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2004  
California  
Gas  
Report

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**SAN DIEGO  
GAS & ELECTRIC COMPANY**

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San Diego Gas & Electric Company (SDG&E), a Sempra Energy company, is a combined gas and electric distribution utility serving more than three million people in San Diego and southern Orange counties. SDG&E delivers natural gas to over 800,000 customers in San Diego County, including the power plants and turbines previously owned and operated by the company. Total gas sales and transportation through SDG&E's system for 2003 was approximately 115 billion cubic feet (Bcf), which is an average of over 316 million cubic feet per day (MMcf/day). These 2003 deliveries corresponded to a decrease in gas usage by power generators within San Diego's service territory compared to earlier years.

## **GAS DEMAND**

This projection of natural gas requirements, excluding electric generation (EG) demand, reflects the forecast and planning assumptions from SDG&E's Gas Market OIR (R.04-01-025) Phase I data response filing. This demand is projected to increase by 11% between 2004 and 2013, which is 1.5% lower than the anticipated growth over the same period from the last long-term forecast in the *2002 California Gas Report*. Assumptions for SDG&E's gas transport requirements for cogeneration and EG are included as part of the wholesale market sector description for Southern California.

SDG&E projects core and noncore sales and transportation customer gas consumption and peak demand for its service territory, with the exception of gas requirements for the fossil fuel power plants. Customer gas usage forecasts are derived from models that integrate demographic assumptions, economics, energy prices, conservation, marketing programs, building and appliance standards, weather, and other factors. These forecasting models use econometric techniques and end-use forecasting methodologies.

The compressed natural gas vehicle market continues to grow at a moderate rate due to federal, state and local incentives for the purchase of school and transit buses. San Diego's Metropolitan Transit System expects to add a significant number of new NGV buses, going from 290 to at least 600 vehicles over the next four to five years. Transit vehicles account for over 85% of the total NGV throughput. Additionally, the increased reliability of the refueling infrastructure and a substantial differential between the gasoline and CNG prices has aided growth. At the end of 2003, there were 30 NGV fueling stations servicing approximately 1,600 vehicles in the San Diego County area.

## **GAS SUPPLY**

SDG&E continues to procure and deliver natural gas for its customers, with its current core portfolio consisting of supplies from Canada, southwest basins and spot

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market purchases at the California border. In response to the Commission's Gas Market OIR, SDG&E proposed guidelines for acquiring interstate pipeline capacity to provide supply diversity and flexibility for the future. Gas procurement will continue to be subject to a performance-based incentive mechanism that allows for the reasonableness of gas purchases to be judged against a market benchmark.

SDG&E has long-term contracts with El Paso Natural Gas Company for a total of 25.8 MMcf/day of firm transportation capacity and for 51.2 MMcf/day on the PGT/PG&E (1993 Expansion) pipeline system from Canada. Underground storage inventory rights for SDG&E's core gas customers totaling 8,000,000 Decatherms (Dth) are specified in the current one-year natural gas service contract with SoCalGas. As the gas industry continues to change in response to market dynamics, however, SDG&E's firm pipeline and storage capacity needs and supply portfolio mix can be expected to be revised to ensure customer service reliability at reasonable costs.

There is expected to be sufficient supply deliverability to SDG&E's gas system from the SoCalGas pipeline system and storage facilities. Gas delivery is made primarily through the Moreno-to-San Diego transmission pipeline.

### **PEAK DAY DEMAND AND DELIVERABILITY**

SDG&E's design peak day gas demand consists of projected requirements for its core market of residential and small commercial customers, as well as a limited amount of retail noncore gas requirements. The peak day is expected to occur during the winter season due to demand for gas space heating. SDG&E plans to meet its design peak day gas demand from a combination of flowing gas supplies and withdrawing gas storage inventory.

SDG&E's gas transmission system is designed to provide a 100 percent level of service to all core customers under design peak day conditions. Because this design peak day is expected to occur only once every 35 years, the remaining capacity during non-peak conditions is available to serve noncore customers. During periods of cold weather or extremely high electric generation demand, however, it may not always be possible to maintain a 100% level of service to all noncore customers under the current system design criteria.

The following table shows SDG&E's core gas demand forecast for the 1-in-35-year design peak day for the winter periods. This assumes that supplies from storage withdrawal are at SDG&E's maximum allowable rate under the terms of the current SoCalGas service contract and are used before out-of-state flowing gas supply purchases for the peak day core requirements. SDG&E storage withdrawal rights are assumed for this table to continue at the same level after expiration of the current storage contract with SoCalGas. Any increase (or reduction) in firm storage inventory withdrawal will result in a decrease (or increase) in the requirement for out-of-state flowing gas supplies.

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**SAN DIEGO GAS & ELECTRIC COMPANY  
Design Peak Day Forecast  
for Core Demand and Supplies  
(MMCF/DAY)**

	<u>2004-05</u>	<u>2005-06</u>	<u>2006-07</u>
<b>PEAK DAY DEMAND:</b>	398	401	405
<b>AVAILABLE SUPPLY</b>			
Storage Withdrawal	225	225	225
Out-of-State Supply	<u>173</u>	<u>176</u>	<u>180</u>
<b>TOTAL CORE SUPPLY:</b>	398	401	405



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**SAN DIEGO GAS & ELECTRIC COMPANY  
TABULAR DATA**

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# SAN DIEGO GAS AND ELECTRIC COMPANY

## ANNUAL GAS SUPPLY TAKEN RECORDED YEARS 1999-2003 MMCFD

<u>LINE</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>LINE</u>
<b><u>GAS SUPPLY AVAILABLE</u></b>						
1						1
	California Source Gas					
	Regular Purchases					
	Received for Exchange/Transport					
2						2
	Total California Source Gas					
3						3
4						4
	Purchases from Other Utilities					
5						5
6						6
	Out-of-State Gas					
7						7
	Incremental Supplies (Utility)					
	Out-of-State Transport (for others)					
8						8
	TOTAL Out-of-State Gas					
9						9
	GAS SUPPLY AVAILABLE					
10						10
	Underground Storage Withdrawal					
<b><u>GAS SUPPLY TAKEN</u></b>						
<b>California Source Gas</b>						
11	18	10	9	3	3	11
	Regular Purchases					
12	0	0	0	0	0	12
	Received for Exchange/Transport					
13	18	10	9	3	3	13
	Total California Source Gas					
14	0	0	0	0	0	14
	Purchases from Other Utilities					
<b>Out-of-State Gas</b>						
15	200	145	131	122	133	15
	Supplemental Supplies-Utility					
16	131	233	284	247	182	16
	Out-of-State Transport-Others					
17	331	378	415	369	315	17
	Total Out-of-State Gas					
18	349	388	424	371	317	18
	TOTAL Gas Supply Taken & Transported					

# SAN DIEGO GAS AND ELECTRIC COMPANY

## ACTUAL GAS SUPPLY AND SENDOUT RECORDED YEARS 1999-2003 MMCFD

<u>LINE</u>	<u>Actual Deliveries by End-Use</u>		<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>LINE</u>
1	<b>CORE</b>	Residential	104	92	93	92	87	1
2		Commercial	41	40	46	49	47	2
3		Industrial	0	0	0	0	0	3
4		<i>Subtotal - CORE</i>	145	132	139	141	134	4
5	<b>NONCORE</b>	Commercial	0	0	0	0	0	5
6		Industrial	22	21	12	10	10	6
7		Non-EOR Cogen/EG	128	228	276	234	172	7
8		Electric Utilities	51	0	0	0	0	8
9		<i>Subtotal - NONCORE</i>	201	249	288	244	182	9
10	<b>WHOLESALE</b>	All End Uses	0	0	0	0	0	10
11		<i>Subtotal - Co Use &amp; LUAF</i>	4	7	-2	-14	1	11
12		<b>SYSTEM TOTAL THROUGHPUT</b>	350	388	425	371	317	12
		<u>Actual Transport &amp; Exchange</u>						
13	<b>CORE</b>	Residential	0	0	0	0	0	13
14		Commercial	5	5	6	7	2	14
15	<b>NONCORE</b>	Industrial	6	5	6	8	9	15
16		Non-EOR Cogen/EG	120	222	272	232	171	16
17		Electric Utilities	0	0	0	0	0	17
18		<i>Subtotal - RETAIL</i>	131	233	284	247	182	18
19	<b>WHOLESALE</b>	All End Uses	0	0	0	0	0	19
20		<b>TOTAL TRANSPORT &amp; EXCHANGE</b>	131	233	284	247	182	20
		<u>Storage</u>						
21		<i>Storage Injection</i>	15	17	12	11	20	21
22		<i>Storage Withdrawal</i>	27	20	7	16	18	22
		<u>Actual Curtailment</u>						
23		Residential	0	0	0	0	0	23
24		Com/Indl & Cogen	0	0	0	0	0	24
25		Electric Generation	0	1	3	0	0	25
26		<b>TOTAL CURTAILMENT</b>	0	1	3	0	0	26
27	<b>REFUSAL</b>		0	0	0	0	0	27
		ACTUAL DELIVERIES BY END-USE includes sales and transportation volumes						
		MMbtu/Mcf:	1.009	1.013	1.018	1.014	1.012	

# SAN DIEGO GAS AND ELECTRIC COMPANY

## Annual Gas Supply and Requirements Forecast Years 2004-2008 MMCF/Day Average Temperature Year

<u>Line</u> <u>GAS SUPPLY AVAILABLE</u>	2004	2005	2006	2007	2008	<u>Line</u>
1 California Source Gas						1
2 Regular Purchases	0	0	0	0	0	2
3 Received for Exchange/Transport	0	0	0	0	0	3
4 Total California Source Gas	0	0	0	0	0	4
5 Purchases from Other Utilities	0	0	0	0	0	5
6 Out-of-State Gas						6
7 Incremental Supplies (Utility)	141	142	143	145	147	7
8 Out-of-State Transport (for others)	178	115	147	168	215	8
9 Total Out-of-State Gas	319	256	290	313	362	9
10 GAS SUPPLY AVAILABLE	319	256	290	313	362	10
11 Underground Storage Withdrawal	22	22	22	22	22	11
12 <u>GAS SUPPLY TAKEN</u>						12
13 California Source Gas						13
14 Regular Purchases	0	0	0	0	0	14
15 Received for Exchange/Transport	0	0	0	0	0	15
16 Total California Source Gas	0	0	0	0	0	16
17 Purchases from Other Utilities	0	0	0	0	0	17
18 Out-of-State Gas						18
19 Incremental Supplies (Utility)	141	142	143	145	147	19
20 Out-of-State Transport (for others)	178	115	147	168	215	20
21 Total Out-of-State Gas	319	256	290	313	362	21
22 TOTAL Gas Supply Taken & Transported	319	256	290	313	362	22
23 Underground Storage Withdrawal	22	22	22	22	22	23

# SAN DIEGO GAS AND ELECTRIC COMPANY

## Annual Gas Supply and Requirements Forecast Years 2004-2008 MMCF/Day Average Temperature Year

<u>Line</u>	<u>Requirements Forecast by End-Use</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>Line</u>
1	CORE Residential	88	89	89	90	91	1
2	Commercial	46	47	47	48	48	2
3	NGV	2	2	2	2	2	3
4	Industrial	0	0	0	0	0	4
5	<i>Subtotal - CORE</i>	136	138	139	140	142	5
6	NONCORE Commercial	0	0	0	0	0	6
7	Industrial	10	10	10	10	10	7
8	Electric Generation	169	106	138	159	206	8
9	<i>Subtotal - NONCORE</i>	179	116	148	169	216	9
10	WHOLESALE All End Uses	0	0	0	0	0	10
11	Co Use & LUAF	3	3	3	3	4	11
12	<b>SYSTEM TOTAL - THROUGHPUT</b>	319	256	290	313	362	12
13	Storage Injection	22	22	22	22	22	13
14	<b>Transportation &amp; Exchange</b>						14
15	CORE All End Uses	2	2	2	2	2	15
16	NONCORE Commercial/Industrial	9	9	9	9	9	16
17	Electric Generation	167	104	136	157	204	17
18	<i>Subtotal - RETAIL</i>	178	115	147	168	215	18
19	WHOLESALE All End Uses	0	0	0	0	0	19
20	<b>TOTAL TRANSPORT &amp; EXCHANGE</b>	178	115	147	168	215	20
21	<b>CURTAILMENT (Retail &amp; Wholesale)</b>						21
22	Core	0	0	0	0	0	22
23	Commercial/Industrial	0	0	0	0	0	23
24	Electric Generation	0	0	0	0	0	24
25	<i>Total - CURTAILMENT</i>	0	0	0	0	0	25
26	REFUSAL	0	0	0	0	0	26

**NOTE:**

Requirement forecast by end-use includes sales, transportation, and exchange volumes.  
(Sub-Totals and Totals may vary due to rounding)

# SAN DIEGO GAS AND ELECTRIC COMPANY

## Annual Gas Supply and Requirements Forecast Years 2010-2025 MMCF/Day Average Temperature Year

<u>Line</u> <u>GAS SUPPLY AVAILABLE</u>	2010	2013	2016	2020	2025	<u>Line</u>
1 California Source Gas						1
2     Regular Purchases	0	0	0	0	0	2
3     Received for Exchange/Transport	0	0	0	0	0	3
4 Total California Source Gas	0	0	0	0	0	4
5 Purchases from Other Utilities	0	0	0	0	0	5
6 Out-of-State Gas						6
7     Incremental Supplies (Utility)	151	157	163	172	183	7
8     Out-of-State Transport (for others)	215	216	213	212	218	8
9 Total Out-of-State Gas	366	373	376	384	401	9
10 GAS SUPPLY AVAILABLE	366	373	376	384	401	10
11 Underground Storage Withdrawal	22	22	22	22	22	11
12 <u>GAS SUPPLY TAKEN</u>						12
13 California Source Gas						13
14     Regular Purchases	0	0	0	0	0	14
15     Received for Exchange/Transport	0	0	0	0	0	15
16 Total California Source Gas	0	0	0	0	0	16
17 Purchases from Other Utilities	0	0	0	0	0	17
18 Out-of-State Gas						18
19     Incremental Supplies (Utility)	151	157	163	172	183	19
20     Out-of-State Transport (for others)	215	216	213	212	218	20
21 Total Out-of-State Gas	366	373	376	384	401	21
22 TOTAL Gas Supply Taken & Transported	366	373	376	384	401	22
23 Underground Storage Withdrawal	22	22	22	22	22	23

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## Annual Gas Supply and Requirements Forecast Years 2010-2025 MMCF/Day Average Temperature Year

<u>Line Requirements Forecast by End-Use</u>		2010	2013	2016	2020	2025	<u>Line</u>
1	CORE Residential	94	98	102	108	116	1
2	Commercial	50	52	53	56	60	2
3	NGV	2	3	3	3	3	3
4	Industrial	0	0	0	0	0	4
5	<i>Subtotal - CORE</i>	146	152	158	167	178	5
6	NONCORE Commercial	0	0	0	0	0	6
7	Industrial	10	11	11	12	13	7
8	Electric Generation	206	206	203	201	206	8
9	<i>Subtotal - NONCORE</i>	216	217	214	213	219	9
10	WHOLESALE All End Uses	0	0	0	0	0	10
11	<i>Co Use &amp; LUAF</i>	4	4	4	4	4	11
12	SYSTEM TOTAL - THROUGHPUT	366	373	376	384	401	12
13	<i>Storage Injection</i>	22	22	22	22	22	13
14	<u>Transportation &amp; Exchange</u>						14
15	CORE All End Uses	2	2	2	2	2	15
16	NONCORE Commercial/Industrial	9	9	10	10	11	16
17	Electric Generation	204	205	201	199	204	17
18	<i>Subtotal - RETAIL</i>	215	216	213	212	218	18
19	WHOLESALE All End Uses	0	0	0	0	0	19
20	TOTAL TRANSPORT & EXCHANGE	215	216	213	212	218	20
21	<u>CURTAILMENT (Retail &amp; Wholesale)</u>						21
22	Core	0	0	0	0	0	22
23	Com/Ind	0	0	0	0	0	23
24	Electric Generation	0	0	0	0	0	24
25	<i>Total - CURTAILMENT</i>	0	0	0	0	0	25
26	REFUSAL	0	0	0	0	0	26

**NOTE:**

Requirement forecast by end-use includes sales, transportation and exchange volumes.  
(Sub-Totals and Totals may vary due to rounding)