

**NRNC Market Characterization  
And Program Activities Tracking Report  
2005  
Final**

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## **TABLE OF CONTENTS**

Section		Page
1	EXECUTIVE SUMMARY	1-1
	1.1 NRNC Market Characterization	1-1
	1.2 Savings By Design Program Tracking and Penetration	1-2
	1.3 Historic Trends	1-4
2	INTRODUCTION	2-1
	2.1 NRNC Data Sources	2-1
	2.2 The Savings By Design Program	2-2
	2.3 Report Layout	2-2
3	STATEWIDE NONRESIDENTIAL NEW CONSTRUCTION TRENDS	3-1
	3.1 New Construction Market Characteristics in 2005	3-1
	3.2 SBD New Construction Program Participation in 2005	3-11
4	STATEWIDE NONRESIDENTIAL ALTERATION (R&R) TRENDS	4-1
	4.1 Alteration (R&R) Market Characteristics in 2005	4-1
	4.2 SBD R&R Program Participation in 2005	4-7
5	SBD PROGRAM PENETRATION INTO THE NRNC MARKET IN 2005	5-1
6	NRNC MARKET AND PROGRAM TRACKING SUMMARY	6-1
7	MARKET PLAYERS IN 2005	7-1
 Appendix		
A	GLOSSARY OF BUILDING TYPES RECORDED BY F.W. DODGE	A-1
B	CIRB NRNC PERMIT VALUE IN 2005	B-1
C	CEC ZIP CODE – TO – UTILITY MAPPING	C-1
D	GLOSSARY OF MEASURES IMPLEMENTED BY SBD PARTICIPANTS	D-1

## 1. EXECUTIVE SUMMARY

This section presents a summary of results from the statewide Market Characterization and Program Activities Tracking (MCPAT) Report. The Market Characterization part of the MCPAT Report 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 Report 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 2005.

### 1.1 MARKET CHARACTERIZATION

The market characterization part of the MCPAT Report requires knowledge of the characteristics of the California NRNC market and its segments. This task relies on periodic data collection to capture and describe changes in the NRNC market. Specifically, calendar year 2005 F.W. Dodge data were collected 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 years 2000 through 2004, 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 2005 is presented in Table 1.1 and in Exhibit 1.1.

**Table 1.1 Market Summary of Project Starts in California**

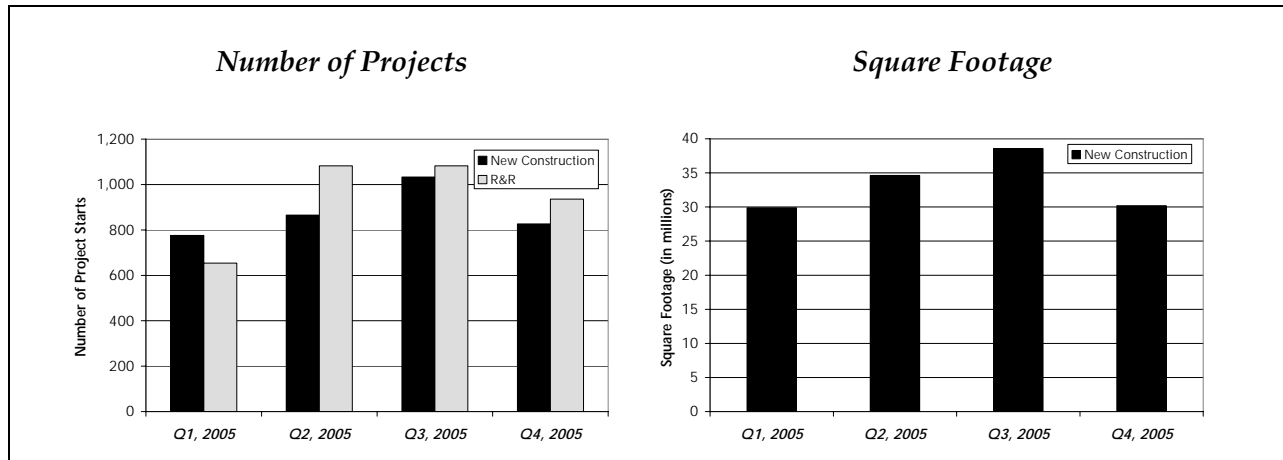
Project Type	Quarter	Value (\$ billions)	Area (millions of sqft)	Number of Projects
New and additions	Q1, 2005	2.846	29.88	776
	Q2, 2005	3.739	34.63	865
	Q3, 2005	4.276	38.56	1,033
	Q4, 2005	3.824	30.19	827
	Subtotal	14.685	133.26	3,501
Alterations	Q1, 2005	0.617	-	654
	Q2, 2005	1.157	-	1,083
	Q3, 2005	0.880	-	1,083
	Q4, 2005	0.892	-	936
	Subtotal	3.546	-	3,756
<b>Total</b>		<b>18.231</b>	<b>-</b>	<b>7,257</b>

\* F.W. Dodge does not report square footage for alteration projects.

F.W. Dodge data indicate that there were over 7,200 nonresidential projects that started construction in California in calendar year 2005, 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 some variation in the overall market activity from quarter to quarter, with quarter 3 more active and quarter 1 less active than quarters 2 and 4; market activity varied little from quarter to quarter with respect to building type or location.

**Exhibit 1.1**  
**F.W. Dodge Nonresidential Project Starts by Quarter in 2005**



\* F.W. Dodge does not report square footage for alteration projects.

There are some shortcomings to F.W. Dodge data as a measure of NRNC market activity: they only track information for *project starts* in a given time period; they only track *publicly-bid projects* (whereas some projects do not go to public bid); and they pertain to the whole state of California, including areas outside IOU territories. In addition, the F.W. Dodge data include retrofits in the alterations category (but retrofits do not qualify for SBD program participation), and do not report the square footage of renovation/remodeling projects. Even considering these shortcomings, F.W. Dodge data are considered the best available source of market information for the nonresidential new construction market study.

### **1.2 SAVINGS BY DESIGN PROGRAM TRACKING AND PENETRATION**

The second objective of the MCPAT Report 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 committed 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 proposed to be installed by program participants, whole building design, “process and other” measures (variable speed drives, gas-fired boilers, water heating), “other HVAC measures” (VSDs, motors, furnaces, boilers, gas-fired space heating) and lighting are the most popular. These

measures also account for the highest estimated energy savings, in both new construction projects and R&R projects.

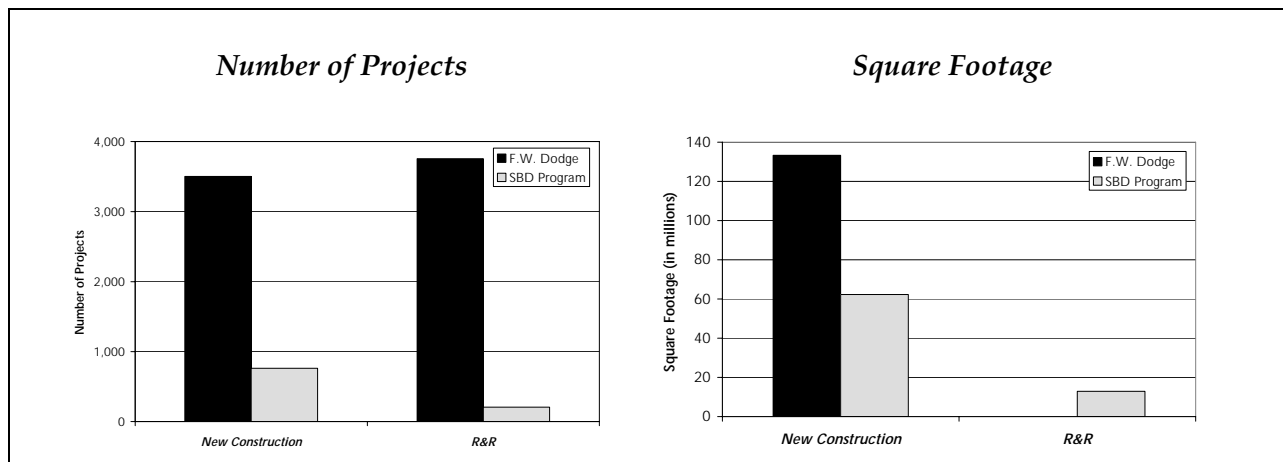
The SBD program data were used in conjunction with the NRNC market data described in the first part of the report to prepare the SBD program tracking and penetration analysis. A summary of statewide program activity is presented in Table 1.2. Exhibit 1.2 shows program penetration results for calendar year 2005.

**Table 1.2 Summary of Statewide SBD Program Activity in 2005**

Project Type	Quarter	Area (millions of sqft)	Number of Participants
New and additions	Q1, 2005	10.10	123
	Q2, 2005	13.63	158
	Q3, 2005	10.75	171
	Q4, 2005	27.81	311
	Subtotal	62.30	763
Alterations (R&R)	Q1, 2005	6.05	56
	Q2, 2005	1.54	38
	Q3, 2005	2.20	42
	Q4, 2005	3.10	69
	Subtotal	12.89	205
Total		75.19	968

Program penetration results for 2005 indicate that the SBD program captured 21.8% of the nonresidential new construction projects and 5.5% of the R&R projects. By square footage, program penetration into the new construction market is 46.8%, indicating that the program continues to reach relatively large buildings. Although this penetration level is the highest in the history of the SBD program, opportunities remain for increased program penetration into the market.

**Exhibit 1.2**  
**Statewide SBD Program Penetration into the NRNC Market in 2005**



\* F.W. Dodge does not report square footage for alteration projects.

### 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 2005 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%
	2004	1-4	120.86	47.97	39.7%	3,863	497	12.9%
	2005	1-4	133.26	62.30	46.8%	3,501	763	21.8%
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%
	2004	1-4	-	10.29	-	4,053	115	2.8%
	2005	1-4	-	12.89	-	3,756	205	5.5%

\* F.W. Dodge does not report square footage for alteration projects.

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 that went into effect on July 1, 2001 (and to the subsequent change in program requirements), 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, the NRNC sector activity had a downturn from 2002 through 2004 as compared to the previous years; the downturn continued in 2005 with respect the number of projects that started construction, but not with respect to the square footage built. In terms of the number of projects that started construction, 2004 marked a 5 percent decrease relative to 2002 and 2003, and the trend continued with a 7 percent decrease in 2005 relative to 2003 and 2004. In terms of square footage the NRNC market building rate dropped by approximately 11 percent in 2004 relative to 2002 and 2003, but it increased by 7% in 2005 relative to 2003 and 2004. In other words, fewer but larger projects started construction in 2005 than in previous years.

Savings By Design program activity follows similar trends as the NRNC market in the early years, with a relatively busy year in 2001 and a less active year in 2002. Then instead of a downturn, 2003 and were more active than 2002, and 2005 was more active even than the busy 2001. In 2005 program penetration in terms of both square footage and number of projects reached a new historic high.

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) project is to collect, 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 report summarizes the NRNC market and SBD Program tracking and penetration results in calendar year 2005.

### 2.1 NRNC DATA SOURCES

The MCPAT project 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 nonresidential remodel/renovation (R&R) market.

The building permit data that were filed with the 523 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 nonresidential 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 can be attributed to the time delay that naturally occurs between permit filing and construction start. Others are due to the fact that F.W. Dodge records only publicly-bid projects, whereas some projects do not go to public bid. Appendix B summarizes the value of nonresidential *permits filed* in calendar year 2005, 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 investor-owned utilities (IOUs) PG&E, SCE, SDG&E and SoCalGas, is designed to transform energy-efficiency investment behavior in the nonresidential 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 nonresidential 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 nonresidential building market.

The SBD program targets specific links in the nonresidential building construction decision-making chain, reflecting differences in design activities and priorities between large and small buildings with 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 nonresidential new construction market segments, including the public, private, and speculative markets. Remodeling and renovation (“R&R”) program elements address the nonresidential remodeling and renovation market segments specific to “gut-rehabilitation” and tenant improvement projects, including the public, private, and speculative markets.

This report focuses on new construction projects for which the IOUs have committed SBD program funds in calendar year 2005. The SBD program data analyzed here were obtained as extracts from the IOU tracking databases.

## ***2.3 REPORT LAYOUT***

The core of this report starts in Chapter 3 with a characterization of the NRNC market in calendar year 2005, as described by F.W. Dodge. Drawing on the Savings By Design program participation databases maintained by the four California investor-owned utilities (IOUs) PG&E, SCE, SDG&E and SoCalGas, the chapter then summarizes the characteristics of new construction program participants in 2005.

Chapter 4 presents the market characteristics for alteration projects, as described by F.W. Dodge. It then describes program participation in 2005 for the renovation/remodel/first tenant improvement (R&R) element of the SBD program.

An evaluation of SBD program penetration into the market in calendar year 2005 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, engineers and general contractors) in calendar year 2005.



### 3. STATEWIDE NONRESIDENTIAL NEW CONSTRUCTION TRENDS

This chapter presents information on the nonresidential new construction activity that has occurred in 2005 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 2005.

#### 3.1 NEW CONSTRUCTION MARKET CHARACTERISTICS IN 2005

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 Customer Information System (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 municipal territories, and is consistent with the territory in which SoCalGas offers the Savings By Design program.

Table 3.1 presents the F.W. Dodge valuation for nonresidential new construction projects that have started construction during calendar year 2005. 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 2005, half of which is concentrated in the school, office, retail and medical 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, retail and service segments account for half of 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, service and retail segments.

As shown in Exhibit 3.1 below, Los Angeles, San Diego, Orange, Riverside and San Bernardino Counties account for the highest value of projects that *have started construction* in 2005. F.W. Dodge did not report any project starts in 2005 in Alpine, Lassen and San Benito Counties. Among building types, school and medical account for the highest project start valuation, but retail, service, office, storage and amusement also show relatively high market activity. The assembly segment (churches) accounts for the lowest project start value.

**Exhibit 3.1**  
**New Construction Market Segments with the Highest Project Start Valuation in 2005**

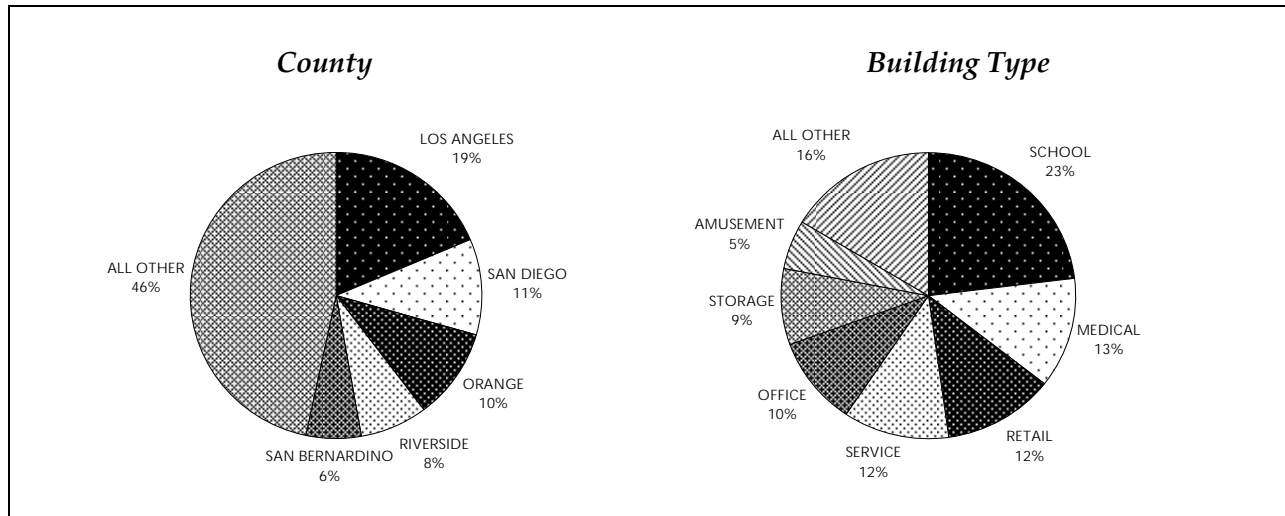
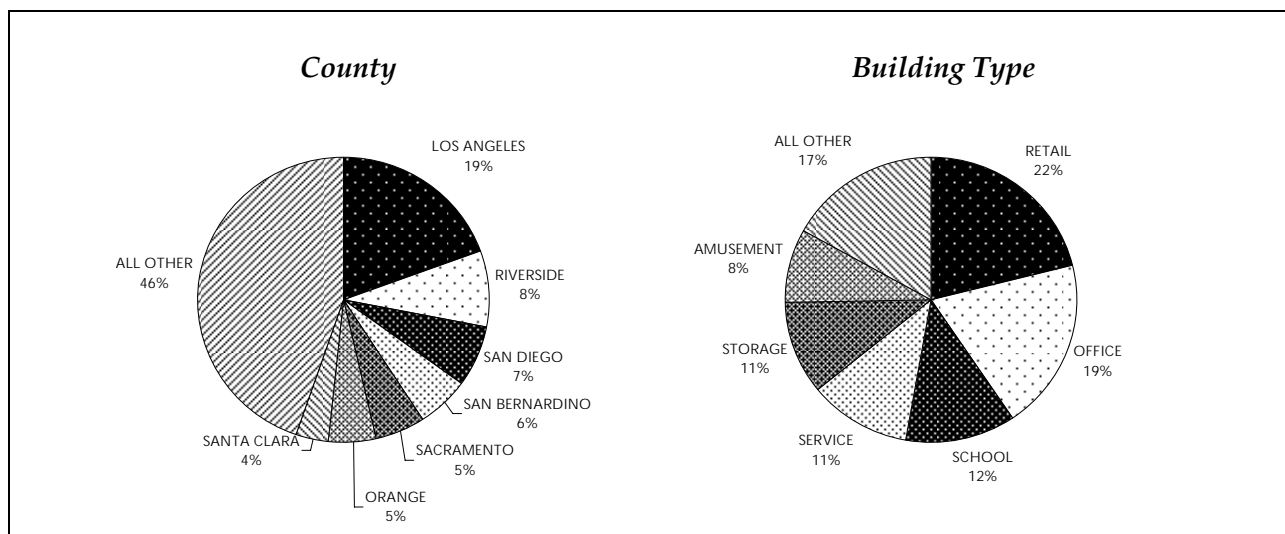


Table 3.2 presents the number of nonresidential new construction and addition projects that have started construction in 2005, as reported by F.W. Dodge. Among utility territories, PG&E leads with the highest number of project starts, followed by SCE. SoCalGas territory accounts for a few more project starts than SDG&E 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, Riverside, San Diego, San Bernardino, Sacramento, Orange and Santa Clara Counties have the highest number of new construction project starts. Among building types, retail, office, school, service, storage and amusement account for the highest number of project starts. The education segment (museums, libraries) accounts for the lowest number of project starts in 2005.

**Exhibit 3.2**  
**New Construction Market Segments with the Highest Number of Project Starts in 2005**

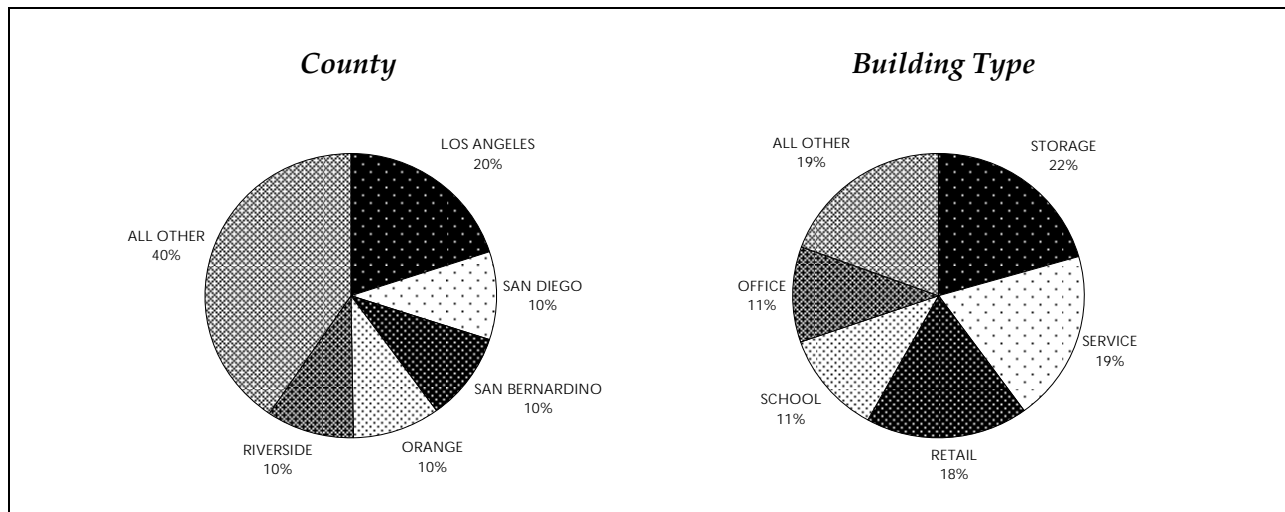


Tables 3.3 and 3.4 summarize quarterly project starts by county and building type. There is some variation from quarter to quarter in the number of project starts by segment, with quarter 2 slightly more active than quarters 1, 3 and 4.

Table 3.5 presents the number of square feet of nonresidential new construction and addition projects that have started construction in 2005, as reported by F.W. Dodge. Among utility territories, SCE accounts for the largest number of new square feet built in 2005, two-thirds of which are concentrated in the storage, retail, and service segments. PG&E follows closely, with half of the square footage concentrated in the retail, service and school segments. In the SDG&E service territory, the office and service segments account for nearly half the square footage built, while in SoCalGas territory the retail and service segments account for over half of the 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 2005. A large fraction of the Non-IOU project area is concentrated in the service, retail and office 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, Orange and Riverside. The storage, service, retail, school and office segments account for large fractions of square footage of new space, while the assembly (churches), education (museums, libraries) and government segments account for the least amount of new space built in 2005.

**Exhibit 3.3**  
***New Construction Market Segments with the Highest Square Footage in 2005***



Tables 3.6 and 3.7 summarize quarterly square feet of nonresidential new construction built, by county and building type. The volume of new space built did not change much from quarter to quarter in 2005, either geographically or by building type, although quarter 2 was again slightly busier than quarters 1, 3 and 4.

**Table 3.1 F.W. Dodge Valuation of New Construction Project Starts in 2005  
by Building Type, County and Service Territory (\$1,000)**

COUNTY	AMUSEMENT	ASSEMBLY	EDUCATION	GOVT	HOTEL	MEDICAL	OFFICE	RETAIL	SCHOOL	SERVICE	STORAGE	OTHER	TOTAL
ALAMEDA	26,126	1,500	27,585	2,340		17,764	20,393	68,461	121,843	143,197	21,568	3,940	454,717
ALPINE													0
AMADOR				159			7,862	10,057		84	400	3,550	22,112
BUTTE	698		2,000		7,000	600	1,830	2,521	39,048	2,000	9,497		65,194
CALAVERAS	2,176					2,000	903				118		5,197
COLUSA				1,299					1,082				2,381
CONTRA COSTA	3,224	7,102	6,300	100	7,200	95,745	48,629	22,712	85,196	38,883	3,194	4,256	322,541
DEL NORTE	299							4,500					4,799
EL DORADO	2,003	4,108		516	47,500	333	6,478	8,536	2,334	139	10,666	467	83,080
FRESNO	3,513		10,081	91,130	4,002	476	25,708	15,517	137,714		18,664	10,669	317,474
GLENN					2,000				3,255				5,255
HUMBOLDT	345		700					739	8,332	864			10,980
IMPERIAL		488		278	5,000		450	12,327	28,747	1,925	475	10,569	60,259
INYO				372							1,300		1,672
KERN	2,817	4,306		2,050	6,000	6,250	13,513	17,128	116,447	5,203	37,616	6,184	217,514
KINGS		3,750					963	8,350	5,980		1,930	157	21,130
LAKE	310			2,403							890	197	3,800
LASSEN													0
LOS ANGELES	198,131	18,525	23,262	98,880	56,250	316,216	273,461	455,536	597,020	410,812	225,122	56,790	2,730,005
MADERA	3,628			5,280					34,435	35,141	2,470		80,954
MARIN	17,861		6,002	1,500	5,000	15,000	7,642	3,325	1,302	100	4,000	375	62,107
MARIPOSA									15,300				15,300
MENDOCINO				2,835		2,750		1,000	2,880		86		9,551
MERCED	8,765	278					5,561	300	55,226	500	2,256	13,800	86,686
MODOC								1,000	1,147				2,147
MONO				6,219	66,500	19,000							91,719
MONTEREY	11,115	400	4,245	516	3,340		1,460	7,479	38,885	957	248	7,053	75,698
NAPA					21,221	3,898	1,154	4,150	9,748		883		41,054
NEVADA	3,620	413			6,263	4,125	601	2,301		1,302	1,610	1,516	21,751
ORANGE	76,316	29,887	30,490	11,729	15,103	280,973	322,653	135,629	235,236	295,540	54,402	14,045	1,502,003
PLACER	909	8,000	7,500	4,054	5,000	64,774	79,393	37,036	98,489	350	8,977	643	315,125
PLUMAS		130		174			442	130		975	202	541	2,594
RIVERSIDE	38,285	21,188	49,175	14,903	12,500	46,378	85,057	264,574	365,144	22,365	168,742	14,784	1,103,095
SACRAMENTO	86,589	4,490	12,082	30,287	36,200	149,600	54,433	143,346	153,289	50,484	37,574	11,067	769,441
SAN BENITO													0
SAN BERNARDINO	20,721	6,500	36,059	49,807	32,600	27,623	71,780	106,074	91,733	12,445	393,805	37,969	887,116
SAN DIEGO	45,376	34,415	24,750	31,381	131,140	187,069	211,381	145,950	410,709	276,427	62,245	34,327	1,595,170
SAN FRANCISCO	49,260		250,000		183,910	147,719	42,000		14,842	84,095	74	18,100	790,000
SAN JOAQUIN	17,958	3,253	9,540	5,941	19,648	26,351	15,452	35,150	59,730	9,823	34,957	25,126	262,929
SAN LUIS OBISPO	9,543	605		390	13,519	135	16,703	5,769	27,202	3,182	1,618	1,180	79,846
SAN MATEO	2,790			2,184			22,719	16,008	46,880	105,643	10,425	180	206,829
SANTA BARBARA	4,295	722	111		3,269	19,117	14,930	8,758	41,095	23,780	9,332	3,050	128,459
SANTA CLARA	37,908	3,562	13,618	3,332		105,401	16,207	77,908	199,954	87,410	16,724	167,991	730,015
SANTA CRUZ	68,128		35,756			85	5,375	6,359	19,445	9,577	180	150	145,055
SHASTA	1,570		13,000	2,035		2,391	2,108	13,222	15,725				50,051
SIERRA			1,665										1,665
SISKIYOU	131		799	886		680	634	91	131	469	160		3,981
SOLANO	643	867	8,913		450	203,388	14,282	41,587	26,177	4,550	8,235	4,736	313,828
SONOMA	13,099	1,750		1,799	9,673		10,577	24,892	47,092	34,792	100	585	144,359
STANISLAUS	2,323	1,026	382	1,373	7,000	85,325	23,137	11,325	73,811	1,277	40,545	4,204	251,728
SUTTER			211			9,000	621	29,480	1,582		5,960		46,854
TEHAMA	2,182			969			528	2,663	4,084		470	115	11,011
TRINITY		800							750				1,550
TULARE	1,458			2,655	2,000	2,267	5,222	9,272	46,219	160	47,033	16,003	132,289
TUOLUMNE	208			2,643	390		4,146		14,700	289	184	2,781	25,341
VENTURA	21,250	31,886	29,500	2,740	14,400	6,985	12,101	22,002	34,509	31,544	32,824	26,836	266,577
YOLO	10,910			800	2,000	1,000	12,024	20,262	25,744		3,966	10,290	86,996
YUBA							75	5,560	10,425			398	16,458
CALIFORNIA	796,483	189,951	603,726	385,959	726,078	1,850,418	1,460,588	1,808,986	3,370,618	1,696,284	1,281,727	514,624	14,685,442
<b>UTILITY</b>													
SCE	121,558	90,004	132,230	79,527	163,874	413,559	276,394	597,556	739,138	254,785	825,819	112,867	3,807,311
PG&E	291,282	34,875	389,639	134,349	352,020	785,045	400,816	469,690	1,299,757	569,249	235,179	288,821	5,250,722
SDG&E	57,651	39,415	24,750	34,381	131,140	201,069	224,805	150,200	457,244	311,344	83,845	25,639	1,741,483
SoCalGas	139,120	8,201	4,291	66,623	32,948	12,739	180,720	287,315	338,655	162,766	24,039	52,169	1,309,586
Non-IOU	186,872	17,456	52,816	71,079	46,096	438,006	377,853	304,225	535,824	398,140	112,845	35,128	2,576,340

**Table 3.2 F.W. Dodge Number of Nonresidential New Construction Project Starts in 2005  
by Building Type, County and Service Territory**

COUNTY	AMUSEMENT	ASSEMBLY	EDUCATION	GOVT	HOTEL	MEDICAL	OFFICE	RETAIL	SCHOOL	SERVICE	STORAGE	OTHER	TOTAL
ALAMEDA	10	1	3	1	.	2	26	22	15	31	6	3	120
ALPINE	.	.	.	.	.	.	.	.	.	.	.	.	0
AMADOR	.	.	.	1	.	.	6	6	.	1	1	5	20
BUTTE	2	.	1	.	1	2	4	3	5	1	5	.	24
CALAVERAS	2	.	.	.	.	1	4	.	.	.	1	.	8
COLUSA	.	.	.	1	.	.	.	.	1	.	.	.	2
CONTRA COSTA	5	5	1	1	3	3	28	17	9	6	4	8	90
DEL NORTE	1	.	.	.	.	.	.	1	.	.	.	.	2
EL DORADO	3	1	.	1	1	1	9	10	4	2	12	4	48
FRESNO	4	.	2	2	2	3	30	16	10	.	4	3	76
GLENN	.	.	.	.	1	.	.	.	2	.	.	.	3
HUMBOLDT	2	.	1	.	.	.	.	2	2	1	.	.	8
IMPERIAL	.	1	.	1	1	.	1	14	3	1	1	3	26
INYO	.	.	.	1	.	.	.	.	.	.	1	.	2
KERN	7	3	.	1	1	2	14	14	9	3	26	15	95
KINGS	.	1	.	.	.	.	3	6	1	.	10	1	22
LAKE	2	.	.	2	.	.	.	.	.	.	2	1	7
LASSEN	.	.	.	.	.	.	.	.	.	.	.	.	0
LOS ANGELES	45	12	2	16	11	19	119	163	65	132	74	23	681
MADERA	1	.	.	2	.	.	.	.	5	2	1	.	11
MARIN	3	.	2	2	1	1	2	3	3	1	1	2	21
MARIPOSA	.	.	.	.	.	.	.	.	3	.	.	.	3
MENDOCINO	.	.	.	1	.	2	.	1	1	.	1	.	6
MERCED	1	1	.	.	.	.	8	1	11	1	2	1	26
MODOC	.	.	.	.	.	.	.	1	1	.	.	.	2
MONO	.	.	.	2	2	1	.	.	.	.	.	.	5
MONTEREY	8	1	2	1	3	.	5	5	9	4	3	4	45
NAPA	.	.	.	.	3	2	3	1	4	.	1	.	14
NEVADA	1	1	.	.	2	2	2	2	.	2	2	2	16
ORANGE	23	10	6	3	2	6	25	39	23	24	14	7	182
PLACER	4	3	1	1	1	7	46	24	10	1	16	3	117
PLUMAS	.	1	.	1	.	.	2	1	.	1	1	4	11
RIVERSIDE	20	6	6	7	2	10	62	88	45	12	30	9	297
SACRAMENTO	23	5	2	2	4	2	39	65	10	18	17	4	191
SAN BENITO	.	.	.	.	.	.	.	.	.	.	.	.	0
SAN BERNARDINO	15	2	3	6	7	7	24	57	19	11	52	3	206
SAN DIEGO	24	7	4	6	6	8	34	32	48	48	18	12	247
SAN FRANCISCO	4	.	1	.	4	2	1	.	3	16	1	4	36
SAN JOAQUIN	5	2	1	3	2	5	27	15	8	5	4	4	81
SAN LUIS OBISPO	6	1	.	1	5	1	16	7	2	8	7	6	60
SAN MATEO	2	.	.	1	.	.	7	7	5	8	1	1	32
SANTA BARBARA	10	2	1	.	2	7	13	11	9	6	4	4	69
SANTA CLARA	13	4	3	3	.	6	22	25	20	19	6	9	130
SANTA CRUZ	7	.	2	.	.	1	3	5	5	1	1	1	26
SHASTA	1	.	1	1	.	2	2	3	4	.	.	.	14
SIERRA	.	.	1	.	.	.	.	.	.	.	.	.	1
SISKIYOU	1	.	1	2	.	1	3	1	1	2	1	.	13
SOLANO	5	1	1	.	1	3	5	12	4	4	6	4	46
SONOMA	6	2	.	2	3	.	7	15	9	7	1	4	56
STANISLAUS	2	3	1	1	3	4	40	8	8	4	7	3	84
SUTTER	.	.	1	.	.	1	2	5	1	.	3	.	13
TEHAMA	1	.	.	1	.	.	2	1	3	.	3	1	12
TRINITY	.	1	.	.	.	.	.	.	1	.	.	.	2
TULARE	6	.	.	1	1	3	10	8	8	1	8	15	61
TUOLUMNE	2	.	.	1	2	.	7	.	1	3	1	4	21
VENTURA	8	5	2	2	2	2	12	15	12	9	11	2	82
YOLO	2	.	.	1	1	1	5	2	5	.	2	2	21
YUBA	.	.	.	.	.	.	1	4	1	.	.	1	7
CALIFORNIA	287	82	52	82	80	120	681	738	428	396	373	182	3,501
<b>UTILITY</b>													
SCE	78	23	14	17	21	31	143	257	125	66	146	30	951
PG&E	113	30	24	31	40	57	320	225	179	123	117	82	1,341
SDG&E	27	9	4	7	6	9	39	35	51	49	22	14	272
SoCalGas	18	4	1	12	6	4	41	76	28	62	20	16	288
Non-IOU	51	16	9	15	7	19	138	145	45	96	68	40	649

**Table 3.3 F.W. Dodge Number of Nonresidential New Construction Project Starts in 2005 by Quarter, County and Service Territory**

	Q1, 2005	Q2, 2005	Q3, 2005	Q4, 2005	2005 Total
<b>COUNTY</b>					
ALAMEDA	21	28	28	43	120
ALPINE	0	0	0	0	0
AMADOR	3	4	5	8	20
BUTTE	8	3	6	7	24
CALAVERAS	1	3	2	2	8
COLUSA	1	0	0	1	2
CONTRA COSTA	23	22	33	12	90
DEL NORTE	0	0	2	0	2
EL DORADO	8	9	20	11	48
FRESNO	15	31	21	9	76
GLENN	0	1	2	0	3
HUMBOLDT	0	4	4	0	8
IMPERIAL	15	8	3	0	26
INYO	0	1	0	1	2
KERN	21	13	30	31	95
KINGS	5	3	10	4	22
LAKE	2	2	2	1	7
LASSEN	0	0	0	0	0
LOS ANGELES	132	185	201	163	681
MADERA	1	3	5	2	11
MARIN	6	5	6	4	21
MARIPOSA	0	3	0	0	3
MENDOCINO	0	2	3	1	6
MERCED	5	3	12	6	26
MODOC	0	2	0	0	2
MONO	0	2	2	1	5
MONTEREY	11	7	13	14	45
NAPA	4	2	3	5	14
NEVADA	5	1	5	5	16
ORANGE	46	47	47	42	182
PLACER	37	29	29	22	117
PLUMAS	1	2	4	4	11
RIVERSIDE	52	92	92	61	297
SACRAMENTO	45	47	58	41	191
SAN BENITO	0	0	0	0	0
SAN BERNARDINO	46	50	58	52	206
SAN DIEGO	64	59	69	55	247
SAN FRANCISCO	4	2	16	14	36
SAN JOAQUIN	26	20	24	11	81
SAN LUIS OBISPO	21	11	12	16	60
SAN MATEO	9	6	12	5	32
SANTA BARBARA	13	16	20	20	69
SANTA CLARA	36	19	34	41	130
SANTA CRUZ	1	7	12	6	26
SHASTA	5	2	5	2	14
SIERRA	0	0	0	1	1
SISKIYOU	0	1	7	5	13
SOLANO	9	10	9	18	46
SONOMA	9	15	14	18	56
STANISLAUS	17	27	27	13	84
SUTTER	4	3	4	2	13
TEHAMA	3	4	3	2	12
TRINITY	0	1	0	1	2
TULARE	10	13	18	20	61
TUOLUMNE	1	3	6	11	21
VENTURA	23	25	22	12	82
YOLO	6	4	11	0	21
YUBA	1	3	2	1	7
CALIFORNIA	776	865	1,033	827	3,501
<b>UTILITY</b>					
SCE	188	260	284	219	951
PG&E	308	302	402	329	1,341
SDG&E	72	67	73	60	272
SoCalGas	65	92	83	48	288
Non-IOU	143	144	191	171	649

**Table 3.4 F.W. Dodge Number of Nonresidential New Construction Project Starts in 2005  
by Quarter, Building Type and Service Territory**

	AMUSEMENT	ASSEMBLY	EDUCATION	GOVT	HOTEL	MEDICAL	OFFICE	RETAIL	SCHOOL	SERVICE	STORAGE	OTHER	TOTAL
<b>CALIFORNIA</b>													
Q1, 2005	66	19	7	14	12	30	150	182	82	94	88	32	776
Q2, 2005	73	22	15	24	29	26	162	167	124	84	101	38	865
Q3, 2005	69	20	17	27	21	34	226	230	127	106	97	59	1,033
Q4, 2005	79	21	13	17	18	30	143	159	95	112	87	53	827
2005 Total	287	82	52	82	80	120	681	738	428	396	373	182	3,501
<b>SCE</b>													
Q1, 2005	16	5	.	.	4	6	26	58	23	13	34	3	188
Q2, 2005	29	7	5	5	11	10	32	53	38	19	44	7	260
Q3, 2005	17	4	3	7	4	7	55	80	40	17	40	10	284
Q4, 2005	16	7	6	5	2	8	30	66	24	17	28	10	219
2005 Total	78	23	14	17	21	31	143	257	125	66	146	30	951
<b>PG&amp;E</b>													
Q1, 2005	27	9	4	8	8	17	78	48	30	33	31	15	308
Q2, 2005	22	7	7	5	10	10	89	42	54	15	29	12	302
Q3, 2005	33	9	9	10	10	14	96	79	49	32	29	32	402
Q4, 2005	31	5	4	8	12	16	57	56	46	43	28	23	329
2005 Total	113	30	24	31	40	57	320	225	179	123	117	82	1,341
<b>SDG&amp;E</b>													
Q1, 2005	8	.	.	3	.	2	12	14	12	15	3	3	72
Q2, 2005	6	5	.	1	2	4	8	8	11	10	9	3	67
Q3, 2005	5	2	3	2	2	3	13	8	15	14	3	3	73
Q4, 2005	8	2	1	1	2	.	6	5	13	10	7	5	60
2005 Total	27	9	4	7	6	9	39	35	51	49	22	14	272
<b>SoCalGas</b>													
Q1, 2005	5	1	1	1	.	1	13	19	6	12	3	3	65
Q2, 2005	5	2	.	7	3	.	8	25	7	22	7	6	92
Q3, 2005	4	1	.	3	2	2	15	23	10	13	6	4	83
Q4, 2005	4	.	.	1	1	1	5	9	5	15	4	3	48
2005 Total	18	4	1	12	6	4	41	76	28	62	20	16	288
<b>Non-IOU</b>													
Q1, 2005	10	4	2	2	.	4	21	43	11	21	17	8	143
Q2, 2005	11	1	3	6	3	2	25	39	14	18	12	10	144
Q3, 2005	10	4	2	5	3	8	47	40	13	30	19	10	191
Q4, 2005	20	7	2	2	1	5	45	23	7	27	20	12	171
2005 Total	51	16	9	15	7	19	138	145	45	96	68	40	649

**Table 3.5 F.W. Dodge Area of Nonresidential New Construction Project Starts in 2005  
by Building Type, County and Service Territory (1,000 sqft)**

COUNTY	AMUSEMENT	ASSEMBLY	EDUCATION	GOVT	HOTEL	MEDICAL	OFFICE	RETAIL	SCHOOL	SERVICE	STORAGE	OTHER	TOTAL
ALAMEDA	117	25	123	10	.	80	199	777	459	1,327	317	39	3,473
ALPINE	.	.	.	.	.	.	.	.	.	.	.	.	0
AMADOR	.	.	.	1	.	.	71	193	.	2	10	33	309
BUTTE	4	.	14	.	52	7	24	29	209	21	155	.	514
CALAVERAS	11	.	.	.	.	18	11	.	.	.	4	.	44
COLUSA	.	.	.	6	.	.	.	.	6	.	.	.	11
CONTRA COSTA	16	117	21	1	71	541	528	433	277	611	54	39	2,710
DEL NORTE	2	.	.	.	.	.	.	132	.	.	.	.	134
EL DORADO	14	48	.	3	230	4	92	138	11	5	213	5	763
FRESNO	29	.	76	608	53	4	265	203	629	.	595	78	2,539
GLENN	.	.	.	.	33	.	.	.	19	.	.	.	52
HUMBOLDT	2	.	8	.	.	.	.	8	5	18	.	.	41
IMPERIAL	.	5	.	1	51	.	5	227	111	42	12	158	611
INYO	.	.	.	2	.	.	.	.	.	.	32	.	34
KERN	21	53	.	6	75	39	169	217	493	68	658	99	1,897
KINGS	.	63	.	.	.	.	16	220	30	.	68	5	402
LAKE	2	.	.	12	.	.	.	.	.	.	20	2	37
LASSEN	.	.	.	.	.	.	.	.	.	.	.	.	0
LOS ANGELES	816	176	84	371	627	1,179	2,504	5,090	2,765	7,400	4,896	590	26,498
MADERA	14	.	.	24	.	.	.	.	167	266	65	.	536
MARIN	36	.	29	7	67	106	91	48	9	1	68	6	467
MARIPOSA	.	.	.	.	.	.	.	.	60	.	.	.	60
MENDOCINO	.	.	.	9	.	25	.	14	30	.	2	.	79
MERCED	35	2	.	.	.	.	76	3	247	3	53	60	479
MODOC	.	.	.	.	.	.	.	13	7	.	.	.	20
MONO	.	.	.	23	318	38	.	.	.	.	.	.	379
MONTEREY	63	5	20	4	22	.	14	77	252	12	5	225	698
NAPA	.	.	.	.	193	46	14	48	40	.	1	.	342
NEVADA	20	7	.	.	59	14	7	30	.	25	25	23	209
ORANGE	265	329	107	46	178	726	2,678	1,673	1,262	4,720	999	120	13,104
PLACER	5	116	30	22	52	334	886	604	410	7	227	15	2,707
PLUMAS	.	1	.	1	.	.	4	2	.	20	5	12	45
RIVERSIDE	252	249	171	59	149	334	1,012	4,060	1,958	540	3,955	151	12,889
SACRAMENTO	374	53	30	72	417	475	764	1,935	686	1,245	622	61	6,734
SAN BENITO	.	.	.	.	.	.	.	.	.	.	.	.	0
SAN BERNARDINO	172	74	231	268	386	252	1,141	1,509	448	171	8,437	319	13,408
SAN DIEGO	351	270	62	111	934	604	1,867	1,821	1,657	4,111	1,182	453	13,422
SAN FRANCISCO	326	.	370	.	655	306	165	.	60	1,249	1	211	3,342
SAN JOAQUIN	19	40	42	44	168	131	195	618	295	251	741	104	2,647
SAN LUIS OBISPO	51	6	.	4	140	1	189	151	125	36	39	22	765
SAN MATEO	19	.	.	9	.	.	154	262	175	926	139	1	1,685
SANTA BARBARA	29	12	1	.	33	159	120	130	135	458	217	28	1,321
SANTA CLARA	221	30	50	11	.	378	184	865	630	1,263	175	636	4,441
SANTA CRUZ	207	.	121	.	.	1	83	71	134	163	4	5	790
SHASTA	9	.	55	7	.	21	28	282	69	.	.	.	471
SIERRA	.	.	7	.	.	.	.	.	.	.	.	.	7
SISKIYOU	1	.	3	6	.	4	6	1	1	8	4	.	34
SOLANO	4	9	32	.	6	474	261	436	104	51	193	38	1,607
SONOMA	55	22	.	8	100	.	156	353	346	428	2	11	1,482
STANISLAUS	7	12	2	6	110	445	404	289	292	25	886	23	2,501
SUTTER	.	.	2	.	.	49	9	430	2	.	124	.	615
TEHAMA	13	.	.	4	.	.	5	19	22	.	11	1	76
TRINITY	.	1	.	.	.	.	.	.	4	.	.	.	5
TULARE	14	.	.	15	37	17	71	172	245	2	961	260	1,794
TUOLUMNE	1	.	.	8	5	.	26	.	50	6	4	63	163
VENTURA	136	122	89	16	159	45	118	374	164	389	1,057	230	2,899
YOLO	54	.	.	6	43	8	99	268	100	.	151	125	853
YUBA	.	.	.	.	.	.	2	69	41	.	.	8	119
CALIFORNIA	3,785	1,845	1,781	1,811	5,422	6,864	14,709	24,291	15,238	25,868	27,388	4,260	133,260
<b>UTILITY</b>													
SCE	778	826	567	365	1,467	1,813	3,513	8,488	3,736	4,673	18,338	1,179	45,742
PG&E	1,336	477	955	813	2,140	3,001	4,302	6,987	5,671	6,777	4,758	1,860	39,076
SDG&E	393	307	62	120	934	744	2,027	1,845	1,871	4,652	1,523	274	14,749
SoCalGas	566	57	24	292	330	84	1,259	2,935	1,376	3,259	491	499	11,172
Non-IOU	712	178	173	221	551	1,222	3,608	4,036	2,585	6,507	2,279	449	22,522



**Table 3.6 F.W. Dodge Area of Nonresidential New Construction Project Starts in 2005  
by Quarter, County and Service Territory (1,000 sqft)**

	Q1, 2005	Q2, 2005	Q3, 2005	Q4, 2005	2005 Total
<b>COUNTY</b>					
ALAMEDA	286	573	1,102	1,513	3,473
ALPINE	0	0	0	0	0
AMADOR	10	24	164	112	309
BUTTE	199	24	114	178	514
CALAVERAS	2	9	11	22	44
COLUSA	6	0	0	6	11
CONTRA COSTA	698	486	1,266	260	2,710
DEL NORTE	0	0	134	0	134
EL DORADO	39	362	220	141	763
FRESNO	691	562	1,052	234	2,539
GLENN	0	9	43	0	52
HUMBOLDT	0	14	27	0	41
IMPERIAL	64	493	54	0	611
INYO	0	2	0	32	34
KERN	361	225	565	746	1,897
KINGS	82	39	242	39	402
LAKE	6	20	2	9	37
LASSEN	0	0	0	0	0
LOS ANGELES	5,784	7,240	6,240	7,234	26,498
MADERA	71	67	378	20	536
MARIN	187	143	59	78	467
MARIPOSA	0	60	0	0	60
MENDOCINO	0	32	27	20	79
MERCED	21	111	247	99	479
MODOC	0	20	0	0	20
MONO	0	318	56	5	379
MONTEREY	218	77	68	336	698
NAPA	120	71	66	84	342
NEVADA	26	20	71	92	209
ORANGE	3,854	2,634	2,401	4,216	13,104
PLACER	874	761	602	471	2,707
PLUMAS	2	6	9	29	45
RIVERSIDE	3,332	3,856	3,826	1,876	12,889
SACRAMENTO	743	3,368	1,285	1,339	6,734
SAN BENITO	0	0	0	0	0
SAN BERNARDINO	2,972	3,399	4,507	2,530	13,408
SAN DIEGO	2,398	3,184	4,868	2,972	13,422
SAN FRANCISCO	320	243	1,669	1,110	3,342
SAN JOAQUIN	535	1,212	685	216	2,647
SAN LUIS OBISPO	375	108	146	135	765
SAN MATEO	977	168	358	182	1,685
SANTA BARBARA	468	453	190	209	1,321
SANTA CLARA	1,258	805	1,322	1,056	4,441
SANTA CRUZ	22	310	420	37	790
SHASTA	162	11	129	169	471
SIERRA	0	0	0	7	7
SISKIYOU	0	2	23	10	34
SOLANO	167	108	348	984	1,607
SONOMA	193	406	379	504	1,482
STANISLAUS	620	631	1,014	236	2,501
SUTTER	377	152	74	12	615
TEHAMA	23	28	20	5	76
TRINITY	0	4	0	1	5
TULARE	98	410	913	373	1,794
TUOLUMNE	8	61	67	27	163
VENTURA	1,163	821	705	210	2,899
YOLO	30	440	383	0	853
YUBA	42	51	10	17	119
CALIFORNIA	29,881	34,631	38,557	30,191	133,260
<b>UTILITY</b>					
SCE	11,836	12,195	14,010	7,701	45,742
PG&E	8,690	8,408	12,617	9,362	39,076
SDG&E	3,176	3,543	4,936	3,094	14,749
SoCalGas	1,895	4,482	1,614	3,181	11,172
Non-IOU	4,284	6,004	5,381	6,853	22,522

**Table 3.7 F.W. Dodge Area of Nonresidential New Construction Project Starts in 2005  
by Quarter, Building Type and Service Territory (1,000 sqft)**

	AMUSEMENT	ASSEMBLY	EDUCATION	GOVT	HOTEL	MEDICAL	OFFICE	RETAIL	SCHOOL	SERVICE	STORAGE	OTHER	TOTAL
<b>CALIFORNIA</b>													
Q1, 2005	840	395	118	117	523	1,730	2,080	5,469	3,163	7,638	7,422	385	29,881
Q2, 2005	1,267	549	322	527	2,161	1,624	3,697	7,961	4,188	4,841	6,484	1,012	34,631
Q3, 2005	514	646	907	928	1,406	1,887	5,300	6,403	4,424	6,082	8,642	1,418	38,557
Q4, 2005	1,163	256	434	239	1,331	1,622	3,633	4,458	3,463	7,306	4,840	1,445	30,191
2005 Total	3,785	1,845	1,781	1,811	5,422	6,864	14,709	24,291	15,238	25,868	27,388	4,260	133,260
<b>SCE</b>													
Q1, 2005	177	109			258	147	503	2,569	653	2,056	5,317	48	14,552
Q2, 2005	369	288	178	131	919	376	1,074	2,324	1,085	1,203	4,058	191	12,643
Q3, 2005	124	277	150	84	163	830	1,392	1,683	1,190	1,239	6,370	509	14,030
Q4, 2005	108	154	239	149	127	461	544	1,912	808	176	2,593	432	11,201
2005 Total	778	826	567	365	1,467	1,813	3,513	8,488	3,736	4,673	18,338	1,179	45,742
<b>PG&amp;E</b>													
Q1, 2005	211	240	42	56	265	1,294	756	1,407	922	2,230	1,085	183	9,311
Q2, 2005	388	150	112	25	535	259	1,248	2,104	1,694	434	1,264	196	9,594
Q3, 2005	277	65	631	696	430	819	1,521	2,099	1,633	2,451	1,315	681	11,674
Q4, 2005	460	23	171	36	910	629	777	1,378	1,422	1,663	1,094	800	11,295
2005 Total	1,336	477	955	813	2,140	3,001	4,302	6,987	5,671	6,777	4,758	1,860	39,076
<b>SDG&amp;E</b>													
Q1, 2005	60			42		196	335	363	382	1,515	265	17	4,352
Q2, 2005	127	68		9	426	511	595	281	285	385	805	51	4,174
Q3, 2005	29	221	48	42	429	38	747	941	701	1,403	206	132	4,115
Q4, 2005	176	17	14	27	79		351	259	502	1,348	247	74	2,420
2005 Total	393	307	62	120	934	744	2,027	1,845	1,871	4,652	1,523	274	14,749
<b>SoCalGas</b>													
Q1, 2005	235	13	24	4		31	51	431	342	671	19	75	5,141
Q2, 2005	308	36		236	163		516	1,554	465	693	167	345	4,686
Q3, 2005	13	9		37	102	4	83	669	228	374	81	14	7,148
Q4, 2005	11			15	66	49	609	282	340	1,520	224	64	4,766
2005 Total	566	57	24	292	330	84	1,259	2,935	1,376	3,259	491	499	11,172
<b>Non-IOU</b>													
Q1, 2005	158	34	52	14		62	435	700	864	1,167	736	62	2,253
Q2, 2005	76	7	32	127	119	479	264	1,698	658	2,126	189	230	2,909
Q3, 2005	71	74	79	69	282	197	1,556	1,011	672	615	672	83	4,483
Q4, 2005	408	63	11	12	150	484	1,352	627	391	2,600	682	75	2,869
2005 Total	712	178	173	221	551	1,222	3,608	4,036	2,585	6,507	2,279	449	22,522

### **3.2 SBD NEW CONSTRUCTION PROGRAM PARTICIPATION IN 2005**

Savings By Design (SBD) program activity for nonresidential new construction participants for whom the IOUs have committed funds in 2005 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 or withdrawn. 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 nonresidential building construction decision-making chain, reflecting differences in design activities and priorities between large and small buildings with various occupancies. The Whole Building Approach is used for complex projects where the design team can work closely to integrate the energy systems. For Whole Building participants, 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 Systems Approach participants, energy savings can be attributed to one or more of several types of proposed measures: 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 2005.

Table 3.9 summarizes the number of square feet of new construction committed in 2005.

Table 3.10, 3.11 and 3.12 respectively show the estimated MWh, kW and therm savings attributable to new construction measures committed in 2005.

Table 3.13 presents the frequency with which classes of measures were proposed to be installed by new construction SBD participants in 2005. A glossary of the measure classes is presented in Appendix D.

Table 3.14, 3.15 and 3.16 respectively summarize the estimated MWh, kW and therm savings by measure class, in new construction committed in 2005.

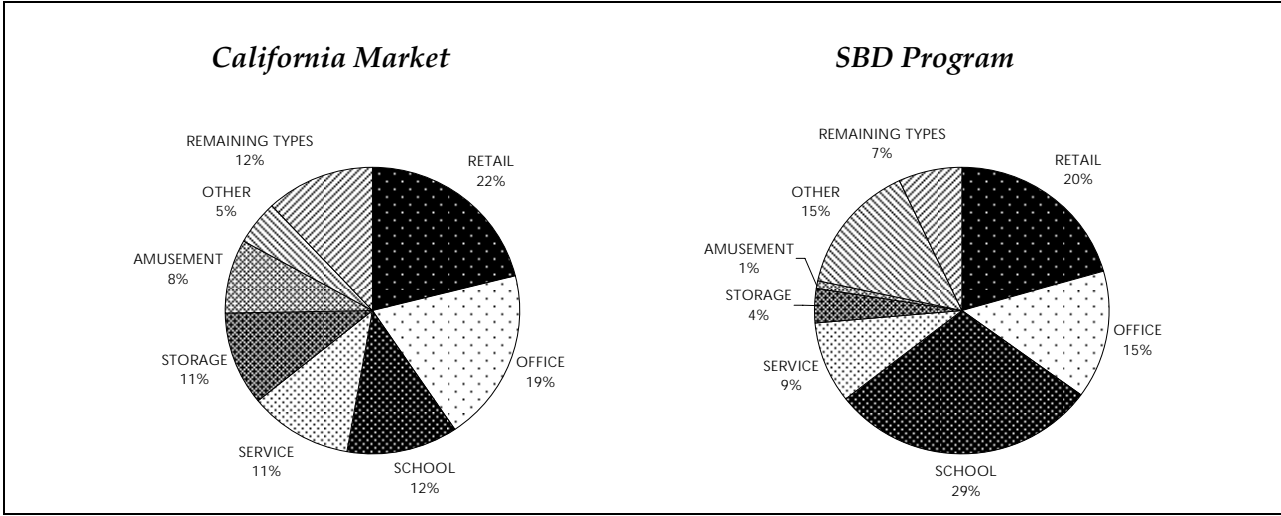
*Table 3.8 Number of Nonresidential New Construction SBD Participants Committed in 2005*

	AMUSEMENT	ASSEMBLY	EDUCATION	GOVT	HOTEL	MEDICAL	OFFICE	RETAIL	SCHOOL	SERVICE	STORAGE	OTHER	TOTAL
<b>CALIFORNIA</b>													
Whole Building Approach	.	8	9	4	3	10	42	77	163	7	13	17	353
Systems Approach	5	3	2	2	2	9	69	79	61	63	18	97	410
Total	5	11	11	6	5	19	111	156	224	70	31	114	763
<b>SCE</b>													
Whole Building Approach	.	1	1	.	.	.	2	22	29	3	4	4	66
Systems Approach	1	3	2	.	.	8	26	56	41	25	8	48	218
Total	1	4	3	.	.	8	28	78	70	28	12	52	284
<b>PG&amp;E</b>													
Whole Building Approach	.	2	8	4	1	7	27	47	84	4	8	10	202
Systems Approach	4	.	.	2	.	.	28	8	13	38	1	41	135
Total	4	2	8	6	1	7	55	55	97	42	9	51	337
<b>SDG&amp;E</b>													
Whole Building Approach	.	5	.	.	2	1	7	4	39	.	1	3	62
Systems Approach	.	.	.	.	2	1	15	7	5	.	9	5	44
Total	.	5	.	.	4	2	22	11	44	.	10	8	106
<b>SoCalGas</b>													
Whole Building Approach	.	.	.	.	.	2	6	4	11	.	.	.	23
Systems Approach	.	.	.	.	.	.	.	8	2	.	.	3	13
Total	.	.	.	.	.	2	6	12	13	.	.	3	36

The majority of SBD program participants committed in 2005 belong to the school, retail and office building types. High participation in these segments can be attributed to the overall high volume of new construction within these same segments (see Exhibit 3.4 below), but also to the good fit between these building types and the scope of the SBD program. As there was greater emphasis on industrial projects since 2004, as PG&E broadened their baseline studies applicable to the SBD program, the “Other” building type, which is primarily responsible for industrial and process measures, also had a large number of projects in 2005.

Note that the number of SBD participants has increased substantially in 2005 as compared to previous years, including the very busy 2001 (see Chapter 6, Table 6.12). The high participation rates at the beginning of 2001 may be due to changes in building codes and that went into effect on July 1, 2001 (and to the subsequent change in program requirements), but also to the overall conservation efforts undertaken in California prior to, and during the Summer of 2001. The decrease in participation in 2002 is probably due to the absence of such drivers, but also to the situation of the economy in California in 2002. As the SBD program captures relatively large buildings, the increase in participation in 2003 and 2004 may be correlated with the increase in the average size of new construction projects in these years as compared to 2002. The increase in participation in 2005 relative to 2003 and 2004 is also correlated with an increase in funds committed through the SBD program in 2005.

**Exhibit 3.4**  
**New Construction Building Segments with the Highest Number of Projects in 2005**



**Table 3.9 Area of Nonresidential New Construction  
for SBD Participants Committed in 2005 (1,000 sqft)**

	AMUSEMENT	ASSEMBLY	EDUCATION	GOVT	HOTEL	MEDICAL	OFFICE	RETAIL	SCHOOL	SERVICE	STORAGE	OTHER	TOTAL
<b>CALIFORNIA</b>													
Whole Building Approach	.	643	488	749	320	1,188	4,487	4,485	10,822	183	1,198	1,880	26,443
Systems Approach	318	277	61	10	163	865	10,366	5,206	5,287	2,381	4,684	6,239	35,859
Total	318	920	550	759	483	2,053	14,853	9,691	16,109	2,564	5,882	8,119	62,302
<b>SCE</b>													
Whole Building Approach	.	63	42	.	.	.	61	1,609	2,935	115	602	279	5,705
Systems Approach	63	277	61	.	.	709	7,452	4,040	4,586	2,324	3,704	4,412	27,629
Total	63	340	103	.	.	709	7,513	5,649	7,521	2,439	4,306	4,691	33,335
<b>PG&amp;E</b>													
Whole Building Approach	.	33	446	749	76	981	3,373	2,578	5,239	68	571	945	15,059
Systems Approach	255	.	.	10	.	.	1,112	230	292	57	.	1,518	3,474
Total	255	33	446	759	76	981	4,485	2,807	5,532	125	571	2,463	18,533
<b>SDG&amp;E</b>													
Whole Building Approach	.	547	.	.	244	27	757	57	2,035	.	26	655	4,348
Systems Approach	.	.	.	.	163	156	1,802	318	319	.	979	70	3,807
Total	.	547	.	.	407	183	2,559	375	2,353	.	1,005	725	8,155
<b>SoCalGas</b>													
Whole Building Approach	.	.	.	.	.	180	296	242	613	.	.	.	1,330
Systems Approach	.	.	.	.	.	.	.	618	91	.	.	240	949
Total	.	.	.	.	.	180	296	860	703	.	.	240	2,279

The majority of SBD program activity in terms of area committed in 2005 belongs to the school, office, retail and “other” (industrial, agricultural, etc.) business segments. The same segments account for high committed MWh and kW savings, as shown in Tables 3.10 and 3.11. In addition, the service segment brings high committed MWh savings in 2005.<sup>1</sup> Similar to the number of participants into the SBD program, the committed square footage has increased in 2005 as compared to previous years (see Chapter 6, Table 6.12).

<sup>1</sup> The service business type includes automobile service stations, but also utility, sanitary and sewage services, direct mail advertising services, security systems services, laundry services, and generic “services” buildings. The high MWh savings in 2005 are mostly due to water treatment projects.

**Table 3.10 Estimated MWh Savings  
for New Construction SBD Participants Committed in 2005**

	AMUSEMENT	ASSEMBLY	EDUCATION	GOVT	HOTEL	MEDICAL	OFFICE	RETAIL	SCHOOL	SERVICE	STORAGE	OTHER	TOTAL
<b>CALIFORNIA</b>													
Whole Building Approach	.	1,023	2,625	2,428	421	8,267	9,725	29,299	34,113	692	6,661	9,412	104,666
Systems Approach	562	709	31	14	400	4,568	21,815	11,906	4,262	81,719	8,182	29,507	163,675
Total	562	1,732	2,656	2,441	822	12,835	31,540	41,206	38,375	82,411	14,843	38,919	268,342
<b>SCE</b>													
Whole Building Approach	.	126	153	.	.	.	777	13,455	7,890	357	2,679	1,394	39,100
Systems Approach	19	709	31	.	.	3,276	12,029	8,249	3,381	46,243	5,899	19,257	84,778
Total	19	835	184	.	.	3,276	12,806	21,703	11,271	46,601	8,578	20,651	125,924
<b>PG&amp;E</b>													
Whole Building Approach	.	140	2,473	2,428	222	8,052	6,740	14,286	14,208	335	3,916	4,958	57,757
Systems Approach	542	.	.	14	.	.	7,880	570	316	35,476	370	8,570	53,738
Total	542	140	2,473	2,441	222	8,052	14,620	14,856	14,524	35,810	4,286	13,528	111,494
<b>SDG&amp;E</b>													
Whole Building Approach	.	757	.	.	199	60	1,318	206	8,670	.	66	3,060	14,336
Systems Approach	.	.	.	.	400	1,292	1,906	1,000	502	.	1,913	839	7,853
Total	.	757	.	.	599	1,352	3,224	1,207	9,173	.	1,979	3,899	22,189
<b>SoCalGas</b>													
Whole Building Approach	.	.	.	.	.	155	891	1,353	3,345	.	.	.	5,744
Systems Approach	.	.	.	.	.	.	.	2,088	63	.	.	841	2,992
Total	.	.	.	.	.	155	891	3,441	3,407	.	.	841	8,735

**Table 3.11 Estimated kW Savings  
for New Construction SBD Participants Committed in 2005**

	<b>AMUSEMENT</b>	<b>ASSEMBLY</b>	<b>EDUCATION</b>	<b>GOVT</b>	<b>HOTEL</b>	<b>MEDICAL</b>	<b>OFFICE</b>	<b>RETAIL</b>	<b>SCHOOL</b>	<b>SERVICE</b>	<b>STORAGE</b>	<b>OTHER</b>	<b>TOTAL</b>
<b>CALIFORNIA</b>													
Whole Building Approach	1,686	419	1,733	962	113	1,312	4,657	6,571	16,927	375	1,018	2,382	38,154
Systems Approach	133	218	14	59	79	694	3,330	2,218	1,085	6,790	2,028	3,859	20,505
Total	1,819	636	1,747	1,021	191	2,007	7,987	8,789	18,012	7,165	3,045	6,241	58,660
<b>SCE</b>													
Whole Building Approach	.	148	64	.	.	.	372	2,634	6,331	130	525	360	10,564
Systems Approach	1	218	14	.	.	565	1,617	1,665	910	367	1,393	2,710	9,460
Total	1	365	78	.	.	565	1,989	4,300	7,242	497	1,918	3,069	20,024
<b>PG&amp;E</b>													
Whole Building Approach	.	61	1,669	962	117	1,279	3,859	3,862	7,499	160	473	1,095	21,035
Systems Approach	131	.	.	1	.	.	1,356	121	141	6,423	5	1,032	9,209
Total	131	61	1,669	963	117	1,279	5,215	3,983	7,640	6,583	478	2,127	30,244
<b>SDG&amp;E</b>													
Whole Building Approach	.	210	.	.	-4	34	427	75	3,097	.	20	927	4,784
Systems Approach	.	.	.	.	79	119	356	270	33	.	538	118	1,514
Total	.	210	.	.	75	152	783	345	3,130	.	558	1,045	6,298
<b>SoCalGas</b>													
Whole Building Approach	1,686	.	.	.	.	.	.	.	.	85	.	.	1,771
Systems Approach	.	.	.	58	.	10	.	161	1	.	92	.	322
Total	1,686	.	.	58	.	10	.	161	1	85	92	.	2,093



**Table 3.12 Estimated Therm Savings  
for New Construction SBD Participants Committed in 2005**

	<b>AMUSEMENT</b>	<b>ASSEMBLY</b>	<b>EDUCATION</b>	<b>GOVT</b>	<b>HOTEL</b>	<b>MEDICAL</b>	<b>OFFICE</b>	<b>RETAIL</b>	<b>SCHOOL</b>	<b>SERVICE</b>	<b>STORAGE</b>	<b>OTHER</b>	<b>TOTAL</b>
<b>CALIFORNIA</b>													
Whole Building Approach	.	13,572	31,212	1,755	5,665	97,273	197,693	3,162	580,888	8,775	-2,494	230,271	1,167,772
Systems Approach	-3,605	.	.	1,237	7,934	-2,419	61,403	106,165	-287	.	7	419,547	589,982
Total	-3,605	13,572	31,212	2,992	13,599	94,854	259,096	109,327	580,601	8,775	-2,487	649,818	1,757,754
<b>SCE</b>													
Whole Building Approach	.	.	.	.	.	.	.	.	.	.	.	.	0
Systems Approach	.	.	.	.	.	.	.	.	.	.	.	.	0
Total	.	.	.	.	.	.	.	.	.	.	.	.	0
<b>PG&amp;E</b>													
Whole Building Approach	.	-175	31,212	1,755	.	94,338	165,164	5,995	312,548	8,775	-1,110	234,566	853,068
Systems Approach	-3,605	.	.	1,237	.	.	22,098	108,701	-1,520	.	.	388,173	515,084
Total	-3,605	-175	31,212	2,992	.	94,338	187,262	114,696	311,028	8,775	-1,110	622,739	1,368,152
<b>SDG&amp;E</b>													
Whole Building Approach	.	13,747	.	.	5,665	405	23,802	-213	117,907	.	-1,384	-4,295	155,634
Systems Approach	.	.	.	.	7,934	-2,419	39,305	-661	1,422	.	7	4,174	49,762
Total	.	13,747	.	.	13,599	-2,014	63,107	-874	119,329	.	-1,377	-121	205,396
<b>SoCalGas</b>													
Whole Building Approach	.	.	.	.	.	2,530	8,727	-2,620	150,433	.	.	.	159,070
Systems Approach	.	.	.	.	.	.	.	-1,875	-189	.	.	27,200	25,136
Total	.	.	.	.	.	2,530	8,727	-4,495	150,244	.	.	27,200	184,206

\* SCE does not report therm savings.

**Table 3.13 Measures Proposed by New Construction SBD Participants Committed in 2005**

	WHOLE BUILDING	WB + REFRIGERATION	DAY-LIGHTING	SKYLIGHT	HVAC CHILLER	HVAC UNITARY	HVAC CONTROLS	HVAC OTHER	MOTORS	LIGHTING	ENVELOPE	PROCESS + OTHER	TOTAL
<b>CALIFORNIA</b>													
Whole Building Approach	412	32	.	.	.	.	.	.	.	.	.	.	444
Systems Approach	.	.	39	2	11	33	.	153	16	269	26	213	762
Total	412	32	39	2	11	33	.	153	16	269	26	213	1,206
<b>SCE</b>													
Whole Building Approach	44	24	.	.	.	.	.	.	.	.	.	.	68
Systems Approach	.	.	32	1	8	1	.	100	16	148	16	95	417
Total	44	24	32	1	8	1	.	100	16	148	16	95	485
<b>PG&amp;E</b>													
Whole Building Approach	197	5	.	.	.	.	.	.	.	.	.	.	202
Systems Approach	.	.	7	.	1	19	.	4	.	45	2	102	180
Total	197	5	7	.	1	19	.	4	.	45	2	102	382
<b>SDG&amp;E</b>													
Whole Building Approach	150	1	.	.	.	.	.	.	.	.	.	.	151
Systems Approach	.	.	.	1	2	9	.	47	.	68	7	7	141
Total	150	1	.	1	2	9	.	47	.	68	7	7	292
<b>SoCalGas</b>													
Whole Building Approach	21	2	.	.	.	.	.	.	.	.	.	.	23
Systems Approach	.	.	.	.	.	4	.	2	.	8	1	9	24
Total	21	2	.	.	.	4	.	2	.	8	1	9	47

The measures proposed by each committed 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 proposed for installation through the SBD Program. For example, each whole building approach participant counted as one instance in which the whole building approach was proposed, regardless of the number and types of measures involved.

As Table 3.13 indicates, the whole building approach, lighting, “process and other” (variable speed drives, gas-fired boilers, water heating) and “other HVAC” (pumps, VSDs, etc.) were proposed most often by SBD new construction participants, while HVAC controls were not proposed at all in 2005. The “whole building and refrigeration” category contains only refrigeration and other measures for grocery and big box stores, submitted by JJ Hirsch and VaCom as a whole building “alternative delivery method”.

**Table 3.14 Estimated MWh Savings by Measure  
for New Construction SBD Participants Committed in 2005**

	WHOLE BUILDING	WB + REFRIGERATION	DAY-LIGHTING	SKYLIGHT	HVAC CHILLER	HVAC UNITARY	HVAC CONTROLS	HVAC OTHER	MOTORS	LIGHTING	ENVELOPE	PROCESS + OTHER	TOTAL
<b>CALIFORNIA</b>													
Whole Building Approach	88,957	15,709	.	.	.	.	.	.	.	.	.	.	104,666
Systems Approach	.	.	8,452	348	2,322	322	.	4,928	121	26,350	241	120,590	163,675
Total	88,957	15,709	8,452	348	2,322	322	.	4,928	121	26,350	241	120,590	268,342
<b>SCE</b>													
Whole Building Approach	12,932	13,898	.	.	.	.	.	.	.	.	.	.	26,830
Systems Approach	.	.	7,332	10	1,925	1	.	2,394	121	19,032	100	68,178	99,094
Total	12,932	13,898	7,332	10	1,925	1	.	2,394	121	19,032	100	68,178	125,924
<b>PG&amp;E</b>													
Whole Building Approach	56,517	1,240	.	.	.	.	.	.	.	.	.	.	57,757
Systems Approach	.	.	1,120	.	71	118	.	11	.	3,377	0	49,040	53,738
Total	56,517	1,240	1,120	.	71	118	.	11	.	3,377	0	49,040	111,494
<b>SDG&amp;E</b>													
Whole Building Approach	14,197	138	.	.	.	.	.	.	.	.	.	.	14,336
Systems Approach	.	.	.	338	326	95	.	2,491	.	3,169	138	1,294	7,853
Total	14,197	138	.	338	326	95	.	2,491	.	3,169	138	1,294	22,189
<b>SoCalGas</b>													
Whole Building Approach	5,311	432	.	.	.	.	.	.	.	.	.	.	5,744
Systems Approach	.	.	.	.	.	107	.	32	.	772	2	2,078	2,992
Total	5,311	432	.	.	.	107	.	32	.	772	2	2,078	8,735

As shown in Table 3.14, “process and other” measures (such as variable speed drives, gas-fired boilers, water heating) account for most of the committed MWh savings in new construction, followed by whole building design. Whole building and “process and other” are also responsible for the largest committed kW and therm savings (Tables 3.15 and 3.16). Note that lighting, skylights and “whole building and refrigeration” measures generate negative therm impacts.

**Table 3.15 Estimated kW Savings by Measure  
for New Construction SBD Participants Committed in 2005**

	WHOLE BUILDING	WB + REFRIGERATION	DAY-LIGHTING	SKYLIGHT	HVAC CHILLER	HVAC UNITARY	HVAC CONTROLS	HVAC OTHER	MOTORS	LIGHTING	ENVELOPE	PROCESS + OTHER	TOTAL
<b>CALIFORNIA</b>													
Whole Building Approach	35,226	2,928	.	.	.	.	.	.	.	.	.	.	38,154
Systems Approach	.	.	2,019	108	941	196	.	931	28	4,393	82	11,807	20,505
Total	35,226	2,928	2,019	108	941	196	.	931	28	4,393	82	11,807	58,660
<b>SCE</b>													
Whole Building Approach	7,917	2,647	.	.	.	.	.	.	.	.	.	.	10,564
Systems Approach	.	.	1,985	4	841	1	.	656	28	3,051	29	2,865	9,460
Total	7,917	2,647	1,985	4	841	1	.	656	28	3,051	29	2,865	20,024
<b>PG&amp;E</b>													
Whole Building Approach	20,864	171	.	.	.	.	.	.	.	.	.	.	21,035
Systems Approach	.	.	34	.	54	89	.	2	.	609	0	8,420	9,209
Total	20,864	171	34	.	54	89	.	2	.	609	0	8,420	30,244
<b>SDG&amp;E</b>													
Whole Building Approach	4,759	25	.	.	.	.	.	.	.	.	.	.	4,784
Systems Approach	.	.	.	104	46	48	.	263	.	572	52	431	1,514
Total	4,759	25	.	104	46	48	.	263	.	572	52	431	6,298
<b>SoCalGas</b>													
Whole Building Approach	1,686	85	.	.	.	.	.	.	.	.	.	.	1,771
Systems Approach	.	.	.	.	.	58	.	10	.	161	1	92	322
Total	1,686	85	.	.	.	58	.	10	.	161	1	92	2,093

**Table 3.16 Estimated Therm Savings by Measure  
for New Construction SBD Participants Committed in 2005**

	WHOLE BUILDING	WB + REFRIGERATION	DAY-LIGHTING	SKYLIGHT	HVAC CHILLER	HVAC UNITARY	HVAC CONTROLS	HVAC OTHER	MOTORS	LIGHTING	ENVELOPE	PROCESS + OTHER	TOTAL
<b>CALIFORNIA</b>													
Whole Building Approach	1,168,158	-386	.	.	.	.	.	.	.	.	.	.	1,167,772
Systems Approach	.	.	.	-72	.	415	.	51,911	.	-24,532	2,855	559,405	589,982
Total	1,168,158	-386	.	-72	.	415	.	51,911	.	-24,532	2,855	559,405	1,757,754
<b>SCE</b>													
Whole Building Approach	.	.	.	.	.	.	.	.	.	.	.	.	0
Systems Approach	.	.	.	.	.	.	.	.	.	.	.	.	0
Total	.	.	.	.	.	.	.	.	.	.	.	.	0
<b>PG&amp;E</b>													
Whole Building Approach	850,540	2,528	.	.	.	.	.	.	.	.	.	.	853,068
Systems Approach	.	.	.	.	.	436	.	107	.	-18,765	-12	533,318	515,084
Total	850,540	2,528	.	.	.	436	.	107	.	-18,765	-12	533,318	1,368,152
<b>SDG&amp;E</b>													
Whole Building Approach	156,549	-915	.	.	.	.	.	.	.	.	.	.	155,634
Systems Approach	.	.	.	-72	.	-21	.	51,893	.	-4,909	2,871	.	49,762
Total	156,549	-915	.	-72	.	-21	.	51,893	.	-4,909	2,871	.	205,396
<b>SoCalGas</b>													
Whole Building Approach	161,069	-1,999	.	.	.	.	.	.	.	.	.	.	159,070
Systems Approach	.	.	.	.	.	.	.	-89	.	-858	-4	26,087	25,136
Total	161,069	-1,999	.	.	.	.	.	-89	.	-858	-4	26,087	184,206

\* SCE does not report therm savings.

#### 4. STATEWIDE NONRESIDENTIAL ALTERATION (R&R) TRENDS

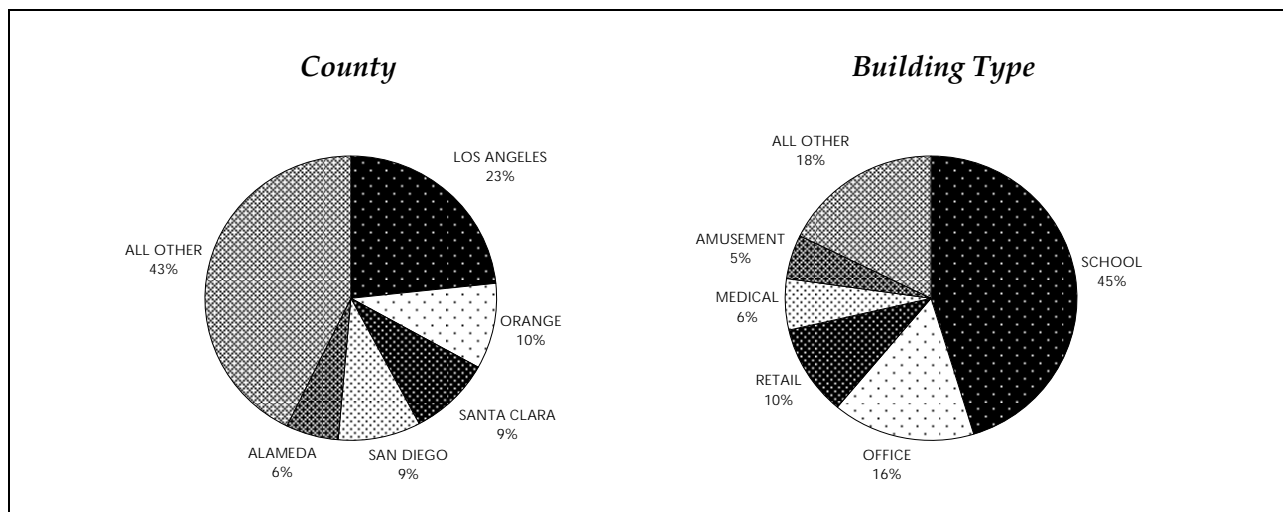
This chapter summarizes the nonresidential alterations that have occurred in calendar year 2005 in the State of California. Similar to Chapter 2, the first section presents the total valuation and the number of project starts in the nonresidential alteration market, by county and building type (F.W. Dodge does not track square feet for alteration projects.) The second section presents the SBD program activity for first tenant improvement, renovation and remodeling projects (R&R) in calendar year 2005.

##### 4.1 ALTERATION (R&R) MARKET CHARACTERISTICS IN 2005

The following exhibits and tables present the nonresidential alteration market activity that occurred in calendar year 2005, by building segment and county. 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 was used in conjunction with the CEC zip code-to-utility mapping 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 in 2005. 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). There are some differences in the ways F.W. Dodge and CIRB report R&R projects: CIRB groups addition and alteration projects together, thus reporting a larger market segment than F.W. Dodge. CIRB records only building-related projects, while leaving out permits for heating, HVAC, electrical, and other remodeling/renovation projects.

*Exhibit 4.1  
R&R Market Segments with the Highest Project Start Valuation in 2005*



Among utility territories, PG&E accounts for over one-third of the statewide project start value in 2005, followed closely by SCE. In SCE, PG&E and SDG&E territories, schools account for about half of the total project start valuation. In the SoCalGas and non-IOU territories the school and office segments together account for half of the total project start valuation.

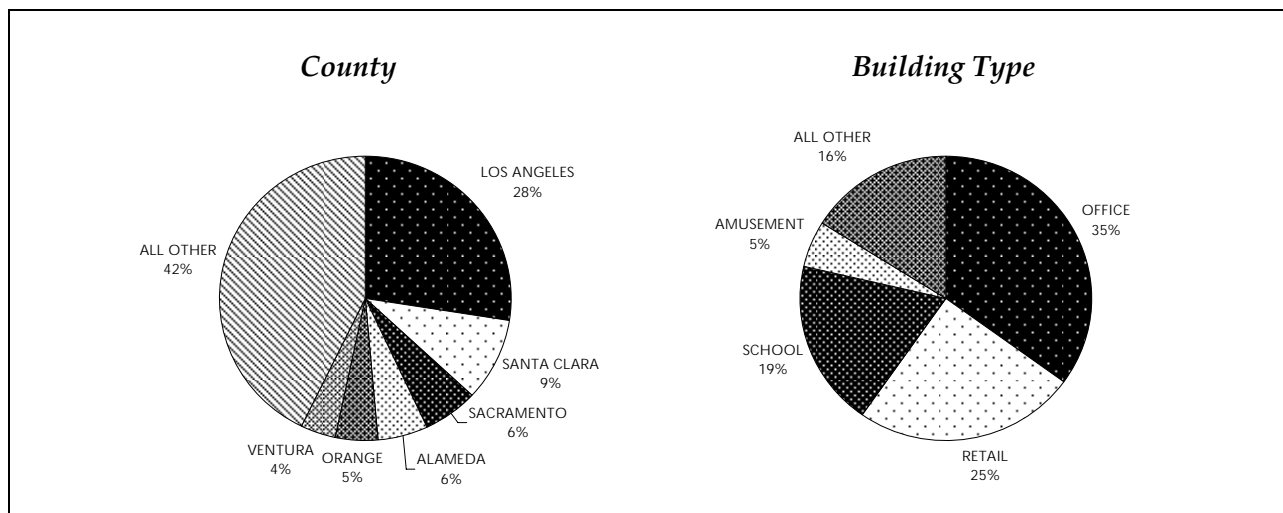
As Exhibit 4.1 shows, the counties with the most active alteration activity in terms of valuation are Los Angeles, Orange, Santa Clara, San Diego and Alameda. There are six counties for which F.W. Dodge does not record any nonresidential alteration project starts: Alpine, Modoc, Mono, Sierra, Tehama and Trinity.

Among building types, school accounts for almost half of the value of alteration projects that have started construction in 2005, with office and retail following in order of importance. Service and assembly (churches) account for the lowest value of alteration projects in 2005.

Table 4.2 presents the number of nonresidential alteration projects that started construction during 2005. Among utility territories, PG&E leads with the highest number of project starts, followed by SCE. The number of project starts in SoCalGas territory is more than triple the number in SDG&E territory. Non-IOU areas have a significant number of project starts, higher than 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, Sacramento, Alameda, Orange and Ventura. Among building types, the office segment is the largest in terms of alteration project starts, followed by retail and school. The fewest alteration project starts recorded by F.W. Dodge in 2005 occur in the education (museums, libraries) and hotel segments.

**Exhibit 4.2**  
**R&R Market Segments with the Highest Number of Project Starts in 2005**



Tables 4.3 and 4.4 summarize quarterly alteration project starts by county and building type. There is some variation from quarter to quarter in the number of project starts by segment, with quarters 2 and 3 more active than quarters 1 and 4.

**Table 4.1 F.W. Dodge Valuation for Nonresidential Alteration Project Starts in 2005  
by Building Type, County and Service Territory (\$1,000)**

	AMUSEMENT	ASSEMBLY	EDUCATION	GOVT	HOTEL	MEDICAL	OFFICE	RETAIL	SCHOOL	SERVICE	STORAGE	OTHER	TOTAL
<b>COUNTY</b>													
ALAMEDA	1,624	670	1,510	3,384	300	877	22,793	24,282	143,031		1,534	10,607	210,612
ALPINE													0
AMADOR								121			221		342
BUTTE							903	788	10,504				12,195
CALAVERAS							213					578	791
COLUSA												821	821
CONTRA COSTA	4,402	2,100	3,762	2,058		1,131	16,537	6,632	56,263	466	100	11,135	104,586
DEL NORTE								225					225
EL DORADO	200					162	2,265	1,210	4,565			1,013	9,415
FRESNO	1,505	347	12,000	80		492	7,551	2,346	19,072		400	1,972	45,765
GLENN								625	1,414				2,039
HUMBOLDT	628		98				245	100	12,858				13,929
IMPERIAL	198					920	400	2,853	7,674	800			12,845
INYO	1,440											1,000	2,440
KERN	150	240				1,108	2,454	6,140	10,155	112	450	707	21,516
KINGS	2,202						93				298		2,593
LAKE							265		699				964
LASSEN								280	200				480
LOS ANGELES	38,714	8,200	3,331	27,226	38,514	31,495	162,912	75,897	288,981	3,490	11,190	133,230	823,180
MADERA	918					2,000		995					3,913
MARIN							19,504	1,094	67,099	90		182	87,969
MARIPOSA								150					150
MENDOCINO	2,913							625	2,524				6,062
MERCED	274						783	1,997	9,682				12,736
MODOC													0
MONO													0
MONTEREY	5,085		150	30,970	300	664	4,042	1,632	9,807	557	434	7,414	61,055
NAPA		1,300			500		4,382	975	2,977	100			10,234
NEVADA	300						82	168	3,940			208	4,698
ORANGE	10,688	1,286	449	4,580	68,655	250	22,724	41,702	182,089	2,250	514	11,864	347,051
PLACER	1,005					1,179	11,944	5,041	6,325	99	2,964	1,390	29,947
PLUMAS									1,041				1,041
RIVERSIDE	7,469	609		5,915	100	1,221	11,324	10,592	40,658	285	4,107	18,690	100,970
SACRAMENTO	3,527	155	843		414	6,495	68,448	13,504	77,619	362	2,656	4,400	178,423
SAN BENITO									200				200
SAN BERNARDINO	10,249			500		1,555	9,482	11,547	36,029	759	668	3,018	73,807
SAN DIEGO	7,089	500	1,200	10,708	26,000	40,963	7,770	37,725	164,031	10,295	1,084	12,428	319,793
SAN FRANCISCO	8,487		10,437	469	3,120	45,411	14,619	5,493	77,489			2,008	167,533
SAN JOAQUIN	988	500	2,000	2,094		1,592	5,859	1,376	10,649	300	396	1,042	26,796
SAN LUIS OBISPO	772					359	857	1,667	6,493		106	1,808	12,062
SAN MATEO	17,300	375	186	3,500	385	3,359	26,708	9,874	39,241	479	3,727	5,078	110,212
SANTA BARBARA	2,063	120			4,800	2,424	3,575	4,278	51,762		172	338	69,532
SANTA CLARA	21,224	2,152		3,222	222	40,201	99,344	32,258	101,121	708	6,356	22,956	329,764
SANTA CRUZ	1,218			92			3,020	11,602	6,790	386	2,238	1,417	26,763
SHASTA								100	4,475				4,575
SIERRA													0
SISKIYOU	917			455									1,372
SOLANO	2,645	780	422	948	1,050	5,300	2,053	1,259	32,670		1,400		48,527
SONOMA	2,854	881	1,229			12,698	6,886	5,167	35,375	241		1,255	66,586
STANISLAUS	667	302	438			3,335	7,097	3,850	17,620	135		750	34,194
SUTTER							819	11,000	6,470				18,289
TEHAMA													0
TRINITY													0
TULARE	4,120		2,487	285		3,189	601	1,569	2,973		834	884	16,942
TUOLUMNE		100						964					1,064
VENTURA	6,835	1,641		396	98	674	5,784	18,840	36,250	280	4,765	584	76,147
YOLO	2,998			860		200	10,590	3,675	12,191				30,514
YUBA							848	85	1,189				2,122
CALIFORNIA	173,668	22,258	40,542	97,742	144,458	209,254	566,740	361,339	1,602,195	22,194	46,614	258,777	3,545,781
<b>UTILITY</b>													
SCE	51,145	4,494	1,219	12,976	27,693	19,615	59,791	93,313	413,110	3,204	16,947	42,100	745,607
PG&E	84,893	9,647	34,569	44,962	5,814	99,056	252,669	141,103	685,557	3,383	20,242	72,474	1,454,369
SDG&E	11,059	500	1,649	11,153	26,000	40,963	8,111	37,321	166,031	10,295	1,084	12,662	326,828
SoCalGas	15,337	3,150	1,800	23,950	83,754	12,605	99,901	40,814	102,579	1,750	2,443	41,872	429,955
Non-IOU	11,234	4,467	1,305	4,701	1,197	37,015	146,268	48,788	234,918	3,562	5,898	89,669	589,022



**Table 4.2 F.W. Dodge Number of Nonresidential Alteration Project Starts in 2005  
by Building Type, County and Service Territory**

COUNTY	AMUSEMENT	ASSEMBLY	EDUCATION	GOVT	HOTEL	MEDICAL	OFFICE	RETAIL	SCHOOL	SERVICE	STORAGE	OTHER	TOTAL
ALAMEDA	5	3	3	2	1	4	73	56	47		4	9	207
ALPINE													0
AMADOR								1			1		2
BUTTE							6	5	3				14
CALAVERAS							1					2	3
COLUSA												1	1
CONTRA COSTA	5	1	2	4		7	44	24	15	1	1	8	112
DEL NORTE								1					1
EL DORADO	1					1	15	7	4			2	30
FRESNO	3	1	1	1		4	35	11	10		2	3	71
GLENN								1	1				2
HUMBOLDT	1		1				1	1	11				15
IMPERIAL	1					3	1	12	4	1			22
INYO	1											1	2
KERN	1	1				2	10	13	9	1	1	3	41
KINGS	1						1				1		3
LAKE							1		1				2
LASSEN								1	1				2
LOS ANGELES	65	10	7	4	14	44	433	236	158	8	25	34	1,038
MADERA	1					1		1					3
MARIN							27	7	22	1		1	58
MARIPOSA								1					1
MENDOCINO	1							2	3				6
MERCED	1						2	2	8				13
MODOC													0
MONO													0
MONTEREY	2		1	1	1	2	17	9	14	2	2	4	55
NAPA		1			1		7	4	3	1			17
NEVADA	1						1	2	2			2	8
ORANGE	9	3	1	7	3	2	41	45	51	2	2	14	180
PLACER	4					10	51	23	4	1	4	2	99
PLUMAS									1				1
RIVERSIDE	13	3		2	1	9	43	42	13	2	5	6	139
SACRAMENTO	8	1	2		2	11	93	62	42	2	2	4	229
SAN BENITO									1				1
SAN BERNARDINO	11			1		2	19	16	23	5	5	7	89
SAN DIEGO	12	1	1	4	1	9	19	32	53	2	2	11	147
SAN FRANCISCO	5		4	1	2	10	21	13	21			3	80
SAN JOAQUIN	2	1	1	2		3	22	6	7	1	2	1	48
SAN LUIS OBISPO	2					1	5	12	2		1	2	25
SAN MATEO	2	3	1	1	3	5	59	32	14	3	3	6	132
SANTA BARBARA	5	1			1	5	17	13	25		1	1	69
SANTA CLARA	13	4		3	2	23	126	94	57	4	11	11	348
SANTA CRUZ	2			1			6	8	11	1	1	3	33
SHASTA								1	6				7
SIERRA													0
SISKIYOU	1			1									2
SOLANO	4	1	2	1	2	2	12	8	10		1		43
SONOMA	6	3	1			5	26	12	14	2		2	71
STANISLAUS	2	1	1			2	24	11	8	1		1	51
SUTTER							4	2	3				9
TEHAMA													0
TRINITY													0
TULARE	2		1	1		3	3	8	5		4	4	31
TUOLUMNE		1					4						5
VENTURA	2	4		2	1	5	29	79	18	1	3	4	148
YOLO	3			2		1	15	5	8				34
YUBA							3	1	2				6
CALIFORNIA	198	44	30	41	35	176	1,317	922	715	42	84	152	3,756
<b>UTILITY</b>													
SCE	60	12	3	12	7	28	165	219	192	10	20	38	766
PG&E	70	20	18	19	12	81	579	368	315	18	35	66	1,601
SDG&E	15	1	2	5	1	9	21	31	54	2	2	12	155
SoCalGas	20	2	2	1	7	22	227	119	55	4	11	17	487
Non-IOU	33	9	5	4	8	36	325	185	99	8	16	19	747

**Table 4.3 F.W. Dodge Number of Nonresidential Alteration Project Starts in 2005  
by Quarter, County and Service Territory**

	Q1, 2005	Q2, 2005	Q3, 2005	Q4, 2005	2005 Total
<b>COUNTY</b>					
ALAMEDA	30	60	59	58	207
ALPINE	0	0	0	0	0
AMADOR	1	0	1	0	2
BUTTE	2	2	5	5	14
CALAVERAS	0	0	0	3	3
COLUSA	1	0	0	0	1
CONTRA COSTA	23	29	27	33	112
DEL NORTE	1	0	0	0	1
EL DORADO	5	5	12	8	30
FRESNO	15	27	26	3	71
GLENN	1	0	0	1	2
HUMBOLDT	3	8	2	2	15
IMPERIAL	12	5	3	2	22
INYO	0	0	0	2	2
KERN	8	9	10	14	41
KINGS	0	2	1	0	3
LAKE	0	0	1	1	2
LASSEN	0	2	0	0	2
LOS ANGELES	176	337	288	237	1,038
MADERA	0	1	2	0	3
MARIN	14	18	18	8	58
MARIPOSA	0	0	1	0	1
MENDOCINO	1	1	1	3	6
MERCED	3	8	0	2	13
MODOC	0	0	0	0	0
MONO	0	0	0	0	0
MONTEREY	12	18	14	11	55
NAPA	2	6	5	4	17
NEVADA	1	3	1	3	8
ORANGE	22	37	76	45	180
PLACER	22	15	26	36	99
PLUMAS	0	1	0	0	1
RIVERSIDE	25	37	43	34	139
SACRAMENTO	36	65	67	61	229
SAN BENITO	1	0	0	0	1
SAN BERNARDINO	12	23	31	23	89
SAN DIEGO	24	50	35	38	147
SAN FRANCISCO	9	13	19	39	80
SAN JOAQUIN	16	10	12	10	48
SAN LUIS OBISPO	6	10	5	4	25
SAN MATEO	25	46	29	32	132
SANTA BARBARA	16	12	20	21	69
SANTA CLARA	54	87	101	106	348
SANTA CRUZ	4	11	13	5	33
SHASTA	1	5	0	1	7
SIERRA	0	0	0	0	0
SISKIYOU	0	0	1	1	2
SOLANO	9	15	6	13	43
SONOMA	10	28	17	16	71
STANISLAUS	6	18	21	6	51
SUTTER	2	6	1	0	9
TEHAMA	0	0	0	0	0
TRINITY	0	0	0	0	0
TULARE	6	5	11	9	31
TUOLUMNE	1	1	2	1	5
VENTURA	29	28	62	29	148
YOLO	7	14	7	6	34
YUBA	0	5	1	0	6
CALIFORNIA	654	1,083	1,083	936	3,756
<b>UTILITY</b>					
SCE	139	203	240	184	766
PG&E	288	470	427	416	1,601
SDG&E	26	51	38	40	155
SoCalGas	100	180	131	76	487
Non-IOU	101	179	247	220	747

**Table 4.4 F.W. Dodge Number of Nonresidential Alteration Project Starts in 2005  
by Quarter, Building Type and Service Territory**

	AMUSEMENT	ASSEMBLY	EDUCATION	GOVT	HOTEL	MEDICAL	OFFICE	RETAIL	SCHOOL	SERVICE	STORAGE	OTHER	TOTAL
<b>CALIFORNIA</b>													
Q1, 2005	36	9	5	7	3	26	236	138	132	10	17	35	654
Q2, 2005	56	10	11	8	6	34	359	236	297	7	23	36	1,083
Q3, 2005	50	10	6	14	10	57	401	306	153	12	26	38	1,083
Q4, 2005	56	15	8	12	16	59	321	242	133	13	18	43	936
2005 Total	198	44	30	41	35	176	1,317	922	715	42	84	152	3,756
<b>SCE</b>													
Q1, 2005	8	5	.	4	.	1	30	38	38	2	6	7	139
Q2, 2005	17	1	1	1	.	3	44	51	76	1	1	7	203
Q3, 2005	17	3	1	5	1	13	49	84	39	3	8	17	240
Q4, 2005	18	3	1	2	6	11	42	46	39	4	5	7	184
2005 Total	60	12	3	12	7	28	165	219	192	10	20	38	766
<b>PG&amp;E</b>													
Q1, 2005	16	4	4	.	2	16	115	49	51	5	8	18	288
Q2, 2005	20	7	5	7	5	13	141	97	144	3	12	16	470
Q3, 2005	19	.	4	5	1	24	173	110	66	6	8	11	427
Q4, 2005	15	9	5	7	4	28	150	112	54	4	7	21	416
2005 Total	70	20	18	19	12	81	579	368	315	18	35	66	1,601
<b>SDG&amp;E</b>													
Q1, 2005	3	.	.	.	1	2	2	7	6	1	.	4	26
Q2, 2005	4	.	.	.	.	3	10	7	24	.	1	2	51
Q3, 2005	4	.	1	3	.	2	7	9	10	1	.	1	38
Q4, 2005	4	1	1	2	.	2	2	8	14	.	1	5	40
2005 Total	15	1	2	5	1	9	21	31	54	2	2	12	155
<b>SoCalGas</b>													
Q1, 2005	4	.	1	.	.	.	44	31	16	.	1	3	100
Q2, 2005	9	.	1	.	.	9	94	38	17	1	3	8	180
Q3, 2005	2	1	.	.	4	5	59	39	11	2	5	3	131
Q4, 2005	5	1	.	1	3	8	30	11	11	1	2	3	76
2005 Total	20	2	2	1	7	22	227	119	55	4	11	17	487
<b>Non-IOU</b>													
Q1, 2005	5	.	0	3	.	7	45	13	21	2	2	3	101
Q2, 2005	6	2	4	.	1	6	70	43	36	2	6	3	179
Q3, 2005	8	6	.	1	4	13	113	64	27	0	5	6	247
Q4, 2005	14	1	1	0	3	10	97	65	15	4	3	7	220
2005 Total	33	9	5	4	8	36	325	185	99	8	16	19	747

#### **4.2 SBD R&R PROGRAM PARTICIPATION IN 2005**

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 calendar year 2005, 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 or withdrawn. 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 calendar year 2005.

Table 4.6 shows the number of square feet of R&R construction committed in 2005.

Tables 4.7-4.9 summarize the estimated MWh, kW and therm savings attributable to R&R measures committed in 2005.

Table 4.10 presents the frequency with which classes of measures were proposed to be installed in R&R SBD projects committed in 2005. A glossary of measures is presented in Appendix D.

Tables 4.11-4.13 show the estimated MWh, kW and therm savings by measure, for R&R projects committed in 2005.

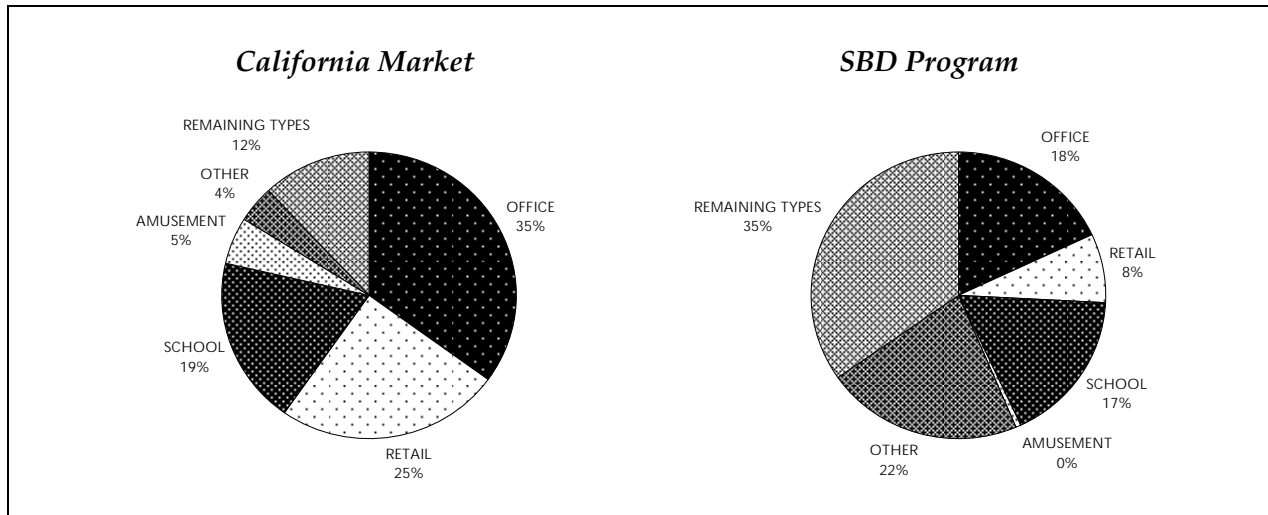
*Table 4.5 Number of Nonresidential R&R SBD Participants Committed in 2005*

	AMUSEMENT	ASSEMBLY	EDUCATION	GOVT	HOTEL	MEDICAL	OFFICE	RETAIL	SCHOOL	SERVICE	STORAGE	OTHER	TOTAL
<b>CALIFORNIA</b>													
Whole Building Approach	.	2	.	.	.	.	11	10	19	1	3	9	55
Systems Approach	1	1	.	1	1	3	36	11	26	21	1	48	150
Total	1	3	.	1	1	3	47	21	45	22	4	57	205
<b>SCE</b>													
Whole Building Approach	.	.	.	.	.	.	.	2	.	1	.	4	7
Systems Approach	.	.	.	.	1	2	2	4	7	2	1	15	34
Total	.	.	.	.	1	2	2	6	7	3	1	19	41
<b>PG&amp;E</b>													
Whole Building Approach	.	.	.	.	.	.	7	5	6	.	1	2	21
Systems Approach	1	.	.	1	.	.	24	4	2	19	.	27	78
Total	1	.	.	1	.	.	31	9	8	19	1	29	99
<b>SDG&amp;E</b>													
Whole Building Approach	.	2	.	.	.	.	4	3	12	.	1	3	25
Systems Approach	.	.	.	.	.	1	10	3	15	.	.	6	35
Total	.	2	.	.	.	1	14	6	27	.	1	9	60
<b>SoCalGas</b>													
Whole Building Approach	.	.	.	.	.	.	.	.	1	.	1	.	2
Systems Approach	.	1	.	.	.	.	.	.	2	.	.	.	3
Total	.	1	.	.	.	.	.	.	3	.	1	.	5

The number of R&R participants is only one-third of the number of new construction SBD participants (refer to 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 (see Exhibit 4.3 below). A greater emphasis on industrial projects within the SBD program in 2005 also caused significant participation in the “other” (manufacturing, nurseries, dairy farms, etc.) and the service business types.<sup>2</sup> R&R participants in 2005 do not include any education buildings (museums, libraries).

<sup>2</sup> The service business type includes automobile service stations, but also utility, sanitary and sewage services, direct mail advertising services, security systems services, laundry services, and generic “services” buildings. The high MWh savings in 2005 are mostly due to water treatment and food processing projects.

**Exhibit 4.3**  
**R&R Building Segments with the Highest Number of Projects in 2005**



**Table 4.6 Area for Nonresidential R&R SBD Participants Committed in 2005 (1,000 sqft)**

	AMUSEMENT	ASSEMBLY	EDUCATION	GOVT	HOTEL	MEDICAL	OFFICE	RETAIL	SCHOOL	SERVICE	STORAGE	OTHER	TOTAL
<b>CALIFORNIA</b>													
Whole Building Approach	.	280	.	.	.	.	1,599	361	509	5	76	448	3,278
Systems Approach	4	60	.	108	729	22	2,423	455	2,568	547	47	2,650	9,613
Total	4	340	.	108	729	22	4,022	816	3,077	552	124	3,098	12,891
<b>SCE</b>													
Whole Building Approach	.	.	.	.	.	.	.	144	.	5	.	152	301
Systems Approach	.	.	.	.	729	12	193	226	224	14	47	1,304	2,749
Total	.	.	.	.	729	12	193	370	224	19	47	1,456	3,050
<b>PG&amp;E</b>													
Whole Building Approach	.	.	.	.	.	.	1,447	56	188	.	30	50	1,771
Systems Approach	4	.	.	108	.	.	1,741	157	1,715	533	.	1,159	5,417
Total	4	.	.	108	.	.	3,188	213	1,903	533	30	1,208	7,188
<b>SDG&amp;E</b>													
Whole Building Approach	.	280	.	.	.	.	152	160	293	.	44	247	1,176
Systems Approach	.	.	.	.	.	10	489	72	385	.	.	187	1,143
Total	.	280	.	.	.	10	641	232	678	.	44	434	2,320
<b>SoCalGas</b>													
Whole Building Approach	.	.	.	.	.	.	.	.	28	.	2	.	30
Systems Approach	.	60	.	.	.	.	.	.	244	.	.	.	304
Total	.	60	.	.	.	.	.	.	272	.	2	.	334

The majority of SBD R&R program activity in terms of area committed in 2005 belongs to the office, school and “other” (manufacturing, nurseries, dairy farms, etc.) business types. The same trend holds for estimated MWh and kW savings. In addition, even though the committed area is low in the medical business type, this segment is responsible for high estimated MWh and kW savings (Tables 4.7 and 4.8). As shown in Table 4.9 the industrial, manufacturing and agricultural projects proposed by the “other” business type account for the largest committed therm savings in 2005, followed by service (water treatment projects, food processing) and office.

**Table 4.7 Estimated MWh Savings for R&R SBD Participants Committed in 2005**

	<b>AMUSEMENT</b>	<b>ASSEMBLY</b>	<b>EDUCATION</b>	<b>GOVT</b>	<b>HOTEL</b>	<b>MEDICAL</b>	<b>OFFICE</b>	<b>RETAIL</b>	<b>SCHOOL</b>	<b>SERVICE</b>	<b>STORAGE</b>	<b>OTHER</b>	<b>TOTAL</b>
<b>CALIFORNIA</b>													
Whole Building Approach	.	573	.	.	.	.	2,094	1,642	1,800	210	334	4,437	11,090
Systems Approach	2	151	.	103	176	34,735	17,127	1,332	1,249	7,928	22	8,839	71,662
Total	2	724	.	103	176	34,735	19,221	2,974	3,049	8,137	355	13,276	82,753
<b>SCE</b>													
Whole Building Approach	.	.	.	.	.	.	.	834	.	210	.	2,386	3,430
Systems Approach	.	.	.	.	176	34,647	305	805	357	1,375	22	2,020	39,706
Total	.	.	.	.	176	34,647	305	1,639	357	1,584	22	4,407	43,136
<b>PG&amp;E</b>													
Whole Building Approach	.	.	.	.	.	.	1,709	466	699	.	94	395	3,363
Systems Approach	2	.	.	103	.	.	16,349	273	323	6,553	.	5,648	29,250
Total	2	.	.	103	.	.	18,057	740	1,021	6,553	94	6,042	32,613
<b>SDG&amp;E</b>													
Whole Building Approach	.	573	.	.	.	.	385	342	950	.	172	1,656	4,078
Systems Approach	.	.	.	.	.	88	474	254	447	.	.	1,171	2,433
Total	.	573	.	.	.	88	859	595	1,396	.	172	2,827	6,512
<b>SoCalGas</b>													
Whole Building Approach	.	.	.	.	.	.	.	.	151	.	67	.	219
Systems Approach	.	151	.	.	.	.	.	.	123	.	.	.	273
Total	.	151	.	.	.	.	.	.	274	.	67	.	492



*Table 4.8 Estimated kW Savings for R&R SBD Participants Committed in 2005*

	AMUSEMENT	ASSEMBLY	EDUCATION	GOVT	HOTEL	MEDICAL	OFFICE	RETAIL	SCHOOL	SERVICE	STORAGE	OTHER	TOTAL
<b>CALIFORNIA</b>													
Whole Building Approach	98	322	.	.	.	.	849	378	816	41	56	523	3,082
Systems Approach	1	.	6	32	28	4,102	2,075	147	241	1,230	8	1,365	9,232
Total	99	322	6	32	28	4,102	2,924	525	1,057	1,271	63	1,887	12,314
<b>SCE</b>													
Whole Building Approach	.	.	.	.	.	.	.	89	.	8	.	171	268
Systems Approach	.	.	.	.	28	4,054	91	42	100	4	8	281	4,607
Total	.	.	.	.	28	4,054	91	131	100	12	8	452	4,874
<b>PG&amp;E</b>													
Whole Building Approach	.	.	.	.	.	.	652	145	334	.	.	20	1,151
Systems Approach	1	.	.	29	.	.	1,852	61	30	1,227	.	888	4,086
Total	1	.	.	29	.	.	2,504	206	363	1,227	.	908	5,237
<b>SDG&amp;E</b>													
Whole Building Approach	.	322	.	.	.	.	196	144	482	.	56	332	1,532
Systems Approach	.	.	.	.	.	11	132	38	112	.	.	196	488
Total	.	322	.	.	.	11	329	182	594	.	56	528	2,021
<b>SoCalGas</b>													
Whole Building Approach	98	.	.	.	.	.	.	.	.	33	.	.	131
Systems Approach	.	.	6	3	.	37	.	7	.	.	.	.	51
Total	98	.	6	3	.	37	.	7	.	33	.	.	182

**Table 4.9 Estimated Therm Savings for R&R SBD Participants Committed in 2005**

	AMUSEMENT	ASSEMBLY	EDUCATION	GOVT	HOTEL	MEDICAL	OFFICE	RETAIL	SCHOOL	SERVICE	STORAGE	OTHER	TOTAL
<b>CALIFORNIA</b>													
Whole Building Approach	.	3,990	.	.	.	.	45,523	3,518	9,549	.	4,966	222,003	289,549
Systems Approach	-30	2,620	.	-644	.	-298	1,382	-993	23,981	106,348	.	471,619	603,985
Total	-30	6,610	.	-644	.	-298	46,905	2,525	33,530	106,348	4,966	693,622	893,534
<b>SCE</b>													
Whole Building Approach	.	.	.	.	.	.	.	.	.	.	.	.	0
Systems Approach	0	.	.	.	.	.	.	.	.	.	.	.	0
Total	0	.	.	.	.	.	.	.	.	.	.	.	0
<b>PG&amp;E</b>													
Whole Building Approach	.	.	.	.	.	.	42,520	1,225	8,096	.	.	.	51,841
Systems Approach	-30	.	.	-644	.	.	-66	-289	9,130	106,348	.	249,017	363,466
Total	-30	.	.	-644	.	.	42,454	936	17,226	106,348	.	249,017	415,307
<b>SDG&amp;E</b>													
Whole Building Approach	.	3,990	.	.	.	.	3,003	2,293	601	.	4,966	222,003	236,856
Systems Approach	.	.	.	.	.	-298	1,448	-704	11,497	.	.	222,602	234,545
Total	.	3,990	.	.	.	-298	4,451	1,589	12,098	.	4,966	444,605	471,401
<b>SoCalGas</b>													
Whole Building Approach	.	.	.	.	.	.	.	.	852	.	.	.	852
Systems Approach	.	2,620	.	.	.	.	.	.	3,354	.	.	.	5,974
Total	.	2,620	.	.	.	.	.	.	4,206	.	.	.	6,826

\* SCE does not report therm savings.

**Table 4.10 Measures Proposed by R&R SBD Participants Committed in 2005**

	WHOLE BUILDING	WB + REFRIGERATION	DAY-LIGHTING	SKYLIGHT	HVAC CHILLER	HVAC UNITARY	HVAC CONTROLS	HVAC OTHER	MOTORS	LIGHTING	ENVELOPE	PROCESS + OTHER	TOTAL
<b>CALIFORNIA</b>													
Whole Building Approach	77	7	.	.	.	.	.	.	.	.	.	.	84
Systems Approach	.	.	3	1	2	15	.	34	4	82	13	89	243
Total	77	7	3	1	2	15	.	34	4	82	13	89	327
<b>SCE</b>													
Whole Building Approach	1	6	.	.	.	.	.	.	.	.	.	.	7
Systems Approach	.	.	1	.	1	1	.	8	4	22	.	19	56
Total	1	6	1	.	1	1	.	8	4	22	.	19	63
<b>PG&amp;E</b>													
Whole Building Approach	21	.	.	.	.	.	.	.	.	.	.	.	21
Systems Approach	.	.	2	.	.	2	.	1	.	14	.	65	84
Total	21	.	2	.	.	2	.	1	.	14	.	65	105
<b>SDG&amp;E</b>													
Whole Building Approach	54	.	.	.	.	.	.	.	.	.	.	.	54
Systems Approach	.	.	.	1	.	11	.	19	.	44	13	5	93
Total	54	.	.	1	.	11	.	19	.	44	13	5	147
<b>SoCalGas</b>													
Whole Building Approach	1	1	.	.	.	.	.	.	.	.	.	.	2
Systems Approach	.	.	.	.	1	1	.	6	.	2	.	.	10
Total	1	1	.	.	1	1	.	6	.	2	.	.	12

Similar to new construction SBD participants, the measures proposed 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 measure was proposed to be installed through the SBD Program. For example, each whole building participant counted as one instance in which the whole building approach was proposed, regardless of the number and types of measures involved.

As Table 4.10 indicates, R&R participants proposed “process and other” measures most often (variable speed drives, gas-fired boilers, water heating), followed by lighting and whole building design. Chillers and skylights were proposed very rarely, and HVAC controls were not proposed at all in 2005. Again, measures with significant refrigeration-process loads, proposed to be installed in grocery and big box stores by JJ Hirsch and VaCom as a whole building “alternative delivery method,” were reported under the new “whole building and refrigeration” segment.

**Table 4.11 Estimated MWh Savings by Measure for R&R SBD Participants Committed in 2005**

	<i>WHOLE BUILDING</i>	<i>WB + REFRIGERATION</i>	<i>DAY-LIGHTING</i>	<i>SKYLIGHT</i>	<i>HVAC CHILLER</i>	<i>HVAC UNITARY</i>	<i>HVAC CONTROLS</i>	<i>HVAC OTHER</i>	<i>MOTORS</i>	<i>LIGHTING</i>	<i>ENVELOPE</i>	<i>PROCESS + OTHER</i>	<i>TOTAL</i>
<b>CALIFORNIA</b>													
Whole Building Approach	8,036	3,054	.	.	.	.	.	.	.	.	.	.	11,090
Systems Approach	.	.	395	25	162	63	.	1,193	14	2,769	79	66,963	71,662
Total	8,036	3,054	395	25	162	63	.	1,193	14	2,769	79	66,963	82,753
<b>SCE</b>													
Whole Building Approach	444	2,986	.	.	.	.	.	.	.	.	.	.	3,430
Systems Approach	.	.	4	.	154	16	.	25	14	1,188	.	38,305	39,706
Total	444	2,986	4	.	154	16	.	25	14	1,188	.	38,305	43,136
<b>PG&amp;E</b>													
Whole Building Approach	3,363	.	.	.	.	.	.	.	.	.	.	.	3,363
Systems Approach	.	.	391	.	.	14	.	2	.	823	.	28,020	29,250
Total	3,363	.	391	.	.	14	.	2	.	823	.	28,020	32,613
<b>SDG&amp;E</b>													
Whole Building Approach	4,078	.	.	.	.	.	.	.	.	.	.	.	4,078
Systems Approach	.	.	.	25	.	31	.	926	.	735	79	638	2,433
Total	4,078	.	.	25	.	31	.	926	.	735	79	638	6,512
<b>SoCalGas</b>													
Whole Building Approach	151	67	.	.	.	.	.	.	.	.	.	.	219
Systems Approach	.	.	.	.	7	2	.	240	.	23	.	.	273
Total	151	67	.	.	7	2	.	240	.	23	.	.	492

Tables 4.11 and 4.12 indicate that “process and other” measures by far account for the highest estimated MWh and kW savings in the R&R SBD program in 2005. Whole building design, “whole building and refrigeration” and lighting also contribute significant savings. The largest therm savings are generated by the “process and other” and Whole Building Design measures, as shown in Table 4.13. Lighting, daylighting and skylights generate negative therm savings.

**Table 4.12 Estimated kW Savings by Measure for R&R SBD Participants Committed in 2005**

	<i>WHOLE BUILDING</i>	<i>WB + REFRIGERATION</i>	<i>DAY-LIGHTING</i>	<i>SKYLIGHT</i>	<i>HVAC CHILLER</i>	<i>HVAC UNITARY</i>	<i>HVAC CONTROLS</i>	<i>HVAC OTHER</i>	<i>MOTORS</i>	<i>LIGHTING</i>	<i>ENVELOPE</i>	<i>PROCESS + OTHER</i>	<i>TOTAL</i>
<b><i>CALIFORNIA</i></b>													
Whole Building Approach	2,840	243	.	.	.	.	.	.	.	.	.	.	3,082
Systems Approach	.	.	149	10	70	45	.	167	4	707	25	8,056	9,232
Total	2,840	243	149	10	70	45	.	167	4	707	25	8,056	12,314
<b><i>SCE</i></b>													
Whole Building Approach	58	210	.	.	.	.	.	.	.	.	.	.	268
Systems Approach	.	.	.	.	65	8	.	21	4	254	.	4,255	4,607
Total	58	210	.	.	65	8	.	21	4	254	.	4,255	4,874
<b><i>PG&amp;E</i></b>													
Whole Building Approach	1,151	.	.	.	.	.	.	.	.	.	.	.	1,151
Systems Approach	.	.	149	.	.	12	.	0	.	223	.	3,702	4,086
Total	1,151	.	149	.	.	12	.	0	.	223	.	3,702	5,237
<b><i>SDG&amp;E</i></b>													
Whole Building Approach	1,532	.	.	.	.	.	.	.	.	.	.	.	1,532
Systems Approach	.	.	.	10	.	22	.	109	.	223	25	99	488
Total	1,532	.	.	10	.	22	.	109	.	223	25	99	2,021
<b><i>SoCalGas</i></b>													
Whole Building Approach	98	33	.	.	.	.	.	.	.	.	.	.	131
Systems Approach	.	.	.	.	6	3	.	37	.	7	.	.	51
Total	98	33	.	.	6	3	.	37	.	7	.	.	182

**Table 4.13 Estimated Therm Savings by Measure for R&R SBD Participants Committed in 2005**

	WHOLE BUILDING	WB + REFRIGERATION	DAY-LIGHTING	SKYLIGHT	HVAC CHILLER	HVAC UNITARY	HVAC CONTROLS	HVAC OTHER	MOTORS	LIGHTING	ENVELOPE	PROCESS + OTHER	TOTAL
<b>CALIFORNIA</b>													
Whole Building Approach	289,549	.	.	.	.	.	.	.	.	.	.	.	289,549
Systems Approach	.	.	-2,201	-10	.	-30	.	22,683	.	-8,464	798	591,209	603,985
Total	289,549	.	-2,201	-10	.	-30	.	22,683	.	-8,464	798	591,209	893,534
<b>SCE</b>													
Whole Building Approach	.	.	.	.	.	.	.	.	.	.	.	.	0
Systems Approach	.	.	.	.	.	.	.	.	.	.	.	.	0
Total	.	.	.	.	.	.	.	.	.	.	.	.	0
<b>PG&amp;E</b>													
Whole Building Approach	51,841	.	.	.	.	.	.	.	.	.	.	.	51,841
Systems Approach	.	.	-2,201	.	.	.	.	.	.	-6,141	.	371,808	363,466
Total	51,841	.	-2,201	.	.	.	.	.	.	-6,141	.	371,808	415,307
<b>SDG&amp;E</b>													
Whole Building Approach	236,856	.	.	.	.	.	.	.	.	.	.	.	236,856
Systems Approach	.	.	.	-10	.	-30	.	16,613	.	-2,227	798	219,401	234,545
Total	236,856	.	.	-10	.	-30	.	16,613	.	-2,227	798	219,401	471,401
<b>SoCalGas</b>													
Whole Building Approach	852	.	.	.	.	.	.	.	.	.	.	.	852
Systems Approach	.	.	.	.	.	.	.	6,070	.	-96	.	.	5,974
Total	852	.	.	.	.	.	.	6,070	.	-96	.	.	6,826

\* SCE does not report therm savings.

## 5. SBD PROGRAM PENETRATION INTO THE NRNC MARKET IN 2005

This chapter presents SBD program penetration into the NRNC market statewide and by utility territory, in calendar year 2005.

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 in 2005 is 46.8%. 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 56.3%. SBD committed square feet account for 72.9% market penetration in the SCE territory; 47.4% penetration in the PG&E territory; 55.3% penetration in the SDG&E territory; and 20.4% penetration in the SoCalGas territory.

In terms of number of projects committed, the statewide new construction market penetration of the SBD program is 21.8%. In the four IOU service territories, program penetration by number of projects is 26.8%. SBD committed projects account for 29.9% market penetration in the SCE territory; 25.1% penetration in the PG&E territory; 39.0% penetration in the SDG&E territory; and 12.5% 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 5.5%. In the four IOU service territories, program penetration by number of projects is 6.8%. SBD committed projects account for 5.4% market penetration in the SCE territory; 6.2% penetration in the PG&E territory; 38.7% penetration in the SDG&E territory; and 1.0% penetration in SoCalGas territory.

Due to the higher number of Systems Approach R&R projects, SBD program penetration is consistently higher for these projects than for the Whole Building Approach projects. SBD program penetration is higher for Whole Building Approach than for Systems Approach new construction projects in all service territories except SCE (where the number of Systems Approach projects is again much higher than the number of Whole Building Approach projects). 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 2005**

Program Type	Year/Quarter	Source	Value (\$ billions)	Area (millions of sqft)	%Area Penetration	Number of Projects	%Projects Penetration
New and Additions	2005 QTR 1-4	F. W. Dodge	14.685	133.26		3,501	
		SBD Whole Building	-	26.44	19.8%	353	10.1%
		SBD Systems Approach	-	35.86	26.9%	410	11.7%
		SBD Total	-	62.30	46.8%	763	21.8%
Alterations (R&R and TI)	2005 QTR 1-4	F. W. Dodge	3.546	-		3,756	
		SBD Whole Building	-	3.28	-	55	1.5%
		SBD Systems Approach	-	9.61	-	150	4.0%
		SBD Total	-	12.89	-	205	5.5%

**Table 5.2 SBD Program Penetration in the SCE Service Territory in 2005**

Program Type	Year/Quarter	Source	Value (\$ billions)	Area (millions of sqft)	%Area Penetration	Number of Projects	%Projects Penetration
New and Additions	2005 QTR 1-4	F. W. Dodge	3.807	45.74		951	
		SBD Whole Building	-	5.71	11.7%	66	6.9%
		SBD Systems Approach	-	27.63	12.0%	218	22.9%
		SBD Total	-	33.33	72.9%	284	29.9%
Alterations (R&R and TI)	2005 QTR 1-4	F. W. Dodge	0.746	-		766	-
		SBD Whole Building	-	0.30	-	7	0.9%
		SBD Systems Approach	-	2.75	-	34	4.4%
		SBD Total	-	3.05	-	41	5.4%



**Table 5.3 SBD Program Penetration in the PG&E Service Territory in 2005**

Program Type	Year/Quarter	Source	Value (\$ billions)	Area (millions of sqft)	%Area Penetration	Number of Projects	%Projects Penetration
New and Additions	2005 QTR 1-4	F. W. Dodge	5.251	39.08		1,341	
		SBD Whole Building	-	15.06	38.5%	202	15.1%
		SBD Systems Approach	-	3.47	8.9%	135	10.1%
		SBD Total	-	18.53	47.4%	337	25.1%
Alterations (R&R and TI)	2005 QTR 1-4	F. W. Dodge	1.454	-		1,601	
		SBD Whole Building	-	1.77	-	21	1.3%
		SBD Systems Approach	-	5.42	-	78	4.9%
		SBD Total	-	7.19	-	99	6.2%

**Table 5.4 SBD Program Penetration in the SDG&E Service Territory in 2005**

Program Type	Year/Quarter	Source	Value (\$ billions)	Area (millions of sqft)	%Area Penetration	Number of Projects	%Projects Penetration
New and Additions	2005 QTR 1-4	F. W. Dodge	1.741	14.75		272	
		SBD Whole Building	-	4.35	29.5%	62	22.8%
		SBD Systems Approach	-	3.81	25.8%	44	16.2%
		SBD Total	-	8.16	55.3%	106	39.0%
Alterations (R&R and TI)	2005 QTR 1-4	F. W. Dodge	0.327	-		155	
		SBD Whole Building	-	1.18	-	25	16.1%
		SBD Systems Approach	-	1.14	-	35	22.6%
		SBD Total	-	2.32	-	60	38.7%

**Table 5.5 SBD Program Penetration in the SoCalGas Service Territory in 2005**

Program Type	Year/Quarter	Source	Value (\$ billions)	Area (millions of sqft)	%Area Penetration	Number of Projects	%Projects Penetration
New and Additions	2005 QTR 1-4	F. W. Dodge	1.310	11.17		288	
		SBD Whole Building	-	1.33	11.9%	23	8.0%
		SBD Systems Approach	-	0.95	8.5%	13	4.5%
		SBD Total	-	2.28	20.4%	36	12.5%
Alterations (R&R and TI)	2005 QTR 1-4	F. W. Dodge	0.430	-		487	
		SBD Whole Building	-	0.03	-	2	0.4%
		SBD Systems Approach	-	0.30	-	3	0.6%
		SBD Total	-	0.33	-	5	1.0%

## **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 some variation in market activity from quarter to quarter. Quarter 4, 2004, 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 SBD Program penetration by year, 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. 2003 and 2004 were slightly more active than 2002, but significantly less active than 2001. 2005 is the most active year so far, with participation rates and committed square footage that surpass even the very busy year 2001. This increase in activity is correlated with an increase in funds committed through the SBD program in 2005.

**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	
	2004	1	2.927	29.88	952	
		2	3.220	31.70	987	
		3	3.658	32.58	1,138	
		4	2.762	26.69	786	
	2005	1	2.846	29.88	776	
		2	3.739	34.63	865	
		3	4.276	38.56	1,033	
		4	3.824	30.19	827	
	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	
2004		1	0.772	-	918	
		2	1.470	-	1,224	
		3	1.072	-	1,118	
		4	0.615	-	793	
2005		1	0.617	-	654	
		2	1.157	-	1,083	
	3	0.880	-	1,083		
	4	0.892	-	936		

\* F.W. Dodge does not report square footage for alteration projects.

**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	
	2004	1	0.923	10.38	252	
		2	0.767	10.64	279	
		3	1.160	11.89	324	
		4	0.836	11.23	231	
	2005	1	0.773	11.84	188	
		2	1.062	12.20	260	
		3	1.181	14.01	284	
		4	0.792	7.70	219	
	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	
2004		1	0.264	-	229	
		2	0.374	-	278	
		3	0.424	-	287	
		4	0.197	-	197	
2005		1	0.127	-	139	
		2	0.217	-	203	
		3	0.223	-	240	
		4	0.179	-	184	

\* F.W. Dodge does not report square footage for alteration projects.

**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	
	2004	1	0.781	8.45	387	
		2	1.764	13.79	423	
		3	1.529	10.91	460	
		4	0.828	7.35	326	
	2005	1	0.980	8.69	308	
		2	1.006	8.41	302	
		3	1.795	12.62	402	
		4	1.470	9.36	329	
	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	
2004		1	0.302	-	441	
		2	0.569	-	562	
		3	0.311	-	474	
		4	0.216	-	323	
2005		1	0.264	-	288	
		2	0.514	-	470	
		3	0.320	-	427	
		4	0.357	-	416	

\* F.W. Dodge does not report square footage for alteration projects.

**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	
	2004	1	0.380	3.78	79	
		2	0.223	2.33	65	
		3	0.199	2.10	85	
		4	0.236	1.76	52	
	2005	1	0.359	3.18	72	
		2	0.424	3.54	67	
		3	0.610	4.94	73	
		4	0.348	3.09	60	
	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	
2004		1	0.056	-	30	
		2	0.084	-	69	
		3	0.060	-	43	
		4	0.021	-	26	
2005		1	0.070	-	26	
		2	0.103	-	51	
		3	0.057	-	38	
		4	0.097	-	40	

\* F.W. Dodge does not report square footage for alteration projects.

**Table 6.5 F.W. Dodge Market Summary for Project Starts in 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	
	2004	1	0.401	2.99	69	
		2	0.147	1.22	57	
		3	0.338	3.04	70	
		4	0.111	0.93	51	
	2005	1	0.252	1.90	65	
		2	0.604	4.48	92	
		3	0.197	1.61	83	
		4	0.257	3.18	48	
	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	
2004		1	0.055	-	63	
		2	0.225	-	120	
		3	0.075	-	120	
		4	0.087	-	146	
2005		1	0.081	-	100	
		2	0.084	-	180	
		3	0.150	-	131	
		4	0.114	-	76	

\* F.W. Dodge does not report square footage for alteration projects.

**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
<b>California</b>					
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
	2004	1-4	12.57	120.86	3,863
	2005	1-4	14.69	133.26	3,501
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
	2004	1-4	3.93	-	4,053
	2005	1-4	3.55	-	3,756
<b>SCE</b>					
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
	2004	1-4	3.69	44.14	1,086
	2005	1-4	3.81	45.74	951
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
	2004	1-4	1.26	-	991
	2005	1-4	0.75	-	766
<b>PG&amp;E</b>					
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
	2004	1-4	4.90	40.50	1,596
	2005	1-4	5.25	39.08	1,341
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
	2004	1-4	1.40	-	1,800
	2005	1-4	1.45	-	1,601
<b>SDG&amp;E</b>					
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
	2004	1-4	1.04	9.97	281
	2005	1-4	1.74	14.75	272
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
	2004	1-4	0.22	-	168
	2005	1-4	0.33	-	155
<b>SoCalGas</b>					
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
	2004	1-4	1.00	8.18	247
	2005	1-4	1.31	11.17	288
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
	2004	1-4	0.44	-	449
	2005	1-4	0.43	-	487

\* F.W. Dodge does not report square footage for alteration projects.



**Table 6.7 Statewide SBD Program Participation Summary**

Program Type	Year	Quarter	Area (millions of sqft)	Energy Impacts GWh	Demand Impact MW	Gas Impacts 1,000 Therms	Number of Participants	
<b>NEW CONSTRUCTION</b>								
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	
	2004	1	4.54	32.68	6.02	953.16	67	
		2	18.39	32.16	6.74	5,253.33	126	
		3	8.75	46.47	9.23	414.48	122	
		4	16.29	115.73	15.32	533.58	182	
	2005	1	10.10	83.90	8.19	438.50	123	
		2	13.63	49.58	12.89	206.77	158	
		3	10.75	51.66	13.64	142.64	171	
		4	27.81	83.20	23.94	969.85	311	
	<b>R&amp;R, incl. TI</b>							
	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	
2004		1	1.62	6.77	1.25	116.95	20	
		2	1.86	11.16	1.58	-0.67	21	
		3	3.10	6.41	1.06	-26.37	27	
		4	3.70	10.91	2.41	7.79	47	
2005		1	6.05	11.17	2.06	275.84	56	
		2	1.54	5.08	1.05	298.63	38	
		3	2.20	9.49	1.32	199.16	42	
		4	3.10	57.02	7.89	119.90	69	

**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	
<b>NEW CONSTRUCTION</b>								
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	
	2001	4	2.31	11.22	1.85	0.00	30	
		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	
	2002	4	9.96	39.22	6.06	0.00	82	
		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	
	2003	4	7.38	43.34	8.01	0.00	89	
		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	
	2004	4	8.36	35.26	5.94	0.00	103	
		1	1.75	8.05	1.22	0.00	20	
		2	4.50	16.26	3.15	0.00	49	
		3	5.46	29.97	5.63	0.00	63	
	2005	4	7.36	69.60	4.74	0.00	61	
		1	5.85	48.28	1.58	0.00	43	
		2	9.19	23.92	5.89	0.00	73	
		3	5.26	22.28	5.93	0.00	57	
		4	13.04	31.44	6.62	0.00	111	
	<b>R&amp;R, incl. TI</b>							
	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
2001		4	3.46	9.30	2.73	0.00	46	
		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	
2002		4	0.71	1.95	0.29	0.00	11	
		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	
2003		4	1.15	3.21	0.42	0.00	19	
		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	
2004		4	1.12	5.23	1.05	0.00	20	
		1	0.58	3.26	0.57	0.00	6	
		2	1.07	5.46	0.84	0.00	6	
		3	2.28	1.02	0.28	0.00	6	
2005		4	0.94	3.92	0.85	0.00	17	
		1	0.95	2.10	0.14	0.00	9	
		2	0.42	0.59	0.14	0.00	10	
		3	0.59	2.95	0.28	0.00	10	
		4	1.09	37.49	4.31	0.00	12	

**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	
<b>NEW CONSTRUCTION</b>								
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	
	2001	4	5.98	10.71	5.28	10.04	93	
		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	
	2002	4	6.74	18.09	4.64	-17.08	90	
		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	
	2003	4	8.99	35.89	8.97	197.92	86	
		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	
	2004	4	11.85	54.35	17.18	1006.24	112	
		1	1.55	7.58	1.45	26.43	32	
		2	12.16	10.83	1.89	5228.68	41	
		3	1.62	7.12	1.47	343.78	32	
	2005	4	4.64	32.05	6.75	361.78	70	
		1	3.00	31.01	5.59	363.33	55	
		2	2.36	18.43	4.79	47.82	56	
		3	3.51	24.34	6.52	133.03	82	
			4	9.66	37.72	13.35	823.97	144
	<b>R&amp;R, incl. TI</b>							
	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
2001		4	0.82	2.64	0.67	0.00	24	
		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	
2002		4	2.93	4.61	1.07	23.19	61	
		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	
2003		4	1.54	6.10	1.12	74.34	27	
		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	
2004		4	1.70	3.70	0.81	23.52	25	
		1	0.58	0.61	0.26	-0.11	10	
		2	0.62	5.47	0.70	-0.77	10	
		3	0.79	5.30	0.75	-26.32	19	
2005		4	2.63	6.66	1.41	6.79	24	
		1	4.43	7.36	1.35	262.64	30	
		2	0.87	3.85	0.57	101.40	16	
		3	1.03	4.77	0.62	35.76	18	
			4	0.86	16.63	2.70	15.51	35

**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	
<b>NEW CONSTRUCTION</b>								
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	
	2004	1	0.98	15.08	3.20	928.31	12	
		2	1.16	3.93	1.30	1.13	23	
		3	1.06	7.14	1.29	74.18	12	
		4	1.60	6.33	1.45	22.92	31	
	2005	1	0.36	1.48	0.56	19.31	11	
		2	1.28	3.15	1.01	27.89	19	
		3	1.52	4.06	0.90	10.16	24	
		4	4.99	13.50	3.82	148.04	52	
	<b>R&amp;R, incl. TI</b>							
	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	
2004		1	0.46	2.89	0.42	117.06	4	
		2	0.10	0.07	0.03	-0.14	3	
		3	0.03	0.10	0.02	-0.04	2	
		4	0.07	0.28	0.15	0.39	4	
2005		1	0.41	1.47	0.52	7.09	15	
		2	0.18	0.38	0.20	196.52	9	
		3	0.58	1.76	0.42	163.40	14	
		4	1.16	2.90	0.87	104.39	22	

**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	
<b>NEW CONSTRUCTION</b>								
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	
	2001	4	0.13	0.38	0.21	8.12	11	
		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	
	2002	4	0.67	0.29	0.13	0.44	1	
		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	
	2003	4	1.02	2.79	0.55	2.85	22	
		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	
	2004	4	1.24	6.96	0.86	104.91	16	
		1	0.25	1.98	0.15	-1.58	3	
		2	0.57	1.14	0.39	23.52	13	
		3	0.61	2.24	0.84	-3.47	15	
	2005	4	2.69	7.75	2.38	148.88	20	
		1	0.89	3.13	0.46	55.87	14	
		2	0.80	4.08	1.20	131.05	10	
		3	0.47	0.98	0.29	-0.54	8	
		4	0.12	0.54	0.15	-2.17	4	
	<b>R&amp;R, incl. TI</b>							
	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	
2001		4	0.00	0.00	0.00	0.00	0	
		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	
2002		4	0.06	0.37	0.07	0.48	1	
		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	
2003		4	0.00	0.00	0.00	0.00	0	
		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	
2004		4	0.37	0.89	0.13	3.38	5	
		1	0.00	0.00	0.00	0.00	0	
		2	0.08	0.17	0.01	0.24	2	
		3	0.00	0.00	0.00	0.00	0	
2005		4	0.07	0.04	0.01	0.61	2	
		1	0.26	0.23	0.04	6.11	2	
		2	0.07	0.26	0.14	0.71	3	
		3	0.00	0.00	0.00	0.00	0	
		4	0.00	0.00	0.00	0.00	0	

**Table 6.12 Annual SBD Program Participation Summary**

<b>Program Type</b>	<b>Year</b>	<b>Quarters</b>	<b>Area (millions of sqft)</b>	<b>Energy Impacts GWh</b>	<b>Demand Impacts MW</b>	<b>Gas Impacts 1,000 Therms</b>	<b>Number of Participants</b>
<b>California</b>							
New Construction	1999	3-4	15.37	37.05	13.02	1.37	128
	2000	1-4	22.92	57.51	18.19	207.85	316
	2001	1-4	60.53	153.65	40.64	1,177.93	576
	2002	1-4	38.63	165.17	36.27	713.35	435
	2003	1-4	45.17	198.79	43.91	1,663.06	489
	2004	1-4	47.97	227.03	37.30	7,154.55	497
	2005	1-4	62.30	268.34	58.66	1,757.75	763
Alterations (R&R)	1999	3-4	3.29	10.11	2.15	3.67	52
	2000	1-4	13.27	26.87	7.28	12.74	182
	2001	1-4	12.60	32.92	7.96	75.90	222
	2002	1-4	6.65	31.28	4.32	178.37	127
	2003	1-4	9.30	21.73	4.49	204.33	154
	2004	1-4	10.29	35.25	6.30	97.70	115
	2005	1-4	12.89	82.75	12.31	893.53	205
<b>SCE</b>							
New Construction	1999	3-4	9.55	22.69	5.65	0.00	76
	2000	1-4	8.99	30.10	7.28	0.00	85
	2001	1-4	23.11	71.30	12.34	0.00	189
	2002	1-4	19.02	92.59	19.08	0.00	211
	2003	1-4	18.10	83.06	14.00	0.00	208
	2004	1-4	19.08	123.88	14.74	0.00	193
	2005	1-4	33.33	125.92	20.02	0.00	284
Alterations (R&R)	1999	3-4	2.33	7.69	1.31	0.00	26
	2000	1-4	6.22	16.25	3.87	0.00	73
	2001	1-4	4.21	17.91	3.68	0.00	52
	2002	1-4	2.90	18.25	1.66	0.00	55
	2003	1-4	2.86	9.65	1.65	0.00	55
	2004	1-4	4.86	13.66	2.54	0.00	35
	2005	1-4	3.05	43.14	4.87	0.00	41
<b>PG&amp;E</b>							
New Construction	1999	3-4	4.06	8.84	5.49	0.00	35
	2000	1-4	9.11	15.99	7.40	10.04	144
	2001	1-4	26.21	50.36	20.55	569.50	273
	2002	1-4	13.11	48.72	12.98	197.85	120
	2003	1-4	17.92	73.18	22.11	1,113.82	169
	2004	1-4	19.97	57.58	11.55	5,960.67	175
	2005	1-4	18.53	111.49	30.24	1,368.15	337
Alterations (R&R)	1999	3-4	0.34	0.56	0.22	0.00	6
	2000	1-4	1.45	4.26	1.28	0.00	38
	2001	1-4	6.17	8.14	2.71	49.84	119
	2002	1-4	3.22	10.85	2.32	99.08	55
	2003	1-4	4.02	6.50	1.77	35.38	49
	2004	1-4	4.63	18.04	3.13	-20.41	63
	2005	1-4	7.19	32.61	5.24	415.31	99
<b>SDG&amp;E</b>							
New Construction	1999	3-4	1.76	5.52	1.87	1.37	17
	2000	1-4	4.70	11.03	3.30	189.70	76
	2001	1-4	10.01	31.71	7.62	607.99	112
	2002	1-4	5.25	19.74	3.50	509.80	80
	2003	1-4	4.70	24.80	5.11	442.29	69
	2004	1-4	4.80	32.47	7.25	1,026.54	78
	2005	1-4	8.16	22.19	6.30	205.40	106
Alterations (R&R)	1999	3-4	0.62	1.85	0.63	3.67	20
	2000	1-4	5.60	6.36	2.14	12.74	71
	2001	1-4	2.08	6.47	1.48	25.58	49
	2002	1-4	0.53	2.18	0.34	79.28	17
	2003	1-4	1.70	4.45	0.84	160.11	38
	2004	1-4	0.66	3.34	0.62	117.26	13
	2005	1-4	2.32	6.51	2.02	471.40	60
<b>SoCalGas</b>							
New Construction	1999	3-4	0.00	0.00	0.00	0.00	0
	2000	1-4	0.13	0.38	0.21	8.12	11
	2001	1-4	1.20	0.29	0.13	0.44	2
	2002	1-4	1.25	4.13	0.71	5.71	24
	2003	1-4	4.45	17.75	2.68	106.96	43
	2004	1-4	4.13	13.10	3.76	167.35	51
	2005	1-4	2.28	8.74	2.09	184.21	36
Alterations (R&R)	1999	3-4	0.00	0.00	0.00	0.00	0
	2000	1-4	0.00	0.00	0.00	0.00	0
	2001	1-4	0.13	0.40	0.08	0.48	2
	2002	1-4	0.00	0.00	0.00	0.00	0
	2003	1-4	0.73	1.14	0.22	8.84	12
	2004	1-4	0.14	0.21	0.02	0.86	4
	2005	1-4	0.33	0.49	0.18	6.83	5

**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	
<b>California</b>									
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%	
	2004	1-4	120.86	47.97	39.7%	3,863	497	12.9%	
Alterations (R&R)	2005	1-4	133.26	62.30	46.8%	3,501	763	21.8%	
	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%	
Alterations (R&R)	2004	1-4	-	10.29	-	4,053	115	2.8%	
	2005	1-4	-	12.89	-	3,756	205	5.5%	
	<b>SCE</b>								
	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%	
2004		1-4	44.14	19.08	43.2%	1,086	193	17.8%	
Alterations (R&R)	2005	1-4	45.74	33.33	72.9%	951	284	29.9%	
	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%	
Alterations (R&R)	2004	1-4	-	4.86	-	991	35	3.5%	
	2005	1-4	-	3.05	-	766	41	5.4%	
	<b>PG&amp;E</b>								
	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%	
2004		1-4	40.50	19.97	49.3%	1,596	175	11.0%	
Alterations (R&R)	2005	1-4	39.08	18.53	47.4%	1,341	337	25.1%	
	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%	
Alterations (R&R)	2004	1-4	-	4.63	-	1,800	63	3.5%	
	2005	1-4	-	7.19	-	1,601	99	6.2%	
	<b>SDG&amp;E</b>								
	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%	
2004		1-4	9.97	4.80	48.1%	281	78	27.8%	
Alterations (R&R)	2005	1-4	14.75	8.16	55.3%	272	106	39.0%	
	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%	
Alterations (R&R)	2004	1-4	-	0.66	-	168	13	7.7%	
	2005	1-4	-	2.32	-	155	60	38.7%	
	<b>SoCalGas</b>								
	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%	
2004		1-4	8.18	4.13	50.5%	247	51	20.6%	
Alterations (R&R)	2005	1-4	11.17	2.28	20.4%	288	36	12.5%	
	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%	
Alterations (R&R)	2004	1-4	-	0.14	-	449	4	0.9%	
	2005	1-4	-	0.33	-	487	5	1.0%	

\* F.W. Dodge does not report square footage for alteration projects.

## 7. MOST ACTIVE MARKET PLAYERS IN 2005

This chapter presents the most active market players in calendar year 2005, by utility territory and statewide, as reported in the F.W. Dodge "Players" database. The most active market players are defined as the architectural, engineering and general contractor firms who either contributed to the highest number of projects, or contributed to projects that added up to the highest total value in 2005. 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, engineer or contractor (the F.W. Dodge database also tracks owners). The data reported below are therefore subject to the internal limitations of 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 from this analysis based on the actor description field found in the F.W. Dodge database.

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

Table 7.1 presents the most active market players statewide, during calendar year 2005.

Table 7.2 presents the most active market players in SCE territory in 2005.

Table 7.3 shows the most active market players in PG&E territory in 2005.

Table 7.4 summarizes the most active market players in SDG&E territory in Y2005.

Table 7.5 shows the most active market players in SoCalGas territory in 2005.



**Table 7.1 Most Active Market Players in California in 2005  
according to F.W. Dodge**

Firm Name	Firm Location		Project Value (in \$Millions)			Number of Projects		
	City	State	Total	New	Alteration	Total	New	Alteration
				Construction			Construction	
<b>ARCHITECTS</b>								
<b>Top 10 by Project Value</b>								
Hellmuth Obata + Kassabaum Inc.	SAN FRANCISCO	CA	1,548.683	1,522.637	26.046	9	6	3
Chong Partners Architects	SAN FRANCISCO	CA	1,525.597	1,452.701	72.896	21	12	9
SmithGroup	SAN FRANCISCO	CA	520.065	499.000	21.065	6	5	1
Lee Burkhardt Liu	MARINA DEL REY	CA	505.380	505.380	-	2	2	-
Kaplan McLaughlin Diaz	SAN FRANCISCO	CA	483.625	483.000	0.625	7	6	1
Gensler & Associates	SAN FRANCISCO	CA	458.411	336.980	121.431	11	6	5
Anshen and Allen	SAN FRANCISCO	CA	421.805	417.150	4.655	5	4	1
HMC Group	SACRAMENTO	CA	419.541	290.175	129.366	42	10	32
Steinberg Architects	LOS ANGELES	CA	388.446	367.493	20.953	10	7	3
LPA Inc	IRVINE	CA	384.533	289.681	94.852	44	22	22
<b>Top 10 by Number of Projects</b>								
Perkowitz & Ruth Architects	LONG BEACH	CA	364.829	327.629	37.200	59	42	17
W L C Architects	RANCHO CUCAMONGA	CA	289.378	224.058	65.320	52	26	26
LPA Inc	IRVINE	CA	384.533	289.681	94.852	44	22	22
HMC Group	SACRAMENTO	CA	419.541	290.175	129.366	42	10	32
BFGC Architects Planners Inc	OAKLAND	CA	110.685	54.422	56.263	39	11	28
Ware Malcomb	IRVINE	CA	370.510	369.410	1.100	37	33	4
NTDStichler Architects	SAN DIEGO	CA	216.272	177.961	38.311	31	13	18
Flewelling & Moody Architects	PASADENA	CA	71.380	35.716	35.664	28	6	22
MulvannyG2 Architecture	BELLEVUE	WA	61.160	54.865	6.295	26	13	13
Rauschenbach Marvelli Becker & Associates	SACRAMENTO	CA	66.974	60.775	6.199	26	14	12
<b>ENGINEERS</b>								
<b>Top 10 by Project Value</b>								
ARUP	SAN FRANCISCO	CA	963.000	963.000	-	8	8	-
Capital Engineering Consultants Inc	SACRAMENTO	CA	880.555	713.582	166.973	114	48	66
Flack & Kurtz Consulting Engineers	SAN FRANCISCO	CA	808.984	789.201	19.783	11	7	4
TMAD Engineers	SAN FRANCISCO	CA	707.186	572.204	134.982	72	39	33
F W Associates Inc	SAN FRANCISCO	CA	527.777	413.819	113.958	12	4	8
Gutmann & Blaevot	SAN FRANCISCO	CA	465.745	454.253	11.492	7	4	3
Frederick Brown Associates	NEWPORT BEACH	CA	444.119	403.688	40.431	36	26	10
McParlane & Associates	SAN DIEGO	CA	363.850	363.225	0.625	27	26	1
Ted Jacob Engineering Group Inc	OAKLAND	CA	361.000	361.000	-	2	2	-
Johnson Consulting Engineers	POWAY	CA	290.171	247.067	43.104	22	12	10
<b>Top 10 by Number of Projects</b>								
Capital Engineering Consultants Inc	SACRAMENTO	CA	880.555	713.582	166.973	114	48	66
TMAD Engineers	SAN FRANCISCO	CA	707.186	572.204	134.982	72	39	33
Sacramento Engineering Consultants	SACRAMENTO	CA	114.264	98.427	15.837	41	29	12
Glumac International	SAN FRANCISCO	CA	256.288	212.515	43.773	39	21	18
Frederick Brown Associates	NEWPORT BEACH	CA	444.119	403.688	40.431	36	26	10
G L P Engineering	SANTA ANA	CA	177.121	124.015	53.106	34	20	14
Charles A Martin & Associates	SACRAMENTO	CA	279.618	260.888	18.730	31	21	10
Palmieri & Associates Inc	SOUTH PASADENA	CA	103.603	97.778	5.825	30	24	6
Turley & Associates	SACRAMENTO	CA	212.462	202.876	9.586	30	19	11
Alfa Tech Consulting Engineers	SAN JOSE	CA	127.250	50.308	76.942	29	5	24
<b>GENERAL CONTRACTORS</b>								
<b>Top 10 by Project Value</b>								
Westfield Corporation	LOS ANGELES	CA	1,414.600	1,414.200	0.400	8	6	2
Hensel Phelps Construction Co Inc	SAN JOSE	CA	1,031.668	1,031.668	-	14	14	-
McCarthy Building Companies Inc.	SAN FRANCISCO	CA	985.663	980.563	5.100	17	16	1
Rudolph & Sletten Inc	FOSTER CITY	CA	790.675	742.131	48.544	19	10	9
Webcor Builders	SAN MATEO	CA	739.355	733.000	6.355	12	8	4
Cleveland Wrecking Co	VERNON	CA	497.880	497.880	-	1	1	-
McCarthy/Clarke/Hunt	LOS ANGELES	CA	497.880	497.880	-	1	1	-
Turner Construction Co	SAN JOSE	CA	453.284	393.032	60.252	21	11	10
Forest City Enterprises	LOS ANGELES	CA	386.279	386.279	-	2	2	-
Rosedin Electric	SAN JOSE	CA	373.250	370.000	3.250	2	1	1
<b>Top 10 by Number of Projects</b>								
Market Contractors Ltd	PORTLAND	OR	7.365	-	7.365	54	-	54
MS Walker & Associates Inc.	BAKERSFIELD	CA	103.046	94.261	8.785	38	27	11
A S R Constructors Inc	RIVERSIDE	CA	304.130	269.207	34.923	31	22	9
Lusardi Construction Company	SAN MARCOS	CA	292.277	290.077	2.200	31	29	2
RP Wages Inc	REDLANDS	CA	68.945	64.875	4.070	31	23	8
Devcon Construction	MILPITAS	CA	228.867	202.750	26.117	25	7	18
Magnum Enterprises	ANAHEIM	CA	45.985	34.226	11.759	25	18	7
SD Deacon Corporation of California	CITRUS HEIGHTS	CA	100.083	88.310	11.773	25	15	10

**Table 7.2 Most Active Market Players in SCE Territory in 2005  
according to F.W. Dodge**

Firm Name	Firm Location		Project Value (in \$Millions)			Number of Projects		
	City	State	Total	New		Total	New	
				Construction	Alteration		Construction	Alteration
<b>ARCHITECTS</b>								
<b>Top 10 by Project Value</b>								
Hellmuth Obata + Kassabaum Inc.	SAN FRANCISCO	CA	1,337.637	1,337.637	-	4	4	-
Lee Burkhardt Liu	MARINA DEL REY	CA	505.380	505.380	-	2	2	-
SmithGroup	SAN FRANCISCO	CA	270.000	270.000	-	1	1	-
Ware Malcomb	IRVINE	CA	262.075	261.675	0.400	21	19	2
RGA Architects	IRVINE	CA	256.293	256.293	-	8	8	-
W L C Architects	RANCHO CUCAMONGA	CA	229.198	186.698	42.500	32	17	15
HMC Group	SACRAMENTO	CA	222.778	171.500	51.278	16	4	12
Perkowitz & Ruth Architects	LONG BEACH	CA	219.850	195.950	23.900	31	22	9
Zimmer Gunsul Frasca Partnership	LOS ANGELES	CA	211.000	211.000	-	1	1	-
HPA Hill Pinckert Architects	NEWPORT BEACH	CA	203.857	203.857	-	10	10	-
<b>Top 10 by Number of Projects</b>								
W L C Architects	RANCHO CUCAMONGA	CA	229.198	186.698	42.500	32	17	15
Perkowitz & Ruth Architects	LONG BEACH	CA	219.850	195.950	23.900	31	22	9
Flewellling & Moody Architects	PASADENA	CA	69.026	35.716	33.310	26	6	20
Ware Malcomb	IRVINE	CA	262.075	261.675	0.400	21	19	2
Osborn Architects	GLENDALE	CA	25.913	12.266	13.647	17	3	14
Tarlos & Associates	IRVINE	CA	12.273	12.273	-	17	17	-
HMC Group	SACRAMENTO	CA	222.778	171.500	51.278	16	4	12
NTDStichler Architects	SAN DIEGO	CA	27.581	2.994	24.587	15	2	13
Los Angeles Co Dept of Public Works (LACDPW)	ALHAMBRA	CA	30.746	1.196	29.550	13	1	12
LPA Inc	IRVINE	CA	105.057	82.461	22.596	13	8	5
<b>ENGINEERS</b>								
<b>Top 10 by Project Value</b>								
TMAD Engineers	SAN FRANCISCO	CA	306.833	249.646	57.187	39	20	19
ARUP	SAN FRANCISCO	CA	270.000	270.000	-	1	1	-
Ted Jacob Engineering Group Inc	OAKLAND	CA	211.000	211.000	-	1	1	-
Frederick Brown Associates	NEWPORT BEACH	CA	202.444	180.791	21.653	21	16	5
Sasco Electric	SACRAMENTO	CA	150.000	150.000	-	1	1	-
Southland Industries	IRVINE	CA	150.000	150.000	-	1	1	-
Glumac International	SAN FRANCISCO	CA	142.891	142.891	-	6	6	-
C W A & Associates	RANCHO CUCAMONGA	CA	139.995	134.995	5.000	11	10	1
F T Andrews Inc	ANAHEIM	CA	136.363	121.703	14.660	15	12	3
RPM Engineers Inc	IRVINE	CA	130.001	122.940	7.061	20	16	4
<b>Top 10 by Number of Projects</b>								
TMAD Engineers	SAN FRANCISCO	CA	306.833	249.646	57.187	39	20	19
Frederick Brown Associates	NEWPORT BEACH	CA	202.444	180.791	21.653	21	16	5
Palmieri & Associates Inc.	SOUTH PASADENA	CA	91.825	88.500	3.325	20	16	4
RPM Engineers Inc	IRVINE	CA	130.001	122.940	7.061	20	16	4
G L P Engineering	SANTA ANA	CA	83.452	32.926	50.526	19	8	11
F T Andrews Inc	ANAHEIM	CA	136.363	121.703	14.660	15	12	3
Design West Engineering	SAN BERNARDINO	CA	111.893	110.478	1.415	14	11	3
American Mechanical & Plumbing	GLENDALE	CA	43.527	26.919	16.608	14	6	8
D L Engineering Group	GLENDALE	CA	38.547	22.735	15.812	13	6	7
Pacific Engineers Group	NORTH HOLLYWOOD	CA	45.556	34.082	11.474	12	5	7
<b>GENERAL CONTRACTORS</b>								
<b>Top 10 by Project Value</b>								
Cleveland Wrecking Co	VERNON	CA	497.880	497.880	-	1	1	-
McCarthy/Clarke/Hunt	LOS ANGELES	CA	497.880	497.880	-	1	1	-
McCarthy Building Companies Inc.	SAN FRANCISCO	CA	452.000	452.000	-	4	4	-
Rudolph & Sletten Inc	FOSTER CITY	CA	338.854	301.000	37.854	4	2	2
Oltmans Construction	WHITTIER	CA	278.487	278.241	0.246	13	12	1
A S R Constructors Inc	RIVERSIDE	CA	269.908	237.091	32.817	26	19	7
Fullmer Construction	ONTARIO	CA	200.350	200.350	-	9	9	-
Panattoni Construction Inc	SACRAMENTO	CA	193.084	193.084	-	15	15	-
RVH Constructors	ONTARIO	CA	171.880	170.880	1.000	8	7	1
Inland Pacific Title	SAN BERNARDINO	CA	157.768	152.768	5.000	8	6	2
<b>Top 10 by Number of Projects</b>								
RP Wages Inc	REDLANDS	CA	67.570	64.000	3.570	29	22	7
A S R Constructors Inc	RIVERSIDE	CA	269.908	237.091	32.817	26	19	7
Magnum Enterprises	ANAHEIM	CA	40.544	29.185	11.359	18	12	6
Panattoni Construction Inc	SACRAMENTO	CA	193.084	193.084	-	15	15	-
Oltmans Construction	WHITTIER	CA	278.487	278.241	0.246	13	12	1
Eleven Western Builders Inc	SACRAMENTO	CA	52.159	47.909	4.250	12	9	3
Inland Acoustics Inc	SAN BERNARDINO	CA	45.570	24.583	20.987	12	4	8
Ed Grush General Contractors Inc	LONG BEACH	CA	42.600	37.600	5.000	11	9	2

**Table 7.3 Most Active Market Players in PG&E Territory in 2005  
according to F.W. Dodge**

Firm Name	Firm Location		Project Value (in \$Millions)			Number of Projects		
	City	State	Total	New	Alteration	Total	New	Alteration
			Construction	Construction				
<b>ARCHITECTS</b>								
<b>Top 10 by Project Value</b>								
Chong Partners Architects	SAN FRANCISCO	CA	1,352.985	1,282.351	70.634	17	10	7
Hellmuth Obata + Kassabaum Inc.	SAN FRANCISCO	CA	1,202.637	1,202.637	-	4	4	-
Lee Burkhart Liu	MARINA DEL REY	CA	497.880	497.880	-	1	1	-
Kaplan McLaughlin Diaz	SAN FRANCISCO	CA	458.625	458.000	0.625	5	4	1
Kohn Pederson Fox	NEW YORK	NY	380.000	380.000	-	1	1	-
Anshen and Allen	SAN FRANCISCO	CA	379.305	374.650	4.655	4	3	1
Steinberg Architects	LOS ANGELES	CA	373.320	365.320	8.000	7	6	1
Gensler & Associates	SAN FRANCISCO	CA	349.700	241.000	108.700	4	1	3
SmithGroup	SAN FRANCISCO	CA	250.065	229.000	21.065	5	4	1
Zimmer Gunsul Frasca Partnership	LOS ANGELES	CA	211.000	211.000	-	1	1	-
<b>Top 10 by Number of Projects</b>								
Perkowitz & Ruth Architects	LONG BEACH	CA	183.280	172.780	10.500	18	13	5
Chong Partners Architects	SAN FRANCISCO	CA	1,352.985	1,282.351	70.634	17	10	7
DES Architects + Engineers	REDWOOD CITY	CA	104.624	96.000	8.624	13	3	10
Edwin S Darden Associates Inc	FRESNO	CA	177.033	168.845	8.188	12	8	4
Nadel Architects Inc.	LOS ANGELES	CA	115.150	114.850	0.300	11	9	2
Beverly Prior Architects	SAN FRANCISCO	CA	177.698	172.600	5.098	10	3	7
Lionakis Beaumont Design	SACRAMENTO	CA	137.949	131.454	6.495	10	6	4
City & County of San Francisco	SAN FRANCISCO	CA	139.700	132.751	6.949	9	3	6
Rainforth Grau Architects	SACRAMENTO	CA	101.346	97.912	3.434	9	6	3
Sugimura Associates	CAMPBELL	CA	98.718	75.858	22.860	9	3	6
<b>ENGINEERS</b>								
<b>Top 10 by Project Value</b>								
Flack & Kurtz Consulting Engineers	SAN FRANCISCO	CA	792.931	789.201	3.730	10	7	3
Capital Engineering Consultants Inc	SACRAMENTO	CA	649.094	535.247	113.847	85	38	47
ARUP	SAN FRANCISCO	CA	533.000	533.000	-	6	6	-
F W Associates Inc	SAN FRANCISCO	CA	527.777	413.819	113.958	12	4	8
Guttmann & Blaevoet	SAN FRANCISCO	CA	465.745	454.253	11.492	7	4	3
Ted Jacob Engineering Group Inc	OAKLAND	CA	361.000	361.000	-	2	2	-
Mazzetti & Associates Inc	SAN FRANCISCO	CA	228.831	210.914	17.917	11	5	6
TIMAD Engineers	SAN FRANCISCO	CA	218.526	188.918	29.608	12	8	4
Lawrence Nye Anderson Associates	FRESNO	CA	216.898	207.149	9.749	22	17	5
Charles A Martin & Associates	SACRAMENTO	CA	209.350	192.196	17.154	22	13	9
<b>Top 10 by Number of Projects</b>								
Capital Engineering Consultants Inc	SACRAMENTO	CA	649.094	535.247	113.847	85	38	47
Sacramento Engineering Consultants	SACRAMENTO	CA	71.831	65.081	6.750	30	20	10
Alfa Tech Consulting Engineers	SAN JOSE	CA	95.328	24.308	71.020	27	4	23
Integrated Design Associates	SANTA CLARA	CA	84.265	27.399	56.866	26	4	22
Thoma Electric Inc	SAN LUIS OBISPO	CA	206.868	193.413	13.455	23	18	5
Glumac International	SAN FRANCISCO	CA	163.487	140.023	23.464	23	12	11
OMahony & Myer Electrical Engineering	SANTA ROSA	CA	149.165	119.509	29.656	23	14	9
Turley & Associates	SACRAMENTO	CA	150.136	142.035	8.101	23	14	9
Charles A Martin & Associates	SACRAMENTO	CA	209.350	192.196	17.154	22	13	9
Lawrence Nye Anderson Associates	FRESNO	CA	216.898	207.149	9.749	22	17	5
<b>GENERAL CONTRACTORS</b>								
<b>Top 10 by Project Value</b>								
Rudolph & Sletten Inc	FOSTER CITY	CA	767.751	728.781	38.970	11	7	4
Westfield Corporation	LOS ANGELES	CA	760.400	760.000	0.400	4	2	2
Webcor Builders	SAN MATEO	CA	674.355	668.000	6.355	10	6	4
Cleveland Wrecking Co	VERNON	CA	497.880	497.880	-	1	1	-
McCarthy/Clarke/Hunt	LOS ANGELES	CA	497.880	497.880	-	1	1	-
Hensel Phelps Construction Co Inc	SAN JOSE	CA	462.168	462.168	-	7	7	-
McCarthy Building Companies Inc.	SAN FRANCISCO	CA	402.250	397.150	5.100	8	7	1
Forest City Enterprises	LOS ANGELES	CA	380.000	380.000	-	1	1	-
Rosedin Electric	SAN JOSE	CA	373.250	370.000	3.250	2	1	1
ACCO Engineered Systems	RANCHO CORDOVA	CA	370.000	370.000	-	1	1	-
<b>Top 10 by Number of Projects</b>								
MS Walker & Associates Inc.	BAKERSFIELD	CA	83.086	75.511	7.575	28	21	7
Market Contractors Ltd	PORTLAND	OR	3.105	-	3.105	23	-	23
WL Butler Construction Inc	REDWOOD CITY	CA	21.265	11.900	9.365	20	8	12
Devcon Construction	MILPITAS	CA	110.650	85.000	25.650	18	2	16
John Plane Construction	BURLINGAME	CA	42.459	4.909	37.550	18	2	16
SD Deacon Corporation of California	CITRUS HEIGHTS	CA	63.334	52.810	10.524	18	11	7
Midstate Construction	PETALUMA	CA	29.795	18.625	11.170	16	5	11
DPR Construction Inc	SAN DIEGO	CA	125.818	105.053	20.765	14	7	7

**Table 7.4 Most Active Market Players in SDG&E Territory in 2005  
according to F.W. Dodge**

Firm Name	Firm Location		Project Value (in \$Millions)			Number of Projects		
	City	State	Total	New	Alteration	Total	New	Alteration
				Construction			Construction	
<b>ARCHITECTS</b>								
<b>Top 10 by Project Value</b>								
Carrier Johnson Architects	SAN DIEGO	CA	188.500	186.500	2.000	4	3	1
NTDStichler Architects	SAN DIEGO	CA	142.841	130.867	11.974	11	7	4
Martinez + Cutri	SAN DIEGO	CA	142.500	142.500	-	2	2	-
ICJ Blackman Architecture Inc	SAN DIEGO	CA	136.946	110.147	26.799	5	3	2
Ware Malcomb	IRVINE	CA	130.500	130.500	-	8	8	-
Austin Veum Robbins Partners	LOS ANGELES	CA	117.630	111.130	6.500	6	5	1
Smith Consulting Architects	SAN DIEGO	CA	105.500	105.500	-	8	8	-
Davis Davis Architects	SAN DIEGO	CA	92.500	92.500	-	2	2	-
NBBJ Architecture Design Planning	SAN FRANCISCO	CA	90.000	90.000	-	1	1	-
Shears Adkins Architects	DENVER	CO	90.000	90.000	-	1	1	-
<b>Top 10 by Number of Projects</b>								
Roesling Nakamura Terada Architects	SAN DIEGO	CA	86.653	57.137	29.516	12	3	9
NTDStichler Architects	SAN DIEGO	CA	142.841	130.867	11.974	11	7	4
County of San Diego General Services	SAN DIEGO	CA	5.419	-	5.419	11	-	11
LPA Inc	IRVINE	CA	58.009	27.800	30.209	10	4	6
Smith Consulting Architects	SAN DIEGO	CA	105.500	105.500	-	8	8	-
Ware Malcomb	IRVINE	CA	130.500	130.500	-	8	8	-
HMC Group	SACRAMENTO	CA	45.345	24.375	20.970	6	3	3
SGPA Architecture & Planning	SAN DIEGO	CA	8.800	8.800	-	6	6	-
Austin Veum Robbins Partners	LOS ANGELES	CA	117.630	111.130	6.500	6	5	1
Jeff Katz Architecture	SAN DIEGO	CA	25.170	25.170	-	5	5	-
<b>ENGINEERS</b>								
<b>Top 10 by Project Value</b>								
McParlane & Associates	SAN DIEGO	CA	349.725	349.725	-	22	22	-
Johnson Consulting Engineers	POWAY	CA	285.871	247.067	38.804	21	12	9
ILA Zammit Engineering	SAN DIEGO	CA	255.796	252.196	3.600	24	20	4
Michael Wall Engineering	SAN DIEGO	CA	222.850	222.850	-	12	12	-
Walsh Engineers	SAN DIEGO	CA	122.965	118.965	4.000	15	11	4
Merrick & Associates	SAN DIEGO	CA	118.279	80.800	37.479	13	5	8
Frederick Brown Associates	NEWPORT BEACH	CA	112.234	98.785	13.449	8	5	3
TMAD Engineers	SAN FRANCISCO	CA	111.519	101.720	9.799	9	4	5
HVAC Engineering Inc	SAN DIEGO	CA	99.861	88.618	11.243	10	7	3
MPE Consulting Inc	SAN DIEGO	CA	95.734	95.734	-	7	7	-
<b>Top 10 by Number of Projects</b>								
ILA Zammit Engineering	SAN DIEGO	CA	255.796	252.196	3.600	24	20	4
McParlane & Associates	SAN DIEGO	CA	349.725	349.725	-	22	22	-
Johnson Consulting Engineers	POWAY	CA	285.871	247.067	38.804	21	12	9
Walsh Engineers	SAN DIEGO	CA	122.965	118.965	4.000	15	11	4
Merrick & Associates	SAN DIEGO	CA	118.279	80.800	37.479	13	5	8
Michael Wall Engineering	SAN DIEGO	CA	222.850	222.850	-	12	12	-
HVAC Engineering Inc	SAN DIEGO	CA	99.861	88.618	11.243	10	7	3
Turpin & Rattan Engineering Inc	LA MESA	CA	82.367	82.049	0.318	10	9	1
TMAD Engineers	SAN FRANCISCO	CA	111.519	101.720	9.799	9	4	5
Frederick Brown Associates	NEWPORT BEACH	CA	112.234	98.785	13.449	8	5	3
<b>GENERAL CONTRACTORS</b>								
<b>Top 10 by Project Value</b>								
Hensel Phelps Construction Co Inc	SAN JOSE	CA	232.500	232.500	-	4	4	-
Turner Construction Co	SAN JOSE	CA	225.000	190.500	34.500	7	4	3
Lusardi Construction Company	SAN MARCOS	CA	162.500	160.500	2.000	18	17	1
Reno Contracting Inc	SAN DIEGO	CA	132.900	132.900	-	5	5	-
Soltek Pacific	SAN DIEGO	CA	129.427	85.363	44.064	13	6	7
Snyder Langston Builders	IRVINE	CA	115.000	115.000	-	4	4	-
Dow Diversified	SACRAMENTO	CA	113.764	91.000	22.764	6	3	3
Western Rim Constructors Inc	ESCONDIDO	CA	112.473	103.573	8.900	6	5	1
Sundt Construction Company	SAN DIEGO	CA	102.500	102.500	-	3	3	-
The Clark Construction Group Inc.	COSTA MESA	CA	95.000	-	95.000	2	-	2
<b>Top 10 by Number of Projects</b>								
Lusardi Construction Company	SAN MARCOS	CA	162.500	160.500	2.000	18	17	1
Soltek Pacific	SAN DIEGO	CA	129.427	85.363	44.064	13	6	7
Randall Construction	SAN DIEGO	CA	4.938	-	4.938	10	-	10
Swinerton Builders	SAN DIEGO	CA	80.531	54.350	26.181	9	7	2
Grant General Contractors Inc	CARLSBAD	CA	20.725	20.725	-	8	8	-
Baker Electric	ESCONDIDO	CA	64.535	39.573	24.962	7	2	5
Douglas E Barnhart Inc	SAN DIEGO	CA	76.062	66.102	9.960	7	5	2
Turner Construction Co	SAN JOSE	CA	225.000	190.500	34.500	7	4	3

**Table 7.5 Most Active Market Players in SoCalGas Territory in 2005  
according to F.W. Dodge**

Firm Name	Firm Location		Project Value (in \$Millions)			Number of Projects		
			Total	New	Alteration	Total	New	Alteration
	City	State		Construction			Construction	
<b>ARCHITECTS</b>								
<b>Top 10 by Project Value</b>								
Hellmuth Obata + Kassabaum Inc.	SAN FRANCISCO	CA	1,071.223	1,067.637	3.586	4	3	1
Lee Burkhardt Liu	MARINA DEL REY	CA	497.880	497.880	-	1	1	-
Westfield Corporation	LOS ANGELES	CA	300.000	300.000	-	1	1	-
Zimmer Gunsul Frasca Partnership	LOS ANGELES	CA	211.000	211.000	-	1	1	-
DMJM/JGM Program Managers	LOS ANGELES	CA	188.140	-	188.140	3	-	3
AC Martin Partners	LOS ANGELES	CA	161.780	36.580	125.200	3	1	2
Gensler & Associates	SAN FRANCISCO	CA	140.000	37.500	102.500	3	1	2
The Metropolitan Water District of Southern Ca	LOS ANGELES	CA	130.000	130.000	-	1	1	-
Ware Malcomb	IRVINE	CA	127.325	127.125	0.200	5	4	1
Perkowitz & Ruth Architects	LONG BEACH	CA	124.398	120.898	3.500	9	6	3
<b>Top 10 by Number of Projects</b>								
Los Angeles Unified School District	LOS ANGELES	CA	6.314	-	6.314	11	-	11
Perkowitz & Ruth Architects	LONG BEACH	CA	124.398	120.898	3.500	9	6	3
Osborn Architects	GLENDALE	CA	10.997	5.126	5.871	8	2	6
LHA Leidenfrost Horowitz & Assoc	GLENDALE	CA	11.734	4.000	7.734	7	1	6
Los Angeles Co Dept of Public Works (LACDPW)	ALHAMBRA	CA	16.757	-	16.757	6	-	6
Martinez Architects Inc.	THOUSAND OAKS	CA	10.291	5.000	5.291	5	2	3
Nadel Architects Inc.	LOS ANGELES	CA	24.860	24.860	-	5	5	-
Ware Malcomb	IRVINE	CA	127.325	127.125	0.200	5	4	1
Bastien & Associates	TUSTIN	CA	87.243	49.743	37.500	4	3	1
Bruce A Miller	LOS ANGELES	CA	6.455	1.665	4.790	4	1	3
<b>ENGINEERS</b>								
<b>Top 10 by Project Value</b>								
Ted Jacob Engineering Group Inc	OAKLAND	CA	211.000	211.000	-	1	1	-
TMAD Engineers	SAN FRANCISCO	CA	173.714	166.214	7.500	8	6	2
Syska Hennessey Group Inc	SAN DIEGO	CA	123.742	112.500	11.242	3	2	1
Glumac International	SAN FRANCISCO	CA	101.791	97.500	4.291	4	3	1
Fields Devereaux	LOS ANGELES	CA	88.580	88.580	-	2	2	-
Design West Engineering	SAN BERNARDINO	CA	66.750	66.750	-	3	3	-
Toft Wolff Farrow	NEWPORT BEACH	CA	66.000	66.000	-	3	3	-
M-E Engineers Inc	CULVER CITY	CA	64.938	64.938	-	4	4	-
RE Wall & Associates Inc.	TUSTIN	CA	64.595	64.595	-	2	2	-
P2S Engineering Inc	LONG BEACH	CA	60.000	-	60.000	1	-	1
<b>Top 10 by Number of Projects</b>								
TMAD Engineers	SAN FRANCISCO	CA	173.714	166.214	7.500	8	6	2
Frederick Brown Associates	NEWPORT BEACH	CA	33.129	27.800	5.329	6	4	2
Los Angeles City Board of Public Works	LOS ANGELES	CA	36.213	36.213	-	6	6	-
Budlong & Associates Inc	CAMARILLO	CA	11.909	-	11.909	5	-	5
G L P Engineering	SANTA ANA	CA	31.934	17.598	14.336	4	2	2
Glumac International	SAN FRANCISCO	CA	101.791	97.500	4.291	4	3	1
Kruse & Associates	SAN DIEGO	CA	6.708	6.100	0.608	4	3	1
Mechanical Building Systems Engineering Inc	WESTLAKE VILLAGE	CA	7.573	5.360	2.213	4	2	2
M-E Engineers Inc	CULVER CITY	CA	64.938	64.938	-	4	4	-
RPM Engineers Inc	IRVINE	CA	29.110	29.110	-	4	4	-
<b>GENERAL CONTRACTORS</b>								
<b>Top 10 by Project Value</b>								
Westfield Corporation	LOS ANGELES	CA	654.200	654.200	-	4	4	-
Cleveland Wrecking Co	VERNON	CA	497.880	497.880	-	1	1	-
McCarthy/Clarke/Hunt	LOS ANGELES	CA	497.880	497.880	-	1	1	-
Rudolph & Sletten Inc	FOSTER CITY	CA	338.500	301.000	37.500	3	2	1
Taslimi Construction Company Inc	LOS ANGELES	CA	224.083	26.743	197.340	8	1	7
S J Amoroso Construction Co Inc	REDWOOD CITY	CA	170.544	170.544	-	3	3	-
Shimmick Construction Co Inc	HAYWARD	CA	130.000	130.000	-	1	1	-
WET Design	UNIVERSAL CITY	CA	125.000	-	125.000	1	-	1
Snyder Langston Builders	IRVINE	CA	115.000	113.000	2.000	4	3	1
Summit Builders	NEWPORT BEACH	CA	112.000	112.000	-	3	3	-
<b>Top 10 by Number of Projects</b>								
EA Environmental Const	AGOURA HILLS	CA	6.833	-	6.833	8	-	8
Pinnacle Contracting Corp	WOODLAND HILLS	CA	3.501	-	3.501	8	-	8
Taslimi Construction Company Inc	LOS ANGELES	CA	224.083	26.743	197.340	8	1	7
Sinanian Dev Co	TARZANA	CA	62.171	38.221	23.950	6	5	1
Sierra Pacific Constructors	WOODLAND HILLS	CA	2.005	-	2.005	6	-	6
Waters L E Construction Company	LOS ANGELES	CA	2.370	-	2.370	6	-	6
Cannon Constructors	ENCINO	CA	3.726	2.098	1.628	5	1	4
Market Contractors Ltd	PORTLAND	OR	0.725	-	0.725	5	-	5

*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	auto service, showrooms, auto body shops, convenience stores, car wash stations and parking structures in residential multifamily buildings <sup>3</sup>
Storage	warehouses and storage facilities
Other	other nonresidential buildings including industrial, manufacturing, and agricultural (wineries, greenhouses)

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<sup>3</sup> The Savings By Design Service building type also includes utility, sanitary and sewage services, direct mail advertising services, security systems services, laundry services, and generic “services” buildings.

## APPENDIX B

### CIRB NONRESIDENTIAL NEW CONSTRUCTION PERMIT VALUE IN 2005

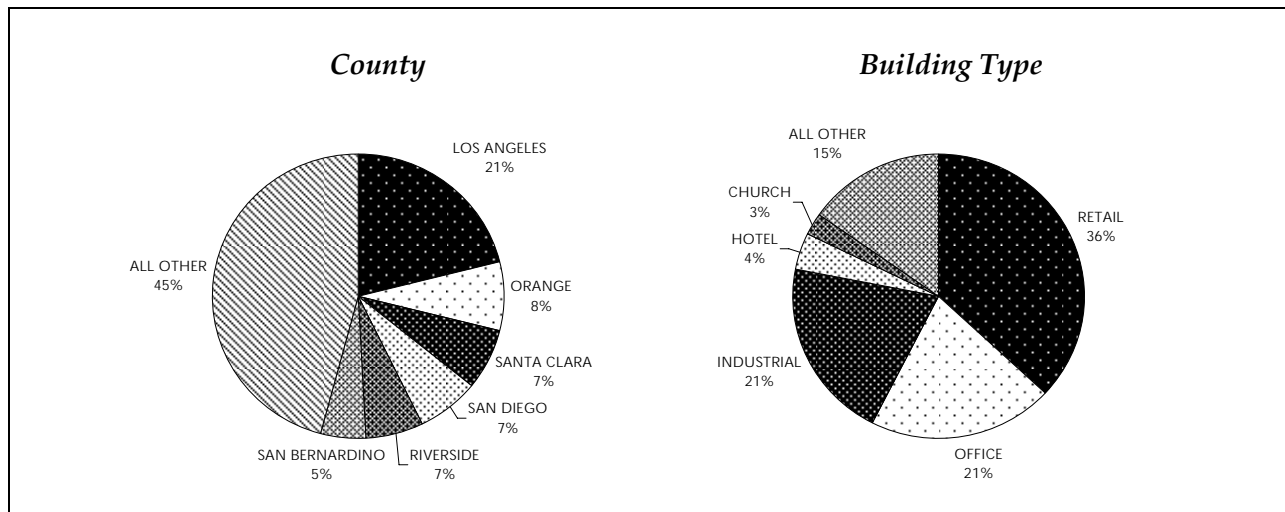
This Appendix presents information on the value of nonresidential new construction permits that were filed in calendar year 2005 in the State of California. The data were collected by the Construction Industry Research Board from 523 city and county building departments in California.

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 2005, by building type. As shown in Exhibit B.1 below, Los Angeles, Orange, Santa Clara, San Diego, Riverside and San Bernardino Counties account for the highest value of permits filed in the State in 2005. Conversely, Alpine, Sierra and Inyo Counties had the lowest volume of permit activity in 2005. Among building types, the highest permit value was recorded in the retail, office and industrial segments, but the hotel and church 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 2005**



**Table B.1 CIRB Statewide Nonresidential Permit Valuation in 2005  
by Building Type and County (\$1,000)**

COUNTY	AMUSEMENT	CHURCH	HOTEL	MEDICAL	OFFICE	OTHER	EDUCATION	RETAIL	SERVICE	INDUSTRIAL	TOTAL NEW	ALTERATION	TOTAL
ALAMEDA	1,236	9,375	1,396	13,162	54,118	5,011		114,057	440	85,587	284,381	398,762	683,143
ALPINE											0	124	124
AMADOR						4,267		17,018			21,286	1,952	23,238
BUTTE				1,069	6,220	7,759	643	13,866	259	6,481	36,297	28,922	65,220
CALAVERAS						4,910		2,690			7,600	4,356	11,957
COLUSA					3,288	2,037		233			5,557	685	6,242
CONTRA COSTA	1,014	1,286		64,400	23,838	13,116	11,539	41,613	1,455	14,975	173,237	160,465	333,702
DEL NORTE					495	866		1,179			2,540	646	3,186
EL DORADO		4,108	10,979		3,823	6,151		19,453		2,223	46,737	16,830	63,567
FRESNO		10,997	9,211		68,847	13,560		86,928	495	65,106	255,144	85,973	341,117
GLENN						1,745		2,801			4,546	2,502	7,049
HUMBOLDT					1,105	470		6,946		450	8,970	10,052	19,023
IMPERIAL	14,540	807	3,675		4,013	3,338		21,311	1,500		49,183	19,050	68,233
INYO								1,573			1,573	911	2,483
KERN		1,173	10,927		17,098	25,190		27,272	180	58,323	140,163	81,750	221,914
KINGS	450	4,431			1,857	3,393		29,541		697	40,369	16,031	56,399
LAKE	735				130	1,441		1,629			3,935	3,124	7,059
LASSEN				8,073		643					8,716	3,553	12,269
LOS ANGELES	35,085	27,719	82,494	6,391	213,937	58,656	158,727	549,441	20,837	255,986	1,409,272	1,648,490	3,057,762
MADERA		5,718			1,815	7,045		9,098		7,507	31,184	10,402	41,586
MARIN						3,383	2,993	27,878			34,253	31,977	66,230
MARIPOSA		1,673				4,048					5,721	743	6,464
MENDOCINO					2,391	2,517		1,653		1,202	7,764	7,963	15,727
MERCED		5,949	5,000		24,349	33,529		6,437		9,343	84,607	27,495	112,101
MODOC						1,255					1,255	1,464	2,719
MONO						162				2,790	2,952	1,837	4,789
MONTEREY	6,600				5,259	6,396		25,049	2,883		46,186	55,102	101,289
NAPA	2,339		30,019	1,091	7,519	14,202		25,895		11,688	92,754	37,393	130,148
NEVADA	3,672		775		3,287	1,769		477	1,313	3,745	15,039	8,808	23,847
ORANGE	1,100	26,265	31,032		188,773	7,445	12,083	135,950	344	37,216	440,209	642,289	1,082,498
PLACER		1,277		17,319	58,536	9,985		62,187	455	6,871	156,630	118,346	274,976
PLUMAS			1,945		340	1,574		1,320			5,179	3,231	8,410
RIVERSIDE	37,224	26,890	6,470		122,806	28,646	6,341	338,357	4,422	101,357	672,514	263,749	936,263
SACRAMENTO		9,372	9,477		64,627	8,418	15,455	162,328	3,179	46,181	319,038	262,347	581,385
SAN BENITO						1,261		3,296			4,557	2,083	6,640
SAN BERNARDINO	15,000	2,288	30,818	2,600	76,622	22,237	13,199	141,561	2,330	226,191	532,846	195,604	728,450
SAN DIEGO	4,927	10,708	10,019		178,863	26,446	6,442	154,222	6,029	144,277	541,933	435,352	977,286
SAN FRANCISCO			18,000		34,403	3,048	8,000	28,510		29,587	121,548	457,968	579,516
SAN JOAQUIN	2,700	3,053	2,554		37,336	20,393	3,000	145,732	3,736	70,463	288,967	115,942	404,909
SAN LUIS OBISPO		1,203	15,341		6,937	9,560		29,652		4,607	67,301	41,214	108,515
SAN MATEO		8,502		8,724	42,216	11,351	4,153	37,811	350	55,403	168,510	237,054	405,564
SANTA BARBARA				470	9,383	7,192		15,555		10,259	42,859	66,441	109,300
SANTA CLARA	10,715	4,500		19,784	105,873	15,687	8,451	110,489	2,793	16,143	294,435	727,957	1,022,392
SANTA CRUZ		851			3,694	2,536		12,989	1,044		21,114	23,163	44,277
SHASTA		6,412		647	3,663	4,390		29,560	258	1,936	46,867	11,463	58,330
SIERRA						425					425	73	498
SISKIYOU	406					2,503		920			3,829	3,942	7,771
SOLANO	7,174	771		9,716	40,159	6,583		27,318		244,276	335,996	46,651	382,647
SONOMA	2,902	5,202		3,104	11,695	10,971		55,188	2,000	954	92,016	89,907	181,923
STANISLAUS	2,700	14,614	3,250	2,187	116,939	17,610		68,940	1,837	18,773	246,851	66,075	312,926
SUTTER			4,084		7,100	3,658		25,175		12,253	52,270	16,106	68,376
TEHAMA				3,656	1,583	4,790					10,029	6,767	16,796
TRINITY						1,218					1,218	1,922	3,140
TULARE		3,710	2,000		9,993	20,945	600	59,475	650	6,713	104,085	34,854	138,939
TUOLUMNE					5,099	1,910		1,054		973	9,036	3,047	12,083
VENTURA	12,726	4,843	22,578	7,165	6,296	18,484	17,984	82,672	448	11,619	184,815	128,553	313,368
YOLO					7,361	7,814		58,307			73,482	54,948	128,430
YUBA						1,024		535			1,560	3,870	5,430
CALIFORNIA	163,247	203,695	312,044	169,558	1,583,686	504,963	269,610	2,823,142	59,238	1,572,156	7,661,339	6,728,283	14,389,623



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 2005  
by Quarter and County (\$1,000)**

COUNTY	NEW CONSTRUCTION					ADDITIONS AND ALTERATIONS					2005 TOTAL
	Q1, 2005	Q2, 2005	Q3, 2005	Q4, 2005	2005 Total	Q1, 2005	Q2, 2005	Q3, 2005	Q4, 2005	2005 Total	
ALAMEDA	61,577	91,056	70,171	61,577	284,381	161,620	186,932	172,971	161,620	683,143	967,524
ALPINE	0	0	0	0	0	0	124	0	0	124	124
AMADOR	852	1,989	17,592	852	21,286	1,044	2,149	19,001	1,044	23,238	44,523
BUTTE	7,572	9,870	11,283	7,572	36,297	16,259	17,342	15,359	16,259	65,220	101,517
CALAVERAS	2,110	2,378	1,002	2,110	7,600	3,112	3,591	2,143	3,112	11,957	19,557
COLUSA	463	702	3,930	463	5,557	686	839	4,030	686	6,242	11,799
CONTRA COSTA	34,562	47,219	56,894	34,562	173,237	72,798	92,744	95,361	72,798	333,702	506,940
DEL NORTE	390	1,452	308	390	2,540	585	1,453	563	585	3,186	5,726
EL DORADO	3,774	19,021	20,168	3,774	46,737	7,077	25,009	24,404	7,077	63,567	110,304
FRESNO	73,211	47,812	60,911	73,211	255,144	88,748	74,367	89,254	88,748	341,117	596,261
GLENN	557	2,274	1,157	557	4,546	1,531	2,613	1,373	1,531	7,049	11,595
HUMBOLDT	1,626	770	4,949	1,626	8,970	3,445	2,777	9,356	3,445	19,023	27,993
IMPERIAL	12,491	6,125	18,076	12,491	49,183	17,849	11,546	20,989	17,849	68,233	117,417
INYO	515	543	0	515	1,573	602	1,158	122	602	2,483	4,056
KERN	34,358	36,434	35,014	34,358	140,163	57,799	53,401	52,914	57,799	221,914	362,077
KINGS	8,465	14,408	9,030	8,465	40,369	13,708	17,013	11,971	13,708	56,399	96,768
LAKE	818	1,792	506	818	3,935	1,398	3,218	1,045	1,398	7,059	10,993
LASSEN	4,036	0	643	4,036	8,716	4,665	1,204	1,735	4,665	12,269	20,986
LOS ANGELES	305,801	464,716	332,954	305,801	1,409,272	688,053	916,758	764,899	688,053	3,057,762	4,467,034
MADERA	6,717	4,139	13,611	6,717	31,184	8,644	8,280	16,018	8,644	41,586	72,769
MARIN	10,562	11,287	1,843	10,562	34,253	18,264	23,035	6,667	18,264	66,230	100,483
MARIPOSA	1,866	1,808	181	1,866	5,721	2,085	1,983	311	2,085	6,464	12,185
MENDOCINO	1,354	631	4,425	1,354	7,764	3,110	2,920	6,588	3,110	15,727	23,491
MERCED	15,509	32,921	20,667	15,509	84,607	22,830	39,673	26,769	22,830	112,101	196,708
MODOC	113	317	711	113	1,255	253	1,430	783	253	2,719	3,974
MONO	0	140	2,812	0	2,952	27	1,492	3,243	27	4,789	7,740
MONTEREY	5,754	12,891	21,787	5,754	46,186	18,603	26,306	37,776	18,603	101,289	147,475
NAPA	16,226	50,763	9,539	16,226	92,754	23,220	63,661	20,046	23,220	130,148	222,902
NEVADA	2,564	5,455	4,455	2,564	15,039	6,133	6,390	5,190	6,133	23,847	38,886
ORANGE	97,378	108,104	137,350	97,378	440,209	247,440	289,243	298,375	247,440	1,082,498	1,522,707
PLACER	28,381	50,248	49,621	28,381	156,630	54,458	86,715	79,345	54,458	274,976	431,607
PLUMAS	818	2,278	1,265	818	5,179	1,278	2,630	3,224	1,278	8,410	13,590
RIVERSIDE	107,944	210,473	246,153	107,944	672,514	168,557	291,947	307,201	168,557	936,263	1,608,777
SACRAMENTO	53,202	130,320	82,313	53,202	319,038	110,783	196,775	163,045	110,783	581,385	900,423
SAN BENITO	458	448	3,193	458	4,557	883	906	3,969	883	6,640	11,197
SAN BERNARDINO	85,418	160,768	201,241	85,418	532,846	133,330	203,837	257,951	133,330	728,450	1,261,295
SAN DIEGO	93,980	214,480	139,494	93,980	541,933	182,395	338,740	273,755	182,395	977,286	1,519,219
SAN FRANCISCO	2,446	69,157	47,499	2,446	121,548	100,190	194,627	184,508	100,190	579,516	701,064
SAN JOAQUIN	81,409	38,148	88,002	81,409	288,967	114,921	68,368	106,700	114,921	404,909	693,875
SAN LUIS OBISPO	19,717	19,018	8,848	19,717	67,301	30,392	30,225	17,506	30,392	108,515	175,816
SAN MATEO	47,490	4,935	68,595	47,490	168,510	103,962	75,378	122,262	103,962	405,564	574,073
SANTA BARBARA	6,351	14,235	15,921	6,351	42,859	20,286	35,096	33,632	20,286	109,300	152,159
SANTA CLARA	75,883	70,237	72,431	75,883	294,435	221,197	300,726	279,272	221,197	1,022,392	1,316,827
SANTA CRUZ	2,958	1,313	13,886	2,958	21,114	6,177	8,312	23,611	6,177	44,277	65,391
SHASTA	6,516	27,486	6,348	6,516	46,867	9,112	29,908	10,198	9,112	58,330	105,196
SIERRA	25	140	236	25	425	25	203	246	25	498	923
SISKIYOU	403	2,076	948	403	3,829	1,067	3,262	2,375	1,067	7,771	11,600
SOLANO	48,621	211,829	26,924	48,621	335,996	56,577	228,157	41,337	56,577	382,647	718,643
SONOMA	18,681	23,773	30,880	18,681	92,016	36,107	50,227	59,483	36,107	181,923	273,939
STANISLAUS	69,742	54,030	53,336	69,742	246,851	83,007	71,644	75,267	83,007	312,926	559,776
SUTTER	8,075	24,338	11,783	8,075	52,270	13,035	26,872	15,434	13,035	68,376	120,646
TEHAMA	2,734	1,960	2,602	2,734	10,029	4,802	3,101	4,092	4,802	16,796	26,825
TRINITY	330	316	243	330	1,218	1,089	626	336	1,089	3,140	4,358
TULARE	16,940	34,417	35,788	16,940	104,085	24,342	48,278	41,976	24,342	138,939	243,024
TUOLUMNE	1,564	1,304	4,603	1,564	9,036	2,497	1,549	5,541	2,497	12,083	21,119
VENTURA	31,818	83,722	37,457	31,818	184,815	63,824	106,856	78,864	63,824	313,368	498,182
YOLO	28,571	6,341	9,999	28,571	73,482	42,243	14,867	29,077	42,243	128,430	201,913
YUBA	207	1,055	90	207	1,560	1,011	1,973	1,435	1,011	5,430	6,989
CALIFORNIA	1,551,903	2,435,864	2,121,670	1,551,903	7,661,339	3,079,135	4,300,456	3,930,897	3,079,135	14,389,623	22,050,962

**Table B.3 CIRB Nonresidential Permit Valuation in 2005  
by Quarter and Building Type (\$1,000)**

	AMUSEMENT	CHURCH	HOTEL	MEDICAL	OFFICE	OTHER	EDUCATION	RETAIL	SERVICE	INDUSTRIAL	TOTAL NEW	ALTERATION	TOTAL
<b>CALIFORNIA</b>													
Q1, 2005	25,889	42,642	44,106	45,738	271,531	113,772	70,850	612,140	17,597	307,636	1,418,478	1,527,232	2,945,710
Q2, 2005	74,487	58,507	173,685	39,957	461,478	127,934	49,787	836,511	12,995	600,525	1,657,620	1,864,592	3,522,212
Q3, 2005	36,981	59,905	50,146	38,126	579,146	149,485	78,122	762,351	11,050	356,358	1,731,303	1,809,227	3,540,530
Q4, 2005	25,889	42,642	44,106	45,738	271,531	113,772	70,850	612,140	17,597	307,636	1,514,797	1,527,232	3,042,029
2005 Total	163,247	203,695	312,044	169,558	1,583,686	504,963	269,610	2,823,142	59,238	1,572,156	7,661,339	6,728,283	14,389,623

**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 municipal territories, and is consistent with the territory in which SoCalGas offers the Savings By Design program.

## **APPENDIX D**

### **GLOSSARY OF MEASURES PROPOSED BY SBD PARTICIPANTS**

Whole Building	Measures committed by Whole Building Approach participants
Whole Building + Refrigeration	Measures proposed to be installed by JJ Hirsch Associates and VaCom in grocery and other large box stores as a whole building “alternative delivery method”. All the projects that are grouped under the WB-Ref measure have significant refrigeration-process loads.
Daylighting	Daylighting measures
Skylight	Skylights
HVAC chiller	High-efficiency chillers
HVAC unitary	High-efficiency package or split systems
HVAC controls	Controls for HVAC systems
HVAC other	Other measures labeled as “HVAC”, such as air handling units, pumps, variable speed drives and motors
Motors	High-efficiency motors and other measures labeled as “motors”, with the exception of HVAC motors
Lighting	Lighting measures, including lighting power density reduction
Envelope	Envelope measures, including insulation, windows and white roofs
Process + Other	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”, gas measures such as boilers, furnaces and water heating, and measures labeled “other” or “miscellaneous”.