NRNC MARKET CHARACTERIZATION AND PROGRAM ACTIVITIES TRACKING REPORT PY2003

FINAL

Prepared for

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1. EXECUTIVE SUMMARY

This section presents a summary of the results from the statewide Market Characterization and Program Activities Tracking (MCPAT) Study. The Market Characterization conducted by the MCPAT Study is an integral part of the statewide Market Assessment and Evaluation activities, and is intended to inform policymakers, regulators, stakeholders, as well as program managers, implementers and evaluators about the characteristics of the California nonresidential new construction (NRNC) market and its segments. The Program Activities Tracking part of the MCPAT study focuses on the accomplishments of the statewide NRNC Savings By Design (SBD) Program, and describes the ways in which the SBD Program fits into the NRNC market. The activities described in this report cover new construction and remodel/renovation/tenant improvement projects from calendar year 2003.

1.1 MARKET CHARACTERIZATION

The market characterization part of the MCPAT Study consists of developing an understanding of the characteristics of the California NRNC market and its segments. This task requires periodic data collection to capture and describe changes in the NRNC market. Specifically, F.W. Dodge data were collected for calendar year 2003, and summarized to describe nonresidential construction value and volume, building types, building size, and design team characteristics statewide, and by investor owned utility (IOU) territory. The current report, as well as previous reports produced in PY2000-2002 are meant to allow program designers, implementers, evaluators, and market participants to determine the extent to which the NRNC market changes over a given period of time, understand how energy efficient practices are implemented into the market, and if necessary, modify the SBD Program to most effectively enhance energy efficiency practices in the new construction market. A summary of statewide findings for 2003 is presented in Table 1.1 and in Exhibit 1.1.

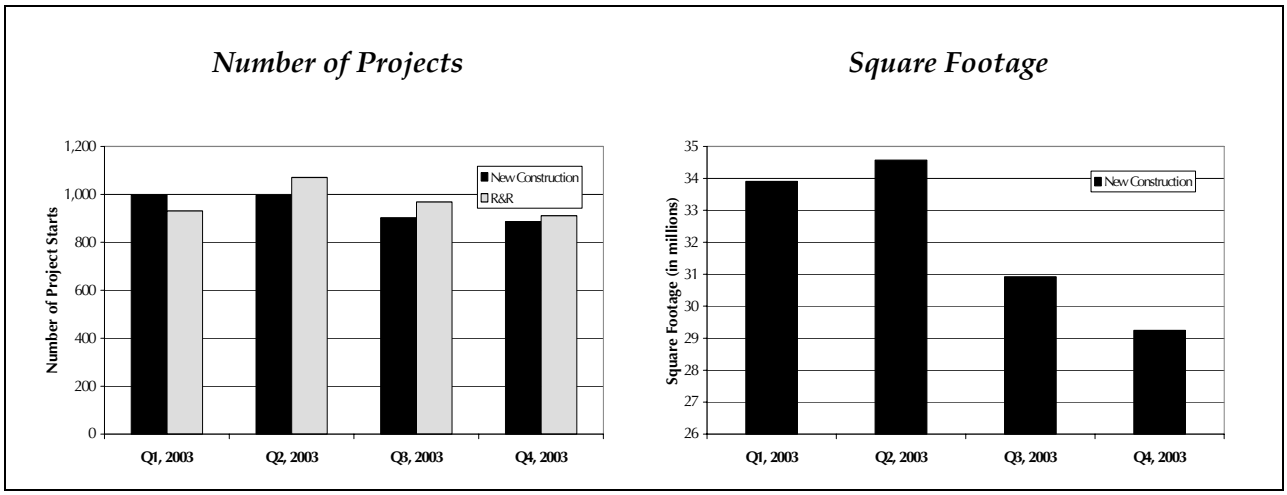
Table 1.1 Market Summary of Project Starts in California

Project Type	Quarter	Value ($ billions)	Area (millions of sqft)	Number of Projects
New and additions	Q1, 2003	3.093	33.90	998
	Q2, 2003	3.979	34.57	996
	Q3, 2003	3.251	30.92	902
	Q4, 2003	3.036	29.24	886
	Subtotal	13.359	128.63	3,782
Alterations	Q1, 2003	0.719	-	931
	Q2, 2003	1.021	-	1,070
	Q3, 2003	0.878	-	968
	Q4, 2003	0.760	-	911
	Subtotal	3.377	-	3,880
Total		16.736	-	7,662

F.W. Dodge data indicate that there were almost 7,700 nonresidential projects that started construction in California in calendar year 2003, almost equally divided between new construction and alteration projects. The value of new construction projects, however, was

approximately three times greater than of alterations. There was little variation in the overall market activity from quarter to quarter, as well as geographically and by building type.

Exhibit 1.1
F.W. Dodge Nonresidential Project Starts by Quarter in 2003



1.2 SAVINGS BY DESIGN PROGRAM TRACKING AND PENETRATION

The second objective of the MCPAT Study is to track the activities surrounding the Savings By Design (SBD) NRNC program, and to evaluate its penetration levels in the overall NRNC market. The task requires the collection and analysis of the internal tracking systems maintained by each of the IOUs. The tracking systems contain data regarding the number of participants in the SBD program, type and size of projects, geographic locations, energy, demand and therm savings, and measures installed through the program.

Results indicate that SBD program participation is high in the building segments with significant market activity, namely office, school and retail. Among the measures installed by program participants, whole building design, lighting and "other HVAC measures" (VSDs, motors, furnaces, boilers) are the most popular. These measures also account for the highest estimated energy savings, in both new construction projects and R&R projects.

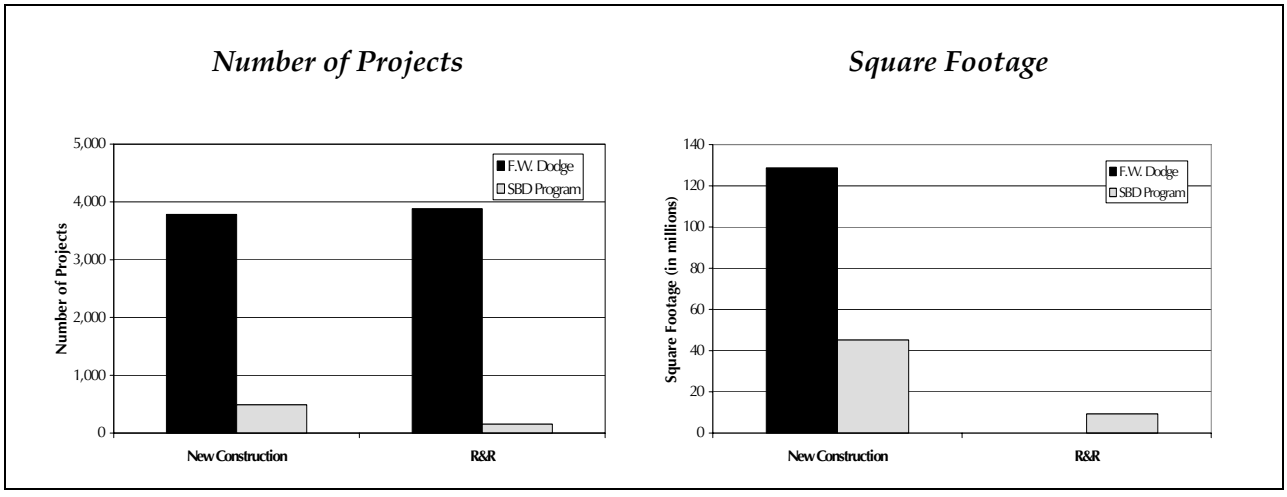
The SBD program data were used in conjunction with the NRNC market data collected in the first part of the Study to prepare the annual SBD program tracking and penetration analysis report. A summary of statewide program activity is presented in Table 1.2. Exhibit 1.2 shows program penetration results for calendar year 2003.

Table 1.2 Summary of Statewide SBD Program Activity in PY2003

Project Type	Quarter	Area (millions of sqft)	Number of Participants
New and additions	Q1, 2003	2.42	35
	Q2, 2003	7.47	80
	Q3, 2003	12.30	123
	Q4, 2003	22.98	251
	Subtotal	45.17	489
Alterations (R&R)	Q1, 2003	0.90	13
	Q2, 2003	2.34	35
	Q3, 2003	2.79	54
	Q4, 2003	3.27	52
	Subtotal	9.30	154
Total		54.47	643

Program penetration results for PY2003 indicate that the SBD program captured 12.9% of the nonresidential new construction projects and 4.0% of the R&R projects. By square footage, program penetration into the new construction market is 35.1%, indicating that the program continues to reach relatively large buildings. Although this penetration level is significant, opportunities remain for increased program penetration into the market.

Exhibit 1.2
Statewide SBD Program Penetration into the NRNC Market in 2003



1.3 HISTORIC TRENDS

A summary of market and program activity from July 1999 (i.e. from the SBD program inception) until the end of calendar year 2003 is presented in Table 1.3.

Table 1.3
Historic Statewide SBD Program and NRNC Market Activity

Program Type	Year	Quarters	Dodge Area (millions of sqft)	SBD Area (millions of sqft)	%Area Penetration	Dodge Projects	SBD Participants	%Projects Penetration
New Construction	1999	3-4	88.38	15.37	17.4%	2,511	128	5.1%
	2000	1-4	180.15	22.92	12.7%	4,674	316	6.8%
	2001	1-4	178.49	60.53	33.9%	4,805	576	12.0%
	2002	1-4	143.62	38.63	26.9%	4,626	435	9.4%
	2003	1-4	128.63	45.17	35.1%	3,782	489	12.9%
Alterations (R&R)	1999	3-4	-	3.29	-	2,400	52	2.2%
	2000	1-4	-	13.27	-	4,654	182	3.9%
	2001	1-4	-	12.60	-	4,791	222	4.6%
	2002	1-4	-	6.65	-	4,343	127	2.9%
	2003	1-4	-	9.30	-	3,880	154	4.0%

Between mid-1999 and the end of 2001 market activity was relatively stable with respect to the number of projects starting construction per year. The high SBD program participation rates in 2001 may be due to changes in building codes and Program standards that went into effect on July 1, 2001, but also to the overall conservation efforts undertaken in California prior to, and during the Summer of 2001.

Similar to the general trends in the California economy, NRNC activity decreased in 2002 and 2003 as compared to the previous years. With respect to the number of projects that started construction, 2002 marked a 5 percent decrease relative to the previous two years, and 2003 an 18 percent decrease relative to the previous three years. In terms of square footage of new construction, the NRNC market building rate dropped by approximately 20 percent in 2002 as compared to the previous two years, and by 23 percent in 2003 as compared to the previous three years.

SBD program activity follows similar trends as the NRNC market, with a relatively busy year in 2001 and a less active year in 2002. The 2003 program year was slightly more active than 2002, but significantly less active than 2001. It is important to note, however, that the 2003 program year achieved the highest historic penetration rates, both in terms of square footage of new construction and in terms of number of participant projects.

The remainder of this report presents detailed market and program tracking and penetration results.

2. INTRODUCTION

The main objective of the statewide Market Characterization and Program Activity Tracking (MCPAT) Study is to gather, summarize and report nonresidential new construction (NRNC) market characteristics, as well as program tracking information in support of the statewide Savings By Design (SBD) energy efficiency program offered by Southern California Edison, Pacific Gas & Electric Company, San Diego Gas & Electric Company, and Southern California Gas Company. The publication of results on an ongoing basis allows program designers, implementers, evaluators, and market participants to determine the extent to which the NRNC market changes over a given period of time, understand how energy efficiency practices are implemented in the NRNC market, and if necessary, modify the SBD Program to most effectively enhance energy efficiency practices in the new construction market. This Annual Report summarizes the NRNC market and SBD Program tracking and penetration results in calendar year 2003.

2.1 NRNC DATA SOURCES

The MCPAT Study conducts the NRNC market characterization using several sources of information. The most important among these are the F.W. Dodge Reports, which provide detailed project information on construction projects that have *started* within a given time period (e.g. a quarter). F.W. Dodge Reports specify project title and location, type of project (new, addition or alteration), type of building under construction, area (square feet) of new or added space, project cost (valuation), and contact information (owner, architect, engineer, contractor, as available). Appendix A contains a glossary of building types tracked by F.W. Dodge.

Regarding project types, F.W. Dodge Reports make a clear distinction between new/addition projects, in which new building area is produced, and alteration projects (which include remodeling, renovation, tenant improvement, and retrofit projects). Even though retrofit projects do not qualify for the SBD program, the F.W. Dodge alteration data remain the best available source of information regarding the commercial remodel/renovation (R&R) market.

The building permit data that were filed with the more than 515 city and county building departments in California represent another source of NRNC data. These permit data are collected by the Construction Industry Research Board (CIRB) into a database that reports monthly permit value data by county and building type. While these data are not as complete as the F.W. Dodge Reports, they provide a framework for the value of commercial projects in California that begin construction in each quarter.

It must be noted that there are differences between the *permit* valuation reported by CIRB and the *project start* valuation reported by F.W. Dodge. Some of these differences are attributable to the time delay that naturally occurs between permit filing and construction start. Others stem from the fact that F.W. Dodge records publicly-bid projects, whereas some projects do not go to public bid. Appendix B summarizes the value of nonresidential *permits filed* in PY2003, by building type, as recorded by the CIRB.

2.2 THE SAVINGS BY DESIGN PROGRAM

The Savings By Design (SBD) statewide NRNC program, currently implemented by the four California electric investor-owned utilities (IOUs) PG&E, SCE, SDG&E and SoCalGas, is designed to transform energy-efficiency investment behavior in the commercial construction market. The program seeks to change the design practice of professionals in the construction industry by promoting the understanding and use of energy efficient and integrated design techniques in commercial building construction; to increase awareness of building owners of the benefits associated with integrated designs; and to increase the penetration of energy efficient materials, equipment, and systems in the commercial building market.

The SBD program targets specific links in the commercial building construction decision-making chain, reflecting differences in design activities and priorities between large and small buildings and various occupancies. The Whole Building Approach is used for complex projects where the design team can work closely to integrate the energy systems. The Systems Approach is used for projects where design of the energy systems is done at different phases: where one energy system predominates, where intervention occurs late in the design, or for buildings with simple system interactions.

Within the SBD program, "new construction" program elements address the commercial new construction market segments, including the public, private, and speculative markets. Remodeling and renovation ("R&R") program elements address the commercial remodeling and renovation market segments specific to "gut-rehabilitation" and tenant improvement projects, including the public, private, and speculative markets.

2.3 REPORT LAYOUT

The core of this report starts in Chapter 3 with a characterization of the NRNC market in PY2003, as described by F.W. Dodge. Drawing on the Savings By Design program participation databases maintained by the four California electric investor-owned utilities (IOUs) PG&E, SCE, SDG&E and SoCalGas, the chapter then summarizes the characteristics of new construction program participants in PY2003.

Chapter 4 presents the market characteristics for alteration projects, as described by F.W. Dodge. It then describes program participation in PY2003 for the renovation/remodel/first tenant improvement (R&R) element of the SBD program.

An evaluation of SBD program penetration into the market in PY2003 is presented in Chapter 5.

Quarterly market and SBD participation data, as well as estimates for the SBD program penetration into the market from program inception in July 1999, are summarized in Chapter 6.

Based on F.W. Dodge Reports, Chapter 7 presents the most active market actors (architects and engineers) in PY2003.

3. STATEWIDE NONRESIDENTIAL NEW CONSTRUCTION TRENDS

This chapter presents information on the nonresidential new construction activity that has occurred in PY2003, in the State of California. The first section covers the total valuation, the number of project starts, and the total square footage of new construction projects by county, as reported by F.W. Dodge. The second section analyzes the Savings By Design (SBD) program activity for new construction projects for which the IOUs have committed funds in PY2003.

3.1 NEW CONSTRUCTION MARKET CHARACTERISTICS IN PY2003

The following exhibits and tables present the nonresidential new construction market activity by building segment and county, in terms of valuation, number of permits, and square feet. To summarize the market activity by utility territory, project zip codes were used in conjunction with California Energy Commission's zip code-to-utility territory mapping to allocate projects to IOU and non-IOU utilities. Appendix C contains a short description of the CEC zip code-to-utility territory mapping. SoCalGas's CIS was used to obtain a comprehensive list of zip codes served by SoCalGas. Using this list, as well as the CEC mapping, a list of zip codes was developed that are served by SoCalGas, but not by any other IOU. This list includes zip codes corresponding to the Los Angeles Department of Water and Power (LADWP) territory, as well as for several other electrical MUNI territories, and is consistent with the territory in which SoCalGas's Savings By Design program offers incentives for electric measures.

Table 3.1 presents the F.W. Dodge valuation for nonresidential new construction projects that have started construction during PY2003. To emulate SBD program scope as closely as possible, additions reported by F.W. Dodge were included with new construction; this explains the higher project value reported by F.W. Dodge, as compared to the CIRB data summarized in Appendix B.

Data in Table 3.1 indicates that the PG&E service territory accounts for the largest project start value in PY2003, almost half of which is concentrated in the school and office segments. The SCE service territory follows closely, with a large fraction of the project value concentrated in the school and storage segments. In the SDG&E and SoCalGas service territories, the school and office segments account for the highest project start value. Non-IOU areas, consisting of the service territories of multiple municipal utilities and other entities, also account for a relatively large share of the project start value. Half of the Non-IOU project value is concentrated in the school, retail and office segments.

As shown in Exhibit 3.1 below, Los Angeles, San Diego, San Bernardino, Riverside and Orange Counties account for the highest value of projects that *have started construction* in PY2003. F.W. Dodge did not report any project starts in PY2003 in Alpine, Mariposa and Sierra Counties. Among building types, school, office and retail account for the highest project start valuation, but service, storage, medical and amusement also show relatively high market activity. The education segment (libraries, museums) accounts for the lowest project start value.

Exhibit 3.1
New Construction Market Segments with the Highest Project Start Valuation in PY2003

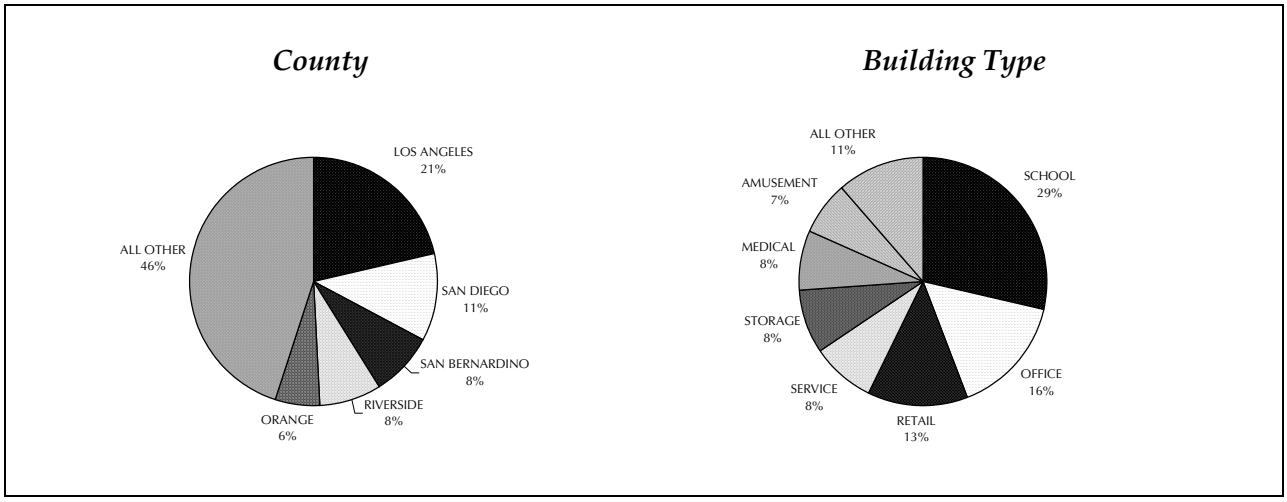
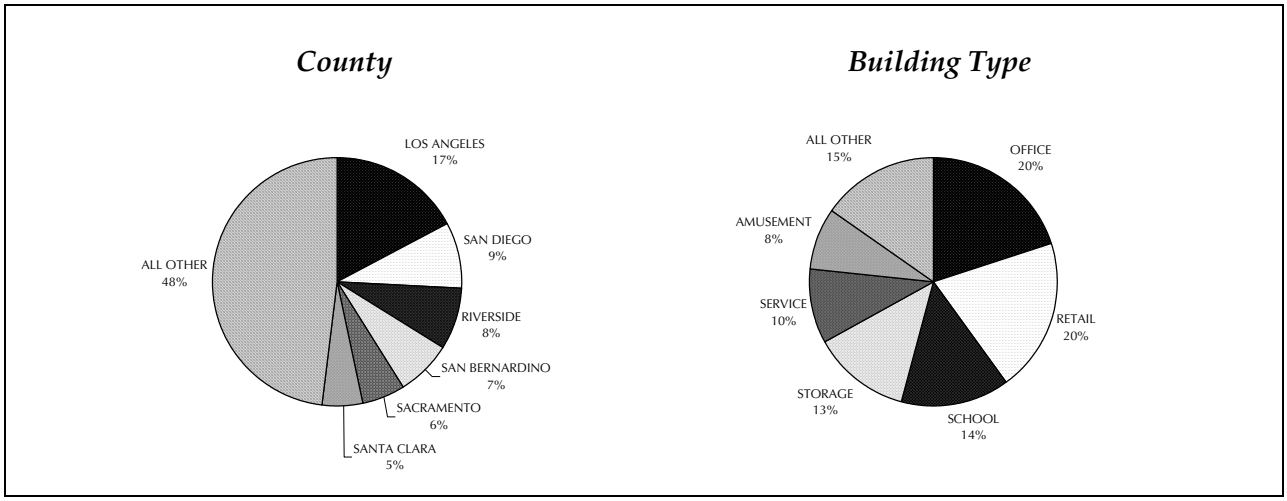


Table 3.2 presents the number of nonresidential new construction and addition projects that have started construction in PY2003, as reported by F.W. Dodge. Among utility territories, PG&E leads with the highest number of project starts, followed by SCE. SDG&E territory accounts for a few more project starts than SoCalGas territory. Non-IOU areas have a significant number of project starts, higher than the number in SDG&E and SoCalGas territories together. As shown in Exhibit 3.2 below, Los Angeles, San Diego, Riverside, San Bernardino, Sacramento and Santa Clara Counties have the highest number of new construction project starts. Among building types, office, retail, school, storage and service account for the highest number of project starts, while the education segment (museums, libraries) accounts for the lowest number of project starts in PY2003.

Exhibit 3.2
New Construction Market Segments with the Highest Number of Project Starts in PY2003

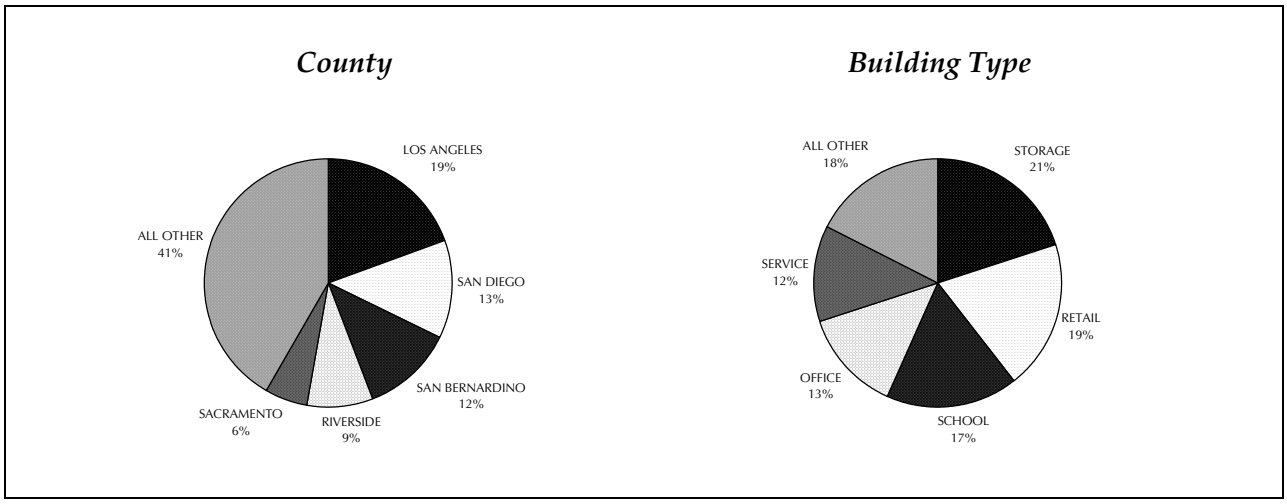


Tables 3.3 and 3.4 summarize quarterly project starts by county and building type. There is little variation from quarter to quarter in the number of project starts by segment.

Table 3.5 presents the number of square feet of nonresidential new construction and addition projects that have started construction in PY2003, as reported by F.W. Dodge. Among utility territories, SCE accounts for the largest number of new square feet built in PY2003, two-thirds of which are concentrated in the storage, retail, and school segments. PG&E follows closely, with over half of the square footage concentrated in the retail, office and school segments. In the SDG&E service territory, the office, retail and service segments account for the highest square footage built, while in SoCalGas territory the school and service segments account for over one-half of new square footage. Non-IOU areas, consisting of the service territories of multiple municipal utilities and other entities, also account for a relatively large share of the new square footage built in PY2003. A large fraction of the Non-IOU project area is concentrated in the retail, storage and service segments.

As shown in Exhibit 3.3 below, the counties with the largest number of square feet attributable to new project starts are Los Angeles, San Diego, San Bernardino, Riverside and Sacramento. The storage, retail, school, office and service segments account for large square footage of new space, while the education segment (museums, libraries) accounts for the least amount of new space built in PY2003.

Exhibit 3.3
New Construction Market Segments with the Highest Square Footage in PY2003



Tables 3.6 and 3.7 summarize quarterly square feet of nonresidential new construction built, by county and building type. Again, the volume of new space built does not change much from quarter to quarter, either geographically or by building type.

Table 3.1 F.W. Dodge Valuation of New Construction Project Starts in PY2003 by Building Type, County and Service Territory ($1,000)

	AMUSEMENT	ASSEMBLY	EDUCATION	GOVT	HOTEL	MEDICAL	OFFICE	RETAIL	SCHOOL	SERVICE	STORAGE	OTHER	TOTAL
COUNTY													
ALAMEDA	3,222	5,115	.	6,617	5,000	12,113	164,188	13,429	63,855	16,815	11,059	40,800	342,213
ALPINE	.	.	.	.	.	.	.	.	.	.	.	.	0
AMADOR	.	1,400	.	1,762	.	500	.	.	.	.	.	.	3,662
BUTTE	4,034	500	.	.	47,000	2,000	3,576	1,475	4,995	1,156	4,251	.	68,987
CALAVERAS	300	368	.	740	.	.	154	.	.	.	4,000	6,174	11,736
COLUSA	.	.	.	.	.	.	175	.	3,023	.	.	.	3,198
CONTRA COSTA	503	99	.	.	.	2,349	39,726	51,538	135,191	9,377	2,484	7,235	248,502
DEL NORTE	.	.	.	.	.	.	.	.	2,580	.	80	.	2,660
EL DORADO	503	3,450	.	7,890	.	125	2,201	14,862	6,445	2,200	744	.	38,420
FRESNO	24,537	19,798	6,992	.	6,000	3,824	33,421	33,613	71,393	10,678	14,523	1,346	226,125
GLENN	.	.	.	1,455	.	1,500	.	.	.	.	.	.	2,955
HUMBOLDT	485	.	.	.	.	2,000	.	.	3,480	.	589	.	6,554
IMPERIAL	.	228	.	.	5,164	1,059	4,468	2,628	10,212	1,430	3,200	6,085	34,474
INYO	600	.	.	.	.	.	190	.	.	.	83	.	873
KERN	12,975	.	.	8,335	.	.	4,230	37,036	26,760	2,540	75,052	28,889	195,817
KINGS	.	3,750	.	982	.	.	8,108	6,103	2,323	.	3,343	.	24,609
LAKE	.	.	.	.	.	.	.	136	2,637	400	706	192	4,071
LASSEN	.	.	.	908	.	.	.	.	7,400	.	.	.	8,308
LOS ANGELES	61,810	7,594	16,571	43,983	10,058	734,242	307,558	244,204	981,163	255,925	160,169	22,523	2,845,800
MADERA	1,492	500	.	2,501	.	.	.	5,676	4,828	.	4,600	.	19,597
MARIN	168	600	.	2,601	131	84	6,027	100	11,903	6,098	10,000	569	38,281
MARIPOSA	.	.	.	.	.	.	.	.	.	.	.	.	0
MENDOCINO	3,834	.	.	.	.	2,000	1,800	.	1,000	.	.	.	8,634
MERCED	1,416	.	.	.	1,513	.	28,515	17,467	113,557	300	3,095	.	165,863
MODOC	.	.	.	576	.	.	576	.	995	.	.	.	2,147
MONO	.	.	.	400	.	2,000	.	.	.	2,149	.	.	4,549
MONTEREY	9,124	8,000	.	3,337	1,731	20,184	4,460	5,298	28,944	6,459	5,251	770	93,558
NAPA	.	.	.	26,302	.	401	3,103	3,250	1,924	.	14,183	.	49,163
NEVADA	6,830	4,694	.	.	.	3,000	2,620	4,183	25,299	.	5,299	.	51,925
ORANGE	207,206	42,012	17,625	11,500	18,125	35,759	8,886	108,931	155,878	115,547	76,328	15,100	812,897
PLACER	9,664	3,361	.	9,290	15,500	120	67,005	45,375	32,501	1,900	3,982	311	189,009
PLUMAS	.	672	.	.	.	.	6,283	166	.	.	511	109	7,741
RIVERSIDE	234,164	14,001	.	8,469	66,234	14,379	66,641	170,905	362,640	18,430	103,268	9,558	1,068,689
SACRAMENTO	29,320	13,232	.	10,708	.	11,281	227,692	152,855	187,117	20,601	59,390	56,485	768,681
SAN BENITO	.	.	.	.	.	1,249	2,100	.	.	.	.	358	3,707
SAN BERNARDINO	31,820	4,004	11,581	10,845	11,850	9,541	48,645	131,041	253,944	209,865	355,300	21,228	1,099,664
SAN DIEGO	37,811	18,157	14,085	14,315	202,156	13,921	424,135	165,009	426,470	158,392	57,781	4,008	1,536,240
SAN FRANCISCO	15,238	.	.	36,643	93,000	7,000	227,408	203,987	12,202	32,795	333	2,166	630,772
SAN JOAQUIN	16,544	3,647	1,000	14,047	.	24,940	8,122	66,486	150,281	1,209	33,620	3,231	323,127
SAN LUIS OBISPO	7,812	188	.	.	18,194	54,230	28,067	7,312	14,151	9,107	4,940	3,389	147,390
SAN MATEO	67,382	.	8,629	.	52,000	.	986	3,675	15,057	2,200	569	7,375	157,873
SANTA BARBARA	27,969	3,433	.	.	18,000	2,799	27,796	12,170	77,697	85,083	10,224	1,686	266,857
SANTA CLARA	42,173	10,331	36,463	8,070	.	12,001	177,023	87,657	280,902	47,655	2,490	20,997	725,762
SANTA CRUZ	524	.	.	.	.	8,438	3,941	2,191	40,153	1,030	.	.	56,277
SHASTA	.	89	.	.	.	709	23,521	.	9,920	.	851	.	35,090
SIERRA	.	.	.	.	.	.	.	.	.	.	.	.	0
SISKIYOU	.	.	.	.	.	.	181	420	1,800	.	484	722	3,607
SOLANO	1,505	1,167	.	.	11,500	21,428	6,855	21,058	62,871	80,383	17,911	2,646	227,324
SONOMA	18,815	.	.	34,418	.	6,043	14,044	9,311	25,306	892	2,603	500	111,932
STANISLAUS	4,874	686	1,428	310	3,066	3,098	9,803	20,336	69,115	3,599	22,223	.	138,538
SUTTER	.	.	.	.	4,000	406	2,909	1,500	.	.	1,407	398	10,620
TEHAMA	1,374	2,265	.	.	.	.	911	300	7,050	.	644	948	13,492
TRINITY	.	.	.	.	.	.	.	.	.	.	464	.	464
TULARE	11,901	.	.	1,207	.	1,300	12,402	29,386	48,658	1,809	2,546	3,171	112,380
TUOLUMNE	10,053	.	.	.	3,000	.	4,507	.	.	.	.	386	17,946
VENTURA	15,060	1,767	9,336	13,092	51,284	20,813	53,929	42,315	31,723	12,322	29,509	112	281,262
YOLO	1,301	4,768	.	.	25,620	500	6,600	8,315	21,521	432	350	3,070	72,477
YUBA	.	.	.	.	.	.	392	5,500	28,473	.	.	1,917	36,282
CALIFORNIA	924,343	179,876	123,710	281,303	670,126	1,037,336	2,075,880	1,737,199	3,825,337	1,118,778	1,110,439	274,454	13,358,781
UTILITY													
SCE	517,542	27,777	20,917	49,630	138,792	106,949	250,400	536,466	1,303,245	355,713	612,756	56,472	3,976,659
PG&E	246,715	74,378	54,512	163,211	279,112	181,169	907,821	679,460	1,216,067	253,665	257,931	117,363	4,431,404
SDG&E	39,213	20,657	14,085	14,315	204,281	14,171	424,135	182,134	445,908	164,392	57,781	11,508	1,592,580
SoCalGas	7,381	710	6,571	19,661	18,000	549,037	201,570	45,227	467,401	139,451	13,624	8,321	1,476,954
Non-IOU	113,492	56,354	27,625	34,486	29,941	186,010	291,954	293,912	392,716	205,557	168,347	80,790	1,881,184

Table 3.2 F.W. Dodge Number of Nonresidential New Construction Project Starts in PY2003 by Building Type, County and Service Territory

	AMUSEMENT	ASSEMBLY	EDUCATION	GOVT	HOTEL	MEDICAL	OFFICE	RETAIL	SCHOOL	SERVICE	STORAGE	OTHER	TOTAL
COUNTY													
ALAMEDA	2	4	.	3	2	5	18	16	11	11	10	4	86
ALPINE	.	.	.	.	.	.	.	.	.	.	.	.	0
AMADOR	.	1	.	1	.	1	.	.	.	.	.	.	3
BUTTE	2	1	.	.	2	1	5	3	1	2	7	.	24
CALAVERAS	1	1	.	1	.	.	2	.	.	.	1	5	11
COLUSA	.	.	.	.	.	.	1	.	1	.	.	.	2
CONTRA COSTA	2	1	.	.	.	2	10	21	19	7	8	4	74
DEL NORTE	.	.	.	.	.	.	.	.	1	.	1	.	2
EL DORADO	1	2	.	3	.	1	7	5	3	2	2	.	26
FRESNO	10	7	4	.	1	3	63	16	17	6	22	3	152
GLENN	.	.	.	1	.	1	.	.	.	.	.	.	2
HUMBOLDT	1	.	.	.	.	1	.	.	2	.	1	.	5
IMPERIAL	.	1	.	.	2	3	4	8	3	1	6	6	34
INYO	1	.	.	.	.	.	1	.	.	.	1	.	3
KERN	7	.	.	5	.	.	15	19	11	2	42	16	117
KINGS	.	1	.	1	.	.	3	4	1	.	7	.	17
LAKE	.	.	.	.	.	.	.	1	1	2	1	1	6
LASSEN	.	.	.	1	.	.	.	.	1	.	.	.	2
LOS ANGELES	49	9	3	9	6	24	96	127	120	115	71	22	651
MADERA	2	1	.	2	.	.	.	1	2	.	2	.	10
MARIN	1	1	.	1	1	1	3	1	6	1	1	1	18
MARIPOSA	.	.	.	.	.	.	.	.	.	.	.	.	0
MENDOCINO	1	.	.	.	.	1	1	.	1	.	.	.	4
MERCED	2	.	.	.	1	.	11	3	9	1	6	.	33
MODOC	.	.	.	1	.	.	1	.	1	.	.	.	3
MONO	.	.	.	1	.	1	.	.	.	2	.	.	4
MONTEREY	8	1	.	2	5	5	10	5	7	3	5	3	54
NAPA	.	.	.	4	.	1	3	1	1	.	3	.	13
NEVADA	4	2	.	.	.	2	8	3	2	.	5	.	26
ORANGE	15	8	2	2	2	5	11	30	23	12	16	4	130
PLACER	8	3	.	1	2	1	34	18	7	4	7	1	86
PLUMAS	.	2	.	.	.	.	1	2	.	.	3	1	9
RIVERSIDE	25	7	.	4	4	8	65	86	41	18	39	8	305
SACRAMENTO	16	7	.	2	.	8	51	62	17	21	24	9	217
SAN BENITO	.	.	.	.	.	1	1	.	.	.	.	1	3
SAN BERNARDINO	16	5	2	4	4	6	39	71	35	15	56	13	266
SAN DIEGO	25	10	2	8	11	7	63	58	62	53	26	5	330
SAN FRANCISCO	6	.	.	2	5	1	20	17	3	7	1	1	63
SAN JOAQUIN	6	3	1	5	.	6	16	19	20	4	9	8	97
SAN LUIS OBISPO	9	2	.	.	6	5	25	13	2	6	19	12	99
SAN MATEO	7	.	3	.	1	.	5	4	5	3	1	3	32
SANTA BARBARA	8	3	.	.	3	3	21	9	9	12	12	3	83
SANTA CLARA	24	3	5	4	.	5	41	42	21	24	9	14	192
SANTA CRUZ	2	.	.	.	.	2	5	2	7	2	.	.	20
SHASTA	.	1	.	.	.	1	5	.	4	.	6	.	17
SIERRA	.	.	.	.	.	.	.	.	.	.	.	.	0
SISKIYOU	.	.	.	.	.	.	1	2	2	.	2	4	11
SOLANO	3	3	.	.	2	4	7	10	5	12	8	2	56
SONOMA	9	.	.	2	.	4	11	12	11	4	4	1	58
STANISLAUS	3	1	1	1	1	4	19	15	9	2	12	.	68
SUTTER	.	.	.	.	1	1	6	1	.	.	1	2	12
TEHAMA	2	5	.	.	.	.	2	1	3	.	5	4	22
TRINITY	.	.	.	.	.	.	.	.	.	.	1	.	1
TULARE	5	.	.	2	.	2	15	17	10	4	4	2	61
TUOLUMNE	2	.	.	.	2	.	6	.	.	.	.	3	13
VENTURA	13	3	2	2	9	5	22	23	8	9	14	1	111
YOLO	3	2	.	.	3	1	4	4	7	1	1	2	28
YUBA	.	.	.	.	.	.	3	1	3	.	.	3	10
CALIFORNIA	301	101	25	75	76	133	761	753	535	368	482	172	3,782
UTILITY													
SCE	92	22	4	16	24	36	188	262	170	86	163	35	1,098
PG&E	121	42	14	35	32	55	360	260	196	108	195	70	1,488
SDG&E	27	11	2	8	12	8	63	62	66	54	26	7	346
SoCalGas	9	2	2	6	2	12	20	32	47	68	16	10	226
Non-IOU	52	24	3	10	6	22	130	137	56	52	82	50	624

Table 3.3 F.W. Dodge Number of Nonresidential New Construction Project Starts in PY2003 by Quarter, County and Service Territory

	Q1, 2003	Q2, 2003	Q3, 2003	Q4, 2003	2003 Total
COUNTY					
ALAMEDA	30	19	13	24	86
ALPINE	0	0	0	0	0
AMADOR	0	0	3	0	3
BUTTE	5	5	7	7	24
CALAVERAS	3	6	2	0	11
COLUSA	2	0	0	0	2
CONTRA COSTA	13	27	18	16	74
DEL NORTE	0	1	1	0	2
EL DORADO	7	11	4	4	26
FRESNO	30	63	33	26	152
GLENN	1	0	0	1	2
HUMBOLDT	2	0	2	1	5
IMPERIAL	7	12	5	10	34
INYO	0	0	1	2	3
KERN	34	26	23	34	117
KINGS	2	1	9	5	17
LAKE	0	3	2	1	6
LASSEN	1	0	1	0	2
LOS ANGELES	205	173	162	111	651
MADERA	0	3	2	5	10
MARIN	4	6	2	6	18
MARIPOSA	0	0	0	0	0
MENDOCINO	1	1	1	1	4
MERCED	16	5	5	7	33
MODOC	2	0	1	0	3
MONO	1	0	2	1	4
MONTEREY	15	14	10	15	54
NAPA	4	4	1	4	13
NEVADA	9	9	4	4	26
ORANGE	25	40	39	26	130
PLACER	13	18	12	43	86
PLUMAS	0	3	6	0	9
RIVERSIDE	81	68	83	73	305
SACRAMENTO	54	44	51	68	217
SAN BENITO	0	1	2	0	3
SAN BERNARDINO	57	59	75	75	266
SAN DIEGO	92	101	75	62	330
SAN FRANCISCO	11	22	22	8	63
SAN JOAQUIN	24	34	24	15	97
SAN LUIS OBISPO	37	21	15	26	99
SAN MATEO	4	9	10	9	32
SANTA BARBARA	29	19	16	19	83
SANTA CLARA	61	38	41	52	192
SANTA CRUZ	5	5	3	7	20
SHASTA	2	4	6	5	17
SIERRA	0	0	0	0	0
SISKIYOU	3	4	3	1	11
SOLANO	15	13	14	14	56
SONOMA	14	15	18	11	58
STANISLAUS	13	22	14	19	68
SUTTER	3	6	1	2	12
TEHAMA	5	8	6	3	22
TRINITY	1	0	0	0	1
TULARE	14	16	16	15	61
TUOLUMNE	2	3	4	4	13
VENTURA	28	26	26	31	111
YOLO	10	5	4	9	28
YUBA	1	3	2	4	10
CALIFORNIA	998	996	902	886	3,782
UTILITY					
SCE	298	259	286	255	1,098
PG&E	377	414	320	377	1,488
SDG&E	95	108	78	65	346
SoCalGas	74	54	55	43	226
Non-IOU	154	161	163	146	624

Table 3.4 F.W. Dodge Number of Nonresidential New Construction Project Starts in PY2003 by Quarter, Building Type and Service Territory

	AMUSEMENT	ASSEMBLY	EDUCATION	GOVT	HOTEL	MEDICAL	OFFICE	RETAIL	SCHOOL	SERVICE	STORAGE	OTHER	TOTAL
CALIFORNIA													
Q1, 2003	79	16	5	16	27	34	211	191	126	100	140	53	998
Q2, 2003	92	29	7	26	17	32	179	194	169	107	97	47	996
Q3, 2003	86	26	7	21	13	30	165	178	133	77	123	43	902
Q4, 2003	44	30	6	12	19	37	206	190	107	84	122	29	886
2003 Total	301	101	25	75	76	133	761	753	535	368	482	172	3,782
SCE													
Q1, 2003	33	2	1	6	7	6	52	69	39	23	50	10	298
Q2, 2003	23	2	.	4	6	8	30	73	57	25	22	9	259
Q3, 2003	24	6	1	3	4	14	45	63	49	19	46	12	286
Q4, 2003	12	12	2	3	7	8	61	57	25	19	45	4	255
2003 Total	92	22	4	16	24	36	188	262	170	86	163	35	1,098
PG&E													
Q1, 2003	23	9	3	5	9	14	97	64	50	25	57	21	377
Q2, 2003	39	16	5	15	10	11	93	68	60	36	46	15	414
Q3, 2003	37	7	4	11	6	10	68	49	41	22	44	21	320
Q4, 2003	22	10	2	4	7	20	102	79	45	25	48	13	377
2003 Total	121	42	14	35	32	55	360	260	196	108	195	70	1,488
SDG&E													
Q1, 2003	10	3	.	2	7	1	22	14	13	13	9	1	95
Q2, 2003	7	4	.	1	.	4	21	20	30	17	2	2	108
Q3, 2003	6	4	.	3	1	1	15	15	15	10	7	1	78
Q4, 2003	4	.	2	2	4	2	5	13	8	14	8	3	65
2003 Total	27	11	2	8	12	8	63	62	66	54	26	7	346
SoCalGas													
Q1, 2003	2	.	.	.	1	5	4	13	10	27	8	4	74
Q2, 2003	2	1	1	3	.	6	6	3	9	17	4	2	54
Q3, 2003	3	1	1	2	1	.	5	11	15	10	3	3	55
Q4, 2003	2	.	.	1	.	1	5	5	13	14	1	1	43
2003 Total	9	2	2	6	2	12	20	32	47	68	16	10	226
Non-IOU													
Q1, 2003	11	2	1	3	3	8	36	31	14	12	16	17	154
Q2, 2003	21	6	1	3	1	3	29	30	13	12	23	19	161
Q3, 2003	16	8	1	2	1	5	32	40	13	16	23	6	163
Q4, 2003	4	8	.	2	1	6	33	36	16	12	20	8	146
2003 Total	52	24	3	10	6	22	130	137	56	52	82	50	624

Table 3.5 F.W. Dodge Area of Nonresidential New Construction Project Starts in PY2003 by Building Type, County and Service Territory (1,000 sqft)

	AMUSEMENT	ASSEMBLY	EDUCATION	GOVT	HOTEL	MEDICAL	OFFICE	RETAIL	SCHOOL	SERVICE	STORAGE	OTHER	TOTAL
COUNTY													
ALAMEDA	27	67	.	29	69	65	748	179	292	379	163	210	2,226
ALPINE	.	.	.	.	.	.	.	.	.	.	.	.	0
AMADOR	.	22	.	3	.	5	.	.	.	.	.	.	30
BUTTE	24	4	.	.	249	27	57	23	20	18	89	.	510
CALAVERAS	3	8	.	5	.	.	3	.	.	.	122	142	282
COLUSA	.	.	.	.	.	.	2	.	14	.	.	.	16
CONTRA COSTA	5	1	.	.	.	21	317	917	674	136	42	138	2,252
DEL NORTE	.	.	.	.	.	.	.	.	18	.	1	.	19
EL DORADO	4	40	.	34	.	2	28	169	28	57	21	.	382
FRESNO	157	200	35	.	60	21	426	746	401	343	244	24	2,655
GLENN	.	.	.	6	.	13	.	.	.	.	.	.	20
HUMBOLDT	1	.	.	.	.	35	.	.	18	.	14	.	68
IMPERIAL	.	3	.	.	65	16	62	32	50	19	97	88	432
INYO	5	.	.	.	.	.	4	.	.	.	2	.	11
KERN	103	.	.	43	.	.	75	801	162	54	1,525	450	3,213
KINGS	.	63	.	6	.	.	65	133	1	.	84	.	352
LAKE	.	.	.	.	.	.	.	3	22	9	8	4	46
LASSEN	.	.	.	5	.	.	.	.	40	.	.	.	45
LOS ANGELES	340	95	139	342	138	3,331	2,445	3,448	5,811	4,643	3,767	407	24,906
MADERA	7	9	.	11	.	.	.	132	31	.	92	.	282
MARIN	1	8	.	10	2	1	40	2	87	135	130	1	418
MARIPOSA	.	.	.	.	.	.	.	.	.	.	.	.	0
MENDOCINO	21	.	.	.	.	17	25	.	0	.	.	.	62
MERCED	12	.	.	.	26	.	187	299	512	5	95	.	1,135
MODOC	.	.	.	3	.	.	4	.	5	.	.	.	11
MONO	.	.	.	3	.	20	.	.	.	23	.	.	46
MONTEREY	80	54	.	18	31	153	48	66	231	103	125	14	924
NAPA	.	.	.	124	.	2	45	46	29	.	272	.	518
NEVADA	41	83	.	.	.	21	33	46	107	.	123	.	454
ORANGE	506	333	72	59	230	236	120	713	963	1,466	1,469	142	6,309
PLACER	87	44	.	35	114	2	864	569	196	42	138	6	2,095
PLUMAS	.	13	.	.	.	.	53	3	.	.	12	2	83
RIVERSIDE	1,268	128	.	39	520	176	894	3,173	2,172	239	2,340	283	11,231
SACRAMENTO	209	107	.	37	.	149	1,482	2,152	957	456	1,258	312	7,118
SAN BENITO	.	.	.	.	.	3	13	.	.	.	.	7	23
SAN BERNARDINO	231	42	60	63	169	124	770	1,990	1,670	1,437	8,566	280	15,401
SAN DIEGO	414	151	105	139	1,429	205	3,518	3,079	2,453	3,181	1,671	122	16,467
SAN FRANCISCO	71	.	.	89	486	15	1,640	1,491	55	413	16	2	4,277
SAN JOAQUIN	114	38	8	58	.	196	115	896	899	26	931	60	3,339
SAN LUIS OBISPO	62	3	.	.	223	107	324	98	66	129	139	64	1,216
SAN MATEO	357	.	34	.	225	.	10	58	58	32	2	10	785
SANTA BARBARA	130	41	.	.	104	17	351	167	401	769	249	32	2,260
SANTA CLARA	267	23	143	33	.	57	867	1,128	1,594	758	42	114	5,026
SANTA CRUZ	3	.	.	.	.	59	41	33	264	16	.	.	417
SHASTA	.	1	.	.	.	5	207	.	77	.	18	.	308
SIERRA	.	.	.	.	.	.	.	.	.	.	.	.	0
SISKIYOU	.	.	.	.	.	.	2	5	8	.	13	15	43
SOLANO	8	12	.	.	125	137	98	357	300	758	276	37	2,107
SONOMA	118	.	.	150	.	53	131	95	168	25	37	7	783
STANISLAUS	28	15	7	2	42	39	156	281	367	60	698	.	1,694
SUTTER	.	.	.	.	55	5	41	15	.	.	36	9	161
TEHAMA	13	27	.	.	.	.	12	3	52	.	15	12	134
TRINITY	.	.	.	.	.	.	.	.	.	.	7	.	7
TULARE	101	.	.	6	.	16	91	628	301	27	50	36	1,256
TUOLUMNE	126	.	.	.	32	.	61	.	.	.	.	8	227
VENTURA	125	21	93	67	475	267	567	722	231	187	752	3	3,508
YOLO	8	51	.	.	196	6	92	136	157	9	12	38	705
YUBA	.	.	.	.	.	.	5	149	157	.	.	27	337
CALIFORNIA	5,076	1,703	695	1,416	5,066	5,622	17,136	24,980	22,119	15,953	25,763	3,102	128,631
UTILITY													
SCE	2,349	278	153	286	1,246	946	3,029	8,426	7,613	3,510	15,023	1,021	43,879
PG&E	1,651	773	227	640	1,847	996	6,948	9,013	6,735	3,533	5,678	1,306	39,345
SDG&E	421	177	105	139	1,462	208	3,518	3,243	2,573	3,254	1,671	172	16,943
SoCalGas	47	13	49	201	222	1,988	1,339	731	2,983	2,823	300	118	10,813
Non-IOU	608	464	162	151	289	1,485	2,303	3,567	2,215	2,833	3,091	484	17,651

Table 3.6 F.W. Dodge Area of Nonresidential New Construction Project Starts in PY2003 by Quarter, County and Service Territory (1,000 sqft)

	Q1, 2003	Q2, 2003	Q3, 2003	Q4, 2003	2003 Total
COUNTY					
ALAMEDA	1,279	270	235	443	2,226
ALPINE	0	0	0	0	0
AMADOR	0	0	30	0	30
BUTTE	38	42	307	122	510
CALAVERAS	17	138	127	0	282
COLUSA	16	0	0	0	16
CONTRA COSTA	228	1,063	332	628	2,252
DEL NORTE	0	18	1	0	19
EL DORADO	117	159	70	37	382
FRESNO	932	1,020	396	307	2,655
GLENN	6	0	0	13	20
HUMBOLDT	39	0	28	1	68
IMPERIAL	82	210	81	59	432
INYO	0	0	5	6	11
KERN	1,165	527	599	922	3,213
KINGS	68	1	220	63	352
LAKE	0	34	9	3	46
LASSEN	40	0	5	0	45
LOS ANGELES	7,008	7,041	6,101	4,757	24,906
MADERA	0	97	138	48	282
MARIN	17	161	140	99	418
MARIPOSA	0	0	0	0	0
MENDOCINO	0	25	21	17	62
MERCED	493	292	82	269	1,135
MODOC	6	0	5	0	11
MONO	8	0	23	15	46
MONTEREY	199	300	235	190	924
NAPA	118	280	12	108	518
NEVADA	146	219	26	63	454
ORANGE	1,849	1,238	2,585	638	6,309
PLACER	354	500	371	870	2,095
PLUMAS	0	15	68	0	83
RIVERSIDE	2,019	3,890	3,143	2,179	11,231
SACRAMENTO	1,551	1,893	2,006	1,669	7,118
SAN BENITO	0	3	20	0	23
SAN BERNARDINO	3,750	2,231	4,315	5,105	15,401
SAN DIEGO	4,458	4,728	3,398	3,883	16,467
SAN FRANCISCO	151	2,337	346	1,444	4,277
SAN JOAQUIN	1,294	925	800	320	3,339
SAN LUIS OBISPO	442	145	262	367	1,216
SAN MATEO	25	160	109	491	785
SANTA BARBARA	679	389	330	861	2,260
SANTA CLARA	2,560	605	1,229	632	5,026
SANTA CRUZ	38	207	67	105	417
SHASTA	41	34	204	30	308
SIERRA	0	0	0	0	0
SISKIYOU	16	16	7	4	43
SOLANO	405	948	394	360	2,107
SONOMA	174	137	367	106	783
STANISLAUS	251	930	224	289	1,694
SUTTER	53	91	8	9	161
TEHAMA	66	31	30	6	134
TRINITY	7	0	0	0	7
TULARE	519	424	186	128	1,256
TUOLUMNE	5	18	130	74	227
VENTURA	752	638	933	1,186	3,508
YOLO	279	66	132	227	705
YUBA	149	75	24	90	337
CALIFORNIA	33,904	34,567	30,920	29,240	128,631
UTILITY					
SCE	10,802	9,915	12,755	10,407	43,879
PG&E	11,396	12,019	6,969	8,962	39,345
SDG&E	4,505	4,937	3,517	3,985	16,943
SoCalGas	3,811	3,072	1,594	2,336	10,813
Non-IOU	3,390	4,625	6,085	3,550	17,651

Table 3.7 F.W. Dodge Area of Nonresidential New Construction Project Starts in PY2003 by Quarter, Building Type and Service Territory (1,000 sqft)

	AMUSEMENT	ASSEMBLY	EDUCATION	GOVT	HOTEL	MEDICAL	OFFICE	RETAIL	SCHOOL	SERVICE	STORAGE	OTHER	TOTAL
CALIFORNIA													
Q1, 2003	1,202	380	143	235	1,292	1,034	4,892	4,672	6,012	3,756	9,281	1,005	33,904
Q2, 2003	1,685	505	151	589	657	2,299	4,852	8,356	6,785	4,315	3,308	1,067	34,567
Q3, 2003	1,463	454	208	332	1,295	1,581	3,706	5,572	5,208	2,670	7,885	546	30,920
Q4, 2003	725	364	194	262	1,822	707	3,686	6,381	4,114	5,212	5,289	484	29,240
2003 Total	5,076	1,703	695	1,416	5,066	5,622	17,136	24,980	22,119	15,953	25,763	3,102	128,631
SCE													
Q1, 2003	574	30	1	120	270	76	561	1,543	1,509	293	5,244	582	14,552
Q2, 2003	902	27	.	45	169	296	389	3,457	2,675	654	1,167	135	12,643
Q3, 2003	690	83	92	8	474	345	778	2,029	2,434	645	4,956	221	14,030
Q4, 2003	183	138	60	112	332	229	1,301	1,398	995	1,919	3,656	84	11,201
2003 Total	2,349	278	153	286	1,246	946	3,029	8,426	7,613	3,510	15,023	1,021	43,879
PG&E													
Q1, 2003	323	296	52	71	322	314	2,421	1,608	2,289	821	2,546	332	9,311
Q2, 2003	565	269	67	283	486	195	2,377	2,525	1,955	1,545	1,379	373	9,594
Q3, 2003	429	84	79	236	567	136	999	1,579	1,147	357	1,064	292	11,674
Q4, 2003	334	123	29	50	472	351	1,151	3,301	1,344	810	689	309	11,295
2003 Total	1,651	773	227	640	1,847	996	6,948	9,013	6,735	3,533	5,678	1,306	39,345
SDG&E													
Q1, 2003	191	50	.	24	457	3	1,035	506	563	800	874	2	4,352
Q2, 2003	39	50	.	70	.	8	1,173	968	1,340	1,080	99	110	4,174
Q3, 2003	124	77	.	26	72	120	936	776	444	572	363	8	4,115
Q4, 2003	68	.	105	20	932	77	373	993	227	802	336	53	2,420
2003 Total	421	177	105	139	1,462	208	3,518	3,243	2,573	3,254	1,671	172	16,943
SoCalGas													
Q1, 2003	6	.	.	.	197	384	528	247	1,226	1,096	111	17	5,141
Q2, 2003	1	7	36	120	.	1,603	303	155	173	506	78	91	4,686
Q3, 2003	16	6	13	41	25	.	124	295	683	293	93	7	7,148
Q4, 2003	25	.	.	40	.	1	384	34	902	928	18	4	4,766
2003 Total	47	13	49	201	222	1,988	1,339	731	2,983	2,823	300	118	10,813
Non-IOU													
Q1, 2003	109	4	90	20	45	257	346	768	426	747	506	73	2,253
Q2, 2003	179	152	47	71	1	197	610	1,251	642	531	585	359	2,909
Q3, 2003	205	204	25	20	158	981	869	892	501	803	1,409	19	4,483
Q4, 2003	115	103	.	40	85	50	477	656	647	752	591	34	2,869
2003 Total	608	464	162	151	289	1,485	2,303	3,567	2,215	2,833	3,091	484	17,651

3.2 SBD NEW CONSTRUCTION PROGRAM PARTICIPATION IN PY2003

Savings By Design (SBD) program activity for nonresidential new construction participants for whom the IOUs have committed funds in PY2003 is summarized below. Program commitment indicates that the customer has filed an application, that the utility has reviewed it and found that it fits within the scope of the SBD program, that an agreement was signed between the utility and the customer, detailing the conditions of participation in the program, and that the application has not been subsequently cancelled. Program commitment was established using the following dates from the tracking systems maintained by the IOUs: the "coupon issue date" for SCE participants, the "acceptance date" for PG&E participants, and the "sign date" for SDG&E and SoCalGas participants.

The SBD program targets specific links in the commercial building construction decision-making chain, reflecting differences in design activities and priorities between large and small buildings and various occupancies. The Whole Building Approach is used for complex projects where the design team can work closely to integrate the energy systems. For participants adopting the Whole Building Approach, energy savings can be attributed to the integration of multiple energy efficient measures into the building design. The Systems Approach is used for projects where design of the energy systems is done at different phases: where one energy system predominates, where intervention occurs late in the design, or for buildings with simple system interactions. For the SBD program participants adopting the Systems Approach, energy savings can be attributed to one or more of several measure classes implemented: daylighting, HVAC, envelope, motors, etc.

The following tables summarize program participation by building type and measure. Participation is provided for the whole building approach and the systems approach separately.

Table 3.8 presents the number of new construction nonresidential participants to the SBD program for which funds were committed in PY2003.

Table 3.9 summarizes the number of square feet of new construction committed in PY2003.

Table 3.10, 3.11 and 3.12 respectively show the estimated annual MWh, kW and therm savings attributable to new construction measures committed in PY2003.

Table 3.13 presents the frequency with which classes of measures were installed by new construction SBD participants in PY2003. A glossary of the measure classes is presented in Appendix D.

Table 3.14, 3.15 and 3.16 respectively summarize the estimated annual MWh, kW and therm savings by measure class, in new construction committed in PY2003.

Table 3.8 Number of Nonresidential New Construction SBD Participants in PY2003

	AMUSEMENT	ASSEMBLY	EDUCATION	GOVT	HOTEL	MEDICAL	OFFICE	RETAIL	SCHOOL	SERVICE	STORAGE	OTHER	TOTAL
CALIFORNIA													
Whole Building Approach	.	2	1	.	1	4	99	46	31	.	8	12	204
Systems Approach	3	4	.	1	15	9	72	48	37	20	24	52	285
Total	3	6	1	1	16	13	171	94	68	20	32	64	489
SCE													
Whole Building Approach	.	.	.	.	.	.	15	31	3	.	.	7	56
Systems Approach	2	3	.	.	10	8	17	32	9	19	12	40	152
Total	2	3	.	.	10	8	32	63	12	19	12	47	208
PG&E													
Whole Building Approach	.	.	1	.	.	1	70	6	12	.	6	2	98
Systems Approach	1	.	.	1	1	.	42	3	8	1	2	12	71
Total	1	.	1	1	1	1	112	9	20	1	8	14	169
SDG&E													
Whole Building Approach	.	1	.	.	1	1	9	4	10	.	1	3	30
Systems Approach	.	1	.	.	4	1	7	10	13	.	3	.	39
Total	.	2	.	.	5	2	16	14	23	.	4	3	69
SoCalGas													
Whole Building Approach	.	1	.	.	.	2	5	5	6	.	1	.	20
Systems Approach	.	.	.	.	.	.	6	3	7	.	7	.	23
Total	.	1	.	.	.	2	11	8	13	.	8	.	43

The majority of SBD program participants in PY2003 belong to the office, retail and school building types. High participation in these segments can be attributed to the overall high volume of new construction within these same segments (Exhibit 3.4 below), but also to the good fit between these building types and the scope of the SBD program.

Note that the number of SBD participants has slightly increased in 2003 as compared to 2002, but was still lower than in 2001 (see Chapter 6, Table 6.12). The high participation rates at the beginning of PY2001 may be due to changes in building codes and Program standards that went into effect on July 1, 2001, but also to the overall conservation efforts undertaken in California prior to, and during the Summer of 2001. The decrease in participation in PY2002 is probably due to the absence of such drivers, but also to the situation of the economy in California in 2002. The increase in participation in 2003 cannot be correlated with an increase in market activity, which has dropped in 2003 as compared to 2002 (see Chapter 6, Table 6.6). However, considering that the program reaches relatively large size buildings, the increase of participation in 2003 may be correlated to the increase in the average size of new construction projects in 2003, as compared to 2002.

Exhibit 3.4
New Construction Building Segments with the Highest Number of Projects in PY2003

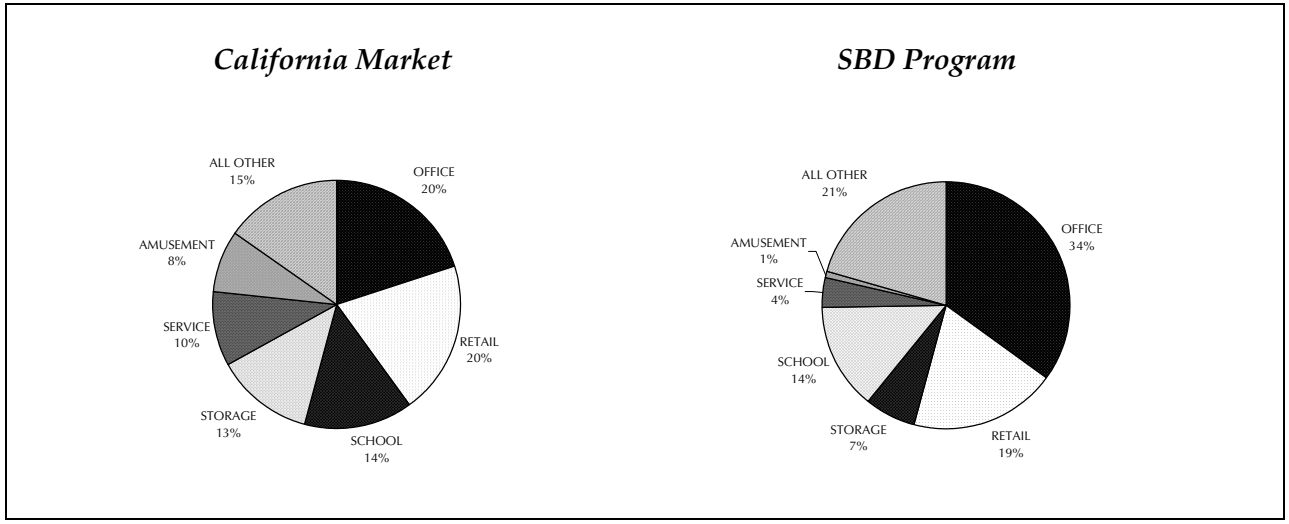


Table 3.9 Area of Nonresidential New Construction SBD Participants in PY2003 (1,000 sqft)

	AMUSEMENT	ASSEMBLY	EDUCATION	GOVT	HOTEL	MEDICAL	OFFICE	RETAIL	SCHOOL	SERVICE	STORAGE	OTHER	TOTAL
CALIFORNIA													
Whole Building Approach	.	7	16	.	139	1,420	11,816	3,856	1,446	.	360	1,091	20,150
Systems Approach	100	112	.	17	1,190	1,079	4,700	6,094	2,406	156	5,384	3,777	25,015
Total	100	119	16	17	1,329	2,499	16,516	9,950	3,852	156	5,743	4,867	45,165
SCE													
Whole Building Approach	.	.	.	.	.	.	1,455	2,464	174	.	.	753	4,845
Systems Approach	12	94	.	.	818	715	634	2,666	441	146	4,394	3,333	13,253
Total	12	94	.	.	818	715	2,089	5,130	615	146	4,394	4,086	18,098
PG&E													
Whole Building Approach	.	.	16	.	.	1,200	8,238	720	412	.	224	70	10,880
Systems Approach	88	.	.	17	61	.	3,130	2,475	601	10	207	444	7,035
Total	88	.	16	17	61	1,200	11,368	3,195	1,014	10	432	514	17,916
SDG&E													
Whole Building Approach	.	3	.	.	139	121	668	450	656	.	20	268	2,325
Systems Approach	.	18	.	.	311	364	271	858	366	.	187	.	2,375
Total	.	21	.	.	450	485	939	1,308	1,022	.	207	268	4,700
SoCalGas													
Whole Building Approach	.	4	.	.	.	99	1,456	223	203	.	115	.	2,099
Systems Approach	.	.	.	.	.	.	665	93	999	.	596	.	2,352
Total	.	4	.	.	.	99	2,120	316	1,202	.	711	.	4,452

The majority of SBD program activity in terms of area committed in PY2003 belongs to the office, retail and storage segments. The same building types yield high estimated MWh and kW savings, as shown in Tables 3.10 and 3.11. Similar to the number of participants into the SBD program, the committed square footage has increased in PY2003 as compared to 2002, but is still lower than in 2001 (see Chapter 6, Table 6.12).

Table 3.10 Estimated Annual MWh Savings
for New Construction SBD Participants in PY2003

	AMUSEMENT	ASSEMBLY	EDUCATION	GOVT	HOTEL	MEDICAL	OFFICE	RETAIL	SCHOOL	SERVICE	STORAGE	OTHER	TOTAL
CALIFORNIA													
Whole Building Approach	.	21	28	.	122	3,548	51,279	27,789	7,162	.	4,909	9,991	104,848
Systems Approach	327	195	.	6	4,538	1,996	15,946	10,894	2,926	19,314	10,412	27,386	93,940
Total	327	216	28	6	4,660	5,544	67,225	38,682	10,088	19,314	15,321	37,377	198,789
SCE													
Whole Building Approach	.	.	.	.	.	.	7,881	15,308	468	.	.	4,223	27,881
Systems Approach	230	102	.	.	1,488	1,070	2,192	6,014	265	19,302	5,116	19,402	55,182
Total	230	102	.	.	1,488	1,070	10,073	21,322	733	19,302	5,116	23,625	83,062
PG&E													
Whole Building Approach	.	.	28	.	.	3,025	39,015	6,934	777	.	3,616	563	53,958
Systems Approach	97	.	.	6	46	.	9,278	767	333	12	695	7,984	19,217
Total	97	.	28	6	46	3,025	48,293	7,701	1,110	12	4,310	8,548	73,175
SDG&E													
Whole Building Approach	.	15	.	.	122	331	1,369	3,091	4,089	.	83	5,204	14,305
Systems Approach	.	93	.	.	3,004	926	354	3,714	355	.	2,046	.	10,492
Total	.	108	.	.	3,126	1,258	1,723	6,805	4,444	.	2,129	5,204	24,796
SoCalGas													
Whole Building Approach	.	6	.	.	.	192	3,014	2,455	1,828	.	1,210	.	8,705
Systems Approach	.	.	.	.	.	.	4,122	400	1,973	.	2,556	.	9,050
Total	.	6	.	.	.	192	7,137	2,854	3,801	.	3,766	.	17,755

Table 3.11 Estimated Annual kW Savings
for New Construction SBD Participants in PY2003

	AMUSEMENT	ASSEMBLY	EDUCATION	GOVT	HOTEL	MEDICAL	OFFICE	RETAIL	SCHOOL	SERVICE	STORAGE	OTHER	TOTAL
CALIFORNIA													
Whole Building Approach	.	12	11	.	-1	1,371	14,567	9,028	2,879	.	384	2,849	31,099
Systems Approach	45	49	.	5	588	379	2,790	2,846	534	1,032	1,741	2,800	12,810
Total	45	61	11	5	587	1,751	17,357	11,874	3,413	1,032	2,125	5,649	43,909
SCE													
Whole Building Approach	.	.	.	.	.	.	1,533	3,377	430	.	.	1,612	6,952
Systems Approach	8	27	.	.	191	184	301	1,574	116	1,026	1,449	2,177	7,052
Total	8	27	.	.	191	184	1,834	4,951	546	1,026	1,449	3,789	14,005
PG&E													
Whole Building Approach	.	.	11	.	.	1,155	11,664	4,854	836	.	279	48	18,847
Systems Approach	36	.	.	5	10	.	2,090	191	65	6	241	624	3,268
Total	36	.	11	5	10	1,155	13,754	5,044	901	6	520	672	22,114
SDG&E													
Whole Building Approach	.	7	.	.	-1	71	430	621	1,000	.	33	1,189	3,351
Systems Approach	.	22	.	.	387	196	95	1,020	144	.	-102	.	1,763
Total	.	29	.	.	387	266	525	1,641	1,145	.	-68	1,189	5,114
SoCalGas													
Whole Building Approach	.	5	.	.	.	146	940	176	613	.	71	.	1,950
Systems Approach	.	.	.	.	.	.	305	61	208	.	153	.	727
Total	.	5	.	.	.	146	1,245	237	820	.	224	.	2,677

Table 3.12 Estimated Annual Therm Savings
for New Construction SBD Participants in PY2003

	AMUSEMENT	ASSEMBLY	EDUCATION	GOVT	HOTEL	MEDICAL	OFFICE	RETAIL	SCHOOL	SERVICE	STORAGE	OTHER	TOTAL
CALIFORNIA													
Whole Building Approach	.	492	307	.	17,894	53,118	651,957	265,299	259,172	.	-3,166	290,289	1,535,362
Systems Approach	-286	-626	.	.	-133	7,833	128,101	-5,264	2,160	-187	-3,899	.	127,699
Total	-286	-134	307	.	17,761	60,951	780,058	260,035	261,332	-187	-7,065	290,289	1,663,061
SCE													
Whole Building Approach	.	.	.	.	.	.	.	.	.	.	.	.	0
Systems Approach	.	.	.	.	.	.	.	.	.	.	.	.	0
Total	.	.	.	.	.	.	.	.	.	.	.	.	0
PG&E													
Whole Building Approach	.	.	307	.	.	57,199	632,166	288,035	18,399	.	-3,321	.	992,785
Systems Approach	-286	.	.	.	-111	.	124,220	-1,043	1,687	-187	-3,249	.	121,031
Total	-286	.	307	.	-111	57,199	756,386	286,992	20,086	-187	-6,570	.	1,113,816
SDG&E													
Whole Building Approach	.	60	.	.	17,894	-7,256	-12,020	-16,988	160,656	.	155	290,289	432,790
Systems Approach	.	-626	.	.	-22	7,833	2,714	-1,353	1,009	.	-56	.	9,499
Total	.	-566	.	.	17,872	577	-9,306	-18,341	161,665	.	99	290,289	442,289
SoCalGas													
Whole Building Approach	.	432	.	.	.	3,175	31,811	-5,748	80,117	.	.	.	109,787
Systems Approach	.	.	.	.	.	.	1,167	-2,868	-536	.	-594	.	-2,831
Total	.	432	.	.	.	3,175	32,978	-8,616	79,581	.	-594	.	106,956

Table 3.13 Classes of Measures Installed by New Construction SBD Participants in PY2003

	WHOLE BUILDING	DAY-LIGHTING	SKYLIGHT	HVAC CHILLER	HVAC PACKAGE	HVAC CONTROLS	HVAC OTHER	MOTORS	LIGHTING	ENVELOPE	REFRIGERATION	PROCESS	OTHER	TOTAL
CALIFORNIA														
Whole Building Approach	248	.	.	.	.	.	.	.	.	.	.	.	.	248
Systems Approach	.	33	.	8	68	1	87	11	197	17	.	20	102	544
Total	248	33	.	8	68	1	87	11	197	17	.	20	102	792
SCE														
Whole Building Approach	56	.	.	.	.	.	.	.	.	.	.	.	.	56
Systems Approach	.	22	.	6	1	.	70	11	92	4	.	1	61	268
Total	56	22	.	6	1	.	70	11	92	4	.	1	61	324
PG&E														
Whole Building Approach	98	.	.	.	.	.	.	.	.	.	.	.	.	98
Systems Approach	.	6	.	.	29	1	1	.	44	4	.	19	20	124
Total	98	6	.	.	29	1	1	.	44	4	.	19	20	222
SDG&E														
Whole Building Approach	72	.	.	.	.	.	.	.	.	.	.	.	.	72
Systems Approach	.	5	.	2	31	.	9	.	51	7	.	.	7	112
Total	72	5	.	2	31	.	9	.	51	7	.	.	7	184
SoCalGas														
Whole Building Approach	22	.	.	.	.	.	.	.	.	.	.	.	.	22
Systems Approach	.	.	.	.	7	.	7	.	10	2	.	.	14	40
Total	22	.	.	.	7	.	7	.	10	2	.	.	14	62

The measures installed by each participant were established using the following fields from the tracking systems maintained by the IOUs: the "meas_desc" for SCE participants, the "description" for PG&E participants, and the "msr_desc" for SDG&E and SoCalGas participants. Each entry into the tracking system was then assigned to one of the measure segments presented in Table 3.13, and counted as one instance in which that particular class of measures was installed through the SBD Program. For example, each participant that selected the whole building approach counted as one instance in which the whole building approach was adopted, regardless of the number and types of measures installed.

As Table 3.13 indicates, the whole building approach, lighting, "other HVAC measures" (fan or pump motors, air handler VSDs, boilers, furnaces, other measures labeled as "HVAC energy reduction") and "other measures" (air compressors, CO monitors, gas measures) were installed most often by SBD new construction participants, while HVAC controls were installed very rarely, and refrigeration measures were not installed at all in PY2003. Note that skylights do not appear to have been installed either, however, they may have been coded as "daylighting" measures in the SBD participation databases.

Table 3.14 Estimated Annual MWh Savings by Measure Class for New Construction SBD Participants in PY2003

	WHOLE BUILDING	DAY-LIGHTING	SKYLIGHT	HVAC CHILLER	HVAC PACKAGE	HVAC CONTROLS	HVAC OTHER	MOTORS	LIGHTING	ENVELOPE	REFRIGERATION	PROCESS	OTHER	TOTAL
CALIFORNIA														
Whole Building Approach	104,848	.	.	.	.	.	.	.	.	.	.	.	.	104,848
Systems Approach	.	8,939	.	1,218	954	.	2,941	131	23,909	327	.	2,767	52,755	93,940
Total	104,848	8,939	.	1,218	954	.	2,941	131	23,909	327	.	2,767	52,755	198,789
SCE														
Whole Building Approach	27,881	.	.	.	.	.	.	.	.	.	.	.	.	27,881
Systems Approach	.	6,170	.	450	2	.	1,450	131	11,801	200	.	283	34,696	55,182
Total	27,881	6,170	.	450	2	.	1,450	131	11,801	200	.	283	34,696	83,062
PG&E														
Whole Building Approach	53,958	.	.	.	.	.	.	.	.	.	.	.	.	53,958
Systems Approach	.	1,560	.	.	536	.	0	.	8,522	19	.	2,484	6,095	19,217
Total	53,958	1,560	.	.	536	.	0	.	8,522	19	.	2,484	6,095	73,175
SDG&E														
Whole Building Approach	14,305	.	.	.	.	.	.	.	.	.	.	.	.	14,305
Systems Approach	.	1,209	.	768	361	.	1,145	.	3,033	65	.	.	3,910	10,492
Total	14,305	1,209	.	768	361	.	1,145	.	3,033	65	.	.	3,910	24,796
SoCalGas														
Whole Building Approach	8,705	.	.	.	.	.	.	.	.	.	.	.	.	8,705
Systems Approach	.	.	.	.	54	.	347	.	554	43	.	.	8,053	9,050
Total	8,705	.	.	.	54	.	347	.	554	43	.	.	8,053	17,755

As shown in Tables 3.14 and 3.15, Whole Building Design measures account by far for most of the committed MWh and kW savings in new construction, followed by "other measures" (such as air compressors and CO monitors) and lighting. Whole Building design also generates the largest therm savings, followed by "process measures", as shown in Table 3.16. Note that lighting, daylighting and unitary HVAC measures generate negative therm impacts.

Table 3.15 Estimated Annual kW Savings by Measure Class for New Construction SBD Participants in PY2003

	WHOLE BUILDING	DAY-LIGHTING	SKYLIGHT	HVAC CHILLER	HVAC PACKAGE	HVAC CONTROLS	HVAC OTHER	MOTORS	LIGHTING	ENVELOPE	REFRIGERATION	PROCESS	OTHER	TOTAL
CALIFORNIA														
Whole Building Approach	31,099	.	.	.	.	.	.	.	.	.	.	.	.	31,099
Systems Approach	.	2,823	.	519	519	.	601	21	3,611	117	.	868	3,732	12,810
Total	31,099	2,823	.	519	519	.	601	21	3,611	117	.	868	3,732	43,909
SCE														
Whole Building Approach	6,952	.	.	.	.	.	.	.	.	.	.	.	.	6,952
Systems Approach	.	2,008	.	205	1	.	407	21	2,277	61	.	.	2,072	7,052
Total	6,952	2,008	.	205	1	.	407	21	2,277	61	.	.	2,072	14,005
PG&E														
Whole Building Approach	18,847	.	.	.	.	.	.	.	.	.	.	.	.	18,847
Systems Approach	.	416	.	.	263	.	.	.	499	12	.	868	1,210	3,268
Total	18,847	416	.	.	263	.	.	.	499	12	.	868	1,210	22,114
SDG&E														
Whole Building Approach	3,351	.	.	.	.	.	.	.	.	.	.	.	.	3,351
Systems Approach	.	400	.	313	202	.	137	.	682	30	.	.	-2	1,763
Total	3,351	400	.	313	202	.	137	.	682	30	.	.	-2	5,114
SoCalGas														
Whole Building Approach	1,950	.	.	.	.	.	.	.	.	.	.	.	.	1,950
Systems Approach	.	.	.	.	54	.	57	.	153	13	.	.	451	727
Total	1,950	.	.	.	54	.	57	.	153	13	.	.	451	2,677

Table 3.16 Estimated Annual Therm Savings by Measure Class for New Construction SBD Participants in PY2003

	WHOLE BUILDING	DAY-LIGHTING	SKYLIGHT	HVAC CHILLER	HVAC PACKAGE	HVAC CONTROLS	HVAC OTHER	MOTORS	LIGHTING	ENVELOPE	REFRIGERATION	PROCESS	OTHER	TOTAL
CALIFORNIA														
Whole Building Approach	1,535,362	.	.	.	.	.	.	.	.	.	.	.	.	1,535,362
Systems Approach	.	-4,472	.	.	-235	3,181	12,385	.	-14,146	7,127	.	122,059	1,800	127,699
Total	1,535,362	-4,472	.	.	-235	3,181	12,385	.	-14,146	7,127	.	122,059	1,800	1,663,061
SCE														
Whole Building Approach	.	.	.	.	.	.	.	.	.	.	.	.	.	0
Systems Approach	.	.	.	.	.	.	.	.	.	.	.	.	.	0
Total	.	.	.	.	.	.	.	.	.	.	.	.	.	0
PG&E														
Whole Building Approach	992,785	.	.	.	.	.	.	.	.	.	.	.	.	992,785
Systems Approach	.	-4,317	.	.	-165	3,181	.	.	-4,835	1,214	.	122,059	3,894	121,031
Total	992,785	-4,317	.	.	-165	3,181	.	.	-4,835	1,214	.	122,059	3,894	1,113,816
SDG&E														
Whole Building Approach	432,790	.	.	.	.	.	.	.	.	.	.	.	.	432,790
Systems Approach	.	-155	.	.	-70	.	10,743	.	-6,371	5,352	.	.	.	9,499
Total	432,790	-155	.	.	-70	.	10,743	.	-6,371	5,352	.	.	.	442,289
SoCalGas														
Whole Building Approach	109,787	.	.	.	.	.	.	.	.	.	.	.	.	109,787
Systems Approach	.	.	.	.	.	.	1,642	.	-2,940	561	.	.	-2,094	-2,831
Total	109,787	.	.	.	.	.	1,642	.	-2,940	561	.	.	-2,094	106,956

4. STATEWIDE NONRESIDENTIAL ALTERATION (R&R) TRENDS

This chapter summarizes the nonresidential alterations that have occurred in PY2003 in the State of California. Similar to Chapter 2, the first section presents the total valuation and the number of project starts in the nonresidential alteration market, by county and building type (F.W. Dodge does not track square feet for alteration projects.) The second section presents the SBD program activity for tenant improvement, renovation and remodeling projects (R&R) in PY2003.

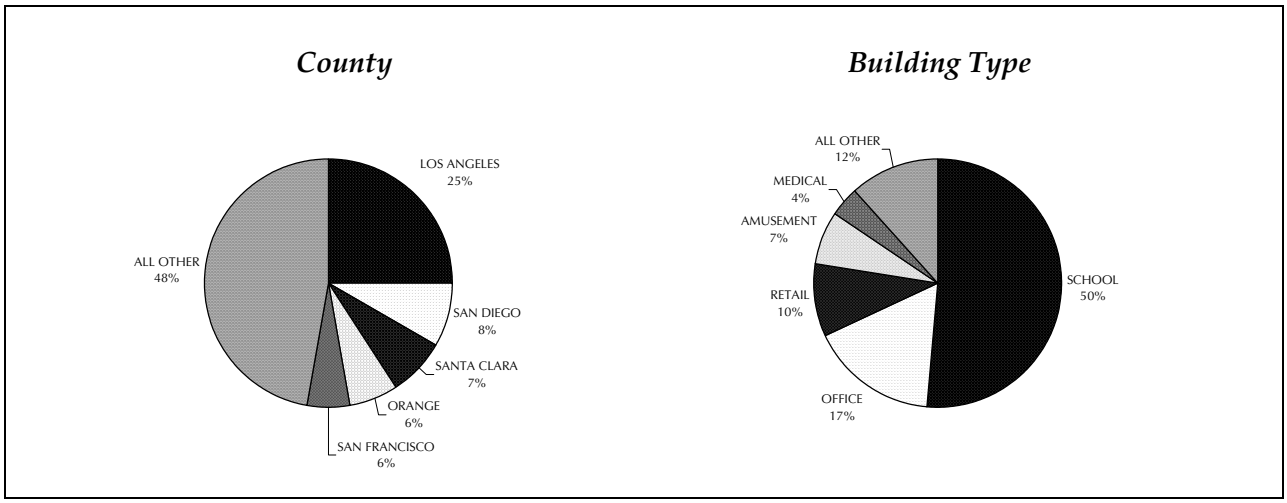
4.1 ALTERATION (R&R) MARKET CHARACTERISTICS IN PY2003

PY2003 nonresidential alteration market activity by building segment and county is presented in the following exhibits and tables. To summarize the market activity by utility territory, project zip codes were used in conjunction with California Energy Commission's zip code-to-utility territory mapping to allocate projects to IOU and non-IOU utilities. SoCalGas's CIS, in conjunction with the CEC zip code-to-utility mapping was used to obtain a comprehensive list of zip codes served by SoCalGas, but not by any other IOU.

Table 4.1 summarizes the F.W. Dodge valuation for the nonresidential alteration projects that started construction during PY2003. The valuation reported by F.W. Dodge is a little more than half of the permit valuation reported by CIRB (Appendix B, Table B.1). One explanation is that CIRB groups addition and alteration projects together, thus reporting a larger market segment than F.W. Dodge. Another is that CIRB records only building-related projects, while leaving out permits for heating, HVAC, electrical, and other remodeling/renovation projects.

Among utility territories, PG&E accounts for over 40 percent of the statewide project start value in PY2003. In all four IOU territories, as well as non-IOU areas, the school and office segments account for large fractions of the total project start valuation.

Exhibit 4.1
R&R Market Segments with the Highest Project Start Valuation in PY2003



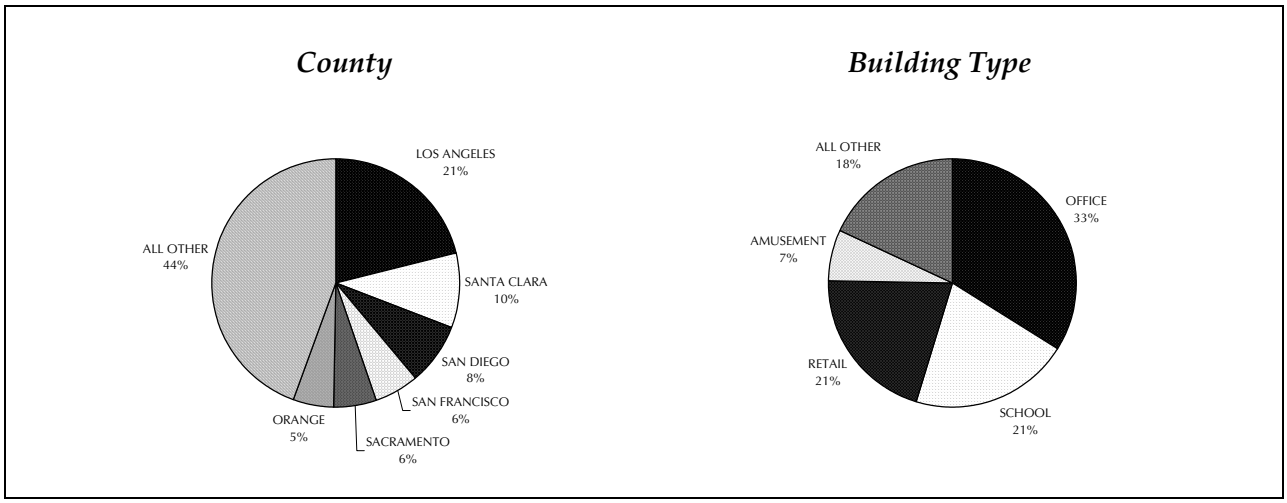
As Exhibit 4.1 shows, the counties with the most active alteration activity in terms of valuation are Los Angeles, San Diego, Santa Clara, Orange and San Francisco. There are seven counties for which F.W. Dodge does not record any nonresidential alteration project starts: Alpine, Colusa, Lassen, Mariposa, Plumas, San Benito and Sierra.

Among building types, school accounts for over half of the value of alteration projects that have started construction in PY2003, with office and retail following in order of importance. Assembly (churches) and education buildings (libraries, museums) account for the lowest value of alteration projects in PY2003.

Table 4.2 presents the number of nonresidential alteration projects that started construction during PY2003. Among utility territories, PG&E leads with the highest number of project starts, followed by SCE. The number of project starts in SDG&E and SoCalGas territories are very similar. Non-IOU areas have a significant number of project starts, roughly equal to the number in SDG&E and SoCalGas territories combined.

As shown in Exhibit 4.2 below, the counties with the largest number of alteration project starts are Los Angeles, Santa Clara, San Diego, San Francisco, Sacramento and Orange. Among building types, the office segment is the largest in terms of alteration project starts, followed by school and retail. The fewest alteration project starts recorded by F.W. Dodge in PY2003 occur in the education (libraries, museums) and government segments.

Exhibit 4.2
R&R Market Segments with the Highest Number of Project Starts in PY2003



Tables 4.3 and 4.4 summarize quarterly alteration project starts by county and building type. There is little variation from quarter to quarter in the number of project starts by segment.

Table 4.1 F.W. Dodge Valuation for Nonresidential Alteration Project Starts in PY2003 by Building Type, County and Service Territory ($1,000)

	AMUSEMENT	ASSEMBLY	EDUCATION	GOVT	HOTEL	MEDICAL	OFFICE	RETAIL	SCHOOL	SERVICE	STORAGE	OTHER	TOTAL
COUNTY													
ALAMEDA	16,157	495	2,322	385	207	3,311	46,817	8,362	62,561	1,434	3,212	3,585	148,848
ALPINE	.	.	.	.	.	.	.	.	.	.	.	.	0
AMADOR	.	.	.	.	.	700	.	.	1,018	.	.	.	1,718
BUTTE	190	.	.	100	.	.	1,576	2,183	4,503	.	.	.	8,552
CALAVERAS	.	.	.	.	.	.	500	.	6,907	.	78	80	7,565
COLUSA	.	.	.	.	.	.	.	.	.	.	.	.	0
CONTRA COSTA	7,863	936	302	.	.	2,065	12,834	5,835	120,610	549	1,247	2,435	154,676
DEL NORTE	.	.	.	.	.	.	.	.	2,769	.	.	.	2,769
EL DORADO	.	.	.	.	.	.	706	230	4,513	.	99	.	5,548
FRESNO	983	144	100	.	.	10,456	10,584	7,014	21,939	.	6,700	6,001	63,921
GLENN	224	.	.	.	.	.	.	.	1,687	.	.	.	1,911
HUMBOLDT	624	.	.	.	.	.	4,453	150	4,923	.	.	3,850	14,000
IMPERIAL	482	315	.	.	.	.	.	1,215	5,998	.	94	1,000	9,104
INYO	.	.	.	.	.	.	300	.	1,930	.	.	.	2,230
KERN	1,902	166	.	.	.	1,128	1,105	1,709	18,296	.	255	468	25,029
KINGS	83	.	.	.	800	.	.	50	3,866	.	.	.	4,799
LAKE	304	.	.	950	.	2,500	.	188	677	.	.	.	4,619
LASSEN	.	.	.	.	.	.	.	.	.	.	.	.	0
LOS ANGELES	91,526	2,059	15,958	8,809	5,461	21,477	100,940	81,099	475,335	6,520	19,385	18,148	846,717
MADERA	.	.	.	.	.	.	.	.	9,463	400	.	.	9,863
MARIN	859	75	.	2,449	.	84	5,883	403	53,818	.	.	1,390	64,961
MARIPOSA	.	.	.	.	.	.	.	.	.	.	.	.	0
MENDOCINO	.	.	.	.	.	.	442	.	520	.	.	.	962
MERCED	.	.	.	.	.	.	4,386	250	24,356	.	257	.	29,249
MODOC	.	.	.	.	.	.	.	.	1,088	.	.	.	1,088
MONO	.	.	.	299	.	.	.	.	.	.	.	.	299
MONTEREY	11,923	1,074	.	.	200	2,480	1,054	1,679	25,599	1,166	500	10,212	55,887
NAPA	.	.	.	.	.	1,450	560	807	8,430	.	1,500	2,500	15,247
NEVADA	166	.	.	.	.	436	778	320	6,140	.	.	.	7,840
ORANGE	8,230	320	715	429	187	4,809	42,708	23,005	121,045	150	5,265	4,208	211,071
PLACER	690	.	.	385	.	1,639	8,324	3,125	47,053	324	806	3,520	65,866
PLUMAS	.	.	.	.	.	.	.	.	.	.	.	.	0
RIVERSIDE	3,576	1,297	.	351	2,156	2,100	9,958	12,830	73,468	1,887	2,746	3,258	113,627
SACRAMENTO	2,224	1,163	.	332	300	6,326	49,732	32,229	64,945	1,801	1,329	4,548	164,929
SAN BENITO	.	.	.	.	.	.	.	.	.	.	.	.	0
SAN BERNARDINO	6,835	229	217	13,849	.	2,190	10,218	5,675	49,741	448	653	10,188	100,243
SAN DIEGO	9,627	446	3,254	.	46,826	16,664	60,382	31,643	100,600	3,886	3,617	3,804	280,749
SAN FRANCISCO	12,403	.	250	589	22,136	28,636	47,539	8,626	39,053	.	2,203	34,771	196,206
SAN JOAQUIN	4,090	.	.	.	.	6,000	2,257	758	8,324	.	120	182	21,731
SAN LUIS OBISPO	1,373	538	1,222	4,633	1,105	1,724	1,967	2,571	38	.	.	88	15,259
SAN MATEO	4,595	.	198	.	.	1,544	13,923	15,221	60,275	.	3,000	1,119	99,875
SANTA BARBARA	3,779	703	.	1,155	253	168	4,565	13,261	30,536	.	.	465	54,885
SANTA CLARA	23,496	2,437	1,103	2,428	773	6,348	73,240	40,849	90,955	1,045	1,648	8,032	252,354
SANTA CRUZ	4,077	.	.	175	.	.	2,710	978	12,373	365	.	927	21,605
SHASTA	971	482	.	.	1,315	.	2,904	290	6,593	.	.	.	12,555
SIERRA	.	.	.	.	.	.	.	.	.	.	.	.	0
SISKIYOU	.	.	.	.	.	.	.	1,215	1,322	.	.	.	2,537
SOLANO	1,564	975	78	7,014	.	491	3,927	2,012	23,334	1,200	121	3,291	44,007
SONOMA	751	2,719	867	471	2,000	1,200	3,713	2,125	18,328	.	129	406	32,709
STANISLAUS	171	1,023	774	.	.	3,055	4,749	5,166	9,447	.	.	336	24,721
SUTTER	.	.	.	.	.	1,051	370	170	14,638	.	.	.	16,229
TEHAMA	.	.	.	.	.	.	.	.	1,728	.	.	.	1,728
TRINITY	149	.	.	.	.	.	.	.	1,490	.	.	.	1,639
TULARE	381	.	.	.	.	1,589	876	1,131	17,377	74	.	557	21,985
TUOLUMNE	.	.	.	.	.	.	162	90	3,564	.	.	.	3,816
VENTURA	10,556	757	.	.	410	792	24,999	9,463	57,985	967	4,443	1,580	111,952
YOLO	.	.	100	.	.	.	654	1,120	12,114	.	1,828	315	16,131
YUBA	.	.	.	.	.	.	.	.	.	.	.	1,629	1,629
CALIFORNIA	232,824	18,353	27,460	44,803	84,129	132,413	562,795	325,047	1,733,272	22,216	61,235	132,893	3,377,440
UTILITY													
SCE	65,847	4,098	14,334	22,087	2,115	24,086	99,679	94,667	515,847	7,258	19,358	27,698	897,074
PG&E	92,292	10,823	6,259	20,734	28,336	73,357	250,995	102,200	730,856	6,557	23,220	84,312	1,429,941
SDG&E	11,427	446	3,254	.	46,826	17,164	60,234	33,593	119,900	3,886	3,617	4,504	304,851
SoCalGas	9,807	776	1,841	1,650	3,687	7,784	42,882	30,598	194,090	1,886	7,075	4,708	306,784
Non-IOU	53,451	2,210	1,772	332	3,165	10,022	109,005	63,989	172,579	2,629	7,965	11,671	438,790

Table 4.2 F.W. Dodge Number of Nonresidential Alteration Project Starts in PY2003 by Building Type, County and Service Territory

	AMUSEMENT	ASSEMBLY	EDUCATION	GOVT	HOTEL	MEDICAL	OFFICE	RETAIL	SCHOOL	SERVICE	STORAGE	OTHER	TOTAL
COUNTY													
ALAMEDA	18	2	5	1	2	7	55	30	27	2	3	9	161
ALPINE	.	.	.	.	.	.	.	.	.	.	.	.	0
AMADOR	.	.	.	.	.	1	.	.	1	.	.	.	2
BUTTE	2	.	.	1	.	.	4	4	5	.	.	.	16
CALAVERAS	.	.	.	.	.	.	1	.	3	.	1	1	6
COLUSA	.	.	.	.	.	.	.	.	.	.	.	.	0
CONTRA COSTA	6	1	1	.	.	4	28	17	32	1	3	8	101
DEL NORTE	.	.	.	.	.	.	.	.	2	.	.	.	2
EL DORADO	.	.	.	.	.	.	3	2	5	.	1	.	11
FRESNO	3	1	1	.	.	4	41	7	24	.	2	5	88
GLENN	1	.	.	.	.	.	.	.	1	.	.	.	2
HUMBOLDT	3	.	.	.	.	.	1	1	8	.	.	1	14
IMPERIAL	2	2	.	.	.	.	.	5	4	.	1	1	15
INYO	.	.	.	.	.	.	1	.	1	.	.	.	2
KERN	5	1	.	.	.	4	8	8	15	.	1	4	46
KINGS	1	.	.	.	1	.	.	1	4	.	.	.	7
LAKE	1	.	.	2	.	1	.	1	1	.	.	.	6
LASSEN	.	.	.	.	.	.	.	.	.	.	.	.	0
LOS ANGELES	56	9	6	6	8	46	240	200	199	9	23	22	824
MADERA	.	.	.	.	.	.	.	.	6	1	.	.	7
MARIN	4	1	.	1	.	1	15	3	28	.	.	4	57
MARIPOSA	.	.	.	.	.	.	.	.	.	.	.	.	0
MENDOCINO	.	.	.	.	.	.	1	.	1	.	.	.	2
MERCED	.	.	.	.	.	.	4	1	8	.	1	.	14
MODOC	.	.	.	.	.	.	.	.	2	.	.	.	2
MONO	.	.	.	1	.	.	.	.	.	.	.	.	1
MONTEREY	4	2	.	.	1	4	5	6	11	1	1	3	38
NAPA	.	.	.	.	.	2	3	4	2	.	1	1	13
NEVADA	1	.	.	.	.	3	3	2	2	.	.	.	11
ORANGE	12	1	1	2	1	5	86	38	45	1	3	6	201
PLACER	4	.	.	1	.	10	25	12	6	1	4	4	67
PLUMAS	.	.	.	.	.	.	.	.	.	.	.	.	0
RIVERSIDE	9	4	.	1	3	14	38	45	26	5	8	11	164
SACRAMENTO	5	2	.	1	1	22	95	52	27	7	5	7	224
SAN BENITO	.	.	.	.	.	.	.	.	.	.	.	.	0
SAN BERNARDINO	13	1	1	6	.	6	41	23	28	3	4	11	137
SAN DIEGO	19	1	2	.	6	18	138	63	42	5	8	9	311
SAN FRANCISCO	15	.	1	1	7	16	131	22	22	.	3	7	225
SAN JOAQUIN	2	.	.	.	.	2	14	7	6	.	1	2	34
SAN LUIS OBISPO	5	3	3	3	5	8	11	12	1	.	.	1	52
SAN MATEO	10	.	1	.	.	3	46	28	25	.	1	6	120
SANTA BARBARA	3	2	.	1	1	2	19	16	14	.	.	2	60
SANTA CLARA	23	7	3	5	4	22	139	92	47	5	9	15	371
SANTA CRUZ	2	.	.	1	.	.	9	2	9	1	.	3	27
SHASTA	1	2	.	.	1	.	4	1	9	.	.	.	18
SIERRA	.	.	.	.	.	.	.	.	.	.	.	.	0
SISKIYOU	.	.	.	.	.	.	.	3	2	.	.	.	5
SOLANO	3	2	1	2	.	2	10	6	11	2	1	3	43
SONOMA	4	4	1	3	1	5	13	11	24	.	1	2	69
STANISLAUS	1	2	2	.	.	8	16	15	8	.	.	1	53
SUTTER	.	.	.	.	.	2	1	2	8	.	.	.	13
TEHAMA	.	.	.	.	.	.	.	.	3	.	.	.	3
TRINITY	1	.	.	.	.	.	.	.	1	.	.	.	2
TULARE	3	.	.	.	.	2	4	6	11	1	.	4	31
TUOLUMNE	.	.	.	.	.	.	1	1	4	.	.	.	6
VENTURA	15	4	.	.	3	6	60	45	20	4	4	9	170
YOLO	.	.	1	.	.	.	4	4	12	.	3	1	25
YUBA	.	.	.	.	.	.	.	.	.	.	.	1	1
CALIFORNIA	257	54	30	39	45	230	1,318	798	803	49	93	164	3,880
UTILITY													
SCE	70	16	5	13	10	48	255	237	197	14	24	46	935
PG&E	117	26	17	22	21	100	564	280	378	15	33	77	1,650
SDG&E	21	1	2	.	6	20	137	66	44	5	8	10	320
SoCalGas	18	2	2	3	2	20	105	72	86	3	7	6	326
Non-IOU	31	9	4	1	6	42	257	143	98	12	21	25	649

Table 4.3 F.W. Dodge Number of Nonresidential Alteration Project Starts in PY2003 by Quarter, County and Service Territory

	Q1, 2003	Q2, 2003	Q3, 2003	Q4, 2003	2003 Total
COUNTY					
ALAMEDA	29	42	47	43	161
ALPINE	0	0	0	0	0
AMADOR	1	1	0	0	2
BUTTE	3	6	5	2	16
CALAVERAS	0	3	1	2	6
COLUSA	0	0	0	0	0
CONTRA COSTA	18	25	36	22	101
DEL NORTE	0	1	1	0	2
EL DORADO	4	4	1	2	11
FRESNO	18	31	21	18	88
GLENN	0	1	0	1	2
HUMBOLDT	5	8	1	0	14
IMPERIAL	0	3	5	7	15
INYO	0	1	0	1	2
KERN	5	14	10	17	46
KINGS	4	1	1	1	7
LAKE	2	2	1	1	6
LASSEN	0	0	0	0	0
LOS ANGELES	269	198	194	163	824
MADERA	2	3	1	1	7
MARIN	8	28	16	5	57
MARIPOSA	0	0	0	0	0
MENDOCINO	0	1	0	1	2
MERCED	1	7	3	3	14
MODOC	0	2	0	0	2
MONO	0	1	0	0	1
MONTEREY	7	14	5	12	38
NAPA	2	6	4	1	13
NEVADA	3	2	1	5	11
ORANGE	41	56	56	48	201
PLACER	16	9	18	24	67
PLUMAS	0	0	0	0	0
RIVERSIDE	39	31	52	42	164
SACRAMENTO	35	51	49	89	224
SAN BENITO	0	0	0	0	0
SAN BERNARDINO	32	43	35	27	137
SAN DIEGO	93	87	92	39	311
SAN FRANCISCO	60	59	55	51	225
SAN JOAQUIN	4	5	10	15	34
SAN LUIS OBISPO	14	11	8	19	52
SAN MATEO	26	31	34	29	120
SANTA BARBARA	11	16	19	14	60
SANTA CLARA	88	117	73	93	371
SANTA CRUZ	4	10	7	6	27
SHASTA	5	5	3	5	18
SIERRA	0	0	0	0	0
SISKIYOU	0	3	1	1	5
SOLANO	4	13	12	14	43
SONOMA	9	24	21	15	69
STANISLAUS	13	13	7	20	53
SUTTER	4	7	0	2	13
TEHAMA	1	1	0	1	3
TRINITY	0	0	0	2	2
TULARE	8	12	4	7	31
TUOLUMNE	1	2	2	1	6
VENTURA	35	51	49	35	170
YOLO	6	8	7	4	25
YUBA	1	0	0	0	1
CALIFORNIA	931	1,070	968	911	3,880
UTILITY					
SCE	206	251	256	222	935
PG&E	342	505	389	414	1,650
SDG&E	94	90	97	39	320
SoCalGas	128	75	72	51	326
Non-IOU	161	149	154	185	649

Table 4.4 F.W. Dodge Number of Nonresidential Alteration Project Starts in PY2003 by Quarter, Building Type and Service Territory

	AMUSEMENT	ASSEMBLY	EDUCATION	GOVT	HOTEL	MEDICAL	OFFICE	RETAIL	SCHOOL	SERVICE	STORAGE	OTHER	TOTAL
CALIFORNIA													
Q1, 2003	62	16	7	7	19	60	366	202	125	9	23	35	931
Q2, 2003	74	11	6	12	6	54	308	203	332	9	17	38	1,070
Q3, 2003	57	12	10	8	8	57	331	193	219	12	22	39	968
Q4, 2003	64	15	7	12	12	59	313	200	127	19	31	52	911
2003 Total	257	54	30	39	45	230	1,318	798	803	49	93	164	3,880
SCE													
Q1, 2003	17	4	.	1	3	14	64	50	37	3	4	9	206
Q2, 2003	16	3	1	5	2	10	57	68	73	2	5	9	251
Q3, 2003	20	8	2	3	1	11	69	63	54	4	8	13	256
Q4, 2003	17	1	2	4	4	13	65	56	33	5	7	15	222
2003 Total	70	16	5	13	10	48	255	237	197	14	24	46	935
PG&E													
Q1, 2003	27	7	5	3	12	27	128	54	52	2	8	17	342
Q2, 2003	43	6	4	7	3	23	144	73	180	2	2	18	505
Q3, 2003	17	1	3	4	3	19	143	71	100	5	8	15	389
Q4, 2003	30	12	5	8	3	31	149	82	46	6	15	27	414
2003 Total	117	26	17	22	21	100	564	280	378	15	33	77	1,650
SDG&E													
Q1, 2003	4	.	.	.	2	5	48	21	6	3	2	3	94
Q2, 2003	6	1	1	.	1	5	34	18	17	.	1	6	90
Q3, 2003	7	.	1	.	2	8	47	16	11	.	4	1	97
Q4, 2003	4	.	.	.	1	2	8	11	10	2	1	.	39
2003 Total	21	1	2	0	6	20	137	66	44	5	8	10	320
SoCalGas													
Q1, 2003	7	1	1	3	.	7	57	32	17	.	1	2	128
Q2, 2003	3	.	.	.	.	6	25	16	20	2	3	.	75
Q3, 2003	4	1	1	.	.	4	18	14	28	1	.	1	72
Q4, 2003	4	.	.	.	2	3	5	10	21	.	3	3	51
2003 Total	18	2	2	3	2	20	105	72	86	3	7	6	326
Non-IOU													
Q1, 2003	7	4	1	0	2	7	69	45	13	1	8	4	161
Q2, 2003	6	1	.	.	.	10	48	28	42	3	6	5	149
Q3, 2003	9	2	3	1	2	15	54	29	26	2	2	9	154
Q4, 2003	9	2	.	.	2	10	86	41	17	6	5	7	185
2003 Total	31	9	4	1	6	42	257	143	98	12	21	25	649

4.2 SBD R&R PROGRAM PARTICIPATION IN PY2003

SBD program activity for nonresidential customers that have a first tenant improvement/ renovation/remodel project (R&R customers), and for whom the IOUs have committed funds in PY2003, is summarized below. Program commitment indicates that the customer has filed an application, that the utility has reviewed it and found that it fits within the scope of the SBD program, that an agreement was signed between the utility and the customer, detailing the conditions of participation in the program, and that the application hasn't been subsequently cancelled. Program commitment was established using the following dates from the tracking systems maintained by the IOUs: the "coupon issue date" for SCE participants, the "acceptance date" for PG&E participants, and the "sign date" for SDG&E and SoCalGas participants.

Table 4.5 presents the number of nonresidential R&R participants to the SBD program for which funds were committed in PY2003.

Table 4.6 shows the number of square feet of R&R construction committed in PY2003.

Tables 4.7-4.9 summarize the estimated annual MWh, kW and therm savings attributable to R&R measures committed in PY2003.

Table 4.10 presents the frequency with which classes of measures were installed in R&R SBD projects committed in PY2003. A glossary of measure classes is presented in Appendix D.

Tables 4.11-4.13 show the estimated annual MWh, kW and therm savings by measure class, for R&R projects committed in PY2003.

Table 4.5 Number of Nonresidential R&R SBD Participants in PY2003

	AMUSEMENT	ASSEMBLY	EDUCATION	GOVT	HOTEL	MEDICAL	OFFICE	RETAIL	SCHOOL	SERVICE	STORAGE	OTHER	TOTAL
CALIFORNIA													
Whole Building Approach	.	.	.	.	1	1	11	4	.	.	1	2	20
Systems Approach	1	1	1	.	1	6	33	12	52	2	1	24	134
Total	1	1	1	.	2	7	44	16	52	2	2	26	154
SCE													
Whole Building Approach	.	.	.	.	.	.	2	2	.	.	1	1	6
Systems Approach	1	.	.	.	1	5	8	10	10	2	.	12	49
Total	1	.	.	.	1	5	10	12	10	2	1	13	55
PG&E													
Whole Building Approach	.	.	.	.	.	.	8	2	.	.	.	.	10
Systems Approach	.	.	1	.	.	.	17	1	13	.	.	7	39
Total	.	.	1	.	.	.	25	3	13	.	.	7	49
SDG&E													
Whole Building Approach	.	.	.	.	1	.	1	.	.	.	.	1	3
Systems Approach	.	1	.	.	.	1	7	1	21	.	.	4	35
Total	.	1	.	.	1	1	8	1	21	.	.	5	38
SoCalGas													
Whole Building Approach	.	.	.	.	.	1	.	.	.	.	.	.	1
Systems Approach	.	.	.	.	.	.	1	.	8	.	1	1	11
Total	.	.	.	.	.	1	1	.	8	.	1	1	12

The number of R&R participants is only one-third of the number of new construction SBD participants (Table 3.8). The school, office and retail building types are the largest segments participating in the program, which reflects the high number of alteration projects reported by F.W. Dodge for these building segments (Exhibit 4.3 below). R&R participants in PY2003 do not include any government buildings, possibly due to differences between the SBD program requirements and FEMP regulations.

Exhibit 4.3
R&R Building Segments with the Highest Number of Projects in PY2003

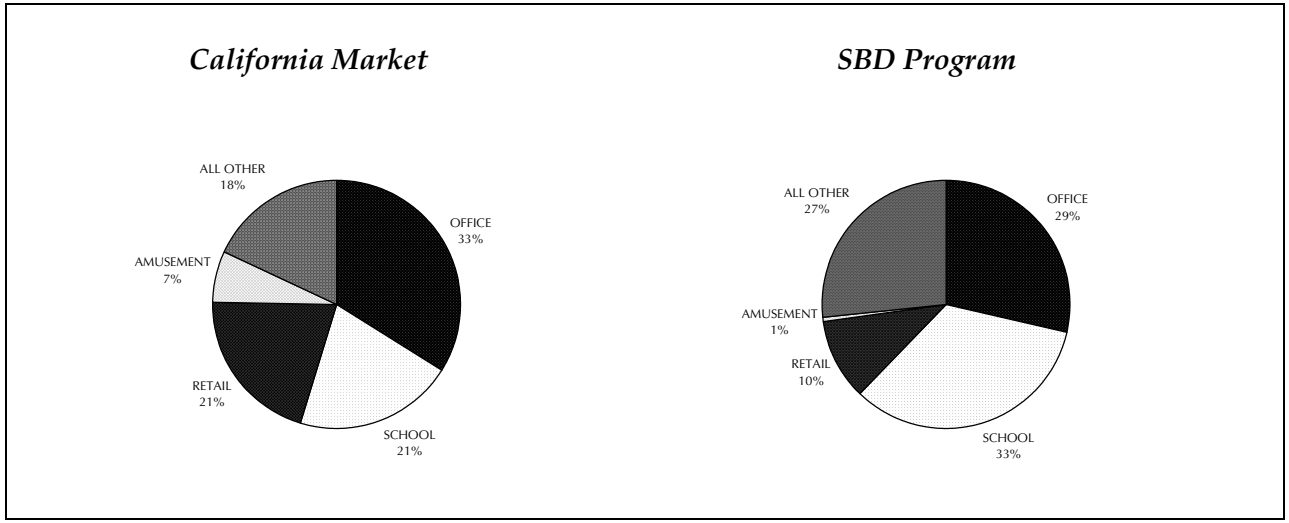


Table 4.6 Area for Nonresidential R&R SBD Participants in PY2003 (1,000 sqft)

	AMUSEMENT	ASSEMBLY	EDUCATION	GOVT	HOTEL	MEDICAL	OFFICE	RETAIL	SCHOOL	SERVICE	STORAGE	OTHER	TOTAL
CALIFORNIA													
Whole Building Approach	.	.	.	.	70	60	1,046	260	.	.	20	129	1,586
Systems Approach	18	13	5	.	119	371	2,862	548	2,542	20	64	1,155	7,717
Total	18	13	5	.	189	431	3,908	808	2,542	20	84	1,284	9,302
SCE													
Whole Building Approach	.	.	.	.	.	.	132	185	.	.	20	39	376
Systems Approach	18	.	.	.	119	232	668	399	290	20	.	740	2,486
Total	18	.	.	.	119	232	800	584	290	20	20	779	2,862
PG&E													
Whole Building Approach	.	.	.	.	.	.	909	75	.	.	.	.	985
Systems Approach	.	.	5	.	.	.	1,698	24	1,111	.	.	196	3,034
Total	.	.	5	.	.	.	2,607	99	1,111	.	.	196	4,018
SDG&E													
Whole Building Approach	.	.	.	.	70	.	5	.	.	.	.	90	165
Systems Approach	.	13	.	.	.	139	432	125	677	.	.	144	1,531
Total	.	13	.	.	70	139	437	125	677	.	.	234	1,695
SoCalGas													
Whole Building Approach	.	.	.	.	.	60	.	.	.	.	.	.	60
Systems Approach	.	.	.	.	.	.	64	.	464	.	64	75	666
Total	.	.	.	.	.	60	64	.	464	.	64	75	726

The majority of SBD R&R program activity in terms of area committed in PY2003 belongs to the office, school and retail building types. The same trend holds for estimated MWh and kW savings, as shown in Tables 4.7 and 4.8.

Table 4.7 Estimated Annual MWh Savings for R&R SBD Participants in PY2003

	AMUSEMENT	ASSEMBLY	EDUCATION	GOVT	HOTEL	MEDICAL	OFFICE	RETAIL	SCHOOL	SERVICE	STORAGE	OTHER	TOTAL
CALIFORNIA													
Whole Building Approach	.	.	.	.	200	63	3,899	1,297	.	.	386	2,157	8,003
Systems Approach	41	20	0	.	325	952	2,895	878	1,616	1,542	453	5,006	13,728
Total	41	20	0	.	525	1,015	6,794	2,175	1,616	1,542	839	7,163	21,730
SCE													
Whole Building Approach	.	.	.	.	.	.	930	770	.	.	386	869	2,955
Systems Approach	41	.	.	.	325	735	646	382	143	1,542	.	2,878	6,692
Total	41	.	.	.	325	735	1,576	1,152	143	1,542	386	3,747	9,647
PG&E													
Whole Building Approach	.	.	.	.	.	.	2,962	527	.	.	.	.	3,490
Systems Approach	.	.	0	.	.	.	1,813	8	267	.	.	920	3,008
Total	.	.	0	.	.	.	4,775	535	267	.	.	920	6,498
SDG&E													
Whole Building Approach	.	.	.	.	200	.	7	.	.	.	.	1,288	1,494
Systems Approach	.	20	.	.	.	216	428	488	652	.	.	1,150	2,953
Total	.	20	.	.	200	216	434	488	652	.	.	2,437	4,447
SoCalGas													
Whole Building Approach	.	.	.	.	.	63	.	.	.	.	.	.	63
Systems Approach	.	.	.	.	.	.	8	.	554	.	453	58	1,074
Total	.	.	.	.	.	63	8	.	554	.	453	58	1,137

Table 4.8 Estimated Annual kW Savings for R&R SBD Participants in PY2003

	AMUSEMENT	ASSEMBLY	EDUCATION	GOVT	HOTEL	MEDICAL	OFFICE	RETAIL	SCHOOL	SERVICE	STORAGE	OTHER	TOTAL
CALIFORNIA													
Whole Building Approach	.	.	.	.	31	18	942	303	.	.	77	408	1,779
Systems Approach	11	5	1	.	65	191	829	240	534	.	33	798	2,706
Total	11	5	1	.	96	209	1,771	543	534	.	110	1,206	4,485
SCE													
Whole Building Approach	.	.	.	.	.	.	62	236	.	.	77	325	700
Systems Approach	11	.	.	.	65	127	159	134	63	.	.	393	951
Total	11	.	.	.	65	127	221	370	63	.	77	718	1,651
PG&E													
Whole Building Approach	.	.	.	.	.	.	876	67	.	.	.	.	943
Systems Approach	.	.	1	.	.	.	544	8	69	.	.	206	828
Total	.	.	1	.	.	.	1,420	75	69	.	.	206	1,770
SDG&E													
Whole Building Approach	.	.	.	.	31	.	5	.	.	.	.	83	118
Systems Approach	.	5	.	.	.	64	123	98	255	.	.	182	726
Total	.	5	.	.	31	64	127	98	255	.	.	265	844
SoCalGas													
Whole Building Approach	.	.	.	.	.	18	.	.	.	.	.	.	18
Systems Approach	.	.	.	.	.	.	4	.	148	.	33	18	202
Total	.	.	.	.	.	18	4	.	148	.	33	18	220

Table 4.9 Estimated Annual therm Savings for R&R SBD Participants in PY2003

	AMUSEMENT	ASSEMBLY	EDUCATION	GOVT	HOTEL	MEDICAL	OFFICE	RETAIL	SCHOOL	SERVICE	STORAGE	OTHER	TOTAL
CALIFORNIA													
Whole Building Approach	.	.	.	.	-354	7,084	-2,388	-4,217	.	.	.	70,561	70,686
Systems Approach	.	.	.	.	.	.	-1,702	-194	-1,453	.	.	136,992	133,643
Total	.	.	.	.	-354	7,084	-4,090	-4,411	-1,453	.	.	207,553	204,329
SCE													
Whole Building Approach	.	.	.	.	.	.	.	.	.	.	.	.	0
Systems Approach	.	.	.	.	.	.	.	.	.	.	.	.	0
Total	.	.	.	.	.	.	.	.	.	.	.	.	0
PG&E													
Whole Building Approach	.	.	.	.	.	.	-2,431	-4,217	.	.	.	.	-6,648
Systems Approach	.	.	.	.	.	.	-2,247	.	-428	.	.	44,698	42,023
Total	.	.	.	.	.	.	-4,678	-4,217	-428	.	.	44,698	35,375
SDG&E													
Whole Building Approach	.	.	.	.	-354	.	43	.	.	.	.	70,561	70,250
Systems Approach	.	.	.	.	.	.	-900	-194	-1,490	.	.	92,444	89,860
Total	.	.	.	.	-354	.	-857	-194	-1,490	.	.	163,005	160,110
SoCalGas													
Whole Building Approach	.	.	.	.	.	7,084	.	.	.	.	.	.	7,084
Systems Approach	.	.	.	.	.	.	1,445	.	465	.	.	-150	1,760
Total	.	.	.	.	.	7,084	1,445	.	465	.	.	-150	8,844

Table 4.10 Classes of Measures Installed by R&R SBD Participants in PY2003

	WHOLE BUILDING	DAY-LIGHTING	SKYLIGHT	HVAC CHILLER	HVAC PACKAGE	HVAC CONTROLS	HVAC OTHER	MOTORS	LIGHTING	ENVELOPE	REFRIGERATION	PROCESS	OTHER	TOTAL
CALIFORNIA														
Whole Building Approach	20	.	.	.	.	.	.	.	.	.	.	.	.	20
Systems Approach	.	3	.	5	64	.	41	3	177	3	.	5	25	326
Total	20	3	.	5	64	.	41	3	177	3	.	5	25	346
SCE														
Whole Building Approach	6	.	.	.	.	.	.	.	.	.	.	.	.	6
Systems Approach	.	.	.	3	.	.	25	3	21	1	.	.	16	69
Total	6	.	.	3	.	.	25	3	21	1	.	.	16	75
PG&E														
Whole Building Approach	10	.	.	.	.	.	.	.	.	.	.	.	.	10
Systems Approach	.	3	.	.	14	.	.	.	29	1	.	5	4	56
Total	10	3	.	.	14	.	.	.	29	1	.	5	4	66
SDG&E														
Whole Building Approach	3	.	.	.	.	.	.	.	.	.	.	.	.	3
Systems Approach	.	.	.	1	47	.	11	.	117	.	.	.	4	180
Total	3	.	.	1	47	.	11	.	117	.	.	.	4	183
SoCalGas														
Whole Building Approach	1	.	.	.	.	.	.	.	.	.	.	.	.	1
Systems Approach	.	.	.	1	3	.	5	.	10	1	.	.	1	21
Total	1	.	.	1	3	.	5	.	10	1	.	.	1	22

Similar to new construction SBD participants, the measures installed by each participant were established using the following fields from the tracking systems maintained by the IOUs: the "meas_desc" for SCE participants, the "description" for PG&E participants, and the "msr_desc" for SDG&E and SoCalGas participants. Each entry into the tracking system was then assigned to one of the measure segments presented in Table 4.10, and counted as one instance in which that particular class of measures was installed through the SBD Program. For example, each participant that selected the whole building approach counted as one instance in which the whole building approach was adopted, regardless of the number and types of measures installed.

As Table 4.10 indicates, R&R participants installed lighting measures most often, followed by unitary HVAC systems and "other HVAC measures" (motors, VSDs). Daylighting, envelope measures and motors were installed very rarely, and HVAC controls and refrigeration measures were not installed at all in PY2003. Note that skylights do not appear to have been installed either, however, they may have been coded as "daylighting" measures in the SBD participation databases.

Table 4.11 Estimated Annual MWh Savings by Measure Class for R&R SBD Participants in PY2003

	WHOLE BUILDING	DAY-LIGHTING	SKYLIGHT	HVAC CHILLER	HVAC PACKAGE	HVAC CONTROLS	HVAC OTHER	MOTORS	LIGHTING	ENVELOPE	REFRIGERATION	PROCESS	OTHER	TOTAL
CALIFORNIA														
Whole Building Approach	5,047	.	.	.	.	.	.	930	770	.	.	386	869	8,003
Systems Approach	41	94	.	219	144	325	956	646	4,106	143	1,542	1,129	4,382	13,728
Total	5,088	94	.	219	144	325	956	1,576	4,876	143	1,542	1,515	5,252	21,730
SCE														
Whole Building Approach	.	.	.	.	.	.	.	930	770	.	.	386	869	2,955
Systems Approach	41	.	.	.	.	325	735	646	382	143	1,542	.	2,878	6,692
Total	41	.	.	.	.	325	735	1,576	1,152	143	1,542	386	3,747	9,647
PG&E														
Whole Building Approach	3,490	.	.	.	.	.	.	.	.	.	.	.	.	3,490
Systems Approach	.	94	.	.	39	.	.	.	1,746	0	.	1,129	.	3,008
Total	3,490	94	.	.	39	.	.	.	1,746	0	.	1,129	.	6,498
SDG&E														
Whole Building Approach	1,494	.	.	.	.	.	.	.	.	.	.	.	.	1,494
Systems Approach	.	.	.	211	42	.	115	.	1,534	.	.	.	1,051	2,953
Total	1,494	.	.	211	42	.	115	.	1,534	.	.	.	1,051	4,447
SoCalGas														
Whole Building Approach	63	.	.	.	.	.	.	.	.	.	.	.	.	63
Systems Approach	.	.	.	8	63	.	106	.	444	0	.	.	453	1,074
Total	63	.	.	8	63	.	106	.	444	0	.	.	453	1,137

Tables 4.11 and 4.12 indicate that Whole Building Design measures, lighting, motors, refrigeration and process account for the highest estimated MWh and kW savings in the R&R SBD program in PY2003. The largest therm savings are generated by the Whole Building Design and process measures, as shown in Table 4.13. Again, lighting measures generate negative therm savings.

Table 4.12 Estimated Annual kW Savings by Measure Class for R&R SBD Participants in PY2003

	WHOLE BUILDING	DAY-LIGHTING	SKYLIGHT	HVAC CHILLER	HVAC PACKAGE	HVAC CONTROLS	HVAC OTHER	MOTORS	LIGHTING	ENVELOPE	REFRIGERATION	PROCESS	OTHER	TOTAL
CALIFORNIA														
Whole Building Approach	1,079	.	.	.	.	.	.	62	236	.	.	77	325	1,779
Systems Approach	11	47	.	67	106	65	158	159	1,229	63	.	217	585	2,706
Total	1,090	47	.	67	106	65	158	221	1,465	63	.	294	910	4,485
SCE														
Whole Building Approach	.	.	.	.	.	.	.	62	236	.	.	77	325	700
Systems Approach	11	.	.	.	.	65	127	159	134	63	.	.	393	951
Total	11	.	.	.	.	65	127	221	370	63	0	77	718	1,651
PG&E														
Whole Building Approach	943	.	.	.	.	.	.	.	.	.	.	.	.	943
Systems Approach	.	47	.	.	28	.	.	.	536	.	.	217	.	828
Total	943	47	.	.	28	.	.	.	536	.	.	217	.	1,770
SDG&E														
Whole Building Approach	118	.	.	.	.	.	.	.	.	.	.	.	.	118
Systems Approach	.	.	.	63	38	.	29	.	437	.	.	.	159	726
Total	118	.	.	63	38	.	29	.	437	.	.	.	159	844
SoCalGas														
Whole Building Approach	18	.	.	.	.	.	.	.	.	.	.	.	.	18
Systems Approach	.	.	.	4	41	.	2	.	123	0	.	.	33	202
Total	18	.	.	4	41	.	2	.	123	0	.	.	33	220

Table 4.13 Estimated Annual therm Savings by Measure Class for R&R SBD Participants in PY2003

	WHOLE BUILDING	DAY-LIGHTING	SKYLIGHT	HVAC CHILLER	HVAC PACKAGE	HVAC CONTROLS	HVAC OTHER	MOTORS	LIGHTING	ENVELOPE	REFRIGERATION	PROCESS	OTHER	TOTAL
CALIFORNIA														
Whole Building Approach	70,686	.	.	.	.	.	.	.	.	.	.	.	.	70,686
Systems Approach	.	.	.	.	4,740	.	7,164	.	-15,175	92	.	45,049	91,773	133,643
Total	70,686	.	.	.	4,740	.	7,164	.	-15,175	92	.	45,049	91,773	204,329
SCE														
Whole Building Approach	.	.	.	.	.	.	.	.	.	.	.	.	.	0
Systems Approach	.	.	.	.	.	.	.	.	.	.	.	.	.	0
Total	.	.	.	.	.	.	.	.	.	.	.	.	.	0
PG&E														
Whole Building Approach	-6,648	.	.	.	.	.	.	.	.	.	.	.	.	-6,648
Systems Approach	.	.	.	.	4,890	.	.	.	-9,381	-2	.	45,049	1,467	42,023
Total	-6,648	.	.	.	4,890	.	.	.	-9,381	-2	.	45,049	1,467	35,375
SDG&E														
Whole Building Approach	70,250	.	.	.	.	.	.	.	.	.	.	.	.	70,250
Systems Approach	.	.	.	.	.	.	2,810	.	-3,256	.	.	.	90,306	89,860
Total	70,250	.	.	.	.	.	2,810	.	-3,256	.	.	.	90,306	160,110
SoCalGas														
Whole Building Approach	7,084	.	.	.	.	.	.	.	.	.	.	.	.	7,084
Systems Approach	.	.	.	.	-150	.	4,354	.	-2,538	94	.	.	.	1,760
Total	7,084	.	.	.	-150	.	4,354	.	-2,538	94	.	.	.	8,844

5. SBD PROGRAM PENETRATION INTO THE NRNC MARKET IN PY2003

This chapter presents SBD program penetration into the NRNC market statewide and by utility territory, in PY2003.

Program penetration for new construction participants was evaluated based on both construction area (square feet) and number of projects. As the area of alteration projects is not tracked by F.W. Dodge, program penetration for R&R participants was evaluated only based on number of projects.

When summarizing market activity by utility territory, project zip codes were used in conjunction with California Energy Commission's zip code-to-utility territory mapping to allocate projects to IOU and non-IOU utilities. SoCalGas's CIS, in conjunction with the CEC zip code-to-utility mapping was used to obtain a comprehensive list of zip codes served by SoCalGas, but not by any other IOU.

Table 5.1 presents the statewide SBD program penetration.

Table 5.2 presents SBD program penetration in the SCE service territory.

Table 5.3 shows SBD program penetration in the PG&E service territory.

Table 5.4 summarizes SBD program penetration in the SDG&E service territory.

Table 5.5 shows SBD program penetration in the SoCalGas service territory.

In terms of square feet committed, the statewide new construction market penetration of the SBD program is 35.1%. This number is lower than in individual utility territories due to the fact that non-IOU areas are included in the statewide market. If only the IOU territories are considered, program penetration by square footage is 40.7%. SBD committed square feet account for 41.2% market penetration in the SCE territory; 45.5% penetration in the PG&E territory; 27.7% penetration in the SDG&E territory; and 41.2% penetration in the SoCalGas territory.

In terms of number of projects committed, the statewide new construction market penetration of the SBD program is 12.9%. In the four IOU service territories, program penetration by number of projects is 15.5%. SBD committed projects account for 18.9% market penetration in the SCE territory; 11.4% penetration in the PG&E territory; 19.9% penetration in the SDG&E territory; and 19.0% penetration in the SoCalGas territory.

Note that SBD program penetration by number of projects is lower than penetration by square footage, indicating that the SBD program is reaching relatively large buildings.

Among R&R participants, the statewide market penetration of the SBD program is 4.0%. In the four IOU service territories, program penetration by number of projects is 4.8%. SBD committed projects account for 5.9% market penetration in the SCE territory; 3.0% penetration in the PG&E territory; 11.9% penetration in the SDG&E territory; and 3.7% penetration in SoCalGas territory.

Due to the higher number of projects selecting the systems approach, SBD program penetration is consistently higher for these projects than for those selecting the whole building approach, with the exception of new construction in PG&E territory. Significant opportunities remain for increased program penetration into the market, through sustained networking with the most active designers (Chapter 7) and with building officials.

Table 5.1 Statewide SBD Program Penetration in PY2003

Program Type	Year/Quarter	Source	Value ($ billions)	Area (millions of sqft)	%Area Penetration	Number of Projects	%Projects Penetration
New and Additions	2003 QTR 1-4	F. W. Dodge	13.359	128.63		3,782	
		SBD Whole Building	-	20.15	15.7%	204	5.4%
		SBD Systems Approach	-	25.02	19.4%	285	7.5%
		SBD Total	-	45.17	35.1%	489	12.9%
Alterations (R&R and TI)	2003 QTR 1-4	F. W. Dodge	3.377	-		3,880	
		SBD Whole Building	-	1.59	-	20	0.5%
		SBD Systems Approach	-	7.72	-	134	3.5%
		SBD Total	-	9.30	-	154	4.0%

Table 5.2 SBD Program Penetration in the SCE Service Territory in PY2003

Program Type	Year/Quarter	Source	Value ($ billions)	Area (millions of sqft)	%Area Penetration	Number of Projects	%Projects Penetration
New and Additions	2003 QTR 1-4	F. W. Dodge	3.977	43.88		1,098	
		SBD Whole Building	-	4.85	11.0%	56	5.1%
		SBD Systems Approach	-	13.25	30.2%	152	13.8%
		SBD Total	-	18.10	41.2%	208	18.9%
Alterations (R&R and TI)	2003 QTR 1-4	F. W. Dodge	0.897	-		935	-
		SBD Whole Building	-	0.38	-	6	0.0%
		SBD Systems Approach	-	2.49	-	49	5.2%
		SBD Total	-	2.86	-	55	5.9%

Table 5.3 SBD Program Penetration in the PG&E Service Territory in PY2003

Program Type	Year/Quarter	Source	Value ($ billions)	Area (millions of sqft)	%Area Penetration	Number of Projects	%Projects Penetration
New and Additions	2003 QTR 1-4	F. W. Dodge	4.431	39.35		1,488	
		SBD Whole Building	-	10.88	27.7%	98	6.6%
		SBD Systems Approach	-	7.04	17.9%	71	4.8%
		SBD Total	-	17.92	45.5%	169	11.4%
Alterations (R&R and TI)	2003 QTR 1-4	F. W. Dodge	1.430	-		1,650	
		SBD Whole Building	-	0.98	-	10	0.6%
		SBD Systems Approach	-	3.03	-	39	2.4%
		SBD Total	-	4.02	-	49	3.0%

Table 5.4 SBD Program Penetration in the SDG&E Service Territory in PY2003

Program Type	Year/Quarter	Source	Value ($ billions)	Area (millions of sqft)	%Area Penetration	Number of Projects	%Projects Penetration
New and Additions	2003 QTR 1-4	F. W. Dodge	1.593	16.94		346	
		SBD Whole Building	-	2.33	13.7%	30	8.7%
		SBD Systems Approach	-	2.37	14.0%	39	11.3%
		SBD Total	-	4.70	27.7%	69	19.9%
Alterations (R&R and TI)	2003 QTR 1-4	F. W. Dodge	0.305	-		320	
		SBD Whole Building	-	0.16	-	3	0.9%
		SBD Systems Approach	-	1.53	-	35	10.9%
		SBD Total	-	1.70	-	38	11.9%

Table 5.5 SBD Program Penetration in the SoCalGas Service Territory in PY2003

Program Type	Year/Quarter	Source	Value ($ billions)	Area (millions of sqft)	%Area Penetration	Number of Projects	%Projects Penetration
New and Additions	2003 QTR 1-4	F. W. Dodge	1.477	10.81		226	
		SBD Whole Building	-	2.10	19.4%	20	8.8%
		SBD Systems Approach	-	2.35	21.8%	23	10.2%
		SBD Total	-	4.45	41.2%	43	19.0%
Alterations (R&R and TI)	2003 QTR 1-4	F. W. Dodge	0.307	-		326	
		SBD Whole Building	-	0.06	-	1	0.3%
		SBD Systems Approach	-	0.67	-	11	3.4%
		SBD Total	-	0.73	-	12	3.7%

6. NRNC MARKET AND PROGRAM TRACKING SUMMARY

This chapter provides a summary of the NRNC market and SBD program activity since SBD program inception (July 1999).

Tables 6.1 – 6.5 summarize the market activity quarterly, statewide and by utility territory, starting with Quarter 3, 1999. Table 6.6 summarizes Tables 6.1-6.5 and presents the market activity by year. Consistent with the data reported in the previous chapters, F.W. Dodge project zip codes were used in conjunction with California Energy Commission's zip code-to-utility territory mapping to allocate projects to IOU and non-IOU utilities. SoCalGas's CIS, in conjunction with the CEC zip code-to-utility mapping was used to obtain a comprehensive list of zip codes served by SoCalGas, but not by any other IOU.

As discussed in Chapters 3 and 4, there is little variation in market activity from quarter to quarter. Quarter 4, 2003, presents the lowest volume of project starts statewide, while Quarter 2, 2001, presents the largest volume of project starts. This result may be due to changes in building codes that went into effect on July 1, 2001, and which contributed to an increase in permit activity prior to the effective date of those changes, but also to the energy conservation activity statewide in 2001. The slight decrease in the subsequent years is probably due to the slowing of the California economy since 2002.

Tables 6.7 – 6.11 summarize SBD Program activity quarterly, statewide and by utility territory, starting with Quarter 3, 1999. Table 6.12 summarizes the SBD Program activity by year. Table 6.13 summarizes annual SBD Program penetration, statewide and by utility territory.

SBD program activity follows similar trends as the NRNC market, with a relatively busy year in 2001 and a less active year in 2002. The 2003 program year was slightly more active than 2002, but significantly less active than 2001. It is important to note, however, that the 2003 program year achieved the highest historic penetration rates, both in terms of square footage of new construction and in terms of number of participant projects.

Table 6.1 F.W. Dodge Market Summary for Project Starts in California

Program Type	Year	Quarter	Value ($billions)	Area (millions of sqft)	Number of Projects
New and additions	1999	3	3.492	50.23	1,443
		4	2.474	38.16	1,068
	2000	1	3.004	48.08	1,160
		2	2.855	39.77	1,096
		3	3.890	46.31	1,227
		4	3.500	45.99	1,191
	2001	1	4.006	52.11	1,118
		2	3.639	44.73	1,221
		3	3.800	46.47	1,398
		4	2.877	35.17	1,068
	2002	1	2.741	35.61	1,273
		2	3.164	34.01	1,020
		3	3.562	41.45	1,267
		4	3.423	32.55	1,066
	2003	1	3.093	33.90	998
		2	3.979	34.57	996
		3	3.251	30.92	902
		4	3.036	29.24	886
Alterations	1999	3	1.102	-	1,374
		4	0.851	-	1,026
	2000	1	0.710	-	983
		2	0.958	-	1,101
		3	0.959	-	1,425
		4	0.813	-	1,145
	2001	1	0.963	-	1,188
		2	1.164	-	1,416
		3	0.951	-	1,313
		4	0.754	-	874
	2002	1	0.827	-	1,174
		2	0.856	-	1,200
		3	0.876	-	1,175
		4	0.672	-	794
	2003	1	0.719	-	931
		2	1.021	-	1,070
		3	0.878	-	968
		4	0.760	-	911

Table 6.2 F.W. Dodge Market Summary for Project Starts within the SCE Service Territory

Program Type	Year	Quarter	Value ($billions)	Area (millions of sqft)	Number of Projects
New and additions	1999	3	0.951	17.68	486
		4	0.731	13.84	340
	2000	1	1.177	23.25	416
		2	0.836	14.15	384
		3	0.891	13.00	325
		4	0.736	11.63	303
	2001	1	1.108	14.03	301
		2	1.013	14.62	351
		3	1.132	17.36	387
		4	0.767	10.96	337
	2002	1	0.866	14.55	368
		2	1.081	12.64	289
		3	1.171	14.03	369
		4	0.999	11.20	331
	2003	1	0.776	10.80	298
		2	1.047	9.91	259
		3	1.210	12.75	286
		4	0.944	10.41	255
Alterations	1999	3	0.239	-	429
		4	0.156	-	343
	2000	1	0.214	-	311
		2	0.173	-	293
		3	0.208	-	292
		4	0.167	-	290
	2001	1	0.284	-	241
		2	0.216	-	277
		3	0.188	-	294
		4	0.156	-	227
	2002	1	0.183	-	248
		2	0.180	-	258
		3	0.219	-	266
		4	0.135	-	193
	2003	1	0.187	-	206
		2	0.256	-	251
		3	0.243	-	256
		4	0.210	-	222

Table 6.3 F.W. Dodge Market Summary for Project Starts within the PG&E Service Territory

Program Type	Year	Quarter	Value ($billions)	Area (millions of sqft)	Number of Projects
New and additions	1999	3	1.528	17.77	566
		4	0.992	13.17	387
	2000	1	1.087	13.00	371
		2	0.965	13.05	392
		3	1.948	21.36	536
		4	1.671	20.56	532
	2001	1	1.716	21.66	457
		2	1.620	17.32	472
		3	1.300	14.21	497
		4	1.030	12.04	360
	2002	1	0.820	9.31	462
		2	1.036	9.59	414
		3	1.201	11.67	489
		4	1.345	11.30	401
	2003	1	1.246	11.40	377
		2	1.321	12.02	414
		3	0.835	6.97	320
		4	1.029	8.96	377
Alterations	1999	3	0.513	-	466
		4	0.390	-	291
	2000	1	0.289	-	300
		2	0.430	-	458
		3	0.428	-	620
		4	0.373	-	471
	2001	1	0.404	-	456
		2	0.612	-	652
		3	0.421	-	472
		4	0.311	-	358
	2002	1	0.339	-	419
		2	0.383	-	473
		3	0.373	-	465
		4	0.269	-	289
	2003	1	0.251	-	342
		2	0.501	-	505
		3	0.362	-	389
		4	0.316	-	414

Table 6.4 F.W. Dodge Market Summary for Project Starts within the SDG&E Service Territory

Program Type	Year	Quarter	Value ($billions)	Area (millions of sqft)	Number of Projects
New and additions	1999	3	0.412	5.28	132
		4	0.362	5.06	136
	2000	1	0.297	5.29	141
		2	0.451	5.54	110
		3	0.453	5.33	141
		4	0.342	4.63	109
	2001	1	0.466	5.46	119
		2	0.326	3.85	144
		3	0.545	6.49	154
		4	0.259	3.56	118
	2002	1	0.374	4.35	118
		2	0.350	4.17	80
		3	0.349	4.12	121
		4	0.236	2.42	86
	2003	1	0.401	4.50	95
		2	0.458	4.94	108
		3	0.324	3.52	78
		4	0.410	3.98	65
Alterations	1999	3	0.074	-	139
		4	0.142	-	126
	2000	1	0.105	-	140
		2	0.116	-	106
		3	0.099	-	176
		4	0.103	-	133
	2001	1	0.103	-	192
		2	0.133	-	167
		3	0.113	-	179
		4	0.051	-	74
	2002	1	0.101	-	138
		2	0.076	-	129
		3	0.106	-	130
		4	0.106	-	103
	2003	1	0.079	-	94
		2	0.084	-	90
		3	0.059	-	97
		4	0.084	-	39

Table 6.5 F.W. Dodge Market Summary for Project Starts within the SoCalGas Service Territory

Program Type	Year	Quarter	Value ($billions)	Area (millions of sqft)	Number of Projects
New and additions	1999	3	0.358	5.43	81
		4	0.165	2.68	78
	2000	1	0.214	2.44	97
		2	0.209	1.89	83
		3	0.337	2.56	88
		4	0.355	4.69	66
	2001	1	0.299	5.24	61
		2	0.378	4.55	83
		3	0.221	2.43	116
		4	0.233	3.09	66
	2002	1	0.244	2.82	98
		2	0.337	3.19	79
		3	0.318	3.67	75
		4	0.414	3.26	76
	2003	1	0.321	3.81	74
		2	0.633	3.07	54
		3	0.184	1.59	55
		4	0.339	2.34	43
Alterations	1999	3	0.123	-	134
		4	0.091	-	128
	2000	1	0.058	-	107
		2	0.084	-	114
		3	0.055	-	156
		4	0.036	-	94
	2001	1	0.063	-	107
		2	0.060	-	91
		3	0.083	-	131
		4	0.030	-	53
	2002	1	0.095	-	146
		2	0.091	-	113
		3	0.068	-	117
		4	0.081	-	80
	2003	1	0.127	-	128
		2	0.056	-	75
		3	0.063	-	72
		4	0.061	-	51

Table 6.6 F.W. Dodge Market Summary for Annual Project Starts

Program Type	Year	Quarters	Value $ billions	Area (millions of sqft)	Number of Projects
California					
New Construction	1999	3-4	5.97	88.38	2,511
	2000	1-4	13.25	180.15	4,674
	2001	1-4	14.32	178.49	4,805
	2002	1-4	12.89	143.62	4,626
	2003	1-4	13.36	128.63	3,782
Alterations (R&R)	1999	3-4	1.95	-	2,400
	2000	1-4	3.44	-	4,654
	2001	1-4	3.83	-	4,791
	2002	1-4	3.23	-	4,343
	2003	1-4	3.38	-	3,880
SCE					
New Construction	1999	3-4	1.68	31.52	826
	2000	1-4	3.64	62.03	1,428
	2001	1-4	4.02	56.95	1,376
	2002	1-4	4.12	52.43	1,357
	2003	1-4	3.98	43.88	1,098
Alterations (R&R)	1999	3-4	0.40	-	772
	2000	1-4	0.76	-	1,186
	2001	1-4	0.84	-	1,039
	2002	1-4	0.72	-	965
	2003	1-4	0.90	-	935
PG&E					
New Construction	1999	3-4	2.52	30.94	953
	2000	1-4	5.67	67.98	1,831
	2001	1-4	5.67	65.23	1,786
	2002	1-4	4.40	41.87	1,766
	2003	1-4	4.43	39.35	1,488
Alterations (R&R)	1999	3-4	0.90	-	757
	2000	1-4	1.52	-	1,849
	2001	1-4	1.75	-	1,938
	2002	1-4	1.36	-	1,646
	2003	1-4	1.43	-	1,650
SDG&E					
New Construction	1999	3-4	0.77	10.33	268
	2000	1-4	1.54	20.79	501
	2001	1-4	1.60	19.35	535
	2002	1-4	1.31	15.06	405
	2003	1-4	1.59	16.94	346
Alterations (R&R)	1999	3-4	0.22	-	265
	2000	1-4	0.42	-	555
	2001	1-4	0.40	-	612
	2002	1-4	0.39	-	500
	2003	1-4	0.30	-	320
SoCalGas					
New Construction	1999	3-4	0.52	8.11	159
	2000	1-4	1.12	11.58	334
	2001	1-4	1.13	15.32	326
	2002	1-4	1.31	12.93	328
	2003	1-4	1.48	10.81	226
Alterations (R&R)	1999	3-4	0.21	-	262
	2000	1-4	0.23	-	471
	2001	1-4	0.24	-	382
	2002	1-4	0.34	-	456
	2003	1-4	0.31	-	326

Table 6.7 Statewide SBD Program Participation Summary

Program Type	Year	Quarter	Area (millions of sqft)	Energy Impacts GWh	Demand Impacts MW	Gas Impacts 1,000 Therms	Number of Participants
NEW CONSTRUCTION							
New Construction	1999	3	3.96	8.30	2.39	16.50	30
		4	11.41	28.75	10.63	-15.13	98
	2000	1	2.00	6.14	1.73	8.94	19
		2	5.86	15.45	4.70	181.22	62
		3	5.22	11.53	3.93	0.00	74
		4	9.84	24.39	7.83	17.70	161
	2001	1	12.59	17.09	6.01	1.68	72
		2	14.70	40.39	11.06	658.58	162
		3	12.00	29.03	9.58	408.06	139
		4	21.24	67.13	13.99	109.61	203
	2002	1	4.08	12.36	3.83	32.42	36
		2	7.39	33.15	7.32	428.14	61
		3	7.83	32.22	6.31	-8.75	92
		4	19.33	87.44	18.81	261.53	246
	2003	1	2.42	8.86	1.82	-14.80	35
		2	7.47	43.74	8.47	342.96	80
		3	12.30	40.56	7.98	167.60	123
		4	22.98	105.63	25.64	1,167.30	251
R&R, incl. TI							
R&R, incl. TI	1999	3	1.39	5.56	0.69	0.00	16
		4	1.90	4.54	1.47	3.67	36
	2000	1	4.01	3.33	1.11	12.28	25
		2	2.69	5.32	1.60	0.46	36
		3	1.82	5.40	0.94	0.00	37
		4	4.75	12.83	3.63	0.00	84
	2001	1	1.26	10.15	1.45	0.00	22
		2	4.42	9.74	3.12	2.51	67
		3	2.60	4.23	1.47	25.29	48
		4	4.32	8.80	1.91	48.11	85
	2002	1	0.89	10.37	0.89	11.52	13
		2	0.90	4.32	0.29	9.19	18
		3	1.95	6.96	1.52	85.34	43
		4	2.91	9.63	1.61	72.33	53
	2003	1	0.90	0.88	0.31	-1.47	13
		2	2.34	3.14	0.87	-2.46	35
		3	2.79	6.59	1.23	110.75	54
		4	3.27	11.11	2.08	97.50	52

Table 6.8 SBD Program Participation Summary for SCE Territory

Program Type	Year	Quarter	Area (millions of sqft)	Energy Impacts GWh	Demand Impacts MW	Gas Impacts 1,000 Therms	Number of Participants
NEW CONSTRUCTION							
New Construction	1999	3	3.78	7.98	2.23	0.00	27
		4	5.77	14.71	3.42	0.00	49
	2000	1	1.30	4.89	1.32	0.00	8
		2	2.63	6.77	1.63	0.00	19
		3	2.74	7.22	2.48	0.00	28
		4	2.31	11.22	1.85	0.00	30
	2001	1	5.46	5.92	0.96	0.00	23
		2	3.89	13.88	2.11	0.00	47
		3	3.80	12.28	3.21	0.00	37
		4	9.96	39.22	6.06	0.00	82
	2002	1	2.95	10.70	2.76	0.00	23
		2	4.37	18.67	4.28	0.00	38
		3	4.33	19.87	4.03	0.00	61
		4	7.38	43.34	8.01	0.00	89
	2003	1	1.45	5.14	1.44	0.00	23
		2	2.06	20.09	2.45	0.00	21
		3	6.23	22.58	4.18	0.00	61
		4	8.36	35.26	5.94	0.00	103
R&R, incl. TI							
R&R, incl. TI	1999	3	1.23	5.34	0.64	0.00	11
		4	1.10	2.35	0.67	0.00	15
	2000	1	0.41	0.44	0.12	0.00	5
		2	1.58	2.65	0.68	0.00	10
		3	0.77	3.87	0.33	0.00	12
		4	3.46	9.30	2.73	0.00	46
	2001	1	0.44	6.54	0.93	0.00	10
		2	2.12	7.18	1.86	0.00	15
		3	0.94	2.24	0.60	0.00	16
		4	0.71	1.95	0.29	0.00	11
	2002	1	0.42	9.71	0.65	0.00	8
		2	0.70	3.39	0.21	0.00	13
		3	0.64	1.94	0.39	0.00	15
		4	1.15	3.21	0.42	0.00	19
	2003	1	0.65	0.69	0.23	0.00	7
		2	0.33	0.69	0.05	0.00	10
		3	0.76	3.04	0.31	0.00	18
		4	1.12	5.23	1.05	0.00	20

Table 6.9 SBD Program Participation Summary for PG&E Territory

Program Type	Year	Quarter	Area (millions of sqft)	Energy Impacts GWh	Demand Impacts MW	Gas Impacts 1,000 Therms	Number of Participants
NEW CONSTRUCTION							
New Construction	1999	3	0.00	0.00	0.00	0.00	0
		4	4.06	8.84	5.49	0.00	35
	2000	1	0.07	0.18	0.08	0.00	1
		2	1.75	3.05	1.27	0.00	20
		3	1.32	2.06	0.78	0.00	30
		4	5.98	10.71	5.28	10.04	93
	2001	1	5.68	8.98	4.54	0.00	31
		2	7.94	13.35	6.46	286.77	81
		3	5.85	9.94	4.91	299.81	71
		4	6.74	18.09	4.64	-17.08	90
	2002	1	1.14	1.66	1.07	32.42	13
		2	1.69	5.10	1.65	2.41	10
		3	1.29	6.08	1.29	-34.91	11
		4	8.99	35.89	8.97	197.92	86
	2003	1	0.00	0.00	0.00	0.00	0
		2	3.60	11.47	3.26	47.58	31
		3	2.47	7.35	1.68	59.99	26
		4	11.85	54.35	17.18	1006.24	112
R&R, incl. TI							
R&R, incl. TI	1999	3	0.00	0.00	0.00	0.00	0
		4	0.34	0.56	0.22	0.00	6
	2000	1	0.04	0.06	0.02	0.00	2
		2	0.43	1.44	0.50	0.00	9
		3	0.16	0.13	0.09	0.00	3
		4	0.82	2.64	0.67	0.00	24
	2001	1	0.44	0.56	0.13	0.00	5
		2	1.67	1.71	0.93	1.25	34
		3	1.12	1.26	0.58	25.40	19
		4	2.93	4.61	1.07	23.19	61
	2002	1	0.47	0.66	0.24	11.52	5
		2	0.08	0.06	0.02	5.57	1
		3	1.13	4.04	0.93	7.66	22
		4	1.54	6.10	1.12	74.34	27
	2003	1	0.05	0.07	0.04	0.00	2
		2	1.08	1.48	0.51	-1.21	9
		3	1.19	1.25	0.42	13.07	13
		4	1.70	3.70	0.81	23.52	25

Table 6.10 SBD Program Participation Summary for SDG&E Territory

Program Type	Year	Quarter	Area (millions of sqft)	Energy Impacts GWh	Demand Impacts MW	Gas Impacts 1,000 Therms	Number of Participants
NEW CONSTRUCTION							
New Construction	1999	3	0.18	0.32	0.16	16.50	3
		4	1.57	5.20	1.72	-15.13	14
	2000	1	0.63	1.08	0.33	8.94	10
		2	1.48	5.63	1.81	181.22	23
		3	1.16	2.25	0.67	0.00	16
		4	1.42	2.08	0.49	-0.46	27
	2001	1	0.92	2.19	0.52	1.68	17
		2	2.88	13.17	2.49	371.81	34
		3	2.35	6.82	1.46	108.25	31
		4	3.87	9.53	3.15	126.25	30
	2002	1	0.00	0.00	0.00	0.00	0
		2	1.32	9.39	1.39	425.73	13
		3	1.99	4.93	0.82	23.31	18
		4	1.94	5.42	1.28	60.76	49
	2003	1	0.44	1.40	0.23	-14.60	4
		2	1.21	9.36	2.24	296.07	19
		3	1.51	4.97	0.98	104.67	26
		4	1.54	9.06	1.67	56.15	20
R&R, incl. TI							
R&R, incl. TI	1999	3	0.16	0.22	0.05	0.00	5
		4	0.46	1.63	0.58	3.67	15
	2000	1	3.56	2.82	0.97	12.28	18
		2	0.68	1.23	0.42	0.46	17
		3	0.89	1.41	0.52	0.00	22
		4	0.47	0.89	0.22	0.00	14
	2001	1	0.38	3.05	0.40	0.00	7
		2	0.55	0.81	0.31	1.26	17
		3	0.54	0.73	0.29	-0.11	13
		4	0.61	1.88	0.49	24.44	12
	2002	1	0.00	0.00	0.00	0.00	0
		2	0.12	0.86	0.07	3.62	4
		3	0.18	0.98	0.20	77.68	6
		4	0.22	0.33	0.07	-2.02	7
	2003	1	0.00	0.00	0.00	0.00	0
		2	0.85	0.92	0.29	-1.10	15
		3	0.75	2.23	0.46	90.60	21
		4	0.10	1.29	0.09	70.60	2

Table 6.11 SBD Program Participation Summary for SoCalGas Territory

Program Type	Year	Quarter	Area (millions of sqft)	Energy Impacts GWh	Demand Impacts MW	Gas Impacts 1,000 Therms	Number of Participants
NEW CONSTRUCTION							
New Construction	1999	3	0.00	0.00	0.00	0.00	0
		4	0.00	0.00	0.00	0.00	0
	2000	1	0.00	0.00	0.00	0.00	0
		2	0.00	0.00	0.00	0.00	0
		3	0.00	0.00	0.00	0.00	0
		4	0.13	0.38	0.21	8.12	11
	2001	1	0.53	0.00	0.00	0.00	1
		2	0.00	0.00	0.00	0.00	0
		3	0.00	0.00	0.00	0.00	0
		4	0.67	0.29	0.13	0.44	1
	2002	1	0.00	0.00	0.00	0.00	0
		2	0.00	0.00	0.00	0.00	0
		3	0.22	1.34	0.16	2.85	2
		4	1.02	2.79	0.55	2.85	22
	2003	1	0.53	2.32	0.15	-0.20	8
		2	0.59	2.82	0.52	-0.69	9
		3	2.10	5.66	1.15	2.94	10
		4	1.24	6.96	0.86	104.91	16
R&R, incl. TI							
R&R, incl. TI	1999	3	0.00	0.00	0.00	0.00	0
		4	0.00	0.00	0.00	0.00	0
	2000	1	0.00	0.00	0.00	0.00	0
		2	0.00	0.00	0.00	0.00	0
		3	0.00	0.00	0.00	0.00	0
		4	0.00	0.00	0.00	0.00	0
	2001	1	0.00	0.00	0.00	0.00	0
		2	0.08	0.04	0.02	0.00	1
		3	0.00	0.00	0.00	0.00	0
		4	0.06	0.37	0.07	0.48	1
	2002	1	0.00	0.00	0.00	0.00	0
		2	0.00	0.00	0.00	0.00	0
		3	0.00	0.00	0.00	0.00	0
		4	0.00	0.00	0.00	0.00	0
	2003	1	0.20	0.12	0.04	-1.47	4
		2	0.07	0.06	0.02	-0.15	1
		3	0.09	0.07	0.03	7.08	2
		4	0.37	0.89	0.13	3.38	5

Table 6.12 Annual SBD Program Participation Summary

Program Type	Year	Quarters	Area (millions of sqft)	Energy Impacts GWh	Demand Impacts MW	Gas Impacts 1,000 Therms	Number of Measures	Number of Participants
California								
New Construction	1999	3-4	15.37	37.05	13.02	1.37	243	128
	2000	1-4	22.92	57.51	18.19	207.85	662	316
	2001	1-4	60.53	153.65	40.64	1177.93	1,126	576
	2002	1-4	38.63	165.17	36.27	713.35	742	435
	2003	1-4	45.17	198.79	43.91	1663.06	792	489
Alterations (R&R)	1999	3-4	3.29	10.11	2.15	3.67	133	52
	2000	1-4	13.27	26.87	7.28	12.74	608	182
	2001	1-4	12.60	32.92	7.96	75.90	475	222
	2002	1-4	6.65	31.28	4.32	178.37	214	127
	2003	1-4	9.30	21.73	4.49	204.33	346	154
SCE								
New Construction	1999	3-4	9.55	22.69	5.65	0.00	145	76
	2000	1-4	8.99	30.10	7.28	0.00	154	85
	2001	1-4	23.11	71.30	12.34	0.00	292	189
	2002	1-4	19.02	92.59	19.08	0.00	323	211
	2003	1-4	18.10	83.06	14.00	0.00	324	208
Alterations (R&R)	1999	3-4	2.33	7.69	1.31	0.00	43	26
	2000	1-4	6.22	16.25	3.87	0.00	116	73
	2001	1-4	4.21	17.91	3.68	0.00	86	52
	2002	1-4	2.90	18.25	1.66	0.00	80	55
	2003	1-4	2.86	9.65	1.65	0.00	75	55
PG&E								
New Construction	1999	3-4	4.06	8.84	5.49	0.00	50	35
	2000	1-4	9.11	15.99	7.40	10.04	214	144
	2001	1-4	26.21	50.36	20.55	569.50	401	273
	2002	1-4	13.11	48.72	12.98	197.85	148	120
	2003	1-4	17.92	73.18	22.11	1113.82	222	169
Alterations (R&R)	1999	3-4	0.34	0.56	0.22	0.00	9	6
	2000	1-4	1.45	4.26	1.28	0.00	57	38
	2001	1-4	6.17	8.14	2.71	49.84	156	119
	2002	1-4	3.22	10.85	2.32	99.08	92	55
	2003	1-4	4.02	6.50	1.77	35.38	66	49
SDG&E								
New Construction	1999	3-4	1.76	5.52	1.87	1.37	48	17
	2000	1-4	4.70	11.03	3.30	189.70	283	76
	2001	1-4	10.01	31.71	7.62	607.99	430	112
	2002	1-4	5.25	19.74	3.50	509.80	206	80
	2003	1-4	4.70	24.80	5.11	442.29	184	69
Alterations (R&R)	1999	3-4	0.62	1.85	0.63	3.67	81	20
	2000	1-4	5.60	6.36	2.14	12.74	435	71
	2001	1-4	2.08	6.47	1.48	25.58	231	49
	2002	1-4	0.53	2.18	0.34	79.28	42	17
	2003	1-4	1.70	4.45	0.84	160.11	183	38
SoCalGas								
New Construction	1999	3-4	0.00	0.00	0.00	0.00	0	0
	2000	1-4	0.13	0.38	0.21	8.12	11	11
	2001	1-4	1.20	0.29	0.13	0.44	3	2
	2002	1-4	1.25	4.13	0.71	5.71	65	24
	2003	1-4	4.45	17.75	2.68	106.96	62	43
Alterations (R&R)	1999	3-4	0.00	0.00	0.00	0.00	0	0
	2000	1-4	0.00	0.00	0.00	0.00	0	0
	2001	1-4	0.13	0.40	0.08	0.48	2	2
	2002	1-4	0.00	0.00	0.00	0.00	0	0
	2003	1-4	0.73	1.14	0.22	8.84	22	12

Table 6.13 Summary of Statewide SBD Program Penetration

Program Type	Year	Quarters	Dodge Area (millions of sqft)	SBD Area (millions of sqft)	%Area Penetration	Dodge Projects	SBD Participants	%Projects Penetration
California								
New Construction	1999	3-4	88.38	15.37	17.4%	2,511	128	5.1%
	2000	1-4	180.15	22.92	12.7%	4,674	316	6.8%
	2001	1-4	178.49	60.53	33.9%	4,805	576	12.0%
	2002	1-4	143.62	38.63	26.9%	4,626	435	9.4%
	2003	1-4	128.63	45.17	35.1%	3,782	489	12.9%
Alterations (R&R)	1999	3-4	-	3.29	-	2,400	52	2.2%
	2000	1-4	-	13.27	-	4,654	182	3.9%
	2001	1-4	-	12.60	-	4,791	222	4.6%
	2002	1-4	-	6.65	-	4,343	127	2.9%
	2003	1-4	-	9.30	-	3,880	154	4.0%
SCE								
New Construction	1999	3-4	31.52	9.55	30.3%	826	76	9.2%
	2000	1-4	62.03	8.99	14.5%	1,428	85	6.0%
	2001	1-4	56.95	23.11	40.6%	1,376	189	13.7%
	2002	1-4	52.43	19.02	36.3%	1,357	211	15.5%
	2003	1-4	43.88	18.10	41.2%	1,098	208	18.9%
Alterations (R&R)	1999	3-4	-	2.33	-	772	26	3.4%
	2000	1-4	-	6.22	-	1,186	73	6.2%
	2001	1-4	-	4.21	-	1,039	52	5.0%
	2002	1-4	-	2.90	-	965	55	5.7%
	2003	1-4	-	2.86	-	935	55	5.9%
PG&E								
New Construction	1999	3-4	30.94	4.06	13.1%	953	35	3.7%
	2000	1-4	67.98	9.11	13.4%	1,831	144	7.9%
	2001	1-4	65.23	26.21	40.2%	1,786	273	15.3%
	2002	1-4	41.87	13.11	31.3%	1,766	120	6.8%
	2003	1-4	39.35	17.92	45.5%	1,488	169	11.4%
Alterations (R&R)	1999	3-4	-	0.34	-	757	6	0.8%
	2000	1-4	-	1.45	-	1,849	38	2.1%
	2001	1-4	-	6.17	-	1,938	119	6.1%
	2002	1-4	-	3.22	-	1,646	55	3.3%
	2003	1-4	-	4.02	-	1,650	49	3.0%
SDG&E								
New Construction	1999	3-4	10.33	1.76	17.0%	268	17	6.3%
	2000	1-4	20.79	4.70	22.6%	501	76	15.2%
	2001	1-4	19.35	10.01	51.7%	535	112	20.9%
	2002	1-4	15.06	5.25	34.9%	405	80	19.8%
	2003	1-4	16.94	4.70	27.7%	346	69	19.9%
Alterations (R&R)	1999	3-4	-	0.62	-	265	20	7.5%
	2000	1-4	-	5.60	-	555	71	12.8%
	2001	1-4	-	2.08	-	612	49	8.0%
	2002	1-4	-	0.53	-	500	17	3.4%
	2003	1-4	-	1.70	-	320	38	11.9%
SoCalGas								
New Construction	1999	3-4	8.11	0.00	0.0%	159	0	0.0%
	2000	1-4	11.58	0.13	1.1%	334	11	3.3%
	2001	1-4	15.32	1.20	7.9%	326	2	0.6%
	2002	1-4	12.93	1.25	9.6%	328	24	7.3%
	2003	1-4	10.81	4.45	41.2%	226	43	19.0%
Alterations (R&R)	1999	3-4	-	0.00	-	262	0	0.0%
	2000	1-4	-	0.00	-	471	0	0.0%
	2001	1-4	-	0.13	-	382	2	0.5%
	2002	1-4	-	0.00	-	456	0	0.0%
	2003	1-4	-	0.73	-	326	12	3.7%

7. MOST ACTIVE MARKET PLAYERS IN PY2003

This chapter presents the most active market players in PY2003, by utility territory and statewide, as reported in the F.W. Dodge "Players" database. The most active market players are defined as the architectural and engineering firms who either contributed to the highest number of projects, or contributed to projects that added up to the highest total value in PY2003. Knowledge about the players who are most active in new construction design offers targeted marketing opportunities for the SBD program.

Our experience with the F.W. Dodge Reports indicates that, while most projects are associated with at least one market actor, that actor is not necessarily an architect or an engineer (the F.W. Dodge database also tracks owners and contractors). The data reported below are therefore subject to the limitations intrinsic to reporting within the F.W. Dodge Reports.

In preparing these results, all entries containing the same address, zip code, and similar names for the market actors, were considered to correspond to the same firm. Civil engineering, structural engineering, and landscape architecture firms were excluded only if their name included the words "civil", "structural" or "landscape" (the F.W. Dodge database does not contain information regarding the specialty of an actor).

The mapping of market actors by utility service territory was done using the zip code associated with the *project* location, not that associated with the address of the *market actor*.

Table 7.1 presents the most active market players statewide, during PY2003.

Table 7.2 presents the most active market players in SCE territory during PY2003.

Table 7.3 shows the most active market players in PG&E territory during PY2003.

Table 7.4 summarizes the most active market players in SDG&E territory during PY2003.

Table 7.5 shows the most active market players in SoCalGas territory during PY2003.

Table 7.1 Most Active Market Players in California in PY2003 according to F.W. Dodge

Firm Name	Firm Location City	State	Project Value (in $millions) Total	New Construction	Alteration	Number of Projects Total	New Construction	Alteration
ARCHITECTS								
Top 10 by Project Value								
HOK (Hellmuth Obata & Kassabaum Inc)	SAN FRANCISCO	CA	1,181.394	1,180.957	0.437	7	6	1
Lee Burkhart Liu	SANTA MONICA	CA	541.880	541.880	-	2	2	-
Perkowitz & Ruth Architects Inc.	NEWPORT BEACH	CA	374.415	334.215	40.200	58	51	7
W L C Architects	RANCHO CUCAMONGA	CA	342.124	209.816	132.308	55	23	32
Gensler & Associates	SANTA MONICA	CA	317.443	248.000	69.064	20	6	10
NTD Architects (Neptune Thomas Davis)	SAN DIEGO	CA	295.263	181.498	113.765	50	21	29
HMC Group	SAN DIEGO	CA	292.178	174.637	117.541	49	14	35
Nadel Architects Inc.	SACRAMENTO	CA	267.290	206.790	60.500	23	21	2
AC Martin Partners	LOS ANGELES	CA	259.847	259.847	-	7	7	-
LPA Inc	IRVINE	CA	250.802	161.445	89.357	32	11	21
Top 10 by Number of Projects								
Perkowitz & Ruth Architects Inc.	NEWPORT BEACH	CA	374.415	334.215	40.200	58	51	7
W L C Architects	RANCHO CUCAMONGA	CA	342.124	209.816	132.308	55	23	32
NTD Architects (Neptune Thomas Davis)	SAN DIEGO	CA	295.263	181.498	113.765	50	21	29
HMC Group	SAN DIEGO	CA	292.178	174.637	117.541	49	14	35
LPA Inc	IRVINE	CA	250.802	161.445	89.357	32	11	21
TLCD Architecture	SANTA ROSA	CA	59.221	24.352	34.869	30	7	23
Tait & Associates Inc	SAN DIEGO	CA	49.936	29.890	19.850	30	17	12
BFGC Architects Planners Inc	SAN JOSE	CA	88.339	43.173	45.166	28	11	17
Leidenfrost Horowitz & Assoc	GLENDALE	CA	225.176	157.997	67.179	26	12	14
Nichols Melburg Rosetto	REDDING	CA	63.674	54.817	8.857	26	14	12
ENGINEERS								
Top 10 by Project Value								
Ove Arup & Partners California Ltd	SAN FRANCISCO	CA	766.475	697.161	69.314	13	10	3
KPFF Consulting Engineers	SAN FRANCISCO	CA	745.913	704.551	41.362	29	16	13
Capital Engineering Consultants Inc	SACRAMENTO	CA	656.556	501.331	155.225	104	45	59
C W Cook Company	LOS ANGELES	CA	497.880	497.880	-	1	1	-
Buehler & Buehler Associates	SACRAMENTO	CA	490.882	438.256	52.626	56	32	24
John A Martin & Associates	LOS ANGELES	CA	457.389	432.389	25.000	7	6	1
TMAD Engineering	SAN DIEGO	CA	381.625	271.928	109.697	52	22	30
FBA Engineering	NEWPORT BEACH	CA	355.780	301.052	54.728	44	28	16
Rutherford & Chekene	SAN FRANCISCO	CA	292.024	283.108	8.916	10	6	4
Harry Yee & Associates	SACRAMENTO	CA	291.072	258.753	32.319	41	22	19
Top 10 by Number of Projects								
Capital Engineering Consultants Inc	SACRAMENTO	CA	656.556	501.331	155.225	104	45	59
Buehler & Buehler Associates	SACRAMENTO	CA	490.882	438.256	52.626	56	32	24
TMAD Engineering	SAN DIEGO	CA	381.625	271.928	109.697	52	22	30
Lawrence Nye Anderson Associates	FRESNO	CA	146.360	113.590	32.770	48	25	23
G L P Engineering	COSTA MESA	CA	157.918	93.065	64.853	46	16	30
FBA Engineering	NEWPORT BEACH	CA	355.780	301.052	54.728	44	28	16
Harry Yee & Associates	SACRAMENTO	CA	291.072	258.753	32.319	41	22	19
Taylor & Gaines Inc	PASADENA	CA	269.283	189.473	79.810	41	20	21
Sacramento Engineering Consultants	SACRAMENTO	CA	80.574	65.034	15.540	41	27	14
ANF and Associates	EL MONTE	CA	248.837	226.587	22.250	40	37	3

Table 7.2 Most Active Market Players in SCE Territory in PY2003 according to F.W. Dodge

Firm Name	Firm Location City	State	Project Value (in $millions) Total	New Construction	Alteration	Number of Projects Total	New Construction	Alteration
ARCHITECTS								
Top 10 by Project Value								
The Jerde Partnership	VENICE	CA	250.000	250.000	-	1	1	-
Perkins & Will Architects	LOS ANGELES	CA	247.320	247.320	-	4	4	-
Wimberly Allison Tong & Goo Architects	NEWPORT BEACH	CA	220.000	220.000	-	2	2	-
NTD Architects (Neptune Thomas Davis)	SAN DIEGO	CA	212.248	132.493	79.755	36	14	22
AC Martin Partners	LOS ANGELES	CA	204.000	204.000	-	2	2	-
Morphosis Architecture	SANTA MONICA	CA	190.000	190.000	-	1	1	-
Hill Pinckert Architects	NEWPORT BEACH	CA	178.684	178.684	-	10	10	-
HMC Group	SAN DIEGO	CA	173.706	98.418	75.288	28	9	19
LPA Inc	IRVINE	CA	155.352	102.055	53.297	13	4	9
Langdon Wilson Architecture	IRVINE	CA	150.548	85.404	65.144	6	4	2
Top 10 by Number of Projects								
NTD Architects (Neptune Thomas Davis)	SAN DIEGO	CA	212.248	132.493	79.755	36	14	22
HMC Group	SAN DIEGO	CA	173.706	98.418	75.288	28	9	19
W L C Architects	RANCHO CUCAMONGA	CA	132.871	85.317	47.554	26	10	16
Perkowitz & Ruth Architects Inc.	NEWPORT BEACH	CA	118.600	106.100	12.500	21	17	4
Tait & Associates Inc	SAN DIEGO	CA	19.725	9.875	9.850	14	7	7
LPA Inc	IRVINE	CA	155.352	102.055	53.297	13	4	9
PJHM Architects Southwest	SAN CLEMENTE	CA	90.494	84.267	6.227	13	8	5
Dougherty + Dougherty	COSTA MESA	CA	40.475	13.359	27.116	13	5	8
RGA Architectural Design	IRVINE	CA	53.996	53.092	0.714	12	8	2
Flewelling & Moody Architects	LANCASTER	CA	44.645	13.786	30.859	11	3	8
ENGINEERS								
Top 10 by Project Value								
Ove Arup & Partners California Ltd	SAN FRANCISCO	CA	461.960	392.960	69.000	8	6	2
John A Martin & Associates	LOS ANGELES	CA	420.903	395.903	25.000	6	5	1
FBA Engineering	NEWPORT BEACH	CA	262.005	239.061	22.944	28	21	7
TMAD Engineering	SAN DIEGO	CA	261.604	205.403	56.201	34	18	16
F T Andrews Inc	ANAHEIM	CA	202.964	192.397	10.567	21	17	4
Johnson & Nielsen Associates	RIVERSIDE	CA	175.412	145.486	29.926	24	17	7
Nack & Associates	CARLSBAD	CA	162.872	151.099	11.773	18	13	5
Taylor & Gaines Inc	PASADENA	CA	158.712	102.351	56.361	20	8	12
KNA Consulting Engineers Inc	LAGUNA HILLS	CA	128.134	74.815	53.319	24	11	13
LRM Limited	CULVER CITY	CA	114.910	114.910	-	1	1	-
Top 10 by Number of Projects								
TMAD Engineering	SAN DIEGO	CA	261.604	205.403	56.201	34	18	16
FBA Engineering	NEWPORT BEACH	CA	262.005	239.061	22.944	28	21	7
Johnson & Nielsen Associates	RIVERSIDE	CA	175.412	145.486	29.926	24	17	7
KNA Consulting Engineers Inc	LAGUNA HILLS	CA	128.134	74.815	53.319	24	11	13
ANF and Associates	EL MONTE	CA	110.345	108.095	2.250	22	20	2
G L P Engineering	COSTA MESA	CA	61.470	35.555	25.915	22	9	13
F T Andrews Inc	ANAHEIM	CA	202.964	192.397	10.567	21	17	4
Taylor & Gaines Inc	PASADENA	CA	158.712	102.351	56.361	20	8	12
Lawrence Nye Anderson Associates	FRESNO	CA	57.700	43.783	13.917	19	10	9
Nack & Associates	CARLSBAD	CA	162.872	151.099	11.773	18	13	5

Table 7.3 Most Active Market Players in PG&E Territory in PY2003 according to F.W. Dodge

Firm Name	Firm Location City	State	Project Value (in $millions) Total	New Construction	Alteration	Number of Projects Total	New Construction	Alteration
ARCHITECTS								
Top 10 by Project Value								
Gensler & Associates	SANTA MONICA	CA	227.725	188.000	39.625	9	5	3
M W M Architects Inc	SACRAMENTO	CA	200.897	0.688	200.209	5	2	3
Morphosis Architecture	SANTA MONICA	CA	190.000	190.000	-	1	1	-
Kaplan McLaughlin Diaz	SAN FRANCISCO	CA	175.524	164.580	10.944	6	3	3
W L C Architects	RANCHO CUCAMONGA	CA	174.999	90.577	84.422	22	7	15
Chong Partners Architects	SAN FRANCISCO	CA	169.153	167.304	1.849	3	2	1
City & County of San Francisco	SAN FRANCISCO	CA	167.109	123.558	43.551	13	3	10
Richard Meier and Partners	LOS ANGELES	CA	140.000	140.000	-	1	1	-
Perkowitz & Ruth Architects Inc.	NEWPORT BEACH	CA	137.790	117.790	20.000	18	17	1
Leidenfrost Horowitz & Assoc	GLENDALE	CA	137.690	131.084	6.606	8	7	1
Top 10 by Number of Projects								
BFGC Architects Planners Inc	SAN JOSE	CA	86.615	42.199	44.416	26	10	16
W L C Architects	RANCHO CUCAMONGA	CA	174.999	90.577	84.422	22	7	15
Perkowitz & Ruth Architects Inc.	NEWPORT BEACH	CA	137.790	117.790	20.000	18	17	1
VBN Corporation	OAKLAND	CA	124.232	46.149	78.083	17	6	11
M B H Architects (McNulty Briseman & Heath)	ALAMEDA	CA	64.638	48.700	15.863	16	8	7
Integrated Designs by SOMAM Inc	FRESNO	CA	62.575	53.801	8.774	16	10	6
Quattrocchi Kwok Architects	SANTA ROSA	CA	123.005	83.265	39.740	15	6	9
The Steinberg Group	SAN JOSE	CA	98.987	44.264	54.723	14	5	9
City & County of San Francisco	SAN FRANCISCO	CA	167.109	123.558	43.551	13	3	10
Deems Lewis McKinley	SAN FRANCISCO	CA	82.770	52.003	30.767	13	4	9
ENGINEERS								
Top 10 by Project Value								
Capital Engineering Consultants Inc	SACRAMENTO	CA	352.293	214.252	138.041	81	31	50
Buehler & Buehler Associates	SACRAMENTO	CA	283.379	244.554	38.825	34	17	17
Rutherford & Chekene	SAN FRANCISCO	CA	280.430	271.514	8.916	9	5	4
Ove Arup & Partners CaliforniaLtd	SAN FRANCISCO	CA	264.926	264.926	-	3	3	-
Harry Yee & Associates	SACRAMENTO	CA	173.713	145.733	27.980	28	14	14
Flack & Kurtz Consulting Engineers	SAN FRANCISCO	CA	170.394	167.594	2.800	7	6	1
Alfa Tech Consulting Engineers	SAN JOSE	CA	159.912	91.636	68.276	26	9	17
Horn Engineers	SANTA ROSA	CA	158.862	109.720	49.142	33	11	22
Englekirk & Sabol Consulting Engineers Inc	LOS ANGELES	CA	151.000	151.000	-	2	2	-
OMahoney & Myer	SAN RAFAEL	CA	145.466	99.485	45.981	21	8	13
Top 10 by Number of Projects								
Capital Engineering Consultants Inc	SACRAMENTO	CA	352.293	214.252	138.041	81	31	50
Buehler & Buehler Associates	SACRAMENTO	CA	283.379	244.554	38.825	34	17	17
Fard Engineer Inc. Chamberlain/Painter	WALNUT CREEK	CA	88.924	27.961	60.963	34	7	27
Horn Engineers	SANTA ROSA	CA	158.862	109.720	49.142	33	11	22
Lawrence Nye Anderson Associates	FRESNO	CA	93.960	69.807	24.153	31	15	16
Dasse Design Inc	OAKLAND	CA	118.194	46.078	72.116	30	7	23
Harry Yee & Associates	SACRAMENTO	CA	173.713	145.733	27.980	28	14	14
Alfa Tech Consulting Engineers	SAN JOSE	CA	159.912	91.636	68.276	26	9	17
Lencioni Associates	CLOVIS	CA	105.207	90.228	14.979	26	15	11
HCS Engineering Inc.	STOCKTON	CA	82.530	57.552	24.978	26	12	14

Table 7.4 Most Active Market Players in SDG&E Territory in PY2003 according to F.W. Dodge

Firm Name	Firm Location City	State	Project Value (in $millions) Total	New Construction	Alteration	Number of Projects Total	New Construction	Alteration
ARCHITECTS								
Top 10 by Project Value								
AC Martin Partners	LOS ANGELES	CA	190.000	190.000	-	1	1	-
HOK (Hellmuth Obata & Kassabaum Inc)	SAN FRANCISCO	CA	135.000	135.000	-	2	2	-
LPA Inc	IRVINE	CA	117.787	97.528	20.259	6	4	2
Bohlin Cywinski Jackson	PITTSBURGH	PA	113.300	113.300	-	4	4	-
Paul Steelman Ltd.	LAS VEGAS	NV	112.000	112.000	-	1	1	-
Perkowitz & Ruth Architects Inc.	NEWPORT BEACH	CA	97.325	97.325	-	15	15	-
Friedmutter and Associates	LAS VEGAS	NV	80.000	80.000	-	1	1	-
McGraw/Baldwin Architects	SAN DIEGO	CA	64.497	64.404	-	5	4	-
Villanueva Arnoni Architects	COSTA MESA	CA	63.257	63.257	-	1	1	-
Mosher Drew Watson Ferguson & Assocs	SAN DIEGO	CA	62.492	62.492	-	3	3	-
Top 10 by Number of Projects								
Perkowitz & Ruth Architects Inc.	NEWPORT BEACH	CA	97.325	97.325	-	15	15	-
Ruhnau Ruhnau Clarke	RIVERSIDE	CA	51.747	29.583	22.164	13	3	10
Tait & Associates Inc	SAN DIEGO	CA	26.375	18.375	8.000	12	8	4
NTD Architects (Neptune Thomas Davis)	SAN DIEGO	CA	52.620	24.750	27.870	9	4	5
Ken Smith Architect	EL CAJON	CA	44.635	44.635	-	9	9	-
The Stichler Design Group Inc	SAN DIEGO	CA	12.915	5.150	7.765	8	1	7
Architects Delawie Wilkes Rodrigues Barker	SAN DIEGO	CA	43.176	41.894	1.282	7	4	3
HMC Group	SAN DIEGO	CA	41.860	24.875	16.985	7	3	4
LPA Inc	IRVINE	CA	117.787	97.528	20.259	6	4	2
Ware Malcomb	SAN DIEGO	CA	56.498	56.250	-	6	4	-
ENGINEERS								
Top 10 by Project Value								
John A Martin & Associates	LOS ANGELES	CA	333.557	333.557	-	3	3	-
Hope Engineering	SAN DIEGO	CA	180.934	180.934	-	7	7	-
Syska Hennessey Group Inc	SAN DIEGO	CA	132.554	129.114	3.440	5	4	1
KPFF Consulting Engineers	SAN FRANCISCO	CA	110.150	96.844	13.306	8	5	3
FBA Engineering	NEWPORT BEACH	CA	109.992	72.271	37.721	16	7	9
Turpin & Rattan Engineering	SAN DIEGO	CA	97.228	56.286	40.942	21	6	15
ILA Zammit Engineering	SAN DIEGO	CA	94.675	92.175	2.500	11	10	1
Magnusson Klemencic Associates	SEATTLE	WA	87.500	87.500	-	2	2	-
GEM Engineering Inc	SAN DIEGO	CA	84.286	81.786	2.500	6	5	1
Glumac International	SACRAMENTO	CA	80.868	80.868	-	5	5	-
Top 10 by Number of Projects								
Turpin & Rattan Engineering	SAN DIEGO	CA	97.228	56.286	40.942	21	6	15
FBA Engineering	NEWPORT BEACH	CA	109.992	72.271	37.721	16	7	9
Kanda & Tso Associates	SOUTH PASADENA	CA	60.357	29.583	30.774	15	3	12
Nack & Associates	CARLSBAD	CA	67.747	29.583	38.164	14	3	11
Burkett & Wong	SAN DIEGO	CA	79.201	42.728	36.473	13	7	6
Johnson Consulting Engineers	POWAY	CA	79.995	43.750	36.245	12	5	7
Bement Dainwood Sturgeon Engineering Inc	LEMON GROVE	CA	64.222	7.250	56.972	12	2	10
ILA Zammit Engineering	SAN DIEGO	CA	94.675	92.175	2.500	11	10	1
HVAC Engineering Inc	SAN DIEGO	CA	77.795	45.625	32.170	11	5	6
TKG (Tsuchiyama/Kaino/Gibson)	SAN DIEGO	CA	56.740	43.434	13.306	9	6	3

Table 7.5 Most Active Market Players in SoCalGas Territory in PY2003 according to F.W. Dodge

Firm Name	Firm Location City	State	Project Value (in $millions) Total	New Construction	Alteration	Number of Projects Total	New Construction	Alteration
ARCHITECTS								
Top 10 by Project Value								
HOK (Hellmuth Obata & Kassabaum Inc)	SAN FRANCISCO	CA	995.760	995.760	-	2	2	-
Lee Burkhart Liu	SANTA MONICA	CA	497.880	497.880	-	1	1	-
Perkins & Will Architects	LOS ANGELES	CA	229.820	229.820	-	2	2	-
AC Martin Partners	LOS ANGELES	CA	190.000	190.000	-	1	1	-
Morphosis Architecture	SANTA MONICA	CA	190.000	190.000	-	1	1	-
RBB Architects Inc.	LOS ANGELES	CA	144.178	142.778	1.400	4	3	1
PEI Partnership Architect	NEW YORK	NY	114.910	114.910	-	1	1	-
HDR Architecture	SACRAMENTO	CA	86.000	86.000	-	1	1	-
Taylor & Assocs	NEWPORT BEACH	CA	86.000	86.000	-	1	1	-
Nadel Architects Inc.	SACRAMENTO	CA	81.117	81.117	-	3	3	-
Top 10 by Number of Projects								
LPA Inc	IRVINE	CA	80.357	70.757	9.600	5	2	3
Leidenfrost Horowitz & Assoc	GLENDALE	CA	39.708	6.568	33.140	5	1	4
Richard Berliner Architect	LOS ANGELES	CA	13.564	-	13.564	5	-	5
Gruen Associates/Architectural Planning	LOS ANGELES	CA	8.603	3.672	4.761	5	1	3
Coup/Smith/Diaz Architects	CALEXICO	CA	6.077	5.137	0.940	5	3	2
RBB Architects Inc.	LOS ANGELES	CA	144.178	142.778	1.400	4	3	1
Carde Ten Architects	SANTA MONICA	CA	74.212	74.212	-	4	4	-
Carrier Johnson Architects	SAN DIEGO	CA	61.500	57.500	4.000	4	2	2
W L C Architects	RANCHO CUCAMONGA	CA	18.755	18.755	-	4	4	-
Nadel Architects Inc.	SACRAMENTO	CA	81.117	81.117	-	3	3	-
ENGINEERS								
Top 10 by Project Value								
C W Cook Company	LOS ANGELES	CA	497.880	497.880	-	1	1	-
KPFF Consulting Engineers	SAN FRANCISCO	CA	497.880	497.880	-	1	1	-
John A Martin & Associates	LOS ANGELES	CA	333.557	333.557	-	3	3	-
RBA Partners Inc (Rogoway Borkovetz & Assoc)	LOS ANGELES	CA	217.435	214.935	2.500	5	4	1
Wheeler & Grey Inc	PASADENA	CA	180.935	151.739	29.196	8	4	4
N A Cohen Associates	ENCINO	CA	144.309	136.568	7.741	7	4	3
Pacific Engineers Group Inc	NORTH HOLLYWOOD	CA	130.428	119.476	10.952	7	4	3
Brandow & Johnston Associates	LOS ANGELES	CA	117.011	107.590	9.421	4	2	2
LRM Limited	CULVER CITY	CA	114.910	114.910	-	1	1	-
P A Arca Engineering Inc.	CARSON	CA	107.961	107.961	-	4	4	-
Top 10 by Number of Projects								
Taylor & Gaines Inc	PASADENA	CA	59.402	55.532	3.870	10	7	3
Wheeler & Grey Inc	PASADENA	CA	180.935	151.739	29.196	8	4	4
N A Cohen Associates	ENCINO	CA	144.309	136.568	7.741	7	4	3
Pacific Engineers Group Inc	NORTH HOLLYWOOD	CA	130.428	119.476	10.952	7	4	3
Henrikson Owen and Associates Inc	IRVINE	CA	82.659	81.728	0.931	7	6	1
Maroko & Shwe Inc	MISSION HILLS	CA	99.708	66.568	33.140	6	2	4
Silver Roth Associates Inc	LOS ANGELES	CA	72.216	65.773	6.443	6	2	4
Glumac International	SACRAMENTO	CA	62.938	54.097	8.841	6	3	3
RBA Partners Inc (Rogoway Borkovetz & Assoc)	LOS ANGELES	CA	217.435	214.935	2.500	5	4	1
Stedman & Dyson	SAN DIEGO	CA	24.837	24.137	0.700	5	4	1

APPENDIX A

GLOSSARY OF BUILDING TYPES RECORDED BY F.W. DODGE

Amusement	amusement and recreational buildings
Assembly	religious and worship buildings
Education	libraries, museums
Government	government services
Hotel	hotels and motels
Medical	hospitals and other health-related buildings
Office	office and laboratory buildings
Retail	retail stores and shopping centers
School	schools, colleges and universities, including dorms
Service	service stations
Storage	warehouses and storage facilities
Other	other nonresidential buildings

APPENDIX B

CIRB NONRESIDENTIAL NEW CONSTRUCTION PERMIT VALUE IN PY2003

This Appendix presents information on the value of nonresidential new construction permits that were filed in PY2003 in the State of California. The data were collected by the Construction Industry Research Board from the more than 515 city and county building departments in California.

The CIRB database separates new construction projects from additions and alterations. New construction projects are then reported by building type, while additions and alteration projects are reported together, with no indication regarding building type. Moreover, CIRB reports only building-related projects, while leaving out permits for heating, HVAC, electrical, and other remodeling/renovation projects. A glossary of building/project types recorded by CIRB is provided at the end of this Appendix.

Table B.1 summarizes the value of nonresidential *permits filed* in PY2003, by building type. As shown in Exhibit B.1 below, Los Angeles, San Diego Santa Clara, Orange, San Bernardino and Riverside Counties account for the highest value of permits filed in the State during PY2003. Conversely, Sierra, Alpine and Trinity Counties had the lowest volume of permit activity in PY2003. Among building types, the highest permit value was recorded in the retail, industrial and office segments, but the education (museums, libraries) and hotel segments also show relatively high activity. The lowest permit value was recorded in the service segment.

A breakdown of project valuation by utility territory was not possible, because the CIRB reports permit activity by city and county, not by zip code.

Exhibit B.1
Market Segments with the Highest Permit Value in PY2003

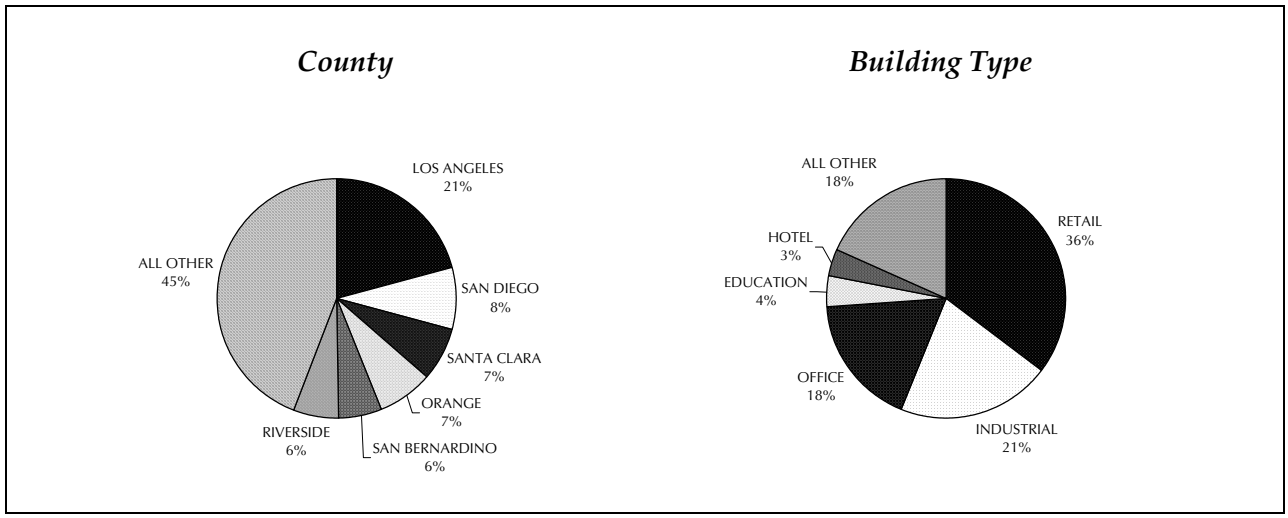


Table B.1 CIRB Statewide Nonresidential Permit Valuation in PY2003 by Building Type and County ($1,000)

	AMUSEMENT	CHURCH	HOTEL	MEDICAL	OFFICE	OTHER	EDUCATION	RETAIL	SERVICE	INDUSTRIAL	TOTAL NEW	ALTERATION	TOTAL
COUNTY													
ALAMEDA	.	36,660	3,672	.	45,432	11,958	16,315	68,146	3,722	36,695	222,601	304,239	526,840
ALPINE	.	144	.	.	.	5	.	.	.	.	149	26	175
AMADOR	.	.	.	.	.	5,059	.	232	.	110	5,401	5,039	10,441
BUTTE	.	.	2,500	768	14,314	5,349	1,176	9,785	.	622	34,514	20,725	55,239
CALAVERAS	.	.	.	.	.	3,840	.	616	.	.	4,456	4,946	9,402
COLUSA	.	.	.	.	.	478	.	947	.	.	1,425	377	1,802
CONTRA COSTA	845	1,302	2,789	.	34,711	13,067	.	88,295	2,099	33,047	176,154	197,299	373,453
DEL NORTE	.	.	1,100	.	262	626	.	443	.	.	2,431	268	2,699
EL DORADO	.	1,201	.	.	886	5,915	1,420	21,500	322	1,098	32,343	15,528	47,871
FRESNO	1,303	10,471	3,947	.	57,444	20,177	681	60,152	1,013	52,755	207,941	108,740	316,681
GLENN	.	.	.	.	.	2,231	.	.	1,800	.	4,031	1,464	5,495
HUMBOLDT	.	.	.	.	971	1,650	.	11,985	350	1,376	16,331	12,174	28,504
IMPERIAL	371	1,721	4,399	.	6,099	3,164	768	19,330	1,660	1,437	38,950	9,213	48,163
INYO	.	.	.	.	.	610	.	605	.	.	1,216	967	2,182
KERN	.	4,715	8,753	7,203	18,007	39,937	7,900	43,593	599	80,108	210,815	64,612	275,426
KINGS	1,591	.	1,750	4,500	165	2,031	.	10,271	.	160	20,468	9,098	29,566
LAKE	.	.	.	.	.	1,347	.	270	320	.	1,938	1,804	3,742
LASSEN	.	.	.	.	.	42	.	2,612	.	.	2,654	2,021	4,675
LOS ANGELES	12,250	17,500	26,997	53,027	181,763	76,617	118,006	355,880	12,878	276,414	1,131,330	1,365,542	2,496,872
MADERA	.	1,852	.	.	.	9,097	.	6,393	.	2,364	19,705	7,831	27,537
MARIN	7,751	6,946	.	.	2,607	2,837	1,715	3,232	.	.	25,089	48,476	73,565
MARIPOSA	.	.	.	.	.	783	.	.	114	.	897	356	1,253
MENDOCINO	.	124	120	.	798	4,118	1,032	604	.	6,332	13,127	8,582	21,709
MERCED	287	460	.	.	2,371	27,304	380	1,929	.	5,117	37,847	17,874	55,721
MODOC	.	.	.	.	.	1,110	.	.	.	.	1,110	276	1,386
MONO	.	.	706	2,138	.	32	.	.	.	1,678	4,554	213	4,767
MONTEREY	1,621	1,052	.	.	32,254	5,721	180	20,957	.	12,281	74,066	71,327	145,393
NAPA	.	.	.	.	4,655	17,648	.	18,386	.	2,064	42,753	27,480	70,233
NEVADA	.	3,137	.	.	916	3,431	.	3,815	474	973	12,746	2,506	15,251
ORANGE	5,732	31,123	.	3,484	117,574	11,474	12,506	78,375	4,594	67,721	332,583	539,855	872,438
PLACER	2,621	2,225	15,686	.	41,341	3,822	1,546	45,148	151	9,214	121,752	80,504	202,256
PLUMAS	.	.	742	.	.	952	.	98	.	.	1,791	1,449	3,240
RIVERSIDE	7,624	17,385	29,821	20,899	85,150	33,022	1,130	231,404	4,472	112,707	543,614	173,165	716,779
SACRAMENTO	14,097	12,578	4,540	10,275	79,318	14,381	13,494	146,998	1,934	36,574	334,188	253,858	588,045
SAN BENITO	.	.	.	.	.	697	.	4,160	.	.	4,857	3,526	8,383
SAN BERNARDINO	214	11,944	2,589	8,597	61,273	16,227	1,367	225,398	4,492	244,855	576,956	142,612	719,568
SAN DIEGO	16,403	9,141	21,626	21,325	109,911	33,141	27,184	184,182	13,534	131,009	567,456	399,709	967,165
SAN FRANCISCO	.	2,300	.	.	2,500	5	25,900	13,733	450	.	44,888	320,303	365,191
SAN JOAQUIN	4,000	4,500	.	7,233	26,185	18,101	2,088	107,840	5,723	64,077	239,746	104,580	344,326
SAN LUIS OBISPO	806	.	1,634	.	14,188	14,358	.	25,201	129	4,475	60,792	31,392	92,184
SAN MATEO	650	6,286	.	.	2,375	10,580	982	10,722	223	.	31,818	168,497	200,315
SANTA BARBARA	.	4,966	17,000	.	19,794	16,386	866	19,116	1,827	5,783	85,738	47,436	133,174
SANTA CLARA	31,285	1,381	2,000	23,186	51,794	23,196	13,859	97,782	4,392	6,506	255,381	630,724	886,106
SANTA CRUZ	.	.	.	.	1,273	7,268	.	3,503	.	.	12,044	18,635	30,680
SHASTA	.	755	.	.	5,602	4,181	4,122	12,784	660	3,483	31,588	13,577	45,165
SIERRA	.	.	.	.	.	62	.	.	.	.	62	88	150
SISKIYOU	.	.	.	.	2,933	1,985	.	517	188	.	5,623	4,037	9,659
SOLANO	733	2,596	.	9,144	6,355	6,396	.	33,985	1,915	12,857	73,981	51,788	125,769
SONOMA	465	555	9,725	3,000	11,786	29,108	513	33,458	2,441	12,448	103,498	67,676	171,174
STANISLAUS	.	668	3,066	3,711	15,414	14,131	5,932	65,579	1,282	27,845	137,627	52,838	190,464
SUTTER	1,637	.	1,063	236	4,939	2,105	.	6,225	.	2,605	18,811	5,484	24,295
TEHAMA	.	.	.	.	3,983	4,745	.	5,523	268	.	14,518	3,975	18,494
TRINITY	.	.	.	.	.	350	.	.	.	.	350	297	646
TULARE	5,411	433	.	5,000	14,770	12,200	.	44,808	676	4,997	88,295	22,391	110,687
TUOLUMNE	.	.	1,409	.	5,554	1,251	.	6,122	.	.	14,337	2,979	17,316
VENTURA	.	958	44,286	9,757	39,726	14,050	685	54,643	3,297	46,671	214,073	114,809	328,882
YOLO	.	8,779	3,600	.	5,139	4,385	.	16,480	1,487	10,519	50,389	30,234	80,623
YUBA	.	.	2,881	500	118	628	.	3,019	.	1,251	8,397	5,714	14,110
CALIFORNIA	117,698	205,858	218,400	193,983	1,132,649	565,369	261,745	2,226,784	79,486	1,320,225	6,322,198	5,601,132	11,923,329

Tables B.2 and B.3 present quarterly permit activity, by county and building type. According to these data, there is little variation from quarter to quarter in the volume of permit activity for the entire market, as well as geographically and by building type.

Table B.2 CIRB Nonresidential Permit Valuation in PY2003 by Quarter and County ($1,000)

	NEW CONSTRUCTION					ADDITIONS AND ALTERATIONS					2003
COUNTY	**Q1, 2003**	**Q2, 2003**	**Q3, 2003**	**Q4, 2003**	**2003 Total**	**Q1, 2003**	**Q2, 2003**	**Q3, 2003**	**Q4, 2003**	**2003 Total**	**TOTAL**
ALAMEDA	58,893	70,445	66,084	27,178	222,601	67,197	88,431	74,278	74,333	304,239	526,840
ALPINE	5	0	0	144	149	6	20	.	.	26	175
AMADOR	603	1,895	1,330	1,574	5,401	934	494	1,820	1,791	5,039	10,441
BUTTE	7,719	9,643	3,846	13,307	34,514	2,626	10,031	3,474	4,594	20,725	55,239
CALAVERAS	400	1,240	2,230	586	4,456	1,087	1,245	1,425	1,189	4,946	9,402
COLUSA	440	222	236	527	1,425	57	56	99	165	377	1,802
CONTRA COSTA	25,489	37,264	42,839	70,562	176,154	49,970	71,994	44,942	30,392	197,299	373,453
DEL NORTE	65	839	350	1,177	2,431	29	12	65	162	268	2,699
EL DORADO	5,714	7,854	14,283	4,492	32,343	3,504	1,941	3,298	6,784	15,528	47,871
FRESNO	31,751	35,047	67,058	74,085	207,941	27,875	35,623	22,521	22,721	108,740	316,681
GLENN	2,173	380	486	993	4,031	527	152	587	198	1,464	5,495
HUMBOLDT	1,953	3,970	1,532	8,875	16,331	2,009	2,634	3,545	3,986	12,174	28,504
IMPERIAL	14,863	6,836	4,434	12,817	38,950	352	1,524	3,338	3,999	9,213	48,163
INYO	11	117	125	962	1,216	119	115	638	94	967	2,182
KERN	42,262	46,615	64,836	57,101	210,815	12,090	12,651	23,925	15,946	64,612	275,426
KINGS	6,414	882	6,575	6,597	20,468	2,426	1,304	3,553	1,815	9,098	29,566
LAKE	474	285	1,109	69	1,938	391	232	253	929	1,804	3,742
LASSEN	42	0	618	1,994	2,654	96	695	423	806	2,021	4,675
LOS ANGELES	276,481	322,337	229,630	302,883	1,131,330	277,184	376,734	375,765	335,858	1,365,542	2,496,872
MADERA	5,771	7,520	3,884	2,530	19,705	1,200	2,589	2,098	1,945	7,831	27,537
MARIN	10,717	4,489	1,634	8,249	25,089	4,368	11,462	19,378	13,269	48,476	73,565
MARIPOSA	210	255	140	292	897	143	113	37	64	356	1,253
MENDOCINO	2,553	1,845	3,975	4,755	13,127	1,715	2,335	1,131	3,401	8,582	21,709
MERCED	8,423	12,207	10,183	7,034	37,847	4,026	4,345	4,786	4,717	17,874	55,721
MODOC	94	518	286	212	1,110	200	52	.	24	276	1,386
MONO	738	217	2,800	799	4,554	98	59	41	15	213	4,767
MONTEREY	8,771	19,397	22,691	23,207	74,066	10,648	19,240	24,159	17,281	71,327	145,393
NAPA	1,163	5,080	22,519	13,992	42,753	10,657	4,629	7,358	4,836	27,480	70,233
NEVADA	584	2,552	7,392	2,218	12,746	341	224	910	1,031	2,506	15,251
ORANGE	52,628	131,168	84,908	63,879	332,583	130,530	151,103	127,927	130,296	539,855	872,438
PLACER	34,563	14,847	38,898	33,444	121,752	14,206	24,485	21,555	20,258	80,504	202,256
PLUMAS	145	390	350	905	1,791	165	947	257	80	1,449	3,240
RIVERSIDE	125,061	143,294	181,807	93,451	543,614	46,933	39,487	47,301	39,445	173,165	716,779
SACRAMENTO	71,362	105,394	100,101	57,332	334,188	73,757	64,233	62,587	53,281	253,858	588,045
SAN BENITO	1,745	168	268	2,677	4,857	766	510	1,519	730	3,526	8,383
SAN BERNARDINO	132,796	156,639	120,376	167,145	576,956	26,568	53,909	33,262	28,873	142,612	719,568
SAN DIEGO	153,116	139,894	184,397	90,049	567,456	101,026	111,192	99,692	87,799	399,709	967,165
SAN FRANCISCO	1,233	803	35,003	7,850	44,888	75,735	90,524	67,971	86,072	320,303	365,191
SAN JOAQUIN	65,342	48,980	58,876	66,547	239,746	33,584	32,676	18,851	19,469	104,580	344,326
SAN LUIS OBISPO	19,064	22,239	5,955	13,533	60,792	11,035	7,655	7,473	5,230	31,392	92,184
SAN MATEO	5,460	5,902	16,654	3,801	31,818	26,051	37,094	57,113	48,239	168,497	200,315
SANTA BARBARA	19,651	19,410	34,404	12,274	85,738	9,868	12,267	14,599	10,702	47,436	133,174
SANTA CLARA	38,086	80,742	76,545	60,008	255,381	152,926	141,255	184,222	152,321	630,724	886,106
SANTA CRUZ	963	1,501	8,317	1,263	12,044	5,921	2,170	4,951	5,594	18,635	30,680
SHASTA	10,075	10,203	7,355	3,955	31,588	3,496	4,421	3,333	2,327	13,577	45,165
SIERRA	0	44	18	0	62	18	.	70	.	88	150
SISKIYOU	335	666	902	3,720	5,623	927	1,393	1,176	541	4,037	9,659
SOLANO	15,706	19,585	32,617	6,074	73,981	10,961	9,352	19,771	11,704	51,788	125,769
SONOMA	31,591	31,095	14,198	26,614	103,498	12,828	16,680	17,039	21,130	67,676	171,174
STANISLAUS	22,808	39,367	55,270	20,181	137,627	10,643	11,978	12,679	17,538	52,838	190,464
SUTTER	8,586	5,107	3,019	2,099	18,811	1,627	778	1,532	1,547	5,484	24,295
TEHAMA	2,390	5,382	4,106	2,640	14,518	877	733	825	1,541	3,975	18,494
TRINITY	70	133	129	18	350	131	18	20	128	297	646
TULARE	33,331	15,683	22,081	17,200	88,295	5,286	4,365	6,842	5,899	22,391	110,687
TUOLUMNE	4,894	1,616	4,867	2,960	14,337	677	185	410	1,707	2,979	17,316
VENTURA	36,496	37,312	50,350	89,915	214,073	25,059	28,047	35,594	26,109	114,809	328,882
YOLO	13,998	19,412	4,314	12,665	50,389	6,911	10,433	7,303	5,587	30,234	80,623
YUBA	2,205	692	2,116	3,384	8,397	1,399	1,623	1,819	872	5,714	14,110
CALIFORNIA	1,418,478	1,657,620	1,731,303	1,514,797	6,322,198	1,271,783	1,510,448	1,481,539	1,337,362	5,601,132	11,923,329

Table B.3 CIRB Nonresidential Permit Valuation in PY2003
by Quarter and Building Type ($1,000)

	AMUSEMENT	CHURCH	HOTEL	MEDICAL	OFFICE	OTHER	EDUCATION	RETAIL	SERVICE	INDUSTRIAL	TOTAL NEW	ALTERATION	TOTAL
CALIFORNIA													
Q1, 2003	31,396	34,529	54,242	28,519	261,853	145,768	41,982	553,700	14,471	252,018	1,418,478	1,271,783	2,690,260
Q2, 2003	32,930	60,073	38,471	69,941	305,022	121,955	34,588	574,653	20,594	399,394	1,657,620	1,510,448	3,168,068
Q3, 2003	22,811	75,119	80,046	46,691	223,563	159,927	89,474	663,294	21,404	348,975	1,731,303	1,481,539	3,212,842
Q4, 2003	30,562	36,136	45,642	48,832	342,212	137,720	95,701	435,137	23,017	319,838	1,514,797	1,337,362	2,852,159
2003 Total	117,698	205,858	218,400	193,983	1,132,649	565,369	261,745	2,226,784	79,486	1,320,225	6,322,198	5,601,132	11,923,329

GLOSSARY OF BUILDING/PROJECT TYPES RECORDED BY CIRB

Amusement	amusement and recreational buildings
Church	churches and religious buildings
Hotel	hotels and motels
Medical	hospitals and institutional buildings
Office	office and bank buildings
Other	other nonresidential buildings
Education	schools, colleges, universities, libraries, museums
Retail	stores and other mercantile buildings
Service	service stations
Industrial	manufacturing plants and affiliated buildings
Alterations	alterations, additions, and conversions to nonresidential structures (excludes special installation permits for electrical, plumbing, heating, AC, or similar mechanical work, or installation of fire escapes, elevators, signs, etc.)

APPENDIX C

CEC ZIP CODE-TO-UTILITY TERRITORY MAPPING

California Energy Commission's zip code-to-utility territory mapping consists of a list of 2,671 zip codes corresponding to 1,410 cities in California. In this list, each zip code is mapped to one of 16 territory zones. In turn, the territory zones correspond to utility territories as follows.

Zones 1 – 5 are in PG&E territory

Zone 6 is in SMUD territory

Zones 7 – 10 are in SCE territory

Zones 11 and 12 are in LADWP territory

Zone 13 is in SDG&E territory

Zones 14 – 16 comprise the Other Service area

To identify the utility territory based on zip code, the zip code must be first used to identify the territory zone, which then corresponds to a utility territory.

Note that the territory zones defined for this purpose by the CEC are not the same as the California Climate Zones.

SoCalGas's CIS was used to obtain a comprehensive list of zip codes served by SoCalGas. Using this list, as well as the CEC mapping, a list of zip codes was developed that are served by SoCalGas, but not by any other IOU. This list includes zip codes for the LADWP territory, as well as for several other electrical MUNIs, and is consistent with the territory in which SoCalGas's Savings By Design program offers incentives for electric measures.

APPENDIX D

GLOSSARY OF MEASURES IMPLEMENTED BY SBD PARTICIPANTS

Whole building	Measures installed as part of the whole building approach
Daylighting	Daylighting measures
Skylight	Skylights
HVAC chiller	High-efficiency chillers
HVAC package	High-efficiency unitary systems
HVAC controls	Controls for HVAC systems
HVAC other	Other measures labeled as "HVAC", including air handling units, pumps, variable speed drives, motors and other measures specifically labeled "HVAC".
Motors	High-efficiency motors and other measures labeled as "motors"
Lighting	Lighting measures, including lighting power density reduction
Envelope	Envelope measures, including insulation and windows
Other	Refrigeration, process cooling and pumps, variable frequency drives and adjustable speed drives that are not specifically labeled "HVAC" or "motors", controls that are not specifically labeled "HVAC" or "motors", and measures labeled "other" or "miscellaneous".