

**NRNC MARKET CHARACTERIZATION AND
PROGRAM ACTIVITIES TRACKING REPORT
QUARTERS 3-4, 2001**

FINAL

Prepared for

**Richard Pulliam
Southern California Edison Co
Statewide NRNC MA&E Program
Douglas Mahone, Catherine Chappell, Program Managers**

Prepared by

**QUANTUM CONSULTING INC.
2030 Addison Street
Berkeley, CA 94704**

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TABLE OF CONTENTS

Section		Page
1	INTRODUCTION	1-1
	1.1 NRNC Data Sources	1-1
	1.2 The Savings By Design Program	1-2
	1.3 Report Layout	1-2
2	STATEWIDE NONRESIDENTIAL NEW CONSTRUCTION TRENDS	2-1
	2.1 New Construction Market Characteristics in Quarters 3-4, 2001	2-1
	2.2 SBD New Construction Program Participation in Quarters 3-4, 2001	2-12
3	STATEWIDE NONRESIDENTIAL ALTERATION (R&R) TRENDS	3-1
	3.1 Alteration (R&R) Market Characteristics in Quarters 3-4, 2001	3-1
	3.2 SBD R&R Program Participation in Quarters 3-4, 2001	3-6
4	SBD PROGRAM PENETRATION INTO THE NRNC MARKET IN QUARTERS 3-4, 2001	4-1
5	NRNC MARKET AND PROGRAM TRACKING SUMMARY	5-1
6	MARKET PLAYERS IN QUARTERS 3-4, 2001	6-1
Appendix		
A	GLOSSARY OF BUILDING TYPES RECORDED BY F.W. DODGE	A-1
B	CIRB NRNC PERMIT VALUE IN QUARTERS 3-4, 2001	B-1
C	CEC ZIP CODE – TO – UTILITY MAPPING	C-1
D	GLOSSARY OF MEASURES IMPLEMENTED BY SBD PARTICIPANTS	D-1

1. INTRODUCTION

The statewide Market Characterization and Program Activity Tracking (MCPAT) Study was commissioned to track trends in the nonresidential new construction (NRNC) market, as well as participation in the Savings By Design statewide NRNC Program, in PY2000 – 2001. 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, 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 Quarters 3-4, 2001.

1.1 NRNC DATA SOURCES

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

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

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

It is important to note that there are differences between the *permit* valuation reported by CIRB and the *project start* valuation reported by F.W. Dodge. Some of these differences are attributable to the time delay that naturally occurs between permit filing and construction start. Others are attributable to the fact that F.W. Dodge records publicly-bid projects, whereas some projects do not go to public bid. Appendix B summarizes the value of nonresidential *permits filed* in Quarters 3-4, 2001, by building type, as recorded by the CIRB.

1.2 THE SAVINGS BY DESIGN PROGRAM

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

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

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

1.3 REPORT LAYOUT

The core of this report starts in Chapter 2 with a characterization of the NRNC market in Quarters 3-4, 2001, as described by F.W. Dodge. Drawing on the Savings By Design Program participation databases maintained by the three California electric investor-owned utilities (IOUs) PG&E, SCE, and SDG&E, the chapter then summarizes the characteristics of new construction program participants in Quarters 3-4, 2001.

Chapter 3 presents the market characteristics for alteration projects, as described by F.W. Dodge. It then describes program participation in Quarters 3-4, 2001 for the renovation/remodel/first tenant improvement (R&R) element of the SBD Program.

An evaluation of SBD Program penetration into the market in Quarters 3-4, is presented in Chapter 4.

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 5.

Based on F.W. Dodge Reports, Chapter 6 presents the most active market actors (architects and engineers) in Quarters 3-4, 2001.

2. STATEWIDE NONRESIDENTIAL NEW CONSTRUCTION TRENDS

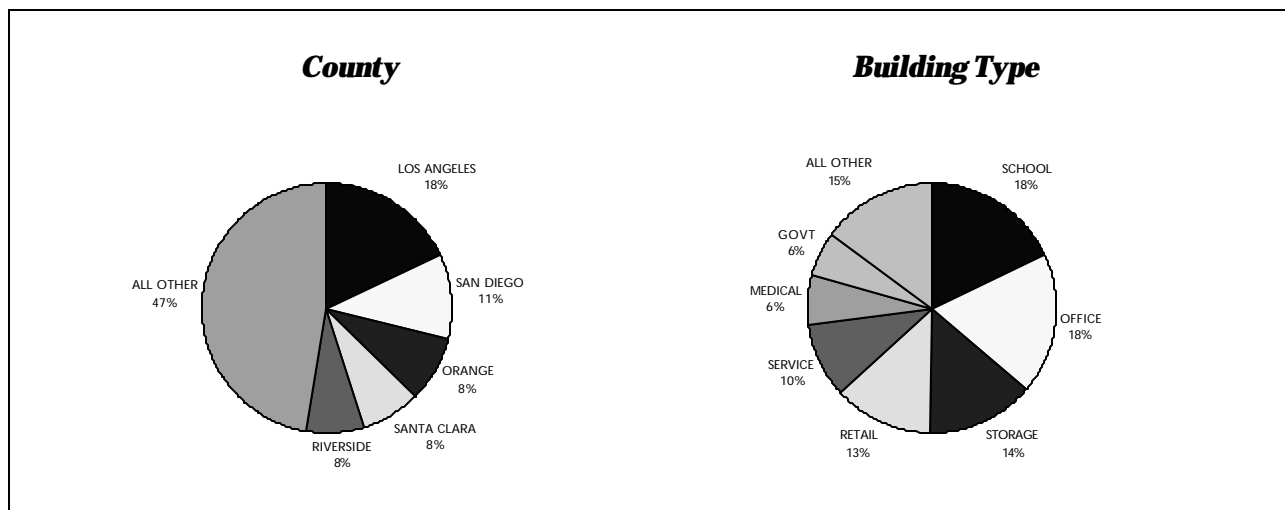
This chapter presents information on the nonresidential new construction activity that has occurred in Quarters 3-4, 2001, in the State of California. The first section covers the total valuation, the number of project starts, and the total square footage of new construction projects by county, as reported 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 Quarters 3-4, 2001.

2.1 NEW CONSTRUCTION MARKET CHARACTERISTICS IN QUARTERS 3-4, 2001

The following exhibits 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.

Table 2.1 presents the F.W. Dodge valuation for nonresidential new construction projects that have started construction during Quarters 3-4, 2001. To emulate the 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. As shown in Exhibit 2.1 below, Los Angeles, San Diego, Orange, Santa Clara, and Riverside Counties account for the highest value of projects that *have started construction* in Quarters 3-4, 2001. F.W. Dodge did not report any project starts in Quarters 3-4, 2001 in Alpine, Del Norte, Mariposa and Modoc Counties.

Exhibit 2.1
New Construction Market Segments with the Highest Project Start Valuation
in Quarters 3-4, 2001

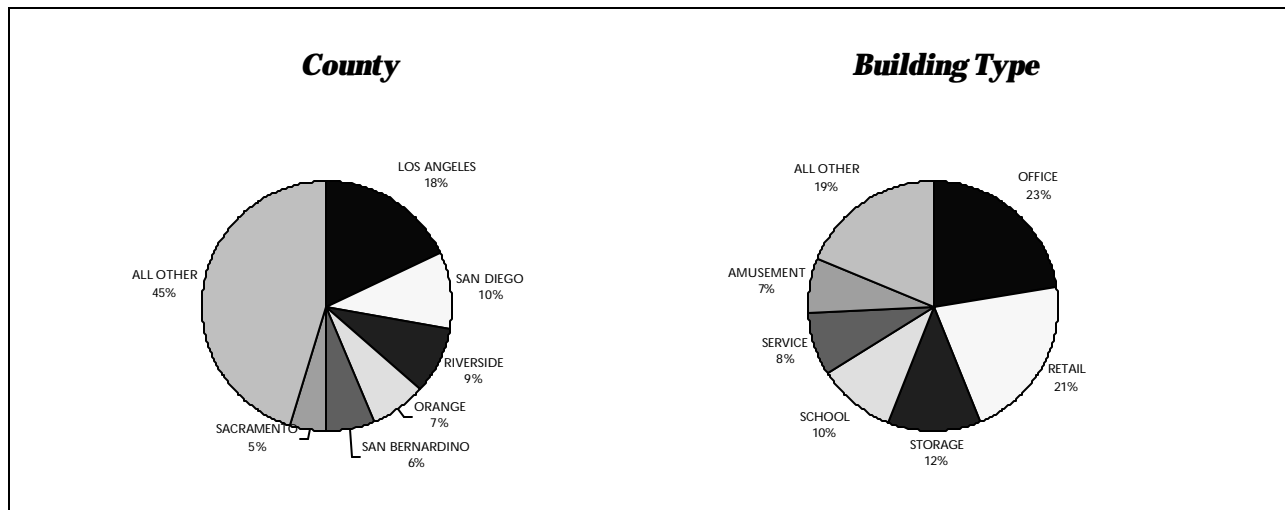


Among building types, office, school, storage and retail account for the highest project start valuation, but the service, medical and government segments also show relatively high market activity. The education (museums, libraries) and assembly (churches) segments account for the lowest project start value in Quarters 3-4, 2001.

Among utility territories, PG&E accounts for the largest project start value in Quarters 3-4, 2001, a large fraction of which is concentrated in the office and school segments. SCE follows, with a large fraction of the project value concentrated in the storage, school, retail and office segments. In the SDG&E service territory, the service and school segments account for the highest project start value. Non-IOU areas, consisting of the service territories of multiple municipal utilities and other entities, also account for a relatively large share of the project start value. A large fraction of the Non-IOU project value is concentrated in the office, medical and school segments.

Table 2.2 presents the number of nonresidential new construction and addition projects that have started construction in Quarters 3-4, 2001, as reported by F.W. Dodge. As shown in Exhibit 2.2 below, Los Angeles, San Diego, Riverside, Orange and San Bernardino Counties have the highest number of new construction project starts. Among building types, office, retail, storage and school account for the highest number of project starts, while the education segment (museums, libraries) accounts for the lowest number of project starts in Quarters 3-4, 2001. Among utility territories, PG&E leads with the highest number of project starts, closely followed by SCE. SDG&E accounts for the smallest number of project starts. Non-IOU areas have a significant number of project starts, approximately double when compared to the number in SDG&E territory.

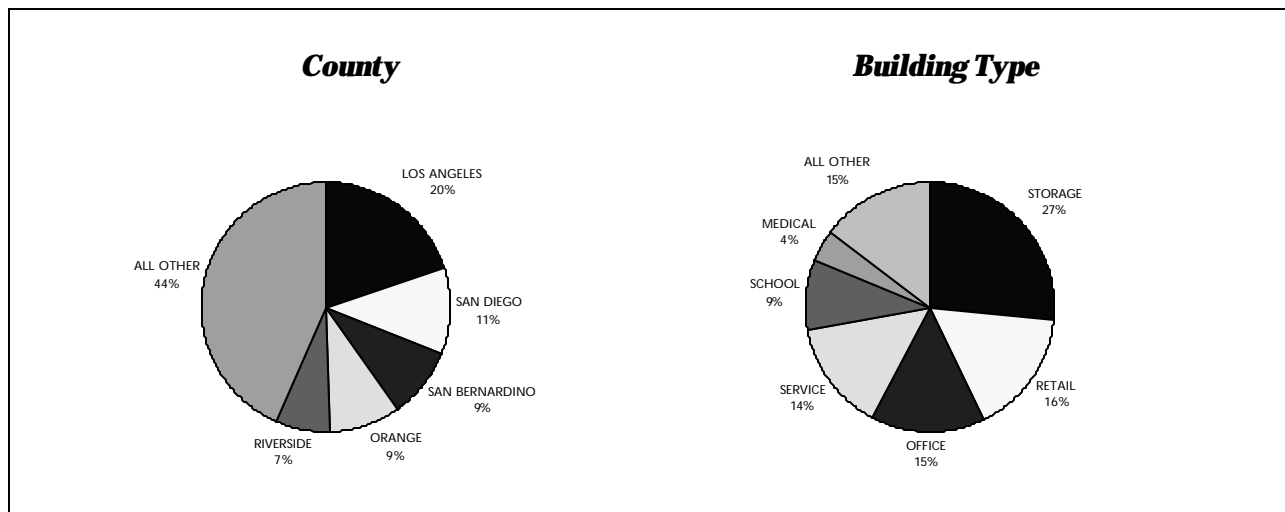
Exhibit 2.2
New Construction Market Segments with the Highest Number of Project Starts
in Quarters 3-4, 2001



Tables 2.3 and 2.4 summarize quarterly project starts by county and building type, for a 1-year period ending in December 2001. These data show very little variation from quarter to quarter in the number of project starts.

Table 2.5 presents the number of square feet of nonresidential new construction and addition projects that have started construction in Quarters 3-4, 2001, as reported by F.W. Dodge. As shown in Exhibit 2.3 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 Counties. The storage, retail, office and service segments account for large square footage of new space, while the assembly and education segments account for the least amount of new space built in Quarters 3-4, 2001.

Exhibit 3.3
New Construction Market Segments with the Highest Square Footage
in Quarters 3-4, 2001



Among utility territories, PG&E accounts for the largest number of new square feet built in Quarters 3-4, 2001, half of which is concentrated in the office, retail and storage segments. SCE follows closely, with over half of the square footage concentrated in the same three segments. In the SDG&E service territory, the service, office, storage and retail segments account for the highest square footage built. 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 Quarters 3-4, 2001. A large fraction of the Non-IOU project area is concentrated in the office, service and retail segments.

Tables 2.6 and 2.7 summarize quarterly square feet of nonresidential new construction built, by county and building type for a 1-year time period ending in December 2001. Again, the volume of new space built does not change significantly from quarter to quarter, either geographically or by building type.

**Table 2.1 F.W. Dodge Valuation of New Construction Project Starts
in Quarters 3-4, 2001
by Building Type, County and Service Territory (\$1,000)**

	AMUSEMENT	ASSEMBLY	EDUCATION	GOVT	HOTEL	MEDICAL	OFFICE	RETAIL	SCHOOL	SERVICE	STORAGE	OTHER	TOTAL
COUNTY													
ALAMEDA	4,962	2,425	9,700	5,656	3,000	23,105	59,791	19,624	5,588	82,801	8,157		224,809
ALPINE													0
AMADOR						1,000							1,000
BUTTE	257					362	1,579	3,500	16,572		1,231		23,501
CALAVERAS				487	540			201		83	520		1,831
COLUSA				1,147					2,998				4,145
CONTRA COSTA	17,441	4,000		1,974	20,700	7,000	35,812	27,822	55,052	21,450	2,115	16,580	209,946
DEL NORTE													0
EL DORADO	95	500					7,140	8,159	8,208	423		231	24,756
FRESNO	2,972	2,438	600	1,195		696	2,170	32,970	42,491	750	1,294	154	87,730
GLENN										471			471
HUMBOLDT						2,000			2,060	774			4,834
IMPERIAL	3,218					312	1,657	5,750	961	14,000	1,168	500	27,566
INYO									7,000		5,611		12,611
KERN	120	158			491	2,175	11,133	4,276	11,455	125	67,459	8,821	106,213
KINGS				46,800	100		86			2,077	263	179	49,505
LAKE									2,411	594			3,005
LASSEN	156			122,052		9,000							131,208
LOS ANGELES	74,254	19,592	31,767	3,988	21,506	83,947	285,880	168,608	137,858	147,020	206,618	26,053	1,207,091
MADERA										342			688
MARIN				875		80	7,905	150	11,662	1,500	6,095		28,267
MARIPOSA													0
MENDOCINO								500	960			1,421	2,881
MERCED	150	3,000					6,084	2,393			10,200	416	22,243
MODOC													0
MONO	758												758
MONTEREY	3,000					1,180	5,657	1,441	32,840	150	2,286	3,824	50,378
NAPA	300				1,200	140	2,262	131	6,150	99	2,859	8,126	21,267
NEVADA	2,000	280	632				2,946	408			134	112	6,512
ORANGE	35,549	17,879		10,426	47,094	14,673	99,443	132,987	100,462	26,332	80,404	284	565,533
PLACER	2,090	3,852		7,255	3,500	7,105	38,961	59,104	10,196	7,307	9,167	7,273	155,810
PLUMAS							859				1,164		2,023
RIVERSIDE	7,000	6,311	27,245	12,531	52,350	10,486	54,279	110,634	111,880	32,224	72,178	3,626	500,744
SACRAMENTO	4,330	6,290		5,794	23,000	3,570	110,465	29,509	32,483	22,512	25,387	10,416	273,756
SAN BENITO							1,533	245					1,778
SAN BERNARDINO	13,502	11,717	2,269	8,001		15,246	14,607	45,873	64,584	2,731	230,534	16,563	425,627
SAN DIEGO	67,298	11,201	72,085	3,370	28,825	5,971	95,334	72,025	153,879	166,204	39,760	7,869	723,821
SAN FRANCISCO	1,325				25,000	20,000	69,935	11,640	12,810	33,755	730	1,824	177,019
SAN JOAQUIN	450	98		374		13,717	8,683	29,836	46,351	1,350	36,390	4,437	141,686
SAN LUIS OBISPO	3,293	1,000			6,508		4,177	8,027	29,687	6,484	4,474	3,691	67,341
SAN MATEO	30,074	3,280		87,500	18,510		35,309	1,055	6,000	14,356	17,919	83	214,086
SANTA BARBARA	4,432	935		1,367	1,477	1,990	13,798	4,948	11,451		2,324	8,078	50,800
SANTA CLARA	29,312	1,184	16,560			183,150	122,045	6,727	95,295	50,341	6,329	14,849	525,792
SANTA CRUZ			600						53,816		750		55,166
SHASTA		2,700			6,500		1,468	10,660		323	890		22,541
SIERRA											1,466		1,466
SISKIYOU	3,227	596				2,500	304	500	1,382				8,509
SOLANO	3,707			5,177	12,714		6,000	5,827	5,329		25,348	173	64,275
SONOMA	4,079	707				3,000	9,752	7,636	17,102		1,585	3,523	47,384
STANISLAUS	300	273			3,000		5,216	7,472	34,525	480	10,642	3,181	65,089
SUTTER		2,300							971	371	472		4,114
TEHAMA	936			6,208				210				534	7,888
TRINITY				173			2,467						2,640
TULARE	1,110	286				1,172	2,360	1,010	9,398	1,100	19,379	5,251	41,066
TUOLUMNE	98					666	706				93		1,563
VENTURA	1,308	1,380		40,000		9,324	2,900	18,146	27,663	3,656	22,990	9,692	137,059
YOLO	1,029	3,500					71,390	3,190	31,788	1,500	3,000	22,124	137,521
YUBA	1,257												1,257
CALIFORNIA	325,389	107,882	161,458	372,350	276,015	423,567	1,202,093	844,165	1,202,424	641,608	929,731	189,888	6,676,570
UTILITY													
SCE	71,499	44,283	29,514	66,320	49,574	94,609	146,284	368,618	313,520	102,905	561,007	50,929	1,899,062
PG&E	110,662	30,165	28,092	119,538	111,272	100,448	507,871	249,909	523,374	223,545	225,836	99,706	2,330,418
SDG&E	67,673	16,271	72,085	3,370	28,825	10,709	110,451	77,935	180,400	179,104	49,760	7,869	804,452
Non-IOU	75,555	17,163	31,767	183,122	86,344	217,801	437,487	147,703	185,130	136,054	93,128	31,384	1,642,638

**Table 2.2 F.W. Dodge Number of Nonresidential New Construction Project Starts
in Quarters 3-4, 2001
by Building Type, County and Service Territory**

	AMUSEMENT	ASSEMBLY	EDUCATION	GOVT	HOTEL	MEDICAL	OFFICE	RETAIL	SCHOOL	SERVICE	STORAGE	OTHER	TOTAL
COUNTY													
ALAMEDA	5	3	1	3	1	2	30	15	7	14	7	.	88
ALPINE	.	.	.	.	.	.	.	.	.	.	.	.	0
AMADOR	.	.	.	.	.	1	.	.	.	.	.	.	1
BUTTE	1	.	.	.	.	2	2	2	1	.	4	.	12
CALAVERAS	.	.	.	1	1	.	.	2	.	1	2	.	7
COLUSA	.	.	.	1	.	.	.	.	1	.	.	.	2
CONTRA COSTA	9	1	.	2	2	3	12	11	10	6	2	3	61
DEL NORTE	.	.	.	.	.	.	.	.	.	.	.	.	0
EL DORADO	1	1	.	.	.	.	7	6	3	1	.	2	21
FRESNO	2	3	1	1	.	1	8	10	7	1	5	1	40
GLENN	.	.	.	.	.	.	.	.	.	1	.	.	1
HUMBOLDT	.	.	.	.	.	1	.	.	1	1	.	.	3
IMPERIAL	1	.	.	.	.	1	3	1	1	1	5	1	14
INYO	.	.	.	.	.	.	.	.	1	.	4	.	5
KERN	1	1	.	.	1	2	10	11	8	1	16	10	61
KINGS	.	.	.	8	1	.	1	.	2	.	1	1	14
LAKE	.	.	.	.	.	.	.	.	1	4	.	.	5
LASSEN	1	.	.	2	.	1	.	.	.	.	.	.	4
LOS ANGELES	27	12	11	5	4	13	84	109	45	62	49	23	444
MADERA	.	.	.	.	.	.	.	.	.	1	1	.	2
MARIN	.	.	.	1	.	1	6	1	5	1	3	.	18
MARIPOSA	.	.	.	.	.	.	.	.	.	.	.	.	0
MENDOCINO	.	.	.	.	.	.	.	1	1	.	.	2	4
MERCED	1	2	.	.	.	.	5	3	.	.	2	2	15
MODOC	.	.	.	.	.	.	.	.	.	.	.	.	0
MONO	1	.	.	.	.	.	.	.	.	.	.	.	1
MONTEREY	1	.	.	.	.	3	11	4	7	1	4	6	37
NAPA	1	.	.	.	1	1	1	1	2	1	3	3	14
NEVADA	1	2	1	.	.	.	4	1	.	.	1	1	11
ORANGE	17	10	.	3	7	8	39	45	17	9	18	2	175
PLACER	2	3	.	1	1	5	20	22	3	6	5	4	72
PLUMAS	.	.	.	.	.	.	1	.	.	.	6	.	7
RIVERSIDE	19	6	2	5	7	4	51	56	21	13	29	2	215
SACRAMENTO	4	11	.	2	3	4	35	26	8	8	10	4	115
SAN BENITO	.	.	.	.	.	.	2	2	.	.	.	.	4
SAN BERNARDINO	12	8	1	7	.	7	19	36	13	8	37	6	154
SAN DIEGO	19	10	9	3	6	6	68	60	18	18	17	11	245
SAN FRANCISCO	5	.	.	.	1	3	23	9	2	9	3	4	59
SAN JOAQUIN	1	1	.	1	.	1	3	11	7	1	9	10	45
SAN LUIS OBISPO	2	1	.	.	4	.	7	11	7	1	7	5	45
SAN MATEO	9	2	.	1	3	.	12	6	2	5	3	1	44
SANTA BARBARA	3	3	.	1	1	2	14	4	5	.	3	6	42
SANTA CLARA	11	1	2	.	.	6	32	8	21	11	4	11	107
SANTA CRUZ	.	.	1	.	.	.	.	.	4	.	1	.	6
SHASTA	.	1	.	.	1	.	5	9	.	2	2	.	20
SIERRA	.	.	.	.	.	.	.	.	.	.	2	.	2
SISKIYOU	1	1	.	.	.	1	2	1	1	.	.	.	7
SOLANO	1	.	.	1	3	.	1	5	2	.	2	2	17
SONOMA	8	1	.	.	.	1	9	12	3	.	2	3	39
STANISLAUS	1	1	.	.	1	.	9	8	5	2	8	5	40
SUTTER	.	1	.	.	.	.	.	2	.	1	1	.	5
TEHAMA	1	.	.	1	.	.	.	2	.	.	.	1	5
TRINITY	.	.	.	1	.	.	2	.	.	.	.	.	3
TULARE	1	1	.	.	.	4	5	3	5	2	5	10	36
TUOLUMNE	1	.	.	.	.	1	2	.	.	.	1	.	5
VENTURA	3	2	.	1	.	3	5	9	5	3	9	8	48
YOLO	2	1	.	.	.	.	2	3	3	1	1	5	18
YUBA	1	.	.	.	.	.	.	.	.	.	.	.	1
CALIFORNIA	177	90	29	52	49	88	552	528	255	197	294	155	2,466
UTILITY													
SCE	51	30	3	16	11	21	131	175	71	57	123	35	724
PG&E	65	24	6	17	21	30	205	158	108	63	92	68	857
SDG&E	20	15	9	3	6	9	76	63	21	20	19	11	272
Non-IOU	41	21	11	16	11	28	140	132	55	57	60	41	613

**Table 2.3 F.W. Dodge Number of Nonresidential New Construction Project Starts
in 1-Year Period
by Quarter, County and Service Territory**

	Q1, 2001	Q2, 2001	Q3, 2001	Q4, 2001	2001 Total
COUNTY					
ALAMEDA	47	54	47	41	189
ALPINE	0	0	0	0	0
AMADOR	14	2	0	1	17
BUTTE	14	12	7	5	38
CALAVERAS	0	2	3	4	9
COLUSA	0	1	1	1	3
CONTRA COSTA	25	29	36	25	115
DEL NORTE	0	0	0	0	0
EL DORADO	5	10	9	12	36
FRESNO	35	25	20	20	100
GLENN	0	1	1	0	2
HUMBOLDT	0	2	3	0	5
IMPERIAL	7	5	8	6	26
INYO	4	2	4	1	11
KERN	32	24	42	19	117
KINGS	5	7	13	1	26
LAKE	3	0	4	1	8
LASSEN	1	1	4	0	6
LOS ANGELES	162	238	263	181	844
MADERA	13	2	1	1	17
MARIN	12	7	10	8	37
MARIPOSA	0	0	0	0	0
MENDOCINO	2	2	1	3	8
MERCED	7	12	8	7	34
MODOC	0	0	0	0	0
MONO	2	0	1	0	3
MONTEREY	8	10	19	18	55
NAPA	6	5	5	9	25
NEVADA	2	3	5	6	16
ORANGE	78	67	96	79	320
PLACER	22	35	39	33	129
PLUMAS	3	5	6	1	15
RIVERSIDE	80	92	108	107	387
SACRAMENTO	52	40	60	55	207
SAN BENITO	0	3	1	3	7
SAN BERNARDINO	80	73	73	81	307
SAN DIEGO	104	125	141	104	474
SAN FRANCISCO	31	37	38	21	127
SAN JOAQUIN	10	13	26	19	68
SAN LUIS OBISPO	18	25	26	19	88
SAN MATEO	32	27	29	15	103
SANTA BARBARA	20	22	31	11	84
SANTA CLARA	87	76	63	44	270
SANTA CRUZ	3	1	5	1	10
SHASTA	9	9	9	11	38
SIERRA	1	1	0	2	4
SISKIYOU	1	1	3	4	9
SOLANO	10	11	8	9	38
SONOMA	14	30	23	16	83
STANISLAUS	13	22	26	14	75
SUTTER	1	3	5	0	9
TEHAMA	1	3	1	4	9
TRINITY	0	0	3	0	3
TULARE	7	10	22	14	53
TUOLUMNE	1	0	3	2	6
VENTURA	27	22	28	20	97
YOLO	7	11	9	9	36
YUBA	0	1	1	0	2
CALIFORNIA	1,118	1,221	1,398	1,068	4,805
UTILITY					
SCE	301	351	387	337	1,376
PG&E	457	472	497	360	1,786
SDG&E	119	144	154	118	535
Non-IOU	241	254	360	253	1,108

**Table 2.4 F.W. Dodge Number of Nonresidential New Construction Project Starts
in 1-Year Period
by Quarter, Building Type and Service Territory**

	AMUSEMENT	ASSEMBLY	EDUCATION	GOVT	HOTEL	MEDICAL	OFFICE	RETAIL	SCHOOL	SERVICE	STORAGE	OTHER	TOTAL
CALIFORNIA													
Q1, 2001	73	32	8	15	26	39	294	221	97	95	140	78	1,118
Q2, 2001	89	30	21	16	47	37	250	295	116	88	155	77	1,221
Q3, 2001	97	47	18	30	28	44	323	283	155	115	164	94	1,398
Q4, 2001	80	43	11	22	21	44	229	245	100	82	130	61	1,068
2001 Total	339	152	58	83	122	164	1,096	1,044	468	380	589	310	4,805
SCE													
Q1, 2001	21	9	.	4	4	5	56	85	30	16	46	25	301
Q2, 2001	22	9	2	1	12	7	58	99	37	22	62	20	351
Q3, 2001	26	16	1	6	8	11	79	85	45	28	65	17	387
Q4, 2001	25	14	2	10	3	10	52	90	26	29	58	18	337
2001 Total	94	48	5	21	27	33	245	359	138	95	231	80	1,376
PG&E													
Q1, 2001	24	11	1	7	9	18	140	76	39	41	52	39	457
Q2, 2001	34	11	7	15	19	13	119	84	59	36	44	31	472
Q3, 2001	35	12	4	9	13	14	121	94	63	38	56	38	497
Q4, 2001	30	12	2	8	8	16	84	64	45	25	36	30	360
2001 Total	123	46	14	39	49	61	464	318	206	140	188	138	1,786
SDG&E													
Q1, 2001	12	2	4	1	6	6	33	16	7	18	10	4	119
Q2, 2001	12	6	2	.	9	4	29	41	12	13	10	6	144
Q3, 2001	12	7	5	2	2	4	43	34	12	12	11	10	154
Q4, 2001	8	8	4	1	4	5	33	29	9	8	8	1	118
2001 Total	44	23	15	4	21	19	138	120	40	51	39	21	535
Non-IOU													
Q1, 2001	16	10	3	3	7	10	65	44	21	20	32	10	241
Q2, 2001	21	4	10	.	7	13	44	71	8	17	39	20	254
Q3, 2001	24	12	8	13	5	15	80	70	35	37	32	29	360
Q4, 2001	17	9	3	3	6	13	60	62	20	20	28	12	253
2001 Total	78	35	24	19	25	51	249	247	84	94	131	71	1,108

**Table 2.5 F.W. Dodge Area of Nonresidential New Construction Project Starts
in Quarters 3-4, 2001
by Building Type, County and Service Territory (1,000 sqft)**

	AMUSEMENT	ASSEMBLY	EDUCATION	GOVT	HOTEL	MEDICAL	OFFICE	RETAIL	SCHOOL	SERVICE	STORAGE	OTHER	TOTAL
COUNTY													
ALAMEDA	19	26	40	20	34	246	613	374	54	1,457	201	.	3,084
ALPINE	.	.	.	.	.	.	.	.	.	.	.	.	0
AMADOR	.	.	.	.	.	7	.	.	.	.	.	.	7
BUTTE	3	.	.	.	.	4	21	28	80	.	30	.	167
CALAVERAS	.	.	.	4	5	.	.	7	.	2	13	.	30
COLUSA	.	.	.	5	.	.	.	.	13	.	.	.	17
CONTRA COSTA	93	25	.	9	185	110	412	509	281	335	37	167	2,163
DEL NORTE	.	.	.	.	.	.	.	.	.	.	.	.	0
EL DORADO	1	10	.	.	.	.	84	138	104	8	.	4	349
FRESNO	29	34	6	9	.	7	27	407	317	17	34	4	889
GLENN	.	.	.	.	.	.	.	.	9	9	.	.	9
HUMBOLDT	.	.	.	.	.	40	.	.	9	7	.	.	56
IMPERIAL	16	.	.	.	.	2	17	110	13	189	38	2	387
INYO	.	.	.	.	.	.	.	.	29	.	58	.	86
KERN	1	3	.	.	8	20	156	56	108	6	1,890	206	2,454
KINGS	.	.	.	252	2	.	1	.	18	.	8	3	284
LAKE	.	.	.	.	.	.	.	.	22	11	.	.	33
LASSEN	1	.	.	640	.	60	.	.	.	.	.	.	701
LOS ANGELES	584	201	244	23	272	793	2,673	2,323	888	3,252	4,647	395	16,294
MADERA	.	.	.	.	.	.	.	.	.	7	10	.	16
MARIN	.	.	.	14	.	1	166	3	53	31	72	.	339
MARIPOSA	.	.	.	.	.	.	.	.	.	.	.	.	0
MENDOCINO	.	.	.	.	.	.	.	6	4	.	.	15	25
MERCED	2	37	.	.	.	.	52	55	.	.	547	6	700
MODOC	.	.	.	.	.	.	.	.	.	.	.	.	0
MONO	4	.	.	.	.	.	.	.	.	.	.	.	4
MONTEREY	12	.	.	.	.	9	54	26	149	3	54	85	392
NAPA	2	.	.	.	18	2	28	2	82	2	67	59	262
NEVADA	24	4	7	.	.	.	26	8	.	.	3	3	74
ORANGE	312	151	.	76	493	157	1,195	2,333	648	367	1,613	7	7,352
PLACER	21	38	.	40	60	83	428	918	65	101	206	129	2,088
PLUMAS	.	.	.	.	.	.	6	.	.	.	29	.	36
RIVERSIDE	94	88	130	60	362	94	706	1,515	775	685	1,280	91	5,879
SACRAMENTO	41	80	.	38	212	34	1,356	453	188	503	683	199	3,787
SAN BENITO	.	.	.	.	.	.	19	4	.	.	.	.	24
SAN BERNARDINO	157	141	17	60	.	196	181	814	514	61	5,141	335	7,616
SAN DIEGO	376	120	614	25	320	76	1,399	1,227	939	2,694	1,100	132	9,021
SAN FRANCISCO	11	.	.	.	144	206	304	175	37	652	17	19	1,564
SAN JOAQUIN	3	2	.	3	.	80	49	558	270	26	979	89	2,057
SAN LUIS OBISPO	31	12	.	.	133	.	38	125	147	114	156	70	825
SAN MATEO	225	41	.	250	186	.	265	18	13	199	193	4	1,394
SANTA BARBARA	41	13	.	14	25	26	135	74	85	.	67	69	548
SANTA CLARA	141	15	103	.	.	985	1,133	94	441	766	135	155	3,966
SANTA CRUZ	.	.	5	.	.	.	.	.	174	.	15	.	194
SHASTA	.	26	.	.	49	.	18	157	.	4	27	.	282
SIERRA	.	.	.	.	.	.	.	.	.	.	65	.	65
SISKIYOU	17	7	.	.	.	41	4	9	11	.	.	.	90
SOLANO	21	.	.	24	187	.	115	103	24	.	933	4	1,410
SONOMA	34	4	.	.	.	35	122	129	123	.	65	21	533
STANISLAUS	2	3	.	.	50	.	62	97	174	13	318	32	752
SUTTER	.	29	.	.	.	.	.	12	.	6	8	.	55
TEHAMA	9	.	.	25	.	.	.	4	.	.	.	2	40
TRINITY	.	.	.	1	.	.	19	.	.	.	.	.	20
TULARE	5	6	.	.	.	17	24	14	75	23	280	67	509
TUOLUMNE	1	.	.	.	.	7	8	.	.	.	2	.	17
VENTURA	12	18	.	200	.	131	32	365	148	52	587	256	1,801
YOLO	6	22	.	.	.	.	251	60	264	18	60	201	882
YUBA	14	.	.	.	.	.	.	.	.	.	.	.	14
CALIFORNIA	2,363	1,155	1,166	1,791	2,745	3,469	12,197	13,309	7,334	11,618	21,665	2,830	81,642
UTILITY													
SCE	710	477	147	369	573	846	1,990	5,866	2,170	1,954	12,133	1,077	28,311
PG&E	705	315	160	418	1,126	974	4,325	3,977	2,963	3,760	6,281	1,247	26,250
SDG&E	379	167	614	25	320	139	1,604	1,333	1,108	2,870	1,357	132	10,047
Non-IOU	570	197	244	979	727	1,510	4,279	2,133	1,093	3,034	1,894	375	17,034

**Table 2.6 F.W. Dodge Area of Nonresidential New Construction Project Starts
in 1-Year Period
by Quarter, County and Service Territory (1,000 sqft)**

	Q1, 2001	Q2, 2001	Q3, 2001	Q4, 2001	2001 Total
COUNTY					
ALAMEDA	1,843	2,967	2,438	646	7,894
ALPINE	0	0	0	0	0
AMADOR	28	28	0	7	63
BUTTE	396	295	132	35	857
CALAVERAS	0	8	17	14	38
COLUSA	0	4	5	13	21
CONTRA COSTA	1,156	733	1,233	930	4,051
DEL NORTE	0	0	0	0	0
EL DORADO	34	457	82	266	839
FRESNO	527	1,359	467	422	2,775
GLENN	0	2	9	0	11
HUMBOLDT	0	30	56	0	86
IMPERIAL	396	184	228	158	967
INYO	117	86	58	29	289
KERN	2,215	559	410	2,044	5,228
KINGS	41	269	281	3	594
LAKE	19	0	11	22	52
LASSEN	4	10	701	0	715
LOS ANGELES	10,587	10,593	8,353	7,942	37,475
MADERA	121	20	7	10	157
MARIN	270	81	269	70	690
MARIPOSA	0	0	0	0	0
MENDOCINO	19	11	4	21	55
MERCED	229	179	616	83	1,108
MODOC	0	0	0	0	0
MONO	29	0	4	0	33
MONTEREY	61	180	180	211	633
NAPA	113	140	193	69	516
NEVADA	9	244	50	24	326
ORANGE	4,739	4,136	4,575	2,777	16,228
PLACER	559	793	1,099	989	3,439
PLUMAS	32	9	16	19	76
RIVERSIDE	1,920	2,910	3,098	2,782	10,709
SACRAMENTO	2,353	1,598	2,343	1,444	7,738
SAN BENITO	0	62	6	18	86
SAN BERNARDINO	4,185	3,237	4,653	2,963	15,038
SAN DIEGO	4,551	3,389	6,125	2,896	16,961
SAN FRANCISCO	3,253	1,010	769	796	5,828
SAN JOAQUIN	481	842	827	1,230	3,379
SAN LUIS OBISPO	294	310	556	269	1,429
SAN MATEO	2,161	2,503	785	608	6,057
SANTA BARBARA	214	371	444	105	1,133
SANTA CLARA	5,645	3,141	1,970	1,997	12,753
SANTA CRUZ	266	2	189	5	462
SHASTA	32	25	153	129	338
SIERRA	19	9	0	65	93
SISKIYOU	2	1	58	33	93
SOLANO	440	285	362	1,048	2,135
SONOMA	566	543	278	255	1,642
STANISLAUS	421	290	548	204	1,463
SUTTER	25	152	55	0	232
TEHAMA	6	5	2	38	50
TRINITY	0	0	20	0	20
TULARE	205	59	314	195	773
TUOLUMNE	2	0	10	7	20
VENTURA	1,419	512	1,018	784	3,733
YOLO	107	104	385	498	1,093
YUBA	0	2	14	0	16
CALIFORNIA	52,110	44,734	46,473	35,169	178,486
UTILITY					
SCE	14,027	14,616	17,355	10,956	56,954
PG&E	21,661	17,320	14,210	12,041	65,231
SDG&E	5,462	3,846	6,488	3,559	19,355
Non-IOU	10,961	8,952	8,420	8,613	36,946

**Table 2.7 F.W. Dodge Area of Nonresidential New Construction Project Starts
in 1-Year Period
by Quarter, Building Type and Service Territory (1,000 sqft)**

	AMUSEMENT	ASSEMBLY	EDUCATION	GOVT	HOTEL	MEDICAL	OFFICE	RETAIL	SCHOOL	SERVICE	STORAGE	OTHER	TOTAL
CALIFORNIA													
Q1, 2001	1,055	392	118	1,430	1,899	2,392	12,208	7,403	3,315	9,304	9,724	2,870	52,110
Q2, 2001	1,809	426	287	469	3,973	1,268	9,199	6,505	3,800	4,258	10,070	2,670	44,734
Q3, 2001	1,726	658	961	1,283	1,831	1,156	7,583	7,426	4,127	6,699	10,961	2,060	46,473
Q4, 2001	638	497	204	508	914	2,313	4,614	5,882	3,207	4,919	10,703	770	35,169
1-Year Total	5,228	1,974	1,571	3,690	8,617	7,130	33,604	27,216	14,449	25,181	41,458	8,370	178,486
SCE													
Q1, 2001	247	96	.	1,270	295	95	3,566	3,011	1,395	480	2,634	939	14,027
Q2, 2001	313	99	36	11	1,244	111	1,350	1,685	1,541	1,548	5,644	1,035	14,616
Q3, 2001	456	242	81	259	451	358	1,238	3,236	1,361	1,048	7,822	804	17,355
Q4, 2001	254	234	66	110	122	488	752	2,630	810	907	4,310	273	10,956
1-Year Total	1,270	671	183	1,649	2,113	1,052	6,906	10,563	5,106	3,982	20,410	3,051	56,954
PG&E													
Q1, 2001	349	91	3	75	753	472	5,000	2,704	912	6,261	3,700	1,342	21,661
Q2, 2001	1,029	231	70	458	1,138	630	4,822	2,484	1,611	1,938	1,902	1,007	17,320
Q3, 2001	501	169	106	101	818	426	2,798	2,315	1,508	2,470	2,172	826	14,210
Q4, 2001	204	145	55	318	307	548	1,527	1,662	1,455	1,290	4,109	421	12,041
1-Year Total	2,082	637	233	952	3,017	2,076	14,148	9,165	5,486	11,958	11,883	3,596	65,231
SDG&E													
Q1, 2001	220	56	68	1	591	545	1,543	690	371	900	358	119	5,462
Q2, 2001	212	73	7	.	1,251	129	389	767	336	390	273	19	3,846
Q3, 2001	348	134	572	15	207	39	534	935	685	2,382	512	124	6,488
Q4, 2001	31	33	42	10	113	100	1,070	398	423	488	845	8	3,559
1-Year Total	811	296	688	26	2,162	814	3,536	2,790	1,815	4,159	1,988	269	19,355
Non-IOU													
Q1, 2001	241	150	47	84	260	1,281	2,099	998	637	1,664	3,032	470	10,961
Q2, 2001	255	24	175	.	340	398	2,637	1,568	312	383	2,251	610	8,952
Q3, 2001	420	113	203	909	355	333	3,013	941	573	800	455	306	8,420
Q4, 2001	149	84	42	70	372	1,177	1,266	1,192	520	2,235	1,439	68	8,613
1-Year Total	1,065	371	466	1,063	1,326	3,189	9,014	4,699	2,042	5,082	7,177	1,455	36,946

2.2 SBD NEW CONSTRUCTION PROGRAM PARTICIPATION IN QUARTERS 3-4, 2001

Savings By Design (SBD) Program activity for nonresidential new construction participants for whom the IOUs have committed funds in Quarters 3-4, 2001 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, and that an agreement was signed between the utility and the customer, detailing the conditions of participation in the program. 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 participants.

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

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

Table 2.8 presents the number of new construction nonresidential participants to the SBD Program for which funds were committed in Quarters 3-4, 2001.

Table 2.9 summarizes the number of square feet of new construction committed in Quarters 3-4, 2001.

Table 2.10 shows the estimated annual MWh savings attributable to new construction measures committed in Quarters 3-4, 2001.

Table 2.11 presents the frequency with which classes of measures were installed by new construction SBD participants in Quarters 3-4, 2001. A glossary of the measure classes is presented in Appendix D.

Table 2.12 summarizes the estimated annual MWh savings by measure class, in new construction committed in Quarters 3-4, 2001.

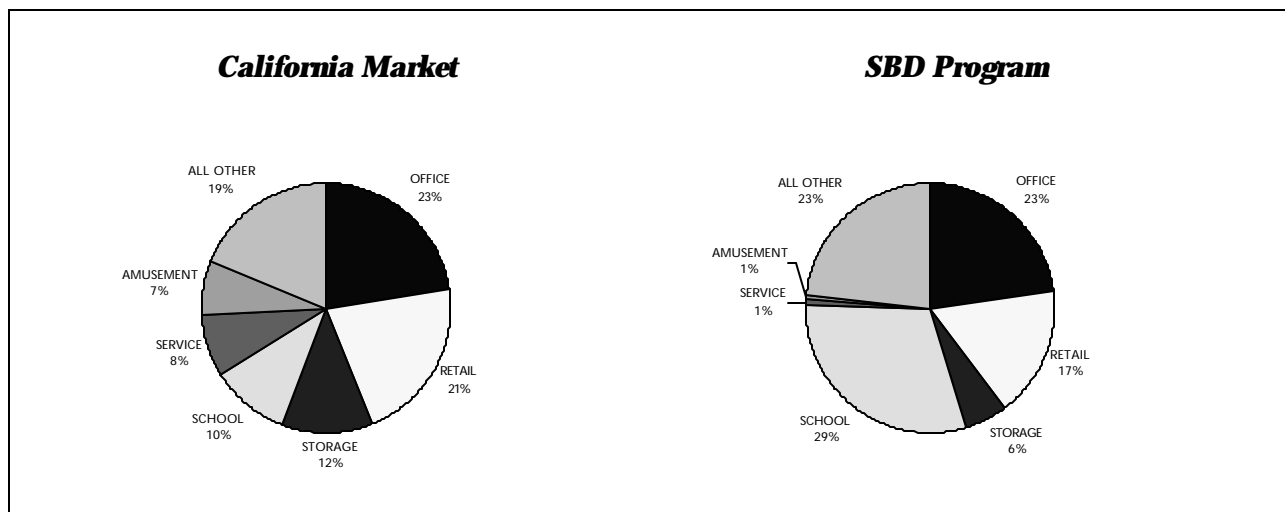
Table 2.8 Number of Nonresidential New Construction SBD Participants in Quarters 3-4, 2001

	AMUSEMENT	ASSEMBLY	EDUCATION	GOVT	HOTEL	MEDICAL	OFFICE	RETAIL	SCHOOL	SERVICE	STORAGE	OTHER	TOTAL
CALIFORNIA													
Whole Building Approach	1	2	2	2	.	.	36	10	38	1	7	9	108
Systems Approach	1	11	1	.	12	14	54	56	79	3	15	38	284
Total	2	13	3	2	12	14	90	66	117	4	22	47	392
SCE													
Whole Building Approach	.	.	.	.	.	.	4	10	2	.	7	7	30
Systems Approach	.	2	.	.	.	3	10	22	18	.	10	24	89
Total	.	2	.	.	.	3	14	32	20	.	17	31	119
PG&E													
Whole Building Approach	1	1	2	2	.	.	19	.	8	1	.	1	35
Systems Approach	1	6	1	.	3	9	35	31	27	3	3	7	126
Total	2	7	3	2	3	9	54	31	35	4	3	8	161
SDG&E													
Whole Building Approach	.	1	.	.	.	.	13	.	28	.	.	1	43
Systems Approach	.	3	.	.	9	2	9	3	34	.	2	7	69
Total	.	4	.	.	9	2	22	3	62	.	2	8	112

The majority of SBD Program participants in Quarters 3-4, 2001 belong to the school, office and retail building types. High participation in these segments can be attributed to the overall high volume of new construction within these same segments (Exhibit 2.4 below), but also to the good fit between these building types and the scope of the SBD Program.

Note that the number of SBD participants in Quarters 3-4, 2001 higher the number of SBD participants in the entire PY2000 (see Chapter 5, tables 5.5-5.8 for details). The high participation rates in Quarters 3-4, 2001 may be due to the overall energy conservation efforts undertaken in California in 2001, but also to an increase in SBD program awareness in this second year of program implementation.

**Exhibit 2.4
New Construction Building Segments with the Highest Number of Projects in Quarters 3-4, 2001**



**Table 2.9 Area of Nonresidential New Construction SBD Participants in Quarters 3-4, 2001
(1,000 sqft)**

	AMUSEMENT	ASSEMBLY	EDUCATION	GOVT	HOTEL	MEDICAL	OFFICE	RETAIL	SCHOOL	SERVICE	STORAGE	OTHER	TOTAL
CALIFORNIA													
Whole Building Approach	44	128	111	579	.	.	5,058	809	1,700	204	1,837	1,417	11,887
Systems Approach	15	536	11	.	2,379	700	4,207	2,948	2,826	89	4,051	2,913	20,675
Total	59	664	122	579	2,379	700	9,265	3,757	4,527	293	5,887	4,330	32,561
SCE													
Whole Building Approach	.	.	.	.	.	.	830	809	94	.	1,837	1,283	4,851
Systems Approach	.	229	.	.	.	45	1,631	855	1,004	.	3,035	2,109	8,908
Total	.	229	.	.	.	45	2,461	1,663	1,098	.	4,872	3,391	13,759
PG&E													
Whole Building Approach	44	50	111	579	.	.	3,341	.	686	204	.	30	5,045
Systems Approach	15	111	11	.	228	605	2,154	1,836	1,099	89	940	458	7,546
Total	59	161	122	579	228	605	5,495	1,836	1,785	293	940	488	12,590
SDG&E													
Whole Building Approach	.	78	.	.	.	.	887	.	920	.	.	105	1,991
Systems Approach	.	197	.	.	2,151	50	422	257	723	.	76	346	4,221
Total	.	275	.	.	2,151	50	1,309	257	1,643	.	76	451	6,212

The majority of SBD Program activity in terms of area committed in Quarters 3-4, 2001 belongs to the office and storage segments. The same building types yield high estimated MWh savings.

Both the area committed through the SBD Program in Quarters 3-4, 2001, and the estimated MWh savings are larger than those committed in the entire PY2001. Again, this result is probably due to the overall energy conservation efforts undertaken in the State of California in 2001.

**Table 2.10 Estimated Annual MWh Savings
for New Construction SBD Participants in Quarters 3-4, 2001**

	AMUSEMENT	ASSEMBLY	EDUCATION	GOVT	HOTEL	MEDICAL	OFFICE	RETAIL	SCHOOL	SERVICE	STORAGE	OTHER	TOTAL
CALIFORNIA													
Whole Building Approach	47	143	433	967	.	.	10,573	5,482	4,569	206	6,386	10,181	38,987
Systems Approach	26	950	8	.	3,998	5,384	7,279	12,853	4,572	81	9,983	11,755	56,888
Total	74	1,093	441	967	3,998	5,384	17,852	18,335	9,141	287	16,369	21,936	95,875
SCE													
Whole Building Approach	.	.	.	.	.	.	1,332	5,482	191	.	6,386	9,346	22,738
Systems Approach	.	657	.	.	.	3,997	2,313	3,753	993	.	7,456	9,595	28,764
Total	.	657	.	.	.	3,997	3,645	9,235	1,184	.	13,842	18,942	51,502
PG&E													
Whole Building Approach	47	51	433	967	.	.	5,637	.	1,958	206	.	38	9,337
Systems Approach	26	126	8	.	119	1,262	4,094	8,091	1,518	81	2,464	899	18,689
Total	74	177	441	967	119	1,262	9,731	8,091	3,477	287	2,464	938	28,027
SDG&E													
Whole Building Approach	.	92	.	.	.	.	3,604	.	2,419	.	.	796	6,912
Systems Approach	.	167	.	.	3,879	125	871	1,008	2,061	.	63	1,261	9,435
Total	.	259	.	.	3,879	125	4,476	1,008	4,480	.	63	2,057	16,347

Table 2.11 Classes of Measures Installed by New Construction SBD Participants in Quarters 3-4, 2001

	WHOLE BUILDING	DAY-LIGHTING	SKYLIGHT	HVAC CHILLER	HVAC PACKAGE	HVAC CONTROLS	HVAC OTHER	MOTORS	LIGHTING	ENVELOPE	OTHER	TOTAL
CALIFORNIA												
Whole Building Approach	108											108
Systems Approach		24		16	180		66	7	132	26	109	560
Total	108	24		16	180		66	7	132	26	109	668
SCE												
Whole Building Approach	30											30
Systems Approach		21		5	50		5	7	35	2	29	154
Total	30	21		5	50		5	7	35	2	29	184
PG&E												
Whole Building Approach	35											35
Systems Approach		3		8	65		9		66	15	40	206
Total	35	3		8	65		9		66	15	40	241
SDG&E												
Whole Building Approach	43											43
Systems Approach				3	65		52		31	9	40	200
Total	43			3	65		52		31	9	40	243

The measures installed by each participant were established using the following fields from the tracking systems maintained by the IOUs: the “meas_desc” for SCE participants, the “description” for PG&E participants, and the “msr_desc” for SDG&E participants. Each entry into the tracking system was then assigned to one of the measure segments presented in Table 2.11, and counted as one instance in which that particular class of measures was installed through the SBD Program. Each participant that selected the whole building approach counted as one instance in which the whole building approach was adopted, regardless of the number and types of measures installed. As Table 2.11 indicates, unitary HVAC systems, lighting, and “other measures” (VSDs, refrigeration) were installed most often by SBD new construction participants, while motors were installed very rarely, and skylights and HVAC controls were not installed at all in Quarters 3-4, 2001.

Table 2.12 Estimated Annual MWh Savings by Measure Class for New Construction SBD Participants in Quarters 3-4, 2001

	WHOLE BUILDING	DAY-LIGHTING	SKYLIGHT	HVAC CHILLER	HVAC PACKAGE	HVAC CONTROLS	HVAC OTHER	MOTORS	LIGHTING	ENVELOPE	OTHER	TOTAL
CALIFORNIA												
Whole Building Approach	38,987											38,987
Systems Approach		6,022		1,137	3,200		3,399	171	14,648	289	28,021	56,888
Total	38,987	6,022		1,137	3,200		3,399	171	14,648	289	28,021	95,875
SCE												
Whole Building Approach	22,738											22,738
Systems Approach		4,585		301	1,727		279	171	9,099	44	12,559	28,764
Total	22,738	4,585		301	1,727		279	171	9,099	44	12,559	51,502
PG&E												
Whole Building Approach	9,337											9,337
Systems Approach		1,437		626	1,354		841		4,837	218	9,376	18,689
Total	9,337	1,437		626	1,354		841		4,837	218	9,376	28,027
SDG&E												
Whole Building Approach	6,912											6,912
Systems Approach				210	119		2,279		713	28	6,086	9,435
Total	6,912			210	119		2,279		713	28	6,086	16,347

In terms of estimated MWh savings, the whole building design, lighting, and “other measures” such as VSDs and refrigeration rank highest among measure classes.

3. STATEWIDE NONRESIDENTIAL ALTERATION (R&R) TRENDS

This chapter summarizes the nonresidential alterations that have occurred in Quarters 3-4, 2001 in the State of California. Similar to Chapter 2, the first section presents the total valuation and the number of project starts in the nonresidential alteration market, by county and building type (F.W. Dodge does not track square feet for alteration projects.) The second section presents the SBD Program activity for tenant improvement, renovation and remodeling projects (R&R) in Quarters 3-4, 2001.

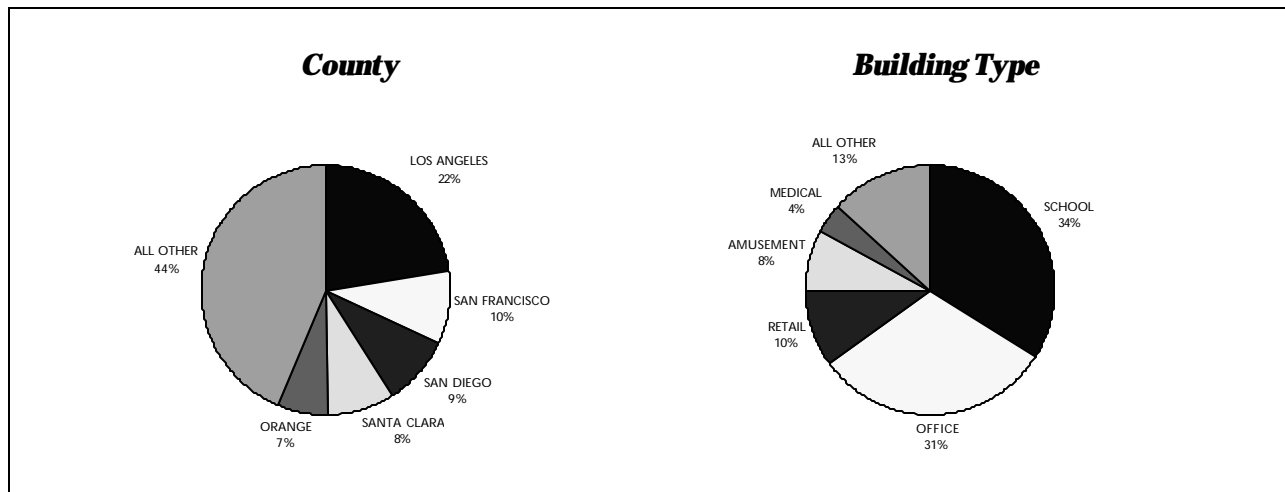
3.1 ALTERATION (R&R) MARKET CHARACTERISTICS IN QUARTERS 3-4, 2001

Nonresidential alteration market activity by building segment and county in Quarters 3-4, 2001 is presented in the following tables. To summarize the market activity by utility territory, project zip codes were used in conjunction with California Energy Commission's zip code-to-utility territory mapping to allocate projects to IOU and non-IOU utilities.

Table 3.1 summarizes the F.W. Dodge valuation for the nonresidential alteration projects that started construction during Quarters 3-4, 2001. The valuation reported by F.W. Dodge is a little over half of the permit valuation reported by CIRB (Appendix B, Table B.1). One explanation is that CIRB groups addition and alteration projects together, thus reporting a larger market segment than F.W. Dodge. Another is that CIRB records only building-related projects, while leaving out permits for heating, HVAC, electrical, and other remodeling/renovation projects.

As Exhibit 3.1 shows, the counties with the most active alteration activity in terms of valuation are Los Angeles, San Francisco, San Diego, Santa Clara and Orange. There are ten counties for which F.W. Dodge does not record any nonresidential alteration project starts: Alpine, Calaveras, Glenn, Inyo, Kings, Lassen, Modoc, Plumas, Sierra and Trinity.

Exhibit 3.1
R&R Market Segments with the Highest Project Start Valuation in Quarters 3-4, 2001

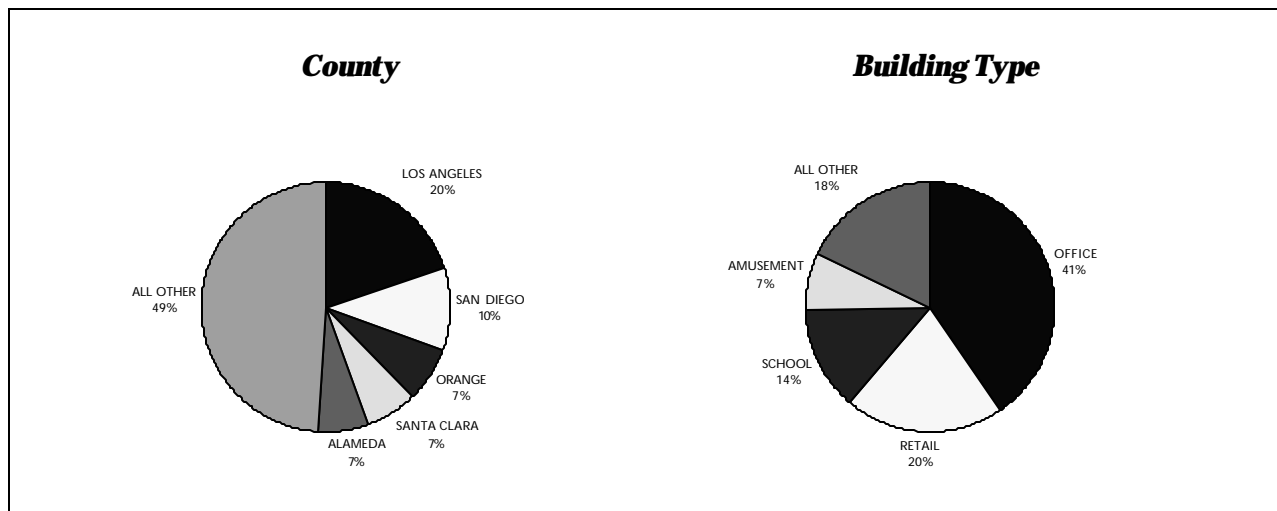


Among building types, school, office, retail and amusement account for the highest value of alteration projects that have started construction in Quarters 3-4, 2001, while assembly (churches) and service account for the lowest value in Quarters 3-4, 2001.

Among utility territories, PG&E accounts for almost half the statewide project start value in Quarters 3-4, 2001. In all three IOU territories, the school and office segments account for large fractions of the total project start valuation. In non-IOU areas, the retail segment is also important in terms of project start valuation.

Table 3.2 presents the number of nonresidential alteration projects that started construction during Quarters 3-4, 2001. As shown in Exhibit 3.2 below, the counties with the largest number of alteration project starts are Los Angeles, San Diego, Orange, Santa Clara and Alameda. Among building types, the office segment is by far the largest in terms of alteration project starts, followed by retail and school. The fewest alteration project starts recorded by F.W. Dodge in Quarters 3-4, 2001 occur in the education (museums, libraries) and hotel segments. Among utility territories, PG&E leads with the highest number of project starts, followed by SCE. SDG&E accounts for the smallest number of project starts. Non-IOU areas have a significant number of project starts, over twice the number in SDG&E territory.

Exhibit 3.2
R&R Market Segments with the Highest Number of Project Starts in Quarters 3-4, 2001



Tables 3.3 and 3.4 summarize quarterly alteration project starts by county and building type, for a 1-year time period ending in December 2001. Similar to the findings for the new construction and addition market, there is little variation from quarter to quarter in the number of project starts by segment.

**Table 3.1 F.W. Dodge Valuation for Nonresidential Alteration Project Starts
in Quarters 3-4, 2001
by Building Type, County and Service Territory (\$1,000)**

	AMUSEMENT	ASSEMBLY	EDUCATION	GOVT	HOTEL	MEDICAL	OFFICE	RETAIL	SCHOOL	SERVICE	STORAGE	OTHER	TOTAL
COUNTY													
ALAMEDA	5,236	1,285	110	472	595	2,878	41,732	13,288	15,252	.	150	907	81,905
ALPINE	.	.	.	.	.	.	.	.	.	.	.	.	0
AMADOR	.	.	.	.	.	.	.	.	240	.	.	.	240
BUTTE	.	749	.	.	.	1,315	1,106	4,731	.	.	.	.	7,901
CALAVERAS	.	.	.	.	.	.	.	.	.	.	.	.	0
COLUSA	.	.	.	.	.	.	.	.	.	.	.	969	969
CONTRA COSTA	3,789	75	.	1,856	142	600	8,092	4,143	6,483	430	.	220	25,830
DEL NORTE	266	.	.	.	.	.	.	.	.	.	.	.	266
EL DORADO	1,998	.	.	.	.	400	1,625	.	196	.	95	135	4,449
FRESNO	167	.	.	.	.	2,000	14,008	1,681	6,040	.	124	.	24,020
GLENN	.	.	.	.	.	.	.	.	.	.	.	.	0
HUMBOLDT	154	.	.	.	.	.	.	.	.	.	.	.	154
IMPERIAL	239	.	.	2,300	.	.	140	220	6,081	.	.	.	8,980
INYO	.	.	.	.	.	.	.	.	.	.	.	.	0
KERN	1,134	.	.	1,679	.	1,080	2,528	1,100	6,530	.	130	566	14,747
KINGS	.	.	.	.	.	.	.	.	.	.	.	.	0
LAKE	.	.	.	.	.	.	240	78	.	.	.	.	318
LASSEN	.	.	.	.	.	.	.	.	.	.	.	.	0
LOS ANGELES	39,411	1,955	3,789	2,396	12,895	13,775	96,005	40,394	152,146	2,333	3,341	13,058	381,498
MADERA	.	.	.	.	.	.	426	.	.	.	.	.	426
MARIN	2,403	.	.	.	.	12,000	5,045	.	.	.	.	84	19,532
MARIPOSA	.	.	.	.	.	.	.	.	.	.	.	218	218
MENDOCINO	200	.	.	.	.	.	879	.	.	.	209	.	1,288
MERCED	.	.	.	.	.	.	1,216	124	11,130	.	.	.	12,470
MODOC	.	.	.	.	.	.	.	.	.	.	.	.	0
MONO	.	.	.	.	.	.	.	.	.	.	60	.	60
MONTEREY	22,859	88	.	.	476	1,253	5,133	1,372	21,154	.	.	2,054	54,389
NAPA	787	.	.	.	.	.	942	1,129	4,915	.	.	445	8,218
NEVADA	.	.	.	614	.	.	.	850	2,865	.	.	.	4,329
ORANGE	3,289	.	821	887	345	1,662	30,897	22,502	51,992	.	500	2,654	115,549
PLACER	575	976	.	.	.	504	4,266	2,298	1,472	.	1,278	419	11,788
PLUMAS	.	.	.	.	.	.	.	.	.	.	.	.	0
RIVERSIDE	2,728	699	300	220	85	5,417	4,042	3,352	18,165	258	.	184	35,450
SACRAMENTO	2,135	99	.	5,921	.	1,036	39,597	7,174	23,833	286	497	4,199	84,777
SAN BENITO	.	.	.	.	.	.	959	.	.	.	.	.	959
SAN BERNARDINO	9,695	1,145	1,471	2,877	118	91	7,107	9,893	38,054	.	2,440	2,187	75,078
SAN DIEGO	2,825	1,613	444	1,107	1,950	3,476	46,019	12,589	62,587	7,150	9,892	8,338	157,990
SAN FRANCISCO	8,707	.	37,430	2,205	16,293	5,169	64,353	6,749	11,528	4,191	486	6,215	163,326
SAN JOAQUIN	649	.	.	1,320	.	.	3,719	1,800	845	.	.	131	8,464
SAN LUIS OBISPO	.	.	.	.	.	108	3,118	719	2,700	352	647	.	7,644
SAN MATEO	12,593	570	.	.	.	12,021	52,420	555	21,647	130	100	2,440	102,476
SANTA BARBARA	357	75	.	.	569	720	4,474	1,518	9,417	489	.	149	17,768
SANTA CLARA	3,734	1,787	1,559	737	5,688	1,538	65,463	15,437	44,583	656	580	1,003	142,765
SANTA CRUZ	388	.	.	.	.	.	635	200	2,814	.	.	203	4,240
SHASTA	.	.	.	177	.	.	.	.	4,876	.	.	213	5,266
SIERRA	.	.	.	.	.	.	.	.	.	.	.	.	0
SISKIYOU	.	.	.	613	.	.	.	.	.	.	175	.	788
SOLANO	2,402	.	.	2,140	.	600	840	2,748	4,996	.	5,000	571	19,297
SONOMA	.	.	.	.	.	427	5,477	345	13,800	120	374	1,736	22,279
STANISLAUS	1,340	.	.	2,150	.	211	2,821	1,598	9,128	.	.	.	17,248
SUTTER	.	.	.	.	.	.	300	1,090	.	.	.	.	1,390
TEHAMA	.	.	.	.	.	.	.	.	900	.	.	.	900
TRINITY	.	.	.	.	.	.	.	.	.	.	.	.	0
TULARE	438	.	671	.	200	180	2,271	231	.	.	.	.	3,991
TUOLUMNE	277	.	.	.	.	.	571	.	.	.	.	.	848
VENTURA	1,425	750	.	593	.	228	11,461	7,881	8,572	600	740	5,349	37,599
YOLO	.	.	.	.	.	244	2,975	475	10,068	.	87	176	14,025
YUBA	.	166	.	.	.	.	.	90	554	.	.	.	810
CALIFORNIA	132,200	12,032	46,595	30,264	39,356	68,933	532,902	168,354	575,563	16,995	26,905	54,823	1,704,922
UTILITY													
SCE	43,770	3,889	2,442	7,642	772	7,815	58,177	43,665	154,101	2,742	4,283	13,852	343,150
PG&E	67,385	3,330	38,619	11,135	17,894	41,255	270,208	58,781	190,778	5,879	8,963	17,800	732,027
SDG&E	2,996	1,613	444	1,287	1,950	3,626	49,227	14,605	62,087	7,150	10,163	8,772	163,920
Non-IOU	18,049	3,200	5,090	10,200	18,740	16,237	155,290	51,303	168,597	1,224	3,496	14,399	465,825

**Table 3.2 F.W. Dodge Number of Nonresidential Alteration Project Starts
in Quarters 3-4, 2001
by Building Type, County and Service Territory**

	AMUSEMENT	ASSEMBLY	EDUCATION	GOVT	HOTEL	MEDICAL	OFFICE	RETAIL	SCHOOL	SERVICE	STORAGE	OTHER	TOTAL
COUNTY													
ALAMEDA	8	3	1	2	2	5	70	31	16	.	1	4	143
ALPINE	.	.	.	.	.	.	.	.	.	.	.	.	0
AMADOR	.	.	.	.	.	.	.	.	1	.	.	.	1
BUTTE	.	1	.	.	.	1	2	3	.	.	.	.	7
CALAVERAS	.	.	.	.	.	.	.	.	.	.	.	.	0
COLUSA	.	.	.	.	.	.	.	.	.	.	.	2	2
CONTRA COSTA	5	1	.	2	1	3	20	12	5	3	.	1	53
DEL NORTE	1	.	.	.	.	.	.	.	.	.	.	.	1
EL DORADO	1	.	.	.	.	1	8	.	1	.	1	1	13
FRESNO	1	.	.	.	.	1	18	9	7	.	1	.	37
GLENN	.	.	.	.	.	.	.	.	.	.	.	.	0
HUMBOLDT	1	.	.	.	.	.	.	.	.	.	.	.	1
IMPERIAL	1	.	.	1	.	.	1	2	1	.	.	.	6
INYO	.	.	.	.	.	.	.	.	.	.	.	.	0
KERN	6	.	.	2	.	4	9	5	7	.	1	3	37
KINGS	.	.	.	.	.	.	.	.	.	.	.	.	0
LAKE	.	.	.	.	.	.	1	1	.	.	.	.	2
LASSEN	.	.	.	.	.	.	.	.	.	.	.	.	0
LOS ANGELES	35	8	3	4	4	15	164	103	65	5	8	23	437
MADERA	.	.	.	.	.	.	1	.	.	.	.	.	1
MARIN	2	.	.	.	.	1	9	.	.	.	.	1	13
MARIPOSA	.	.	.	.	.	.	.	.	.	.	.	1	1
MENDOCINO	1	.	.	.	.	.	1	.	.	.	1	.	3
MERCED	.	.	.	.	.	.	3	1	6	.	.	.	10
MODOC	.	.	.	.	.	.	.	.	.	.	.	.	0
MONO	.	.	.	.	.	.	.	.	.	.	1	.	1
MONTEREY	4	1	.	.	1	5	13	5	6	.	.	3	38
NAPA	2	.	.	.	.	.	6	2	2	.	.	1	13
NEVADA	.	.	.	2	.	.	.	1	1	.	.	.	4
ORANGE	10	.	1	5	1	5	67	37	21	.	1	10	158
PLACER	2	3	.	.	.	4	15	7	3	.	3	3	40
PLUMAS	.	.	.	.	.	.	.	.	.	.	.	.	0
RIVERSIDE	12	1	1	1	1	6	22	17	10	2	.	2	75
SACRAMENTO	5	1	.	2	.	7	55	28	9	2	4	5	118
SAN BENITO	.	.	.	.	.	.	2	.	.	.	.	.	2
SAN BERNARDINO	13	2	4	3	1	1	30	16	17	.	3	2	92
SAN DIEGO	9	6	1	1	2	8	106	37	34	4	6	15	229
SAN FRANCISCO	12	.	2	2	4	9	61	20	7	2	4	5	128
SAN JOAQUIN	2	.	.	1	.	.	6	2	3	.	.	1	15
SAN LUIS OBISPO	.	.	.	.	.	1	11	7	4	1	1	.	25
SAN MATEO	4	2	.	.	.	4	40	4	5	1	1	3	64
SANTA BARBARA	3	1	.	.	1	5	21	9	11	1	.	1	53
SANTA CLARA	6	4	2	3	2	4	65	29	28	1	1	4	149
SANTA CRUZ	1	.	.	.	.	.	3	1	2	.	.	1	8
SHASTA	.	.	.	1	.	.	.	.	1	.	.	1	3
SIERRA	.	.	.	.	.	.	.	.	.	.	.	.	0
SISKIYOU	.	.	.	1	.	.	.	.	.	.	2	.	3
SOLANO	1	.	.	2	.	1	2	6	4	.	1	1	18
SONOMA	.	.	.	.	.	2	10	2	6	1	2	2	25
STANISLAUS	3	.	.	1	.	1	9	10	2	.	.	.	26
SUTTER	.	.	.	.	.	.	1	2	.	.	.	.	3
TEHAMA	.	.	.	.	.	.	.	.	1	.	.	.	1
TRINITY	.	.	.	.	.	.	.	.	.	.	.	.	0
TULARE	2	.	1	.	1	1	5	2	.	.	.	.	12
TUOLUMNE	2	.	.	.	.	.	2	.	.	.	.	.	4
VENTURA	3	1	.	2	.	2	25	35	8	2	3	12	93
YOLO	.	.	.	.	.	3	3	1	6	.	1	1	15
YUBA	.	1	.	.	.	.	.	1	2	.	.	.	4
CALIFORNIA	158	36	16	38	21	100	887	448	302	25	47	109	2,187
UTILITY													
SCE	55	9	6	14	3	20	166	119	80	7	10	32	521
PG&E	58	12	4	15	10	48	356	151	116	9	16	35	830
SDG&E	10	6	1	2	2	9	118	43	33	4	8	17	253
Non-IOU	35	9	5	7	6	23	247	135	73	5	13	25	583

**Table 3.3 F.W. Dodge Number of Nonresidential Alteration Project Starts
in 1-Year Period
by Quarter, County and Service Territory**

	Q1, 2001	Q2, 2001	Q3, 2001	Q4, 2001	2001 Total
COUNTY					
ALAMEDA	61	94	81	62	298
ALPINE	0	0	0	0	0
AMADOR	0	1	1	0	2
BUTTE	4	9	3	4	20
CALAVERAS	0	1	0	0	1
COLUSA	0	0	2	0	2
CONTRA COSTA	19	35	23	30	107
DEL NORTE	0	0	1	0	1
EL DORADO	8	9	10	3	30
FRESNO	13	29	32	5	79
GLENN	0	1	0	0	1
HUMBOLDT	6	5	1	0	12
IMPERIAL	0	3	3	3	9
INYO	0	2	0	0	2
KERN	16	14	19	18	67
KINGS	3	0	0	0	3
LAKE	3	0	2	0	5
LASSEN	0	0	0	0	0
LOS ANGELES	255	272	278	159	964
MADERA	2	1	1	0	4
MARIN	13	14	3	10	40
MARIPOSA	0	0	0	1	1
MENDOCINO	0	0	1	2	3
MERCED	4	5	5	5	19
MODOC	0	0	0	0	0
MONO	0	0	0	1	1
MONTEREY	27	31	31	7	96
NAPA	14	5	5	8	32
NEVADA	2	1	2	2	7
ORANGE	73	98	100	58	329
PLACER	10	18	22	18	68
PLUMAS	0	0	0	0	0
RIVERSIDE	20	42	43	32	137
SACRAMENTO	69	64	60	58	251
SAN BENITO	0	1	1	1	3
SAN BERNARDINO	37	26	48	44	155
SAN DIEGO	184	147	164	65	560
SAN FRANCISCO	48	115	84	44	291
SAN JOAQUIN	5	5	6	9	25
SAN LUIS OBISPO	8	14	10	15	47
SAN MATEO	26	45	35	29	135
SANTA BARBARA	25	27	25	28	105
SANTA CLARA	123	150	78	71	422
SANTA CRUZ	7	11	5	3	26
SHASTA	4	12	1	2	19
SIERRA	0	0	0	0	0
SISKIYOU	1	6	3	0	10
SOLANO	8	7	10	8	33
SONOMA	14	36	13	12	75
STANISLAUS	21	15	18	8	62
SUTTER	2	0	3	0	5
TEHAMA	1	0	1	0	2
TRINITY	1	0	0	0	1
TULARE	7	7	6	6	26
TUOLUMNE	1	2	3	1	7
VENTURA	36	28	53	40	157
YOLO	7	6	14	1	28
YUBA	0	2	3	1	6
CALIFORNIA	1,188	1,416	1,313	874	4,791
UTILITY					
SCE	241	277	294	227	1,039
PG&E	456	652	472	358	1,938
SDG&E	192	167	179	74	612
Non-IOU	299	320	368	215	1,202

**Table 3.4 F.W. Dodge Number of Nonresidential Alteration Project Starts
in 1-Year Period
by Quarter, Building Type and Service Territory**

	AMUSEMENT	ASSEMBLY	EDUCATION	GOVT	HOTEL	MEDICAL	OFFICE	RETAIL	SCHOOL	SERVICE	STORAGE	OTHER	TOTAL
CALIFORNIA													
Q1, 2001	73	13	7	23	16	41	521	216	156	21	38	63	1,188
Q2, 2001	90	17	11	15	11	52	542	260	285	26	36	71	1,416
Q3, 2001	86	26	5	22	15	65	526	271	183	9	30	75	1,313
Q4, 2001	72	10	11	16	6	35	361	177	119	16	17	34	874
2001 Total	321	66	34	76	48	193	1,950	924	743	72	121	243	4,791
SCE													
Q1, 2001	18	2	3	7	3	7	80	57	37	2	7	18	241
Q2, 2001	23	3	2	4	1	15	83	72	45	7	8	14	277
Q3, 2001	30	6	1	8	3	12	98	62	50	2	2	20	294
Q4, 2001	25	3	5	6	-	8	68	57	30	5	8	12	227
2001 Total	96	14	11	25	7	42	329	248	162	16	25	64	1,039
PG&E													
Q1, 2001	28	7	3	8	3	20	206	77	72	7	5	20	456
Q2, 2001	40	4	6	5	8	20	253	104	167	7	7	31	652
Q3, 2001	28	8	-	7	7	28	196	89	72	2	10	25	472
Q4, 2001	30	4	4	8	3	20	160	62	44	7	6	10	358
2001 Total	126	23	13	28	21	88	815	332	355	23	28	86	1,938
SDG&E													
Q1, 2001	5	2	1	6	2	5	112	21	12	2	12	12	192
Q2, 2001	12	1	-	1	-	5	74	20	33	1	11	9	167
Q3, 2001	7	5	-	2	2	7	82	32	22	2	6	12	179
Q4, 2001	3	1	1	-	-	2	36	11	11	2	2	5	74
2001 Total	27	9	2	9	4	19	304	84	78	7	31	38	612
Non-IOU													
Q1, 2001	22	2	-	2	8	9	123	61	35	10	14	13	299
Q2, 2001	15	9	3	5	2	12	132	64	40	11	10	17	320
Q3, 2001	21	7	4	5	3	18	150	88	39	3	12	18	368
Q4, 2001	14	2	1	2	3	5	97	47	34	2	1	7	215
2001 Total	72	20	8	14	16	44	502	260	148	26	37	55	1,202

3.2 SBD R&R PROGRAM PARTICIPATION IN QUARTERS 3-4, 2001

Savings By Design 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 Quarters 3-4, 2001, 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, and that an agreement was signed between the utility and the customer, detailing the conditions of participation in the program. 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 participants.

Table 3.5 presents the number of nonresidential R&R participants to the SBD Program for which funds were committed in Quarters 3-4, 2001.

Table 3.6 shows the number of square feet of R&R construction committed as of Quarters 3-4, 2001.

Table 3.7 summarizes the estimated annual MWh savings attributable to R&R measures committed in Quarters 3-4, 2001.

Table 3.8 presents the frequency with which classes of measures were installed in R&R SBD projects committed in Quarters 3-4, 2001. A glossary of measure classes is presented in Appendix D.

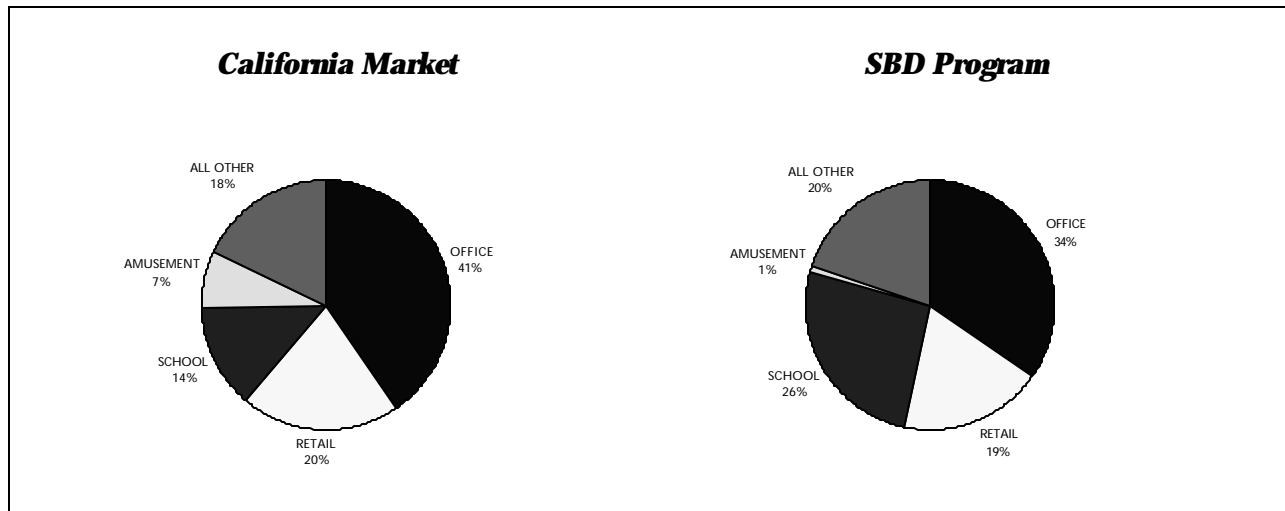
Table 3.9 shows the estimated annual MWh savings by measure class, for R&R projects committed in Quarters 3-4, 2001.

**Table 3.5 Number of Nonresidential R&R SBD Participants
in Quarters 3-4, 2001**

	AMUSEMENT	ASSEMBLY	EDUCATION	GOVT	HOTEL	MEDICAL	OFFICE	RETAIL	SCHOOL	SERVICE	STORAGE	OTHER	TOTAL
CALIFORNIA													
Whole Building Approach	.	.	.	.	.	.	.	3	.	.	.	.	3
Systems Approach	1	5	1	.	.	1	47	25	32	2	3	15	132
Total	1	5	1	.	.	1	47	25	35	2	3	15	135
SCE													
Whole Building Approach	.	.	.	.	.	.	.	.	1	.	.	.	1
Systems Approach	.	1	.	.	.	.	7	7	.	.	3	8	26
Total	.	1	.	.	.	.	7	7	1	.	3	8	27
PG&E													
Whole Building Approach	.	.	.	.	.	.	.	.	1	.	.	.	1
Systems Approach	1	2	1	.	.	1	30	15	23	2	.	4	79
Total	1	2	1	.	.	1	30	15	24	2	.	4	80
SDG&E													
Whole Building Approach	.	.	.	.	.	.	.	.	1	.	.	.	1
Systems Approach	.	2	.	.	.	.	10	3	9	.	.	3	27
Total	.	2	.	.	.	.	10	3	10	.	.	3	28

The number of R&R participants in Quarters 3-4, 2001 is higher than the number of R&R participants in Quarters 3-4, 2000 (refer to Chapter 5, tables 5.5-5.8), but is still less than half the number of new construction SBD participants (Table 2.8). The office and school building types are the largest segments participating in the program, which reflects the high number of alteration projects reported by F.W. Dodge for these building segments (Exhibit 3.3 below). R&R participants in Quarters 3-4, 2001 do not include any government buildings, possibly due to differences between the SBD Program requirements and FEMP regulations. There are also no participants from the hotel segment.

**Exhibit 3.3
R&R Building Segments with the Highest Number of Projects in Quarters 3-4, 2001**



**Table 3.6 Area for Nonresidential R&R SBD Participants
in Quarters 3-4, 2001 (1,000 sqft)**

	AMUSEMENT	ASSEMBLY	EDUCATION	GOVT	HOTEL	MEDICAL	OFFICE	RETAIL	SCHOOL	SERVICE	STORAGE	OTHER	TOTAL
CALIFORNIA													
Whole Building Approach	.	.	.	.	.	.	.	.	125	.	.	.	125
Systems Approach	9	150	18	.	.	18	2,003	2,052	1,166	80	482	755	6,732
Total	9	150	18	.	.	18	2,003	2,052	1,290	80	482	755	6,857
SCE													
Whole Building Approach	.	.	.	.	.	.	.	.	24	.	.	.	24
Systems Approach	.	52	.	.	.	.	363	473	.	.	482	257	1,627
Total	.	52	.	.	.	.	363	473	24	.	482	257	1,650
PG&E													
Whole Building Approach	.	.	.	.	.	.	.	.	63	.	.	.	63
Systems Approach	9	23	18	.	.	18	1,210	1,333	868	80	.	433	3,992
Total	9	23	18	.	.	18	1,210	1,333	931	80	.	433	4,055
SDG&E													
Whole Building Approach	.	.	.	.	.	.	.	.	38	.	.	.	38
Systems Approach	.	76	.	.	.	.	430	245	297	.	.	64	1,113
Total	.	76	.	.	.	.	430	245	336	.	.	64	1,151

The majority of SBD R&R Program activity in terms of area committed in Quarters 3-4, 2001 belongs to the office, retail and school building types. The same trend holds for estimated MWh savings.

**Table 3.7 Estimated Annual MWh Savings for R&R SBD Participants
in Quarters 3-4, 2001**

	AMUSEMENT	ASSEMBLY	EDUCATION	GOVT	HOTEL	MEDICAL	OFFICE	RETAIL	SCHOOL	SERVICE	STORAGE	OTHER	TOTAL
CALIFORNIA													
Whole Building Approach	.	.	.	.	.	.	.	.	322	.	.	.	322
Systems Approach	4	436	8	.	.	3	3,295	4,127	1,283	344	781	2,065	12,347
Total	4	436	8	.	.	3	3,295	4,127	1,605	344	781	2,065	12,669
SCE													
Whole Building Approach	.	.	.	.	.	.	.	.	117	.	.	.	117
Systems Approach	.	229	.	.	.	.	459	1,656	.	.	781	952	4,077
Total	.	229	.	.	.	.	459	1,656	117	.	781	952	4,194
PG&E													
Whole Building Approach	.	.	.	.	.	.	.	.	109	.	.	.	109
Systems Approach	4	14	8	.	.	3	2,209	1,734	714	344	.	727	5,759
Total	4	14	8	.	.	3	2,209	1,734	823	344	.	727	5,867
SDG&E													
Whole Building Approach	.	.	.	.	.	.	.	.	97	.	.	.	97
Systems Approach	.	193	.	.	.	.	627	737	569	.	.	385	2,512
Total	.	193	.	.	.	.	627	737	665	.	.	385	2,608

It is important to note that the estimated MWh savings for Quarters 3-4, 2001 is approximately double the committed MWh savings for Quarters 3-4, 2000 (see Chapter 5, tables 5.5-5.8).

Table 3.8 Classes of Measures Installed by R&R SBD Participants in Quarters 3-4, 2001

	WHOLE BUILDING	DAY-LIGHTING	SKYLIGHT	HVAC CHILLER	HVAC PACKAGE	HVAC CONTROLS	HVAC OTHER	MOTORS	LIGHTING	ENVELOPE	OTHER	TOTAL
CALIFORNIA												
Whole Building Approach	3	.	.	.	.	.	.	.	.	.	.	3
Systems Approach	.	6	.	7	101	.	8	2	82	14	28	248
Total	3	6	.	7	101	.	8	2	82	14	28	251
SCE												
Whole Building Approach	1	.	.	.	.	.	.	.	.	.	.	1
Systems Approach	.	6	.	4	5	.	1	2	13	1	8	40
Total	1	6	.	4	5	.	1	2	13	1	8	41
PG&E												
Whole Building Approach	1	.	.	.	.	.	.	.	.	.	.	1
Systems Approach	.	.	.	2	35	.	.	.	47	1	14	99
Total	1	.	.	2	35	.	.	.	47	1	14	100
SDG&E												
Whole Building Approach	1	.	.	.	.	.	.	.	.	.	.	1
Systems Approach	.	.	.	1	61	.	7	.	22	12	6	109
Total	1	.	.	1	61	.	7	.	22	12	6	110

Similar to new construction SBD participants, the measures installed by each participant were established using the following fields from the tracking systems maintained by the IOUs: the “meas_desc” for SCE participants, the “description” for PG&E participants, and the “msr_desc” for SDG&E participants. Each entry into the tracking system was then assigned to one of the measure segments presented in Table 3.8, and counted as one instance in which that particular class of measures was installed through the SBD Program. Each participant that selected the whole building approach counted as one instance in which the whole building approach was adopted, regardless of the number and types of measures installed. As Table 3.8 indicates, R&R participants installed unitary HVAC and lighting measures most often, and did not install any skylights or HVAC control measures.

Table 3.9 Estimated Annual MWh Savings by Measure Class for R&R SBD Participants in Quarters 3-4, 2001

	WHOLE BUILDING	DAY-LIGHTING	SKYLIGHT	HVAC CHILLER	HVAC PACKAGE	HVAC CONTROLS	HVAC OTHER	MOTORS	LIGHTING	ENVELOPE	OTHER	TOTAL
CALIFORNIA												
Whole Building Approach	322	.	.	.	.	.	.	.	.	.	.	322
Systems Approach	.	731	.	358	1,331	.	240	16	7,189	102	2,382	12,347
Total	322	731	.	358	1,331	.	240	16	7,189	102	2,382	12,669
SCE												
Whole Building Approach	117	.	.	.	.	.	.	.	.	.	.	117
Systems Approach	.	731	.	162	124	.	.	16	1,187	9	1,848	4,077
Total	117	731	.	162	124	.	.	16	1,187	9	1,848	4,194
PG&E												
Whole Building Approach	109	.	.	.	.	.	.	.	.	.	.	109
Systems Approach	.	.	.	123	635	.	.	.	4,837	21	143	5,759
Total	109	.	.	123	635	.	.	.	4,837	21	143	5,867
SDG&E												
Whole Building Approach	97	.	.	.	.	.	.	.	.	.	.	97
Systems Approach	.	.	.	72	571	.	240	.	1,165	72	391	2,512
Total	97	.	.	72	571	.	240	.	1,165	72	391	2,608

Lighting, unitary HVAC and daylighting measures account for the highest estimated MWh savings in the R&R SBD Program in Quarters 3-4, 2001.

4. SBD PROGRAM PENETRATION INTO THE NRNC MARKET IN QUARTERS 3-4, 2001

This chapter presents SBD Program penetration into the NRNC market statewide and by utility territory, in Quarters 3-4, 2001.

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.

Table 4.1 presents the statewide SBD Program penetration.

Table 4.2 presents SBD Program penetration in the SCE service territory.

Table 4.3 shows SBD Program penetration in the PG&E service territory.

Table 4.4 summarizes SBD Program penetration in the SDG&E service territory.

In terms of square feet committed, the statewide new construction market penetration of the SBD Program is 39.9%. 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 50.4%. SBD committed square feet account for 48.6% market penetration in the SCE territory; 48.0% penetration in the PG&E territory; 61.8% penetration in the SDG&E territory.

In terms of number of projects committed, the statewide new construction market penetration of the SBD Program is 15.9%. In the three IOU service territories, program penetration by number of projects is 21.2%. SBD committed projects account for 16.4% market penetration in the SCE territory; 18.8% penetration in the PG&E territory; 41.2% penetration in the SDG&E 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 6.2%. In the three IOU service territories, program penetration by number of projects is 8.4%. SBD committed projects account for 5.2% market penetration in the SCE territory; 9.6% penetration in the PG&E territory; 11.1% penetration in the SDG&E territory.

Due to the higher number of projects selecting the Systems Approach, SBD Program penetration is consistently higher for these projects than for those selecting the Whole Building Approach. Significant opportunities remain for increased program penetration into the market, through sustained networking with the most active designers (Chapter 6) and building officials.

Table 4.1 Statewide SBD Program Penetration in Quarters 3-4, 2001

Program Type	Year/Quarter	Source	Value (\$ billions)	Area (millions of sqft)	%Area Penetration	Number of Projects	%Projects Penetration
New and Additions	2001 QTR 3-4	F. W. Dodge	6.677	81.64		2,466	
		SBD Whole Building	-	11.89	14.6%	108	4.4%
		SBD Systems Approach	-	20.67	25.3%	284	11.5%
		SBD Total	-	32.56	39.9%	392	15.9%
Alterations (R&R and TI)	2001 QTR 3-4	F. W. Dodge	1.705	-		2,187	
		SBD Whole Building	-	0.12	-	3	0.1%
		SBD Systems Approach	-	6.73	-	132	6.0%
		SBD Total	-	6.86	-	135	6.2%

Table 4.2 SBD Program Penetration in the SCE Service Territory in Quarters 3-4, 2001

Program Type	Year/Quarter	Source	Value (\$ billions)	Area (millions of sqft)	%Area Penetration	Number of Projects	%Projects Penetration
New and Additions	2001 QTR 3-4	F. W. Dodge	1.899	28.31		724	
		SBD Whole Building	-	4.85	17.1%	30	4.1%
		SBD Systems Approach	-	8.91	31.5%	89	12.3%
		SBD Total	-	13.76	48.6%	119	16.4%
Alterations (R&R and TI)	2001 QTR 3-4	F. W. Dodge	0.343	-		521	-
		SBD Whole Building	-	0.02	-	1	0.0%
		SBD Systems Approach	-	1.63	-	26	5.0%
		SBD Total	-	1.65	-	27	5.2%

Table 4.3 SBD Program Penetration in the PG&E Service Territory in Quarters 3-4, 2001

Program Type	Year/Quarter	Source	Value (\$ billions)	Area (millions of sqft)	%Area Penetration	Number of Projects	%Projects Penetration
New and Additions	2001 QTR 3-4	F. W. Dodge	2.330	26.25		857	
		SBD Whole Building	-	5.04	19.2%	35	4.1%
		SBD Systems Approach	-	7.55	28.7%	126	14.7%
		SBD Total	-	12.59	48.0%	161	18.8%
Alterations (R&R and TI)	2001 QTR 3-4	F. W. Dodge	0.732	-		830	
		SBD Whole Building	-	0.06	-	1	0.1%
		SBD Systems Approach	-	3.99	-	79	9.5%
		SBD Total	-	4.06	-	80	9.6%

Table 4.4 SBD Program Penetration in the SDG&E Service Territory in Quarters 3-4, 2001

Program Type	Year/Quarter	Source	Value (\$ billions)	Area (millions of sqft)	%Area Penetration	Number of Projects	%Projects Penetration
New and Additions	2001 QTR 3-4	F. W. Dodge	0.804	10.05		272	
		SBD Whole Building	-	1.99	19.8%	43	15.8%
		SBD Systems Approach	-	4.22	42.0%	69	25.4%
		SBD Total	-	6.21	61.8%	112	41.2%
Alterations (R&R and TI)	2001 QTR 3-4	F. W. Dodge	0.164	-		253	
		SBD Whole Building	-	0.04	-	1	0.4%
		SBD Systems Approach	-	1.11	-	27	10.7%
		SBD Total	-	1.15	-	28	11.1%

5. NRNC MARKET AND PROGRAM TRACKING SUMMARY

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

Tables 5.1 – 5.4 summarize the market activities quarterly, statewide and by utility territory, starting with Quarter 3, 1999. 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.

As discussed in Chapters 2 and 3, there is little variation in market activity from quarter to quarter. Quarter 2, 2000, presents the lowest volume of project starts statewide, while Quarter 1, 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.

Tables 5.5 – 5.8 summarize SBD Program activity quarterly, statewide and by utility territory, starting with Quarter 3, 1999.

Tables 5.9 – 5.12 summarize SBD Program penetration quarterly, statewide and by utility territory, starting with Quarter 3, 1999.

Table 5.1 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
	1999	4	2.474	38.16	1,068
	2000	1	3.004	48.08	1,160
	2000	2	2.855	39.77	1,096
	2000	3	3.890	46.31	1,227
	2000	4	3.500	45.99	1,191
	2001	1	4.006	52.11	1,118
	2001	2	3.639	44.73	1,221
	2001	3	3.800	46.47	1,398
Alterations	2001	4	2.877	35.17	1,068
	1999	3	1.102	-	1,374
	1999	4	0.851	-	1,026
	2000	1	0.710	-	983
	2000	2	0.958	-	1,101
	2000	3	0.959	-	1,425
	2000	4	0.813	-	1,145
	2001	1	0.963	-	1,188
	2001	2	1.164	-	1,416
2001	3	0.951	-	1,313	
2001	4	0.754	-	874	

Table 5.2 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
	1999	4	0.731	13.84	340
	2000	1	1.177	23.25	416
	2000	2	0.836	14.15	384
	2000	3	0.891	13.00	325
	2000	4	0.736	11.63	303
	2001	1	1.108	14.03	301
	2001	2	1.013	14.62	351
	2001	3	1.132	17.36	387
Alterations	2001	4	0.767	10.96	337
	1999	3	0.239	-	429
	1999	4	0.156	-	343
	2000	1	0.214	-	311
	2000	2	0.173	-	293
	2000	3	0.208	-	292
	2000	4	0.167	-	290
	2001	1	0.284	-	241
	2001	2	0.216	-	277
2001	3	0.188	-	294	
2001	4	0.156	-	227	

Table 5.3 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
	1999	4	0.992	13.17	387
	2000	1	1.087	13.00	371
	2000	2	0.965	13.05	392
	2000	3	1.948	21.36	536
	2000	4	1.671	20.56	532
	2001	1	1.716	21.66	457
	2001	2	1.620	17.32	472
	2001	3	1.300	14.21	497
Alterations	2001	4	1.030	12.04	360
	1999	3	0.513	-	466
	1999	4	0.390	-	291
	2000	1	0.289	-	300
	2000	2	0.430	-	458
	2000	3	0.428	-	620
	2000	4	0.373	-	471
	2001	1	0.404	-	456
	2001	2	0.612	-	652
	2001	3	0.421	-	472
2001	4	0.311	-	358	

Table 5.4 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
	1999	4	0.362	5.06	136
	2000	1	0.297	5.29	141
	2000	2	0.451	5.54	110
	2000	3	0.453	5.33	141
	2000	4	0.342	4.63	109
	2001	1	0.466	5.46	119
	2001	2	0.326	3.85	144
	2001	3	0.545	6.49	154
Alterations	2001	4	0.259	3.56	118
	1999	3	0.074	-	139
	1999	4	0.142	-	126
	2000	1	0.105	-	140
	2000	2	0.116	-	106
	2000	3	0.099	-	176
	2000	4	0.103	-	133
	2001	1	0.103	-	192
	2001	2	0.133	-	167
	2001	3	0.113	-	179
2001	4	0.051	-	74	

Table 5.5 Statewide SBD Program Participation Summary

Program Type	Year	Quarter	Area (millions of sqft)	Energy Impacts GWh	Number of Participants	
NEW CONSTRUCTION						
Whole Building Approach	1999	3	0.10	0.29	2	
	1999	4	3.13	9.06	22	
	2000	1	0.33	2.12	3	
	2000	2	2.49	8.72	21	
	2000	3	1.01	4.26	5	
	2000	4	4.40	7.61	18	
	2001	1	8.34	11.38	34	
	2001	2	6.12	16.58	44	
	2001	3	6.98	17.25	55	
	2001	4	4.91	21.74	53	
	Systems Approach	1999	3	3.86	8.02	29
		1999	4	6.25	14.78	73
2000		1	1.72	3.63	17	
2000		2	3.17	7.08	46	
2000		3	3.88	6.31	65	
2000		4	5.34	16.84	130	
2001		1	3.72	5.71	50	
2001		2	8.58	23.81	135	
2001		3	5.02	11.78	106	
2001		4	15.66	45.11	178	
Total	1999	3	3.96	8.30	31	
	1999	4	9.38	23.84	95	
	2000	1	2.06	5.75	20	
	2000	2	5.67	15.81	67	
	2000	3	4.89	10.57	70	
	2000	4	9.74	24.45	148	
	2001	1	12.07	17.09	84	
	2001	2	14.70	40.39	179	
	2001	3	12.00	29.03	161	
	2001	4	20.56	66.84	231	
R&R, incl. TI						
Whole Building Approach	1999	3	.	.	.	
	1999	4	0.19	1.10	2	
	2000	1	0.02	0.01	1	
	2000	2	0.13	0.35	3	
	2000	3	.	.	.	
	2000	4	0.85	2.55	9	
	2001	1	.	.	.	
	2001	2	0.07	0.16	2	
	2001	3	0.04	0.10	1	
	2001	4	0.09	0.23	2	
Systems Approach	1999	3	1.36	5.57	15	
	1999	4	1.65	3.51	32	
	2000	1	3.71	2.85	18	
	2000	2	2.68	5.41	35	
	2000	3	1.92	5.52	36	
	2000	4	3.78	9.92	77	
	2001	1	1.26	10.15	27	
	2001	2	4.27	9.54	64	
	2001	3	2.56	4.13	48	
	2001	4	4.17	8.21	84	
Total	1999	3	1.36	5.57	15	
	1999	4	1.84	4.61	34	
	2000	1	3.74	2.86	19	
	2000	2	2.81	5.75	38	
	2000	3	1.92	5.52	36	
	2000	4	4.63	12.47	86	
	2001	1	1.26	10.15	27	
	2001	2	4.34	9.70	66	
	2001	3	2.60	4.23	49	
	2001	4	4.26	8.44	86	

Table 5.6 SBD Program Participation Summary for SCE Territory

Program Type	Year	Quarter	Area (millions of sqft)	Energy Impacts GWh	Number of Participants	
NEW CONSTRUCTION						
Whole Building Approach	1999	3	.	.	.	
	1999	4	.	.	.	
	2000	1	0.09	1.32	1	
	2000	2	0.65	1.58	1	
	2000	3	0.78	3.74	3	
	2000	4	1.11	2.25	4	
	2001	1	4.02	3.97	6	
	2001	2	0.09	0.38	1	
	2001	3	2.03	7.08	10	
	2001	4	2.83	15.66	20	
Systems Approach	1999	3	3.78	7.97	27	
	1999	4	4.33	10.84	44	
	2000	1	1.26	3.17	8	
	2000	2	1.98	5.19	18	
	2000	3	1.82	3.03	24	
	2000	4	1.26	8.58	25	
	2001	1	1.44	1.95	17	
	2001	2	3.81	13.50	46	
	2001	3	1.78	5.20	27	
Total	2001	4	7.13	23.56	62	
	1999	3	3.78	7.97	27	
	1999	4	4.33	10.84	44	
	2000	1	1.36	4.49	9	
	2000	2	2.63	6.77	19	
	2000	3	2.61	6.78	27	
	2000	4	2.37	10.82	29	
	2001	1	5.46	5.92	23	
	2001	2	3.89	13.88	47	
R&R, incl. TI	2001	3	3.80	12.28	37	
	2001	4	9.96	39.22	82	
	Whole Building Approach	1999	3	.	.	.
		1999	4	.	.	.
		2000	1	.	.	.
		2000	2	.	.	.
		2000	3	.	.	.
		2000	4	0.85	2.55	9
		2001	1	.	.	.
		2001	2	.	.	.
2001		3	.	.	.	
2001		4	0.02	0.12	1	
Systems Approach	1999	3	1.20	5.35	10	
	1999	4	1.05	2.41	13	
	2000	1	0.35	0.50	4	
	2000	2	1.58	2.92	10	
	2000	3	0.77	3.93	12	
	2000	4	2.50	7.18	36	
	2001	1	0.44	6.54	10	
	2001	2	2.12	7.18	15	
	2001	3	0.94	2.24	16	
Total	2001	4	0.69	1.84	10	
	1999	3	1.20	5.35	10	
	1999	4	1.05	2.41	13	
	2000	1	0.35	0.50	4	
	2000	2	1.58	2.92	10	
	2000	3	0.77	3.93	12	
	2000	4	3.35	9.73	45	
	2001	1	0.44	6.54	10	
	2001	2	2.12	7.18	15	
2001	3	0.94	2.24	16		
2001	4	0.71	1.95	11		

Table 5.7 SBD Program Participation Summary for PG&E Territory

Program Type	Year	Quarter	Area (millions of sqft)	Energy Impacts GWh	Number of Participants	
NEW CONSTRUCTION						
Whole Building Approach	1999	3	.	.	.	
	1999	4	2.17	6.04	16	
	2000	1	.	.	.	
	2000	2	1.10	3.08	5	
	2000	3	0.23	0.52	2	
	2000	4	3.27	5.30	13	
	2001	1	4.14	6.77	14	
	2001	2	5.00	9.72	21	
	2001	3	4.05	7.59	27	
	2001	4	0.99	1.74	8	
Systems Approach	1999	3	.	.	.	
	1999	4	1.31	1.76	18	
	2000	1	0.07	0.18	1	
	2000	2	0.45	0.48	12	
	2000	3	0.94	1.44	26	
	2000	4	2.71	6.30	78	
	2001	1	1.54	2.21	17	
	2001	2	2.93	3.63	60	
	2001	3	1.79	2.34	44	
Total	2001	4	5.75	16.35	82	
	1999	3	0.00	0.00	0	
	1999	4	3.48	7.80	34	
	2000	1	0.07	0.18	1	
	2000	2	1.55	3.55	17	
	2000	3	1.16	1.96	28	
	2000	4	5.98	11.60	91	
	2001	1	5.68	8.98	31	
	2001	2	7.94	13.35	81	
R&R, incl. TI	2001	3	5.85	9.94	71	
	2001	4	6.74	18.09	90	
	Whole Building Approach	1999	3	.	.	.
		1999	4	.	.	.
		2000	1	.	.	.
		2000	2	0.09	0.25	1
		2000	3	.	.	.
		2000	4	.	.	.
		2001	1	.	.	.
		2001	2	0.06	0.10	1
		2001	3	.	.	.
	Systems Approach	2001	4	0.06	0.11	1
		1999	3	.	.	.
1999		4	0.34	0.56	6	
2000		1	0.04	0.06	2	
2000		2	0.46	1.36	10	
2000		3	0.30	0.26	4	
2000		4	0.78	1.88	24	
2001		1	0.44	0.56	5	
2001		2	1.62	1.61	33	
Total	2001	3	1.12	1.26	19	
	2001	4	2.87	4.50	60	
	1999	3	0.00	0.00	0	
	1999	4	0.34	0.56	6	
	2000	1	0.04	0.06	2	
	2000	2	0.55	1.61	11	
	2000	3	0.30	0.26	4	
	2000	4	0.78	1.88	24	
	2001	1	0.44	0.56	5	
2001	2	1.67	1.71	34		
2001	3	1.12	1.26	19		
2001	4	2.93	4.61	61		

Table 5.8 SBD Program Participation Summary for SDG&E Territory

Program Type	Year	Quarter	Area (millions of sqft)	Energy Impacts GWh	Number of Participants
NEW CONSTRUCTION					
Whole Building Approach	1999	3	0.10	0.29	2
	1999	4	0.96	3.02	6
	2000	1	0.24	0.80	2
	2000	2	0.74	4.06	15
	2000	3	.	.	.
	2000	4	0.02	0.07	1
	2001	1	0.18	0.65	14
	2001	2	1.03	6.48	22
	2001	3	0.90	2.58	18
	2001	4	1.09	4.33	25
Systems Approach	1999	3	0.08	0.04	2
	1999	4	0.61	2.18	11
	2000	1	0.39	0.28	8
	2000	2	0.74	1.42	16
	2000	3	1.12	1.84	15
	2000	4	1.37	1.96	27
	2001	1	0.74	1.55	16
	2001	2	1.84	6.69	29
	2001	3	1.45	4.24	35
	2001	4	2.77	5.20	34
Total	1999	3	0.18	0.33	4
	1999	4	1.57	5.20	17
	2000	1	0.63	1.08	10
	2000	2	1.48	5.48	31
	2000	3	1.12	1.84	15
	2000	4	1.39	2.02	28
	2001	1	0.92	2.19	30
	2001	2	2.88	13.17	51
	2001	3	2.35	6.82	53
	2001	4	3.87	9.53	59
R&R, incl. TI					
Whole Building Approach	1999	3	.	.	.
	1999	4	0.19	1.10	2
	2000	1	0.02	0.01	1
	2000	2	0.04	0.09	2
	2000	3	.	.	.
	2000	4	.	.	.
	2001	1	.	.	.
	2001	2	0.02	0.06	1
	2001	3	0.04	0.10	1
	2001	4	.	.	.
Systems Approach	1999	3	0.16	0.22	5
	1999	4	0.27	0.53	13
	2000	1	3.32	2.28	12
	2000	2	0.64	1.13	15
	2000	3	0.84	1.33	20
	2000	4	0.49	0.86	17
	2001	1	0.38	3.05	12
	2001	2	0.53	0.75	16
	2001	3	0.50	0.63	13
	2001	4	0.61	1.88	14
Total	1999	3	0.16	0.22	5
	1999	4	0.46	1.63	15
	2000	1	3.35	2.30	13
	2000	2	0.68	1.23	17
	2000	3	0.84	1.33	20
	2000	4	0.49	0.86	17
	2001	1	0.38	3.05	12
	2001	2	0.55	0.81	17
	2001	3	0.54	0.73	14
	2001	4	0.61	1.88	14

Table 5.9. Summary of Statewide SBD Program Penetration

Program Type	Year	Quarter	Dodge Area (millions of sqft)	SBD Area (millions of sqft)	%Area Penetration	Dodge Projects	SBD Participants	%Projects Penetration
New Construction	1999	3	50.23	3.96	7.9%	1,443	31	2.1%
	1999	4	38.16	9.38	24.6%	1,068	95	8.9%
	2000	1	48.08	2.06	4.3%	1,160	20	1.7%
	2000	2	39.77	5.67	14.2%	1,096	67	6.1%
	2000	3	46.31	4.89	10.6%	1,227	70	5.7%
	2000	4	45.99	9.74	21.2%	1,191	148	12.4%
	2001	1	52.11	12.07	23.2%	1,118	84	7.5%
	2001	2	44.73	14.70	32.9%	1,221	179	14.7%
	2001	3	46.47	12.00	25.8%	1,398	161	11.5%
	2001	4	35.17	20.56	58.5%	1,068	231	21.6%
Alterations (R&R)	1999	3	-	1.36	-	1,374	15	1.1%
	1999	4	-	1.84	-	1,026	34	3.3%
	2000	1	-	3.74	-	983	19	1.9%
	2000	2	-	2.81	-	1,101	38	3.5%
	2000	3	-	1.92	-	1,425	36	2.5%
	2000	4	-	4.63	-	1,145	86	7.5%
	2001	1	-	1.26	-	1,188	27	2.3%
	2001	2	-	4.34	-	1,416	66	4.7%
	2001	3	-	0.00	-	1,313	49	3.7%
	2001	4	-	4.26	-	874	86	9.8%

Table 5.10. Summary of SBD Program Penetration within the SCE Service Territory

Program Type	Year	Quarter	Dodge Area (millions of sqft)	SBD Area (millions of sqft)	%Area Penetration	Dodge Projects	SBD Participants	%Projects Penetration
New Construction	1999	3	17.68	3.78	21.4%	486	27	5.6%
	1999	4	13.84	4.33	31.3%	340	44	12.9%
	2000	1	23.25	1.36	5.8%	416	9	2.2%
	2000	2	14.15	2.63	18.6%	384	19	4.9%
	2000	3	13.00	2.61	20.0%	325	27	8.3%
	2000	4	11.63	2.37	20.4%	303	29	9.6%
	2001	1	14.03	5.46	38.9%	301	23	7.6%
	2001	2	14.62	3.89	26.6%	351	47	13.4%
	2001	3	17.36	3.80	21.9%	387	37	9.6%
	2001	4	10.96	9.96	90.9%	337	82	24.3%
Alterations (R&R)	1999	3	-	1.20	-	429	10	2.3%
	1999	4	-	1.05	-	343	13	3.8%
	2000	1	-	0.35	-	311	4	1.3%
	2000	2	-	1.58	-	293	10	3.4%
	2000	3	-	0.77	-	292	12	4.1%
	2000	4	-	3.35	-	290	45	15.5%
	2001	1	-	0.44	-	241	10	4.1%
	2001	2	-	2.12	-	277	15	5.4%
	2001	3	-	0.94	-	294	16	5.4%
	2001	4	-	0.71	-	227	11	4.8%

Table 5.11. Summary of SBD Program Penetration within the PG&E Service Territory

Program Type	Year	Quarter	Dodge Area (millions of sqft)	SBD Area (millions of sqft)	%Area Penetration	Dodge Projects	SBD Participants	%Projects Penetration
New Construction	1999	3	17.77	0.00	0.0%	566	0	0.0%
	1999	4	13.17	3.48	26.4%	387	34	8.8%
	2000	1	13.00	0.07	0.5%	371	1	0.3%
	2000	2	13.05	1.55	11.9%	392	17	4.3%
	2000	3	21.36	1.16	5.4%	536	28	5.2%
	2000	4	20.56	5.98	29.1%	532	91	17.1%
	2001	1	21.66	5.68	26.2%	457	31	6.8%
	2001	2	17.32	7.94	45.8%	472	81	17.2%
	2001	3	14.21	5.85	41.2%	497	71	14.3%
	2001	4	12.04	6.74	56.0%	360	90	25.0%
Alterations (R&R)	1999	3	-	0.00	-	466	0	0.0%
	1999	4	-	0.34	-	291	6	2.1%
	2000	1	-	0.04	-	300	2	0.7%
	2000	2	-	0.55	-	458	11	2.4%
	2000	3	-	0.30	-	620	4	0.6%
	2000	4	-	0.78	-	471	24	5.1%
	2001	1	-	0.44	-	456	5	1.1%
	2001	2	-	1.67	-	652	34	5.2%
	2001	3	-	1.12	-	472	19	4.0%
	2001	4	-	2.93	-	358	61	17.0%

Table 5.12. Summary of SBD Program Penetration within the SDG&E Service Territory

Program Type	Year	Quarter	Dodge Area (millions of sqft)	SBD Area (millions of sqft)	%Area Penetration	Dodge Projects	SBD Participants	%Projects Penetration
New Construction	1999	3	5.28	0.18	3.5%	132	4	3.0%
	1999	4	5.06	1.57	31.1%	136	17	12.5%
	2000	1	5.29	0.63	12.0%	141	10	7.1%
	2000	2	5.54	1.48	26.8%	110	31	28.2%
	2000	3	5.33	1.12	21.1%	141	15	10.6%
	2000	4	4.63	1.39	30.1%	109	28	25.7%
	2001	1	5.46	0.92	16.9%	119	30	25.2%
	2001	2	3.85	2.88	74.8%	144	51	35.4%
	2001	3	6.49	2.35	36.2%	154	53	34.4%
	2001	4	3.56	3.87	108.6%	118	59	50.0%
Alterations (R&R)	1999	3	-	0.16	-	139	5	3.6%
	1999	4	-	0.46	-	126	15	11.9%
	2000	1	-	3.35	-	140	13	9.3%
	2000	2	-	0.68	-	106	17	16.0%
	2000	3	-	0.84	-	176	20	11.4%
	2000	4	-	0.49	-	133	17	12.8%
	2001	1	-	0.38	-	192	12	6.3%
	2001	2	-	0.55	-	167	17	10.2%
	2001	3	-	0.54	-	179	14	7.8%
	2001	4	-	0.61	-	74	14	18.9%

6. MOST ACTIVE MARKET PLAYERS IN QUARTERS 3-4, 2001

This chapter presents the most active market players in Quarters 3-4, 2001, by utility territory and statewide, as reported in the F.W. Dodge “Players” database. The most active market players are defined as the architectural and engineering firms who either contributed to the highest number of projects, or contributed to projects that added up to the highest total value in Quarters 3-4, 2001. Knowledge about the players who are most active in new construction design offers targeted marketing opportunities for the SBD Program.

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

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

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

Table 6.1 presents the most active market players statewide, during Quarters 3-4, 2001.

Table 6.2 presents the most active market players in SCE territory during Quarters 3-4, 2001.

Table 6.3 shows the most active market players in PG&E territory during Quarters 3-4, 2001.

Table 6.4 summarizes the most active market players in SDG&E territory during Quarters 3-4, 2001.

**Table 6.1 Most Active Market Players in California in Quarters 3-4, 2001
according to F.W. Dodge**

Firm Name	Firm Location		Project Value (in \$millions)			Number of Projects		
	City	State	Total	New Construction	Alteration	Total	New Construction	Alteration
ARCHITECTS								
Top 10 by Project Value								
Perkowitz & Ruth Architects	LONG BEACH	CA	217.518	217.518	-	25	25	-
Hill Pinckert Architects	NEWPORT BEACH	CA	186.582	184.982	1.500	16	14	1
Langdon Wilson Architecture	IRVINE	CA	162.500	162.500	-	2	2	-
Paul Steelman Ltd.	LAS VEGAS	NV	125.000	125.000	-	1	1	-
LPA	IRVINE	CA	117.634	110.500	7.134	9	4	5
Architects Orange	ORANGE	CA	114.000	114.000	-	5	5	-
Kaplan McLaughlin Diaz	SAN FRANCISCO	CA	106.908	106.908	-	3	3	-
Ratcliff Architects	EMERYVILLE	CA	99.074	96.000	2.954	4	2	1
RTKL	CHICAGO IL	IL	92.000	92.000	-	1	1	-
Ware Malcomb	SAN RAMON	CA	88.000	88.000	-	6	6	-
Top 10 by Number of Projects								
Casco Corporation	SAINT LOUIS	MO	41.333	13.627	27.625	25	3	21
Perkowitz & Ruth Architects	LONG BEACH	CA	217.518	217.518	-	25	25	-
HMC Group	ONTARIO	CA	77.155	51.055	26.100	18	9	9
Hill Pinckert Architects	NEWPORT BEACH	CA	186.582	184.982	1.500	16	14	1
NTD-Neptune Thomas Davis	GLENDORA	CA	78.104	60.747	17.357	15	7	8
W L C Architects	RANCHO CUCAMONGA	CA	40.581	12.257	28.324	13	3	10
Lionakis Beaumont Design Group	SACRAMENTO	CA	52.038	50.155	1.883	12	9	3
Schuss Clark & Associates	SAN DIEGO	CA	5.525	4.125	1.400	12	8	4
Aedis/PIHM Architecture & Planning	SAN JOSE	CA	32.310	22.429	9.881	11	4	7
Rauschenbach Marvelli Becker & Associates	SACRAMENTO	CA	25.900	25.000	0.900	11	8	3
ENGINEERS								
Top 10 by Project Value								
Capitol Engineering Consultants Inc	SACRAMENTO	CA	213.752	149.531	64.221	48	23	25
Frederick Brown & Associates	NEWPORT BEACH	CA	164.553	157.814	6.739	26	19	7
Culp & Tanner	LAKE FOREST	CA	161.766	156.266	5.500	8	6	2
ILA/Zammit Engineering	SAN DIEGO	CA	153.449	147.368	6.081	5	4	1
M E Engineers	LOS ANGELES	CA	147.194	138.842	8.352	7	5	2
Middlebrook & Louie	SAN FRANCISCO	CA	140.695	132.950	7.745	3	2	1
Nishkian Menninger	SAN FRANCISCO	CA	127.653	82.653	45.000	5	3	2
FEA Associates Inc	LAS VEGAS	NV	125.000	125.000	-	1	1	-
RHR Engineering	LAS VEGAS	NV	125.000	125.000	-	1	1	-
Boyle Engineering (Fresno)	FRESNO	CA	122.050	122.050	-	1	1	-
Top 10 by Number of Projects								
Capitol Engineering Consultants Inc	SACRAMENTO	CA	213.752	149.531	64.221	48	23	25
Frederick Brown & Associates	NEWPORT BEACH	CA	164.553	157.814	6.739	26	19	7
TMAD Engineers Inc.	ONTARIO	CA	63.518	33.637	29.881	22	11	11
Buehler & Buehler	SACRAMENTO	CA	107.236	79.041	28.195	21	13	8
Brummel Myrick & Associates	SAN LUIS OBISPO	CA	46.244	30.782	15.462	20	10	10
OMB Electrical Engineers Inc	IRVINE	CA	88.666	71.718	16.948	20	14	6
A N F and Associates	EL MONTE	CA	118.325	116.875	1.450	19	18	1
Palmieri & Associates Inc	SOUTH PASADENA	CA	105.575	103.775	1.800	19	17	2
Sacramento Engineering Consultants	SACRAMENTO	CA	36.986	13.174	23.812	17	8	9
Belden Incorporated	DUBLIN	CA	62.238	58.050	4.188	16	12	4

**Table 6.2 Most Active Market Players in SCE Territory in Quarters 3-4, 2001
according to F.W. Dodge**

Firm Name	Firm Location		Project Value (in \$Millions)			Number of Projects		
	City	State	Total	New Construction	Alteration	Total	New Construction	Alteration
ARCHITECTS								
Top 10 by Project Value								
Perkowitz & Ruth Architects	LONG BEACH	CA	170.337	170.337	-	17	17	-
Hill Pinckert Architects	NEWPORT BEACH	CA	165.589	163.989	1.500	13	11	1
Architects Orange	ORANGE	CA	95.000	95.000	-	2	2	-
Kaplan McLaughlin Diaz	SAN FRANCISCO	CA	93.191	93.191	-	2	2	-
NTD-Neptune Thomas Davis	GLENDORA	CA	74.104	56.747	17.357	14	6	8
R K Z Architects	TUSTIN	CA	56.500	56.500	-	7	7	-
HMC Group	ONTARIO	CA	55.178	30.865	24.313	15	7	8
RGA Architectural Design	LONG BEACH	CA	52.000	52.000	-	2	2	-
The Jerde Partnership	VENICE	CA	50.000	50.000	-	1	1	-
Parkitects/Wayne Banks & Associates	IRVINE	CA	50.000	50.000	-	1	1	-
Top 10 by Number of Projects								
Perkowitz & Ruth Architects	LONG BEACH	CA	170.337	170.337	-	17	17	-
HMC Group	ONTARIO	CA	55.178	30.865	24.313	15	7	8
NTD-Neptune Thomas Davis	GLENDORA	CA	74.104	56.747	17.357	14	6	8
Hill Pinckert Architects	NEWPORT BEACH	CA	165.589	163.989	1.500	13	11	1
W L C Architects	RANCHO CUCAMONGA	CA	29.402	1.257	28.145	11	2	9
R K Z Architects	TUSTIN	CA	56.500	56.500	-	7	7	-
Flewelling & Moody Architects	PASADENA	CA	13.406	6.382	7.024	7	1	6
Gary Miller & Associates	SAN BERNARDINO	CA	4.313	2.375	1.938	7	2	5
Ruhnau Ruhnau Clarke	RIVERSIDE	CA	38.292	37.179	1.113	7	5	2
Lauterbach & Associates	OXNARD	CA	5.643	1.557	4.086	6	1	5
ENGINEERS								
Top 10 by Project Value								
Frederick Brown & Associates	NEWPORT BEACH	CA	90.902	87.424	3.478	15	10	5
A N F and Associates	EL MONTE	CA	73.375	73.375	-	9	9	-
Ajit Randhava Engineers	LA MIRADA	CA	65.000	65.000	-	3	3	-
Nack & Pezeshki	CARLSBAD	CA	55.610	47.230	8.380	12	7	5
Davar & Associates	LONG BEACH	CA	55.000	54.000	1.000	7	6	1
Palmieri & Associates Inc.	SOUTH PASADENA	CA	53.225	52.875	0.350	7	6	1
TMAD Engineers Inc.	ONTARIO	CA	52.248	22.367	29.881	19	8	11
RPM	IRVINE	CA	51.956	51.956	-	3	3	-
Kramer & Associates	TUSTIN	CA	49.956	49.956	-	2	2	-
Sunwest Electric	YORBA LINDA	CA	49.956	49.956	-	2	2	-
Top 10 by Number of Projects								
TMAD Engineers Inc.	ONTARIO	CA	52.248	22.367	29.881	19	8	11
Frederick Brown & Associates	NEWPORT BEACH	CA	90.902	87.424	3.478	15	10	5
Nack & Pezeshki	CARLSBAD	CA	55.610	47.230	8.380	12	7	5
OMB Electrical Engineers Inc	IRVINE	CA	31.963	18.925	13.038	10	6	4
A N F and Associates	EL MONTE	CA	73.375	73.375	-	9	9	-
Kanda & Tso Associates	SOUTH PASADENA	CA	20.968	13.151	7.817	9	5	4
Taylor & Gaines	PASADENA	CA	39.174	20.341	18.833	9	3	6
Davar & Associates	LONG BEACH	CA	55.000	54.000	1.000	7	6	1
Donn C Gilmore & Associates Inc	ONTARIO	CA	17.279	15.291	1.988	7	5	2
F T Andrews Inc	ANAHEIM	CA	35.607	25.686	9.921	7	3	4

**Table 6.3 Most Active Market Players in PG&E Territory in Quarters 3-4, 2001
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
ARCHITECTS								
Top 10 by Project Value								
Ratcliff Architects	EMERYVILLE	CA	99.074	96.000	2.954	4	2	1
RTKL	CHICAGO IL	IL	92.000	92.000	-	1	1	-
Ware Malcomb	SAN RAMON	CA	88.000	88.000	-	6	6	-
Gensler & Associates	SAN FRANCISCO	CA	67.423	59.793	7.500	4	2	1
Cesar Pelli & Associates	NEW HAVEN	CT	62.350	62.350	-	1	1	-
Flad & Associates	SAN FRANCISCO	CA	62.350	62.350	-	1	1	-
Harris Architects	PALATINE	IL	60.000	60.000	-	1	1	-
TLCD Architecture	SANTA ROSA	CA	51.752	31.125	20.627	8	3	5
Design Planning Associates	MILL VALLEY	CA	50.000	50.000	-	1	1	-
HOK/Hellmuth Obata & Kassabaum Inc	SAN FRANCISCO	CA	48.500	48.500	-	2	2	-
Top 10 by Number of Projects								
Aedis/PJHM Architecture & Planning	SAN JOSE	CA	32.310	22.429	9.881	11	4	7
Loving & Campos Architects Inc	WALNUT CREEK	CA	37.438	34.253	3.185	10	6	4
Lionakis Beaumont Design Group	SACRAMENTO	CA	44.869	42.986	1.883	10	7	3
Rauschenbach Marvelli Becker & Associates	SACRAMENTO	CA	23.650	23.000	0.650	9	7	2
TLCD Architecture	SANTA ROSA	CA	51.752	31.125	20.627	8	3	5
The Steinberg Group	SAN JOSE	CA	27.387	20.647	6.740	8	4	4
Murray & Downs Architects Inc	PLACERVILLE	CA	37.554	37.554	-	7	7	-
Ware Malcomb	SAN RAMON	CA	88.000	88.000	-	6	6	-
Hardison Komatsu Ivelich Tucker	OAKLAND	CA	32.821	30.928	1.893	5	3	2
M B H Architects (McNulty Briseman & Heath)	ALAMEDA	CA	24.353	15.000	9.353	5	2	3
ENGINEERS								
Top 10 by Project Value								
Capitol Engineering Consultants Inc	SACRAMENTO	CA	157.105	108.173	48.932	40	20	20
Nishkian Menninger	SAN FRANCISCO	CA	127.653	82.653	45.000	5	3	2
KPFF Consulting Engineers	SANTA MONICA	CA	92.000	92.000	-	1	1	-
M E Engineers	LOS ANGELES	CA	92.000	92.000	-	1	1	-
Rolf Jensen and Associates	WALNUT CREEK	CA	92.000	92.000	-	1	1	-
Stecher Ainsworth Miner	SACRAMENTO	CA	86.371	81.867	4.504	11	8	3
Alfa Tech Consulting Engineers	SAN JOSE	CA	83.198	42.403	40.795	6	2	4
Dasse Design Inc	SAN FRANCISCO	CA	81.468	65.510	15.958	14	7	7
Zucco Fagent Associates	SANTA ROSA	CA	78.951	54.360	24.591	14	8	6
Affiliated Engineers Inc	WALNUT CREEK	CA	73.584	70.635	2.949	3	2	1
Top 10 by Number of Projects								
Capitol Engineering Consultants Inc	SACRAMENTO	CA	157.105	108.173	48.932	40	20	20
Buehler & Buehler	SACRAMENTO	CA	72.747	46.028	26.719	18	11	7
Brummel Myrick & Associates	SAN LUIS OBISPO	CA	27.049	11.944	15.105	16	7	9
Dasse Design Inc	SAN FRANCISCO	CA	81.468	65.510	15.958	14	7	7
Zucco Fagent Associates	SANTA ROSA	CA	78.951	54.360	24.591	14	8	6
Belden Incorporated	DUBLIN	CA	56.762	53.950	2.812	12	10	2
Thoma Electric Inc	SAN LUIS OBISPO	CA	22.653	11.166	11.487	12	9	3
Lefler Engineering Inc	SAN RAFAEL	CA	49.326	35.035	14.291	11	5	6
Stecher Ainsworth Miner	SACRAMENTO	CA	86.371	81.867	4.504	11	8	3
Capital City Design	WEST SACRAMENTO	CA	23.616	13.237	10.379	10	5	5

**Table 6.4 Most Active Market Players in SDG&E Territory in Quarters 3-4, 2001
according to F.W. Dodge**

Firm Name	Firm Location		Project Value (in \$Millions)			Number of Projects		
	City	State	Total	New Construction	Alteration	Total	New Construction	Alteration
ARCHITECTS								
Top 10 by Project Value								
Paul Steelman Ltd.	LAS VEGAS	NV	125.000	125.000	-	1	1	-
The Steinberg Group	LOS ANGELES	CA	60.000	60.000	-	1	1	-
Martinez Cutri	SAN DIEGO	CA	58.499	53.065	5.434	4	3	1
Bergman & Walls Associates	LAS VEGAS	NV	50.000	50.000	-	1	1	-
Carrier Johnson Architects	SAN DIEGO	CA	42.485	42.292	-	4	3	-
Mithun - Architecture Design & Planning	SEATTLE	WA	41.960	41.960	-	2	2	-
Simon Martin Veque Winkelstein Moris	SAN FRANCISCO	CA	32.550	32.550	-	1	1	-
Pacific Cornerstone Architects	SAN DIEGO	CA	26.635	16.592	10.043	7	3	4
Porter Jensen Hansen Manzagol	SAN CLEMENTE	CA	26.312	26.312	-	2	2	-
Architects Hanna Gabriel Wells	SAN DIEGO	CA	23.018	23.018	-	1	1	-
Top 10 by Number of Projects								
Delawie Wilkes Rodrigues	SAN DIEGO	CA	11.729	-	11.729	8	-	8
Pacific Cornerstone Architects	SAN DIEGO	CA	26.635	16.592	10.043	7	3	4
Austin Veum Robbins Parshalle	SAN DIEGO	CA	10.682	6.000	4.599	6	1	4
Sillman Wright Architects	SAN DIEGO	CA	12.109	9.970	2.139	6	3	3
The Stichter Design Group Inc.	SAN DIEGO	CA	8.227	0.375	7.494	6	1	2
Platt-Whitelaw Architects Inc.	SAN DIEGO	CA	6.885	1.430	5.455	5	1	4
Studio C Architects	SAN DIEGO	CA	0.808	-	0.294	5	-	1
Carrier Johnson Architects	SAN DIEGO	CA	42.485	42.292	-	4	3	-
Joseph Wong Design Associates Inc.	SAN DIEGO	CA	3.126	-	3.039	4	-	3
Martinez Cutri	SAN DIEGO	CA	58.499	53.065	5.434	4	3	1
ENGINEERS								
Top 10 by Project Value								
FEA Associates Inc.	LAS VEGAS	NV	125.000	125.000	-	1	1	-
RHR Engineering	LAS VEGAS	NV	125.000	125.000	-	1	1	-
Hope Engineering	SAN DIEGO	CA	69.068	69.068	-	5	5	-
Flores Lund Mobayed	SAN DIEGO	CA	64.345	54.045	10.300	6	3	3
Randall Lamb Associates	SAN DIEGO	CA	57.984	50.000	7.984	4	1	3
GEM Engineering Inc.	SAN DIEGO	CA	55.568	55.568	-	2	2	-
CBM Engineers Inc.	HOUSTON	TX	50.000	50.000	-	1	1	-
Project Design Consultants	SAN DIEGO	CA	50.000	50.000	-	1	1	-
Chalker Putnam Collins & Scott Inc.	TACOMA	WA	37.500	37.500	-	1	1	-
Travis Fitzmaurice & Assoc	SEATTLE	WA	37.500	37.500	-	1	1	-
Top 10 by Number of Projects								
Bechard - Long & Associates	SAN DIEGO	CA	21.197	11.899	9.298	7	2	5
Burkett & Wong	SAN DIEGO	CA	19.579	6.492	13.087	7	3	4
Flores Lund Mobayed	SAN DIEGO	CA	64.345	54.045	10.300	6	3	3
Bement Dainwood Sturgeon	LEMON GROVE	CA	13.110	8.981	4.129	5	3	2
Hope Engineering	SAN DIEGO	CA	69.068	69.068	-	5	5	-
County of San Diego	SAN DIEGO	CA	7.000	-	7.000	5	-	5
McParlane & Associates	SAN DIEGO	CA	19.592	17.592	2.000	5	4	1
Merrick & Associates	SAN DIEGO	CA	15.887	3.870	12.017	5	1	4
Frederick Brown & Associates	NEWPORT BEACH	CA	28.474	28.312	0.162	4	3	1
HVAC Engineering	SAN DIEGO	CA	15.066	8.578	6.488	4	2	2

APPENDIX A

GLOSSARY OF BUILDING TYPES RECORDED BY F.W. DODGE

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

APPENDIX B

CIRB NONRESIDENTIAL NEW CONSTRUCTION PERMIT VALUE IN QUARTERS 3-4, 2001

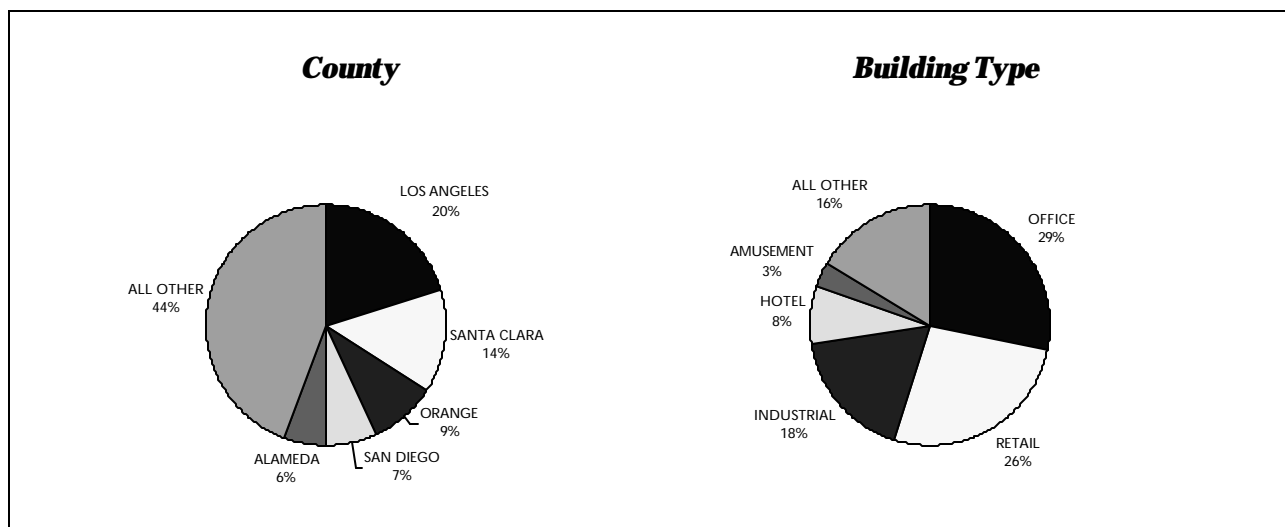
This Appendix presents information on the value of nonresidential new construction permits that were filed in Quarters 3-4, 2001 in the State of California. The data were collected by the Construction Industry Research Board from the more than 515 city and county building departments in California.

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

Table B.1 summarizes the value of nonresidential *permits filed* in Quarters 3-4, 2001, by building type. As shown in Exhibit B.1 below, Los Angeles, Santa Clara, Orange, San Diego and Alameda Counties account for the highest value of permits filed in the State during Quarters 3-4, 2001. Conversely, Alpine, Sierra, Modoc and Lassen Counties had the lowest volume of permit activity in Quarters 3-4, 2001. Among building types, the highest permit value was recorded in the office, retail and industrial segments, but the hotel and amusement 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 Quarters 3-4, 2001



**Table B.1 CIRB Statewide Nonresidential Permit Valuation in Quarters 3-4, 2001
by Building Type and County (\$1,000)**

COUNTY	AMUSEMENT	CHURCH	HOTEL	MEDICAL	OFFICE	OTHER	EDUCATION	RETAIL	SERVICE	INDUSTRIAL	TOTAL NEW	ALTERATION	TOTAL	
ALAMEDA	.	2,329	12,957	.	66,064	1,113	.	64,827	2,211	44,389	193,890	225,339	419,230	
ALPINE	.	.	.	.	.	.	.	.	.	.	0	8	8
AMADOR	.	.	.	.	1,278	921	.	89	.	229	2,517	1,115	3,632
BUTTE	832	790	.	3,454	8,050	3,444	300	4,897	.	1,311	23,078	5,556	28,634	
CALAVERAS	.	.	.	.	.	290	.	170	.	.	460	1,058	1,518
COLUSA	.	.	.	.	.	3,962	.	1,150	.	.	5,112	701	5,813
CONTRA COSTA	6,222	2,108	37,622	.	122,447	21,545	2,459	31,613	.	5,883	229,899	91,257	321,156	
DEL NORTE	.	.	.	.	.	387	.	.	.	.	387	144	531
EL DORADO	.	1,600	61,941	.	829	2,024	571	2,259	.	.	69,224	8,900	78,123	
FRESNO	924	.	.	.	12,343	7,974	476	28,064	780	12,272	62,833	44,308	107,141	
GLENN	.	.	.	.	.	711	.	203	199	376	1,490	200	1,689
HUMBOLDT	.	.	1,889	.	.	2,031	.	3,339	.	180	7,440	3,676	11,116	
IMPERIAL	.	.	.	.	1,043	325	.	1,360	.	.	2,728	3,217	5,945
INYO	.	.	.	977	.	214	.	.	.	821	2,011	594	2,606	
KERN	.	482	.	1,352	19,478	26,382	237	13,085	1,189	12,864	75,069	26,931	101,999	
KINGS	.	.	.	.	450	972	.	178	.	.	19,263	20,863	24,745
LAKE	.	.	.	.	370	214	.	.	371	.	955	122	1,077
LASSEN	.	.	.	.	.	142	.	.	.	.	142	308	451
LOS ANGELES	37,403	10,119	16,136	20,643	179,521	50,612	52,334	235,227	3,145	100,730	705,870	844,455	1,550,325	
MADERA	137	217	.	.	549	1,150	.	2,719	.	1,863	6,634	2,991	9,625	
MARIN	.	.	.	.	15,771	704	.	450	.	800	17,725	26,483	44,208
MARIPOSA	.	.	.	.	.	1,165	.	1,122	.	.	2,287	315	2,601
MENDOCINO	.	.	.	.	917	1,699	.	700	.	3,076	6,392	3,175	9,567
MERCED	.	.	.	.	.	17,045	.	7,321	.	1,968	26,334	5,943	32,277
MODOC	.	.	.	.	.	97	.	.	.	.	97	30	127
MONO	.	.	.	.	.	273	.	.	.	.	273	592	866
MONTEREY	1,079	1,376	329	.	7,657	5,778	5,148	3,596	.	3,036	27,999	26,295	54,294	
NAPA	5,181	.	.	2,034	5,779	5,588	.	25,046	750	3,633	48,010	17,351	65,361	
NEVADA	309	152	1,218	.	4,115	2,312	.	216	.	.	8,322	343	8,665	
ORANGE	18,691	12,274	61,348	8,141	92,709	5,154	17,866	93,243	1,523	66,629	377,579	292,548	670,127	
PLACER	2,078	373	.	.	21,749	2,762	.	32,553	2,325	8,450	70,290	31,063	101,353	
PLUMAS	.	.	.	.	308	.	.	.	.	.	308	159	466
RIVERSIDE	6,873	4,175	14,455	3,139	22,747	11,985	7,745	110,404	2,162	34,382	218,068	78,220	296,288	
SACRAMENTO	7,692	3,833	8,519	4,076	93,753	9,429	4,497	37,402	252	27,720	197,172	119,497	316,668	
SAN BENITO	.	.	.	.	.	793	.	2,482	.	.	3,275	2,551	5,826
SAN BERNARDINO	1,898	1,457	3,000	.	6,671	8,172	5,084	92,272	4,479	166,382	289,414	55,971	345,385	
SAN DIEGO	15,756	5,514	4,213	6,896	67,870	16,165	18,323	92,979	6,289	53,113	287,118	230,753	517,870	
SAN FRANCISCO	1,200	.	.	.	56,501	3,510	10,300	15,899	.	.	87,410	199,048	286,458	
SAN JOAQUIN	.	2,105	1,083	.	3,535	8,442	262	32,942	9,789	24,798	82,956	41,819	124,774	
SAN LUIS OBISPO	.	.	508	.	3,211	7,357	.	11,330	.	4,583	26,989	12,046	39,035	
SAN MATEO	8,550	.	12,099	.	110,264	4,003	.	10,071	3,832	1,909	150,728	133,463	284,191	
SANTA BARBARA	.	250	.	.	3,665	5,884	856	13,585	.	7,935	32,176	30,636	62,812	
SANTA CLARA	3,664	5,032	69,860	53,491	239,451	9,800	42,464	44,093	.	56,717	524,571	534,823	1,059,394	
SANTA CRUZ	.	.	4,175	737	3,606	1,129	381	926	.	482	11,435	9,526	20,961	
SHASTA	9,900	2,010	.	.	3,567	2,494	.	8,289	90	4,802	31,153	4,920	36,073	
SIERRA	.	.	.	.	.	9	.	9	.	.	9	13	22
SISKIYOU	.	.	.	.	.	4,386	.	300	.	601	5,287	2,298	7,585
SOLANO	.	700	.	.	2,609	4,559	.	8,314	1,193	14,386	31,760	25,533	57,294	
SONOMA	480	1,721	22,395	.	7,568	7,072	1,400	19,201	613	12,793	73,242	34,108	107,350	
STANISLAUS	1,900	475	2,846	6,295	8,682	10,401	468	22,929	1,139	4,956	60,091	41,739	101,830	
SUTTER	.	399	.	.	1,208	720	.	8,846	.	.	2,667	13,839	4,450	18,289
TEHAMA	.	406	.	.	.	3,779	.	.	.	1,000	5,185	901	6,086	
TRINITY	194	.	.	.	.	221	.	.	.	.	415	181	597
TULARE	.	286	.	.	3,583	8,269	.	4,609	.	662	17,408	17,106	34,515	
TUOLUMNE	.	.	.	666	815	845	.	1,658	.	.	3,983	1,487	5,470	
VENTURA	6,460	380	.	4,416	4,349	9,965	431	32,123	.	37,352	95,476	55,152	150,628	
YOLO	.	.	.	.	11,641	2,931	.	5,651	157	16,899	37,279	14,987	52,266
YUBA	832	.	.	1,308	518	1,368	901	.	.	179	5,105	715	5,820	
CALIFORNIA	138,254	60,561	336,592	117,624	1,217,241	310,677	172,503	1,129,736	42,486	762,089	4,287,763	3,321,002	7,608,765	

Tables B.2 and B.3 present quarterly permit activity, by county and building type for a 1-year period ending in December 2001. According to these data, there is no significant 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 1-Year Period
by Quarter and County (\$1,000)**

COUNTY	NEW CONSTRUCTION					ADDITIONS AND ALTERATIONS					2001 TOTAL
	Q1, 2001	Q2, 2001	Q3, 2001	Q4, 2001	2001 Total	Q1, 2001	Q2, 2001	Q3, 2001	Q4, 2001	2001 Total	
ALAMEDA	205,105	90,849	103,126	90,764	489,844	161,899	117,560	107,724	117,616	504,799	994,643
ALPINE	20	0	0	0	20	0	0	8		8	28
AMADOR	438	94	2,424	94	3,048	71	196	918	196	1,382	4,431
BUTTE	21,348	12,087	9,910	13,168	56,512	2,817	2,743	2,794	2,762	11,116	67,629
CALAVERAS	3,144	340	120	340	3,945	851	683	374	683	2,592	6,537
COLUSA	2,289	3,034	2,078	3,034	10,435	179	372	329	372	1,251	11,687
CONTRA COSTA	30,581	108,982	116,089	113,810	369,462	39,997	33,899	57,485	33,772	165,153	534,614
DEL NORTE	733	254	133	254	1,373	166	75	69	75	384	1,758
EL DORADO	4,556	66,307	2,917	66,307	140,086	10,235	6,319	2,581	6,319	25,454	165,540
FRESNO	38,342	34,021	24,444	38,389	135,197	31,810	23,854	20,294	24,014	99,972	235,168
GLENN	453	889	601	889	2,831	284	137	63	137	620	3,451
HUMBOLDT	2,735	6,461	979	6,461	16,636	1,438	2,162	1,514	2,162	7,277	23,913
IMPERIAL	2,405	897	1,831	897	6,031	922	2,266	952	2,266	6,405	12,435
INYO	1	214	1,798	214	2,226	196	327	267	327	1,117	3,343
KERN	44,134	37,998	27,565	47,504	157,201	11,576	9,699	13,537	13,393	48,206	205,406
KINGS	4,391	19,943	920	19,943	45,197	1,238	3,376	506	3,376	8,496	53,693
LAKE	560	0	955	0	1,515	614	32	90	32	768	2,284
LASSEN	125	34	125	17	301	356	154	22	286	818	1,119
LOS ANGELES	468,642	456,088	244,691	461,179	1,630,600	397,271	412,973	427,698	416,757	1,654,699	3,285,299
MADERA	6,035	2,400	4,234	2,400	15,070	1,136	2,138	853	2,138	6,265	21,335
MARIN	18,956	15,395	2,330	15,395	52,077	7,925	13,825	12,658	13,825	48,232	100,309
MARIPOSA	797	1,160	1,126	1,160	4,244	0	13	302	13	327	4,571
MENDOCINO	15,094	2,679	3,713	2,679	24,165	1,275	1,550	1,625	1,550	6,000	30,165
MERCED	3,766	17,120	9,214	17,120	47,221	1,319	3,425	2,518	3,425	10,686	57,906
MODOC	28	47	51	47	172	45	14	16	14	89	261
MONO	0	273	0	273	547	46	423	169	423	1,062	1,609
MONTEREY	7,230	8,973	19,027	8,973	44,202	11,229	11,420	14,875	11,420	48,943	93,145
NAPA	34,926	27,122	20,888	27,122	110,058	10,830	6,807	10,544	6,807	34,987	145,045
NEVADA	11,036	4,417	3,905	4,417	23,775	125	131	212	131	599	24,373
ORANGE	223,603	217,266	158,513	219,066	818,448	134,841	159,707	132,153	160,395	587,095	1,405,543
PLACER	12,330	28,522	41,768	28,522	111,141	19,818	14,831	16,232	14,831	65,712	176,853
PLUMAS	0	0	308	0	308	26	75	84	75	260	567
RIVERSIDE	72,564	86,533	129,994	88,073	377,165	29,004	44,409	33,856	44,365	151,633	528,798
SACRAMENTO	40,811	109,808	84,435	112,736	347,790	43,665	46,482	63,675	55,822	209,644	557,434
SAN BENITO	940	421	2,854	421	4,636	2,314	780	1,771	780	5,645	10,281
SAN BERNARDINO	158,359	97,136	191,650	97,764	544,910	25,846	26,150	29,378	26,593	107,968	652,877
SAN DIEGO	166,688	175,730	111,388	175,730	629,537	116,230	108,908	121,844	108,908	455,891	1,085,427
SAN FRANCISCO	134,782	10,059	77,351	10,059	232,252	130,826	120,006	79,042	120,006	449,879	682,131
SAN JOAQUIN	25,121	25,784	57,171	25,784	133,861	14,043	21,116	20,869	20,949	76,978	210,839
SAN LUIS OBISPO	15,875	13,833	13,156	13,833	56,696	5,683	5,694	6,353	5,694	23,422	80,119
SAN MATEO	107,752	83,606	67,487	83,241	342,086	40,204	88,038	56,423	77,040	261,706	603,792
SANTA BARBARA	18,859	17,440	14,736	17,440	68,475	16,243	14,269	16,367	14,269	61,148	129,623
SANTA CLARA	325,451	286,722	237,849	286,722	1,136,744	325,982	309,302	225,521	309,302	1,170,107	2,306,851
SANTA CRUZ	7,924	4,511	6,925	4,511	23,870	3,928	3,517	5,797	3,729	16,971	40,841
SHASTA	6,120	17,106	14,047	17,106	54,379	3,968	2,563	2,356	2,563	11,451	65,830
SIERRA	0	0	9	0	9	0	0	13		13	22
SISKIYOU	2,800	1,405	3,882	1,405	9,492	439	1,202	1,095	1,202	3,940	13,432
SOLANO	23,674	6,298	25,462	6,298	61,732	7,467	13,349	12,185	13,349	46,349	108,081
SONOMA	39,443	30,348	42,894	30,348	143,033	11,643	18,788	15,321	18,788	64,538	207,572
STANISLAUS	23,368	33,860	26,231	33,860	117,318	10,284	17,759	23,981	17,759	69,782	187,100
SUTTER	4,044	10,352	3,487	10,352	28,235	910	2,506	1,945	2,506	7,866	36,100
TEHAMA	1,519	4,415	770	4,415	11,119	367	240	661	240	1,509	12,628
TRINITY	282	42	373	42	740	295	7	175	7	483	1,222
TULARE	26,667	7,786	9,622	7,786	51,862	4,765	8,069	9,037	8,069	29,940	81,801
TUOLUMNE	14,718	2,163	1,820	2,163	20,864	649	973	514	973	3,109	23,973
VENTURA	58,151	49,148	46,328	49,148	202,775	18,817	28,470	26,683	28,470	102,439	305,214
YOLO	5,795	10,338	26,940	10,338	53,413	5,758	8,082	6,905	8,082	28,826	82,239
YUBA	1,980	3,190	1,916	3,190	10,275	775	478	237	478	1,968	12,243
CALIFORNIA	2,447,491	2,251,902	2,004,558	2,283,205	8,987,156	1,670,638	1,722,339	1,591,470	1,729,532	6,713,978	15,701,134

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

	AMUSEMENT	CHURCH	HOTEL	MEDICAL	OFFICE	OTHER	EDUCATION	RETAIL	SERVICE	INDUSTRIAL	TOTAL NEW	ALTERATION	TOTAL
CALIFORNIA													
Q1, 2001	74,054	29,020	256,574	37,476	922,240	101,526	24,016	543,835	10,186	448,565	2,447,491	1,670,638	4,118,129
Q2, 2001	75,218	30,945	149,029	33,881	762,866	138,102	87,238	600,728	18,872	355,023	2,251,902	1,722,339	3,974,241
Q3, 2001	63,037	24,593	181,388	76,375	449,410	166,660	86,305	529,533	23,614	403,643	2,004,558	1,591,470	3,596,027
Q4, 2001	75,218	35,969	155,204	41,249	767,831	144,017	86,198	600,203	18,872	358,446	2,283,205	1,729,532	4,012,737
2001 Total	287,527	120,526	742,194	188,981	2,902,347	550,306	283,756	2,274,298	71,544	1,565,676	8,987,156	6,713,978	15,701,134

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.

APPENDIX D

GLOSSARY OF MEASURES IMPLEMENTED BY SBD PARTICIPANTS

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