	316.00	370.00
	2007	1,208,122	1,189,182	0.9843	329.60	316.00	392.30
	2013	1,291,576	1,275,568	0.9876	349.40	316.00	446.10
COOKING	1980	718,313	312,698	0.4353	677.60	677.60	211.90
	1990	946,084	464,849	0.4913	687.30	687.30	319.40
	2001	1,095,145	560,990	0.5123	708.70	708.70	397.50
	2004	1,156,391	596,730	0.5160	715.60	715.60	427.20
	2007	1,208,122	628,193	0.5200	722.70	722.70	453.90
	2013	1,291,576	682,061	0.5281	734.40	734.40	500.90
DISH WSH MOTOR	1980	718,313	381,433	0.5310	277.20	277.20	105.60
	1990	946,084	638,982	0.6754	263.20	252.20	168.10
	2001	1,095,145	831,563	0.7593	263.00	259.90	218.90
	2004	1,156,391	901,175	0.7793	265.30	262.90	238.90
	2007	1,208,122	961,514	0.7959	267.10	265.40	256.70
	2013	1,291,576	1,062,330	0.8225	270.70	269.60	287.60
CLOTHES DRYER	1980	718,313	241,306	0.3359	1,130.20	1,130.20	272.80
	1990	946,084	399,865	0.4227	1,136.70	1,136.70	454.60
	2001	1,095,145	499,127	0.4558	1,178.80	1,178.80	588.30
	2004	1,156,391	536,518	0.4640	1,192.80	1,192.80	639.80
	2007	1,208,122	568,820	0.4708	1,204.60	1,204.60	685.20
	2013	1,291,576	622,506	0.4820	1,225.10	1,225.10	762.80
SOLR WATER HEAT	1980	671,922	4,305	0.0064	472.10	429.20	2.00
	1990	891,581	8,049	0.0090	391.10	371.20	3.10
	2001	1,041,552	8,000	0.0077	391.80	381.40	3.10
	2004	1,098,932	8,148	0.0074	394.20	385.70	3.20
	2007	1,147,376	8,243	0.0072	397.30	390.00	3.30
	2013	1,225,468	8,330	0.0068	402.30	397.40	3.40
SOLR WATRHT PMP	1980	671,922	16,824	0.0250	472.50	472.50	7.90
	1990	891,581	32,260	0.0362	384.60	283.50	12.40
	2001	1,041,552	38,835	0.0373	304.30	283.50	11.80
	2004	1,098,932	41,013	0.0373	300.00	283.50	12.30
	2007	1,147,376	43,150	0.0376	295.50	283.50	12.80
	2013	1,225,468	47,355	0.0386	291.10	283.50	13.80
CLOTH WASH MTR	1980	718,313	610,708	0.8502	68.80	68.80	42.00
	1990	946,084	888,431	0.9391	70.00	70.00	62.10
	2001	1,095,145	1,040,919	0.9505	72.20	72.20	75.10
	2004	1,156,391	1,101,236	0.9523	72.80	72.80	80.30
	2007	1,208,122	1,152,147	0.9537	73.40	73.40	84.90
	2013	1,291,576	1,234,132	0.9555	74.70	74.70	92.40
WATER BED	1980	718,313	70,339	0.0979	1,525.40	1,483.40	107.30
	1990	946,084	131,909	0.1394	1,379.30	1,340.70	182.00
	2001	1,095,145	178,126	0.1627	1,348.30	1,340.80	240.20
	2004	1,156,391	193,577	0.1674	1,347.20	1,340.90	260.80
	2007	1,208,122	208,561	0.1726	1,348.00	1,340.90	281.20
	2013	1,291,576	238,038	0.1843	1,354.30	1,340.90	322.40

**Table H-1
Residential Electric Consumption Summary by End Use - All Housing Types
SDG&E**

End Use	Year	Housing Stock	Appliance Stock	Appliance Saturation	Average Appliance UEC	Marginal Appliance UEC	Total Energy Used (GWh)
MISCELLANEOUS	1980	718,313	718,313	1.0000	916.80	0.00	658.80
	1990	946,084	946,084	1.0000	1,304.50	0.00	1,234.20
	2001	1,095,145	1,095,145	1.0000	1,517.30	0.00	1,662.00
	2004	1,156,391	1,156,391	1.0000	1,502.60	0.00	1,737.30
	2007	1,208,122	1,208,122	1.0000	1,641.60	0.00	1,983.60
	2013	1,291,576	1,291,576	1.0000	1,933.90	0.00	2,497.50
POOL PUMP	1980	718,313	52,355	0.0729	3,608.70	3,597.40	188.90
	1990	946,084	87,742	0.0927	3,603.70	3,595.30	316.20
	2001	1,095,145	105,609	0.0964	3,602.20	3,597.80	380.40
	2004	1,156,391	112,032	0.0969	3,601.30	3,597.70	403.50
	2007	1,208,122	117,688	0.0974	3,600.50	3,597.50	423.70
	2013	1,291,576	127,481	0.0987	3,599.40	3,597.40	458.90
POOL WATER HEAT	1980	718,313	1,257	0.0018	2,625.00	2,625.00	3.30
	1990	946,084	2,733	0.0029	2,625.00	2,625.00	7.20
	2001	1,095,145	2,089	0.0019	2,625.00	2,625.00	5.50
	2004	1,156,391	1,946	0.0017	2,625.00	2,625.00	5.10
	2007	1,208,122	1,813	0.0015	2,625.00	2,625.00	4.80
	2013	1,291,576	1,577	0.0012	2,625.00	2,625.00	4.10
POOL PUMP(SOLR)	1980	718,312	7,542	0.0105	0.00	0.00	0.00
	1990	946,084	17,303	0.0183	0.00	0.00	0.00
	2001	1,095,144	24,061	0.0220	0.00	0.00	0.00
	2004	1,156,391	25,541	0.0221	0.00	0.00	0.00
	2007	1,208,122	26,987	0.0223	0.00	0.00	0.00
	2013	1,291,576	29,797	0.0231	0.00	0.00	0.00
TUB PUMP	1980	437,909	38,317	0.0875	771.70	771.70	29.60
	1990	567,208	93,800	0.1654	771.70	771.70	72.40
	2001	670,763	113,440	0.1691	771.70	771.70	87.50
	2004	708,035	120,417	0.1701	771.70	771.70	92.90
	2007	739,588	126,395	0.1709	771.70	771.70	97.50
	2013	790,627	136,252	0.1723	771.70	771.70	105.20
TUB WATER HEAT	1980	437,909	8,977	0.0205	499.80	499.80	4.50
	1990	567,208	23,949	0.0422	499.80	499.80	12.00
	2001	670,763	29,904	0.0446	499.80	499.80	14.90
	2004	708,035	32,038	0.0453	499.80	499.80	16.00
	2007	739,588	33,849	0.0458	499.80	499.80	16.90
	2013	790,627	36,790	0.0465	499.80	499.80	18.40

Table H-1
Residential Electric Consumption Summary by End Use - All Housing Types
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End Use	Year	Housing Stock	Appliance Stock	Appliance Saturation	Average Appliance UEC	Marginal Appliance UEC	Total Energy Used (GWh)
CENTRAL A/C	1980	140,878	34,928	0.2479	1,687.40	1,687.40	58.90
	1990	158,588	55,096	0.3474	1,146.10	983.50	63.10
	2001	167,681	67,553	0.4029	958.50	862.60	64.70
	2004	169,699	69,852	0.4116	933.90	861.60	65.20
	2007	171,749	72,002	0.4192	902.70	718.60	65.00
	2013	175,955	75,937	0.4316	852.00	725.10	64.70
ROOM A/C	1980	140,877	44,750	0.3177	214.80	177.40	9.60
	1990	158,587	49,113	0.3097	192.50	173.80	9.40
	2001	167,681	53,694	0.3202	180.60	173.20	9.70
	2004	169,700	54,316	0.3201	179.00	173.10	9.70
	2007	171,750	54,874	0.3195	178.60	173.10	9.80
	2013	175,955	55,917	0.3178	178.10	173.00	10.00
EVAP A/C	1980	140,877	10,854	0.0770	165.60	165.60	1.80
	1990	158,587	9,800	0.0618	165.70	165.70	1.60
	2001	167,681	10,293	0.0614	165.40	165.40	1.70
	2004	169,700	10,373	0.0611	165.40	165.40	1.70
	2007	171,750	10,447	0.0608	165.40	165.40	1.70
	2013	175,955	10,590	0.0602	165.40	165.40	1.80
SPACE HEAT	1980	140,878	15,249	0.1082	3,463.50	3,463.50	52.80
	1990	158,588	23,419	0.1477	2,053.60	1,180.40	48.10
	2001	167,681	24,779	0.1478	1,894.70	1,135.80	46.90
	2004	169,699	25,102	0.1479	1,863.60	1,129.00	46.80
	2007	171,749	25,427	0.1480	1,832.60	1,122.30	46.60
	2013	175,955	26,093	0.1483	1,773.80	1,109.00	46.30
FURNACE FAN	1980	140,877	30,708	0.2180	236.60	0.00	7.30
	1990	158,587	32,052	0.2021	236.30	0.00	7.60
	2001	167,681	34,065	0.2032	236.30	0.00	8.10
	2004	169,700	34,498	0.2033	236.30	0.00	8.20
	2007	171,750	34,936	0.2034	236.30	0.00	8.30
	2013	175,955	35,835	0.2037	236.30	0.00	8.50
HTWATR DISHWASH	1980	140,877	3,663	0.0260	1,050.90	0.00	3.80
	1990	158,587	6,870	0.0433	873.70	0.00	6.00
	2001	167,681	8,226	0.0491	828.90	0.00	6.80
	2004	169,700	8,575	0.0505	825.70	0.00	7.10
	2007	171,750	8,925	0.0520	825.70	0.00	7.40
	2013	175,955	9,619	0.0547	835.40	0.00	8.00
HTWATR CLTHWASH	1980	140,877	7,191	0.0510	1,386.10	0.00	10.00
	1990	158,587	12,119	0.0764	1,062.40	0.00	12.90
	2001	167,681	13,369	0.0797	1,023.30	0.00	13.70
	2004	169,700	13,695	0.0807	1,019.20	0.00	14.00
	2007	171,750	14,018	0.0816	1,019.00	0.00	14.30
	2013	175,955	14,652	0.0833	1,030.20	0.00	15.10
WATER HT(BASIC)	1980	140,877	9,596	0.0681	2,915.50	2,710.80	28.00
	1990	158,587	14,401	0.0908	2,289.80	2,093.10	33.00
	2001	167,681	15,245	0.0909	2,133.40	2,066.30	32.50
	2004	169,700	15,442	0.0910	2,123.90	2,067.60	32.80
	2007	171,750	15,644	0.0911	2,123.20	2,068.60	33.20
	2013	175,955	16,056	0.0913	2,147.10	2,075.30	34.50
REFRIG	1980	140,877	154,453	1.0964	1,510.60	1,538.10	233.30
	1990	158,587	175,729	1.1081	1,405.60	1,200.90	247.00
	2001	167,681	183,418	1.0939	1,225.50	1,011.50	224.80
	2004	169,700	185,141	1.0910	1,187.40	1,014.40	219.80
	2007	171,750	186,931	1.0884	1,155.80	1,016.70	216.00
	2013	175,955	190,718	1.0839	1,109.70	1,018.90	211.60

Table H-1
Residential Electric Consumption Summary by End Use - All Housing Types
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End Use	Year	Housing Stock	Appliance Stock	Appliance Saturation	Average Appliance UEC	Marginal Appliance UEC	Total Energy Used (GWh)
FREEZER	1980	140,877	18,927	0.1344	1,478.40	1,355.80	28.00
	1990	158,587	26,890	0.1696	1,337.70	970.60	36.00
	2001	167,681	32,104	0.1915	1,182.30	970.60	38.00
	2004	169,700	33,435	0.1970	1,151.10	970.60	38.50
	2007	171,750	34,782	0.2025	1,123.40	970.60	39.10
	2013	175,955	37,476	0.2130	1,079.80	970.60	40.50
COLOR TV	1980	140,877	112,545	0.7989	471.90	346.10	53.10
	1990	158,587	151,591	0.9559	375.40	346.10	56.90
	2001	167,681	163,301	0.9739	366.20	346.10	59.80
	2004	169,700	165,950	0.9779	372.50	346.10	61.90
	2007	171,750	168,550	0.9814	384.00	346.10	64.70
	2013	175,955	173,633	0.9868	417.40	346.10	72.50
COOKING	1980	140,877	26,675	0.1894	683.50	683.50	18.20
	1990	158,587	32,122	0.2025	699.50	699.50	22.50
	2001	167,681	36,878	0.2199	714.80	714.80	26.40
	2004	169,700	38,068	0.2243	719.70	719.70	27.40
	2007	171,750	39,253	0.2286	724.10	724.10	28.40
	2013	175,955	41,607	0.2365	734.00	734.00	30.50
DISH WSH MOTOR	1980	140,877	57,947	0.4113	276.20	276.20	16.00
	1990	158,587	82,823	0.5223	284.60	269.70	23.60
	2001	167,681	97,726	0.5828	281.20	275.40	27.40
	2004	169,700	101,372	0.5974	281.10	277.20	28.50
	2007	171,750	104,994	0.6113	282.20	279.00	29.70
	2013	175,955	112,175	0.6375	285.80	282.60	32.10
CLOTHES DRYER	1980	140,877	31,194	0.2214	1,010.70	1,010.70	31.50
	1990	158,587	40,050	0.2525	1,057.40	1,057.40	42.30
	2001	167,681	44,549	0.2657	1,076.60	1,076.60	47.90
	2004	169,700	45,688	0.2692	1,082.50	1,082.50	49.50
	2007	171,750	46,830	0.2727	1,088.90	1,088.90	51.00
	2013	175,955	49,106	0.2791	1,068.50	827.80	52.50
SOLR WATER HEAT	1980	140,877	141	0.0010	567.70	488.70	0.10
	1990	158,587	1,113	0.0070	394.30	382.20	0.40
	2001	167,681	1,130	0.0067	384.50	378.60	0.40
	2004	169,700	1,132	0.0067	384.20	378.70	0.40
	2007	171,750	1,135	0.0066	383.90	378.80	0.40
	2013	175,955	1,142	0.0065	382.70	379.10	0.40
SOLR WATRHT PMP	1980	140,877	358	0.0025	517.50	517.50	0.20
	1990	158,587	5,831	0.0368	517.50	517.50	3.00
	2001	167,681	6,096	0.0364	517.50	517.50	3.20
	2004	169,700	6,157	0.0363	517.50	517.50	3.20
	2007	171,750	6,219	0.0362	517.50	517.50	3.20
	2013	175,955	6,348	0.0361	517.50	517.50	3.30
CLOTH WASH MTR	1980	140,877	108,846	0.7726	67.80	67.80	7.40
	1990	158,587	134,852	0.8503	72.80	72.80	9.90
	2001	167,681	147,310	0.8785	74.70	74.70	11.00
	2004	169,700	150,319	0.8858	75.20	75.20	11.30
	2007	171,750	153,288	0.8925	75.80	75.80	11.60
	2013	175,955	159,115	0.9043	76.30	76.30	12.20
WATER BED	1980	140,877	8,666	0.0615	1,670.50	1,637.60	14.50
	1990	158,587	13,914	0.0877	1,499.40	1,469.70	20.90
	2001	167,681	16,682	0.0995	1,488.90	1,469.70	24.80
	2004	169,700	17,363	0.1023	1,491.50	1,469.70	25.90
	2007	171,750	18,065	0.1052	1,495.00	1,469.70	27.00
	2013	175,955	19,436	0.1105	1,502.60	1,469.70	29.20

Table H-1
Residential Electric Consumption Summary by End Use - All Housing Types
BGP

End Use	Year	Housing Stock	Appliance Stock	Appliance Saturation	Average Appliance UEC	Marginal Appliance UEC	Total Energy Used (GWh)
MISCELLANEOUS	1980	140,877	140,877	1.0000	856.50	0.00	120.70
	1990	158,587	158,587	1.0000	1,300.20	0.00	206.20
	2001	167,681	167,681	1.0000	1,140.70	0.00	191.30
	2004	169,700	169,700	1.0000	1,103.80	0.00	187.30
	2007	171,750	171,750	1.0000	1,198.90	0.00	205.90
	2013	175,955	175,955	1.0000	1,381.70	0.00	243.10
POOL PUMP	1980	140,877	12,669	0.0899	3,837.00	3,262.00	48.60
	1990	158,587	16,502	0.1041	3,365.40	2,796.70	55.50
	2001	167,681	17,446	0.1040	3,122.10	2,795.50	54.50
	2004	169,700	17,644	0.1040	3,073.30	2,795.40	54.20
	2007	171,750	17,845	0.1039	3,030.70	2,795.30	54.10
	2013	175,955	18,258	0.1038	2,965.20	2,795.10	54.10
POOL WATER HEAT	1980	140,877	397	0.0028	2,875.00	2,875.00	1.10
	1990	158,587	635	0.0040	2,875.00	2,875.00	1.80
	2001	167,681	673	0.0040	2,875.00	2,875.00	1.90
	2004	169,700	682	0.0040	2,875.00	2,875.00	2.00
	2007	171,750	691	0.0040	2,875.00	2,875.00	2.00
	2013	175,955	709	0.0040	2,875.00	2,875.00	2.00
POOL PUMP(SOLR)	1980	140,877	2,536	0.0180	0.00	0.00	0.00
	1990	158,587	4,255	0.0268	0.00	0.00	0.00
	2001	167,681	6,061	0.0362	0.00	0.00	0.00
	2004	169,699	6,501	0.0383	0.00	0.00	0.00
	2007	171,751	6,928	0.0403	0.00	0.00	0.00
	2013	175,956	7,743	0.0440	0.00	0.00	0.00
TUB PUMP	1980	76,104	5,334	0.0701	845.20	845.20	4.50
	1990	76,697	7,152	0.0933	845.20	845.20	6.00
	2001	82,214	8,848	0.1076	845.20	845.20	7.50
	2004	83,386	9,242	0.1108	845.20	845.20	7.80
	2007	84,572	9,639	0.1140	845.20	845.20	8.10
	2013	86,995	10,440	0.1200	845.20	845.20	8.80
TUB WATER HEAT	1980	76,104	886	0.0116	547.40	547.40	0.50
	1990	76,697	1,015	0.0132	547.40	547.40	0.60
	2001	82,214	1,216	0.0148	547.40	547.40	0.70
	2004	83,386	1,263	0.0151	547.40	547.40	0.70
	2007	84,572	1,309	0.0155	547.40	547.40	0.70
	2013	86,995	1,403	0.0161	547.40	547.40	0.80

**Table H-2
Residential Natural Gas Consumption Summary by End Use - All Housing Types**

End Use	Year	PG&E					Total Energy Used (MM Therms)
		Housing Stock	Appliance Stock	Appliance Saturation	Average Appliance UEC	Marginal Appliance UEC	
CENTRAL A/C	1980	3,270,580	45,766	0.01399	301.5	286.8	13.8
	1990	3,897,420	89,714	0.02302	205.5	168.2	18.4
	2001	4,422,094	105,712	0.0239	177.5	163	18.8
	2004	4,628,767	112,869	0.02438	171.7	160.9	19.4
	2007	4,812,082	119,548	0.02484	167.3	159.3	20
	2013	5,167,946	132,801	0.0257	162.4	157.1	21.6
SPACE HEAT	1980	3,270,580	2,644,448	0.80856	475	451.9	1,255.60
	1990	3,897,420	2,980,874	0.76483	373.2	347.4	1,112.30
	2001	4,422,094	3,325,276	0.75197	310.8	289.5	1,033.90
	2004	4,628,767	3,459,269	0.74734	296.5	278.9	1,025.30
	2007	4,812,082	3,577,410	0.74342	284.2	269.8	1,016.60
	2013	5,167,946	3,807,440	0.73674	264.9	255.2	1,008.70
HTWATR DISHWASH	1980	3,270,577	1,367,188	0.41802	64.2	0	87.7
	1990	3,897,423	1,902,700	0.48819	58.2	0	110.9
	2001	4,422,094	2,435,427	0.55074	53.8	0	131.4
	2004	4,628,766	2,620,786	0.5662	53.8	0	141.1
	2007	4,812,079	2,788,410	0.57946	53.8	0	150.7
	2013	5,167,944	3,113,214	0.60241	55.3	0	171.5
HTWATR CLTHWASH	1980	3,270,577	2,292,137	0.70084	82.1	0	188.7
	1990	3,897,423	2,851,746	0.7317	64.8	0	185.2
	2001	4,422,094	3,286,524	0.7432	61.7	0	203
	2004	4,628,766	3,445,681	0.74441	61.7	0	212.3
	2007	4,812,079	3,588,623	0.74576	61.7	0	222
	2013	5,167,944	3,866,662	0.7482	63.3	0	244
WATER HT(BASIC)	1980	3,270,577	2,734,349	0.83604	172.5	155.5	471.2
	1990	3,897,423	3,222,456	0.82682	132.7	113.4	426.9
	2001	4,422,094	3,649,980	0.82539	120	113.8	438.3
	2004	4,628,766	3,813,231	0.82381	119.8	114.4	456.6
	2007	4,812,079	3,957,645	0.82244	120.4	115.1	475.7
	2013	5,167,944	4,237,798	0.82002	122.3	115.1	519.4
COOKING	1980	3,270,577	1,292,929	0.39532	65.8	39.4	85.2
	1990	3,897,423	1,325,275	0.34004	57.2	40.3	75.6
	2001	4,422,094	1,444,437	0.32664	50.7	41.6	73.3
	2004	4,628,766	1,496,726	0.32335	49.7	42.2	74.3
	2007	4,812,079	1,543,786	0.32082	48.7	42.3	75.4
	2013	5,167,944	1,636,331	0.31663	47.6	42.9	77.7
CLOTHES DRYER	1980	3,270,577	576,257	0.17619	30.4	30.4	17.6
	1990	3,897,423	785,083	0.20144	32.1	32.1	25.4
	2001	4,422,094	930,740	0.21047	33.5	33.5	31.2
	2004	4,628,766	981,722	0.21209	33.5	33.5	33.2
	2007	4,812,079	1,028,990	0.21383	34.2	34.2	35.1
	2013	5,167,944	1,122,218	0.21715	34.2	34.2	38.6
SOLR WATER HEAT	1980	3,073,910	27,800	0.00904	61.7	53.8	1.7
	1990	3,641,850	36,053	0.0099	42.7	39.2	1.5
	2001	4,177,020	36,825	0.00882	41.6	39.3	1.5
	2004	4,368,567	37,225	0.00852	41.6	39.3	1.5
	2007	4,538,334	37,553	0.00827	41.6	39.3	1.6
	2013	4,867,953	38,181	0.00785	40.8	40.1	1.6
MISCELLANEOUS	1980	3,270,577	3,270,577	1	8.5	0	28.5
	1990	3,897,423	3,897,423	1	11	0	42.8
	2001	4,422,094	4,422,094	1	14.2	0	61.6
	2004	4,628,766	4,628,766	1	12.4	0	57.9
	2007	4,812,079	4,812,079	1	13.3	0	65
	2013	5,167,944	5,167,944	1	15.3	0	79.1
POOL WATER HEAT	1980	3,270,577	71,953	0.022	285	285	20.5
	1990	3,897,423	42,872	0.011	285	271	12.2
	2001	4,422,094	51,261	0.01159	278.4	271	14.3
	2004	4,628,766	54,481	0.01177	277.2	271	15.1
	2007	4,812,079	57,345	0.01192	275.5	271	15.8
	2013	5,167,944	62,900	0.01217	273.7	271	17.2
POOL PUMP(SOLR)	1980	3,270,576	103,023	0.0315	307.8	307.8	31.7
	1990	3,897,421	66,256	0.017	306.9	292	20.4
	2001	4,422,096	74,913	0.01694	306.9	292	23
	2004	4,628,768	74,541	0.0161	306.9	292	22.9
	2007	4,812,079	74,204	0.01542	306.9	292	22.8
	2013	5,167,945	73,740	0.01427	306.9	292	22.6
TUB WATER HEAT	1980	2,146,878	68,700	0.032	191.2	191.2	13.1
	1990	2,549,156	76,475	0.03	191.2	191.2	14.6
	2001	2,957,926	102,510	0.03466	191.2	191.2	19.6
	2004	3,108,751	111,705	0.03593	191.2	191.2	21.4
	2007	3,247,038	120,175	0.03701	191.2	191.2	23
	2013	3,519,346	136,841	0.03888	191.2	191.2	26.2

**Table H-2
Residential Natural Gas Consumption Summary by End Use - All Housing Types**

End Use	Year	SMUD					Total Energy Used (MM Therms)
		Housing Stock	Appliance Stock	Appliance Saturation	Average Appliance UEC	Marginal Appliance UEC	
CENTRAL A/C	1980	303,166	9,381	0.03095	340	324.6	3.2
	1990	396,134	9,799	0.02473	290.8	276.6	2.9
	2001	463,723	10,775	0.02324	270.2	264.7	2.9
	2004	487,469	11,042	0.02265	266.5	261.9	2.9
	2007	509,699	11,287	0.02214	263.5	259.4	3
	2013	553,902	11,738	0.02119	260.5	256.1	3.1
SPACE HEAT	1980	303,166	232,066	0.76547	565.3	537.4	131.1
	1990	396,134	283,788	0.7164	425.3	397.7	120.7
	2001	463,723	343,535	0.74082	345.6	323.6	118.7
	2004	487,469	363,889	0.74649	331.4	313.4	120.7
	2007	509,699	382,942	0.75131	319.8	304.8	122.5
	2013	553,902	420,795	0.75969	302.1	291.9	127.1
HTWATR DISHWASH	1980	303,166	141,592	0.46705	63.2	0	8.9
	1990	396,135	218,087	0.55054	54.5	0	11.9
	2001	463,722	279,673	0.6031	50.4	0	14.2
	2004	487,468	299,294	0.61398	50.4	0	15.1
	2007	509,698	317,761	0.62343	50.5	0	16.1
	2013	553,903	354,232	0.63952	51.4	0	18.2
HTWATR CLTHWASH	1980	303,166	199,435	0.65784	81.3	0	16.2
	1990	396,135	288,551	0.72842	62.3	0	17.9
	2001	463,722	339,661	0.73247	58.8	0	20.1
	2004	487,468	356,446	0.73122	58.8	0	21.1
	2007	509,698	372,144	0.73013	59.5	0	22
	2013	553,903	403,324	0.72815	59.7	0	24.2
WATER HT(BASIC)	1980	303,166	222,712	0.73462	171.4	154.5	38.2
	1990	396,135	302,152	0.76275	128.5	113.5	38.9
	2001	463,722	349,931	0.75461	118.5	114	41.4
	2004	487,468	366,493	0.75183	117.6	114	43.2
	2007	509,698	381,934	0.74933	117.6	114.6	45
	2013	553,903	412,573	0.74485	119.4	114.6	49.2
COOKING	1980	303,166	112,101	0.36977	66.1	39.4	7.4
	1990	396,135	126,166	0.31849	54.5	39.8	6.9
	2001	463,722	138,050	0.2977	49	40.6	6.7
	2004	487,468	142,914	0.29318	47.9	41.3	6.8
	2007	509,698	147,501	0.28938	47	41.3	7
	2013	553,903	156,781	0.28304	46	41.4	7.2
CLOTHES DRYER	1980	303,166	17,537	0.05784	30.2	30.2	0.5
	1990	396,135	32,644	0.08241	30.4	30.4	1
	2001	463,722	53,175	0.11467	31.3	31.3	1.7
	2004	487,468	59,303	0.12166	32	32	1.9
	2007	509,698	65,386	0.12828	32.1	32.1	2.1
	2013	553,903	77,784	0.14043	32.1	32.1	2.5
SOLR WATER HEAT	1980	289,001	897	0.0031	56.2	52.8	0.1
	1990	378,655	3,581	0.00946	42.2	38.7	0.1
	2001	446,769	5,781	0.01294	40.9	40.1	0.2
	2004	468,837	6,461	0.01378	40.9	40.1	0.3
	2007	489,495	7,168	0.01464	41.1	40.3	0.3
	2013	530,585	8,662	0.01633	41.2	40.4	0.4
MISCELLANEOUS	1980	303,166	303,166	1	7.6	0	2.2
	1990	396,135	396,135	1	8.7	0	3.5
	2001	463,722	463,722	1	8.4	0	4.1
	2004	487,468	487,468	1	7.5	0	3.8
	2007	509,698	509,698	1	8.4	0	4.2
	2013	553,903	553,903	1	9.3	0	5.2
POOL WATER HEAT	1980	303,166	7,731	0.0255	406.9	406.9	3.1
	1990	396,135	14,500	0.03661	396.2	386.8	5.7
	2001	463,722	15,222	0.03282	392.4	386.8	6
	2004	487,468	15,611	0.03203	391.5	386.8	6.1
	2007	509,698	15,937	0.03127	390.5	386.8	6.2
	2013	553,903	16,560	0.0299	389.6	386.8	6.4
POOL PUMP(SOLR)	1980	303,167	13,491	0.0445	307.8	307.8	4.2
	1990	396,134	11,641	0.02939	307.8	292	3.6
	2001	463,722	15,607	0.03366	306.9	292	4.8
	2004	487,468	16,476	0.0338	306.9	292	5.1
	2007	509,698	17,343	0.03403	306.9	292	5.3
	2013	553,903	19,132	0.03454	306.9	292	5.9
TUB WATER HEAT	1980	202,659	7,498	0.037	191.2	191.2	1.4
	1990	269,090	14,136	0.05253	185.9	181.5	2.6
	2001	328,058	15,659	0.04773	184.2	181.5	2.9
	2004	346,639	16,189	0.0467	184.2	181.5	3
	2007	364,068	16,640	0.04571	183.3	181.5	3.1
	2013	398,750	17,499	0.04388	182.4	181.5	3.2

**Table H-2
Residential Natural Gas Consumption Summary by End Use - All Housing Types**

End Use	Year	Housing Stock	SCE		Average Appliance UEC	Marginal Appliance UEC	Total Energy Used (MM Therms)
			Appliance Stock	Appliance Saturation			
CENTRAL A/C	1980	2,990,440	98,702	0.03301	264.3	249	26
	1990	3,683,748	76,239	0.0207	202.3	191.5	15.4
	2001	4,080,521	90,571	0.0222	186.8	183.1	16.9
	2004	4,247,007	96,500	0.02272	185.1	182.2	17.9
	2007	4,403,767	102,235	0.02322	183.8	181.6	18.8
	2013	4,768,591	115,264	0.02417	183.1	181.4	21.1
SPACE HEAT	1980	2,990,440	2,636,506	0.88164	338.5	322.1	892.4
	1990	3,683,748	3,139,595	0.85228	251.8	234.7	790.6
	2001	4,080,521	3,457,521	0.84732	210.2	195.8	726.6
	2004	4,247,007	3,589,700	0.84523	201.3	189.4	722.3
	2007	4,403,767	3,714,163	0.84341	193.9	184	720
	2013	4,768,591	4,004,865	0.83984	181.3	174.6	725.9
HTWATR DISHWASH	1980	2,990,438	1,345,178	0.44983	61.4	0	82.3
	1990	3,683,744	2,024,562	0.54959	52.7	0	106.4
	2001	4,080,522	2,523,326	0.61839	50	0	126.4
	2004	4,247,004	2,699,318	0.63558	50	0	135.9
	2007	4,403,765	2,866,330	0.65088	50.9	0	145.9
	2013	4,768,589	3,236,424	0.67869	51.7	0	167.4
HTWATR CLTHWASH	1980	2,990,438	2,280,165	0.76249	78.9	0	179.6
	1990	3,683,744	2,812,226	0.76342	59.5	0	168.4
	2001	4,080,522	3,198,973	0.78396	58.9	0	187.6
	2004	4,247,004	3,346,527	0.78797	58.9	0	197.2
	2007	4,403,765	3,485,774	0.79154	59.6	0	207.6
	2013	4,768,589	3,802,461	0.7974	60.4	0	230.2
WATER HT(BASIC)	1980	2,990,438	2,608,242	0.87219	167.8	151.4	437.8
	1990	3,683,744	3,074,043	0.83449	132.5	115.4	407.6
	2001	4,080,522	3,411,405	0.83603	123.6	117.1	422.1
	2004	4,247,004	3,550,431	0.83598	124.2	117.7	441.3
	2007	4,403,765	3,681,592	0.83601	125.7	118.3	462.4
	2013	4,768,589	3,986,553	0.836	127.6	118.4	508.7
COOKING	1980	2,990,438	2,153,721	0.7202	67.7	41.7	145.5
	1990	3,683,744	2,537,756	0.68891	56.6	43.5	143.8
	2001	4,080,522	2,786,574	0.6829	51	45.5	143.1
	2004	4,247,004	2,895,673	0.68181	50.8	46.2	146.2
	2007	4,403,765	2,997,565	0.68068	49.9	46.2	150
	2013	4,768,589	3,237,339	0.67888	49.1	46.3	159.3
CLOTHES DRYER	1980	2,990,438	1,372,330	0.45891	32.8	32.8	45.3
	1990	3,683,744	1,908,122	0.51798	35	35	67.3
	2001	4,080,522	2,191,320	0.53702	37.1	37.1	81.7
	2004	4,247,004	2,299,938	0.54154	37.7	37.7	86.6
	2007	4,403,765	2,401,589	0.54535	37.7	37.7	91.3
	2013	4,768,589	2,631,890	0.55193	38.3	38.3	100.3
SOLR WATER HEAT	1980	2,813,154	53,151	0.01889	49.6	42.8	2.6
	1990	3,466,906	92,251	0.02661	39	32.8	3.6
	2001	3,872,781	96,188	0.02484	36.7	33.2	3.5
	2004	4,027,083	97,870	0.0243	36	33.2	3.5
	2007	4,172,305	99,418	0.02383	35.8	33.5	3.6
	2013	4,510,797	103,179	0.02287	35	33.5	3.6
MISCELLANEOUS	1980	2,990,438	2,990,438	1	8.2	0	25
	1990	3,683,744	3,683,744	1	11.1	0	39.7
	2001	4,080,522	4,080,522	1	9.9	0	40.4
	2004	4,247,004	4,247,004	1	9.7	0	40.2
	2007	4,403,765	4,403,765	1	9.9	0	44.9
	2013	4,768,589	4,768,589	1	11.4	0	54.6
POOL WATER HEAT	1980	2,990,438	164,474	0.055	223.1	223.1	36.7
	1990	3,683,744	261,545	0.071	217.7	211.9	56.9
	2001	4,080,522	270,608	0.06631	215.4	211.9	58.3
	2004	4,247,004	277,239	0.06528	214.5	211.9	59.6
	2007	4,403,765	283,114	0.06429	214.5	211.9	60.7
	2013	4,768,589	298,253	0.06255	213.6	211.9	63.7
POOL PUMP(SOLR)	1980	2,990,439	35,885	0.012	223.1	223.1	8
	1990	3,683,745	73,675	0.02	223.1	211.9	16.4
	2001	4,080,523	106,601	0.02612	222.2	211.9	23.7
	2004	4,247,003	115,675	0.02724	222.2	211.9	25.7
	2007	4,403,763	124,604	0.02829	222.2	211.9	27.7
	2013	4,768,588	143,607	0.03012	222.2	211.9	31.9
TUB WATER HEAT	1980	1,991,621	121,489	0.061	162.2	162.2	19.7
	1990	2,430,808	281,974	0.116	162.2	162.2	45.7
	2001	2,747,873	334,520	0.12174	162.2	162.2	54.2
	2004	2,864,728	353,818	0.12351	162.2	162.2	57.4
	2007	2,976,743	372,186	0.12503	162.2	162.2	60.4
	2013	3,234,824	414,368	0.1281	162.2	162.2	67.2

**Table H-2
Residential Natural Gas Consumption Summary by End Use - All Housing Types**

LADWP							
End Use	Year	Housing Stock	Appliance Stock	Appliance Saturation	Average Appliance UEC	Marginal Appliance UEC	Total Energy Used (MM Therms)
CENTRAL A/C	1980	1,141,082	43,279	0.03793	225.2	213.5	9.7
	1990	1,224,258	31,762	0.02594	175.5	159.6	5.3
	2001	1,283,140	36,345	0.02832	147.6	145.7	5.4
	2004	1,300,720	37,864	0.02911	145.8	144.3	5.5
	2007	1,318,565	39,397	0.02988	144.2	142.8	5.7
	2013	1,355,038	42,487	0.03136	143	141.9	6.1
SPACE HEAT	1980	1,141,082	1,023,797	0.89722	334.8	317.9	342.7
	1990	1,224,258	1,028,647	0.84022	289.6	261.9	297.4
	2001	1,283,140	1,040,027	0.81053	270.1	236	280.6
	2004	1,300,720	1,042,702	0.80163	266.3	233.3	277.3
	2007	1,318,565	1,045,618	0.793	262.6	230.1	274
	2013	1,355,038	1,052,157	0.77648	255.4	224.8	268.4
HTWATR DISHWASH	1980	1,141,082	427,457	0.37461	61.2	0	26.2
	1990	1,224,260	510,547	0.41702	55.3	0	28.1
	2001	1,283,140	613,774	0.47834	51.6	0	31.4
	2004	1,300,720	642,751	0.49415	51	0	32.9
	2007	1,318,566	671,465	0.50924	51.4	0	34.5
	2013	1,355,037	728,099	0.53733	52.1	0	38.1
HTWATR CLTHWASH	1980	1,141,082	816,783	0.71579	79.2	0	64.8
	1990	1,224,260	860,805	0.70312	64	0	54.9
	2001	1,283,140	944,850	0.73636	61.1	0	57.6
	2004	1,300,720	969,086	0.74504	61	0	59.1
	2007	1,318,566	992,940	0.75304	61.4	0	60.9
	2013	1,355,037	1,039,310	0.767	62.6	0	65
WATER HT(BASIC)	1980	1,141,082	1,056,338	0.92573	165.3	149.4	174.5
	1990	1,224,260	1,077,602	0.88021	137.8	117.2	148.2
	2001	1,283,140	1,127,756	0.87891	126.1	118	142
	2004	1,300,720	1,142,707	0.87852	125.6	117.9	143.8
	2007	1,318,566	1,157,894	0.87815	126.4	118.3	146.6
	2013	1,355,037	1,188,965	0.87744	128.9	119.1	153.4
COOKING	1980	1,141,082	922,389	0.80835	64.6	38	59.5
	1990	1,224,260	979,863	0.80037	57.1	41.7	56
	2001	1,283,140	1,005,178	0.78337	51.8	42.8	51.9
	2004	1,300,720	1,013,593	0.77925	50.5	43.2	51.3
	2007	1,318,566	1,022,316	0.77532	49.6	43.2	51
	2013	1,355,037	1,040,648	0.76799	49	43.5	50.9
CLOTHES DRYER	1980	1,141,082	511,788	0.44851	30.8	30.8	15.6
	1990	1,224,260	607,758	0.49643	34.2	34.2	20.7
	2001	1,283,140	665,112	0.51835	35.4	35.4	23.3
	2004	1,300,720	681,073	0.52361	35.3	35.3	24
	2007	1,318,566	696,782	0.52844	35.8	35.8	24.7
	2013	1,355,037	727,672	0.53701	36.1	36.1	26.1
SOLR WATER HEAT	1980	1,141,082	1,706	0.00149	52.9	43.2	0.1
	1990	1,224,260	23,798	0.01944	37.8	35.2	0.9
	2001	1,283,140	23,703	0.01847	36.9	34.9	0.9
	2004	1,300,720	23,633	0.01817	36.3	34.9	0.9
	2007	1,318,566	23,568	0.01788	36.3	34.9	0.9
	2013	1,355,037	23,456	0.01731	36.3	35.7	0.9
MISCELLANEOUS	1980	1,141,082	1,141,082	1	8.6	0	10.1
	1990	1,224,260	1,224,260	1	12.3	0	15.4
	2001	1,283,140	1,283,140	1	10.9	0	14.1
	2004	1,300,720	1,300,720	1	10.5	0	13.7
	2007	1,318,566	1,318,566	1	11.8	0	15
	2013	1,355,037	1,355,037	1	13	0	17.5
POOL WATER HEAT	1980	1,141,082	76,452	0.067	223.1	223.1	17.1
	1990	1,224,260	102,838	0.084	218.7	211.9	22.5
	2001	1,283,140	97,597	0.07606	216.6	211.9	21.1
	2004	1,300,720	96,373	0.07409	215.8	211.9	20.8
	2007	1,318,566	95,232	0.07222	214.9	211.9	20.5
	2013	1,355,037	93,184	0.06877	214.9	211.9	20
POOL PUMP(SOLR)	1980	1,141,081	21,110	0.0185	223.1	223.1	4.7
	1990	1,224,261	26,934	0.022	220.5	211.9	5.9
	2001	1,283,140	34,908	0.0272	217.9	211.9	7.6
	2004	1,300,719	36,841	0.02832	217.1	211.9	8
	2007	1,318,566	38,739	0.02938	217.1	211.9	8.4
	2013	1,355,036	42,438	0.03132	216.2	211.9	9.2
TUB WATER HEAT	1980	564,463	31,751	0.05625	162.2	162.2	5.1
	1990	567,437	54,474	0.096	162.2	162.2	8.8
	2001	588,926	65,842	0.1118	162.2	162.2	10.7
	2004	594,848	68,960	0.11593	162.2	162.2	11.2
	2007	600,927	72,082	0.11995	162.2	162.2	11.7
	2013	613,528	78,330	0.12767	162.2	162.2	12.7

**Table H-2
Residential Natural Gas Consumption Summary by End Use - All Housing Types**

End Use	Year	SDG&E					Total Energy Used (MM Therms)
		Housing Stock	Appliance Stock	Appliance Saturation	Average Appliance UEC	Marginal Appliance UEC	
CENTRAL A/C	1980	718,313	9,343	0.01301	105.1	100.4	1
	1990	946,085	31,809	0.03362	87.8	86.6	2.8
	2001	1,095,144	46,594	0.04255	86.5	86.2	4
	2004	1,156,392	51,983	0.04495	86.3	86.2	4.5
	2007	1,208,123	56,729	0.04696	86.2	86.2	4.9
	2013	1,291,578	64,877	0.05023	86.2	86.2	5.6
SPACE HEAT	1980	718,313	577,522	0.804	238.1	226.5	137.5
	1990	946,085	667,900	0.70596	182.9	170.1	122.2
	2001	1,095,144	772,286	0.70519	145.6	135.3	112.5
	2004	1,156,392	814,915	0.70471	137.5	128.9	112
	2007	1,208,123	850,914	0.70433	130.9	123.9	111.3
	2013	1,291,578	908,953	0.70376	121.8	116.8	110.5
HTWATR DISHWASH	1980	718,313	324,035	0.45111	53.3	0	17.3
	1990	946,084	543,486	0.57446	45.3	0	24.7
	2001	1,095,145	710,828	0.64907	42	0	29.9
	2004	1,156,391	770,834	0.66658	41.7	0	32.3
	2007	1,208,122	822,908	0.68115	42.1	0	34.6
	2013	1,291,576	910,054	0.70461	42.9	0	39.1
HTWATR CLTHWASH	1980	718,313	518,550	0.7219	68.9	0	35.8
	1990	946,084	755,541	0.7986	52.6	0	39.6
	2001	1,095,145	889,405	0.81213	49.5	0	44.2
	2004	1,156,391	941,475	0.81415	49.3	0	46.7
	2007	1,208,122	985,487	0.81572	49.8	0	49
	2013	1,291,576	1,056,514	0.818	51	0	53.7
WATER HT(BASIC)	1980	718,313	596,606	0.83057	145.8	131.9	87.1
	1990	946,084	780,171	0.82463	112.8	98.8	87.8
	2001	1,095,145	904,718	0.82612	103.6	99.5	93.8
	2004	1,156,391	955,586	0.82635	103.5	100	98.9
	2007	1,208,122	998,291	0.82632	104	100.5	103.7
	2013	1,291,576	1,066,515	0.82575	106.4	100.7	113.3
COOKING	1980	718,313	374,401	0.52122	58.3	35.2	21.7
	1990	946,084	453,063	0.47889	47.8	36.7	21.7
	2001	1,095,145	504,506	0.46067	43	37.9	21.8
	2004	1,156,391	528,022	0.45661	42.7	37.9	22.5
	2007	1,208,122	546,847	0.45264	42.5	38.5	23.1
	2013	1,291,576	574,682	0.44495	41.6	39	24
CLOTHES DRYER	1980	718,313	197,321	0.2747	27.6	27.6	5.4
	1990	946,084	388,529	0.41067	26.7	26.7	10.3
	2001	1,095,145	462,881	0.42267	27.1	27.1	12.6
	2004	1,156,391	490,822	0.42444	27.5	27.5	13.5
	2007	1,208,122	514,688	0.42602	27.5	27.5	14.3
	2013	1,291,576	553,766	0.42875	28.3	28.3	15.6
SOLR WATER HEAT	1980	671,922	12,519	0.01863	44.4	38.9	0.6
	1990	891,581	24,212	0.02716	33.3	27.1	0.8
	2001	1,041,552	30,835	0.0296	28.8	27.5	0.9
	2004	1,098,932	32,866	0.02991	28.9	28.2	0.9
	2007	1,147,376	34,907	0.03043	28.9	28.3	1
	2013	1,225,468	39,025	0.03185	29	28.4	1.1
MISCELLANEOUS	1980	718,313	718,313	1	7.9	0	5.6
	1990	946,084	946,084	1	10.7	0	10.1
	2001	1,095,145	1,095,145	1	12.2	0	13
	2004	1,156,391	1,156,391	1	11.5	0	13.5
	2007	1,208,122	1,208,122	1	12.7	0	15.3
	2013	1,291,576	1,291,576	1	15	0	18.9
POOL WATER HEAT	1980	718,313	24,781	0.0345	92.4	92.4	2.3
	1990	946,084	38,725	0.04093	90.7	87.9	3.5
	2001	1,095,145	44,105	0.04027	89.4	87.9	3.9
	2004	1,156,391	46,578	0.04028	89.1	87.9	4.1
	2007	1,208,122	48,507	0.04015	88.7	87.9	4.3
	2013	1,291,576	51,218	0.03965	88.6	87.9	4.5
POOL PUMP(SOLR)	1980	718,312	7,542	0.0105	268.2	268.2	2
	1990	946,084	17,303	0.01829	267.4	254.4	4.6
	2001	1,095,144	24,061	0.02197	267.4	254.4	6.4
	2004	1,156,391	25,541	0.02209	267.4	254.4	6.8
	2007	1,208,122	26,987	0.02234	267.4	254.4	7.2
	2013	1,291,576	29,797	0.02307	267.4	254.4	8
TUB WATER HEAT	1980	437,909	25,399	0.058	144.4	144.4	3.7
	1990	567,208	61,217	0.10793	144.4	144.4	8.8
	2001	670,763	71,935	0.10724	144.4	144.4	10.4
	2004	708,035	75,846	0.10712	144.4	144.4	11
	2007	739,588	79,097	0.10695	144.4	144.4	11.4
	2013	790,627	84,203	0.1065	144.4	144.4	12.2

**Table H-2
Residential Natural Gas Consumption Summary by End Use - All Housing Types**

End Use	Year	BGP				Average Appliance UEC	Marginal Appliance UEC	Total Energy Used (MM Therms)
		Housing Stock	Appliance Stock	Appliance Saturation	Appliance UEC			
CENTRAL A/C	1980	140,878	8,192	0.05815	112	106.9	0.9	
	1990	158,588	10,822	0.06824	94.4	90.1	1	
	2001	167,681	13,010	0.07759	86.5	85.5	1.1	
	2004	169,699	13,403	0.07898	85.8	84.9	1.2	
	2007	171,749	13,764	0.08015	85.2	84.3	1.2	
	2013	175,955	14,441	0.08208	85.2	84.2	1.2	
SPACE HEAT	1980	140,878	124,824	0.88604	281.2	267.2	35.1	
	1990	158,588	134,625	0.84891	212.7	192.8	28.6	
	2001	167,681	142,332	0.84883	196.5	172.4	27.9	
	2004	169,699	144,028	0.84871	193	169.7	27.8	
	2007	171,749	145,743	0.84858	189.3	167.1	27.6	
	2013	175,955	149,269	0.84834	183.9	162.7	27.4	
HTWATR DISHWASH	1980	140,877	54,080	0.38388	59.2	0	3.2	
	1990	158,587	75,765	0.47775	52.8	0	4	
	2001	167,681	89,297	0.53254	48.3	0	4.3	
	2004	169,700	92,590	0.54561	48.3	0	4.5	
	2007	171,750	95,861	0.55814	48.3	0	4.6	
	2013	175,955	102,344	0.58165	49.6	0	5.1	
HTWATR CLTHWASH	1980	140,877	101,230	0.71856	76.4	0	7.8	
	1990	158,587	122,419	0.77194	60.8	0	7.4	
	2001	167,681	133,629	0.79692	57.4	0	7.6	
	2004	169,700	136,314	0.80326	57.4	0	7.8	
	2007	171,750	138,962	0.80909	57.4	0	8	
	2013	175,955	144,158	0.81929	58.7	0	8.4	
WATER HT(BASIC)	1980	140,877	130,315	0.92502	160.4	144	20.9	
	1990	158,587	137,978	0.87005	132.5	111.8	18.3	
	2001	167,681	145,979	0.87057	120.1	111.4	17.5	
	2004	169,700	147,743	0.87061	119.7	111.9	17.7	
	2007	171,750	149,534	0.87065	120.5	112.3	18	
	2013	175,955	153,209	0.87073	122.7	112.8	18.8	
COOKING	1980	140,877	114,048	0.80956	61.7	35.5	7	
	1990	158,587	126,394	0.79701	53.2	37.8	6.8	
	2001	167,681	130,745	0.77973	47.4	38.8	6.2	
	2004	169,700	131,576	0.77534	46.5	38.8	6.1	
	2007	171,750	132,445	0.77114	45.7	39.3	6.1	
	2013	175,955	134,302	0.76326	44.9	39.7	6	
CLOTHES DRYER	1980	140,877	64,610	0.45863	27.7	27.7	1.8	
	1990	158,587	87,916	0.55438	30.5	30.5	2.7	
	2001	167,681	97,069	0.57889	31	31	3	
	2004	169,700	99,162	0.58434	31.5	31.5	3.1	
	2007	171,750	101,221	0.58935	31.5	31.5	3.2	
	2013	175,955	105,265	0.59825	32	32	3.4	
SOLR WATER HEAT	1980	140,877	217	0.00154	50.4	40.9	0	
	1990	158,587	4,720	0.02976	36.1	34.3	0.2	
	2001	167,681	4,966	0.02962	35.3	33.5	0.2	
	2004	169,700	5,025	0.02961	34.6	33.7	0.2	
	2007	171,750	5,084	0.0296	34.6	33.7	0.2	
	2013	175,955	5,206	0.02958	34.6	33.7	0.2	
MISCELLANEOUS	1980	140,877	140,877	1	7.7	0	1.1	
	1990	158,587	158,587	1	10.7	0	1.7	
	2001	167,681	167,681	1	9	0	1.5	
	2004	169,700	169,700	1	9	0	1.5	
	2007	171,750	171,750	1	9.4	0	1.6	
	2013	175,955	175,955	1	10.7	0	1.9	
POOL WATER HEAT	1980	140,877	9,208	0.06536	223.1	223.1	2.1	
	1990	158,587	12,711	0.08015	219.6	211.9	2.8	
	2001	167,681	11,903	0.07098	217.1	211.9	2.6	
	2004	169,700	11,679	0.06882	216.6	211.9	2.5	
	2007	171,750	11,471	0.06679	215.8	211.9	2.5	
	2013	175,955	11,101	0.06309	214.9	211.9	2.4	
POOL PUMP(SOLR)	1980	140,877	2,536	0.018	223.1	223.1	0.6	
	1990	158,587	4,255	0.02683	223.1	223.1	0.9	
	2001	167,681	6,061	0.03615	223.1	223.1	1.4	
	2004	169,699	6,501	0.03831	223.1	223.1	1.5	
	2007	171,751	6,928	0.04034	223.1	223.1	1.5	
	2013	175,956	7,743	0.04401	223.1	223.1	1.7	
TUB WATER HEAT	1980	76,104	4,296	0.05645	162.2	162.2	0.7	
	1990	76,697	5,707	0.07441	159.6	154.4	0.9	
	2001	82,214	6,443	0.07837	157	154.4	1	
	2004	83,386	6,575	0.07885	156.2	154.4	1	
	2007	84,572	6,707	0.0793	156.2	154.4	1	
	2013	86,995	6,970	0.08012	155.3	154.4	1.1	

**Table I-1
Commercial Building Forecast
Electricity Sales by End-Use and Building Type (GWh)
PG&E Planning Area**

Year	Cooling	Heating	Ventilation	Water Heating	Cooking	Refrigeration	Indoor Lighting	Outdoor Lighting	Office Equipment	Misc.	Total
Colleges											
GWh by End Use											
1980	115.636	18.268	86.280	6.237	1.623	1.959	286.236	11.452	2.095	18.925	548.712
1990	127.896	16.542	78.533	5.742	1.003	1.422	268.989	11.398	4.642	45.510	561.677
2000	139.012	18.055	88.774	8.551	1.258	1.734	306.910	13.147	7.782	59.360	644.583
2001	145.417	16.815	87.039	8.531	1.234	1.704	301.958	12.962	7.718	58.519	641.898
2003	136.044	17.439	87.972	9.315	1.289	1.770	310.207	13.338	8.076	60.249	645.698
2008	144.722	18.991	94.098	11.826	1.525	2.057	346.821	14.867	9.356	67.282	711.545
2013	147.044	19.716	95.422	13.984	1.694	2.255	369.873	15.788	10.316	71.546	747.638
Average Consumption per Square Foot by End Use (kWh/SF)											
1980	1.327	0.210	0.990	0.072	0.019	0.022	3.285	0.131	0.024	0.217	6.296
1990	1.347	0.174	0.827	0.060	0.011	0.015	2.834	0.120	0.049	0.479	5.918
2000	1.341	0.174	0.856	0.082	0.012	0.017	2.961	0.127	0.075	0.573	6.218
2001	1.394	0.161	0.834	0.082	0.012	0.016	2.894	0.124	0.074	0.561	6.152
2003	1.269	0.163	0.821	0.087	0.012	0.017	2.894	0.124	0.075	0.562	6.024
2008	1.264	0.166	0.822	0.103	0.013	0.018	3.029	0.130	0.082	0.588	6.215
2013	1.217	0.163	0.790	0.116	0.014	0.019	3.061	0.131	0.085	0.592	6.187
Food Stores											
GWh by End Use											
1980	161.629	29.816	252.792	6.974	4.682	810.785	864.107	78.700	0.741	386.724	2,596.951
1990	372.219	39.163	338.895	10.254	4.519	965.970	1,004.123	98.062	2.062	1,170.610	4,005.878
2000	430.742	40.295	405.036	13.794	5.278	1,076.085	1,086.764	108.956	3.488	1,464.378	4,634.817
2001	461.769	37.688	400.442	13.745	5.184	1,056.602	1,058.397	107.128	3.443	1,439.801	4,584.200
2003	434.014	39.016	418.851	14.978	5.427	1,091.760	1,073.303	110.810	3.600	1,489.373	4,681.132
2008	477.565	43.998	500.230	19.492	6.566	1,268.635	1,197.048	127.895	4.286	1,719.321	5,365.037
2013	510.075	46.551	559.115	23.260	7.368	1,384.651	1,262.051	138.650	4.805	1,864.134	5,800.659
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	2.742	0.506	4.288	0.118	0.079	13.754	14.658	1.335	0.013	6.560	44.054
1990	5.031	0.529	4.581	0.139	0.061	13.056	13.572	1.325	0.028	15.822	54.144
2000	5.072	0.474	4.769	0.162	0.062	12.670	12.796	1.283	0.041	17.242	54.573
2001	5.379	0.439	4.664	0.160	0.060	12.308	12.328	1.248	0.040	16.771	53.398
2003	4.913	0.442	4.742	0.170	0.061	12.360	12.151	1.254	0.041	16.861	52.995
2008	4.986	0.459	5.223	0.204	0.069	13.246	12.498	1.335	0.045	17.951	56.015
2013	4.953	0.452	5.429	0.226	0.072	13.444	12.254	1.346	0.047	18.100	56.322
Hospitals											
GWh by End Use											
1980	450.477	1.614	211.630	0.761	6.751	10.462	742.605	23.831	8.237	480.786	1,937.153
1990	764.687	3.296	256.664	3.108	7.615	12.415	908.655	29.995	24.525	1,469.742	3,480.703
2000	939.005	4.203	322.582	6.429	9.613	15.483	1,121.214	37.258	43.920	2,054.826	4,554.534
2001	996.809	4.222	319.587	6.523	9.526	15.344	1,111.057	36.972	43.808	2,039.090	4,582.939
2003	940.676	4.501	329.117	7.169	9.806	15.765	1,141.409	38.048	45.543	2,098.456	4,630.491
2008	1,029.022	5.357	370.485	9.211	11.092	17.724	1,278.950	42.598	52.226	2,349.417	5,166.081
2013	1,082.163	6.057	397.592	11.089	11.974	19.045	1,370.616	45.545	57.190	2,511.969	5,513.242
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	6.862	0.025	3.224	0.012	0.103	0.159	11.312	0.363	0.125	7.324	29.510
1990	8.738	0.038	2.933	0.036	0.087	0.142	10.384	0.343	0.280	16.795	39.776
2000	8.814	0.039	3.028	0.060	0.090	0.145	10.525	0.350	0.412	19.289	42.753
2001	9.211	0.039	2.953	0.060	0.088	0.142	10.267	0.342	0.405	18.843	42.350
2003	8.432	0.040	2.950	0.064	0.088	0.141	10.231	0.341	0.408	18.810	41.506
2008	8.607	0.045	3.099	0.077	0.093	0.148	10.697	0.356	0.437	19.650	43.209
2013	8.521	0.048	3.130	0.087	0.094	0.150	10.792	0.359	0.450	19.778	43.409
Hotel/Motel											
GWh by End Use											
1980	23.896	4.394	36.782	0.765	1.228	18.179	158.711	17.772	0.324	61.669	323.719
1990	46.420	11.277	49.537	2.529	1.286	25.329	220.056	25.990	1.187	219.052	602.664
2000	51.018	13.357	52.661	3.359	1.490	27.625	240.934	28.350	1.861	268.943	689.596
2001	53.910	13.174	52.570	3.530	1.512	27.842	243.032	28.599	1.895	271.314	697.380
2003	51.946	14.155	53.447	3.832	1.581	28.622	250.352	29.446	1.982	279.351	714.715
2008	55.782	16.925	57.273	4.744	1.824	31.555	276.286	32.330	2.257	306.716	785.690
2013	58.072	19.333	59.236	5.558	2.018	33.677	294.732	34.312	2.472	325.533	834.944
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	0.407	0.075	0.626	0.013	0.021	0.309	2.700	0.302	0.006	1.049	5.508
1990	0.523	0.127	0.559	0.029	0.014	0.286	2.481	0.293	0.013	2.470	6.796
2000	0.527	0.138	0.544	0.035	0.015	0.286	2.491	0.293	0.019	2.780	7.129
2001	0.544	0.133	0.531	0.036	0.015	0.281	2.453	0.289	0.019	2.738	7.038
2003	0.508	0.139	0.523	0.038	0.015	0.280	2.450	0.288	0.019	2.734	6.995
2008	0.510	0.155	0.523	0.043	0.017	0.288	2.525	0.295	0.021	2.803	7.181
2013	0.502	0.167	0.512	0.048	0.017	0.291	2.548	0.297	0.021	2.814	7.217

**Table I-1
Commercial Building Forecast
Electricity Sales by End-Use and Building Type (GWh)
PG&E Planning Area**

Year	Cooling	Heating	Ventilation	Water Heating	Cooking	Refrigeration	Indoor Lighting	Outdoor Lighting	Office Equipment	Misc.	Total
Large Offices											
GWh by End Use											
1980	693.368	19.819	646.405	12.479	5.145	3.304	1,956.826	79.376	35.932	386.501	3,839.156
1990	1,170.172	65.482	833.598	17.247	6.733	3.928	2,712.037	108.237	138.832	1,280.044	6,336.309
2000	1,373.412	92.225	986.798	21.994	8.429	4.503	3,168.957	134.700	246.507	1,792.985	7,830.510
2001	1,431.173	89.439	975.875	22.175	8.437	4.471	3,162.382	134.948	249.151	1,796.295	7,874.346
2003	1,340.170	98.614	985.636	23.064	8.667	4.542	3,235.224	138.789	259.819	1,847.426	7,941.950
2008	1,425.776	124.423	1,069.808	26.864	9.786	5.062	3,608.693	155.894	301.444	2,075.127	8,802.876
2013	1,448.621	144.719	1,101.026	29.504	10.463	5.392	3,815.390	165.701	329.472	2,205.696	9,255.984
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	3.841	0.110	3.581	0.069	0.028	0.018	10.839	0.440	0.199	2.141	21.266
1990	4.071	0.228	2.900	0.060	0.023	0.014	9.435	0.377	0.483	4.453	22.043
2000	4.212	0.283	3.027	0.067	0.026	0.014	9.719	0.413	0.756	5.499	24.017
2001	4.273	0.267	2.914	0.066	0.025	0.013	9.442	0.403	0.744	5.364	23.512
2003	3.884	0.286	2.856	0.067	0.025	0.013	9.376	0.402	0.753	5.354	23.016
2008	3.856	0.336	2.893	0.073	0.026	0.014	9.759	0.422	0.815	5.612	23.806
2013	3.713	0.371	2.822	0.076	0.027	0.014	9.778	0.425	0.844	5.653	23.721
Miscellaneous											
GWh by End Use											
1980	227.018	19.435	411.476	19.794	2.326	58.459	428.401	101.189	6.384	552.568	1,827.049
1990	469.767	26.613	495.617	21.823	2.312	60.105	474.636	117.986	18.725	1,564.666	3,252.251
2001	562.254	28.506	550.420	26.152	2.625	57.346	510.832	126.652	29.702	1,890.559	3,785.047
2003	537.473	30.051	578.830	27.657	2.755	58.733	528.523	131.465	31.262	1,962.444	3,889.193
2008	585.063	33.837	666.816	32.667	3.220	64.986	592.791	147.095	36.434	2,195.861	4,358.770
2013	615.089	36.423	726.981	36.639	3.558	69.052	635.260	156.200	40.587	2,331.878	4,651.667
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	0.845	0.072	1.531	0.074	0.009	0.218	1.594	0.377	0.024	2.057	6.800
1990	1.399	0.079	1.476	0.065	0.007	0.179	1.413	0.351	0.056	4.659	9.683
2000	1.447	0.080	1.518	0.071	0.007	0.160	1.417	0.350	0.082	5.227	10.358
2001	1.532	0.078	1.500	0.071	0.007	0.156	1.392	0.345	0.081	5.151	10.312
2003	1.422	0.080	1.531	0.073	0.007	0.155	1.398	0.348	0.083	5.192	10.290
2008	1.444	0.084	1.646	0.081	0.008	0.160	1.463	0.363	0.090	5.419	10.757
2013	1.436	0.085	1.697	0.086	0.008	0.161	1.483	0.365	0.095	5.444	10.859
Restaurants											
GWh by End Use											
1980	92.297	32.253	122.312	11.562	188.046	243.941	302.507	73.136	0.596	222.158	1,288.808
1990	190.023	33.986	137.807	9.278	198.979	260.608	310.888	81.001	1.460	597.523	1,821.553
2000	195.829	30.228	139.631	8.680	193.288	253.127	304.714	79.146	2.194	657.437	1,864.175
2001	206.728	28.128	137.053	8.394	189.303	247.928	297.415	77.627	2.165	644.818	1,839.558
2003	194.608	29.215	144.740	8.234	198.652	259.919	307.806	81.571	2.356	677.701	1,904.802
2008	206.925	31.249	166.869	8.136	225.701	294.627	339.174	92.141	2.866	765.834	2,133.522
2013	214.564	31.691	182.941	7.594	244.414	318.418	357.638	99.072	3.314	823.707	2,283.352
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	2.391	0.835	3.168	0.299	4.871	6.319	7.836	1.894	0.015	5.755	33.384
1990	4.520	0.808	3.278	0.221	4.733	6.199	7.395	1.927	0.035	14.213	43.328
2000	4.519	0.697	3.220	0.200	4.460	5.841	7.031	1.826	0.051	15.170	43.014
2001	4.764	0.648	3.159	0.193	4.363	5.714	6.854	1.789	0.050	14.861	42.395
2003	4.358	0.654	3.242	0.184	4.449	5.821	6.894	1.827	0.053	15.178	42.661
2008	4.275	0.646	3.447	0.168	4.663	6.087	7.007	1.904	0.059	15.822	44.077
2013	4.142	0.612	3.531	0.147	4.718	6.146	6.903	1.912	0.064	15.899	44.074
Retail											
GWh by End Use											
1980	131.647	38.001	113.049	5.251	1.859	37.609	1,345.616	169.098	5.539	135.794	1,983.464
1990	219.599	51.518	141.513	4.826	1.839	39.469	1,526.853	209.755	15.285	409.463	2,620.119
2000	259.516	55.502	164.043	6.223	2.116	39.295	1,644.801	228.938	25.591	504.561	2,930.587
2001	279.165	53.474	162.013	6.197	2.085	38.336	1,603.972	225.242	25.266	496.435	2,892.188
2003	264.354	56.223	167.959	6.784	2.187	39.349	1,631.637	233.316	26.451	514.535	2,942.794
2008	299.366	65.303	194.956	8.706	2.590	44.995	1,803.654	265.353	31.003	586.177	3,302.102
2013	324.231	71.781	212.194	10.176	2.860	48.624	1,882.307	283.379	34.279	626.756	3,496.587
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	0.600	0.173	0.515	0.024	0.008	0.171	6.132	0.771	0.025	0.619	9.039
1990	0.807	0.189	0.520	0.018	0.007	0.145	5.613	0.771	0.056	1.505	9.632
2000	0.839	0.179	0.530	0.020	0.007	0.127	5.317	0.740	0.083	1.631	9.473
2001	0.894	0.171	0.519	0.020	0.007	0.123	5.139	0.722	0.081	1.591	9.266
2003	0.823	0.175	0.523	0.021	0.007	0.123	5.081	0.727	0.082	1.602	9.164
2008	0.870	0.190	0.566	0.025	0.008	0.131	5.240	0.771	0.090	1.703	9.594
2013	0.889	0.197	0.582	0.028	0.008	0.133	5.159	0.777	0.094	1.718	9.583

**Table I-1
Commercial Building Forecast
Electricity Sales by End-Use and Building Type (GWh)
PG&E Planning Area**

Year	Cooling	Heating	Ventilation	Water Heating	Cooking	Refrigeration	Indoor Lighting	Outdoor Lighting	Office Equipment	Misc.	Total
Refrigerated Warehouses											
GWh by End Use											
1980	0.308	0.197	0.754	0.077	0.001	233.770	19.842	4.386	0.183	24.457	283.975
1990	0.886	0.252	0.961	0.097	0.002	274.203	22.742	6.379	0.630	86.385	392.538
2000	1.342	0.346	1.466	0.153	0.002	350.775	36.246	9.461	1.212	144.226	545.230
2001	1.485	0.338	1.495	0.157	0.003	353.792	37.038	9.638	1.232	146.926	552.105
2003	1.428	0.362	1.570	0.164	0.003	364.761	39.031	10.082	1.283	153.700	572.385
2008	1.583	0.409	1.822	0.192	0.003	412.995	45.989	11.559	1.462	176.222	652.236
2013	1.718	0.445	2.020	0.215	0.004	453.239	51.800	12.700	1.606	193.614	717.361
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	0.031	0.020	0.075	0.008	0.000	23.350	1.982	0.438	0.018	2.443	28.365
1990	0.054	0.015	0.058	0.006	0.000	16.601	1.377	0.386	0.038	5.230	23.766
2000	0.058	0.015	0.063	0.007	0.000	15.039	1.554	0.406	0.052	6.183	23.375
2001	0.062	0.014	0.062	0.007	0.000	14.691	1.538	0.400	0.051	6.101	22.925
2003	0.057	0.014	0.063	0.007	0.000	14.517	1.553	0.401	0.051	6.117	22.781
2008	0.057	0.015	0.065	0.007	0.000	14.838	1.652	0.415	0.053	6.331	23.433
2013	0.056	0.015	0.066	0.007	0.000	14.881	1.701	0.417	0.053	6.357	23.552
Schools											
GWh by End Use											
1980	15.740	18.535	58.647	51.759	5.031	23.017	436.145	42.072	2.506	23.009	676.462
1990	21.431	17.415	55.769	40.759	4.585	21.419	408.723	41.306	5.414	54.844	671.664
2000	25.260	15.955	75.047	50.891	5.295	24.649	469.269	47.580	9.206	71.143	794.295
2001	27.081	15.012	75.762	51.482	5.268	24.526	466.987	47.405	9.254	70.882	793.659
2003	25.536	14.982	79.664	54.083	5.386	25.060	477.544	48.520	9.632	72.552	812.960
2008	26.829	14.667	92.027	62.922	5.886	27.316	520.002	52.699	10.875	78.816	892.038
2013	27.758	13.581	102.899	71.101	6.239	28.888	549.050	55.441	11.921	82.930	949.807
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	0.106	0.125	0.395	0.349	0.034	0.155	2.941	0.284	0.017	0.155	4.561
1990	0.139	0.113	0.361	0.264	0.030	0.138	2.642	0.267	0.035	0.355	4.342
2000	0.145	0.092	0.432	0.293	0.030	0.142	2.703	0.274	0.053	0.410	4.575
2001	0.154	0.085	0.431	0.293	0.030	0.139	2.655	0.270	0.053	0.403	4.512
2003	0.142	0.083	0.442	0.300	0.030	0.139	2.651	0.269	0.053	0.403	4.513
2008	0.142	0.077	0.486	0.332	0.031	0.144	2.744	0.278	0.057	0.416	4.707
2013	0.140	0.068	0.518	0.358	0.031	0.146	2.766	0.279	0.060	0.418	4.785
Small Offices											
GWh by End Use											
1980	130.870	21.806	33.721	5.536	0.211	3.036	329.535	105.201	10.382	94.781	735.078
1990	212.316	25.422	41.023	5.606	0.221	2.521	391.286	132.601	38.884	290.059	1,139.937
2000	250.217	30.467	50.170	7.152	0.287	3.037	450.761	163.844	67.976	403.582	1,427.493
2001	265.853	28.865	49.057	7.053	0.282	2.950	440.390	160.937	67.095	396.421	1,418.903
2003	248.234	31.034	50.124	7.397	0.292	3.035	449.073	165.735	69.841	408.264	1,433.029
2008	275.789	37.984	57.164	9.010	0.346	3.630	508.829	190.323	82.138	468.914	1,634.126
2013	296.882	43.455	62.028	10.288	0.387	4.111	548.346	207.677	91.159	511.736	1,776.070
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	1.884	0.314	0.485	0.080	0.003	0.044	4.744	1.514	0.149	1.364	10.581
1990	2.146	0.257	0.415	0.057	0.002	0.025	3.955	1.340	0.393	2.932	11.522
2000	2.222	0.271	0.446	0.064	0.003	0.027	4.004	1.455	0.604	3.585	12.679
2001	2.339	0.254	0.432	0.062	0.002	0.026	3.875	1.416	0.590	3.488	12.484
2003	2.114	0.264	0.427	0.063	0.002	0.026	3.824	1.411	0.595	3.477	12.204
2008	2.139	0.295	0.443	0.070	0.003	0.028	3.946	1.476	0.637	3.637	12.674
2013	2.125	0.311	0.444	0.074	0.003	0.029	3.926	1.487	0.653	3.664	12.715
Warehouses											
GWh by End Use											
1980	20.210	33.216	134.033	0.488	0.012	0.000	235.992	52.320	1.606	291.692	769.569
1990	109.637	59.229	188.602	0.446	0.022	0.000	348.843	78.334	6.574	1,060.726	1,852.412
2000	150.613	80.497	240.753	0.583	0.030	0.000	442.800	101.610	11.689	1,548.859	2,577.433
2001	162.513	78.241	243.218	0.589	0.031	0.000	448.416	103.018	11.910	1,570.333	2,618.268
2003	156.214	84.496	252.918	0.609	0.033	0.000	466.489	107.359	12.507	1,636.539	2,717.165
2008	170.502	97.312	283.004	0.682	0.038	0.000	524.514	120.432	14.313	1,835.911	3,046.709
2013	182.143	107.108	302.884	0.731	0.043	0.000	567.110	129.425	15.714	1,973.077	3,278.236
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	0.169	0.278	1.121	0.004	0.000	0.000	1.974	0.438	0.013	2.440	6.439
1990	0.543	0.293	0.933	0.002	0.000	0.000	1.726	0.388	0.033	5.249	9.166
2000	0.604	0.323	0.965	0.002	0.000	0.000	1.776	0.407	0.047	6.211	10.336
2001	0.634	0.305	0.948	0.002	0.000	0.000	1.748	0.402	0.046	6.123	10.209
2003	0.585	0.317	0.948	0.002	0.000	0.000	1.748	0.402	0.047	6.133	10.182
2008	0.588	0.336	0.977	0.002	0.000	0.000	1.810	0.416	0.049	6.336	10.515
2013	0.587	0.345	0.977	0.002	0.000	0.000	1.829	0.417	0.051	6.362	10.570

**Table I-1
Commercial Building Forecast
Electricity Sales by End-Use and Building Type (GWh)
SMUD Planning Area**

Year	Cooling	Heating	Ventilation	Water Heating	Cooking	Refrigeration	Indoor Lighting	Outdoor Lighting	Office Equipment	Misc.	Total
Colleges											
GWh by End Use											
1980	9.076	0.000	7.138	0.040	0.111	0.138	19.830	0.778	0.420	1.368	38.898
1990	9.842	0.114	7.229	0.017	0.113	0.140	16.479	0.801	1.349	2.524	38.610
2000	9.148	0.234	8.195	0.017	0.131	0.162	19.291	0.941	1.648	3.217	42.984
2001	10.245	0.228	8.318	0.017	0.131	0.163	19.703	0.949	1.661	3.250	44.664
2003	9.998	0.259	8.472	0.016	0.134	0.166	20.259	0.972	1.700	3.346	45.323
2008	10.246	0.327	8.823	0.015	0.140	0.174	21.591	1.017	1.779	3.548	47.660
2013	10.385	0.401	9.075	0.014	0.144	0.179	22.733	1.048	1.834	3.704	49.515
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	1.846	0.000	1.451	0.008	0.023	0.028	4.032	0.158	0.085	0.278	7.910
1990	1.654	0.019	1.215	0.003	0.019	0.024	2.769	0.135	0.227	0.424	6.487
2000	1.389	0.036	1.244	0.003	0.020	0.025	2.929	0.143	0.250	0.489	6.526
2001	1.525	0.034	1.238	0.002	0.020	0.024	2.932	0.141	0.247	0.484	6.646
2003	1.461	0.038	1.238	0.002	0.020	0.024	2.961	0.142	0.249	0.489	6.624
2008	1.428	0.046	1.229	0.002	0.019	0.024	3.009	0.142	0.248	0.494	6.641
2013	1.390	0.054	1.215	0.002	0.019	0.024	3.043	0.140	0.245	0.496	6.628
Food Stores											
GWh by End Use											
1980	15.422	0.609	26.692	0.138	0.488	84.075	87.919	8.030	0.162	41.529	265.065
1990	35.311	0.970	30.933	0.388	0.524	90.205	91.781	8.743	0.412	93.539	352.806
2000	28.878	1.181	33.802	0.590	0.556	95.643	93.428	9.383	0.485	100.449	364.398
2001	32.303	1.115	34.437	0.629	0.567	97.514	93.202	9.585	0.494	102.620	372.464
2003	31.383	1.198	35.498	0.678	0.584	100.467	93.768	9.898	0.505	105.978	379.958
2008	31.495	1.289	37.049	0.775	0.607	104.497	93.402	10.314	0.520	110.453	390.400
2013	31.365	1.365	37.911	0.863	0.618	106.547	91.800	10.525	0.530	112.727	394.252
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	3.302	0.130	5.716	0.030	0.104	18.004	18.827	1.720	0.035	8.893	56.760
1990	5.789	0.159	5.071	0.064	0.086	14.788	15.046	1.433	0.067	15.334	57.837
2000	4.444	0.182	5.201	0.091	0.086	14.717	14.376	1.444	0.075	15.457	56.072
2001	4.814	0.166	5.132	0.094	0.084	14.533	13.890	1.429	0.074	15.294	55.510
2003	4.607	0.176	5.211	0.099	0.086	14.749	13.766	1.453	0.074	15.558	55.781
2008	4.478	0.183	5.268	0.110	0.086	14.859	13.281	1.467	0.074	15.706	55.513
2013	4.305	0.187	5.203	0.118	0.085	14.623	12.599	1.444	0.073	15.471	54.109
Hospitals											
GWh by End Use											
1980	47.177	3.535	21.955	0.056	0.650	1.005	72.032	2.276	1.726	48.259	198.672
1990	101.457	3.511	29.888	1.196	0.888	1.370	98.330	3.155	5.730	138.643	384.169
2000	119.126	4.459	43.509	2.784	1.285	1.982	142.005	4.621	8.727	203.054	531.551
2001	130.405	4.013	42.901	2.772	1.266	1.953	139.953	4.559	8.609	200.313	536.745
2003	130.513	4.201	44.637	3.022	1.318	2.034	145.734	4.757	8.984	209.036	554.236
2008	140.485	4.283	48.137	3.591	1.421	2.195	157.214	5.143	9.712	226.001	598.182
2013	149.594	4.304	51.098	4.139	1.507	2.329	166.960	5.466	10.323	240.210	635.930
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	9.156	0.686	4.261	0.011	0.126	0.195	13.980	0.442	0.335	9.366	38.559
1990	12.037	0.417	3.546	0.142	0.105	0.163	11.666	0.374	0.680	16.448	45.577
2000	10.207	0.382	3.728	0.239	0.110	0.170	12.168	0.396	0.748	17.399	45.547
2001	11.164	0.344	3.673	0.237	0.108	0.167	11.981	0.390	0.737	17.148	45.950
2003	10.783	0.347	3.688	0.250	0.109	0.168	12.040	0.393	0.742	17.270	45.790
2008	10.702	0.326	3.667	0.274	0.108	0.167	11.977	0.392	0.740	17.217	45.571
2013	10.596	0.305	3.619	0.293	0.107	0.165	11.826	0.387	0.731	17.014	45.044
Hotel/Motel											
GWh by End Use											
1980	3.039	1.283	6.466	0.000	0.155	2.313	20.458	2.238	0.061	8.165	44.180
1990	6.393	1.818	7.364	0.000	0.186	2.768	23.616	2.727	0.139	20.616	65.626
2000	5.152	2.059	7.215	0.000	0.187	2.782	23.867	2.782	0.147	21.030	65.222
2001	5.768	1.995	7.345	0.000	0.193	2.870	24.676	2.876	0.152	21.743	67.619
2003	5.703	2.242	7.575	0.000	0.204	3.023	25.990	3.037	0.161	22.962	70.896
2008	5.946	2.640	7.948	0.000	0.223	3.309	28.461	3.333	0.176	25.195	77.230
2013	6.159	2.990	8.257	0.000	0.239	3.552	30.560	3.582	0.189	27.080	82.608
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	0.482	0.203	1.025	0.000	0.025	0.367	3.242	0.355	0.010	1.294	7.002
1990	0.752	0.214	0.866	0.000	0.022	0.326	2.778	0.321	0.016	2.425	7.721
2000	0.593	0.237	0.830	0.000	0.022	0.320	2.747	0.320	0.017	2.421	7.507
2001	0.653	0.226	0.831	0.000	0.022	0.325	2.792	0.325	0.017	2.460	7.651
2003	0.615	0.242	0.817	0.000	0.022	0.326	2.803	0.328	0.017	2.476	7.646
2008	0.584	0.259	0.780	0.000	0.022	0.325	2.794	0.327	0.017	2.474	7.582
2013	0.558	0.271	0.749	0.000	0.022	0.322	2.771	0.325	0.017	2.455	7.490

**Table I-1
Commercial Building Forecast
Electricity Sales by End-Use and Building Type (GWh)
SMUD Planning Area**

Year	Cooling	Heating	Ventilation	Water Heating	Cooking	Refrigeration	Indoor Lighting	Outdoor Lighting	Office Equipment	Misc.	Total
Large Offices											
GWh by End Use											
1980	47.607	3.381	81.274	0.138	0.506	0.325	197.715	7.759	10.425	39.712	388.843
1990	152.584	7.349	115.736	0.282	0.832	0.479	323.736	12.843	55.716	138.944	808.501
2000	190.822	15.078	153.221	0.524	1.239	0.658	451.597	19.266	82.187	216.908	1,131.501
2001	212.713	14.095	151.905	0.533	1.242	0.656	451.055	19.340	82.458	217.743	1,151.740
2003	217.533	16.175	157.282	0.585	1.323	0.690	475.907	20.652	87.959	232.505	1,210.610
2008	237.614	18.866	164.190	0.676	1.441	0.745	511.699	22.531	95.816	253.670	1,307.249
2013	260.983	21.743	172.357	0.775	1.571	0.813	552.279	24.572	104.494	276.647	1,416.234
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	3.207	0.228	5.475	0.009	0.034	0.022	13.320	0.523	0.702	2.675	26.197
1990	5.021	0.242	3.809	0.009	0.027	0.016	10.653	0.423	1.833	4.572	26.606
2000	4.665	0.369	3.746	0.013	0.030	0.016	11.041	0.471	2.009	5.303	27.663
2001	5.108	0.338	3.648	0.013	0.030	0.016	10.831	0.464	1.980	5.229	27.657
2003	4.944	0.368	3.574	0.013	0.030	0.016	10.816	0.469	1.999	5.284	27.513
2008	4.936	0.392	3.411	0.014	0.030	0.015	10.630	0.468	1.991	5.270	27.157
2013	4.896	0.408	3.233	0.015	0.029	0.015	10.361	0.461	1.960	5.190	26.569
Miscellaneous											
GWh by End Use											
1980	23.110	7.461	29.098	0.619	0.000	4.850	36.128	8.311	1.036	47.713	158.324
1990	42.636	6.077	35.143	2.678	0.000	5.349	41.334	10.310	3.141	122.583	269.251
2001	37.159	4.779	39.484	4.576	0.000	5.489	47.753	11.898	3.749	141.486	296.374
2003	35.825	4.795	41.331	5.245	0.000	5.711	50.293	12.568	3.932	149.465	309.165
2008	35.088	4.366	44.402	6.751	0.000	6.156	55.014	13.740	4.253	163.415	333.184
2013	33.916	3.908	46.090	7.972	0.000	6.470	58.258	14.463	4.476	172.027	347.581
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	1.228	0.397	1.547	0.033	0.000	0.258	1.920	0.442	0.055	2.536	8.415
1990	1.579	0.225	1.302	0.099	0.000	0.198	1.531	0.382	0.116	4.540	9.972
2000	1.127	0.177	1.310	0.147	0.000	0.183	1.580	0.394	0.125	4.682	9.724
2001	1.222	0.157	1.299	0.151	0.000	0.181	1.571	0.391	0.123	4.654	9.749
2003	1.132	0.151	1.305	0.166	0.000	0.180	1.589	0.397	0.124	4.721	9.765
2008	1.023	0.127	1.295	0.197	0.000	0.180	1.604	0.401	0.124	4.766	9.717
2013	0.932	0.107	1.266	0.219	0.000	0.178	1.600	0.397	0.123	4.726	9.548
Restaurants											
GWh by End Use											
1980	14.085	1.102	17.235	0.321	18.861	24.457	29.883	7.252	0.155	23.206	136.557
1990	30.598	1.792	20.715	0.352	22.913	29.635	34.277	8.937	0.445	58.810	208.475
2000	22.509	2.091	19.886	0.436	22.235	28.724	32.936	8.794	0.481	58.014	196.106
2001	24.542	1.946	19.763	0.446	22.158	28.625	32.527	8.779	0.478	57.932	197.196
2003	24.165	2.267	21.172	0.519	24.006	31.023	34.261	9.547	0.516	63.052	210.528
2008	24.710	2.695	23.061	0.637	26.569	34.363	36.425	10.603	0.565	70.128	229.757
2013	25.126	3.023	24.406	0.727	28.433	36.788	38.102	11.369	0.606	75.258	243.840
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	4.505	0.352	5.512	0.103	6.033	7.823	9.558	2.320	0.050	7.422	43.677
1990	7.200	0.422	4.874	0.083	5.391	6.973	8.065	2.103	0.105	13.838	49.053
2000	5.149	0.478	4.549	0.100	5.087	6.571	7.534	2.012	0.110	13.271	44.861
2001	5.614	0.445	4.521	0.102	5.069	6.548	7.441	2.008	0.109	13.252	45.111
2003	5.269	0.494	4.616	0.113	5.234	6.764	7.470	2.082	0.112	13.748	45.903
2008	4.905	0.535	4.577	0.127	5.274	6.821	7.230	2.105	0.112	13.920	45.604
2013	4.606	0.554	4.474	0.133	5.212	6.743	6.984	2.084	0.111	13.795	44.697
Retail											
GWh by End Use											
1980	50.961	24.184	32.688	0.167	0.301	5.771	204.334	25.449	1.804	21.732	367.390
1990	74.253	19.117	33.458	0.172	0.309	5.464	201.760	26.613	4.394	47.584	413.122
2000	58.265	16.463	33.236	0.236	0.315	5.135	202.287	27.636	5.011	51.594	400.179
2001	64.612	14.823	33.502	0.249	0.321	5.188	203.331	28.199	5.091	52.663	407.979
2003	62.803	15.130	34.408	0.271	0.333	5.333	206.948	29.400	5.262	54.940	414.830
2008	62.089	14.297	35.046	0.306	0.345	5.485	208.331	30.599	5.406	57.240	419.144
2013	61.128	13.221	35.322	0.341	0.355	5.652	209.290	31.518	5.569	59.016	421.413
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	1.964	0.932	1.260	0.006	0.012	0.222	7.876	0.981	0.070	0.838	14.161
1990	2.320	0.597	1.046	0.005	0.010	0.171	6.305	0.832	0.137	1.487	12.910
2000	1.756	0.496	1.001	0.007	0.010	0.155	6.095	0.833	0.151	1.555	12.058
2001	1.890	0.434	0.980	0.007	0.009	0.152	5.948	0.825	0.149	1.541	11.935
2003	1.793	0.432	0.982	0.008	0.010	0.152	5.909	0.839	0.150	1.569	11.845
2008	1.720	0.396	0.971	0.008	0.010	0.152	5.772	0.848	0.150	1.586	11.612
2013	1.621	0.351	0.937	0.009	0.009	0.150	5.551	0.836	0.148	1.565	11.177

**Table I-1
Commercial Building Forecast
Electricity Sales by End-Use and Building Type (GWh)
SMUD Planning Area**

Year	Cooling	Heating	Ventilation	Water Heating	Cooking	Refrigeration	Indoor Lighting	Outdoor Lighting	Office Equipment	Misc.	Total
Refrigerated Warehouses											
GWh by End Use											
1980	0.111	0.008	0.027	0.007	0.000	19.935	1.685	0.370	0.017	2.168	24.328
1990	0.132	0.008	0.018	0.007	0.000	18.588	1.270	0.416	0.028	4.035	24.501
2000	0.125	0.009	0.023	0.008	0.000	18.034	1.483	0.480	0.034	4.662	24.858
2001	0.143	0.009	0.024	0.008	0.000	18.277	1.529	0.493	0.035	4.786	25.303
2003	0.140	0.009	0.024	0.008	0.000	18.465	1.560	0.507	0.035	4.922	25.671
2008	0.147	0.010	0.026	0.008	0.000	19.203	1.652	0.537	0.037	5.221	26.842
2013	0.155	0.010	0.028	0.009	0.000	19.996	1.758	0.561	0.038	5.454	28.010
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	0.158	0.012	0.038	0.010	0.000	28.240	2.388	0.524	0.024	3.072	34.465
1990	0.138	0.009	0.019	0.007	0.000	19.566	1.336	0.438	0.030	4.247	25.791
2000	0.116	0.009	0.021	0.007	0.000	16.678	1.372	0.444	0.031	4.311	22.989
2001	0.128	0.008	0.021	0.007	0.000	16.427	1.375	0.443	0.031	4.302	22.742
2003	0.124	0.008	0.022	0.007	0.000	16.399	1.386	0.450	0.031	4.371	22.799
2008	0.125	0.008	0.023	0.007	0.000	16.348	1.407	0.458	0.031	4.445	22.852
2013	0.125	0.008	0.023	0.007	0.000	16.182	1.422	0.454	0.031	4.414	22.667
Schools											
GWh by End Use											
1980	1.734	39.931	8.361	0.791	0.310	1.411	26.833	2.538	0.467	1.461	83.838
1990	2.410	40.052	9.891	1.296	0.368	1.671	28.582	3.057	1.757	4.582	93.865
2000	2.574	47.053	12.599	2.123	0.470	2.130	36.619	3.959	2.367	6.183	116.076
2001	2.918	43.537	12.841	2.230	0.479	2.174	37.624	4.048	2.420	6.323	114.594
2003	2.907	45.786	13.299	2.397	0.497	2.256	39.081	4.210	2.517	6.577	119.528
2008	3.087	47.406	14.099	2.755	0.529	2.401	41.816	4.493	2.686	7.023	126.296
2013	3.237	48.645	14.677	3.089	0.553	2.510	43.981	4.706	2.813	7.357	131.568
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	0.230	5.290	1.108	0.105	0.041	0.187	3.555	0.336	0.062	0.194	11.106
1990	0.235	3.908	0.965	0.126	0.036	0.163	2.788	0.298	0.171	0.447	9.138
2000	0.200	3.654	0.978	0.165	0.036	0.165	2.844	0.307	0.184	0.480	9.015
2001	0.220	3.277	0.967	0.168	0.036	0.164	2.832	0.305	0.182	0.476	8.625
2003	0.211	3.330	0.967	0.174	0.036	0.164	2.843	0.306	0.183	0.478	8.694
2008	0.210	3.225	0.959	0.187	0.036	0.163	2.844	0.306	0.183	0.478	8.591
2013	0.209	3.135	0.946	0.199	0.036	0.162	2.834	0.303	0.181	0.474	8.479
Small Offices											
GWh by End Use											
1980	59.150	15.460	9.768	0.919	0.062	0.848	93.394	29.177	7.126	27.658	243.563
1990	92.368	13.197	10.310	0.846	0.045	0.779	91.451	29.391	23.178	58.748	320.313
2000	74.797	15.063	11.046	1.084	0.049	0.749	91.426	31.449	24.387	65.463	315.514
2001	80.404	13.472	10.743	1.084	0.049	0.723	88.513	30.634	23.741	63.767	313.130
2003	80.373	16.566	11.907	1.444	0.058	0.805	96.478	34.938	27.050	72.753	342.374
2008	80.973	19.248	12.860	1.913	0.068	0.873	101.286	38.340	29.638	79.872	365.071
2013	81.498	21.494	13.600	2.320	0.077	0.934	104.874	40.916	31.629	85.267	382.609
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	3.704	0.968	0.612	0.058	0.004	0.053	5.849	1.827	0.446	1.732	15.253
1990	4.620	0.660	0.516	0.042	0.002	0.039	4.574	1.470	1.159	2.939	16.022
2000	3.684	0.742	0.544	0.053	0.002	0.037	4.503	1.549	1.201	3.224	15.541
2001	3.960	0.664	0.529	0.053	0.002	0.036	4.360	1.509	1.169	3.141	15.424
2003	3.773	0.778	0.559	0.068	0.003	0.038	4.529	1.640	1.270	3.416	16.073
2008	3.461	0.823	0.550	0.082	0.003	0.037	4.329	1.639	1.267	3.414	15.603
2013	3.217	0.848	0.537	0.092	0.003	0.037	4.139	1.615	1.248	3.365	15.101
Warehouses											
GWh by End Use											
1980	3.062	1.128	9.446	0.043	0.003	0.000	27.154	5.927	0.312	34.749	81.824
1990	21.883	6.762	22.419	0.065	0.004	0.000	49.877	11.161	0.951	108.456	221.576
2000	21.824	9.072	27.230	0.078	0.005	0.000	58.174	13.002	1.162	126.383	256.930
2001	25.086	8.761	28.361	0.082	0.006	0.000	60.142	13.456	1.195	130.801	267.890
2003	26.281	10.173	31.382	0.091	0.006	0.000	65.305	14.713	1.290	143.027	292.267
2008	29.939	12.281	36.577	0.106	0.007	0.000	74.003	16.788	1.445	163.224	334.371
2013	33.441	14.317	41.172	0.119	0.008	0.000	82.106	18.528	1.595	180.160	371.447
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	0.272	0.100	0.838	0.004	0.000	0.000	2.409	0.526	0.028	3.082	7.258
1990	0.864	0.267	0.885	0.003	0.000	0.000	1.968	0.440	0.038	4.280	8.744
2000	0.749	0.312	0.935	0.003	0.000	0.000	1.998	0.447	0.040	4.340	8.823
2001	0.831	0.290	0.939	0.003	0.000	0.000	1.992	0.446	0.040	4.332	8.872
2003	0.811	0.314	0.968	0.003	0.000	0.000	2.015	0.454	0.040	4.413	9.017
2008	0.822	0.337	1.005	0.003	0.000	0.000	2.033	0.461	0.040	4.484	9.185
2013	0.825	0.353	1.016	0.003	0.000	0.000	2.025	0.457	0.039	4.444	9.163

**Table I-1
Commercial Building Forecast
Electricity Sales by End-Use and Building Type (GWh)
SCE Planning Area**

Year	Cooling	Heating	Ventilation	Water Heating	Cooking	Refrigeration	Indoor Lighting	Outdoor Lighting	Office Equipment	Misc.	Total
Colleges											
GWh by End Use											
1980	167,408	32,854	127,688	7,344	4,222	29,974	216,484	15,721	4,337	70,586	676,618
1990	226,426	64,461	146,808	16,643	5,161	36,215	250,007	19,373	10,008	104,445	879,548
2000	248,505	90,943	178,486	31,938	6,399	44,959	307,210	24,079	16,033	134,866	1,083,417
2001	230,936	118,020	180,966	33,550	6,384	44,860	310,542	24,067	16,155	135,443	1,100,924
2003	251,198	109,891	189,115	37,296	6,638	46,659	323,516	25,093	17,031	142,242	1,148,679
2008	276,844	134,551	209,584	46,618	7,405	52,137	356,240	28,024	19,420	161,128	1,291,949
2013	288,478	150,777	220,089	52,485	7,747	54,595	371,717	29,305	20,644	170,303	1,366,139
Average Consumption per Square Foot by End Use (kWh/SF)											
1980	2.806	0.551	2.140	0.123	0.071	0.502	3.628	0.263	0.073	1.183	11.340
1990	3.060	0.871	1.984	0.225	0.070	0.489	3.379	0.262	0.135	1.412	11.888
2000	2.815	1.030	2.022	0.362	0.072	0.509	3.480	0.273	0.182	1.528	12.273
2001	2.584	1.321	2.025	0.375	0.071	0.502	3.475	0.269	0.181	1.516	12.319
2003	2.740	1.199	2.063	0.407	0.072	0.509	3.529	0.274	0.186	1.552	12.529
2008	2.861	1.391	2.166	0.482	0.077	0.539	3.682	0.290	0.201	1.665	13.354
2013	2.842	1.485	2.168	0.517	0.076	0.538	3.662	0.289	0.203	1.678	13.458
Food Stores											
GWh by End Use											
1980	36,987	11,375	116,385	2,243	2,523	1,245,227	692,851	113,542	1,775	67,311	2,290,219
1990	55,058	19,178	155,820	2,278	3,200	1,645,297	911,101	153,465	4,073	137,243	3,086,714
2000	58,159	20,123	171,335	2,781	3,663	1,834,777	974,483	171,465	6,434	159,884	3,403,104
2001	58,398	24,775	166,761	2,750	3,596	1,787,565	935,965	167,301	6,250	156,531	3,309,892
2003	58,994	22,647	174,501	2,936	3,777	1,878,094	951,198	176,288	6,533	166,277	3,441,244
2008	65,901	27,088	199,381	3,475	4,335	2,171,393	1,031,567	203,889	7,513	195,462	3,910,004
2013	68,493	29,449	209,491	3,745	4,623	2,302,259	1,049,223	216,343	8,103	209,640	4,101,368
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	0.650	0.200	2.045	0.039	0.044	21.876	12.172	1.995	0.031	1.183	40.235
1990	0.720	0.251	2.039	0.030	0.042	21.530	11.923	2.008	0.053	1.796	40.393
2000	0.650	0.225	1.914	0.031	0.041	20.500	10.888	1.916	0.072	1.786	38.023
2001	0.642	0.272	1.832	0.030	0.040	19.639	10.283	1.838	0.069	1.720	36.365
2003	0.628	0.241	1.857	0.031	0.040	19.985	10.122	1.876	0.070	1.769	36.619
2008	0.652	0.268	1.972	0.034	0.043	21.476	10.203	2.017	0.074	1.933	38.671
2013	0.631	0.271	1.930	0.034	0.043	21.205	9.664	1.993	0.075	1.931	37.777
Hospitals											
GWh by End Use											
1980	364,870	26,362	123,382	0,102	4,877	19,093	533,629	17,094	23,128	268,669	1,381,206
1990	694,291	65,319	186,094	18,896	7,734	29,877	835,432	27,375	54,829	631,120	2,550,968
2000	830,938	83,446	236,256	34,514	9,944	38,293	1,066,418	35,263	71,202	817,030	3,223,305
2001	770,279	102,739	231,319	34,442	9,740	37,517	1,044,471	34,585	69,874	801,607	3,136,572
2003	843,307	91,765	238,537	36,904	10,045	38,734	1,077,884	35,760	72,338	829,492	3,274,766
2008	961,515	107,343	268,962	45,437	11,373	43,901	1,220,756	40,527	82,234	941,879	3,723,928
2013	1,005,093	114,383	278,352	49,123	11,829	45,659	1,269,283	42,131	85,688	980,537	3,882,077
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	7.552	0.546	2.554	0.002	0.101	0.395	11.044	0.354	0.479	5.561	28.586
1990	9.025	0.849	2.419	0.246	0.101	0.388	10.859	0.356	0.713	8.203	33.158
2000	8.347	0.838	2.373	0.347	0.100	0.385	10.712	0.354	0.715	8.207	32.379
2001	7.604	1.014	2.284	0.340	0.096	0.370	10.311	0.341	0.690	7.913	30.963
2003	8.007	0.871	2.265	0.350	0.095	0.368	10.234	0.340	0.687	7.875	31.092
2008	8.337	0.931	2.332	0.394	0.099	0.381	10.584	0.351	0.713	8.166	32.288
2013	7.734	0.880	2.142	0.378	0.091	0.351	9.767	0.324	0.659	7.545	29.873
Hotel/Motel											
GWh by End Use											
1980	185,978	88,287	47,451	1,235	2,964	55,470	175,442	26,675	0,390	57,275	641,166
1990	365,023	308,247	82,927	12,170	5,766	107,714	338,331	52,461	1,315	146,257	1,420,211
2000	339,797	310,142	85,872	15,351	6,106	113,989	355,530	55,625	1,518	159,207	1,443,137
2001	315,644	399,457	86,186	15,936	6,146	114,727	358,574	56,091	1,540	161,115	1,515,415
2003	335,846	357,559	88,704	17,211	6,350	118,521	370,175	58,123	1,611	167,902	1,522,002
2008	351,650	409,165	95,918	20,382	6,943	129,661	401,614	63,607	1,796	185,753	1,666,488
2013	357,498	443,863	99,573	22,576	7,277	135,962	418,909	66,621	1,903	195,924	1,750,107
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	4.540	2.155	1.158	0.030	0.072	1.354	4.283	0.651	0.010	1.398	15.653
1990	4.575	3.863	1.039	0.153	0.072	1.350	4.240	0.657	0.016	1.833	17.798
2000	3.856	3.520	0.974	0.174	0.069	1.294	4.035	0.631	0.017	1.807	16.377
2001	3.533	4.471	0.965	0.178	0.069	1.284	4.014	0.628	0.017	1.803	16.963
2003	3.643	3.879	0.962	0.187	0.069	1.286	4.015	0.630	0.017	1.821	16.510
2008	3.567	4.151	0.973	0.207	0.070	1.315	4.074	0.645	0.018	1.884	16.906
2013	3.403	4.225	0.948	0.215	0.068	1.294	3.987	0.634	0.018	1.865	16.657

**Table I-1
Commercial Building Forecast
Electricity Sales by End-Use and Building Type (GWh)
SCE Planning Area**

Year	Cooling	Heating	Ventilation	Water Heating	Cooking	Refrigeration	Indoor Lighting	Outdoor Lighting	Office Equipment	Misc.	Total
Large Offices											
GWh by End Use											
1980	697.830	82.132	578.842	3.669	2.479	3.798	1,781.360	309.064	18.142	289.440	3,766.757
1990	1,404.092	170.247	863.842	14.887	3.811	5.130	2,744.660	479.237	77.598	685.750	6,449.254
2000	1,370.720	188.020	892.209	18.827	4.079	5.014	2,913.501	513.750	108.620	754.256	6,768.994
2001	1,202.306	227.926	867.474	18.820	3.985	4.863	2,826.881	502.567	106.008	740.298	6,501.127
2003	1,370.857	200.394	893.793	20.771	4.164	5.028	2,911.687	526.788	110.908	782.219	6,826.610
2008	1,498.772	233.010	963.628	25.460	4.606	5.495	3,137.966	583.272	123.557	881.140	7,456.906
2013	1,532.268	251.260	965.554	28.769	4.745	5.646	3,190.830	600.520	130.769	921.844	7,632.205
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	3.645	0.429	3.024	0.019	0.013	0.020	9.305	1.614	0.095	1.512	19.677
1990	4.561	0.553	2.806	0.048	0.012	0.017	8.916	1.557	0.252	2.228	20.950
2000	3.908	0.536	2.544	0.054	0.012	0.014	8.307	1.465	0.310	2.151	19.300
2001	3.337	0.633	2.408	0.052	0.011	0.013	7.846	1.395	0.294	2.055	18.045
2003	3.614	0.528	2.356	0.055	0.011	0.013	7.676	1.389	0.292	2.062	17.997
2008	3.552	0.552	2.284	0.060	0.011	0.013	7.436	1.382	0.293	2.086	17.671
2013	3.262	0.535	2.056	0.061	0.010	0.012	6.793	1.278	0.278	1.962	16.248
Miscellaneous											
GWh by End Use											
1980	716.246	96.040	311.068	14.565	3.723	16.893	1,003.578	269.078	14.819	150.699	2,596.708
1990	1,167.322	152.537	438.080	24.752	5.084	20.687	1,386.352	378.323	33.893	265.261	3,872.291
2000	1,099.950	203.850	507.937	33.321	5.925	21.096	1,635.620	435.596	46.980	316.455	4,306.729
2003	1,201.739	183.013	540.420	36.443	6.294	22.190	1,713.010	463.825	49.342	338.901	4,555.177
2008	1,335.544	212.311	617.865	44.002	7.120	24.985	1,908.612	529.259	55.499	391.258	5,126.455
2013	1,378.016	225.411	647.357	48.163	7.440	26.010	1,986.183	552.708	58.978	412.748	5,343.013
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	3.047	0.409	1.323	0.062	0.016	0.072	4.270	1.145	0.063	0.641	11.047
1990	3.548	0.464	1.332	0.075	0.015	0.063	4.214	1.150	0.103	0.806	11.770
2000	2.877	0.402	1.251	0.081	0.015	0.052	4.065	1.073	0.116	0.777	10.708
2001	2.700	0.500	1.247	0.082	0.015	0.052	4.014	1.069	0.115	0.777	10.570
2003	2.862	0.436	1.287	0.087	0.015	0.053	4.080	1.105	0.118	0.807	10.849
2008	2.972	0.473	1.375	0.098	0.016	0.056	4.248	1.178	0.124	0.871	11.409
2013	2.893	0.473	1.359	0.101	0.016	0.055	4.170	1.160	0.124	0.867	11.218
Restaurants											
GWh by End Use											
1980	147.300	9.543	215.357	2.163	34.729	350.787	287.860	144.973	0.196	122.746	1,315.654
1990	268.176	19.515	325.754	1.961	79.096	528.796	415.522	222.513	0.502	282.429	2,144.262
2000	267.104	21.049	367.580	2.389	105.874	603.987	473.732	254.520	0.789	330.887	2,427.913
2001	254.994	26.871	369.970	2.422	108.530	608.714	471.838	256.914	0.792	334.929	2,435.973
2003	272.860	24.440	388.001	2.577	116.804	639.422	486.241	270.496	0.823	354.336	2,555.800
2008	302.368	29.306	444.148	3.079	143.118	738.857	539.430	312.312	0.938	414.021	2,927.578
2013	318.696	33.050	478.268	3.444	164.126	803.751	571.564	339.085	1.035	454.084	3,167.103
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	4.252	0.275	6.217	0.062	1.003	10.126	8.310	4.185	0.006	3.543	37.980
1990	5.076	0.369	6.166	0.037	1.497	10.009	7.865	4.212	0.009	5.346	40.587
2000	4.228	0.333	5.819	0.038	1.676	9.562	7.500	4.029	0.012	5.238	38.436
2001	3.947	0.416	5.726	0.037	1.680	9.422	7.303	3.977	0.012	5.184	37.704
2003	4.041	0.362	5.750	0.038	1.731	9.476	7.206	4.009	0.012	5.251	37.877
2008	4.095	0.397	6.015	0.042	1.938	10.006	7.305	4.230	0.013	5.607	39.647
2013	3.972	0.412	5.960	0.043	2.045	10.017	7.123	4.226	0.013	5.659	39.469
Retail											
GWh by End Use											
1980	356.391	5.406	299.179	3.557	7.295	57.936	1,277.462	251.661	5.971	119.412	2,384.270
1990	548.051	9.957	422.189	6.179	10.528	74.975	1,764.576	366.777	14.552	361.223	3,579.006
2000	572.977	12.403	470.996	9.563	12.111	77.931	1,998.440	422.466	23.304	429.746	4,029.937
2001	542.433	15.595	462.853	9.665	11.941	76.342	1,963.071	417.155	22.876	425.493	3,947.424
2003	574.423	14.121	482.470	10.542	12.515	79.224	2,003.611	438.339	23.749	449.612	4,088.605
2008	633.713	17.723	553.672	13.357	14.579	91.194	2,189.211	510.961	27.335	530.434	4,582.180
2013	663.548	20.305	591.193	15.507	15.806	98.519	2,295.146	553.534	29.961	579.314	4,862.831
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	1.818	0.028	1.526	0.018	0.037	0.295	6.515	1.284	0.030	0.609	12.160
1990	1.932	0.035	1.488	0.022	0.037	0.264	6.220	1.293	0.051	1.273	12.616
2000	1.677	0.036	1.379	0.028	0.035	0.228	5.849	1.237	0.068	1.258	11.795
2001	1.565	0.045	1.335	0.028	0.034	0.220	5.663	1.203	0.066	1.228	11.388
2003	1.603	0.039	1.347	0.029	0.035	0.221	5.592	1.223	0.066	1.255	11.411
2008	1.651	0.046	1.443	0.035	0.038	0.238	5.704	1.331	0.071	1.382	11.938
2013	1.616	0.049	1.439	0.038	0.038	0.240	5.588	1.348	0.073	1.411	11.840

**Table I-1
Commercial Building Forecast
Electricity Sales by End-Use and Building Type (GWh)
SCE Planning Area**

Year	Cooling	Heating	Ventilation	Water Heating	Cooking	Refrigeration	Indoor Lighting	Outdoor Lighting	Office Equipment	Misc.	Total
Refrigerated Warehouses											
GWh by End Use											
1980	1.523	0.034	0.839	0.002	0.004	132.814	30.674	1.919	0.063	11.061	178.934
1990	1.175	0.027	0.556	0.018	0.003	136.572	21.788	1.950	0.115	16.751	178.955
2000	1.315	0.020	0.737	0.066	0.004	189.209	26.337	2.189	0.169	21.111	241.158
2001	1.294	0.024	0.732	0.069	0.004	188.966	25.985	2.160	0.168	20.988	240.389
2003	1.416	0.020	0.838	0.096	0.004	223.440	29.111	2.445	0.195	24.301	281.865
2008	1.547	0.019	0.956	0.126	0.005	265.637	31.953	2.716	0.222	27.824	331.005
2013	1.642	0.017	1.041	0.148	0.006	296.236	34.246	2.881	0.244	30.120	366.580
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	0.134	0.003	0.074	0.000	0.000	11.716	2.706	0.169	0.006	0.976	15.785
1990	0.097	0.002	0.046	0.001	0.000	11.322	1.806	0.162	0.009	1.389	14.836
2000	0.089	0.001	0.050	0.004	0.000	12.808	1.783	0.148	0.011	1.429	16.324
2001	0.086	0.002	0.049	0.005	0.000	12.625	1.736	0.144	0.011	1.402	16.061
2003	0.092	0.001	0.055	0.006	0.000	14.566	1.898	0.159	0.013	1.584	18.375
2008	0.095	0.001	0.059	0.008	0.000	16.345	1.966	0.167	0.014	1.712	20.367
2013	0.095	0.001	0.060	0.009	0.000	17.185	1.987	0.167	0.014	1.747	21.266
Schools											
GWh by End Use											
1980	133.578	17.039	122.550	3.304	7.788	15.793	477.073	167.218	3.040	39.241	986.625
1990	160.150	20.659	128.779	3.836	8.272	16.202	483.253	179.521	5.540	54.296	1,060.507
2000	179.147	19.579	148.732	7.752	9.612	18.868	555.174	210.230	8.522	66.224	1,223.843
2001	170.761	24.148	147.083	7.932	9.509	18.767	551.582	207.225	8.456	65.508	1,210.973
2003	183.863	21.495	152.916	9.307	9.924	19.634	574.851	216.896	9.038	69.344	1,267.268
2008	203.875	23.110	167.473	12.390	10.943	21.606	626.838	240.697	10.410	78.533	1,395.874
2013	219.288	24.059	178.470	15.459	11.754	23.286	669.497	258.850	11.600	86.126	1,498.390
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	0.968	0.124	0.888	0.024	0.056	0.114	3.458	1.212	0.022	0.284	7.152
1990	1.075	0.139	0.865	0.026	0.056	0.109	3.245	1.205	0.037	0.365	7.120
2000	1.007	0.110	0.836	0.044	0.054	0.106	3.121	1.182	0.048	0.372	6.880
2001	0.940	0.133	0.810	0.044	0.052	0.103	3.037	1.141	0.047	0.361	6.668
2003	0.974	0.114	0.810	0.049	0.053	0.104	3.044	1.149	0.048	0.367	6.711
2008	1.001	0.113	0.822	0.061	0.054	0.106	3.078	1.182	0.051	0.386	6.854
2013	1.037	0.114	0.844	0.073	0.056	0.110	3.167	1.224	0.055	0.407	7.088
Small Offices											
GWh by End Use											
1980	142.889	2.011	62.706	0.336	1.032	3.743	359.821	79.404	9.143	119.002	779.888
1990	232.249	1.880	88.941	2.354	1.518	4.887	512.766	120.387	35.093	263.677	1,263.751
2000	238.785	1.981	95.290	3.603	1.709	4.996	563.890	135.792	51.069	302.964	1,400.079
2001	235.972	2.410	92.948	3.618	1.690	4.850	551.986	133.055	49.775	297.405	1,373.708
2003	244.023	2.314	96.657	4.089	1.781	5.060	570.047	140.646	52.108	315.728	1,432.454
2008	275.529	3.087	108.654	5.419	2.043	5.804	631.178	162.948	59.792	369.130	1,623.584
2013	293.272	3.567	113.513	6.427	2.194	6.212	662.506	174.364	64.722	397.646	1,724.424
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	2.222	0.031	0.976	0.005	0.016	0.058	5.603	1.236	0.142	1.853	12.144
1990	2.301	0.019	0.881	0.023	0.015	0.048	5.080	1.193	0.348	2.612	12.521
2000	1.991	0.017	0.794	0.030	0.014	0.042	4.701	1.132	0.426	2.526	11.672
2001	1.921	0.020	0.757	0.029	0.014	0.039	4.493	1.083	0.405	2.421	11.183
2003	1.899	0.018	0.752	0.032	0.014	0.039	4.437	1.095	0.406	2.458	11.150
2008	1.950	0.022	0.769	0.038	0.014	0.041	4.467	1.153	0.423	2.612	11.489
2013	1.895	0.023	0.734	0.042	0.014	0.040	4.281	1.127	0.418	2.570	11.144
Warehouses											
GWh by End Use											
1980	41.346	2.929	34.485	0.042	0.071	0.000	717.661	43.557	3.489	156.489	1,000.068
1990	53.121	5.747	48.635	1.256	0.069	0.000	956.978	58.433	8.216	320.983	1,453.437
2000	44.043	6.284	54.738	2.171	0.080	0.000	1,008.931	59.765	9.916	347.515	1,533.443
2001	41.232	8.176	55.892	2.310	0.082	0.000	1,015.299	60.581	10.045	354.447	1,548.063
2003	44.985	7.868	61.307	2.735	0.091	0.000	1,086.535	65.682	10.876	388.777	1,668.856
2008	47.965	9.479	70.947	3.546	0.109	0.000	1,214.270	74.588	12.372	450.247	1,883.523
2013	48.648	10.367	76.312	4.100	0.118	0.000	1,282.644	78.667	13.328	480.951	1,995.136
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	0.204	0.014	0.170	0.000	0.000	0.000	3.534	0.214	0.017	0.771	4.925
1990	0.192	0.021	0.176	0.005	0.000	0.000	3.454	0.211	0.030	1.158	5.246
2000	0.138	0.020	0.172	0.007	0.000	0.000	3.167	0.188	0.031	1.091	4.813
2001	0.127	0.025	0.172	0.007	0.000	0.000	3.117	0.186	0.031	1.088	4.753
2003	0.133	0.023	0.181	0.008	0.000	0.000	3.202	0.194	0.032	1.146	4.918
2008	0.130	0.026	0.193	0.010	0.000	0.000	3.297	0.203	0.034	1.222	5.114
2013	0.122	0.026	0.192	0.010	0.000	0.000	3.226	0.198	0.034	1.210	5.018

**Table I-1
Commercial Building Forecast
Electricity Sales by End-Use and Building Type (GWh)
LADWP Planning Area**

Year	Cooling	Heating	Ventilation	Water Heating	Cooking	Refrigeration	Indoor Lighting	Outdoor Lighting	Office Equipment	Misc.	Total
Colleges											
GWh by End Use											
1980	154.333	7.119	74.263	2.755	2.485	17.640	127.814	9.266	2.118	31.385	429.178
1990	176.324	9.083	72.799	2.931	2.517	17.829	105.613	9.438	5.495	83.200	485.230
2000	155.318	10.991	72.872	4.174	2.521	17.858	106.146	9.493	14.808	127.947	522.130
2001	139.792	13.874	72.958	4.403	2.525	17.888	106.350	9.510	14.916	128.912	511.129
2003	156.999	15.119	75.849	6.055	2.628	18.617	111.414	9.900	16.024	138.883	551.289
2008	153.546	20.756	77.657	8.423	2.682	19.000	115.309	10.103	17.131	148.508	573.115
2013	148.979	27.459	78.680	11.194	2.707	19.187	118.787	10.206	18.241	158.398	593.839
Average Consumption per Square Foot by End Use (kWh/SF)											
1980	4.120	0.190	1.983	0.074	0.066	0.471	3.412	0.247	0.057	0.838	11.457
1990	4.551	0.234	1.879	0.076	0.065	0.460	2.726	0.244	0.142	2.147	12.524
2000	4.000	0.283	1.877	0.108	0.065	0.460	2.734	0.244	0.381	3.295	13.448
2001	3.600	0.357	1.879	0.113	0.065	0.461	2.739	0.245	0.384	3.320	13.164
2003	3.954	0.381	1.910	0.153	0.066	0.469	2.806	0.249	0.404	3.493	13.885
2008	3.767	0.509	1.905	0.207	0.066	0.466	2.829	0.248	0.420	3.643	14.059
2013	3.563	0.657	1.882	0.268	0.065	0.459	2.841	0.244	0.436	3.788	14.203
Food Stores											
GWh by End Use											
1980	8.115	2.406	32.088	0.380	0.707	350.755	198.581	31.808	0.483	15.123	640.447
1990	13.067	3.526	39.538	0.469	0.834	429.789	233.437	39.514	2.425	29.105	791.704
2000	11.797	3.834	36.540	0.525	0.794	401.773	214.171	36.975	3.534	36.943	746.886
2001	11.039	4.712	36.706	0.538	0.799	404.611	212.689	37.230	3.572	37.620	749.517
2003	12.432	4.263	38.919	0.598	0.859	434.057	217.021	39.922	3.892	41.623	793.586
2008	12.431	4.787	39.941	0.669	0.897	451.884	211.239	41.482	4.160	45.482	812.970
2013	12.203	5.084	39.738	0.703	0.906	454.202	202.833	41.682	4.328	47.367	809.045
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	0.459	0.136	1.814	0.021	0.040	19.833	11.229	1.799	0.027	0.855	36.214
1990	0.619	0.167	1.874	0.022	0.040	20.371	11.064	1.873	0.115	1.380	37.525
2000	0.539	0.175	1.669	0.024	0.036	18.353	9.784	1.689	0.161	1.688	34.118
2001	0.504	0.215	1.677	0.025	0.037	18.483	9.716	1.701	0.163	1.719	34.239
2003	0.555	0.190	1.739	0.027	0.038	19.390	9.694	1.783	0.174	1.859	35.450
2008	0.541	0.208	1.738	0.029	0.039	19.662	9.191	1.805	0.181	1.979	35.373
2013	0.518	0.216	1.686	0.030	0.038	19.268	8.604	1.768	0.184	2.009	34.321
Hospitals											
GWh by End Use											
1980	96.484	3.318	55.773	0.013	2.197	8.598	240.565	7.710	8.595	97.692	520.945
1990	171.824	3.714	57.310	0.889	2.288	8.915	239.945	8.074	34.520	262.761	790.240
2000	179.269	4.028	57.966	1.497	2.313	8.972	241.657	8.197	56.162	334.680	894.742
2001	164.383	5.077	58.039	1.592	2.317	8.985	241.873	8.213	56.512	336.793	883.784
2003	190.784	5.106	59.467	2.261	2.386	9.243	249.020	8.458	59.404	354.059	940.188
2008	214.914	7.759	62.419	4.179	2.535	9.811	266.254	8.985	66.486	396.294	1,039.635
2013	248.912	11.295	66.330	6.831	2.730	10.571	288.138	9.684	76.023	453.147	1,173.662
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	4.151	0.143	2.399	0.001	0.095	0.370	10.349	0.332	0.370	4.203	22.411
1990	6.964	0.151	2.323	0.036	0.093	0.361	9.725	0.327	1.399	10.650	32.029
2000	7.200	0.162	2.328	0.060	0.093	0.360	9.706	0.329	2.256	13.442	35.936
2001	6.602	0.204	2.331	0.064	0.093	0.361	9.715	0.330	2.270	13.527	35.496
2003	7.557	0.202	2.356	0.090	0.094	0.366	9.864	0.335	2.353	14.025	37.243
2008	7.962	0.287	2.313	0.155	0.094	0.363	9.865	0.333	2.463	14.682	38.518
2013	8.421	0.382	2.244	0.231	0.092	0.358	9.748	0.328	2.572	15.331	39.707
Hotel/Motel											
GWh by End Use											
1980	78.542	35.372	23.487	0.347	1.453	27.184	86.067	13.091	0.199	22.396	288.138
1990	124.180	76.655	30.035	2.839	2.008	37.505	112.110	18.226	0.550	52.114	456.221
2000	101.762	85.457	27.740	3.752	1.909	35.665	107.499	17.389	0.739	65.982	447.895
2001	90.731	103.587	27.412	3.828	1.893	35.357	106.587	17.242	0.739	66.013	453.389
2003	107.944	101.694	30.523	5.122	2.154	40.243	120.990	19.629	0.871	77.818	506.988
2008	107.686	113.466	31.173	6.129	2.246	41.941	126.206	20.454	0.945	84.404	534.649
2013	106.589	121.937	31.456	6.872	2.298	42.929	129.418	20.944	0.993	88.717	552.153
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	3.649	1.643	1.091	0.016	0.067	1.263	3.998	0.608	0.009	1.040	13.386
1990	4.160	2.568	1.006	0.095	0.067	1.257	3.756	0.611	0.018	1.746	15.284
2000	3.286	2.760	0.896	0.121	0.062	1.152	3.471	0.562	0.024	2.131	14.464
2001	2.930	3.345	0.885	0.124	0.061	1.142	3.442	0.557	0.024	2.132	14.641
2003	3.384	3.188	0.957	0.161	0.068	1.262	3.793	0.615	0.027	2.439	15.893
2008	3.226	3.399	0.934	0.184	0.067	1.257	3.781	0.613	0.028	2.529	16.018
2013	3.088	3.533	0.911	0.199	0.067	1.244	3.749	0.607	0.029	2.570	15.996

**Table I-1
Commercial Building Forecast
Electricity Sales by End-Use and Building Type (GWh)
LADWP Planning Area**

Year	Cooling	Heating	Ventilation	Water Heating	Cooking	Refrigeration	Indoor Lighting	Outdoor Lighting	Office Equipment	Misc.	Total
Large Offices											
GWh by End Use											
1980	405.291	49.987	347.131	1.966	1.501	2.299	1,079.341	187.408	10.757	163.298	2,248.978
1990	775.081	82.290	481.269	7.281	2.110	2.930	1,476.901	264.944	146.405	436.837	3,676.047
2000	735.698	85.656	474.950	8.549	2.125	2.688	1,485.264	267.667	243.329	560.352	3,866.278
2001	661.084	104.342	476.043	8.775	2.137	2.680	1,486.600	269.278	245.076	566.963	3,822.978
2003	775.810	94.291	493.581	10.214	2.276	2.803	1,558.424	286.793	263.990	616.285	4,104.467
2008	812.119	106.467	501.773	12.454	2.398	2.898	1,612.027	302.129	284.927	674.214	4,311.406
2013	836.435	116.920	498.540	14.628	2.471	2.977	1,649.605	311.494	304.047	719.470	4,456.587
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	3.292	0.406	2.819	0.016	0.012	0.019	8.766	1.522	0.087	1.326	18.265
1990	4.188	0.445	2.600	0.039	0.011	0.016	7.980	1.432	0.791	2.360	19.862
2000	3.813	0.444	2.461	0.044	0.011	0.014	7.697	1.387	1.261	2.904	20.037
2001	3.426	0.541	2.467	0.045	0.011	0.014	7.704	1.396	1.270	2.938	19.812
2003	3.915	0.476	2.491	0.052	0.011	0.014	7.865	1.447	1.332	3.110	20.713
2008	3.913	0.513	2.418	0.060	0.012	0.014	7.768	1.456	1.373	3.249	20.775
2013	3.841	0.537	2.289	0.067	0.011	0.014	7.574	1.430	1.396	3.303	20.463
Miscellaneous											
GWh by End Use											
1980	187.809	24.114	84.305	3.383	1.012	4.592	280.090	73.180	6.189	35.564	700.239
1990	284.198	30.489	99.738	4.700	1.158	4.813	309.357	87.398	29.911	121.034	972.796
2001	216.581	37.469	94.302	5.807	1.116	4.019	304.950	83.085	52.620	186.850	986.798
2003	245.979	32.814	99.202	6.614	1.178	4.177	317.859	87.568	56.315	202.403	1,054.110
2008	245.785	36.191	102.429	7.831	1.225	4.275	325.064	90.748	60.247	220.432	1,094.228
2013	240.307	38.075	102.729	8.685	1.235	4.301	326.935	91.299	62.931	230.281	1,106.780
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	2.624	0.337	1.178	0.047	0.014	0.064	3.913	1.022	0.086	0.497	9.784
1990	3.492	0.375	1.225	0.058	0.014	0.059	3.801	1.074	0.367	1.487	11.952
2000	2.798	0.359	1.104	0.066	0.013	0.047	3.588	0.972	0.613	2.165	11.726
2001	2.549	0.441	1.110	0.068	0.013	0.047	3.589	0.978	0.619	2.199	11.614
2003	2.862	0.382	1.154	0.077	0.014	0.049	3.698	1.019	0.655	2.355	12.263
2008	2.795	0.412	1.165	0.089	0.014	0.049	3.696	1.032	0.685	2.506	12.442
2013	2.685	0.425	1.148	0.097	0.014	0.048	3.653	1.020	0.703	2.573	12.366
Restaurants											
GWh by End Use											
1980	46.197	3.028	72.092	0.547	10.992	118.336	99.514	49.003	0.068	35.706	435.482
1990	86.084	4.600	91.643	0.490	17.717	150.153	119.074	62.714	0.330	121.411	654.216
2000	74.815	4.684	87.317	0.500	18.951	143.431	117.026	60.139	0.461	147.124	654.448
2001	68.337	5.761	88.613	0.513	19.611	145.793	117.938	61.138	0.469	150.495	658.667
2003	77.117	4.915	91.491	0.543	21.148	151.112	120.027	63.378	0.486	158.158	688.375
2008	77.888	5.414	95.036	0.601	24.182	158.271	121.542	66.364	0.515	171.215	721.028
2013	77.978	5.912	96.556	0.652	27.189	162.243	121.557	68.042	0.547	181.997	742.672
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	3.545	0.232	5.532	0.042	0.843	9.080	7.636	3.760	0.005	2.740	33.416
1990	5.384	0.288	5.732	0.031	1.108	9.392	7.448	3.923	0.021	7.594	40.919
2000	4.504	0.282	5.257	0.030	1.141	8.636	7.046	3.621	0.028	8.858	39.403
2001	4.082	0.344	5.293	0.031	1.171	8.708	7.044	3.652	0.028	8.989	39.342
2003	4.517	0.288	5.359	0.032	1.239	8.850	7.030	3.712	0.028	9.263	40.317
2008	4.422	0.307	5.395	0.034	1.373	8.985	6.900	3.768	0.029	9.720	40.935
2013	4.265	0.323	5.281	0.036	1.487	8.873	6.648	3.721	0.030	9.953	40.616
Retail											
GWh by End Use											
1980	91.453	1.455	88.981	0.825	2.202	17.485	395.399	76.054	1.743	29.372	704.968
1990	149.295	1.791	112.359	1.342	2.784	20.383	456.723	98.558	9.066	166.099	1,018.401
2000	141.453	1.974	105.196	1.836	2.691	17.693	443.866	94.947	13.427	257.824	1,080.906
2001	128.413	2.525	105.942	1.918	2.723	17.749	443.870	96.056	13.617	263.395	1,076.208
2003	146.478	2.324	109.763	2.180	2.864	18.356	452.207	100.895	14.416	282.910	1,132.392
2008	148.256	2.813	111.854	2.595	2.985	18.811	450.390	104.896	15.292	306.569	1,164.462
2013	146.948	3.150	110.751	2.885	3.008	18.897	442.120	105.590	15.850	317.902	1,167.102
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	1.391	0.022	1.353	0.013	0.033	0.266	6.012	1.156	0.027	0.447	10.719
1990	1.824	0.022	1.373	0.016	0.034	0.249	5.581	1.204	0.111	2.030	12.445
2000	1.645	0.023	1.223	0.021	0.031	0.206	5.161	1.104	0.156	2.998	12.567
2001	1.490	0.029	1.229	0.022	0.032	0.206	5.149	1.114	0.158	3.055	12.484
2003	1.662	0.026	1.245	0.025	0.032	0.208	5.130	1.144	0.164	3.209	12.845
2008	1.638	0.031	1.236	0.029	0.033	0.208	4.976	1.159	0.169	3.387	12.866
2013	1.583	0.034	1.193	0.031	0.032	0.204	4.763	1.137	0.171	3.424	12.572

**Table I-1
Commercial Building Forecast
Electricity Sales by End-Use and Building Type (GWh)
LADWP Planning Area**

Year	Cooling	Heating	Ventilation	Water Heating	Cooking	Refrigeration	Indoor Lighting	Outdoor Lighting	Office Equipment	Misc.	Total
Refrigerated Warehouses											
GWh by End Use											
1980	0.414	0.001	0.225	0.001	0.001	59.125	8.216	0.502	0.017	2.400	70.901
1990	0.304	0.001	0.168	0.003	0.001	50.315	6.883	0.484	0.027	4.059	62.245
2000	0.213	0.001	0.134	0.007	0.000	34.276	5.417	0.370	0.027	4.376	44.822
2001	0.195	0.001	0.135	0.008	0.001	34.530	5.379	0.372	0.028	4.526	45.175
2003	0.281	0.001	0.184	0.020	0.001	48.844	6.838	0.505	0.043	6.950	63.666
2008	0.286	0.001	0.190	0.026	0.001	51.607	6.731	0.516	0.046	7.645	67.048
2013	0.287	0.001	0.191	0.030	0.001	53.214	6.606	0.515	0.048	8.020	68.913
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	0.125	0.000	0.068	0.000	0.000	17.911	2.489	0.152	0.005	0.727	21.479
1990	0.091	0.000	0.050	0.001	0.000	15.087	2.064	0.145	0.008	1.217	18.664
2000	0.064	0.000	0.040	0.002	0.000	10.278	1.624	0.111	0.008	1.312	13.440
2001	0.059	0.000	0.040	0.002	0.000	10.354	1.613	0.112	0.008	1.357	13.546
2003	0.084	0.000	0.055	0.006	0.000	14.598	2.044	0.151	0.013	2.077	19.028
2008	0.085	0.000	0.056	0.008	0.000	15.336	2.000	0.153	0.014	2.272	19.925
2013	0.085	0.000	0.056	0.009	0.000	15.674	1.946	0.152	0.014	2.362	20.298
Schools											
GWh by End Use											
1980	32.435	4.319	33.792	0.682	2.154	4.372	132.216	46.308	0.999	10.195	267.471
1990	40.345	4.215	33.240	0.518	2.110	4.220	119.219	45.970	2.200	26.398	278.434
2000	39.864	4.207	33.495	0.734	2.121	4.248	119.028	46.423	2.952	40.262	293.335
2001	36.400	5.032	33.500	0.765	2.122	4.249	118.944	46.450	2.964	40.442	290.869
2003	41.279	4.082	33.984	0.938	2.163	4.332	120.920	47.351	3.079	42.017	300.144
2008	41.628	3.960	33.605	1.167	2.152	4.317	120.059	47.101	3.153	43.025	300.167
2013	41.727	3.781	32.741	1.438	2.112	4.239	117.985	46.247	3.209	43.798	297.276
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	0.796	0.106	0.830	0.017	0.053	0.107	3.247	1.137	0.025	0.250	6.568
1990	0.973	0.102	0.802	0.012	0.051	0.102	2.876	1.109	0.053	0.637	6.718
2000	0.958	0.101	0.805	0.018	0.051	0.102	2.860	1.115	0.071	0.967	7.047
2001	0.874	0.121	0.805	0.018	0.051	0.102	2.857	1.116	0.071	0.971	6.987
2003	0.979	0.097	0.806	0.022	0.051	0.103	2.867	1.123	0.073	0.996	7.116
2008	0.977	0.093	0.789	0.027	0.051	0.101	2.817	1.105	0.074	1.010	7.044
2013	0.970	0.088	0.761	0.033	0.049	0.099	2.744	1.076	0.075	1.019	6.914
Small Offices											
GWh by End Use											
1980	38.931	0.655	21.216	0.107	0.342	1.240	119.151	26.362	2.900	39.137	250.040
1990	82.963	0.447	28.610	0.700	0.479	1.615	165.784	37.775	37.528	99.429	455.329
2000	86.105	0.546	29.210	0.986	0.510	1.551	171.505	40.201	65.281	133.545	529.441
2001	79.644	0.670	29.296	1.014	0.514	1.549	171.660	40.502	65.721	135.064	525.632
2003	90.074	0.585	30.157	1.159	0.541	1.600	176.669	42.593	69.188	143.492	556.058
2008	92.494	0.666	30.909	1.438	0.578	1.673	181.910	45.373	74.220	156.042	585.301
2013	94.315	0.742	31.142	1.719	0.606	1.745	186.023	47.524	78.988	166.085	608.888
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	1.723	0.029	0.939	0.005	0.015	0.055	5.273	1.167	0.128	1.732	11.065
1990	2.410	0.013	0.831	0.020	0.014	0.047	4.815	1.097	1.090	2.888	13.225
2000	2.322	0.015	0.788	0.027	0.014	0.042	4.625	1.084	1.761	3.602	14.279
2001	2.145	0.018	0.789	0.027	0.014	0.042	4.623	1.091	1.770	3.637	14.156
2003	2.344	0.015	0.785	0.030	0.014	0.042	4.598	1.108	1.801	3.734	14.471
2008	2.273	0.016	0.759	0.035	0.014	0.041	4.470	1.115	1.824	3.834	14.382
2013	2.174	0.017	0.718	0.040	0.014	0.040	4.287	1.095	1.820	3.828	14.033
Warehouses											
GWh by End Use											
1980	13.478	0.972	10.980	0.014	0.024	0.000	232.943	13.830	1.224	46.684	320.148
1990	15.055	1.454	12.771	0.162	0.017	0.000	248.718	16.036	2.392	102.517	399.122
2000	12.202	1.454	11.484	0.240	0.015	0.000	219.548	13.371	2.888	137.154	398.356
2001	10.971	1.797	11.655	0.263	0.016	0.000	220.253	13.478	2.926	139.979	401.337
2003	12.774	1.752	13.594	0.427	0.019	0.000	249.326	15.337	3.413	165.691	462.334
2008	12.428	1.939	14.361	0.548	0.021	0.000	254.165	15.762	3.592	178.148	480.965
2013	12.181	2.068	14.959	0.654	0.022	0.000	259.605	15.998	3.763	186.677	495.928
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	0.188	0.014	0.153	0.000	0.000	0.000	3.245	0.193	0.017	0.650	4.460
1990	0.189	0.018	0.160	0.002	0.000	0.000	3.119	0.201	0.030	1.286	5.005
2000	0.152	0.018	0.143	0.003	0.000	0.000	2.741	0.167	0.036	1.712	4.973
2001	0.137	0.022	0.146	0.003	0.000	0.000	2.750	0.168	0.037	1.748	5.011
2003	0.158	0.022	0.169	0.005	0.000	0.000	3.094	0.190	0.042	2.056	5.736
2008	0.152	0.024	0.176	0.007	0.000	0.000	3.119	0.193	0.044	2.186	5.902
2013	0.146	0.025	0.179	0.008	0.000	0.000	3.105	0.191	0.045	2.233	5.931

**Table I-1
Commercial Building Forecast
Electricity Sales by End-Use and Building Type (GWh)
SDG&E Planning Area**

Year	Cooling	Heating	Ventilation	Water Heating	Cooking	Refrigeration	Indoor Lighting	Outdoor Lighting	Office Equipment	Misc.	Total
Colleges											
GWh by End Use											
1980	29.744	12.371	34.773	10.037	4.169	10.738	44.072	3.355	1.567	18.987	169.813
1990	43.826	55.784	47.691	25.329	5.091	13.191	55.938	5.387	5.679	37.886	295.803
2000	46.952	84.047	56.746	40.073	5.140	13.667	74.749	6.649	8.365	47.705	384.093
2001	40.881	110.056	57.591	41.731	5.140	13.698	76.762	6.792	8.545	48.733	409.950
2003	52.059	93.768	59.449	44.890	5.209	13.931	80.804	7.109	8.942	51.004	417.165
2008	58.267	113.694	65.303	54.980	5.541	14.943	93.229	8.157	10.261	58.525	482.899
2013	62.651	128.889	69.285	62.890	5.660	15.344	102.588	8.877	11.166	63.689	531.039
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	2.671	1.111	3.123	0.901	0.374	0.964	3.958	0.301	0.141	1.705	15.252
1990	2.545	3.240	2.770	1.471	0.296	0.766	3.249	0.313	0.330	2.200	17.179
2000	2.105	3.767	2.544	1.796	0.230	0.613	3.351	0.298	0.375	2.138	17.217
2001	1.783	4.799	2.511	1.820	0.224	0.597	3.348	0.296	0.373	2.125	17.875
2003	2.180	3.926	2.489	1.880	0.218	0.583	3.383	0.298	0.374	2.136	17.467
2008	2.206	4.304	2.472	2.081	0.210	0.566	3.529	0.309	0.388	2.216	18.281
2013	2.203	4.532	2.436	2.212	0.199	0.540	3.608	0.312	0.393	2.240	18.674
Food Stores											
GWh by End Use											
1980	9.596	1.901	19.503	0.231	2.047	188.901	117.245	18.843	0.547	13.436	372.249
1990	15.083	5.485	37.880	0.592	7.583	360.088	204.254	35.939	2.247	34.586	693.736
2000	13.160	5.256	42.499	0.864	11.154	412.000	220.431	40.976	3.165	40.360	789.864
2001	11.369	6.721	43.514	0.912	11.762	424.377	223.082	42.201	3.255	41.586	808.779
2003	14.225	5.499	45.278	0.983	12.685	444.119	228.244	44.221	3.400	43.607	842.261
2008	15.431	6.204	51.269	1.197	15.427	505.995	248.646	50.671	3.879	50.053	948.770
2013	16.198	6.658	55.319	1.376	17.700	552.825	261.254	55.279	4.232	54.670	1,025.510
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	1.061	0.210	2.157	0.026	0.226	20.891	12.966	2.084	0.061	1.486	41.167
1990	1.000	0.364	2.511	0.039	0.503	23.204	13.538	2.382	0.149	2.292	45.981
2000	0.676	0.270	2.183	0.044	0.573	21.160	11.321	2.105	0.163	2.073	40.567
2001	0.563	0.333	2.157	0.045	0.583	21.034	11.057	2.092	0.161	2.061	40.086
2003	0.678	0.262	2.159	0.047	0.605	21.176	10.883	2.109	0.162	2.079	40.160
2008	0.677	0.272	2.250	0.053	0.677	22.208	10.913	2.224	0.170	2.197	41.642
2013	0.662	0.272	2.260	0.056	0.723	22.581	10.671	2.258	0.173	2.233	41.888
Hospitals											
GWh by End Use											
1980	128.603	18.605	40.211	14.094	3.477	9.258	168.122	5.500	7.988	89.196	485.054
1990	197.770	82.403	72.749	39.842	6.129	15.582	281.199	9.684	25.017	181.930	912.304
2000	174.911	99.735	82.588	50.909	6.911	16.983	316.176	10.708	31.156	205.284	995.362
2001	150.260	128.368	83.514	52.079	6.981	17.126	319.680	10.815	31.466	207.339	1,007.629
2003	189.997	108.339	87.037	55.483	7.262	17.754	332.353	11.244	32.713	215.578	1,057.762
2008	215.598	130.871	100.374	67.674	8.350	20.250	379.983	12.901	37.533	247.410	1,220.944
2013	237.182	150.870	111.685	78.724	9.264	22.281	421.770	14.264	41.498	273.592	1,361.131
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	9.454	1.368	2.956	1.036	0.256	0.681	12.359	0.404	0.587	6.557	35.657
1990	8.713	3.630	3.205	1.755	0.270	0.686	12.388	0.427	1.102	8.015	40.191
2000	6.522	3.719	3.080	1.898	0.258	0.633	11.790	0.399	1.162	7.655	37.116
2001	5.507	4.704	3.061	1.909	0.256	0.628	11.715	0.396	1.153	7.598	36.927
2003	6.732	3.839	3.084	1.966	0.257	0.629	11.776	0.398	1.159	7.638	37.478
2008	6.929	4.206	3.226	2.175	0.268	0.651	12.212	0.415	1.206	7.951	39.238
2013	6.980	4.440	3.287	2.317	0.273	0.656	12.412	0.420	1.221	8.051	40.056
Hotel/Motel											
GWh by End Use											
1980	70.583	11.573	21.343	1.331	6.826	18.879	57.723	9.015	0.204	23.759	221.235
1990	127.909	63.252	38.424	1.359	11.043	41.485	122.862	20.706	0.964	67.811	495.814
2000	106.145	72.965	40.579	1.124	11.236	46.171	140.426	23.170	1.288	77.405	520.508
2001	90.565	93.585	40.686	1.095	11.256	46.712	142.307	23.468	1.304	78.401	529.379
2003	113.631	79.343	41.990	1.054	11.606	49.250	150.259	24.799	1.378	82.847	556.157
2008	122.692	92.619	45.684	0.964	12.662	56.319	171.517	28.426	1.580	94.965	627.428
2013	129.003	103.519	48.413	0.856	13.428	61.999	189.036	31.343	1.742	104.708	684.047
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	5.930	0.972	1.793	0.112	0.573	1.586	4.849	0.757	0.017	1.996	18.586
1990	4.876	2.411	1.465	0.052	0.421	1.581	4.683	0.789	0.037	2.585	18.900
2000	3.400	2.337	1.300	0.036	0.360	1.479	4.498	0.742	0.041	2.479	16.673
2001	2.844	2.939	1.278	0.034	0.353	1.467	4.469	0.737	0.041	2.462	16.624
2003	3.386	2.364	1.251	0.031	0.346	1.468	4.477	0.739	0.041	2.469	16.572
2008	3.266	2.466	1.216	0.026	0.337	1.499	4.566	0.757	0.042	2.528	16.703
2013	3.138	2.518	1.178	0.021	0.327	1.508	4.599	0.762	0.042	2.547	16.641

**Table I-1
Commercial Building Forecast
Electricity Sales by End-Use and Building Type (GWh)
SDG&E Planning Area**

Year	Cooling	Heating	Ventilation	Water Heating	Cooking	Refrigeration	Indoor Lighting	Outdoor Lighting	Office Equipment	Misc.	Total
Large Offices											
GWh by End Use											
1980	85.947	5.511	86.263	3.541	1.145	1.688	192.922	33.720	3.500	42.105	456.342
1990	217.084	50.134	243.437	9.254	2.833	3.862	596.972	103.888	38.445	161.135	1,427.045
2000	209.173	67.616	287.756	11.367	3.472	4.357	711.408	132.519	59.226	209.700	1,696.595
2001	181.836	89.520	293.145	11.745	3.569	4.444	733.431	137.279	61.505	217.235	1,733.708
2003	229.988	76.652	303.515	12.386	3.739	4.596	771.440	145.229	65.396	229.820	1,842.762
2008	245.435	87.147	327.017	13.691	4.082	4.942	846.740	160.577	72.856	254.118	2,016.605
2013	244.255	89.358	326.976	13.866	4.102	4.940	852.834	162.373	73.670	256.965	2,029.339
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	4.536	0.291	4.553	0.187	0.060	0.089	10.182	1.780	0.185	2.222	24.084
1990	3.628	0.838	4.068	0.155	0.047	0.065	9.976	1.736	0.642	2.693	23.847
2000	2.739	0.885	3.768	0.149	0.045	0.057	9.314	1.735	0.775	2.746	22.213
2001	2.277	1.121	3.671	0.147	0.045	0.056	9.184	1.719	0.770	2.720	21.710
2003	2.723	0.908	3.594	0.147	0.044	0.054	9.134	1.719	0.774	2.721	21.818
2008	2.720	0.966	3.624	0.152	0.045	0.055	9.384	1.780	0.807	2.816	22.350
2013	2.707	0.990	3.624	0.154	0.045	0.055	9.452	1.800	0.816	2.848	22.491
Miscellaneous											
GWh by End Use											
1980	102.673	22.277	38.624	7.059	1.511	2.126	115.238	31.019	2.867	21.878	345.273
1990	171.779	62.321	79.115	7.742	3.158	3.392	216.128	60.070	11.727	52.527	667.959
2001	131.358	82.121	105.182	7.386	4.319	3.859	286.247	78.614	18.663	70.186	787.936
2003	164.702	67.083	110.775	7.521	4.563	4.002	299.171	82.759	19.488	73.895	833.959
2008	178.949	73.582	127.689	8.025	5.304	4.504	339.628	95.247	22.162	85.069	940.161
2013	186.195	77.115	138.779	8.193	5.812	4.838	367.576	103.415	24.062	92.381	1,008.366
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	4.251	0.922	1.599	0.232	0.063	0.088	4.771	1.284	0.119	0.906	14.294
1990	3.749	1.360	1.727	0.169	0.069	0.074	4.717	1.311	0.256	1.146	14.577
2000	2.415	1.020	1.607	0.117	0.066	0.060	4.395	1.201	0.286	1.072	12.239
2001	2.003	1.252	1.604	0.113	0.066	0.059	4.365	1.199	0.285	1.070	12.016
2003	2.412	0.982	1.622	0.110	0.067	0.059	4.381	1.212	0.285	1.082	12.213
2008	2.369	0.974	1.691	0.106	0.070	0.060	4.497	1.261	0.293	1.126	12.448
2013	2.290	0.948	1.707	0.101	0.071	0.059	4.521	1.272	0.296	1.136	12.402
Restaurants											
GWh by End Use											
1980	50.200	2.637	73.691	1.722	49.905	104.507	91.483	45.125	0.134	44.750	464.154
1990	61.414	6.602	98.059	2.064	63.518	137.684	108.022	59.558	0.416	79.807	617.145
2000	45.879	7.421	96.669	2.527	61.058	137.269	106.403	58.739	0.507	80.450	596.922
2001	38.812	9.591	97.088	2.595	61.124	138.133	106.308	59.061	0.509	80.918	594.140
2003	47.402	8.115	99.306	2.764	62.152	141.866	107.429	60.544	0.521	83.007	613.106
2008	48.197	9.569	106.315	3.249	65.641	153.441	111.420	65.058	0.557	89.359	652.806
2013	48.035	10.770	110.336	3.687	67.320	160.851	113.195	67.774	0.580	93.230	675.777
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	4.975	0.261	7.304	0.171	4.946	10.358	9.067	4.472	0.013	4.435	46.003
1990	5.092	0.547	8.131	0.171	5.267	11.417	8.957	4.939	0.035	6.817	51.173
2000	3.477	0.562	7.325	0.191	4.627	10.402	8.063	4.451	0.038	6.096	45.232
2001	2.907	0.718	7.273	0.194	4.579	10.348	7.964	4.424	0.038	6.062	44.508
2003	3.484	0.596	7.299	0.203	4.568	10.428	7.897	4.450	0.038	6.101	45.066
2008	3.413	0.678	7.528	0.230	4.648	10.865	7.890	4.607	0.039	6.327	46.225
2013	3.297	0.739	7.574	0.253	4.621	11.042	7.770	4.652	0.040	6.400	46.388
Retail											
GWh by End Use											
1980	82.479	0.825	58.843	2.676	0.916	6.366	296.813	57.556	2.397	31.977	540.847
1990	123.987	1.858	101.632	4.564	1.691	12.832	453.836	100.796	9.041	78.077	886.315
2000	105.560	2.097	109.633	5.244	2.039	15.435	491.909	111.716	12.379	86.159	942.170
2001	90.690	2.683	111.256	5.369	2.092	15.846	497.157	113.998	12.612	87.937	939.641
2003	113.334	2.212	115.302	5.639	2.202	16.703	511.116	119.120	13.140	91.923	990.690
2008	122.401	2.481	128.976	6.484	2.528	19.503	560.478	135.059	14.833	104.317	1,097.060
2013	127.957	2.657	137.771	7.107	2.779	21.751	592.790	146.053	16.040	112.880	1,167.785
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	1.932	0.019	1.378	0.063	0.021	0.149	6.951	1.348	0.056	0.749	12.666
1990	1.882	0.028	1.542	0.069	0.026	0.195	6.887	1.530	0.137	1.155	13.450
2000	1.282	0.025	1.332	0.064	0.025	0.187	5.976	1.357	0.150	1.047	11.445
2001	1.073	0.032	1.316	0.064	0.025	0.187	5.880	1.348	0.149	1.040	11.114
2003	1.293	0.025	1.315	0.064	0.025	0.190	5.829	1.359	0.150	1.048	11.299
2008	1.293	0.026	1.363	0.069	0.027	0.206	5.922	1.427	0.157	1.102	11.591
2013	1.268	0.026	1.365	0.070	0.028	0.215	5.872	1.447	0.159	1.118	11.569

**Table I-1
Commercial Building Forecast
Electricity Sales by End-Use and Building Type (GWh)
SDG&E Planning Area**

Year	Cooling	Heating	Ventilation	Water Heating	Cooking	Refrigeration	Indoor Lighting	Outdoor Lighting	Office Equipment	Misc.	Total
Refrigerated Warehouses											
GWh by End Use											
1980	0.038	0.002	0.022	0.007	0.000	9.362	0.843	0.051	0.002	0.406	10.732
1990	0.016	0.004	0.011	0.006	0.000	9.093	0.489	0.059	0.002	0.576	10.256
2000	0.031	0.005	0.032	0.010	0.000	13.231	1.225	0.107	0.004	1.066	15.713
2001	0.027	0.007	0.033	0.010	0.000	13.051	1.225	0.106	0.004	1.058	15.521
2003	0.034	0.005	0.035	0.011	0.000	13.442	1.296	0.111	0.004	1.103	16.040
2008	0.039	0.006	0.041	0.012	0.000	15.088	1.514	0.126	0.005	1.251	18.082
2013	0.043	0.006	0.046	0.013	0.000	16.336	1.676	0.136	0.005	1.358	19.620
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	0.132	0.007	0.076	0.023	0.000	32.439	2.919	0.176	0.005	1.408	37.185
1990	0.051	0.012	0.037	0.019	0.000	29.006	1.560	0.188	0.006	1.836	32.716
2000	0.053	0.009	0.055	0.017	0.000	22.487	2.083	0.182	0.007	1.812	26.705
2001	0.045	0.011	0.055	0.017	0.000	22.169	2.081	0.180	0.007	1.798	26.365
2003	0.056	0.009	0.057	0.017	0.000	21.963	2.117	0.181	0.007	1.802	26.209
2008	0.058	0.009	0.061	0.018	0.000	22.289	2.237	0.185	0.007	1.849	26.712
2013	0.058	0.009	0.063	0.018	0.000	22.418	2.300	0.187	0.007	1.864	26.924
Schools											
GWh by End Use											
1980	53.865	9.501	34.063	12.574	6.805	3.201	108.869	39.261	1.347	12.270	281.756
1990	52.584	17.576	36.824	10.981	7.420	3.294	104.377	43.410	3.865	16.808	297.139
2000	45.782	19.125	42.983	10.763	8.418	3.904	120.877	49.182	5.736	19.438	326.208
2001	39.086	24.273	43.444	10.775	8.484	3.951	122.054	49.627	5.788	19.615	327.097
2003	48.290	19.782	44.718	10.932	8.712	4.079	125.467	51.052	5.954	20.180	339.167
2008	49.785	21.589	48.435	11.528	9.458	4.455	135.688	55.531	6.476	21.958	364.902
2013	50.201	23.022	51.355	11.819	9.992	4.764	143.653	58.737	6.850	23.232	383.625
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	1.926	0.340	1.218	0.450	0.243	0.114	3.892	1.404	0.048	0.439	10.072
1990	1.753	0.586	1.228	0.366	0.247	0.110	3.480	1.447	0.129	0.560	9.906
2000	1.280	0.535	1.202	0.301	0.235	0.109	3.380	1.375	0.160	0.544	9.122
2001	1.076	0.668	1.196	0.297	0.234	0.109	3.360	1.366	0.159	0.540	9.006
2003	1.297	0.531	1.201	0.294	0.234	0.110	3.371	1.371	0.160	0.542	9.112
2008	1.265	0.549	1.231	0.293	0.240	0.113	3.449	1.411	0.165	0.558	9.275
2013	1.217	0.558	1.245	0.287	0.242	0.115	3.483	1.424	0.166	0.563	9.300
Small Offices											
GWh by End Use											
1980	136.580	3.644	62.509	4.360	0.336	2.142	232.089	51.389	8.693	92.970	594.892
1990	152.254	4.472	73.581	3.905	0.658	2.401	269.925	62.640	37.778	154.751	762.363
2000	113.671	4.133	68.422	3.652	0.661	2.088	244.657	60.377	43.976	152.211	693.847
2001	94.172	5.100	66.659	3.583	0.651	2.025	239.417	59.068	43.129	148.915	662.719
2003	118.088	4.362	69.957	3.977	0.747	2.191	256.337	65.098	47.772	164.152	732.680
2008	123.822	4.836	75.429	4.618	0.901	2.485	282.353	74.766	55.283	188.595	813.088
2013	126.836	5.175	78.385	5.115	1.025	2.714	299.950	81.681	60.396	206.087	867.363
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	3.633	0.097	1.663	0.116	0.014	0.057	6.174	1.367	0.231	2.473	15.826
1990	3.256	0.096	1.573	0.084	0.014	0.051	5.772	1.339	0.808	3.309	16.301
2000	2.403	0.087	1.446	0.077	0.014	0.044	5.172	1.276	0.930	3.217	14.667
2001	1.991	0.108	1.409	0.076	0.014	0.043	5.061	1.249	0.912	3.148	14.009
2003	2.397	0.089	1.420	0.081	0.015	0.044	5.203	1.321	0.970	3.332	14.873
2008	2.272	0.089	1.384	0.085	0.017	0.046	5.182	1.372	1.015	3.461	14.922
2013	2.162	0.086	1.336	0.087	0.017	0.046	5.113	1.392	1.030	3.513	14.786
Warehouses											
GWh by End Use											
1980	4.804	0.792	4.983	1.069	0.000	0.000	75.974	4.453	0.591	20.693	113.361
1990	8.514	2.579	11.443	2.348	0.007	0.000	149.941	9.955	1.716	56.244	242.746
2000	8.288	2.697	15.168	2.959	0.013	0.000	185.132	12.339	2.475	71.159	300.229
2001	7.282	3.490	15.988	3.094	0.014	0.000	192.651	12.931	2.594	74.581	312.624
2003	9.186	2.856	16.901	3.243	0.015	0.000	201.065	13.601	2.731	78.450	328.048
2008	9.939	3.117	19.302	3.667	0.019	0.000	223.833	15.416	3.098	88.940	367.330
2013	10.546	3.314	21.410	4.041	0.022	0.000	243.167	16.937	3.404	97.731	400.572
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	0.239	0.039	0.248	0.053	0.000	0.000	3.787	0.222	0.029	1.031	5.650
1990	0.215	0.065	0.289	0.059	0.000	0.000	3.790	0.252	0.043	1.422	6.136
2000	0.154	0.050	0.281	0.055	0.000	0.000	3.435	0.229	0.046	1.320	5.571
2001	0.128	0.061	0.281	0.054	0.000	0.000	3.389	0.228	0.046	1.312	5.500
2003	0.154	0.048	0.283	0.054	0.000	0.000	3.370	0.228	0.046	1.315	5.498
2008	0.151	0.047	0.292	0.056	0.000	0.000	3.392	0.234	0.047	1.348	5.566
2013	0.147	0.046	0.298	0.056	0.000	0.000	3.381	0.235	0.047	1.359	5.570

**Table I-1
Commercial Building Forecast
Electricity Sales by End-Use and Building Type (GWh)
BGP Planning Area**

Year	Cooling	Heating	Ventilation	Water Heating	Cooking	Refrigeration	Indoor Lighting	Outdoor Lighting	Office Equipment	Misc.	Total
Colleges											
GWh by End Use											
1980	16.621	0.890	22.851	0.348	0.409	4.897	20.517	1.485	0.292	8.000	76.299
1990	18.999	0.674	21.928	0.332	0.401	4.726	19.788	1.445	0.565	12.346	81.204
2000	20.130	1.784	23.824	0.320	0.482	4.885	21.339	1.588	1.052	29.058	104.461
2001	20.423	2.147	23.649	0.313	0.484	4.819	21.160	1.578	1.056	28.914	104.542
2003	21.947	2.067	23.819	0.307	0.496	4.801	21.273	1.592	1.085	29.238	106.625
2008	22.561	2.786	23.858	0.281	0.525	4.650	21.273	1.601	1.154	29.638	108.327
2013	22.991	3.645	23.652	0.245	0.555	4.414	21.118	1.596	1.228	29.826	109.270
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	2.701	0.143	3.713	0.057	0.066	0.796	3.334	0.241	0.047	1.300	12.398
1990	3.018	0.107	3.483	0.053	0.064	0.751	3.143	0.229	0.090	1.961	12.900
2000	3.121	0.277	3.693	0.050	0.075	0.757	3.308	0.246	0.163	4.505	16.194
2001	3.151	0.331	3.648	0.048	0.075	0.743	3.264	0.243	0.163	4.461	16.128
2003	3.382	0.319	3.670	0.047	0.076	0.740	3.278	0.245	0.167	4.505	16.430
2008	3.464	0.428	3.663	0.043	0.081	0.714	3.266	0.246	0.177	4.551	16.633
2013	3.516	0.557	3.617	0.038	0.085	0.675	3.230	0.244	0.188	4.562	16.712
Food Stores											
GWh by End Use											
1980	1.957	2.061	2.691	0.051	0.132	54.767	32.073	5.119	0.082	3.562	102.495
1990	3.298	2.005	3.034	0.070	0.185	63.144	36.065	5.982	0.207	6.724	120.714
2000	3.868	1.862	2.731	0.082	0.196	58.402	32.864	5.599	0.340	13.509	119.453
2001	3.880	2.049	2.677	0.083	0.196	57.483	31.980	5.519	0.337	13.340	117.543
2003	4.196	1.782	2.874	0.099	0.227	63.113	33.228	6.091	0.379	14.847	126.838
2008	4.202	1.711	2.926	0.115	0.255	65.949	32.628	6.407	0.410	15.777	130.380
2013	4.059	1.568	2.829	0.120	0.264	64.970	31.000	6.342	0.417	15.726	127.295
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	0.685	0.722	0.942	0.018	0.046	19.177	11.230	1.792	0.029	1.247	35.889
1990	1.021	0.621	0.939	0.022	0.057	19.551	11.166	1.852	0.064	2.082	37.375
2000	1.178	0.567	0.832	0.025	0.060	17.785	10.008	1.705	0.104	4.114	36.378
2001	1.182	0.624	0.815	0.025	0.060	17.506	9.739	1.681	0.103	4.062	35.796
2003	1.244	0.528	0.852	0.029	0.067	18.705	9.848	1.805	0.112	4.400	37.592
2008	1.201	0.489	0.836	0.033	0.073	18.845	9.324	1.831	0.117	4.508	37.257
2013	1.160	0.446	0.809	0.034	0.075	18.565	8.858	1.812	0.119	4.494	36.375
Hospitals											
GWh by End Use											
1980	14.282	0.911	9.903	0.043	0.321	1.768	34.299	1.097	1.461	17.789	81.876
1990	27.387	1.599	12.369	2.699	0.423	2.074	43.752	1.410	4.416	41.483	137.612
2000	36.769	2.452	14.511	4.851	0.510	2.319	51.264	1.674	8.374	105.617	228.341
2001	37.452	2.794	14.417	4.969	0.508	2.296	50.950	1.665	8.358	105.184	228.593
2003	40.648	2.520	14.705	5.398	0.520	2.326	52.042	1.704	8.605	107.830	236.298
2008	42.490	2.805	15.093	6.374	0.541	2.349	53.723	1.760	9.036	111.990	246.161
2013	43.957	3.053	15.277	7.279	0.554	2.340	54.778	1.792	9.343	114.648	253.021
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	4.206	0.268	2.916	0.013	0.095	0.521	10.100	0.323	0.430	5.239	24.111
1990	6.156	0.359	2.780	0.607	0.095	0.466	9.834	0.317	0.993	9.324	30.930
2000	7.369	0.491	2.908	0.972	0.102	0.465	10.274	0.336	1.678	21.167	45.762
2001	7.451	0.556	2.868	0.989	0.101	0.457	10.136	0.331	1.663	20.925	45.477
2003	7.952	0.493	2.877	1.056	0.102	0.455	10.181	0.333	1.683	21.095	46.228
2008	8.030	0.530	2.852	1.205	0.102	0.444	10.153	0.333	1.708	21.164	46.520
2013	8.089	0.562	2.811	1.340	0.102	0.431	10.081	0.330	1.719	21.099	46.564
Hotel/Motel											
GWh by End Use											
1980	2.147	2.320	2.003	0.026	0.113	1.710	5.402	0.820	0.014	2.056	16.610
1990	4.042	5.967	2.992	0.025	0.274	2.821	8.916	1.359	0.057	5.640	32.094
2000	4.247	8.034	3.159	0.025	0.330	3.080	9.664	1.491	0.102	13.243	43.375
2001	4.279	9.116	3.130	0.025	0.331	3.061	9.595	1.482	0.102	13.182	44.303
2003	4.611	8.364	3.214	0.025	0.352	3.179	9.924	1.540	0.107	13.744	45.059
2008	4.719	9.446	3.329	0.023	0.389	3.366	10.426	1.632	0.116	14.652	48.099
2013	4.774	10.294	3.395	0.021	0.417	3.494	10.758	1.694	0.122	15.288	50.257
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	1.536	1.660	1.433	0.018	0.081	1.223	3.865	0.586	0.010	1.471	11.885
1990	1.738	2.566	1.287	0.011	0.118	1.213	3.834	0.585	0.024	2.426	13.801
2000	1.688	3.192	1.255	0.010	0.131	1.224	3.840	0.592	0.041	5.262	17.234
2001	1.700	3.622	1.243	0.010	0.132	1.216	3.812	0.589	0.041	5.238	17.603
2003	1.777	3.224	1.239	0.009	0.136	1.226	3.825	0.594	0.041	5.298	17.370
2008	1.715	3.433	1.210	0.008	0.141	1.223	3.789	0.593	0.042	5.325	17.479
2013	1.663	3.586	1.183	0.007	0.145	1.217	3.747	0.590	0.043	5.325	17.505

**Table I-1
Commercial Building Forecast
Electricity Sales by End-Use and Building Type (GWh)
BGP Planning Area**

Year	Cooling	Heating	Ventilation	Water Heating	Cooking	Refrigeration	Indoor Lighting	Outdoor Lighting	Office Equipment	Misc.	Total
Large Offices											
GWh by End Use											
1980	73.602	1.817	89.728	0.303	0.831	2.456	235.847	40.869	1.943	48.579	495.976
1990	109.189	1.687	97.361	0.341	0.820	2.145	256.737	44.630	7.853	95.616	616.376
2000	97.194	1.332	86.603	0.316	0.703	1.603	233.140	40.117	13.375	182.805	657.188
2001	97.261	1.460	84.439	0.312	0.682	1.536	226.444	39.182	13.086	178.694	643.096
2003	115.552	1.738	92.259	0.427	0.717	1.518	254.385	45.594	16.312	210.767	739.270
2008	121.756	2.037	92.178	0.518	0.675	1.318	258.927	48.021	18.288	224.885	768.604
2013	121.443	2.187	87.254	0.574	0.598	1.082	251.809	47.624	19.374	225.565	757.510
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	2.711	0.067	3.305	0.011	0.031	0.090	8.686	1.505	0.072	1.789	18.266
1990	3.568	0.055	3.182	0.011	0.027	0.070	8.390	1.458	0.257	3.125	20.143
2000	3.146	0.043	2.803	0.010	0.023	0.052	7.547	1.299	0.433	5.918	21.274
2001	3.148	0.047	2.733	0.010	0.022	0.050	7.330	1.268	0.424	5.784	20.818
2003	3.640	0.055	2.907	0.013	0.023	0.048	8.014	1.436	0.514	6.640	23.290
2008	3.698	0.062	2.800	0.016	0.021	0.040	7.865	1.459	0.556	6.831	23.347
2013	3.689	0.066	2.650	0.017	0.018	0.033	7.649	1.447	0.589	6.852	23.010
Miscellaneous											
GWh by End Use											
1980	40.027	11.408	21.652	0.379	0.202	1.236	55.075	14.389	0.883	37.158	182.409
1990	57.860	11.267	25.677	0.961	0.241	1.235	62.157	16.669	4.749	91.650	272.465
2001	52.446	11.393	24.844	1.492	0.235	0.980	59.791	15.862	8.966	187.088	363.096
2003	56.070	9.845	26.430	1.853	0.251	0.999	62.487	16.792	9.711	199.352	383.789
2008	54.689	9.371	27.619	2.431	0.265	0.974	63.443	17.366	10.513	208.519	395.190
2013	52.207	8.671	28.059	2.942	0.271	0.937	63.411	17.471	11.180	212.078	397.228
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	2.756	0.786	1.491	0.026	0.014	0.085	3.792	0.991	0.061	2.559	12.560
1990	3.534	0.688	1.568	0.059	0.015	0.075	3.796	1.018	0.290	5.598	16.641
2000	3.093	0.610	1.478	0.085	0.014	0.059	3.583	0.945	0.532	11.132	21.531
2001	3.110	0.676	1.473	0.088	0.014	0.058	3.545	0.941	0.532	11.093	21.529
2003	3.296	0.579	1.553	0.109	0.015	0.059	3.673	0.987	0.571	11.717	22.558
2008	3.160	0.542	1.596	0.140	0.015	0.056	3.666	1.003	0.608	12.049	22.836
2013	2.982	0.495	1.603	0.168	0.015	0.054	3.622	0.998	0.639	12.114	22.689
Restaurants											
GWh by End Use											
1980	6.954	0.412	11.193	0.045	1.953	17.743	14.854	7.272	0.009	6.865	67.299
1990	11.353	0.529	13.708	0.103	3.314	22.016	17.459	9.009	0.022	13.736	91.248
2000	11.689	0.583	13.213	0.138	3.836	21.515	17.088	8.817	0.039	28.773	105.691
2001	11.810	0.662	13.166	0.143	3.912	21.502	16.922	8.811	0.039	28.799	105.766
2003	12.718	0.604	13.623	0.164	4.309	22.455	17.254	9.193	0.041	30.194	110.554
2008	12.836	0.672	14.098	0.206	5.078	23.711	17.388	9.681	0.045	32.123	115.837
2013	12.488	0.701	13.814	0.233	5.499	23.631	16.801	9.621	0.046	32.198	115.032
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	3.472	0.206	5.589	0.022	0.975	8.859	7.417	3.631	0.004	3.428	33.603
1990	4.750	0.221	5.735	0.043	1.387	9.211	7.305	3.769	0.009	5.747	38.178
2000	4.760	0.237	5.380	0.056	1.562	8.761	6.958	3.590	0.016	11.716	43.036
2001	4.792	0.269	5.342	0.058	1.587	8.725	6.866	3.575	0.016	11.885	42.914
2003	5.022	0.238	5.379	0.065	1.702	8.867	6.813	3.630	0.016	11.922	43.854
2008	4.887	0.256	5.367	0.078	1.933	9.027	6.620	3.686	0.017	12.230	44.102
2013	4.755	0.267	5.259	0.089	2.093	8.997	6.397	3.663	0.018	12.258	43.795
Retail											
GWh by End Use											
1980	22.712	1.689	11.254	0.123	0.404	4.261	73.713	14.122	0.318	7.468	136.063
1990	33.781	2.112	12.614	0.131	0.449	4.336	81.296	16.140	0.787	15.420	167.066
2000	28.296	2.171	11.210	0.125	0.402	3.555	73.431	14.799	1.272	30.347	165.609
2001	28.276	2.418	10.983	0.124	0.395	3.470	71.505	14.564	1.258	29.918	162.911
2003	31.126	2.197	11.695	0.137	0.427	3.662	74.477	15.932	1.406	33.002	174.061
2008	30.777	2.237	11.600	0.143	0.428	3.625	72.028	16.216	1.473	33.903	172.431
2013	29.834	2.204	11.253	0.144	0.420	3.518	68.931	16.084	1.509	33.888	167.785
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	1.840	0.137	0.912	0.010	0.033	0.345	5.972	1.144	0.026	0.605	11.024
1990	2.477	0.155	0.925	0.010	0.033	0.318	5.960	1.183	0.058	1.131	12.249
2000	2.048	0.157	0.811	0.009	0.029	0.257	5.314	1.071	0.092	2.196	11.985
2001	2.046	0.175	0.795	0.009	0.029	0.251	5.175	1.054	0.091	2.165	11.790
2003	2.248	0.159	0.845	0.010	0.031	0.264	5.378	1.150	0.102	2.383	12.569
2008	2.215	0.161	0.835	0.010	0.031	0.261	5.185	1.167	0.106	2.440	12.412
2013	2.145	0.158	0.809	0.010	0.030	0.253	4.956	1.157	0.109	2.437	12.065

**Table I-1
Commercial Building Forecast
Electricity Sales by End-Use and Building Type (GWh)
BGP Planning Area**

Year	Cooling	Heating	Ventilation	Water Heating	Cooking	Refrigeration	Indoor Lighting	Outdoor Lighting	Office Equipment	Misc.	Total
Refrigerated Warehouses											
GWh by End Use											
1980	0.007	0.000	0.004	0.000	0.000	0.424	0.120	0.007	0.000	0.059	0.623
1990	0.013	0.000	0.006	0.001	0.000	0.612	0.193	0.013	0.001	0.136	0.976
2000	0.018	0.000	0.010	0.001	0.000	0.896	0.320	0.023	0.003	0.527	1.799
2001	0.020	0.000	0.011	0.001	0.000	0.984	0.350	0.026	0.003	0.589	1.984
2003	0.022	0.000	0.012	0.001	0.000	1.018	0.361	0.027	0.003	0.617	2.061
2008	0.023	0.000	0.012	0.001	0.000	1.061	0.375	0.029	0.003	0.654	2.158
2013	0.022	0.000	0.012	0.001	0.000	1.052	0.371	0.028	0.003	0.651	2.141
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	0.147	0.001	0.071	0.006	0.000	8.417	2.390	0.147	0.008	1.176	12.361
1990	0.154	0.001	0.068	0.007	0.000	7.018	2.217	0.150	0.011	1.564	11.189
2000	0.112	0.000	0.062	0.007	0.000	5.533	1.975	0.143	0.017	3.255	11.105
2001	0.112	0.000	0.061	0.007	0.000	5.454	1.939	0.143	0.017	3.263	10.996
2003	0.119	0.000	0.062	0.007	0.000	5.483	1.947	0.145	0.017	3.324	11.106
2008	0.118	0.000	0.063	0.008	0.000	5.514	1.946	0.148	0.017	3.396	11.211
2013	0.116	0.000	0.063	0.008	0.000	5.466	1.925	0.147	0.017	3.382	11.124
Schools											
GWh by End Use											
1980	5.932	1.439	6.012	0.093	0.119	0.338	6.652	2.326	0.053	0.692	23.656
1990	6.754	1.405	6.246	0.090	0.130	0.346	6.966	2.455	0.182	1.166	25.740
2000	7.430	2.930	8.003	0.223	0.193	0.416	8.943	3.245	0.392	3.334	35.109
2001	7.612	3.377	8.077	0.235	0.197	0.418	9.029	3.287	0.399	3.385	36.015
2003	8.326	3.048	8.372	0.261	0.209	0.429	9.367	3.432	0.420	3.546	37.412
2008	8.535	3.233	8.588	0.298	0.222	0.435	9.622	3.558	0.442	3.694	38.627
2013	8.715	3.406	8.734	0.338	0.235	0.436	9.824	3.662	0.464	3.825	39.640
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	2.793	0.677	2.830	0.044	0.056	0.159	3.131	1.095	0.025	0.326	11.136
1990	2.847	0.592	2.633	0.038	0.055	0.146	2.936	1.035	0.077	0.491	10.849
2000	2.554	1.007	2.751	0.077	0.066	0.143	3.074	1.115	0.135	1.146	12.068
2001	2.561	1.136	2.717	0.079	0.066	0.140	3.037	1.106	0.134	1.138	12.115
2003	2.697	0.987	2.712	0.085	0.068	0.139	3.034	1.112	0.136	1.148	12.117
2008	2.667	1.010	2.684	0.093	0.070	0.136	3.007	1.112	0.138	1.154	12.071
2013	2.630	1.026	2.636	0.102	0.071	0.132	2.965	1.105	0.140	1.154	11.963
Small Offices											
GWh by End Use											
1980	8.910	0.622	1.667	0.042	0.202	0.582	16.037	3.534	0.356	6.086	38.036
1990	16.187	1.226	2.066	0.153	0.201	0.541	20.483	4.665	1.694	14.637	61.853
2000	16.702	1.486	1.999	0.201	0.175	0.424	20.479	4.731	2.975	31.750	80.922
2001	16.826	1.694	1.972	0.205	0.170	0.410	20.165	4.700	2.957	31.583	80.683
2003	18.246	1.613	2.029	0.235	0.168	0.403	20.713	4.952	3.130	33.422	84.911
2008	18.526	1.879	2.046	0.286	0.155	0.370	20.926	5.213	3.344	35.470	85.216
2013	18.052	2.000	1.961	0.313	0.136	0.328	20.276	5.166	3.395	35.372	87.001
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	2.912	0.203	0.545	0.014	0.066	0.190	5.242	1.155	0.116	1.989	12.433
1990	3.890	0.295	0.496	0.037	0.048	0.130	4.922	1.121	0.407	3.517	14.863
2000	3.835	0.341	0.459	0.046	0.040	0.097	4.702	1.086	0.683	7.290	18.580
2001	3.863	0.389	0.453	0.047	0.039	0.094	4.630	1.079	0.679	7.252	18.525
2003	4.077	0.360	0.454	0.052	0.038	0.090	4.629	1.107	0.699	7.469	18.975
2008	3.992	0.405	0.441	0.062	0.033	0.080	4.509	1.123	0.721	7.643	19.007
2013	3.890	0.431	0.423	0.067	0.029	0.071	4.369	1.113	0.732	7.621	18.745
Warehouses											
GWh by End Use											
1980	2.391	0.152	0.282	0.013	0.001	0.000	12.718	0.753	0.079	3.500	19.890
1990	5.531	0.294	0.621	0.040	0.002	0.000	20.785	1.254	0.185	7.593	36.305
2000	5.766	0.373	0.733	0.051	0.002	0.000	23.147	1.362	0.328	17.651	49.413
2001	6.043	0.438	0.764	0.053	0.002	0.000	23.735	1.403	0.337	18.221	50.996
2003	6.706	0.399	0.817	0.057	0.002	0.000	24.740	1.475	0.351	19.212	53.759
2008	7.319	0.450	0.924	0.066	0.002	0.000	26.702	1.612	0.381	21.118	58.574
2013	7.756	0.484	1.001	0.073	0.002	0.000	28.097	1.696	0.404	22.333	61.846
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	0.589	0.037	0.069	0.003	0.000	0.000	3.134	0.186	0.019	0.863	4.901
1990	0.836	0.044	0.094	0.006	0.000	0.000	3.144	0.190	0.028	1.148	5.491
2000	0.768	0.050	0.098	0.007	0.000	0.000	3.085	0.181	0.044	2.352	6.585
2001	0.780	0.057	0.099	0.007	0.000	0.000	3.065	0.181	0.044	2.353	6.585
2003	0.838	0.050	0.102	0.007	0.000	0.000	3.092	0.184	0.044	2.401	6.719
2008	0.853	0.052	0.108	0.008	0.000	0.000	3.114	0.188	0.044	2.462	6.830
2013	0.855	0.053	0.110	0.008	0.000	0.000	3.096	0.187	0.044	2.461	6.816

**Table I-1
Commercial Building Forecast
Electricity Sales by End-Use and Building Type (GWh)
OTHER Planning Area**

Year	Cooling	Heating	Ventilation	Water Heating	Cooking	Refrigeration	Indoor Lighting	Outdoor Lighting	Office Equipment	Misc.	Total
Colleges											
GWh by End Use											
1980	6.653	29.477	17.555	0.971	2.051	1.812	8.779	0.678	0.020	0.042	68.038
1990	5.583	24.137	15.442	1.249	1.884	1.657	8.112	0.634	0.021	0.043	58.764
2000	9.824	35.354	33.834	4.469	3.877	3.422	16.350	1.314	0.044	0.089	108.577
2001	9.778	32.318	33.434	4.408	3.824	3.376	16.129	1.298	0.044	0.088	104.697
2003	10.131	33.329	34.944	4.603	3.975	3.510	16.771	1.352	0.046	0.091	108.752
2008	11.474	36.699	40.286	5.664	4.544	4.014	19.139	1.546	0.052	0.105	123.524
2013	12.014	38.212	43.453	6.380	4.877	4.309	20.493	1.659	0.056	0.112	131.566
Average Consumption per Square Foot by End Use (kWh/SF)											
1980	9.242	40.946	24.386	1.349	2.849	2.517	12.194	0.941	0.028	0.058	94.511
1990	6.485	28.037	17.937	1.451	2.189	1.925	9.423	0.737	0.024	0.050	68.259
2000	6.531	23.505	22.495	2.971	2.577	2.275	10.871	0.874	0.029	0.059	72.187
2001	6.484	21.430	22.170	2.923	2.536	2.238	10.695	0.861	0.029	0.058	69.423
2003	6.565	21.596	22.642	2.983	2.576	2.274	10.867	0.876	0.030	0.059	70.467
2008	6.994	22.368	24.554	3.452	2.770	2.447	11.665	0.943	0.032	0.064	75.287
2013	6.889	21.911	24.916	3.658	2.796	2.471	11.751	0.951	0.032	0.064	75.439
Food Stores											
GWh by End Use											
1980	1.085	6.021	4.408	0.339	1.583	52.111	23.025	2.071	0.018	10.036	100.697
1990	1.549	8.153	6.480	0.669	2.168	71.279	31.752	2.878	0.031	15.252	140.211
2000	1.702	10.059	7.746	0.879	2.523	82.999	33.986	3.365	0.037	17.831	161.126
2001	1.707	9.496	7.885	0.918	2.566	84.423	33.813	3.430	0.038	18.177	162.453
2003	1.703	9.821	8.114	0.971	2.632	86.597	33.996	3.530	0.040	18.705	166.107
2008	1.787	10.965	9.110	1.155	2.939	96.747	36.428	3.945	0.046	20.904	184.027
2013	1.804	11.625	9.671	1.286	3.115	102.580	37.059	4.176	0.050	22.129	193.495
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	1.340	7.436	5.444	0.418	1.955	64.359	28.436	2.558	0.022	12.395	124.363
1990	1.259	6.627	5.267	0.544	1.762	57.941	25.811	2.340	0.025	12.398	113.974
2000	1.252	7.400	5.699	0.647	1.856	61.065	25.004	2.476	0.027	13.119	118.545
2001	1.202	6.686	5.552	0.646	1.806	59.441	23.807	2.415	0.027	12.798	114.379
2003	1.165	6.716	5.549	0.664	1.800	59.224	23.250	2.414	0.027	12.792	113.601
2008	1.154	7.078	5.881	0.746	1.897	62.454	23.516	2.547	0.030	13.495	118.796
2013	1.110	7.155	5.952	0.792	1.917	63.134	22.808	2.570	0.031	13.619	119.089
Hospitals											
GWh by End Use											
1980	3.680	0.698	9.154	0.134	0.743	3.667	13.274	0.492	0.011	0.013	31.867
1990	4.077	0.598	10.006	0.133	0.813	3.999	14.558	0.547	0.014	0.016	34.762
2000	8.661	0.570	18.850	0.328	1.521	7.500	27.056	1.032	0.029	0.031	65.579
2001	8.739	0.511	18.785	0.329	1.515	7.469	26.943	1.029	0.029	0.031	65.379
2003	9.235	0.494	19.744	0.350	1.590	7.839	28.277	1.082	0.031	0.032	68.673
2008	10.692	0.448	22.632	0.409	1.820	8.978	32.343	1.240	0.036	0.037	78.634
2013	11.570	0.368	24.221	0.444	1.951	9.631	34.658	1.328	0.039	0.039	84.249
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	7.910	1.501	19.677	0.288	1.598	7.883	28.535	1.057	0.024	0.029	68.501
1990	6.991	1.026	17.160	0.228	1.394	6.859	24.967	0.938	0.025	0.028	59.615
2000	8.414	0.554	18.312	0.319	1.478	7.286	26.283	1.002	0.028	0.030	63.706
2001	8.368	0.489	17.988	0.315	1.451	7.153	25.800	0.985	0.028	0.029	62.606
2003	8.515	0.456	18.204	0.322	1.466	7.227	26.071	0.998	0.029	0.030	63.317
2008	9.169	0.384	19.408	0.350	1.561	7.700	27.736	1.063	0.031	0.032	67.434
2013	9.344	0.297	19.560	0.358	1.576	7.777	27.988	1.073	0.031	0.032	68.036
Hotel/Motel											
GWh by End Use											
1980	16.635	15.385	42.071	1.110	11.058	6.255	34.297	5.111	0.087	0.152	132.161
1990	15.235	23.751	41.292	1.392	10.650	6.009	33.350	5.007	0.096	0.163	136.945
2000	13.512	39.931	39.679	1.841	10.101	5.707	31.560	4.801	0.097	0.156	147.383
2001	13.205	37.455	38.725	1.834	9.840	5.561	30.755	4.684	0.095	0.152	142.306
2003	12.848	48.429	39.036	2.201	9.890	5.591	30.888	4.725	0.099	0.154	153.860
2008	12.705	99.978	43.338	4.035	10.979	6.212	33.935	5.254	0.123	0.171	216.730
2013	12.086	155.516	46.161	5.990	11.737	6.644	35.855	5.607	0.146	0.182	279.924
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	3.340	3.090	8.448	0.223	2.221	1.256	6.887	1.026	0.017	0.031	26.539
1990	3.034	4.730	8.223	0.277	2.121	1.197	6.641	0.997	0.019	0.032	27.271
2000	2.793	8.253	8.201	0.380	2.088	1.180	6.523	0.992	0.020	0.032	30.462
2001	2.764	7.841	8.107	0.384	2.060	1.164	6.438	0.980	0.020	0.032	29.791
2003	2.676	10.087	8.130	0.458	2.060	1.164	6.433	0.984	0.021	0.032	32.045
2008	2.453	19.305	8.368	0.779	2.120	1.199	6.552	1.014	0.024	0.033	41.848
2013	2.197	28.267	8.391	1.089	2.133	1.208	6.517	1.019	0.027	0.033	50.881

**Table I-1
Commercial Building Forecast
Electricity Sales by End-Use and Building Type (GWh)
OTHER Planning Area**

Year	Cooling	Heating	Ventilation	Water Heating	Cooking	Refrigeration	Indoor Lighting	Outdoor Lighting	Office Equipment	Misc.	Total
Large Offices											
GWh by End Use											
1980	3.144	0.090	12.008	0.083	0.248	0.149	18.584	2.299	0.245	4.000	40.850
1990	5.126	0.617	18.331	0.125	0.393	0.212	27.984	3.682	0.507	7.007	63.986
2000	6.492	1.232	22.344	0.167	0.513	0.256	35.242	4.813	0.727	9.159	80.946
2001	7.135	1.430	24.117	0.190	0.577	0.284	39.073	5.425	0.848	10.323	89.402
2003	7.078	1.479	23.949	0.191	0.576	0.282	39.050	5.425	0.861	10.324	89.214
2008	7.775	1.825	26.198	0.219	0.648	0.315	43.640	6.103	1.010	11.614	99.348
2013	8.164	2.127	27.255	0.239	0.695	0.337	46.231	6.534	1.116	12.434	105.134
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	5.698	0.164	21.761	0.150	0.445	0.270	33.679	4.166	0.444	7.249	74.030
1990	5.839	0.702	20.881	0.142	0.448	0.242	31.876	4.195	0.578	7.982	72.886
2000	5.719	1.085	19.682	0.147	0.452	0.225	31.042	4.240	0.640	8.067	71.299
2001	5.488	1.100	18.550	0.146	0.444	0.219	30.054	4.173	0.652	7.940	68.765
2003	5.417	1.132	18.328	0.146	0.441	0.216	29.884	4.152	0.659	7.901	68.274
2008	5.516	1.295	18.587	0.155	0.460	0.224	30.962	4.330	0.717	8.240	70.484
2013	5.453	1.420	18.203	0.160	0.464	0.225	30.876	4.364	0.745	8.304	70.215
Miscellaneous											
GWh by End Use											
1980	61.751	14.549	99.940	2.374	0.546	2.119	125.988	33.873	1.505	22.742	365.388
1990	58.442	14.758	108.175	2.082	0.568	1.997	137.196	35.829	2.198	26.310	387.555
2001	52.745	15.821	109.554	1.982	0.559	1.769	130.405	35.613	2.315	26.151	376.914
2003	51.643	17.158	113.200	2.046	0.573	1.794	133.188	36.627	2.461	26.896	385.587
2008	50.139	20.287	123.504	2.239	0.616	1.906	141.821	39.419	2.850	28.946	411.725
2013	47.111	22.515	128.528	2.340	0.634	1.956	144.963	40.524	3.116	29.757	421.444
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	6.892	1.624	11.154	0.265	0.061	0.236	14.061	3.780	0.168	2.538	40.779
1990	5.482	1.384	10.148	0.195	0.053	0.187	12.870	3.361	0.206	2.468	38.356
2000	5.210	1.658	10.778	0.195	0.055	0.176	12.881	3.509	0.226	2.577	37.266
2001	5.131	1.539	10.658	0.193	0.054	0.172	12.686	3.465	0.225	2.544	36.667
2003	4.921	1.635	10.786	0.195	0.055	0.171	12.691	3.490	0.235	2.563	36.740
2008	4.618	1.869	11.376	0.206	0.057	0.176	13.063	3.631	0.263	2.666	37.925
2013	4.244	2.028	11.580	0.211	0.057	0.176	13.060	3.651	0.281	2.681	37.970
Restaurants											
GWh by End Use											
1980	4.245	4.945	19.701	0.473	11.383	24.271	20.945	5.173	0.026	15.044	106.206
1990	4.495	4.271	19.521	0.434	10.953	23.296	20.491	5.054	0.030	16.077	104.622
2000	4.507	4.510	20.760	0.438	11.350	24.167	20.377	5.289	0.031	16.824	108.253
2001	4.459	4.159	20.739	0.428	11.275	24.011	20.148	5.264	0.032	16.745	107.259
2003	4.359	4.181	20.938	0.419	11.280	24.027	20.047	5.285	0.033	16.810	107.381
2008	4.458	4.580	23.880	0.417	12.534	26.713	21.503	5.881	0.040	18.705	118.711
2013	4.413	4.852	26.120	0.396	13.413	28.589	22.070	6.283	0.046	19.985	126.169
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	7.057	8.221	32.752	0.786	18.925	40.351	34.822	8.600	0.043	25.012	176.568
1990	7.191	6.833	31.229	0.694	17.521	37.268	32.780	8.086	0.047	25.719	167.368
2000	7.226	7.231	33.285	0.702	18.198	38.747	32.671	8.481	0.050	26.975	173.566
2001	7.063	6.588	32.851	0.678	17.860	38.034	31.915	8.339	0.050	26.524	169.902
2003	6.870	6.589	32.999	0.661	17.778	37.868	31.596	8.329	0.052	26.494	169.237
2008	6.513	6.690	34.886	0.610	18.312	39.026	31.415	8.591	0.059	27.326	173.427
2013	6.070	6.673	35.924	0.545	18.447	39.320	30.354	8.641	0.064	27.486	173.524
Retail											
GWh by End Use											
1980	5.545	2.449	8.337	0.127	0.145	2.252	35.468	1.182	0.112	4.648	60.265
1990	7.189	2.681	11.116	0.199	0.197	2.883	49.068	1.644	0.200	7.072	82.250
2000	7.705	3.062	12.502	0.261	0.228	3.044	53.031	1.916	0.236	8.240	90.226
2001	7.699	2.865	12.586	0.275	0.232	3.072	53.203	1.957	0.244	8.416	90.549
2003	7.639	2.910	12.782	0.291	0.238	3.114	53.865	2.015	0.255	8.667	91.777
2008	7.941	3.101	13.887	0.346	0.264	3.416	58.193	2.244	0.295	9.650	99.336
2013	7.950	3.176	14.360	0.385	0.279	3.602	59.792	2.372	0.318	10.202	102.438
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	3.600	1.589	5.412	0.083	0.094	1.462	23.022	0.767	0.073	3.017	39.118
1990	3.081	1.149	4.763	0.085	0.085	1.235	21.026	0.705	0.086	3.030	35.244
2000	2.992	1.189	4.856	0.101	0.089	1.182	20.597	0.744	0.091	3.201	35.043
2001	2.862	1.065	4.679	0.102	0.086	1.142	19.780	0.728	0.091	3.129	33.664
2003	2.757	1.050	4.613	0.105	0.086	1.124	19.440	0.727	0.092	3.128	33.122
2008	2.703	1.055	4.726	0.118	0.090	1.162	19.804	0.764	0.100	3.284	33.806
2013	2.581	1.031	4.662	0.125	0.091	1.170	19.412	0.770	0.103	3.312	33.258

**Table I-1
Commercial Building Forecast
Electricity Sales by End-Use and Building Type (GWh)
OTHER Planning Area**

Year	Cooling	Heating	Ventilation	Water Heating	Cooking	Refrigeration	Indoor Lighting	Outdoor Lighting	Office Equipment	Misc.	Total
Refrigerated Warehouses											
GWh by End Use											
1980	0.001	0.002	0.024	0.001	0.000	7.839	0.605	0.133	0.004	0.781	9.393
1990	0.001	0.003	0.034	0.002	0.000	9.063	0.821	0.186	0.008	1.191	11.307
2000	0.001	0.003	0.034	0.002	0.000	7.805	0.846	0.188	0.009	1.202	10.090
2001	0.001	0.003	0.035	0.002	0.000	7.848	0.855	0.191	0.009	1.225	10.168
2003	0.001	0.003	0.036	0.002	0.000	8.132	0.890	0.202	0.009	1.295	10.571
2008	0.001	0.003	0.041	0.002	0.000	8.916	0.975	0.226	0.011	1.450	11.624
2013	0.001	0.003	0.043	0.002	0.000	9.300	1.015	0.237	0.011	1.519	12.131
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	0.010	0.030	0.309	0.019	0.000	98.858	7.630	1.681	0.055	9.854	118.446
1990	0.008	0.026	0.295	0.017	0.000	79.219	7.175	1.624	0.066	10.409	98.839
2000	0.006	0.024	0.270	0.014	0.000	61.944	6.715	1.488	0.070	9.543	80.076
2001	0.006	0.022	0.268	0.014	0.000	60.979	6.642	1.484	0.070	9.516	79.002
2003	0.006	0.023	0.274	0.014	0.000	61.145	6.695	1.519	0.071	9.738	79.484
2008	0.006	0.023	0.290	0.013	0.000	63.593	6.953	1.613	0.075	10.344	82.911
2013	0.005	0.023	0.291	0.012	0.000	63.698	6.955	1.623	0.077	10.403	83.087
Schools											
GWh by End Use											
1980	3.722	4.300	15.349	2.941	1.116	1.117	18.329	6.630	0.048	0.065	53.615
1990	4.276	3.865	18.200	2.594	1.148	1.146	18.963	6.946	0.057	0.075	57.270
2000	6.557	4.017	26.911	3.220	1.338	1.339	21.788	8.176	0.072	0.088	73.505
2001	6.751	3.672	27.567	3.266	1.341	1.342	21.795	8.204	0.072	0.088	74.099
2003	7.001	3.675	28.685	3.361	1.357	1.358	22.028	8.324	0.074	0.089	75.953
2008	7.934	3.656	32.701	3.740	1.444	1.446	23.298	8.871	0.081	0.095	83.267
2013	8.488	3.451	35.580	3.974	1.472	1.474	23.557	9.032	0.085	0.097	87.209
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	1.723	1.990	7.105	1.361	0.517	0.517	8.485	3.069	0.022	0.030	24.820
1990	1.741	1.574	7.411	1.056	0.467	0.467	7.722	2.828	0.023	0.030	23.320
2000	2.332	1.429	9.571	1.145	0.476	0.476	7.749	2.908	0.026	0.031	26.143
2001	2.366	1.287	9.662	1.145	0.470	0.470	7.639	2.876	0.025	0.031	25.971
2003	2.437	1.279	9.984	1.170	0.472	0.473	7.667	2.897	0.026	0.031	26.437
2008	2.712	1.250	11.179	1.279	0.494	0.494	7.965	3.033	0.028	0.033	28.466
2013	2.868	1.166	12.022	1.343	0.497	0.498	7.960	3.052	0.029	0.033	29.468
Small Offices											
GWh by End Use											
1980	12.240	4.326	11.819	1.281	0.370	2.111	61.419	15.505	1.613	15.219	125.904
1990	13.015	4.687	12.059	1.092	0.368	1.961	59.088	15.670	1.797	16.822	126.559
2000	12.077	5.856	10.866	0.941	0.330	1.585	51.257	14.168	1.800	15.209	114.089
2001	11.661	5.377	10.369	0.901	0.315	1.502	48.802	13.542	1.749	14.537	108.754
2003	11.648	6.075	10.300	0.905	0.315	1.482	48.022	13.593	1.852	14.593	108.786
2008	13.252	8.814	11.374	1.031	0.355	1.648	51.402	15.297	2.363	16.422	121.959
2013	14.376	11.054	11.991	1.114	0.380	1.766	52.702	16.382	2.739	17.586	130.091
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	2.957	1.045	2.855	0.309	0.089	0.510	14.837	3.746	0.390	3.676	30.415
1990	3.146	1.133	2.915	0.264	0.089	0.474	14.284	3.788	0.434	4.067	30.596
2000	3.257	1.580	2.931	0.254	0.089	0.428	13.826	3.821	0.485	4.102	30.773
2001	3.206	1.478	2.851	0.248	0.087	0.413	13.417	3.723	0.481	3.997	29.900
2003	3.186	1.662	2.817	0.248	0.086	0.405	13.136	3.718	0.507	3.992	29.757
2008	3.360	2.235	2.884	0.262	0.090	0.418	13.035	3.879	0.599	4.164	30.927
2013	3.432	2.639	2.863	0.266	0.091	0.422	12.581	3.911	0.654	4.198	31.055
Warehouses											
GWh by End Use											
1980	0.718	0.383	0.671	0.028	0.001	0.000	5.249	0.733	0.035	5.495	13.313
1990	1.733	0.671	1.286	0.050	0.001	0.000	10.080	1.433	0.089	11.746	27.090
2000	1.800	0.807	1.341	0.047	0.001	0.000	11.119	1.530	0.109	12.538	29.291
2001	1.841	0.785	1.384	0.047	0.001	0.000	11.463	1.588	0.112	13.018	30.240
2003	1.897	0.852	1.464	0.048	0.001	0.000	12.051	1.692	0.118	13.864	31.987
2008	2.040	0.991	1.654	0.052	0.001	0.000	13.541	1.934	0.134	15.849	36.196
2013	2.071	1.069	1.746	0.052	0.001	0.000	14.437	2.062	0.144	16.902	38.484
Average Consumption per Square Foot by End-Use (kWh/SF)											
1980	1.125	0.600	1.051	0.043	0.001	0.000	8.223	1.149	0.055	8.608	20.854
1990	1.339	0.518	0.994	0.039	0.001	0.000	7.786	1.107	0.069	9.073	20.925
2000	1.194	0.535	0.889	0.031	0.001	0.000	7.374	1.015	0.072	8.315	19.425
2001	1.174	0.501	0.882	0.030	0.001	0.000	7.311	1.013	0.072	8.303	19.287
2003	1.163	0.522	0.897	0.030	0.001	0.000	7.385	1.037	0.073	8.497	19.603
2008	1.162	0.565	0.943	0.029	0.001	0.000	7.715	1.102	0.076	9.030	20.623
2013	1.112	0.574	0.938	0.028	0.001	0.000	7.754	1.108	0.077	9.078	20.670

TABLE J-1
Nonresidential Electricity Consumption Forecast by SIC and Planning Area (GWh)
(Excluding Commercial)

Sector	SIC	Year	BGP	DWR	LADWP	OTHER	PGE	SCE	SDGE	SMUD	Total	
Agriculture & Water Pumping	01	1980			0.91	121.44	3167.91	645.27	56.08	33.57	4025.18	
		1990	0.44		0.65	144.57	3098.49	803.82	63.20	15.73	4126.90	
		2000	6.66		0.35	185.97	2355.05	820.24	78.61	17.21	3464.09	
		2001	7.35		0.30	178.24	2274.69	738.01	75.96	19.57	3294.12	
		2003	7.35		0.30	186.56	2118.22	763.17	82.00	18.80	3176.40	
		2008	7.35		0.30	205.23	2421.34	850.81	95.21	18.80	3599.04	
	2013	7.35		0.30	222.85	2375.08	901.38	104.04	18.80	3629.79		
	02	1980	0.37			41.29	607.57	239.28	23.02	33.68	945.20	
		1990	0.15			41.25	727.17	328.63	13.20	33.68	1144.08	
		2000	0.11			40.61	712.67	377.84	12.36	33.68	1177.27	
		2001	0.11			40.74	740.04	349.60	11.11	33.68	1175.28	
		2003	0.11			41.04	772.14	366.11	11.54	33.68	1224.62	
		2008	0.11			41.28	752.68	420.64	12.23	33.68	1260.63	
	2013	0.11			41.29	746.62	458.45	12.30	33.68	1292.45		
	494	1980	9.63		127.36	15.43	938.95	2758.03	116.83	34.89	4001.12	
		1990	35.30		148.72	42.78	1120.51	3745.48	148.10	62.25	5303.14	
		2000	21.57		183.18	62.18	1228.76	4055.37	158.77	79.87	5789.70	
		2001	21.74	6349.16	178.69	66.27	1279.36	4160.84	160.89	82.14	12299.08	
		2003	21.74	7889.31	182.33	69.67	1324.91	4360.78	178.94	86.82	14114.50	
		2008	21.74	7889.31	188.52	86.65	1459.48	4893.12	205.15	97.91	14841.88	
	2013	21.74	7889.31	196.90	103.02	1549.62	5462.73	218.27	108.67	15550.26		
	497	1980	0.05		0.14	113.07	2081.15	171.47	2.20	8.79	2376.87	
		1990	0.03		0.22	161.08	2116.17	112.28	2.07	13.61	2405.46	
		2000	0.00		0.00	103.73	1993.53	91.87	1.73	22.79	2213.65	
		2001	0.00		0.00	110.86	2017.46	83.00	1.76	21.05	2234.13	
		2003	0.00		0.00	111.38	2072.68	81.87	1.82	22.50	2290.26	
		2008	0.00		0.00	112.04	2156.60	79.05	1.93	26.14	2375.76	
	2013	0.00		0.00	112.06	2181.04	75.80	1.94	29.78	2400.63		
	Industrial	2030	1980	0.05		21.26	2.87	592.37	198.52	0.60	57.93	873.58
			1990	0.65		30.98	3.21	926.92	308.10	0.60	55.79	1326.25
2000			0.05		30.93	5.04	926.23	250.61	14.43	49.51	1276.80	
2001					36.50	2.05	968.48	270.17	14.17	5.26	1296.63	
2003					39.67	2.03	990.39	282.23	13.49	4.99	1332.80	
2008					46.12	1.80	1061.54	316.82	11.93	4.24	1442.44	
2013				51.33	1.60	1093.57	341.18	10.80	3.60	1502.08		
2060		1980			7.53	1.51	241.45	8.49	0.05	1.44	260.47	
		1990			3.28	1.89	292.91	11.13	0.06	19.98	329.24	
		2000			2.00	1.62	353.26	21.49	0.26	1.92	380.55	
		2001			0.87	2.16	358.56	22.08	0.36	2.03	386.07	
		2003			0.92	2.33	366.88	23.53	0.37	1.84	395.88	
		2008			0.97	2.65	379.82	25.85	0.41	1.38	411.08	
2013				1.00	2.84	384.04	27.63	0.52	1.09	417.11		
20X		1980	14.14		359.73	15.07	1422.25	688.41	66.27	31.59	2597.46	
		1990	22.65		366.98	7.67	1784.48	999.65	28.37	63.70	3273.51	
		2000	15.37		357.14	11.38	2216.58	1345.44	41.96	67.62	4055.48	
		2001	13.99		390.99	8.26	2573.80	1393.57	44.11	71.13	4495.85	
		2003	14.41		401.98	8.52	2532.85	1403.72	46.15	73.73	4481.36	
		2008	15.87		419.55	10.30	2899.15	1629.30	53.15	83.67	5110.99	
2013		17.13		435.47	11.87	3143.06	1790.54	59.37	91.67	5549.11		
22		1980	1.17		23.44	0.98	45.08	152.39	0.64	0.49	224.19	
		1990	1.73		40.68	0.53	52.38	207.94	1.04	0.25	304.54	
		2000	0.79		52.77	0.37	60.72	383.75	3.44	0.43	502.27	
		2001	0.89		49.92	0.35	65.01	361.05	3.33	0.49	481.05	
		2003	0.81		45.91	0.37	56.72	325.32	2.75	0.46	432.35	
		2008	0.88		50.64	0.36	56.20	362.65	2.77	0.52	474.02	
2013		0.98		56.80	0.33	57.67	406.05	2.91	0.59	525.32		
23		1980	1.82		99.69	0.01	28.20	56.22	3.52	0.25	189.70	
		1990	2.12		110.70	0.33	41.54	134.83	5.57	0.61	295.70	
	2000	2.11		131.81	0.13	37.81	258.88	15.81	0.68	447.23		
	2001	2.09		141.67	0.14	41.58	265.14	15.02	0.63	466.27		
	2003	2.12		146.66	0.13	39.52	268.99	14.54	0.60	472.55		
	2008	1.91		132.06	0.11	31.25	242.24	12.38	0.50	420.44		
2013	1.71		118.97	0.10	25.27	215.83	10.87	0.43	373.17			
24	1980	3.35		23.11	125.05	821.99	114.31	2.59	10.22	1100.62		
	1990	3.12		21.50	89.81	1347.92	137.05	7.97	21.90	1629.28		
	2000	1.68		25.10	59.09	1220.72	167.52	11.63	26.11	1511.86		
	2001	1.83		27.70	59.74	1242.17	133.40	10.02	26.08	1500.94		
	2003	1.66		25.22	49.97	1080.77	119.47	8.39	21.07	1306.55		
	2008	1.79		27.19	47.47	1073.14	126.06	7.69	18.65	1301.99		
2013	1.82		27.64	43.59	1007.80	125.64	6.86	16.13	1229.50			
25	1980	3.16		43.39	0.15	31.44	169.51	6.22	0.97	254.83		
	1990	0.95		41.65	0.12	34.81	252.02	5.20	2.66	337.41		
	2000	0.59		35.38	1.14	39.56	270.80	13.84	6.02	367.33		
	2001	0.65		38.26	1.31	39.77	256.92	16.73	5.65	359.29		
	2003	0.63		37.80	1.25	38.27	249.47	16.20	5.23	348.85		
	2008	0.68		39.73	1.35	39.85	261.71	18.15	5.26	366.71		
2013	0.72		41.36	1.40	40.86	273.02	20.18	5.28	382.82			

TABLE J-1
Nonresidential Electricity Consumption Forecast by SIC and Planning Area (GWh)
(Excluding Commercial)

Sector	SIC	Year	BGP	DWR	LADWP	OTHER	PGE	SCE	SDGE	SMUD	Total	
Industrial	26X	1980	1.51		19.86	0.01	279.29	381.54	2.36	1.02	685.60	
		1990	2.94		19.03	1.13	264.92	595.44	4.04	92.33	979.84	
		2000	1.28		30.52	3.34	343.83	967.44	11.48	14.18	1372.08	
		2001	1.27		35.42	2.83	361.70	936.90	10.70	14.32	1363.13	
		2003	1.21		33.33	2.77	329.15	888.14	10.09	12.95	1277.65	
		2008	1.46		38.35	3.22	378.79	1059.32	12.49	14.67	1508.30	
		2013	1.62		40.98	3.19	399.09	1156.66	14.23	15.46	1631.22	
	2610	1980			1.87		0.69		11.34			13.90
		1990			1.00		190.72		17.79		0.01	209.53
		2000			0.03		167.71		0.00			167.74
		2001					127.94		0.00			127.94
		2003					115.40		0.00			115.41
		2008					105.61		0.00			105.61
		2013					79.83		0.00			79.83
	262-3	1980	0.01		2.48		479.53	441.08	0.00	64.00		987.10
		1990	0.03		1.63	0.04	527.68	622.11	0.00	0.05		1151.54
		2000	0.11		1.31	2.65	527.32	441.59	0.56	42.51		1016.05
		2001	0.12		1.36	3.25	580.14	472.73		51.89		1109.48
		2003	0.11		1.27	3.04	552.49	448.79		63.85		1069.55
		2008	0.11		1.30	3.52	625.58	506.31		79.11		1215.93
		2013	0.11		1.24	3.65	627.46	510.31		86.71		1229.47
	27	1980	13.57		169.06	1.35	228.36	260.08	35.33	16.51		724.25
		1990	21.18		228.80	1.62	368.12	467.42	101.25	43.92		1232.32
		2000	20.20		188.10	1.28	364.61	531.92	87.97	44.01		1238.10
		2001	21.00		259.99	1.28	395.92	537.64	85.45	42.45		1343.73
		2003	20.27		258.49	1.31	377.49	521.12	78.74	39.96		1297.38
		2008	20.03		262.12	1.61	361.65	518.64	78.16	36.95		1279.16
		2013	18.75		252.03	1.75	327.19	487.20	73.57	32.84		1193.33
	28	1980	22.01		324.30	59.75	1329.36	1938.30	50.72	28.01		3752.46
		1990	44.94		258.77	0.39	1167.30	1808.46	100.64	105.18		3485.67
		2000	29.82		314.38	0.57	1278.28	2098.52	170.05	191.11		4082.74
		2001	32.42		430.44	0.55	1357.34	2105.60	159.28	169.86		4255.49
		2003	33.90		450.13	0.56	1396.66	2193.97	160.86	163.78		4399.86
		2008	44.22		576.58	0.69	1840.65	2879.29	202.05	191.82		5735.29
		2013	48.03		618.11	0.72	1986.54	3115.86	216.76	199.01		6185.04
	29	1980	0.44		971.45	0.21	4261.47	2304.52	11.85	2.96		7552.91
		1990	0.35		1074.14	0.50	3734.90	2864.76	10.91	0.72		7686.26
		2000	0.18		920.27	0.27	3386.88	2248.80	3.20	7.65		6567.25
		2001	0.23		829.81	0.26	3718.48	1897.36	3.18	5.73		6455.06
		2003	0.23		846.45	0.26	3699.18	1876.43	3.13	5.85		6431.54
		2008	0.21		763.21	0.27	3227.58	1787.49	2.78	3.45		5785.00
		2013	0.16		578.10	0.26	2322.35	1396.07	2.38	1.96		4301.29
	308	1980	25.56		57.65	0.02	241.08	720.75	7.41	0.58		1053.04
		1990	10.49		79.87	0.05	476.46	1152.36	29.02	4.88		1753.12
		2000	7.67		73.37	0.91	675.55	1472.30	48.96	17.42		2296.17
		2001	6.73		84.63	0.82	735.06	1483.30	46.77	15.27		2372.57
		2003	6.25		76.58	0.78	684.35	1389.40	41.82	14.18		2213.35
		2008	5.94		66.88	0.82	663.87	1359.13	39.85	13.53		2150.02
		2013	4.86		51.74	0.73	552.35	1141.78	33.41	11.25		1796.12
	30X	1980	2.03		10.30	0.01	100.68	138.47	9.02			260.52
		1990	0.51		5.80		75.89	151.60	2.80	0.05		236.65
		2000	0.04		8.32	0.07	78.60	196.07	15.75	0.74		299.58
		2001	0.04		10.35	0.03	83.98	195.77	14.91	0.87		305.95
		2003	0.04		9.67	0.04	79.66	182.85	13.78	0.85		286.88
		2008	0.04		9.74	0.04	89.52	193.80	15.16	0.96		309.26
		2013	0.04		8.89	0.05	88.71	184.00	15.18	0.95		297.82
	31	1980	0.05		8.31	0.01	15.54	15.68	0.93	0.05		40.58
		1990	0.06		7.25	0.03	23.24	10.01	0.58	0.08		41.26
		2000	0.13		7.02	0.43	10.97	10.28	1.31	0.02		30.16
		2001	0.18		7.32	0.33	10.86	12.98	2.71	0.01		34.39
		2003	0.18		7.14	0.31	10.07	12.61	2.62	0.01		32.93
		2008	0.20		8.06	0.29	12.05	14.24	3.15	0.02		38.00
		2013	0.20		7.98	0.25	12.40	14.12	3.42	0.01		38.38
	3241	1980	0.00		1.36	0.02	336.98	912.83	0.03	0.01		1251.23
		1990			0.00		416.06	969.69		0.53		1386.28
		2000			0.00		449.52	1105.91		0.63		1556.06
		2001					510.97	1122.66				1633.63
		2003					518.87	1064.50				1583.38
		2008					554.28	985.59				1539.87
		2013					552.16	886.25				1438.41
	321-3	1980	0.32		4.24	0.06	457.68	397.62	4.98	0.10		865.01
		1990	0.25		3.97		667.00	389.40	1.05	0.13		1061.80
		2000	0.05		3.09	0.02	438.15	334.68	0.23	0.21		776.44
		2001			3.45		471.99	314.61	0.36			790.42
		2003			3.41		412.95	280.83	0.34			697.53
		2008			3.24		437.40	311.97	0.70			753.31
		2013			3.23		417.50	313.31	1.08			735.13
	32X	1980	1.23		40.27	31.17	650.68	418.47	34.83	4.92		1181.56
		1990	2.74		31.22	36.84	723.06	356.88	26.58	9.90		1187.23
		2000	1.90		30.59	46.10	635.28	372.37	24.33	32.74		1143.31
		2001	2.03		33.46	30.50	708.87	372.64	25.15	37.17		1209.84
		2003	2.02		33.47	28.03	639.89	352.32	23.38	33.75		1112.86
		2008	2.16		33.87	26.57	672.16	402.42	21.40	29.36		1187.95
		2013	2.24		33.87	24.45	654.49	426.22	19.82	25.27		1186.36

TABLE J-1
Nonresidential Electricity Consumption Forecast by SIC and Planning Area (GWh)
(Excluding Commercial)

Sector	SIC	Year	BGP	DWR	LADWP	OTHER	PGE	SCE	SDGE	SMUD	Total
Industrial	33	1980	2.37		212.58	0.01	817.43	1856.91	15.90	5.45	2910.66
		1990	3.98		180.47	0.02	722.54	1187.98	12.01	1.87	2108.87
		2000	3.25		56.80	0.01	856.70	1302.33	14.00	10.79	2243.89
		2001	2.66		46.89	0.01	913.61	1320.77	13.71	7.86	2305.50
		2003	2.67		46.65	0.01	880.94	1301.66	13.25	7.90	2253.08
		2008	3.00		50.10	0.01	990.42	1527.77	14.55	9.03	2594.87
		2013	3.28		53.20	0.01	1066.09	1720.25	15.93	10.01	2868.77
	34	1980	39.06		217.52	0.06	365.90	1082.81	16.48	3.60	1725.44
		1990	49.19		99.93	10.63	473.84	1133.77	35.00	5.67	1808.03
		2000	28.35		167.36	12.92	556.31	1201.03	80.07	9.01	2055.04
		2001	28.67		182.29	13.63	601.09	1247.75	78.57	10.35	2162.35
		2003	28.03		178.82	12.30	573.61	1210.79	76.40	9.14	2089.10
		2008	28.63		176.37	11.57	610.78	1292.05	82.08	7.53	2209.01
		2013	26.66		161.32	10.36	583.05	1243.27	81.12	6.09	2111.86
	357	1980	0.20		56.13		702.84	327.74	28.76	1.18	1116.84
		1990	0.14		45.73	0.51	1629.28	392.71	79.23	8.57	2156.17
		2000	0.23		19.25	0.36	1310.75	225.09	86.97	29.45	1672.10
		2001	0.20		23.63	0.25	1352.57	214.11	73.52	22.10	1686.38
		2003	0.12		14.45	0.16	758.25	131.42	42.03	13.99	960.42
		2008	0.12		12.40	0.17	596.68	119.83	43.87	14.02	787.08
		2013	0.15		13.63	0.22	593.17	138.07	60.43	17.48	823.16
	35X	1980	15.44		122.98	0.81	481.33	680.57	67.18	8.26	1376.55
		1990	16.66		90.95	1.56	412.85	582.71	76.70	12.92	1194.33
		2000	9.66		96.16	13.11	685.09	643.89	83.09	20.69	1551.70
		2001	11.14		103.78	14.53	631.38	618.71	82.34	21.36	1483.24
		2003	8.78		81.83	11.23	488.11	491.55	62.63	17.14	1161.26
		2008	9.73		84.96	12.05	556.39	543.20	68.88	20.43	1295.66
		2013	9.62		79.25	11.82	563.31	535.53	68.24	22.35	1290.11
	366	1980	12.86		72.15	0.06	313.09	687.37	30.73	0.90	1117.16
		1990	17.59		29.43	0.20	258.59	95.75	55.06	7.77	464.38
		2000	2.40		15.77	9.64	309.11	539.08	143.86	19.89	1039.76
		2001	2.67		19.72	13.84	325.59	537.58	141.25	22.46	1063.11
		2003	2.24		17.46	12.45	271.09	462.92	104.20	14.75	885.12
		2008	2.49		20.11	14.63	304.79	519.62	113.36	9.96	984.96
		2013	2.79		23.02	17.39	335.79	585.05	125.27	8.00	1097.31
	367	1980	39.41		82.93		1289.65	402.07	76.05	0.04	1890.15
		1990	14.53		153.84	0.02	2012.67	686.87	212.28	38.30	3118.53
		2000	5.83		79.15	0.32	2437.90	1005.01	199.89	89.98	3818.07
		2001	4.76		88.75	0.39	2573.21	978.88	198.18	92.65	3936.81
		2003	3.84		75.17	0.34	2010.92	820.07	132.43	74.87	3117.66
		2008	5.77		104.70	0.56	2798.16	1241.28	183.29	116.39	4450.16
		2013	8.86		153.19	0.92	4001.22	1908.95	269.10	184.90	6527.15
	36X	1980	13.23		104.41	0.18	328.12	395.22	63.08	4.52	908.76
		1990	26.15		102.56	0.15	278.47	570.47	95.20	20.14	1093.14
		2000	17.59		68.55	2.59	199.40	521.21	137.73	20.70	967.76
		2001	20.68		77.14	2.92	230.86	504.04	157.61	22.42	1015.66
		2003	17.10		66.15	2.48	193.49	428.21	125.31	19.52	852.27
		2008	18.70		69.94	2.89	244.60	468.68	137.01	22.92	964.74
		2013	18.45		67.41	2.82	271.52	461.77	136.54	23.80	982.32
	37	1980	273.57		452.74	0.32	575.06	1575.56	239.83	1.00	3118.08
		1990	202.91		480.41	2.59	719.99	2690.70	432.38	108.66	4637.65
		2000	11.18		152.74	1.84	364.63	1702.41	309.20	111.05	2653.06
		2001	9.61		168.15	2.06	442.29	1777.05	311.81	113.61	2824.59
		2003	6.05		104.07	1.50	312.04	1135.61	219.61	68.97	1847.85
		2008	7.47		127.02	1.85	368.37	1414.40	284.10	77.02	2280.22
		2013	8.88		150.77	2.18	411.75	1689.06	350.22	84.21	2697.06
	38	1980	29.23		71.88	0.00	263.84	274.27	37.71	0.63	677.55
		1990	32.52		62.88	0.01	767.87	1177.28	118.57	3.27	2162.41
		2000	18.85		64.43	0.34	940.86	691.39	132.64	7.67	1856.17
		2001	20.00		59.25	0.41	783.46	702.65	126.41	7.62	1699.80
		2003	19.27		57.70	0.41	788.85	688.00	118.52	7.65	1680.39
		2008	22.21		66.00	0.50	968.87	805.42	134.94	9.35	2007.29
		2013	23.49		70.04	0.57	1060.36	860.36	141.29	10.31	2166.42
	39	1980	68.43		42.31	0.05	89.85	258.58	6.90	0.71	466.82
		1990	9.51		27.53	0.10	52.32	282.73	31.06	1.64	404.90
		2000	7.69		38.88	1.43	69.84	267.33	78.65	2.03	465.83
		2001	6.72		43.02	9.44	63.68	270.25	116.02	2.05	511.17
		2003	6.24		39.98	8.71	58.87	254.77	109.50	1.94	480.00
		2008	6.35		39.40	8.89	62.10	263.90	120.38	2.06	503.07
		2013	5.69			34.67	8.29	57.91	238.57	114.41	2.03

TABLE J-1
Nonresidential Electricity Consumption Forecast by SIC and Planning Area (GWh)
(Excluding Commercial)

Sector	SIC	Year	BGP	DWR	LADWP	OTHER	PGE	SCE	SDGE	SMUD	Total	
Mining	10	1980			0.00	0.04	10.14	292.07	0.03	0.02	302.29	
		1990	0.01		0.09	18.27	255.58	121.77	0.17	0.01	395.90	
		2000	0.01		0.09	31.11	102.75	26.89	0.01		160.87	
		2001	0.01		0.09	19.33	106.23	29.25	0.01		154.91	
		2003	0.01		0.09	15.09	104.72	29.89	0.01		149.81	
		2008	0.01		0.11	15.91	112.87	35.03	0.01		163.94	
		2013	0.01		0.11	16.27	115.98	37.45	0.01		169.83	
	13	1980			196.28	0.02	1160.86	1923.05	0.06	0.09	3280.35	
		1990	0.00		95.17	0.05	2593.17	1914.94	0.19	0.67	4604.19	
		2000	9.30		106.50	0.03	2330.91	1694.10	0.16	1.58	4142.56	
		2001	13.55		121.11	0.05	2330.68	1747.62	0.39	1.70	4215.11	
		2003	13.03		116.46	0.05	2240.73	1680.46	0.37	1.64	4052.76	
		2008	12.82		114.46	0.06	2235.58	1652.88	0.32	1.37	4017.48	
		2013	12.54		111.91	0.06	2207.22	1618.02	0.29	1.17	3951.21	
	14	1980			19.56	0.44	230.79	278.53	16.40	0.10	545.82	
		1990	0.08		0.02	1.18	241.04	340.43	27.36	2.31	612.42	
		2000			18.46	1.94	290.73	386.27	11.29	5.91	714.59	
		2001			20.45	2.24	301.73	413.57	10.10	7.67	755.75	
		2003			19.01	1.95	268.67	384.26	9.17	6.84	689.91	
		2008			20.57	1.95	269.40	416.23	9.29	7.24	724.68	
		2013			20.38	1.88	248.65	412.89	8.99	7.20	700.00	
	15	1980		12.16		94.06	13.88	674.39	249.96	43.04	50.66	1138.15
		1990		38.62		108.47	21.00	377.01	528.56	142.00	79.79	1295.45
		2000		32.80		107.85	24.77	324.27	367.96	95.49	82.38	1035.52
		2001		37.51		121.45	24.50	347.05	405.99	105.18	80.94	1122.62
		2003		36.85		119.32	25.08	333.71	406.44	104.67	82.47	1108.54
		2008		37.37		120.93	25.84	323.91	419.19	102.55	84.90	1114.68
		2013		36.85		119.10	23.03	305.87	415.55	103.32	75.60	1079.32
	Streetlighting	0	1980	36.42		335.02	3.31	451.53	568.83	90.26	56.05	1541.42
			1990	19.53		238.98	4.97	331.63	443.64	49.28	66.44	1154.46
2000			21.45		215.68	8.07	402.34	485.32	71.78	80.52	1285.15	
2001			21.39		218.21	10.43	349.60	512.36	70.79	78.17	1260.94	
2003			21.63		218.00	10.96	359.44	523.45	73.15	79.97	1286.59	
2008			22.15		217.42	12.26	382.76	553.81	78.41	84.37	1351.17	
2013			22.73		217.90	13.47	401.90	585.73	81.69	88.37	1411.78	
TCU	40	1980	6.21		19.02	5.73	56.35	39.09	0.80	14.34	141.56	
		1990	0.20		19.26	3.32	44.74	50.55	1.30	10.13	129.49	
		2000	0.20		29.86	3.72	49.48	56.57	1.60	2.41	143.84	
		2001	0.20		28.36	3.52	47.83	58.15	1.70	1.61	141.37	
		2003	0.20		25.71	3.32	44.74	53.61	1.50	1.40	130.48	
		2008	0.20		25.60	5.63	71.36	55.29	1.30	1.30	160.68	
		2013	0.20		25.94	8.14	99.64	58.05	1.20	1.20	194.38	
	411	1980	0.10		29.29	0.10	231.13	9.18	2.40	1.20	273.40	
		1990	0.20		59.61	0.20	278.38	39.69	32.27	1.10	411.45	
		2000	0.20		144.36	0.40	99.93	91.42	46.55	24.38	407.23	
		2001	0.20		144.59	0.40	89.57	86.98	51.15	24.08	396.96	
		2003	0.20		149.09	0.40	91.79	91.32	53.35	24.78	410.92	
		2008	0.20		159.81	0.50	96.34	102.57	57.64	26.18	443.25	
		2013	0.20		171.34	0.50	100.02	115.01	61.04	27.49	475.60	
	412-417,	1980	2.40		27.79	2.21	39.31	31.99	3.50	7.32	114.52	
		1990	16.03		48.54	1.91	40.28	55.88	21.58	2.21	186.42	
		2000	21.13		22.71	2.92	67.59	36.92	8.39	10.03	169.70	
		2001	19.73		21.91	4.63	73.20	73.55	7.99	9.73	210.74	
		2003	18.63		20.75	5.33	71.75	69.60	7.09	8.53	201.68	
		2008	20.83		23.18	8.75	86.47	77.79	6.69	7.72	231.44	
		2013	23.54		26.17	12.37	102.74	87.67	6.29	7.12	265.90	
	421,423	1980	0.60		35.51	2.61	56.65	88.16	3.70	4.01	191.24	
		1990	1.10		35.74	3.12	78.04	107.51	8.09	6.12	239.73	
		2000	1.60		34.48	4.73	228.32	144.83	12.79	9.23	435.97	
		2001	1.50		32.05	4.22	319.63	163.39	10.49	9.23	540.52	
		2003	1.40		29.98	4.73	319.44	153.52	9.59	9.03	527.68	
		2008	1.50		31.25	5.83	365.14	161.91	9.39	10.33	585.35	
		2013	1.60		32.75	7.44	424.21	171.98	9.39	11.84	659.20	
	43	1980	3.21		73.22	2.21	93.83	86.78	18.78	7.82	285.84	
		1990	7.51		104.12	2.31	139.92	104.45	22.08	12.34	392.73	
		2000	9.11		98.47	3.72	209.15	170.99	43.46	11.54	546.43	
		2001	9.01		93.62	3.82	209.73	157.46	38.96	11.64	524.25	
		2003	9.21		95.47	4.12	222.13	160.52	37.06	11.84	540.36	
		2008	10.42		108.61	4.22	253.69	182.74	43.26	13.34	616.28	
		2013	11.62		120.61	4.02	280.32	202.88	49.25	14.85	683.54	
	441-445	1980	0.00		0.00	0.00	3.78	4.54	0.40	0.00	8.72	
		1990	0.00		0.00	0.10	8.13	10.56	1.50	0.00	20.30	
		2000	0.00		15.80	0.00	7.55	27.25	0.70	0.00	51.30	
		2001	0.00		14.99	0.10	8.52	23.40	0.50	0.00	47.51	
		2003	0.00		14.76	0.20	9.10	23.10	0.50	0.00	47.66	
2008		0.00		17.99	0.20	9.59	28.04	0.40	0.00	56.21		
2013		0.00		21.91	0.30	9.97	34.16	0.40	0.00	66.74		
446	1980	0.00		0.00	1.11	98.48	29.42	11.49	0.60	141.09		
	1990	0.00		0.00	1.31	73.59	53.80	8.09	3.01	139.80		
	2000	0.00		86.59	1.41	76.59	94.28	13.09	3.01	274.97		
	2001	0.00		82.90	1.61	77.08	82.93	12.09	2.91	259.51		
	2003	0.00		80.60	3.12	83.76	80.66	11.09	2.61	261.82		
	2008	0.00		94.32	3.82	92.76	94.28	10.79	2.51	298.48		
	2013	0.00		110.69	4.52	101.96	110.77	10.59	2.51	341.04		

**TABLE J-1
Nonresidential Electricity Consumption Forecast by SIC and Planning Area (GWh)
(Excluding Commercial)**

Sector	SIC	Year	BGP	DWR	LADWP	OTHER	PGE	SCE	SDGE	SMUD	Total
TCU	451-452	1980	0.50		0.00	0.10	11.52	12.24	11.49	0.60	36.46
		1990	2.10		0.00	0.00	18.20	21.23	12.59	1.71	55.83
		2000	1.90		40.36	0.00	26.43	55.68	9.19	4.01	137.58
		2001	1.90		38.51	0.00	23.72	43.83	8.49	3.91	120.37
		2003	1.80		36.09	0.00	26.43	42.06	7.29	3.61	117.29
		2008	1.80		37.70	0.00	27.60	46.89	5.89	3.71	123.60
	2013	1.90		39.66	0.00	28.56	52.32	4.99	3.81	131.26	
	458	1980	5.21	218.38	2.51	261.54	35.24	12.09	86.27	621.24	
		1990	7.91	257.35	1.41	312.66	52.03	21.88	16.35	669.59	
		2000	9.31	183.45	1.91	384.99	84.41	23.48	30.29	717.84	
		2001	9.11	180.79	1.81	410.94	83.82	48.15	30.29	764.92	
		2003	8.51	169.15	4.52	470.01	79.18	40.76	28.09	800.22	
		2008	8.91	177.22	5.63	522.01	85.10	32.47	28.59	859.93	
	2013	9.41	185.98	6.43	574.49	91.52	26.47	29.19	923.50		
	46	1980	0.00	13.84	0.00	145.53	173.06	12.39	1.00	345.82	
		1990	0.00	25.60	0.00	417.33	238.52	1.50	0.00	682.95	
		2000	0.00	10.84	0.20	530.62	437.74	0.50	0.10	980.00	
		2001	0.00	10.38	0.20	515.71	399.44	1.90	0.10	927.73	
		2003	0.00	10.38	0.20	515.71	399.44	1.90	0.10	927.73	
		2008	0.00	10.38	0.20	515.71	399.44	1.90	0.10	927.73	
	2013	0.00	10.38	0.20	515.71	399.44	1.90	0.10	927.73		
	47	1980	3.21	22.25	7.74	31.37	30.31	2.50	1.81	99.18	
		1990	3.21	20.52	12.07	67.49	59.93	14.29	4.92	182.41	
		2000	1.50	19.72	10.66	72.72	99.22	12.89	7.42	224.12	
		2001	1.30	18.56	10.56	57.61	90.92	13.09	7.22	199.27	
		2003	1.20	17.53	0.80	53.35	88.56	12.09	6.62	180.15	
		2008	1.40	19.02	1.21	55.68	103.86	12.19	6.62	199.98	
	2013	1.60	20.87	271.07	61.29	122.81	12.39	6.62	496.66		
	481	1980	14.22	372.54	15.48	384.12	418.49	67.43	55.47	1327.76	
		1990	26.44	421.20	17.19	429.92	556.51	109.19	115.96	1676.41	
		2000	30.25	312.35	22.22	786.35	787.03	219.27	169.93	2327.40	
		2001	31.65	316.96	21.92	638.49	771.43	302.29	187.99	2270.73	
		2003	32.65	321.92	23.63	671.12	806.28	319.87	198.02	2373.49	
		2008	35.05	332.41	27.75	749.75	894.34	359.33	223.10	2621.74	
	2013	37.66	343.37	32.07	828.28	989.90	394.59	248.88	2874.76		
	482	1980	0.10	0.00	0.10	7.94	10.66	0.20	0.40	19.40	
		1990	0.00	0.00	0.00	3.49	5.92	0.50	0.20	10.11	
		2000	0.00	0.12	0.00	0.19	3.75	2.40	0.10	6.56	
		2001	0.00	0.12	0.00	0.10	3.65	1.70	0.10	5.66	
		2003	0.00	0.12	0.00	0.10	3.26	1.50	0.10	5.07	
		2008	0.00	0.12	0.00	0.10	3.16	1.40	0.10	4.87	
	2013	0.00	0.12	0.00	0.10	3.16	1.40	0.10	4.87		
	483	1980	5.31	0.00	3.22	76.01	50.55	8.79	14.75	158.62	
		1990	3.71	0.00	4.52	130.33	59.83	18.38	23.67	240.44	
		2000	6.21	96.28	5.93	186.11	100.60	21.18	34.01	450.31	
		2001	7.11	91.90	6.23	200.34	98.03	21.98	31.90	457.49	
		2003	7.31	91.78	6.74	202.57	102.28	22.88	32.70	466.25	
		2008	7.81	90.86	7.84	206.05	113.43	24.57	34.41	484.98	
	2013	8.41	90.05	9.05	207.80	125.97	25.87	35.91	503.07		
	489	1980	0.10	0.00	0.80	30.79	24.88	9.59	0.00	66.16	
		1990	0.70	0.00	5.23	78.04	117.68	22.48	5.52	229.65	
		2000	3.71	41.05	6.33	144.08	202.38	55.34	9.13	462.02	
		2001	12.62	40.24	7.74	166.45	205.84	66.53	10.23	509.65	
		2003	13.02	40.59	8.35	168.29	214.72	69.83	10.83	525.63	
		2008	13.92	41.16	9.75	171.19	238.12	77.12	12.24	563.51	
	2013	14.92	41.85	11.16	172.65	264.48	83.21	13.74	602.02		
	491-493	1980	3.00	0.00	36.60	167.22	140.68	35.86	12.84	396.21	
		1990	3.61	0.00	227.14	231.32	601.43	14.49	26.18	1104.16	
		2000	4.41	166.96	96.52	407.07	244.34	7.89	70.52	997.71	
		2001	4.61	167.42	121.66	405.04	235.46	12.59	51.66	998.43	
		2003	4.01	144.82	150.52	409.20	199.52	10.49	48.25	966.80	
		2008	3.61	126.02	204.91	496.83	165.16	8.69	51.06	1056.29	
	2013	3.31	110.23	243.83	583.01	137.32	7.09	53.97	1138.75		
	495	1980	0.00	96.28	5.73	313.63	231.61	96.70	27.39	771.33	
		1990	1.00	296.79	27.15	644.20	472.79	34.46	2.01	1478.40	
		2000	2.20	288.48	39.92	785.28	749.22	48.55	117.17	2030.82	
		2001	2.60	303.36	35.19	783.15	757.61	48.55	65.40	1995.87	
		2003	2.70	304.97	37.40	810.94	780.21	50.65	67.91	2054.80	
		2008	2.90	307.39	42.33	872.53	833.33	54.74	73.63	2186.86	
	2013	3.10	309.59	47.16	928.59	888.61	57.94	79.15	2314.14		
	97	1980	0.60	149.89	22.72	888.21	663.92	532.15	25.08	2282.58	
		1990	0.80	19.26	15.08	1261.10	1175.01	943.13	310.67	3725.06	
		2000	1.30	6.92	20.61	844.74	913.20	914.56	29.69	2731.02	
		2001	1.30	6.80	19.71	894.02	847.35	843.53	15.45	2628.16	
		2003	1.30	6.80	19.91	903.80	843.99	849.53	15.45	2640.78	
		2008	1.50	7.61	19.41	955.80	913.89	919.16	16.65	2834.01	
	2013	1.70	8.19	17.29	963.35	965.42	971.10	17.66	2944.71		

Table K-1
Cumulative Annual Electricity Savings by Program Type (GWh)

Standards Effects through 2013
Program Savings through 2001

Program	Utility Area	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Appliance Standards																						
BGP		-	-	-	-	0	1	2	6	10	15	20	25	30	35	41	46	52	61	67	75	83
LADWP		-	-	-	-	2	6	20	43	77	113	154	193	240	279	320	352	393	443	486	540	591
OTHER		-	-	-	-	1	3	12	26	47	73	99	126	160	191	222	250	277	312	342	381	416
PGE		-	-	-	-	7	26	78	148	256	378	507	646	844	1,019	1,210	1,391	1,549	1,736	1,917	2,090	2,267
SCE		-	-	-	-	5	17	57	125	236	384	547	718	918	1,121	1,309	1,481	1,653	1,840	2,010	2,294	2,537
SDGE		-	-	-	-	1	5	13	23	45	78	113	151	204	249	298	338	377	426	462	520	576
SMUD		-	-	-	-	1	4	12	23	40	62	92	113	138	161	188	213	243	269	295	323	351
APPL.STDS Total		-	-	-	-	16	63	194	395	713	1,102	1,531	1,973	2,535	3,055	3,587	4,070	4,545	5,086	5,580	6,223	6,821
Building Standards																						
BGP		0	1	2	9	18	23	27	27	20	20	19	15	18	24	23	27	31	35	38	43	49
LADWP		3	8	14	52	94	105	127	114	118	154	189	233	281	332	382	425	458	526	564	480	542
OTHER		4	11	19	27	39	46	51	52	56	67	80	93	104	116	128	136	145	164	172	183	193
PGE		18	50	88	258	441	550	597	653	727	836	912	983	1,087	1,233	1,358	1,426	1,496	1,561	1,592	1,819	1,934
SCE		14	39	71	169	271	289	322	312	336	456	576	729	871	1,045	1,186	1,293	1,375	1,488	1,559	1,712	1,867
SDGE		5	15	27	60	97	116	126	134	137	190	241	279	317	385	444	488	514	528	535	595	653
SMUD		10	23	40	60	78	96	109	114	127	155	202	232	250	277	305	321	339	372	386	411	436
BLDG.STDS Total		56	148	260	635	1,039	1,225	1,360	1,406	1,521	1,878	2,221	2,563	2,928	3,412	3,827	4,116	4,358	4,675	4,846	5,243	5,673
Conservation/Efficiency Programs																						
LADWP		-	-	0	1	1	28	233	314	461	520	573	570	558	526	486	427	364	332	320	306	308
PGE		-	119	243	418	603	893	1,249	1,566	1,884	2,549	3,164	3,805	3,897	3,920	3,963	4,060	4,437	4,748	5,028	5,361	5,558
SCE		-	-	404	890	1,694	2,608	3,585	4,688	5,766	6,696	7,487	7,962	8,175	8,209	8,171	8,205	8,310	8,499	8,836	9,136	8,757
SDGE		-	-	-	80	99	158	203	287	361	368	365	353	326	299	287	312	383	464	565	692	915
SMUD		-	-	1	3	4	5	11	17	23	30	36	43	49	56	67	88	144	253	339	492	625
Conservation Total		-	119	648	1,392	2,401	3,692	5,281	6,872	8,494	10,162	11,626	12,733	13,005	13,010	12,973	13,091	13,637	14,296	15,088	15,987	16,162
Fuel Substitution																						
PGE		-	-	-	-	-	-	-	-	-	-	-	-	17	40	76	111	126	126	133	138	
SCE		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(3)	(3)	(11)	(11)
SCG		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	172	184	253	311	313	318
SDGE		-	-	-	-	-	-	-	-	-	-	-	8	12	16	21	22	27	27	29	28	27
F-Sub Total		-	-	-	-	-	-	-	-	-	-	-	8	30	55	97	306	337	402	462	462	473
Load Management																						
LADWP		-	-	-	-	-	1	2	3	3	4	3	2	1	1	0	0	0	0	0	0	0
PGE		-	-	-	6	11	14	18	18	18	18	18	18	17	13	11	9	6	3	1	(1)	(1)
SCE		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
SDGE		-	-	-	-	6	15	14	12	9	6	4	2	3	5	6	4	5	5	5	5	5
SMUD		-	-	-	4	4	3	3	2	1	1	1	1	1	1	1	0	(0)	(1)	(1)	(1)	(1)
LM-ND Total		-	-	-	10	20	32	35	34	31	29	26	23	24	24	21	15	14	11	8	5	3
Public Agency Programs																						
BGP		-	-	0	0	1	5	7	12	16	20	23	26	26	26	26	26	25	25	25	23	21
LADWP		-	-	0	1	4	18	38	59	72	91	109	127	129	136	138	141	140	138	136	133	128
OTHER		-	-	0	0	1	2	6	12	17	24	30	37	37	37	38	39	42	44	46	48	48
PGE		-	-	2	4	22	63	136	235	315	426	523	623	631	646	657	662	679	688	678	661	638
SCE		-	-	1	2	8	33	73	122	164	222	280	340	345	354	366	372	379	383	384	387	379
SDGE		-	-	0	1	2	6	18	34	47	64	78	92	94	97	101	103	101	98	94	88	88
SMUD		-	-	0	0	1	4	10	17	24	32	40	48	49	49	49	49	49	48	47	45	43
Public Total		-	-	4	8	39	132	287	492	654	879	1,083	1,293	1,311	1,345	1,372	1,390	1,417	1,427	1,413	1,391	1,345
Total Cumulative GWh		56	266	912	2,045	3,516	5,145	7,158	9,199	11,413	14,049	16,488	18,593	19,832	20,901	21,876	22,988	24,309	25,897	27,395	29,313	30,477

**Table K-1
Cumulative Annual Electricity Savings by Program Type (GWh)**

Standards Effects through 2013
Program Savings through 2001

Program	Utility Area	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Appliance Standards																			
	BGP	91	98	106	113	120	128	134	141	148	155	161	168	174	179	185	191	196	202
	LADWP	640	688	735	782	829	873	916	958	999	1,040	1,079	1,115	1,150	1,185	1,218	1,250	1,280	1,308
	OTHER	451	485	519	552	585	617	648	678	707	736	764	791	817	842	866	889	911	933
	PGE	2,444	2,620	2,796	2,970	3,139	3,302	3,465	3,626	3,782	3,936	4,084	4,234	4,378	4,519	4,653	4,785	4,917	5,044
	SCE	2,786	3,038	3,288	3,541	3,795	4,045	4,287	4,536	4,779	5,011	5,237	5,453	5,669	5,876	6,076	6,271	6,456	6,637
	SDGE	634	694	750	807	869	931	989	1,044	1,101	1,157	1,210	1,260	1,308	1,353	1,400	1,443	1,486	1,528
	SMUD	379	406	433	461	487	512	538	563	589	613	635	658	681	702	723	742	763	782
	APPL.STDS Total	7,424	8,029	8,628	9,227	9,823	10,408	10,977	11,546	12,106	12,648	13,170	13,677	14,177	14,655	15,121	15,570	16,009	16,432
Building Standards																			
	BGP	54	61	67	74	80	88	94	101	109	117	124	132	139	147	154	161	169	176
	LADWP	589	641	694	749	803	857	912	966	1,021	1,078	1,132	1,187	1,239	1,291	1,343	1,395	1,446	1,498
	OTHER	202	210	220	229	238	246	254	263	271	279	287	296	303	310	317	324	332	339
	PGE	1,986	2,067	2,159	2,248	2,334	2,412	2,494	2,568	2,652	2,757	2,865	2,978	3,084	3,181	3,268	3,360	3,456	3,551
	SCE	2,037	2,227	2,426	2,630	2,844	3,055	3,269	3,504	3,732	3,947	4,164	4,369	4,581	4,780	4,984	5,185	5,379	5,576
	SDGE	708	778	838	899	976	1,051	1,119	1,183	1,255	1,331	1,403	1,463	1,523	1,587	1,655	1,714	1,778	1,840
	SMUD	458	479	501	523	543	564	587	609	630	653	674	696	715	732	749	765	782	800
	BLDG.STDS Total	6,033	6,463	6,905	7,352	7,818	8,274	8,729	9,194	9,671	10,162	10,649	11,121	11,584	12,028	12,470	12,905	13,341	13,780
Conservation/Efficiency Programs																			
	LADWP	291	290	280	271	264	239	217	195	172	148	124	102	84	71	62	56	51	47
	PGE	5,583	5,684	5,828	5,820	5,936	6,358	5,857	5,401	4,899	4,407	3,945	3,475	3,040	2,629	2,247	1,917	1,687	1,496
	SCE	8,667	8,510	8,298	8,103	8,007	7,917	7,302	6,718	6,151	5,601	5,074	4,571	4,100	3,640	3,191	2,763	2,349	1,991
	SDGE	1,233	1,447	1,537	1,632	1,764	1,863	1,790	1,700	1,595	1,472	1,348	1,216	1,089	980	887	802	724	653
	SMUD	703	730	758	773	786	765	735	693	638	569	489	407	329	262	209	170	141	120
	Conservation Total	16,477	16,661	16,702	16,599	16,757	31,793	29,454	27,166	24,774	22,384	20,091	17,817	15,707	13,736	11,931	10,336	9,012	7,886
Fuel Substitution																			
	PGE	138	138	138	138	138	138	137	136	134	130	123	112	96	77	57	40	27	18
	SCE	(11)	(11)	(11)	(11)	(11)	(11)	(11)	(11)	(11)	(11)	(11)	(11)	(10)	(10)	(10)	(9)	(8)	(6)
	SCG	340	341	341	341	341	341	341	340	339	336	331	322	304	274	233	185	137	96
	SDGE	27	30	28	28	28	28	28	27	26	24	22	18	15	12	8	6	4	3
	F-Sub Total	495	498	497	497	496	496	495	493	489	480	466	441	404	352	288	221	160	110
Load Management																			
	LADWP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	PGE	(0)	(1)	(1)	(1)	(1)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
	SCE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	SDGE	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
	SMUD	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
	LM-ND Total	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Public Agency Programs																			
	BGP	19	17	15	13	12	11	10	9	9	8	7	6	5	5	4	4	4	3
	LADWP	123	116	109	101	94	86	80	75	70	65	60	54	48	43	38	35	33	31
	OTHER	47	45	42	39	35	32	29	26	23	20	17	14	10	7	5	3	2	1
	PGE	612	576	533	487	445	398	357	320	285	248	208	168	131	97	70	49	36	29
	SCE	366	351	331	306	283	255	230	207	185	163	139	115	93	73	58	46	39	35
	SDGE	82	75	67	60	53	46	40	35	31	27	23	19	15	12	9	7	5	5
	SMUD	41	39	36	36	33	30	27	25	22	19	16	12	9	7	4	3	2	1
	Public Total	1,290	1,218	1,134	1,043	955	859	774	699	626	550	469	388	311	243	188	147	120	105
Total Cumulative GWh		31,723	32,874	33,868	34,720	35,853	51,832	50,431	49,100	47,669	46,228	44,848	43,448	42,186	41,018	40,001	39,182	38,645	38,316

Appendix L: Load and Temperature

For illustrative purposes, the state is broken into three temperature regions; north, south and San Diego. San Diego has been differentiated from the rest of southern California due to its mild climate. To account for summer heat buildup, staff uses a three-day moving average of the maximum temperatures to correlate with the system summer loads. This moving average is calculated as 60 percent of the current day's maximum temperature, 30 percent of the previous day's maximum temperature and 10 percent of the second previous day's maximum temperature. **Table L-1** shows the weights used to develop statewide or regional temperatures. These are based on the estimated saturation of residential air conditioning.

Table L-1
Regional Temperature Weights for Weather Stations

Weather Station	North Region	South Region	State
Ukiah	6%	0%	2%
Sacramento	29%	0%	11%
Fresno	35%	5%	16%
San Jose	27%	0%	10%
San Francisco	3%	0%	1%
Long Beach	0%	33%	18%
Burbank	0%	33%	18%
Riverside	0%	29%	16%
San Diego	0%	0%	7%

Figures L-1 and L-2 show the 1950-2002 three-day weighted average May through September average maximum temperatures for the south region and north region weather stations.

Figure L-3 provides the 1950-2002 weighted three-day moving average maximum temperatures for the total state as well as the north, south and San Diego regions. The regional combination of temperatures creates statewide maximum temperatures in the late July to mid-August time frame.

Figures L-4 through L-8 show the relationship of hot summer statewide temperatures to the temperatures in both the north and south regions for the last five summers as well as the top 20 CAISO peak days for each year. With very few exceptions statewide temperatures over 95 degrees occur only when both the north and south region temperatures exceed 95 degrees. These occurrences were most prevalent in 1998. These charts also show the relationship of high statewide temperatures to high CAISO loads. Of the last five summers, 1998 had the greatest number of days with statewide temperatures of 95 degrees F or higher. What should be noted is the difference in temperature patterns between the years. These temperature patterns yield load patterns that follow the temperatures, but each year is unique. The hot days in 1998 were clustered in a six-week period from mid-July to early September. 1999 was relatively cool and had three relatively short heat episodes essentially one month apart from each other. The hot

episodes for 2000, 2001 and 2002 were more evenly distributed throughout the summer. What is important is that these hot summer episodes cause the needle peaks that California experiences.

Figure L-9 provides an indication of the variation of the frequency of hot temperatures by year for the last 53 years. 1962 had no days exceeding 95.0 degrees while 1984 had 24 days exceeding 95.0 degrees. This is an indication of the kind of diverse weather conditions that can be faced in the electricity planning process.

Figure L-1
North Region 1950-2002 3-day weighted moving average maximum temperatures

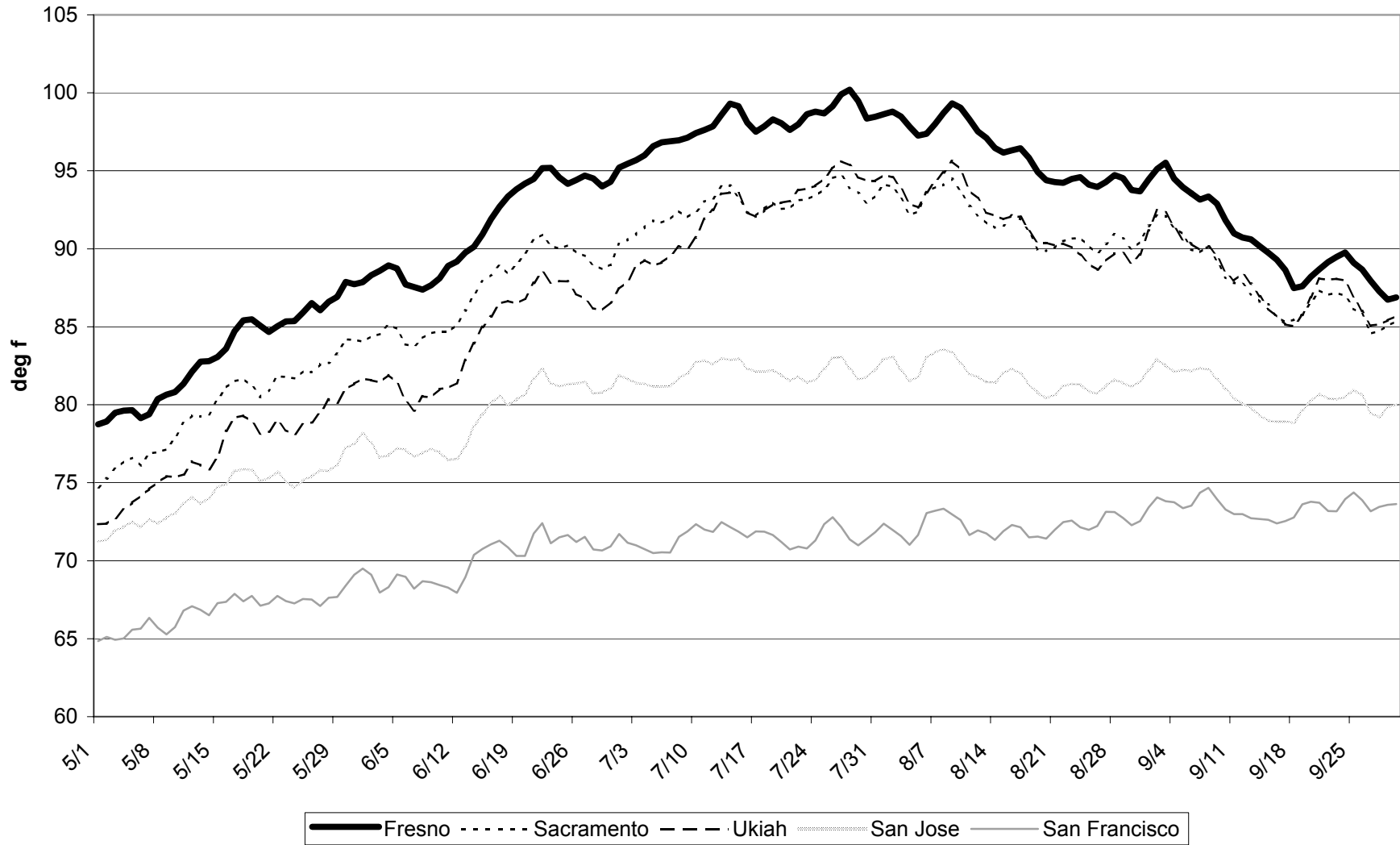


Figure L-2
South Region 1950-2002 3-day weighted moving average maximum temperatures

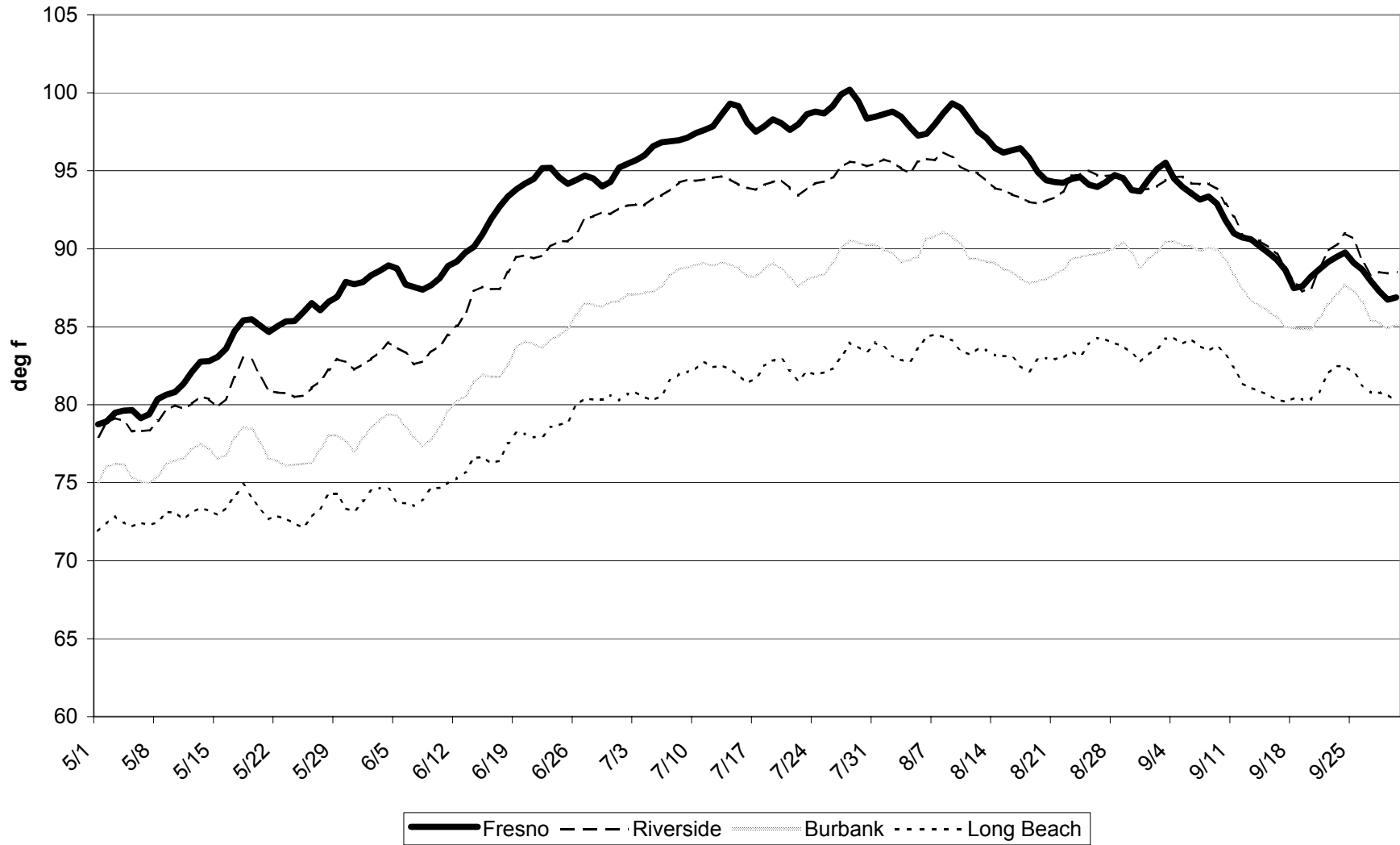


Figure L-3
A/C Weighted 1950-2002 Regional 3-day moving average maximum temperatures



Figure L-4
1998 Composite 3-day moving average maximum temperatures
and CAISO top 20 daily peaks

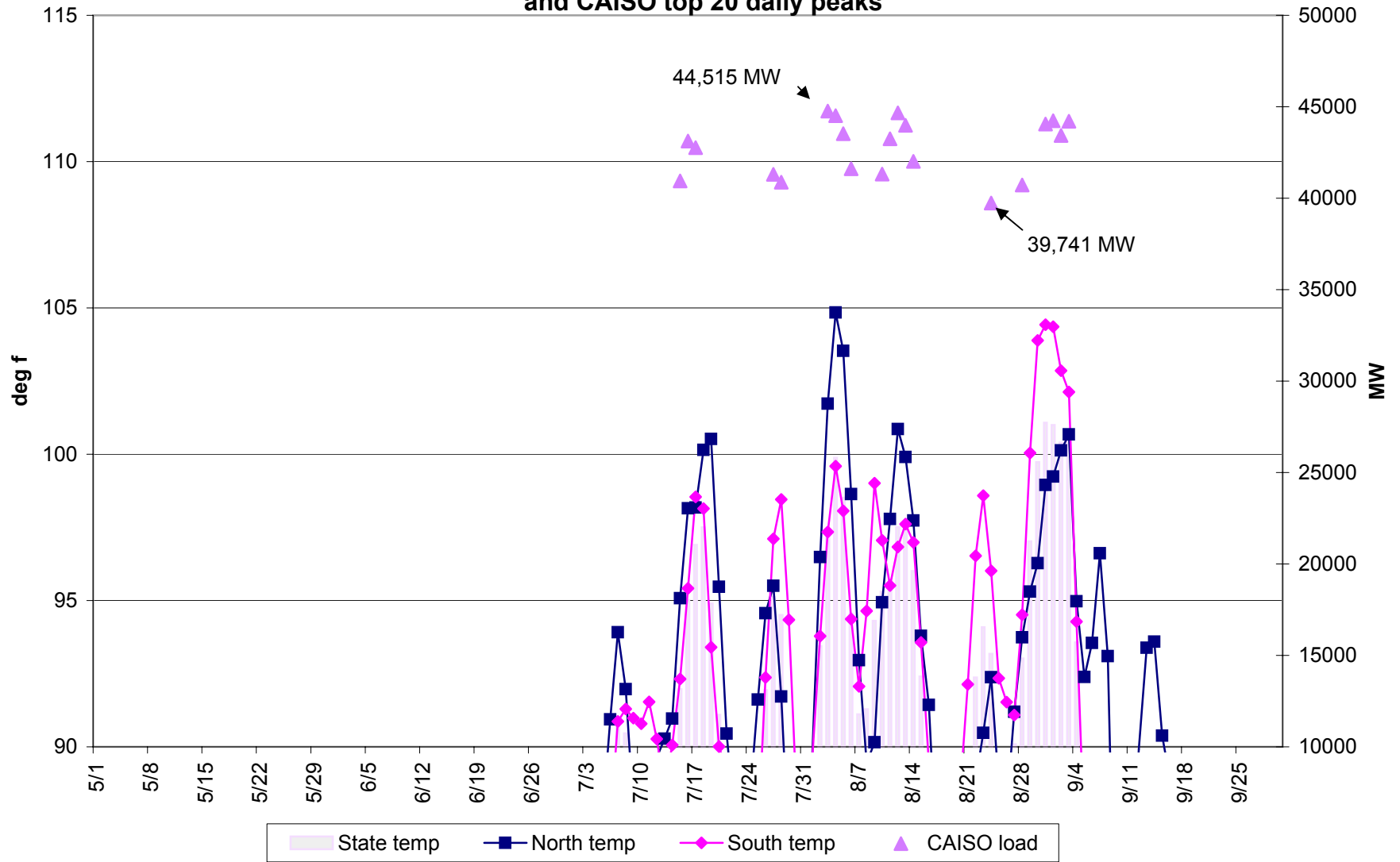


Figure L-5
1999 Composite 3-day moving average maximum temperatures
and CAISO top 20 daily peaks

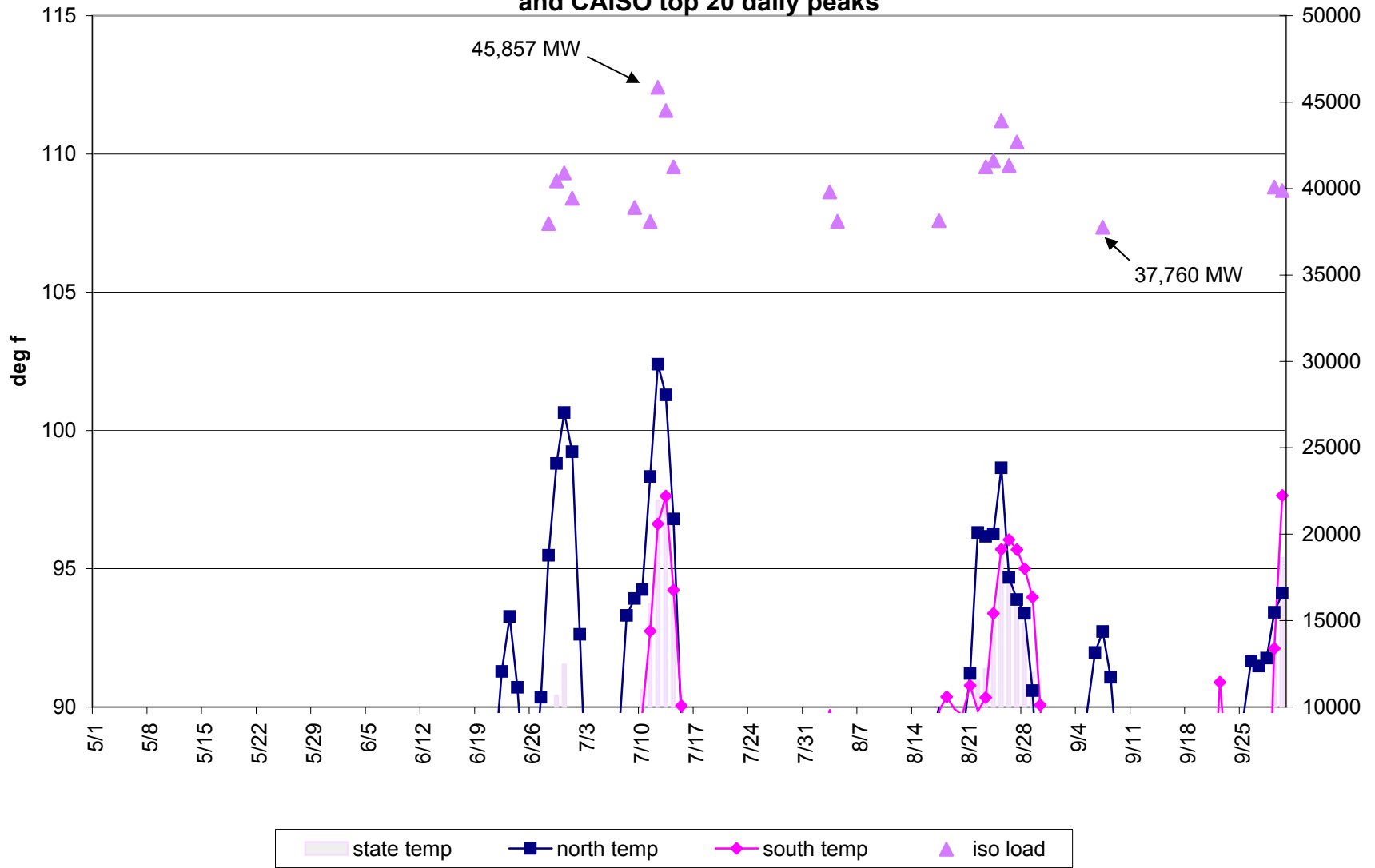


Figure L-6
2000 Composite 3-day moving average maximum temperatures
and CAISO top 20 daily peaks

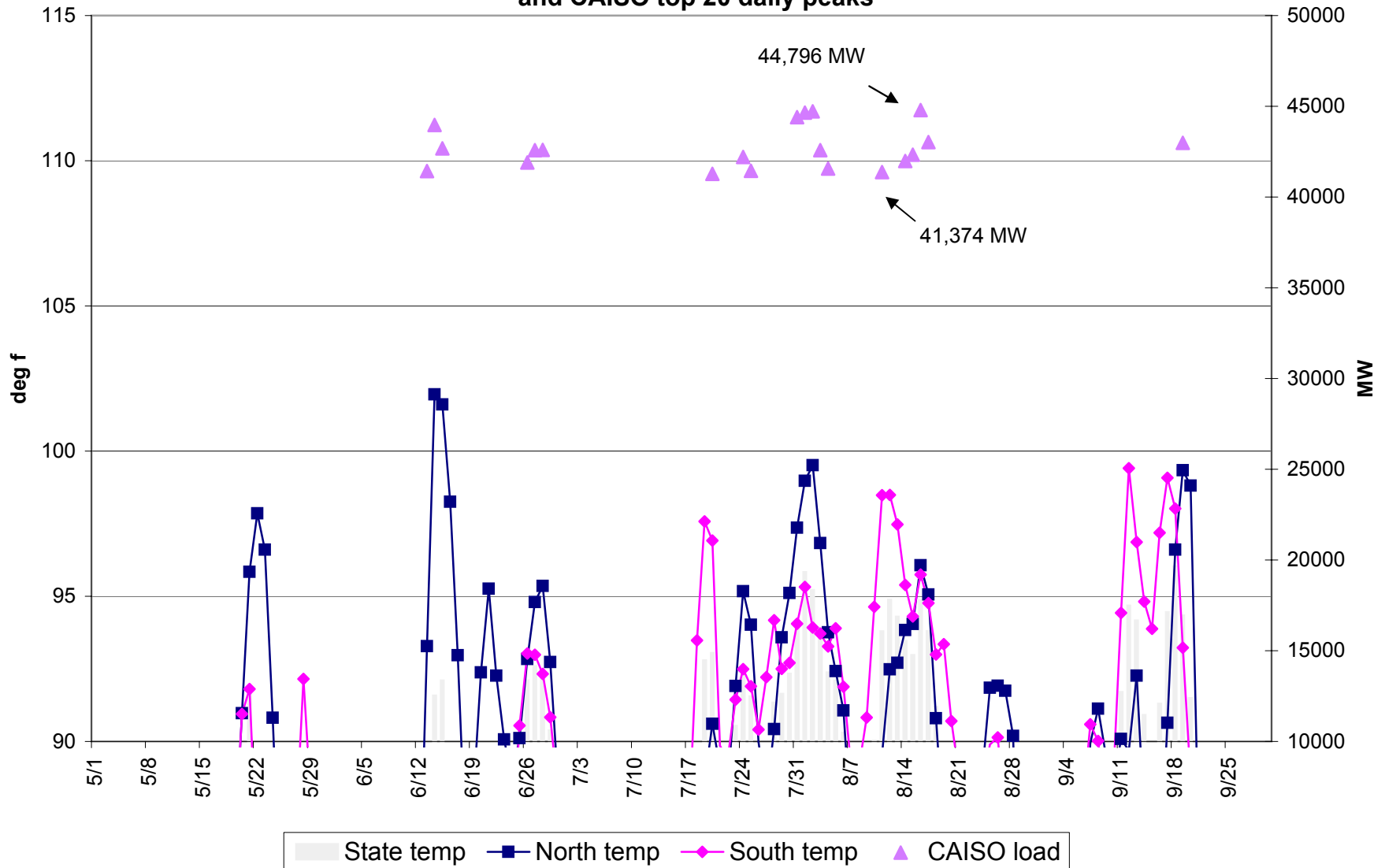


Figure L-7
2001 Composite 3-day moving average maximum temperatures
and CAISO top 20 daily peaks

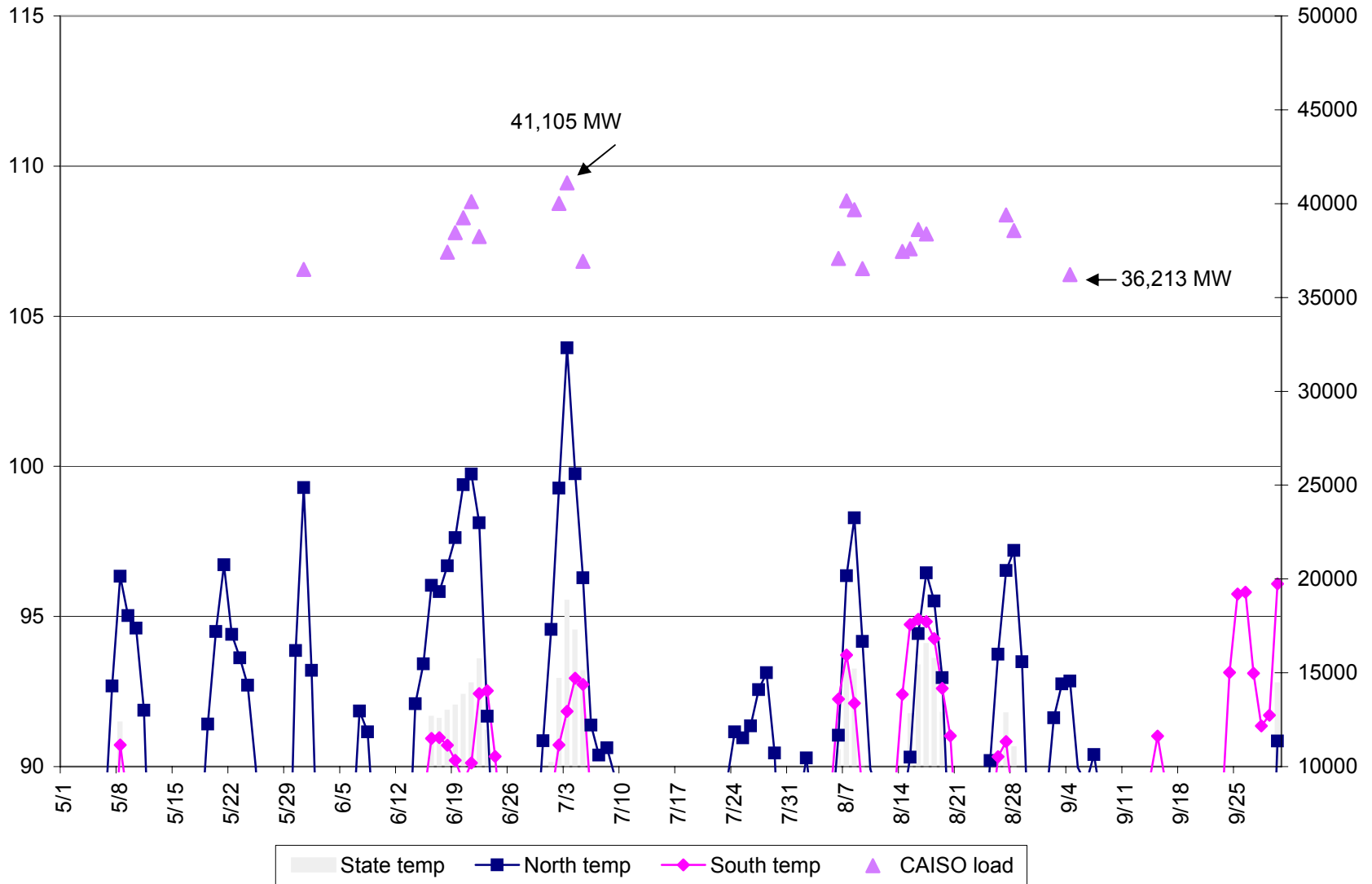


Figure L-8
2002 Composite 3-day moving average maximum temperatures
and CAISO top 20 daily peaks

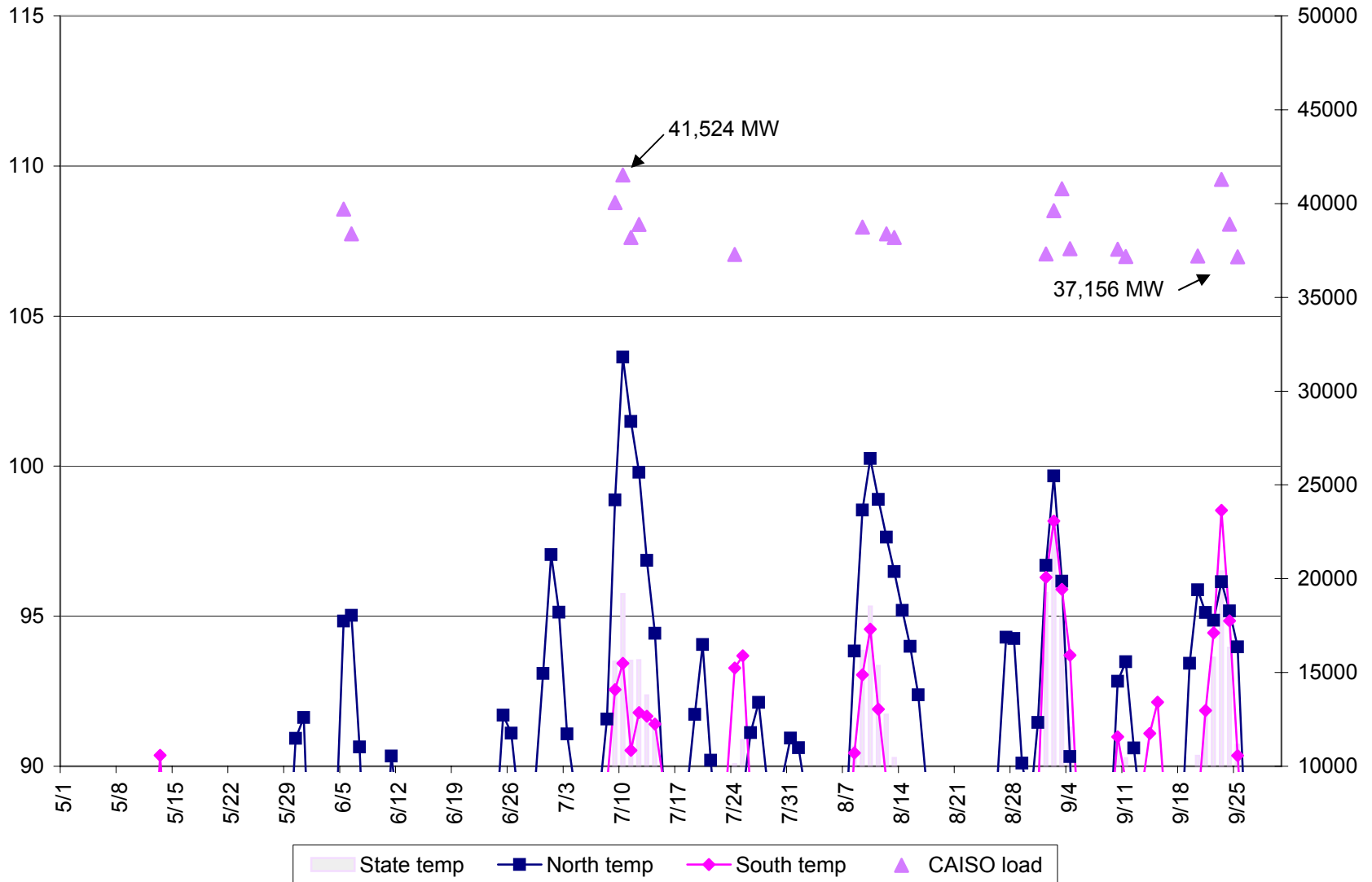


Figure L-9
Annual number of days (may-sept) where
statewide weighted 3-day moving average maximum temperature exceeded 95.0 f

