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2002  
California  
Gas  
Report

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***EXECUTIVE SUMMARY***

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### EXECUTIVE SUMMARY

#### DEMAND OUTLOOK

California natural gas demand, including volumes bypassing utility systems, is expected to grow at an annual average rate of 1.3 percent from 2002 to 2022. Forecast growth is a combination of strong anticipated 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 2.3 percent due to the assumption 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 half the rate of growth in underlying drivers such as household and employment growth and reflects increasing penetration of energy efficient homes, appliances and commercial equipment. 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, 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 customer’s 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 on the following page shows the locations of these supply sources and the natural gas pipelines serving California.

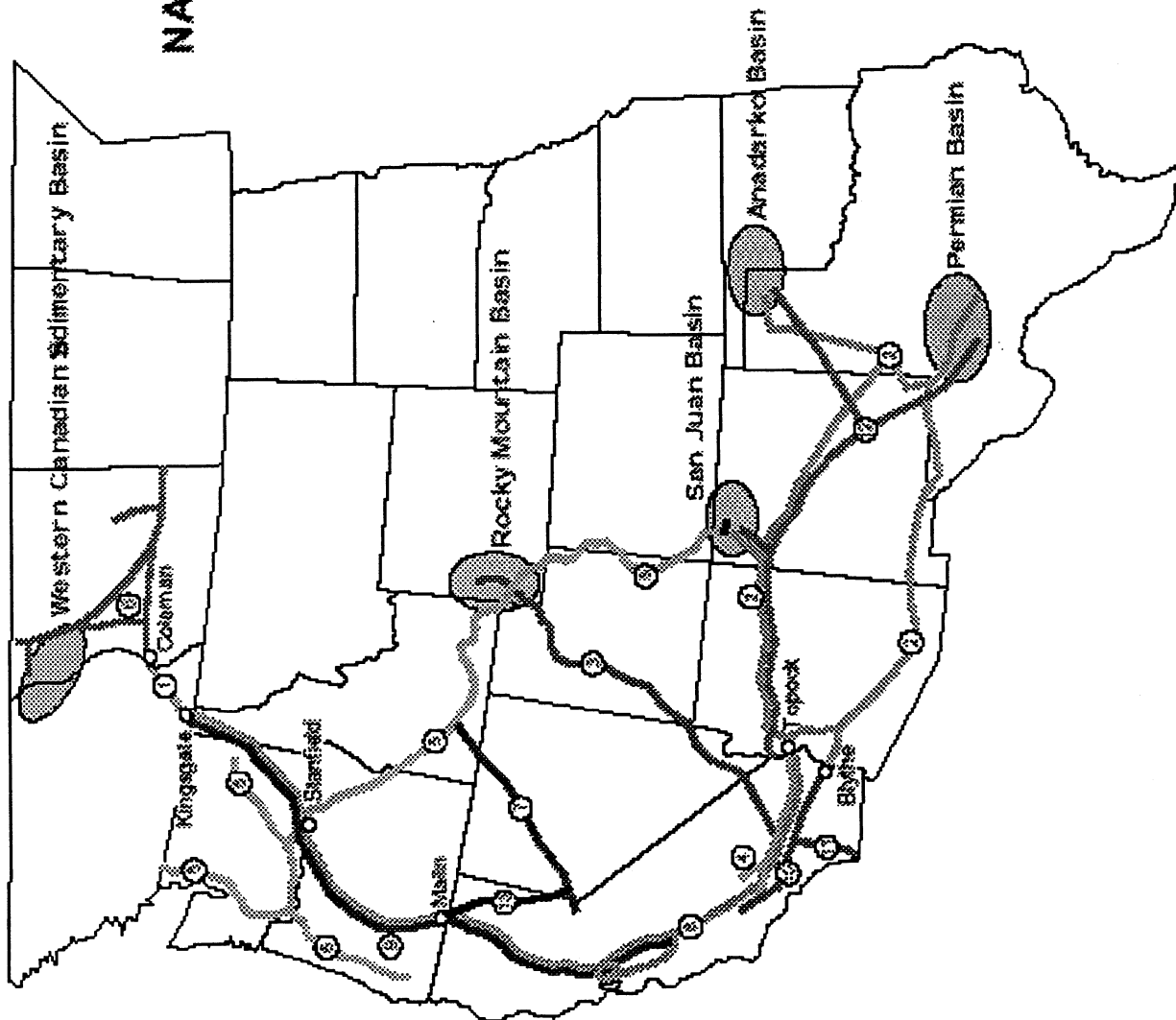
Additional pipeline capacity and open access have contributed to long-term supply availability and gas-on-gas competition. Interstate pipelines currently serving California include El Paso Natural Gas Company (El Paso), Kern River Transmission Company (Kern River), Mojave Pipeline Company (Mojave), PG&E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

### NATURAL GAS PROJECT PROPOSALS

To meet the growing demand for natural gas during the next 20 years, a number of pipeline projects have been proposed. Several are under construction, others are in the permitting phase and others are still developing the necessary support to move forward. In total these proposed projects would provide an estimated 4,835 MMcf/d in new delivery capacity to California. The California Energy Commission (CEC) is posting a natural gas project list on their website, which track the development of these proposed projects. To review this project list check the CEC's website at [www.energy.ca.gov](http://www.energy.ca.gov).

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

- ① TCPL BC System (ANG)
- ② El Paso
- ③ Kern River
- ④ Mojave
- ⑤ Northwest
- ⑥ TCPL Alberta System (NOVA)
- ⑦ Palute
- ⑧ PG&E
- ⑨ PG&E GT-NW
- ⑩ SoCalGas
- ⑪ SDG&E
- ⑬ Transwestem
- ⑭ Tuscarora



## **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 Energy 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.

## EXECUTIVE SUMMARY

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

<b>Total California's Supply Sources</b>	<b>2002</b>	<b>2003</b>	<b>2007</b>	<b>2015</b>	<b>2020</b>	<b>2022</b>
California Sources	660	660	660	660	660	660
Out-of-State	4,068	3,626	4,227	4,850	5,246	5,409
Net Withdrawal (Injection)	-	-	-	-	-	-
Utility Total	4,728	4,286	4,887	5,510	5,906	6,069
Pipeline Bypass (1)	769	836	859	922	915	913
Total	5,497	5,122	5,746	6,432	6,821	6,982
<b>Total California's Requirements</b>	<b>2002</b>	<b>2003</b>	<b>2007</b>	<b>2015</b>	<b>2020</b>	<b>2022</b>
Residential	1,284	1,293	1,436	1,450	1,524	1,555
Commercial	493	499	532	563	579	582
Natural Gas Vehicles	17	22	31	48	59	65
Industrial	863	859	824	787	774	769
Electric Generation (2)	1,549	1,170	1,663	2,060	2,332	2,446
Enhanced Oil Recovery	28	28	28	21	21	21
Wholesale/Resale	384	315	360	450	475	487
Company Use and Unaccounted for	87	79	89	99	106	108
Utility Total	4,705	4,265	4,963	5,478	5,870	6,033
Pipeline Bypass (1)	769	836	859	922	915	913
Total	5,474	5,101	5,822	6,400	6,785	6,946

#### NOTES:

(1) Bypass is defined in the Glossary.

(2) Includes utility and non-utility generation.

## EXECUTIVE SUMMARY

### STATEWIDE TOTAL SUPPLY SOURCES - TAKEN MMCF/DAY

<b>Northern California</b>	<b>2002</b>	<b>2003</b>	<b>2007</b>	<b>2015</b>	<b>2020</b>	<b>2022</b>
California Sources (1)	150	150	150	150	150	150
Out-of-State	1,962	1,866	2,135	2,554	2,788	2,882
Net Withdrawal/(Injection)	-	-	-	-	-	-
Utility Total	2,112	2,016	2,285	2,704	2,938	3,032
Pipeline Bypass (2)	366	366	366	366	366	366
Northern California Total	2,478	2,382	2,651	3,070	3,304	3,398
<b>Southern California</b>	<b>2002</b>	<b>2003</b>	<b>2007</b>	<b>2015</b>	<b>2020</b>	<b>2022</b>
California Sources (1)	510	510	510	510	510	510
Out-of-State	2,106	1,760	2,092	2,296	2,458	2,527
Net Withdrawal/(Injection)	-	-	-	-	-	-
Utility Total	2,616	2,270	2,602	2,806	2,968	3,037
Pipeline Bypass (2)	403	470	493	556	549	547
Northern California Total	3,019	2,740	3,095	3,362	3,517	3,584

#### NOTES:

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

(2) Bypass is defined in the Glossary.

## EXECUTIVE SUMMARY

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

Northern California	2002	2003	2007	2015	2020	2022
Residential	563	565	687	632	656	665
Commercial-Core	233	235	245	261	270	273
Natural Gas Vehicles-Core	2	3	4	6	7	8
Natural Gas Vehicles-Noncore	1	2	2	2	2	2
Industrial-Noncore	450	453	451	443	435	432
Wholesale/Resale	10	11	11	12	12	12
SMUD Electric Generation	65	67	125	185	185	185
Electric Generation (2)	746	640	815	1,113	1,317	1,400
Enhanced Oil Recovery	-	-	-	-	-	-
Southwest Gas Exchange	-	-	-	10	10	10
Company Use and Unaccounted for	32	31	34	40	43	44
<b>Utility Total</b>	<b>2,102</b>	<b>2,007</b>	<b>2,374</b>	<b>2,704</b>	<b>2,937</b>	<b>3,031</b>
Pipeline Bypass (3)	366	366	366	366	366	366
<b>Northern California Total</b>	<b>2,468</b>	<b>2,373</b>	<b>2,740</b>	<b>3,070</b>	<b>3,303</b>	<b>3,397</b>
Southern California	2002	2003	2007	2015	2020	2022
Residential	721	728	749	818	868	890
Commercial-Core	204	214	234	247	253	253
Commercial-Noncore	56	50	53	55	56	56
Natural Gas Vehicles-Core	14	17	25	40	50	55
Industrial-Core	57	67	75	70	69	68
Industrial-Noncore	356	339	298	274	270	269
Wholesale/Resale	374	304	349	438	463	475
Electric Generation	738	463	723	762	830	861
Enhanced Oil Recovery - Steaming	28	28	28	21	21	21
Company Use and Unaccounted for	55	48	55	59	63	64
<b>Utility Total</b>	<b>2,603</b>	<b>2,258</b>	<b>2,589</b>	<b>2,784</b>	<b>2,943</b>	<b>3,012</b>
Pipeline Bypass (3)	403	470	493	556	549	547
<b>Southern California Total</b>	<b>3,006</b>	<b>2,728</b>	<b>3,082</b>	<b>3,340</b>	<b>3,492</b>	<b>3,559</b>

**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 that, 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.

2002 California Gas Report  
Recorded 1997 Statewide Sources and Disposition Summary  
MMcf/Day

	California Sources	El Paso	Trans western	PG&E	Kern River	Mojave	Other (1)	Total
<b>Southern California Gas Company</b>								
Core (2)	77	487	212	26	6	76	3	886
Noncore Commercial/Industrial	56	179	57	111	32	6	(5)	435
EG (3)	103	328	105	203	58	11	0	808
EOR	5	17	5	10	3	1	(0)	41
Wholesale/Resale/International (4)	49	156	50	96	28	5	(5)	379
<b>Total</b>	290	1,166	429	447	126	98	(7)	2,549
<b>Pacific Gas and Electric Company</b>								
Core (5)	29	139	1	565	4	0	4	742
Noncore (6)	118	77	52	456	67	0	34	804
UEG	0	137	52	203	3	0	22	418
EOR	*	*	*	*	*	*	*	*
Wholesale/Resale	0	0	0	23	0	0	0	23
<b>Total</b>	147	353	106	1,246	75	0	60	1,987
<b>Other Northern California</b>								
Core (7)	0	0	0	0	0	0	9	9
<b>Non-Utilities</b>								
Direct Sales/Bypass	329	7	4	0	434	202	0	976
<b>TOTAL SUPPLIER</b>	766	1,526	539	1,693	635	300	62	5,521
<b>San Diego Gas &amp; Electric Company</b>								
Core	11	57	19	24	1	0	6	118
Noncore Commercial/Industrial	3	47	16	6	0	0	2	73
UEG	13	64	21	28	1	0	8	134
<b>Total</b>	26	168	56	57	2	0	16	325

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

San Diego Gas & Electric Company  
 Core  
 Noncore Commercial/Industrial  
 UEG  
 (5) Core includes residential and commercial volumes.  
 (6) Noncore includes industrial, resale, and non-utility EG volumes.  
 (7) Includes customers served by Southwest Gas Corp. and Avista.

2002 California Gas Report  
Recorded 1998 Statewide Sources and Disposition Summary  
MMcf/Day

	California Sources	Trans			Kern		Mojave	Other <sup>(1)</sup>	Total
		El Paso	western	PG&E	River				
<b>Southern California Gas Company</b>									
Core (2)	81	589	246	52	23	34	(32)	993	
Noncore Commercial/Industrial	60	177	107	69	50	7	(30)	440	
EG (3)	96	282	171	110	80	11	0	750	
EOR	4	11	7	4	3	0	0	29	
Wholesale/Resale/International (4)	56	166	100	64	47	7	(17)	423	
<b>Total</b>	<b>298</b>	<b>1,224</b>	<b>631</b>	<b>299</b>	<b>204</b>	<b>60</b>	<b>(79)</b>	<b>2,636</b>	
<b>Pacific Gas and Electric Company</b>									
Core (5)	13	103	102	595	44	0	0	858	
Noncore (6)	128	182	33	577	34	0	20	974	
UEG	3	46	40	230	15	0	8	343	
EOR	*	*	*	*	*	*	*	*	
Wholesale/Resale	3	4	4	8	3	0	0	22	
<b>Total</b>	<b>147</b>	<b>334</b>	<b>181</b>	<b>1,410</b>	<b>97</b>	<b>0</b>	<b>28</b>	<b>2,197</b>	
<b>Other Northern California</b>									
Core (7)	0	0	0	0	0	0	11	11	
<b>Non-Utilities</b>									
Direct Sales/Bypass	407	0	0	0	337	264	8	1,016	
<b>TOTAL SUPPLIER</b>	<b>852</b>	<b>1,558</b>	<b>812</b>	<b>1,709</b>	<b>638</b>	<b>324</b>	<b>(32)</b>	<b>5,860</b>	
<b>San Diego Gas &amp; Electric Company</b>									
Core	14	62	28	22	0	0	9	135	
Noncore Commercial/Industrial	8	68	31	14	0	0	5	126	
UEG	17	70	33	25	0	0	12	157	
<b>Total</b>	<b>39</b>	<b>200</b>	<b>92</b>	<b>61</b>	<b>0</b>	<b>0</b>	<b>26</b>	<b>418</b>	

NOTES:

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

- (5) Core includes residential and commercial volumes.
- (6) Noncore includes industrial, resale, and non-utility EG volumes.
- (7) Includes customers served by Southwest Gas Corp., Avista and Tuscarora.

2002 California Gas Report  
Recorded 1999 Statewide Sources and Disposition Summary  
MMcf/Day

	California Sources		Trans western		PG&E		Kern River		Mojave		Other (1)		Total	
	El Paso	El Paso	western	western	PG&E	PG&E	River	River	Mojave	Mojave	Other (1)	Other (1)		
<b>Southern California Gas Company</b>														
Core (2)	97	557	276	276	44	44	19	19	47	47	(23)	(23)	1,018	
Noncore Commercial/Industrial EG (3)	59	175	87	87	48	48	49	49	12	12	18	18	448	
EOR	117	349	173	173	95	95	98	98	25	25	0	0	856	
Wholesale/Resale/International (4)	3	10	5	5	3	3	3	3	1	1	0	0	25	
<b>Total</b>	330	1,255	622	622	235	235	215	215	97	97	6	6	2,761	
<b>Pacific Gas and Electric Company</b>														
Core (5)	8	134	76	76	595	595	62	62	0	0	0	0	875	
Noncore (6)	134	196	52	52	824	824	28	28	0	0	31	31	1,265	
UEG	6	19	12	12	46	46	16	16	0	0	3	3	103	
EOR	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Wholesale/Resale	3	4	3	3	5	5	4	4	0	0	0	0	19	
<b>Total</b>	151	353	143	143	1,470	1,470	110	110	0	0	34	34	2,262	
<b>Other Northern California</b>														
Core (7)	0	0	0	0	0	0	0	0	0	0	11	11	11	
<b>Non-Utilities</b>														
Direct Sales/Bypass	508	0	0	0	0	0	296	296	294	294	0	0	1,098	
<b>TOTAL SUPPLIER</b>	989	1,608	765	765	1,705	1,705	621	621	391	391	51	51	6,132	
<b>NOTES:</b>														
(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.														
<b>San Diego Gas &amp; Electric Company</b>														
Core	12	70	33	33	29	29	0	0	0	0	5	5	148	
Noncore	7	119	58	58	15	15	0	0	0	0	3	3	201	
<b>Total</b>	19	188	91	91	43	43	0	0	0	0	8	8	349	
(5) Core includes residential and commercial volumes.														
(6) Noncore includes industrial, resale and non-utility EG volumes.														
(7) Includes Southwest Gas Corporation, Avista and tuscarora data.														

2002 California Gas Report  
Recorded 2000 Statewide Sources and Disposition Summary  
MMcf/Day

	California Sources		Trans western		PG&E		Kern River		Mojave		Other <sup>(1)</sup>		Total
	El Paso				GT-NW								
<b>Southern California Gas Company</b>													
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
<b>Total</b>	<b>276</b>	<b>1,450</b>	<b>670</b>		<b>278</b>		<b>250</b>		<b>95</b>		<b>78</b>		<b>3,098</b>
<b>Pacific Gas and Electric Company</b>													
Core (5)	12	130	79		604		28		0		0		853
Noncore (6)	142	255	101		929		17		0		0		1,444
UEG	7	8	7		8		7		0		0		37
EOR	*	*	*		*		*		*		*		*
Wholesale/Resale	2	1	2		2		0		0		0		7
<b>Total</b>	<b>163</b>	<b>394</b>	<b>189</b>		<b>1,543</b>		<b>52</b>		<b>0</b>		<b>0</b>		<b>2,341</b>
<b>Other Northern California</b>													
Core (7)	0	0	0		0		0		0		9		9
<b>Non-Utilities</b>													
Direct Sales/Bypass	552	0	0		0		294		243		0		1,089
<b>TOTAL SUPPLIER</b>	<b>991</b>	<b>1,844</b>	<b>859</b>		<b>1,821</b>		<b>596</b>		<b>338</b>		<b>87</b>		<b>6,536</b>
<b>NOTES:</b>													
(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.													
<b>San Diego Gas &amp; Electric Company</b>													
Core	9	63	25		36		0		0		5		139
Noncore Commercial/Industrial	1	171	70		6		0		0		1		250
<b>Total</b>	<b>10</b>	<b>234</b>	<b>95</b>		<b>42</b>		<b>0</b>		<b>0</b>		<b>6</b>		<b>388</b>
(5) Core includes residential and commercial volumes.													
(6) Noncore includes industrial, resale and non-utility EG volumes.													
(7) Includes Southwest Gas Corporation, Avista, and Tuscarora data.													

2002 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 <sup>(1)</sup>	Total
<b>Southern California Gas Company</b>								
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
EOB	5	12	5	3	3	1	0	29
Wholesale/Resale/International (4)	80	201	90	47	52	14	(9)	475
<b>Total</b>	<b>415</b>	<b>1,495</b>	<b>694</b>	<b>276</b>	<b>275</b>	<b>75</b>	<b>(70)</b>	<b>3,158</b>
<b>Pacific Gas and Electric Company</b>								
Core (5)	29	110	94	574	6	0	0	813
Noncore (6)	157	563	81	864	78	0	0	1,743
EOB	*	*	*	*	*	*	*	0
<b>Total</b>	<b>186</b>	<b>673</b>	<b>175</b>	<b>1,438</b>	<b>84</b>	<b>0</b>	<b>0</b>	<b>2,556</b>
<b>Other Northern California</b>								
Core (7)	0	0	0	0	0	0	9	9
<b>Non-Utilities</b>								
Direct Sales/Bypass	417	0	0	0	319	208	0	945
<b>TOTAL SUPPLIER</b>	<b>1,018</b>	<b>2,168</b>	<b>869</b>	<b>1,714</b>	<b>678</b>	<b>283</b>	<b>(61)</b>	<b>6,668</b>
<b>San Diego Gas &amp; Electric Company</b>								
Core	9	45	17	44	4	4	16	139
Noncore Commercial/Industrial	1	172	65	7	1	1	3	250
<b>Total</b>	<b>10</b>	<b>217</b>	<b>81</b>	<b>51</b>	<b>5</b>	<b>4</b>	<b>19</b>	<b>388</b>

- 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.
  - (5) Core includes residential and commercial volumes.
  - (6) Noncore includes industrial, resale and non-utility EG volumes.
  - (7) Includes Southwest Gas Corporation, Avista and Tuscarora data.