2004
California
Gas
Report

SOUTHERN CALIFORNIA

INTRODUCTION

Southern California Gas Company (SoCalGas) is the principal distributor of natural gas in southern California, providing retail and wholesale customers with procurement, transportation, exchange and storage services. SoCalGas is a gas-only utility and, in addition to serving the residential, commercial, and industrial markets, provides gas for enhanced oil recovery (EOR) and electric generation (EG) in southern California. San Diego Gas & Electric (SDG&E), Southwest Gas Corporation, and the City of Long Beach Energy Department are SoCalGas' three wholesale utility customers. Gas service at wholesale is expected to begin to the City of Vernon during the forecast period.

This report covers a 22-year forecast period, from 2004 through 2025; only the consecutive years 2004 through 2008 and the point years 2010, 2013, 2016, 2022 and 2025, however, are shown in the tabular data in the next sections. The single point forecasts are subject to uncertainty, but represents best estimates for the future, based upon the most current information available.

The Southern California section of the 2004 California Gas Report (CGR) begins with a discussion of the economic conditions and regulatory issues facing the utilities, followed by a discussion of the factors affecting gas demand in various market sectors. The outlook on gas supply availability, which continues to be favorable, is presented followed by a review of the peak day demand forecast. Summary tables and figures underlying the forecast are provided.

THE SOUTHERN CALIFORNIA ENVIRONMENT

Economics and Demographics

The gas demand projections are partly determined by the long-term economic outlook for the SoCalGas service territory. Southern California's economy enjoyed strong growth in the late 1990s before slowing from 2001 through 2003. After strong 2.7% growth in 2000, the area's non-farm jobs grew by a more modest 1.2% in 2001, then fell by 0.1% in 2002. After increasing by a slight 0.2% in 2003, the area's total non-farm employment should grow 1.1% in 2004 and surpass 7.8 million. Local industrial employment (manufacturing and mining) dropped by 4.8% in 2003 (about the same as the national average) and is expected to drop 0.1% in 2004—less severe than the expected drop of 1.6% across the U.S. However, after many years of declines, southern California's industrial jobs now stand nearly 30% below their 1989 peak of 1.3 million. Southern California's non-industrial employment is faring relatively better. In 2003, local commercial jobs (all jobs except industrial) saw 1.0% growth – slow, but much better than the anemic 0.3% national growth rate. In 2004, we expect local commercial jobs to grow by 1.3% -- faster than the forecasted 1.1% U.S. growth rate.

From 2003 through 2008, service-area non-farm jobs should see 1.4% average annual growth. Beyond 2008, we expect the service area population's average age to gradually increase, part of a national demographic trend of aging "baby boomers". As the population ages and as more people retire, we expect employment to grow at slower rates. From 2008 through 2025, local non-farm job growth should average approximately 1.1% per year—with annual growth gradually slowing from 1.2% in 2008 to 1.0% by 2025. Area industrial jobs should grow very slowly, averaging about 0.6% per year from 2003 through 2025. We expect the industrial share of non-farm employment to fall from 11.9% in 2003 to 10.4% by 2025. Commercial jobs should average nearly 1.3% annual growth from 2003 through 2025.

Mainly as a result of growing numbers of residents, SoCalGas expects its active meters to increase an average of about 1.3% per year from 2003 to 2025 – nearly the same as the current growth rate in 2004.

Regulatory Environment

The past year witnessed numerous developments at both the California Public Utilities Commission (CPUC) and Federal Energy Regulatory Commission (FERC) designed to make the natural gas industry more responsive to the changing needs of the marketplace.

State Regulatory Matters

In April 2004, the Commission issued D.04-04-015 adopting tariffs implementing D.01-12-018, which adopted a comprehensive settlement agreement that modified the market and regulatory framework for regulating the transportation and storage of natural gas on SoCalGas' system. Once fully implemented, D.01-12-018 would provide new unbundled service offerings for transportation, storage, and balancing, while creating firm tradable rights for SoCalGas' 3875 MMcf/day of firm backbone transmission capacity. After a set aside for core customers, receipt point rights would be awarded through an open season ensuring customer access and preventing market concentration. However, while the Commission adopted D.04-04-015, it stayed the order pending the issuance of a decision in Phase I of Order Instituting Rulemaking (OIR) (R.) 04-01-025.

R.04-01-025 was issued in January 2004 to establish policies and rules to ensure reliable, long-term supplies of natural gas to California. This Gas Market OIR was predicated by recent reports, FERC orders, and ongoing changes in the natural gas market, which indicated that in the long-term, there may not be sufficient natural gas supplies and/or infrastructure to meet the requirements of all California residential and business consumers. The Gas Market OIR further seeks to address a broad range of supply issues to increase demand reduction efforts, ensure sufficient interstate pipeline capacity to serve California, maximize the utilization and benefits of storage facilities, and enable access of imported liquefied natural gas (LNG) supplies.

Each of the California natural gas public utilities are respondents to R.04-01-025, which was bifurcated into two phase; Phase 1 to address proposals regarding interstate capacity and LNG access. Phase 2 will address issues including emergency reserves, utility backstopping, and ratemaking policies. A decision in Phase 1 is expected by the Summer 2004, while a Phase 2 decision is expected by the end of the year. In opening R.04-01-025, the Commission concurrently noted that in R.01-08-028, it was addressing natural gas energy efficiency programs and how best to increase demand reduction efforts.

Federal Regulatory Matters

Over the past few years, SoCalGas has been actively participating in numerous FERC proceedings relative to interstate capacity serving California, including Docket No. RP00-336, which is reviewing the basis for assigning capacity and receipt point rights on the El Paso Natural Gas Company pipeline system. SoCalGas has been actively advocating the need for the El Paso system to be fully pathed to ensure that contract demand shippers receive a level of firm transportation service consistent with their costs and with the 1996 El Paso global settlement. The changes proposed by SoCalGas for the El Paso system are similar to those advocated by the California Public Utilities Commission and would increase the reliability and certainty of supply deliveries to California from El Paso.

In May 2002, the FERC found El Paso to be in violation of Section 5 of the Natural Gas Act and ordered El Paso to change its current capacity allocation system because Contract Demand shippers, including SoCalGas, SDG&E and other California shippers, have not been getting the level of firm gas transportation service that they have been paying for since the 1996 El Paso global settlement. The FERC further ordered El Paso to convert Full Requirement contracts to Contract Demand contracts by November 1, 2002. The November 1, 2002 deadline was later delayed until May 1, 2003.

GAS DEMAND (REQUIREMENTS)

Overview

SoCalGas expects continued growth in the residential market, as well as, in associated service-oriented businesses in the commercial market. These markets, along with small- and medium-sized industrial customers, comprise the core market. The remaining large customers make up the noncore market.

The following table compares the composition of SoCalGas' throughput for recorded year 2003 and forecast year 2025.

Composition of SoCalGas Throughput – Bcf
(Average Temperature Year)

	2003	2025	Change
Residential	249	303	22%
Core Non-Residential	100	123	23%
Noncore C&I	150	127	-15%
EOR-Steaming	15	7	-53%
Electric Generation	288	189	-34%
Wholesale	135	173	28%
Other	21	24	14%
TOTAL	**958**	**946**	**-1%**

Notes:
1) "Core Non-Residential includes Natural Gas Vehicle (NGV) throughput.
2) "Other" includes international (Mexicali) throughput and Lost and Unaccounted for Gas (L&UAF) + Company-Use gas.

Residential, core non-residential, and wholesale requirements are expected to increase as southern California's economy continues through a gradual economic expansion. Requirements for EOR steaming operations, which have declined since the Kern/Mojave pipeline began offering direct service to California customers in 1992, are expected to continue to decline. The EG market is also expected to continue to decline from the unusually high level witnessed in 2001. Lastly, noncore commercial/industrial markets are expected to decline offsetting the expected growth from the core and wholesale markets.

MARKET SENSITIVITY

Temperature

Core demand forecasts are prepared for two design temperature conditions – average and cold – to quantify changes in space heating demand due to weather. Temperature variations can cause significant changes in winter gas demand due to space heating in the residential, core commercial and industrial markets. The largest demand variations due to temperature occur in the month of December. Degree-day differences between the three conditions are developed from a six-zone temperature monitoring procedure within SoCalGas' service territory. The cold design temperature conditions are based on a statistical recurrence factor of 1-in-35 years.

Pipeline Bypass

In 1992 Kern/Mojave Pipeline began California operations, which resulted in the bypass of local gas distribution systems. Aggregate bypass volumes were at 182 Bcf in 2003, and bypass to the Kern/Mojave mainline is expected to grow gradually to 342 Bcf per year by 2008, and crest at 373 Bcf in 2013, before a gradual decline.

By 2009, several long-term EOR customer transportation contracts will expire and bypass is expected to increase to 167 Bcf by the year 2016. Beyond 2016, bypass load is anticipated to decline slowly as total gas usage in the EOR market declines.

The California market continues to attract natural gas pipeline projects and expansions. Kern River Pipeline's 282 MMcfd High Desert Lateral was placed into service in 2002, and the 906 MMcfd mainline expansion to California was completed in 2003. Questar placed the Southern Trails Pipeline eastern segment into service in 2002, bringing 80 MMcfd of interstate transportation to California. The western leg of the Southern Trails Pipeline, within California, is not in service to date. In 2003, the FERC extended Southern Trail's construction certificate until mid-2005. However, Questar Corporation's 2003 Annual Report states Southern Trails still hopes to either sign transportation contracts, or sell the pipeline in 2004. Customer usage of the Southern Trails Pipeline is assumed to begin in 2006 and is forecast at 11 Bcf, increasing to 21 Bcf through the forecast period.

There are electric generating plants in operation within SoCalGas' service territory that take their gas transportation service from other providers. These off-system plants, which have never been serviced by SoCalGas, have a forecasted demand of 147 Bcf in 2004, gradually increasing to 179 Bcf by 2013, after which a slow decline is anticipated.

Market Sectors

Residential

Residential demand adjusted for temperature increased to 249.0 Bcf in 2003 from 245.0 Bcf in 2002. Unadjusted residential demand was 245.3 Bcf in 2003, 1.5% less than temperature adjusted demand primarily because of warmer than normal weather conditions in southern California.

Active residential meters averaged 4.99 million in 2003, an increase of 61,356 (or 1.3%) from the 2002 average. From 2003 through 2025, active residential meters are expected to grow at an average annual rate of 1.3%, reaching 6.71 million by 2025.

Residential demand is projected to grow from 249.0 Bcf in 2003 to 303.5 Bcf in 2025, an increase of 2.5 Bcf per year. This forecast reflects the savings from SoCalGas' Energy Efficiency program.

Commercial

On a temperature-adjusted basis, core commercial market demand in 2003 totaled 73.4 Bcf, up 0.1 Bcf (about 0.1%) from 2002. This increase is largely the result of slowly improving economic conditions in southern California. On average, core commercial market demand is forecast to increase about 0.7% per year, over the next 21 years, reaching 84.5 Bcf in 2025.

Noncore Commercial demand is forecast to be 21.3 Bcf in 2004, a slight decrease of about 0.9 Bcf from 2003 usage. After year 2004, noncore commercial demand is expected to decrease to 20.4 Bcf in 2007 primarily due to the Vernon retail load switching to wholesale service. After 2007, the noncore commercial demand is expected to grow gradually to 22.3 Bcf in 2025. The growth is primarily due to the increase in the commercial economic activity.

Industrial

In 2003, temperature-adjusted core industrial demand was 21.0 Bcf, an increase of 0.5 Bcf (about 2%) over 2002 deliveries. Core industrial market demand is projected to increase by approximately 0.7% per year from 21.1 Bcf in 2004 to about 24.3 Bcf in 2025. This increase in gas demand results from a combination of a slightly higher forecasted growth in industrial production and lower growth in marginal gas rates, tempered by the use of more energy-efficient gas equipment in the industrial sector.

Retail noncore industrial deliveries are forecast to decline to 60.4 Bcf in 2004 compared to 61.8 Bcf in 2003. The forecast demand is expected to continue its decrease from 60.4 Bcf in 2004 to 56.6 Bcf in 2007. The decrease is primarily due to the reclassification of Vernon retail load to wholesale service starting April 2005 and the expected noncore to core customer migration. After 2007, noncore industrial demand demand is forecast to increase slightly to 58.4 Bcf in 2025 due to an expected increase in service area industrial employment forecast.

Refinery industrial demand is comprised of gas consumption by petroleum refining customers, hydrogen producers and petroleum refined product transporters. Refinery gas demand is forecast to decline 1.0% per year, from 64 Bcf in 2003 to 49 Bcf in 2025. This decrease is mainly due to refiners' using alternate fuels such as pentane and butane during summer months where natural gas prices are forecasted to be less competitive than the alternate fuel prices. The forecast increase of pentane fuel switching is caused by new gasoline quality regulations that require refineries to replace MTBE gasoline additives with ethanol. To accommodate ethanol blending, refineries will need to remove volatile gasoline components, such as pentanes, from the refining process. This change in process will make more pentane available to refineries for internal use thereby displacing natural gas usage in the refinery processes.

Migration of Commercial and Industrial Load: Noncore to Core

As a result of continuing natural gas price volatility, and continuing financial weakness in the contracted gas procurement marketplace, some noncore (G-30) commercial and industrial demand has been migrating to core (G-10) commercial and industrial service. SoCalGas also eliminated its core subscription program in 2003 as reflected in D.01-12-018 and most of these customers have transferred to core service in 2003. For calendar year 2005 and 2006 this transfer from noncore to core service is forecast to be 1.0 Bcf and 1.3 Bcf, respectively.

Electric Generation

This sector includes the following markets: all commercial/industrial cogeneration, EOR-related cogeneration, and non-cogeneration EG. It should be noted that the forecasts of EG-related load are subject to a higher degree of uncertainty associated with the continued operation of existing generation facilities, the timing and location of construction of new facilities in the Western United States, and regulatory and market decisions that impact the operation of existing qualifying facilities (QF) facilities and other EG plants, including the construction of additional electric transmission transfer capacity.

Industrial/Commercial/Cogeneration <20MW

The commercial/industrial cogeneration segment is generally made up of customers generating less than 20 MW of electric power. Most of the cogeneration units in this segment are installed primarily to generate electricity for internal customer consumption rather than for the sale of power to electric utilities. In 2003, recorded gas deliveries to this market were 16.7 Bcf, an increase of 2.9 Bcf from 2002 deliveries of 13.7 Bcf. Commercial/industrial cogeneration demand is projected to hold steady at around 16.7 Bcf annually for the next 20 years.

Industrial/Commercial Cogeneration (>20 MW)

Commercial/industrial cogeneration greater than 20 MW gas demand is forecast to decline 43%, from 54 Bcf in 2004 to 31 Bcf in 2007. The forecast is based on a power market simulation for the period to 2025 and thus reflects the anticipated dispatch of these resources under the forecast market conditions, in addition to receiving contract capacity payments. In addition, some customers are expected to select alternate service providers. The forecast remains at 31 Bcf per year from 2007 to 2025.

Refinery-Related Cogeneration

Refinery cogeneration units are installed primarily to generate electricity for internal use. Refinery-related cogeneration is forecast to decline 1.5% per year, from 18 Bcf in 2003 to 13 Bcf in 2025. This gas demand decrease is mainly due to the increased use of alternative fuels, such as pentane and butane, during summer months when gas prices are less competitive with alternate fuels.

EOR-Related Cogeneration

In 2003, recorded gas deliveries to the EOR-related cogeneration market were 17.7 Bcf, a decrease of 5.4 Bcf from 2002. This decrease was mainly due to increased bypass to the Kern River/Mojave Pipeline and increased usage of customer owned field gas. EOR-related cogeneration demand is expected to further decrease to 14.6 Bcf in 2004 and will remain at that level until 2008 when usage will start to drop due to the expiration of several EOR long-term gas transportation contracts. Demand is forecast to level off in 2010 at 3.7 Bcf and remain at that level for the remainder of the forecast period.

Non-Cogeneration Electric Generation

SoCalGas forecasts a decline in retail non-cogeneration EG gas requirements of 23%, from 113 Bcf in 2004 to 87 Bcf in 2005. The 2004 forecast is based on below normal hydro conditions and the derating due to planned maintenance of the Pacific DC-Intertie, a transmission line from Oregon to southern California. The decline in gas use in 2005 is a result of average hydro conditions and normal operation of the Pacific DC-Intertie. SoCalGas forecasts an increase in retail non-cogeneration EG gas requirements of 1.6% per year, from 87 Bcf in 2005 to 124 Bcf in 2025. The forecast for SoCalGas' EG customers is based on a power market simulation.

SoCalGas' forecast includes the construction of approximately 26,500 MW from 2003 to 2008 of new thermal resources' capacity. Of that total, 17,800 MW are currently in operation, and 8,600 MW are under construction. Only 3,000 MW are to be served directly by SoCalGas. Throughout the entire planning period, SoCalGas assumes that market participants construct additional generation resources such that the WECC maintains a minimum planning reserve margin of 15%. For electric demand within California, SoCalGas used the California Energy Commission's (CEC) end-use electric demand forecast. Based on the CEC Staff's recommendation, the aggressive Demand Side Reduction scenario from CEC's 2003 Integrated Energy Policy report was used. Since natural gas is generally the marginal fuel, EG demand could be significantly higher should actual electric demand be higher than this forecast. For electric end-use demand outside of California, SoCalGas used Henwood Energy's electric demand forecast.

SoCalGas performed two special hydro sensitivities. Due to the displacement of generation by off-system resources, the impact of significant hydro conditions had little impact on gas demand. A dry hydro year, as defined by the CEC, increased demand on average for the forecast period by 26 Bcf. A wet hydro year, as defined by the CEC, decreased demand on average for the forecast period by 8 Bcf.

Enhanced Oil Recovery – Steam

Recorded deliveries to the EOR steaming market in 2003 were 15.2 Bcf, an increase of 0.9 Bcf from 2002. This increase was due to more production as a result of higher crude oil prices. SoCalGas' EOR steaming demand is expected to remain stable at 11.8 Bcf from 2004 until 2008 when SoCalGas' EOR long-term gas transportation contracts terminate in late 2008. From 2009 through the end of the forecast period, usage is expected to be approximately 6.7 Bcf. These figures include gas delivered to PG&E's EOR customers through interutility exchange. In 2003, 0.01 Bcf of gas was delivered to PG&E through such arrangements. No change in demand is expected in that market. The EOR-related cogeneration demand is discussed in the Electric Generation sector.

Crude oil prices are not expected to reach a level that would initiate any major expansion in EOR operations during the forecast period. As a result, EOR production is expected to gradually decline by approximately 1.5% percent per year. In addition, oil producers will rely increasingly on the interstate pipelines in California to supplant traditional supply sources, such as own source gas and SoCalGas' transportation system.

Mexicali

SoCalGas used the forecast prepared by Ecogas, Mexicali, for this report. Mexicali's use is expected to increase from 4 Bcf at an average rate of 2.2% per year to 6.6 Bcf in 2025.

Wholesale

The forecast of wholesale gas demand includes transportation to SDG&E, the City of Long Beach Electric and Gas Department (Long Beach), Southwest Gas Corporation (SWG), and the City of Vernon (Vernon).

The non-electric generation (EG) gas demand forecast for SDG&E incorporates the long-term gas demand forecast prepared by SDG&E for this report. Under average temperature conditions, total non-EG requirements for SDG&E are expected to increase from 53 Bcf in 2004 at an average growth rate of 1.2% per year to 69 Bcf in 2025.

The forecast of the large EG loads in SDG&E's area is based on the power market simulation as noted in the Electric Generation chapter for "non-cogeneration EG" demand. EG-related load is subject to a higher degree of uncertainty associated with the continued operation of existing generation facilities and the construction of new facilities. SDG&E's cogeneration and non-cogeneration EG requirements are expected to decrease from 61 Bcf in 2004 to 38 Bcf in 2005. The 2004 forecast is based on below normal hydro conditions and the derating due to planned maintenance of the Pacific DC-Intertie, a transmission line from Oregon to southern California. The decline in gas use in 2005 is a result of average hydro conditions and normal operation of the Pacific DC-Intertie. SoCalGas forecasts an increase in SDG&E's cogeneration and non-cogeneration EG gas requirements of 3% per year, from 38 Bcf in 2005 to 74 Bcf in 2025 driven primarily by the addition of new resources. The cogeneration EG demand forecast is based on the long-term demand forecast prepared by SDG&E for this report. The same assumptions used for the retail non-cogeneration EG demand were used for the wholesale non-cogeneration EG demand.

SoCalGas performed two special hydro sensitivity analyses. Due to the displacement of generation by off-system resources, the impact of significant hydro conditions had little impact on gas demand. A dry hydro year, as defined by the CEC, increased demand on average for the forecast period by 26 Bcf. A wet year, as defined by the CEC, decreased demand on average for the forecast period by 8 Bcf.

For the City of Long Beach, SoCalGas used the forecast prepared by Long Beach for this report. Long Beach's usage is expected to decrease gradually from 12.3 Bcf in 2004 to 12.2 Bcf in 2025. Long Beach's local deliveries are expected to stay steady at 1.2 Bcf/year. SoCalGas' transportation to Long Beach is expected to decrease from 11.1 Bcf to 11 Bcf in 2025.

The demand forecast for SWG is based on a long-term demand forecast prepared by Southwest Gas. In 2004, SoCalGas will serve approximately 6.5 Bcf directly, with another 3.8 Bcf being served by PG&E under exchange arrangements with SoCalGas. The direct service load is expected to grow by 1.5% per year from 6.5 Bcf in 2004 to approximately 8.9 Bcf in 2025.

The wholesale forecast assumes Vernon initiates municipal gas service to a portion of the existing SoCalGas retail customers within the City's jurisdiction in April, 2005. The forecasted throughput starts at 5 Bcf in 2005 and grows to 10 Bcf by 2025. The throughput forecast for the EG customers is based on a power market simulation.

<u>Natural Gas Vehicles (NGV)</u>

At the end of 2003, there were 179 fueling stations serving approximately 13,400 vehicles that consumed 5.9 Bcf of compressed natural gas (CNG) for the year. SoCalGas remains optimistic about the NGV market growth, forecasting an increase in demand to 10.8 Bcf in 2015 and 14.1 Bcf in 2025. The growth is being propelled by the private and public sectors, with customer support from SoCalGas' LEV program.

ENERGY EFFICIENCY PROGRAMS

The cumulative net Energy Efficiency load impact forecast for selected years is provided in **Table 1**. The net load impact includes all Energy Efficiency programs that SoCalGas forecasted to implement in the years 2004 through 2025. Savings and goals for these programs are based on the program goals authorized by the Commission in D.03-12-060 and D.04-02-059.

Conservation and energy efficiency activities encourage customers to install energy efficient equipment and weatherization measures and adopt energy saving practices that result in reduced gas usage for a comparable level of service. Conservation and energy efficiency load impacts are shown as positive numbers. The "total net load impact" is the natural gas throughput reduction resulting from SoCalGas' Energy Efficiency programs.

Savings reported are for measures installed under SoCalGas' Energy Efficiency programs. Credit is only taken for measures that are installed as a result of SoCalGas' Energy Efficiency programs, and only for the measure lives of the measures installed. Measures with lives less than the forecast planning period fall out of the forecast when their expected life is reached. This means, for example, that a measure installed in 2004 with a lifetime of 10 years is only included in the forecast through 2013. Naturally occurring conservation that is not attributable to SoCalGas' Energy Efficiency activities is not included in the Energy Efficiency forecast.

Table 1. Energy Efficiency Load Impact Forecast for Selected Years (MMcf)

	2004	2005	2006	2007	2008	2010	2013	2016	2020	2025
Core Commercial	771	1,037	1,303	1,569	1,375	1,372	1,364	1,103	797	285
Core Industrial	340	455	569	684	617	522	421	355	327	97
Core Residential	456	650	845	1,040	1,030	1,011	983	596	230	47
Total Net Load Impacts	1,566	2,142	2,717	3,293	3,022	2,904	2,767	2,054	1,354	429

Notes:
1. Energy Efficiency load impacts include 2003 program savings, but do not include pre-2003 program savings.
2. "Hard" impacts include measures requiring a physical equipment modification or replacement.
3. SoCalGas did not include "soft" impacts, e.g., energy management services type measures, consistent with its Program Year 2004-2005 Program Application filed on September 23, 2003.

CAPACITY, SOURCES, AND STORAGE

Interstate Pipeline Capacity

Southern California continues to operate in an environment of interstate pipeline capacity in excess of anticipated demand. Interstate pipeline delivery capability into southern California is over 4,000 MMcf/day, with approximately 3,230 MMcf/day available directly to SoCalGas customers (the remaining interstate capacity serves local distribution company bypass customers). These pipeline systems provide access to several large supply basins, located in: New Mexico (San Juan Basin), West Texas (Permian Basin), Rocky Mountains and Western Canada. The interstate pipeline systems, along with local California gas supplies, deliver gas to most southern California customers through SoCalGas.

SoCalGas currently has firm receipt capacity at the following locations for its customers to access supply and interstate pipelines.

	Interstate and Local Volumes MMcf/day
Current Firm Capacity	
El Paso at Blythe	1,210
El Paso at Topock	540
North Needles (Transwestern, Questar Southern Trails)	800
Hector Road (Mojave)	50
Wheeler Ridge (PG&E, Kern/Mojave, CA Production)	765
Line 85 (CA Production)	190
North Coastal (CA Production)	120
Kramer Junction (Kern/Mojave)	200
Total Firm Supply Access	**3,875**

Gas Supply Sources

Southern California receives gas supplies from several sedimentary basins in the western United States and Canada.

California Gas

Gas supply available to SoCalGas from California sources (state onshore plus state/federal offshore supplies) was about 400 MMcf/day in 2003.

Southwestern U.S. Gas

Traditional Southwestern U.S. sources of natural gas, especially from the San Juan Basin, will continue to supply most of southern California's natural gas demand. This gas is delivered via the El Paso Natural Gas Company and Transwestern Pipeline Company pipelines. The San Juan Basin's conventionally produced gas supplies have increased since 1991 and are expected to meet southern California's gas demand. Permian basin gas also provides an additional source of supply into California.

Rocky Mountain Gas

Rocky Mountain supply presents a viable alternative to traditional Southwestern U.S. gas sources for Southern California. This gas is delivered to southern California primarily on the Kern River Gas Transmission Company's pipeline, although there is also access through the San Juan Basin. In recent years, Rocky Mountain gas has increasingly flowed to Midwestern and Pacific Northwest Markets.

Canadian Gas

SoCalGas anticipates that the role of Canadian gas in meeting southern California's demand during the forecast period will decline. New pipeline capacity out of western Canada to the Midwest and eastern United States are likely to move Canadian gas away from California. Increased gas deliveries from the Permian Basin to California are expected to replace these supplies.

Liquefied Natural Gas (LNG)

SoCalGas anticipates that LNG may be a significant source of gas supply to the U.S. by 2008. Although there is substantial uncertainty associated with the successful citing of the regasification facilities to deliver LNG, approximately 800 MMcf/day of such capacity is included in our forecast tables.

RETAIL CORE PEAK DAY DEMAND

SoCalGas plans and designs its system to provide continuous service to its core customers under an extreme peak day event. The extreme peak day design criteria is defined as in a 1-in-35 year event; this correlates to a system average temperature of 38 degrees Fahrenheit. Demand on an extreme peak day is met through a combination of withdrawals from underground storage facilities and flowing pipeline supplies. The following table provides an illustration of how storage and flowing supplies can meet the growth in forecasted retail core peak day demand.

Retail Core Peak Day Demand and Supply Requirements (MMCF/day)

	2004	2005	2010	2015
Retail Core Demand	3,119	3,137	3,244	3,392
Firm Storage Withdrawal	1,935	1,935	2,001	2,092
Required Flowing Supplies	1,184	1,202	1,243	1,299

Notes:

Firm withdrawal and flowing supply requirements are shown to increase proportionally with demand growth beginning in 2006 and afterwards. Firm withdrawal plus firm pipeline supplies must be sufficient to meet peak day operating requirements.

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SOUTHERN CALIFORNIA GAS COMPANY TABULAR DATA

ANNUAL GAS SUPPLY AND SENDOUT - MMCF/DAY
RECORDED YEARS 1999 TO 2003

Line	CAPACITY AVAILABLE		1999	2000	2001	2002	2003
1	California Source Gas						
	Out-of-State Gas						
2	California Offshore -POPCO / PIOC						
3	El Paso Natural Gas Co.						
4	Transwestern Pipeline Co.						
5	Kern / Mojave						
6	PGT / PG&E						
7	Other						
8	Total Out-of-State Gas						
9	TOTAL CAPACITY AVAILABLE						
	GAS SUPPLY TAKEN						
10	California Source Gas		271	386	388	300	241
	Out-of-State Gas						
11	Pacific Interstate Companies		111	0	0	0	0
12	Other Out-of-State		2,412	2,689	2,907	2,488	2,378
13	Total Out-of-State Gas		2,523	2,689	2,907	2,488	2,378
14	TOTAL SUPPLY TAKEN		2,794	3,075	3,295	2,788	2,619
15	Net Underground Storage Withdrawal		6	78	(70)	11	(11)
16	TOTAL THROUGHPUT (1)(2)		2,800	3,153	3,225	2,799	2,608
	ACTUAL DELIVERIES BY END-USE (3)						
17	Core	Residential	761	694	724	707	666
18		Commercial	197	199	205	205	200
19		Industrial	54	56	57	57	57
20		NGV	6	9	12	15	15
21		Subtotal	1,018	957	998	984	938
22	Noncore	Commercial	71	71	61	65	65
23		Industrial	377	392	338	368	346
24		EOR Steaming	25	33	29	39	42
25		Electric Generation	856	1,199	1,257	869	789
26		Subtotal	1,329	1,695	1,685	1,342	1,242
27	Wholesale	Residential	134	120	116	106	113
28		Com/Ind & Others	87	84	77	75	84
29		Electric Generation	181	231	276	234	172
30		Subtotal	402	435	469	415	369
31	International DGN		11	11	6	10	8
32	Co. Use & LUAF		40	55	66	48	51
33	SYSTEM TOTAL-THROUGHPUT (1)		2,800	3,153	3,225	2,799	2,608
	TRANSPORTATION AND EXCHANGE						
34	Core	All End Uses	42	42	26	14	10
35	Noncore	Commercial/Industrial	439	457	393	427	403
36		EOR Steaming	25	33	29	39	42
37		Electric Generation	855	1,197	1,255	869	788
38		Subtotal-Retail	1,361	1,729	1,703	1,348	1,243
39	Wholesale	All End Uses	402	435	469	415	369
40	International DGN		11	11	6	10	8
41	TOTAL TRANSPORTATION & EXCHANGE		1,774	2,175	2,178	1,773	1,620
	CURTAILMENT (RETAIL & WHOLESALE)						
42		Core	0	0	0	0	0
43		Noncore	0	0	0	0	0
44		TOTAL - Curtailment	0	0	0	0	0
45	REFUSAL		0	0	0	0	0
	NOTES:						
	(1) Figures exclude pipeline bypass load losses due to non-jurisdictional gas suppliers.		395	387	410	358	499
	(2) Exclude own-source gas supply of procurement by City of Long Beach.		10	11	11	11	4

(3) Actual deliveries by end-use includes sales, transportation, and exchange volumes.

SOUTHERN CALIFORNIA GAS COMPANY

ANNUAL GAS SUPPLY AND REQUIREMENTS - MMCF/DAY
ESTIMATED YEARS 2004 THRU 2008

AVERAGE TEMPERATURE YEAR

LINE	FIRM CAPACITY AVAILABLE		2004	2005	2006	2007	2008	LINE
1	California Source Gas		310	310	310	310	310	1
	Out-of-State Gas							
2	Mojave (Hector Road)		50	50	50	50	50	2
3	El Paso Natural Gas Co. (Blythe)		1,210	1,210	1,210	1,210	1,210	3
4	El Paso Natural Gas Co. (Topock)		540	540	540	540	540	4
5	Transwestern Pipeline Co. (No. Needles)		800	800	800	800	800	5
6	Kern-Mojave, PG&E, Oxy (Wheeler Ridge)		765	765	765	765	765	6
7	Kern-Mojave (Kramer Junction)		200	200	200	200	200	7
8	LNG Capacity 4/		0	0	0	0	800	8
9	Total Out-of-State Gas		3,565	3,565	3,565	3,565	4,365	9
10	TOTAL CAPACITY AVAILABLE /1		3,875	3,875	3,875	3,875	4,675	10
	GAS SUPPLY TAKEN							
11	California Source Gas		310	310	310	310	310	11
12	Out-of-State		2,046	1,912	1,980	1,996	2,041	12
13	TOTAL SUPPLY TAKEN		2,356	2,222	2,290	2,306	2,351	13
14	Net Underground Storage Withdrawal		0	0	0	0	0	14
15	TOTAL THROUGHPUT 1/, 2/		2,356	2,222	2,290	2,306	2,351	15
	REQUIREMENTS FORECAST BY END-USE 3/							
16	CORE	Residential	687	693	697	697	702	16
17		Commercial	200	202	204	204	206	17
18		Industrial	58	59	59	59	59	18
19		NGV	18	20	22	24	24	19
20		Subtotal-CORE	963	974	982	984	991	20
21	NONCORE	Commercial	57	55	55	55	55	21
22		Industrial	302	282	280	280	280	22
23		EOR Steaming	33	33	33	33	28	23
24		Electric Generation (EG)	577	500	517	506	508	24
25		Subtotal-NONCORE	969	870	885	874	871	25
26	WHOLESALE	Core	175	179	184	186	180	26
27		Noncore Excl. EG	27	36	42	42	42	27
28		Electric Generation (EG)	167	109	142	164	209	28
29		Subtotal-WHOLESALE	369	324	368	392	431	29
30	INTERNATIONAL	DGN (Mexicali)	11	12	12	13	14	30
31		Co. Use & LUAF	44	42	43	43	44	31
32	SYSTEM TOTAL THROUGHPUT /1		2,356	2,222	2,290	2,306	2,351	32
	TRANSPORTATION AND EXCHANGE							
33	CORE	All End Uses	9	9	9	9	9	33
34	NONCORE	Commercial/Industrial	358	338	334	335	335	34
35		EOR Steaming	33	33	33	33	28	35
36		Electric Generation (EG)	577	500	517	506	508	36
37		Subtotal-RETAIL	977	880	893	883	880	37
38	WHOLESALE	All End Uses	369	324	368	392	431	38
39	INTERNATIONAL	All End Uses	11	12	12	13	14	39
40	TOTAL TRANSPORTATION & EXCHANGE		1,357	1,216	1,273	1,288	1,325	40
	CURTAILMENT (RETAIL & WHOLESALE)							
41		Core	0	0	0	0	0	41
42		Noncore	0	0	0	0	0	42
43		TOTAL - Curtailment	0	0	0	0	0	43

NOTES:

	2004	2005	2006	2007	2008
1/ Figures exclude pipeline bypass load losses of to non-jurisdictional gas suppliers.	788	838	894	919	934
2/ Excludes own-source gas supply of gas procurement by the City of Long Beach	3	3	3	3	3

3/ Requirement forecast by end-use includes sales, transportation, and exchange volumes.
4/ Liquified Natural Gas delivery capacity assumed to be available in 2008.

SOUTHERN CALIFORNIA GAS COMPANY

ANNUAL GAS SUPPLY AND REQUIREMENTS - MMCF/DAY
ESTIMATED YEARS 2010 THRU 2025

AVERAGE TEMPERATURE YEAR

LINE	FIRM CAPACITY AVAILABLE		2010	2013	2016	2020	2025	LINE
1	California Source Gas		310	310	310	310	310	1
	Out-of-State Gas							
2	Mojave (Hector Road)		50	50	50	50	50	2
3	El Paso Natural Gas Co. (Blythe)		1,210	1,210	1,210	1,210	1,210	3
4	El Paso Natural Gas Co. (Topock)		540	540	540	540	540	4
5	Transwestern Pipeline Co. (No. Needles)		800	800	800	800	800	5
6	Kern-Mojave, PG&E, Oxy (Wheeler Ridge)		765	765	765	765	765	6
7	Kern-Mojave (Kramer Junction)		200	200	200	200	200	7
8	LNG Capacity 4/		800	800	800	800	800	8
9	Total Out-of-State Gas		4,365	4,365	4,365	4,365	4,365	9
10	TOTAL CAPACITY AVAILABLE /1		4,675	4,675	4,675	4,675	4,675	10
	GAS SUPPLY TAKEN							
11	California Source Gas		310	310	310	310	310	11
12	Out-of-State		1,963	2,027	2,055	2,136	2,284	12
13	TOTAL SUPPLY TAKEN		2,273	2,337	2,365	2,446	2,594	13
14	Net Underground Storage Withdrawal		0	0	0	0	0	14
15	TOTAL THROUGHPUT 1/, 2/		2,273	2,337	2,365	2,446	2,594	15
	REQUIREMENTS FORECAST BY END-USE 3/							
16	CORE	Residential	718	741	760	790	830	16
17		Commercial	209	213	217	223	231	17
18		Industrial	60	61	62	63	67	18
19		NGV	26	28	30	33	38	19
20		Subtotal-CORE	1,013	1,043	1,069	1,109	1,166	20
21	NONCORE	Commercial	56	57	57	58	59	21
22		Industrial	282	285	285	287	290	22
23		EOR Steaming	19	19	19	19	19	23
24		Electric Generation (EG)	413	433	431	458	519	24
25		Subtotal-NONCORE	770	794	792	822	887	25
26	WHOLESALE	Core	182	188	195	204	217	26
27		Noncore Excl. EG	42	42	43	43	44	27
28		Electric Generation (EG)	209	211	206	205	213	28
29		Subtotal-WHOLESALE	433	441	444	452	474	29
30	INTERNATIONAL	DGN (Mexicali)	14	15	16	17	18	30
31		Co. Use & LUAF	43	44	44	46	49	31
32	SYSTEM TOTAL THROUGHPUT /1		2,273	2,337	2,365	2,446	2,594	32
	TRANSPORTATION AND EXCHANGE							
33	CORE	All End Uses	9	9	9	10	10	33
34	NONCORE	Commercial/Industrial	338	341	342	345	350	34
35		EOR Steaming	19	19	19	19	19	35
36		Electric Generation (EG)	413	433	431	458	519	36
37		Subtotal-RETAIL	779	802	801	832	898	37
38	WHOLESALE	All End Uses	433	441	444	452	474	38
39	INTERNATIONAL	All End Uses	14	15	16	17	18	39
40	TOTAL TRANSPORTATION & EXCHANGE		1,226	1,258	1,261	1,301	1,390	40
	CURTAILMENT (RETAIL & WHOLESALE)							
41		Core	0	0	0	0	0	41
42		Noncore	0	0	0	0	0	42
43		TOTAL - Curtailment	0	0	0	0	0	43

NOTES:

	2010	2013	2016	2020	2025
1/ Figures exclude pipeline bypass load losses of to non-jurisdictional gas suppliers.	994	1,021	992	982	965
2/ Excludes own-source gas supply of gas procurement by the City of Long Beach	3	3	3	3	3

3/ Requirement forecast by end-use includes sales, transportation, and exchange volumes.
4/ Liquified Natural Gas delivery capacity assumed to be available in 2008.

SOUTHERN CALIFORNIA GAS COMPANY

ANNUAL GAS SUPPLY AND REQUIREMENTS - MMCF/DAY
ESTIMATED YEARS 2004 THRU 2008

COLD TEMPERATURE YEAR

LINE	FIRM CAPACITY AVAILABLE		2004	2005	2006	2007	2008	LINE
1	California Source Gas		310	310	310	310	310	1
	Out-of-State Gas							
2	Mojave (Hector Road)		50	50	50	50	50	2
3	El Paso Natural Gas Co. (Blythe)		1,210	1,210	1,210	1,210	1,210	3
4	El Paso Natural Gas Co. (Topock)		540	540	540	540	540	4
5	Transwestern Pipeline Co. (No. Needles)		800	800	800	800	800	5
6	Kern-Mojave, PG&E, Oxy (Wheeler Ridge)		765	765	765	765	765	6
7	Kern-Mojave (Kramer Junction)		200	200	200	200	200	7
8	LNG Capacity 4/		0	0	0	0	800	8
9	Total Out-of-State Gas		3,565	3,565	3,565	3,565	4,365	9
10	TOTAL CAPACITY AVAILABLE /1		3,875	3,875	3,875	3,875	4,675	10
	GAS SUPPLY TAKEN							
11	California Source Gas		310	310	310	310	310	11
12	Out-of-State		2,143	2,011	2,079	2,098	2,141	12
13	TOTAL SUPPLY TAKEN		2,453	2,321	2,389	2,408	2,451	13
14	Net Underground Storage Withdrawal		0	0	0	0	0	14
15	TOTAL THROUGHPUT 1/, 2/		2,453	2,321	2,389	2,408	2,451	15
	REQUIREMENTS FORECAST BY END-USE 3/							
16	CORE	Residential	756	762	767	768	773	16
17		Commercial	210	213	214	215	216	17
18		Industrial	59	60	60	60	60	18
19		NGV	18	20	22	24	24	19
20		Subtotal-CORE	1,043	1,055	1,063	1,067	1,073	20
21	NONCORE	Commercial	57	55	55	55	55	21
22		Industrial	302	282	280	280	280	22
23		EOR Steaming	33	33	33	33	28	23
24		Electric Generation (EG)	577	500	517	506	508	24
25		Subtotal-NONCORE	969	870	885	874	871	25
26	WHOLESALE	Core	190	195	200	203	196	26
27		Noncore Excl. EG	27	36	42	42	42	27
28		Electric Generation (EG)	167	109	142	164	209	28
29		Subtotal-WHOLESALE	384	340	384	409	447	29
30	INTERNATIONAL	DGN (Mexicali)	11	12	12	13	14	30
31		Co. Use & LUAF	46	44	45	45	46	31
32	SYSTEM TOTAL THROUGHPUT /1		2,453	2,321	2,389	2,408	2,451	32
	TRANSPORTATION AND EXCHANGE							
33	CORE	All End Uses	9	9	9	9	9	33
34	NONCORE	Commercial/Industrial	358	338	334	335	335	34
35		EOR Steaming	33	33	33	33	28	35
36		Electric Generation (EG)	577	500	517	506	508	36
37		Subtotal-RETAIL	977	880	893	883	880	37
38	WHOLESALE	All End Uses	384	340	384	409	447	38
39	INTERNATIONAL	All End Uses	11	12	12	13	14	39
40	TOTAL TRANSPORTATION & EXCHANGE		1,372	1,232	1,289	1,305	1,341	40
	CURTAILMENT (RETAIL & WHOLESALE)							
41		Core	0	0	0	0	0	41
42		Noncore	0	0	0	0	0	42
43		TOTAL - Curtailment	0	0	0	0	0	43

NOTES:

	2004	2005	2006	2007	2008
1/ Figures exclude pipeline bypass load losses of to non-jurisdictional gas suppliers.	788	838	894	919	934
2/ Excludes own-source gas supply of gas procurement by the City of Long Beach	3	3	3	3	3

3/ Requirement forecast by end-use includes sales, transportation, and exchange volumes.
4/ Liquified Natural Gas delivery capacity assumed to be available in 2008.

SOUTHERN CALIFORNIA GAS COMPANY

ANNUAL GAS SUPPLY AND REQUIREMENTS - MMCF/DAY
ESTIMATED YEARS 2010 THRU 2025

COLD TEMPERATURE YEAR

LINE	FIRM CAPACITY AVAILABLE		2010	2013	2016	2020	2025	LINE
1	California Source Gas		310	310	310	310	310	1
	Out-of-State Gas							
2	Mojave (Hector Road)		50	50	50	50	50	2
3	El Paso Natural Gas Co. (Blythe)		1,210	1,210	1,210	1,210	1,210	3
4	El Paso Natural Gas Co. (Topock)		540	540	540	540	540	4
5	Transwestern Pipeline Co. (No. Needles)		800	800	800	800	800	5
6	Kern-Mojave, PG&E, Oxy (Wheeler Ridge)		765	765	765	765	765	6
7	Kern-Mojave (Kramer Junction)		200	200	200	200	200	7
8	LNG Capacity 4/		800	800	800	800	800	8
9	Total Out-of-State Gas		4,365	4,365	4,365	4,365	4,365	9
10	TOTAL CAPACITY AVAILABLE /1		4,675	4,675	4,675	4,675	4,675	10
	GAS SUPPLY TAKEN							
11	California Source Gas		310	310	310	310	310	11
12	Out-of-State		2,063	2,132	2,161	2,247	2,401	12
13	TOTAL SUPPLY TAKEN		2,373	2,442	2,471	2,557	2,711	13
14	Net Underground Storage Withdrawal		0	0	0	0	0	14
15	TOTAL THROUGHPUT 1/, 2/		2,373	2,442	2,471	2,557	2,711	15
	REQUIREMENTS FORECAST BY END-USE 3/							
16	CORE	Residential	790	815	836	869	913	16
17		Commercial	219	223	227	233	242	17
18		Industrial	61	63	63	65	68	18
19		NGV	26	28	30	33	38	19
20		Subtotal-CORE	1,096	1,129	1,156	1,200	1,261	20
21	NONCORE	Commercial	56	57	57	58	59	21
22		Industrial	282	285	285	287	290	22
23		EOR Steaming	19	19	19	19	19	23
24		Electric Generation (EG)	413	433	431	458	519	24
25		Subtotal-NONCORE	770	794	792	822	887	25
26	WHOLESALE	Core	197	205	212	222	237	26
27		Noncore Excl. EG	42	42	43	43	44	27
28		Electric Generation (EG)	209	211	206	205	213	28
29		Subtotal-WHOLESALE	448	458	461	470	494	29
30	INTERNATIONAL	DGN (Mexicali)	14	15	16	17	18	30
31		Co. Use & LUAF	45	46	46	48	51	31
32	SYSTEM TOTAL THROUGHPUT /1		2,373	2,442	2,471	2,557	2,711	32
	TRANSPORTATION AND EXCHANGE							
33	CORE	All End Uses	9	10	10	10	11	33
34	NONCORE	Commercial/Industrial	338	341	342	345	350	34
35		EOR Steaming	19	19	19	19	19	35
36		Electric Generation (EG)	413	433	431	458	519	36
37		Subtotal-RETAIL	779	803	802	832	899	37
38	WHOLESALE	All End Uses	448	458	461	470	494	38
39	INTERNATIONAL	All End Uses	14	15	16	17	18	39
40	TOTAL TRANSPORTATION & EXCHANGE		1,241	1,276	1,279	1,319	1,411	40
	CURTAILMENT (RETAIL & WHOLESALE)							
41		Core	0	0	0	0	0	41
42		Noncore	0	0	0	0	0	42
43		TOTAL - Curtailment	0	0	0	0	0	43

NOTES:

	2010	2013	2016	2020	2025
1/ Figures exclude pipeline bypass load losses of to non-jurisdictional gas suppliers.	994	1,021	992	982	965
2/ Excludes own-source gas supply of gas procurement by the City of Long Beach	3	3	3	3	3

3/ Requirement forecast by end-use includes sales, transportation, and exchange volumes.
4/ Liquified Natural Gas delivery capacity assumed to be available in 2008.