
2004
California
Gas
Report

EXECUTIVE SUMMARY

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Demand Outlook

California natural gas demand, including volumes bypassing utility systems, is expected to grow at an annual average rate of 0.6 percent from 2004 to 2025. Forecast growth is a combination of strong growth in the electric generation (EG) market segment tempered by slower growth in the residential and commercial markets and virtually no growth in the industrial sector.

EG gas demand is expected to increase at an annual average rate of 1.4 percent due to the assumptions that gas-fired generation continues to be the technology of choice to meet the ever-growing demand for electric power. Residential and commercial sector consumption is expected to increase by an average of 0.9 percent per year over the forecast period. This rate of growth is roughly two-thirds the rate of growth in underlying drivers such as household and employment growth and reflects increasing penetration of energy efficient homes and appliances. Demand in the industrial sector is estimated to decline by 0.1 percent annually as California continues its transition from a manufacturing based to a service based economy.

Focus On Efficiency and Environmental Quality

California utilities continue to focus on Customer Energy Efficiency (CEE) and other Demand-Side Management (DSM) programs in their utility electric and gas resource plans. The recent "energy crisis" in California was not limited to electricity. Gas resources were also severely constrained with gas prices at the Southern California border reaching levels nearly ten times greater than experienced in recent history. California utilities are committed to helping their customers make the best possible choices regarding use of this increasingly valuable resource.

Supply Outlook/ Pipeline Capacity

California's existing gas supply portfolio is regionally diverse and includes supplies from California sources (onshore and offshore), Southwestern U.S. supply sources (the Permian, Anadarko, and San Juan Basins), the Rocky Mountains, and Canada. The map provided on page 7 shows the locations of these supply sources and the natural gas pipelines serving California.

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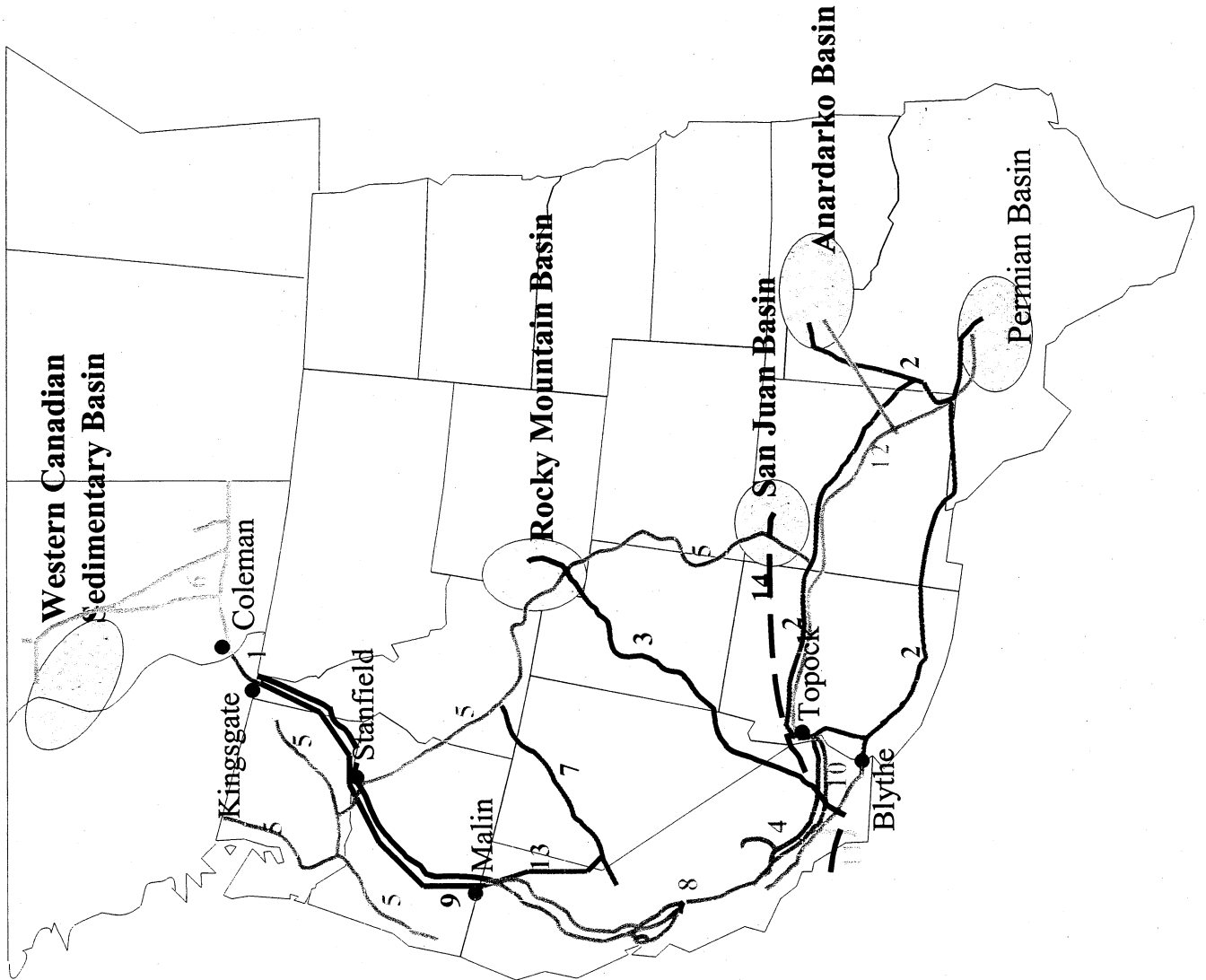
Additional pipeline capacity and open access have contributed to long-term supply availability and gas-on-gas competition. Interstate pipelines currently serving California include El Paso Natural Gas Company (El Paso), Kern River Transmission Company (Kern River), Mojave Pipeline Company (Mojave), Gas Transmission-Northwest, Transwestern Pipeline Company (Transwestern), Southern Trails Pipeline, and Tuscarora Pipeline.

Natural Gas Projects: Proposals, Completions, and Liquefied Natural Gas

Over the past three years, California natural gas utilities, interstate pipelines, and instate natural gas storage facilities have increased their delivery and receipt capacity to meet natural gas demand growth. In addition, more projects have been proposed and some are under construction. The California Energy Commission (Energy Commission) posts a list of natural gas projects on their website, which track both completed projects and ones that are being developed or in the proposal stage, along with proposed LNG projects. To review these project lists check the Energy Commission's website at www.energy.ca.gov, "[completed projects](#)", "[pending projects](#)", and "[LNG projects](#)".

**WESTERN NORTH
AMERICAN
NATURAL GAS
PIPELINES
(Not to scale)**

- 1 ANG
- 2 El Paso
- 3 Kern River
- 4 Mojave
- 5 Northwest
- 6 NOVA
- 7 Paiute
- 8 PG&E
- 9 GT-NW
- 10 SoCalGas
- 11 SDG&E
- 12 Transwestern
- 13 Tuscarora
- 14 Southern Trails



Statewide Consolidated Summary Tables

The consolidated summary tables on the following pages show the statewide aggregations of gas supplies and gas requirements (demand).

Gas sales and transportation volumes are consolidated under the general category of system gas requirements. Details of gas transportation for individual utilities are given in the tabular data for northern California and southern California. The wholesale category includes the City of Long Beach Gas and Electric Department, San Diego Gas & Electric Company, Southwest Gas Corporation, Los Angeles Department of Water and Power, Alpine Natural Gas, Island Energy, West Coast Gas, Inc, and the municipalities of Coalinga and Palo Alto. Wholesale gas service to the City of Vernon is scheduled to commence during the forecast period.

Some columns may not sum precisely because of modeling accuracy and rounding differences, and do not imply curtailments.

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**STATEWIDE TOTAL SUPPLY SOURCES AND REQUIREMENTS
MMCF/DAY**

Total California's Supply Sources	2004	2005	2008	2016	2020	2025
California Sources	660	660	660	660	660	660
Out-of-State	3,994	3,850	4,144	4,294	4,523	4,856
Net Withdrawal (Injection)	-	-	-	-	-	-
Utility Total	4,654	4,510	4,804	4,954	5,183	5,516
Pipeline Bypass (1)	1,228	1,278	1,374	1,432	1,422	1,405
Total	5,882	5,788	6,178	6,386	6,605	6,921
Total California's Requirements	2004	2005	2008	2016	2020	2025
Residential	1,249	1,265	1,291	1,399	1,448	1,510
Commercial	494	493	504	531	544	563
Natural Gas Vehicles	22	25	30	32	40	46
Industrial	770	750	749	744	740	738
Electric Generation (2)	1,201	1,115	1,197	1,224	1,378	1,617
Enhanced Oil Recovery	41	41	41	10	10	10
Wholesale/Resale	379	334	442	455	463	485
Company Use and Unaccounted for	85	83	88	91	96	102
Utility Total	4,241	4,106	4,342	4,486	4,729	5,071
Pipeline Bypass (1)	1,097	1,147	1,243	1,301	1,291	1,274
Total	5,338	5,253	5,585	5,787	6,010	6,345

NOTES:

- (1) Bypass is defined in the Glossary.
(2) Includes utility and non-utility generation.

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STATEWIDE TOTAL SUPPLY SOURCES - TAKEN MMCF/DAY

Northern California	2004	2005	2008	2016	2020	2025
California Sources (1)	150	150	150	150	150	150
Out-of-State	2,148	2,138	2,303	2,439	2,587	2,773
Net Withdrawal/(Injection)	-	-	-	-	-	-
Utility Total	2,298	2,288	2,453	2,589	2,737	2,923
Pipeline Bypass (2)	440	440	440	440	440	440
Northern California Total	2,738	2,728	2,893	3,029	3,177	3,363
Southern California	2004	2005	2008	2016	2020	2025
California Sources (1)	510	510	510	510	510	510
Out-of-State	1,946	1,712	1,841	1,855	1,936	2,083
Net Withdrawal/(Injection)	-	-	-	-	-	-
Utility Total	2,356	2,222	2,351	2,365	2,446	2,593
Pipeline Bypass (2)	788	838	934	992	982	965
Southern California Total	3,144	3,060	3,285	3,357	3,428	3,558

NOTES:

(1) Includes utility purchases and exchange/transport gas.

(2) Bypass is defined in the Glossary.

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**STATEWIDE ANNUAL GAS REQUIREMENTS (1)
MMCF/DAY**

Northern California	2004	2005	2008	2016	2020	2025
Residential	562	572	592	639	658	680
Commercial-Core	233	236	243	257	263	273
Natural Gas Vehicles-Core	3	4	5	6	6	7
Natural Gas Vehicles-Noncore	1	1	1	1	1	1
Industrial-Noncore	410	409	410	397	390	381
Wholesale/Resale	10	10	11	11	11	11
SMUD Electric Generation	59	82	128	128	128	128
Electric Generation (2)	632	623	702	784	911	1,070
Southwest Gas Exchange	-	-	7	9	9	9
Company Use and Unaccounted for	41	41	44	47	50	53
Utility Total	1,951	1,978	2,143	2,279	2,427	2,613
Pipeline Bypass (3)	440	440	440	440	440	440
Northern California Total	2,391	2,418	2,583	2,719	2,867	3,053
Southern California	2004	2005	2008	2016	2020	2025
Residential	687	693	697	760	790	830
Commercial-Core	200	202	206	217	223	231
Commercial-Noncore	57	55	55	57	58	59
Natural Gas Vehicles-Core	18	20	34	30	33	38
Industrial-Core	58	59	59	62	63	67
Industrial-Noncore	302	282	280	285	287	290
Wholesale/Resale	369	324	431	444	452	474
Electric Generation	569	492	495	440	467	527
Enhanced Oil Recovery - Steaming	41	41	41	10	10	10
Company Use and Unaccounted for	44	42	44	44	46	49
Utility Total	2,603	2,210	2,342	2,349	2,429	2,575
Pipeline Bypass (3)	788	838	934	992	982	965
Southern California Total	3,391	3,048	3,276	3,341	3,411	3,540

NOTES:

(1) Includes transportation gas.

(2) Electric Generation includes Non-EOR cogeneration, PG&E Utility Electric Generation, and other non-utility generation.

(3) Bypass is defined in the Glossary.

Statewide Sources and Disposition

The Statewide Sources and Disposition Summary is intended to complement the existing five-year recorded data tables included in the tabular data sections for each utility.

The information shown on the following tables shows by customer class the composition of supplies from both out-of-state and California sources and is based on the utilities' accounting records and on available gas nomination and preliminary gas transaction information obtained daily from customers or their appointed agents and representatives. It should be noted that data on daily gas nominations are frequently subject to reconciling adjustments. In addition, some of the data are based on allocations and assignments, which, by necessity, rely on estimated information. These tables have been updated to reflect the most current information.

Some columns may not sum exactly because of factored allocation and rounding differences, and do not imply curtailments.

2004 California Gas Report
Recorded 1999 Statewide Sources and Disposition Summary
MMcf/Day

	California Sources	El Paso	Trans western	PG&E	Kern River	Mojave	Other (1)	Total
<u>Southern California Gas Company</u>								
Core (2)	97	557	276	44	19	47	(23)	1,018
Noncore Commercial/Industrial	59	175	87	48	49	12	18	448
EG (3)	117	349	173	95	98	25	0	856
EOR	3	10	5	3	3	1	0	25
Wholesale/Resale/International (4)	55	164	81	45	46	12	11	413
Total	330	1,255	622	235	215	97	6	2,761
<u>Pacific Gas and Electric Company (5)</u>								
Core	8	134	76	595	62	0	0	875
Noncore Commercial/Industrial	134	196	52	824	28	0	31	1,265
EG (3)	6	19	12	46	16	0	3	103
Wholesale/Resale	3	4	3	5	4	0	0	19
Total	151	353	143	1,470	110	0	34	2,262
<u>Other Northern California</u>								
Core (5)	0	0	0	0	0	0	11	11
Non-Utilities								
Direct Sales/Bypass	508	0	0	0	296	294	0	1,098
TOTAL SUPPLIER	989	1,608	765	1,705	621	391	51	6,132
San Diego Gas & Electric Company (6)								
Core	12	69	33	29	0	0	5	148
Noncore	7	120	57	14	0	0	3	201
Total	19	189	90	43	0	0	8	349

NOTES:

- (1) Includes storage withdrawals.
- (2) Includes NGV volumes.
- (3) EG includes UEG, COGEN, and EOR Cogen.
- (4) Includes DGN volumes and SDG&E data as shown.

(5) Includes Southwest Gas Corp., Avista and Tuscarora data.
(6) SDG&E data revised from previous reports.

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2004 California Gas Report Recorded 2000 Statewide Sources and Disposition Summary MMcf/Day

	California Sources	El Paso	Trans western	PG&E GT-NW	Kern River	Mojave	Other ⁽¹⁾	Total
<u>Southern California Gas Company</u>								
Core (2)	28	600	263	11	6	40	10	957
Noncore Commercial/Industrial	49	167	80	53	48	11	55	463
EG (3)	144	492	235	155	141	32	0	1,199
EOR	4	14	6	4	4	1	0	33
Wholesale/Resale/International (4)	52	178	85	56	51	12	13	446
Total	276	1,450	670	278	250	95	78	3,098
<u>Pacific Gas and Electric Company</u>								
Core	12	130	79	604	28	0	0	853
Noncore Commercial/Industrial	142	255	101	929	17	0	0	1,444
EG (3)	7	8	7	8	7	0	0	37
Wholesale/Resale	2	1	2	2	0	0	0	7
Total	163	394	189	1,543	52	0	0	2,341
<u>Other Northern California</u>								
Core (5)	0	0	0	0	0	0	11	11
<u>Non-Utilities</u>								
Direct Sales/Bypass	552	0	0	0	294	243	0	1,089
TOTAL SUPPLIER	991	1,844	859	1,821	596	338	87	6,536
NOTES:								
(1) Includes storage withdrawals.								
(2) Includes NGV volumes.								
(3) EG includes UEG, COGEN, and EOR Cogen.								
(4) Includes DGN volumes and SDG&E data as shown.								
San Diego Gas & Electric Company (6)								
Core	9	63	25	36	0	0	5	139
Noncore Commercial/Industrial	1	171	70	6	0	0	1	250
Total	10	234	95	42	0	0	6	388

(5) Includes Southwest Gas Corp., Avista and Tuscarora data.

(6) SDG&E data revised from previous reports.

2004 California Gas Report
Recorded 2001 Statewide Sources and Disposition Summary
MMcf/Day

	California Sources	El Paso	Trans western	PG&E GT-NW	Kern River	Mojave	Other ⁽¹⁾	Total
<u>Southern California Gas Company</u>								
Core (2)	38	556	274	58	30	10	31	998
Noncore Commercial/Industrial	82	204	91	47	53	14	(93)	399
EG (3)	209	522	233	121	136	36	0	1,257
EOR	5	12	5	3	3	1	0	29
Wholesale/Resale/International (4)	80	201	90	47	52	14	(9)	475
Total	415	1,495	694	276	275	75	(70)	3,158
<u>Pacific Gas and Electric Company</u>								
Core	29	110	94	574	6	0	0	813
Noncore Commercial/Industrial/EG/Resale (3)	157	563	81	864	78	0	0	1,743
Total	186	673	175	1,438	84	0	0	2,556
<u>Other Northern California</u>								
Core (5)	0	0	0	0	0	0	11	11
<u>Non-Utilities</u>								
Direct Sales/Bypass	417	0	0	0	319	208	0	945
TOTAL SUPPLIER	1,018	2,168	869	1,714	678	283	(61)	6,668
NOTES:								
(1) Includes storage activities.								
(2) Includes NGV volumes.								
(3) EG includes UEG, COGEN, and EOR Cogen.								
(4) Includes DGN volumes and SDG&E data as shown.								
San Diego Gas & Electric Company (6)								
Core	9	45	17	43	4	4	16	136
Noncore Commercial/Industrial	1	205	77	3	0	0	1	288
Total	9	250	94	46	4	4	17	424

(5) Includes Southwest Gas Corp., Avista and Tuscarora data.

(6) SDG&E data revised from previous reports.

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**2004 California Gas Report
Recorded 2002 Statewide Sources and Disposition Summary
MMcf/Day**

	California Sources	El Paso	Trans western	PG&E GT-NW	Kern River	Mojave	Other (1)	Total
<u>Southern California Gas Company</u>								
Core (2)	73	588	251	49	29	6	(13)	984
Noncore Commercial/Industrial	78	125	71	51	74	18	6	433
EG (3)	161	259	148	107	153	38	11	869
EOR	6	10	6	4	6	2	1	39
Wholesale/Resale/International (4)	79	127	73	52	75	19	6	425
Total	398	1,109	550	264	336	83	11	2,750
<u>Pacific Gas and Electric Company (5)</u>								
Core	53	92	90	578	4	0	0	817
Noncore Commercial/Industrial/EG/Resale (3)	134	456	12	840	32	0	0	1,474
Total	187	548	102	1,418	36	0	0	2,291
<u>Other Northern California</u>								
Core (5)	0	0	0	0	0	0	12	12
<u>Non-Utilities</u>								
Direct Sales/Bypass	380	0	0	0	33	186	0	599
TOTAL SUPPLIER	965	1,657	652	1,682	405	269	23	5,653
<u>San Diego Gas & Electric Company (8)</u>								
Core	3	47	11	41	1	0	24	127
Noncore Commercial/Industrial	0	194	47	2	0	0	1	244
Total	3	241	59	43	1	0	24	371

NOTES:

- (1) Includes storage activities.
- (2) Includes NGV volumes.
- (3) EG includes UEG, COGEN, and EOR Cogen.
- (4) Includes DGN volumes and SDG&E data as shown.

San Diego Gas & Electric Company (8)

- (5) Includes Southwest Gas Corp., Avista and Tuscarora data.
- (6) SDG&E data revised from previous reports.

2004 California Gas Report
Recorded 2003 Statewide Sources and Disposition Summary
MMcf/Day

	California Sources	El Paso	Trans western	PG&E GT-NW	Kern River	Mojave	Other (1)	Total
Southern California Gas Company								
Core (2)	57	575	245	23	26	5	6	938
Noncore Commercial/Industrial	63	102	65	55	103	27	(4)	411
EG (3)	121	195	125	105	198	52	(8)	789
EOR	7	10	7	6	11	3	(1)	42
Wholesale/Resale/International (4)	58	93	60	50	95	25	(4)	377
Total	306	976	503	238	432	112	(11)	2,557
Pacific Gas and Electric Company (5)								
Core	0	146	9	569	9	0	0	733
Noncore Commercial/Industrial/EG/Resale (3)	155	305	78	595	157	0	64	1,354
Total	155	451	87	1,164	166	0	64	2,087
Other Northern California								
Core (5)	0	0	0	0	0	0	12	12
Non-Utilities								
Direct Sales/Bypass	496	0	0	0	644	150	0	804
TOTAL SUPPLIER	957	1,427	590	1,402	1,242	262	65	5,965

NOTES:

- (1) Includes storage activities. For PG&E, this includes volumes flowing over Kern River High Desert interconnect & Questar Southern Trails interconnect.
- (2) Includes NGV volumes.
- (3) EG includes UEG, COGEN, and EOR Cogen.
- (4) Includes DGN volumes and SDG&E data as shown.

San Diego Gas & Electric Company

Core	3	43	14	49	12	0	13	135
Noncore Commercial/Industrial	0	136	45	1	0	0	0	183
Total	3	179	60	50	12	0	13	317

(5) Includes Southwest Gas Corp., Avista and Tuscarora data.

