

**NRNC MARKET CHARACTERIZATION AND
PROGRAM ACTIVITIES TRACKING REPORT
QUARTERS 1-2, 2001**

FINAL

Prepared for

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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 1-2, 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 1-2, 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 1-2, 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 1-2, 2001.

Chapter 3 presents the market characteristics for alteration projects, as described by F.W. Dodge. It then describes program participation in Quarters 1-2, 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 1-2, 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 1-2, 2001.

2. STATEWIDE NONRESIDENTIAL NEW CONSTRUCTION TRENDS

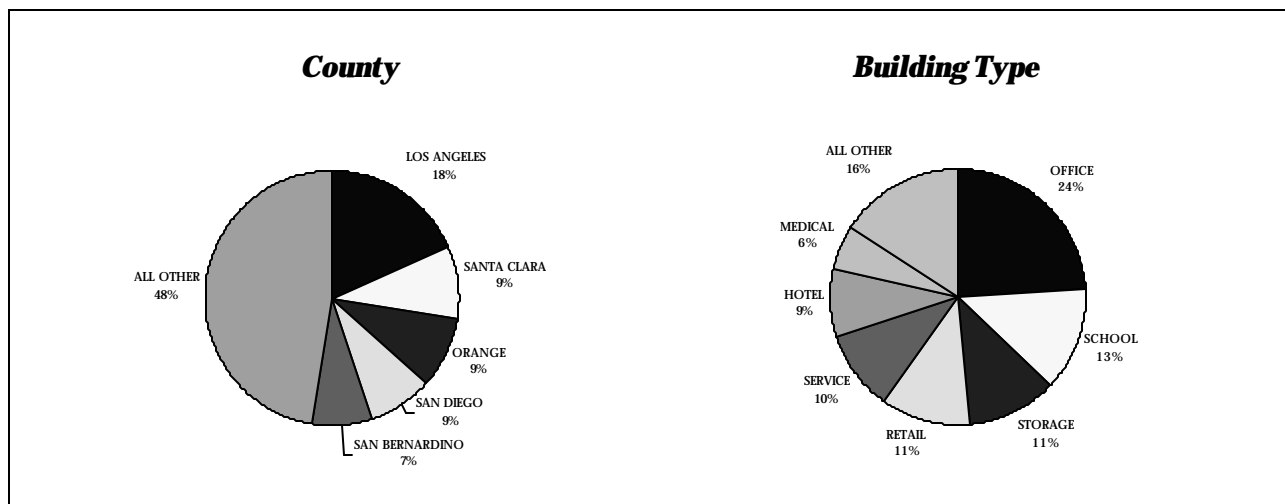
This chapter presents information on the nonresidential new construction activity that has occurred in Quarters 1-2, 2001, in the State of California. The first section covers the total valuation, the number of project starts, and the total square footage of new construction projects by county, as reported 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 1-2, 2001.

2.1 NEW CONSTRUCTION MARKET CHARACTERISTICS IN QUARTERS 1-2, 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 1-2, 2001. To emulate SBD Program scope as closely as possible, additions reported by F.W. Dodge were included with new construction; this explains the higher project value reported by F.W. Dodge, as compared to the CIRB data summarized in Appendix B. As shown in Exhibit 2.1 below, Los Angeles, Santa Clara, Orange, San Diego and San Bernardino Counties account for the highest value of projects that *have started construction* in Quarters 1-2, 2001. F.W. Dodge did not report any project starts in Quarters 1-2, 2001 in Alpine, Del Norte, Mariposa, Modoc and Trinity Counties.

Exhibit 2.1
New Construction Market Segments with the Highest Project Start Valuation in Quarters 1-2, 2001

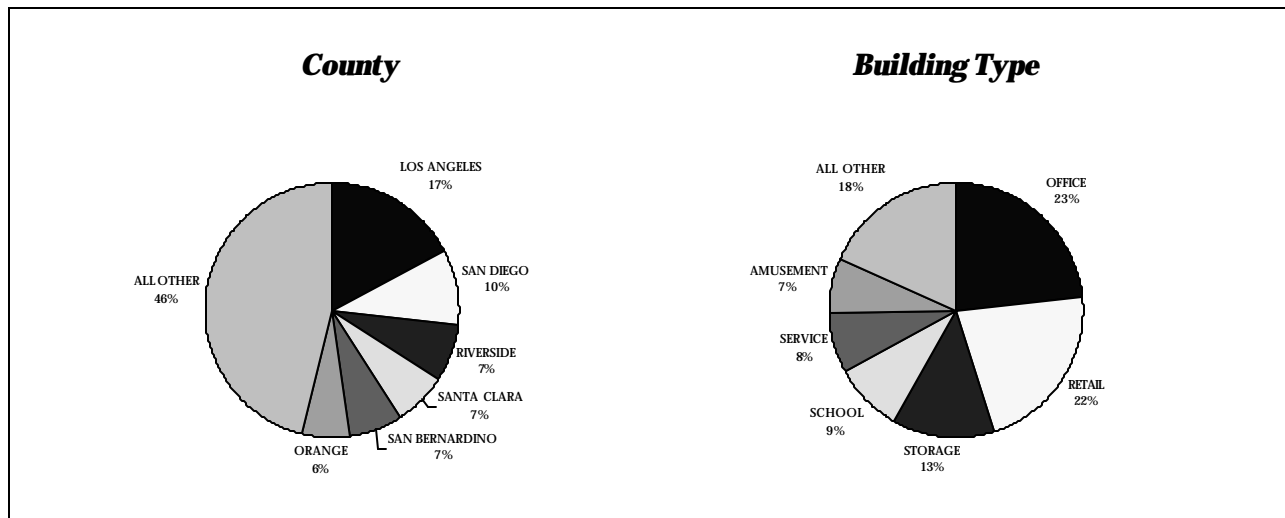


Among building types, office, school, storage and retail account for the highest project start valuation, but the service, hotel and medical segments also show relatively high market activity. The education (museums, libraries) and assembly (churches) segments account for the lowest project start value in Quarters 1-2, 2001.

Among utility territories, PG&E accounts for the largest project start value in Quarters 1-2, 2001, a large fraction of which is concentrated in the office and service segments. SCE follows, with a large fraction of the project value concentrated in the school, storage, office and retail segments. In the SDG&E service territory, the hotel and office segments account for the highest project start value. Non-IOU areas, consisting of the service territories of multiple municipal utilities and other entities, also account for a relatively large share of the project start value. A large fraction of the Non-IOU project value is concentrated in the office, medical and storage segments.

Table 2.2 presents the number of nonresidential new construction and addition projects that have started construction in Quarters 1-2, 2001, as reported by F.W. Dodge. As shown in Exhibit 2.2, Los Angeles, San Diego, Riverside, Santa Clara 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 1-2, 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.

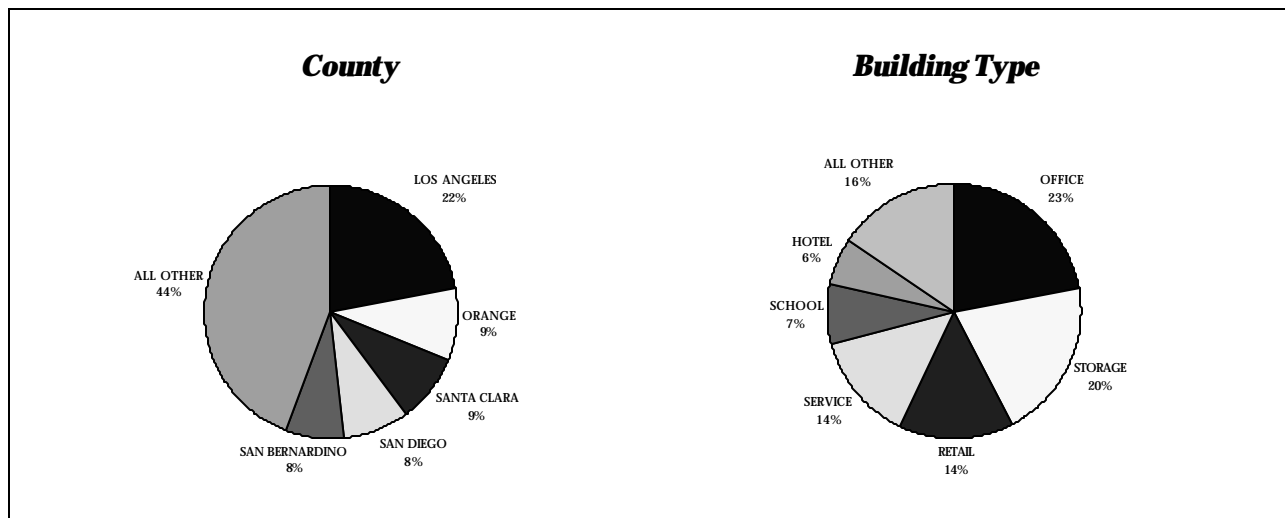
Exhibit 2.2
New Construction Market Segments with the Highest Number of Project Starts
in Quarters 1-2, 2001



Tables 2.3 and 2.4 summarize quarterly project starts by county and building type, for a 1-year period ending in June 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 1-2, 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, Orange, Santa Clara, San Diego and San Bernardino. The office, storage, retail and service segments account for large square footage of new space, while the education segment accounts for the least amount of new space built in Quarters 1-2, 2001.

Exhibit 3.3
New Construction Market Segments with the Highest Square Footage
in Quarters 1-2, 2001



Among utility territories, PG&E accounts for the largest number of new square feet built in Quarters 1-2, 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 office, hotel 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 1-2, 2001. A large fraction of the Non-IOU project area is concentrated in the storage, office and service 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 June 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 1-2, 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	1,004	.	1,111	7,214	39,486	5,240	108,876	39,698	55,376	10,200	57,512	28,322	354,039
ALPINE	.	.	.	.	.	.	.	.	.	.	.	.	0
AMADOR	.	.	.	507	1,600	170	576	958	.	.	.	110	3,921
BUTTE	3,464	.	1,159	9,115	.	12,724	2,350	21,200	550	800	1,780	1,607	54,749
CALAVERAS	.	.	.	.	.	.	114	329	.	.	.	.	443
COLUSA	.	.	.	.	.	.	200	.	.	.	.	.	200
CONTRA COSTA	594	.	2,000	28,447	.	2,315	50,227	12,015	22,015	22,483	6,475	8,635	155,206
DEL NORTE	.	.	.	.	.	.	.	.	.	.	.	.	0
EL DORADO	350	2,400	.	.	52,000	.	2,867	2,600	9,841	2,500	.	167	72,725
FRESNO	24,320	.	.	15,545	.	97,150	20,163	14,528	3,492	3,000	11,423	3,756	193,377
GLENN	.	.	.	.	.	.	.	125	.	.	.	.	125
HUMBOLDT	.	.	.	.	.	.	.	.	4,872	.	.	.	4,872
IMPERIAL	125	.	.	6,800	.	27,175	214	15,302	192	208	.	25,000	75,016
INYO	.	.	.	.	.	.	2,883	.	3,000	4,940	1,875	.	12,698
KERN	135	2,735	.	.	1,000	854	850	31,527	1,140	125	102,354	13,506	154,226
KINGS	13,407	432	.	618	.	.	.	492	9,810	.	.	1,528	26,287
LAKE	1,796	.	.	.	.	.	.	.	750	.	136	.	2,682
LASSEN	649	.	.	.	.	.	.	.	2,140	.	.	.	2,789
LOS ANGELES	75,853	33,233	41,128	2,849	25,707	146,358	309,238	197,487	186,732	107,836	187,567	89,414	1,403,402
MADERA	.	4,000	.	500	.	294	.	1,529	.	242	3,640	185	10,390
MARIN	4,556	.	.	.	.	222	7,748	1,800	16,829	.	142	15,000	46,297
MARIPOSA	.	.	.	.	.	.	.	.	.	.	.	.	0
MENDOCINO	.	.	.	275	1,650	.	.	.	1,270	911	.	.	4,106
MERCED	.	.	.	683	.	.	652	7,445	7,723	.	6,461	4,109	27,073
MODOC	.	.	.	.	.	.	.	.	.	.	.	.	0
MONO	.	.	.	.	.	.	.	.	3,459	.	.	.	3,459
MONTEREY	1,151	1,264	.	.	5,000	10,125	1,945	157	14,613	550	382	150	35,337
NAPA	.	.	.	.	1,000	2,000	153	8,189	.	.	1,606	9,043	21,991
NEVADA	459	.	.	.	.	1,800	.	.	1,000	.	10,113	.	13,372
ORANGE	44,809	7,299	.	.	193,500	8,855	105,446	93,558	40,094	17,342	123,099	47,546	681,548
PLACER	6,878	10,970	.	.	.	140	26,636	16,746	12,928	14,817	5,679	100	94,894
PLUMAS	397	.	.	1,491	.	.	170	468	.	.	196	1,125	3,847
RIVERSIDE	21,013	2,771	2,500	1,874	232	2,250	65,713	67,906	76,989	10,125	71,988	40,562	363,923
SACRAMENTO	2,982	3,264	.	5,443	27,400	10,768	41,840	30,264	17,934	77,000	25,843	19,195	261,933
SAN BENITO	.	.	.	.	.	5,506	151	.	3,200	.	.	.	8,857
SAN BERNARDINO	11,332	2,172	1,200	124,606	6,018	443	43,624	51,640	142,705	10,388	152,986	9,752	556,866
SAN DIEGO	39,382	10,651	15,030	98	151,025	55,480	142,508	74,592	79,491	61,832	18,762	4,452	653,303
SAN FRANCISCO	62,473	500	162	.	95,365	78	181,087	7,057	30,041	172,593	550	80	549,986
SAN JOAQUIN	.	1,000	.	1,728	4,500	.	1,440	6,776	950	9,651	20,165	28,736	74,946
SAN LUIS OBISPO	1,406	.	.	8,242	2,168	260	7,520	5,738	12,137	806	4,372	6,791	49,440
SAN MATEO	15,000	700	.	6,639	15,400	13,180	325,274	2,069	15,912	46,719	961	30,000	471,854
SANTA BARBARA	9,303	1,300	126	.	97	1,800	7,595	2,707	38,554	640	1,933	1,901	65,956
SANTA CLARA	22,438	4,950	4,186	.	4,199	16,405	224,709	81,413	132,998	189,624	25,690	2,469	709,081
SANTA CRUZ	.	.	.	.	.	200	527	.	12,981	.	.	.	13,708
SHASTA	.	.	.	.	.	.	1,694	601	253	.	1,500	361	4,409
SIERRA	.	.	.	.	.	.	.	.	2,238	905	.	.	3,143
SISKIYOU	114	.	.	.	.	.	122	.	.	.	.	.	236
SOLANO	.	.	.	.	7,500	.	22,028	2,250	7,973	8,600	7,523	274	56,148
SONOMA	6,360	1,499	6,441	3,275	28,895	.	37,589	680	4,952	1,100	225	19,529	110,545
STANISLAUS	1,000	.	.	2,390	.	3,000	2,210	16,125	10,892	300	5,523	784	42,224
SUTTER	.	.	.	.	.	1,500	.	4,721	900	.	.	.	7,121
TEHAMA	.	.	.	107	.	.	676	81	.	.	.	.	864
TRINITY	.	.	.	.	.	.	.	.	.	.	.	.	0
TULARE	2,750	.	.	.	82	.	119	.	11,172	.	2,807	1,153	18,083
TUOLUMNE	322	.	.	.	.	.	.	.	.	.	.	.	322
VENTURA	5,685	.	.	.	.	159	71,755	33,193	5,856	4,091	13,301	11,057	145,097
YOLO	1,200	.	.	.	.	330	5,477	378	4,630	1,600	4,000	250	17,865
YUBA	.	.	.	.	.	.	.	.	.	.	117	.	117
CALIFORNIA	382,707	91,140	75,043	228,446	663,824	426,781	1,824,966	854,344	1,010,584	781,928	878,686	426,649	7,645,098
UTILITY													
SCE	73,298	24,443	3,700	126,480	134,644	19,125	367,302	320,313	413,901	90,629	384,333	162,719	2,120,887
PG&E	176,099	31,357	13,413	90,591	255,763	172,627	939,049	280,505	373,438	554,828	266,943	181,283	3,335,896
SDG&E	45,882	10,651	15,030	98	221,025	55,558	156,181	96,072	82,166	61,832	23,999	23,532	792,026
Non-IOU	87,428	24,689	42,900	11,277	52,392	179,471	362,434	157,454	141,079	74,639	203,411	59,115	1,396,289

**Table 2.2 F.W. Dodge Number of Nonresidential New Construction Project Starts
in Quarters 1-2, 2001
by Building Type, County and Service Territory**

	AMUSEMENT	ASSEMBLY	EDUCATION	GOVT	HOTEL	MEDICAL	OFFICE	RETAIL	SCHOOL	SERVICE	STORAGE	OTHER	TOTAL
COUNTY													
ALAMEDA	4	.	1	1	6	2	32	23	10	2	15	5	101
ALPINE	.	.	.	.	.	.	.	.	.	.	.	.	0
AMADOR	.	.	.	1	1	1	5	7	.	.	.	1	16
BUTTE	1	.	1	1	.	5	4	7	1	1	4	1	26
CALAVERAS	.	.	.	.	.	.	1	1	.	.	.	.	2
COLUSA	.	.	.	.	.	.	1	.	.	.	.	.	1
CONTRA COSTA	2	.	2	2	.	3	16	8	3	7	5	6	54
DEL NORTE	.	.	.	.	.	.	.	.	.	.	.	.	0
EL DORADO	1	1	.	.	2	.	6	1	2	1	.	1	15
FRESNO	2	.	.	3	.	3	19	14	4	1	10	4	60
GLENN	.	.	.	.	.	.	.	1	.	.	.	.	1
HUMBOLDT	.	.	.	.	.	.	.	.	2	.	.	.	2
IMPERIAL	1	.	.	1	.	2	2	3	1	1	.	1	12
INYO	.	.	.	.	.	.	1	.	3	1	1	.	6
KERN	1	4	.	.	1	1	2	17	4	1	17	8	56
KINGS	2	1	.	1	.	.	.	2	3	.	.	3	12
LAKE	1	.	.	.	.	.	.	.	1	.	1	.	3
LASSEN	1	.	.	.	.	.	.	.	1	.	.	.	2
LOS ANGELES	30	12	11	1	8	15	64	117	27	41	53	21	400
MADERA	.	1	.	1	.	1	.	3	.	1	7	1	15
MARIN	6	.	.	.	.	1	3	2	5	.	1	1	19
MARIPOSA	.	.	.	.	.	.	.	.	.	.	.	.	0
MENDOCINO	.	.	.	1	1	.	.	.	1	1	.	.	4
MERCED	.	.	.	1	.	.	4	3	2	.	4	5	19
MODOC	.	.	.	.	.	.	.	.	.	.	.	.	0
MONO	.	.	.	.	.	.	.	.	2	.	.	.	2
MONTEREY	1	2	.	.	1	1	4	1	2	2	3	1	18
NAPA	.	.	.	.	1	1	1	1	.	.	2	5	11
NEVADA	1	.	.	.	.	1	.	.	1	.	2	.	5
ORANGE	13	4	.	.	9	4	24	45	9	7	22	8	145
PLACER	7	4	.	.	.	1	16	14	5	5	4	1	57
PLUMAS	1	.	.	1	.	.	1	1	.	.	2	2	8
RIVERSIDE	14	5	1	1	2	2	33	43	19	6	32	14	172
SACRAMENTO	5	5	.	1	5	4	22	22	11	5	8	4	92
SAN BENITO	.	.	.	.	.	1	1	.	1	.	.	.	3
SAN BERNARDINO	4	4	1	4	5	2	27	44	15	7	33	7	153
SAN DIEGO	22	8	6	1	12	9	54	45	17	31	17	7	229
SAN FRANCISCO	6	1	1	.	5	1	25	10	6	11	1	1	68
SAN JOAQUIN	.	1	.	2	1	.	4	2	1	3	4	5	23
SAN LUIS OBISPO	4	.	.	1	2	1	8	7	4	2	8	6	43
SAN MATEO	1	2	.	1	3	3	28	3	6	7	2	3	59
SANTA BARBARA	5	2	1	.	1	2	11	8	4	1	3	4	42
SANTA CLARA	10	4	2	.	1	4	68	24	15	23	9	3	163
SANTA CRUZ	.	.	.	.	.	1	2	.	1	.	.	.	4
SHASTA	.	.	.	.	.	.	11	4	1	.	1	1	18
SIERRA	.	.	.	.	.	.	.	.	1	1	.	.	2
SISKIYOU	1	.	.	.	.	.	1	.	.	.	.	.	2
SOLANO	.	.	.	.	1	.	9	2	1	4	2	2	21
SONOMA	4	1	2	3	4	.	10	5	5	2	1	7	44
STANISLAUS	1	.	.	1	.	1	7	11	3	1	7	3	35
SUTTER	.	.	.	.	.	1	.	2	1	.	.	.	4
TEHAMA	.	.	.	1	.	.	2	1	.	.	.	.	4
TRINITY	.	.	.	.	.	.	.	.	.	.	.	.	0
TULARE	3	.	.	.	1	.	1	.	5	.	3	4	17
TUOLUMNE	1	.	.	.	.	.	.	.	.	.	.	.	1
VENTURA	4	.	.	.	.	1	10	10	3	6	8	7	49
YOLO	2	.	.	.	.	1	4	2	4	1	2	2	18
YUBA	.	.	.	.	.	.	.	.	.	.	1	.	1
CALIFORNIA	162	62	29	31	73	76	544	516	213	183	295	155	2,339
UTILITY													
SCE	43	18	2	5	16	12	114	184	67	38	108	45	652
PG&E	58	22	8	22	28	31	259	160	98	77	96	70	929
SDG&E	24	8	6	1	15	10	62	57	19	31	20	10	263
Non-IOU	37	14	13	3	14	23	109	115	29	37	71	30	495

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

	Q3, 2000	Q4, 2000	Q1, 2001	Q2, 2001	1-Year Total
COUNTY					
ALAMEDA	56	51	47	54	208
ALPINE	0	0	0	0	0
AMADOR	2	2	14	2	20
BUTTE	11	8	14	12	45
CALAVERAS	2	0	0	2	4
COLUSA	0	0	0	1	1
CONTRA COSTA	31	28	25	29	113
DEL NORTE	0	0	0	0	0
EL DORADO	15	10	5	10	40
FRESNO	18	26	35	25	104
GLENN	0	0	0	1	1
HUMBOLDT	2	1	0	2	5
IMPERIAL	13	8	7	5	33
INYO	0	2	4	2	8
KERN	34	27	32	24	117
KINGS	1	6	5	7	19
LAKE	3	3	3	0	9
LASSEN	0	0	1	1	2
LOS ANGELES	186	179	162	238	765
MADERA	3	4	13	2	22
MARIN	17	11	12	7	47
MARIPOSA	0	0	0	0	0
MENDOCINO	2	0	2	2	6
MERCED	3	6	7	12	28
MODOC	0	0	0	0	0
MONO	1	1	2	0	4
MONTEREY	10	14	8	10	42
NAPA	6	10	6	5	27
NEVADA	8	10	2	3	23
ORANGE	80	72	78	67	297
PLACER	31	33	22	35	121
PLUMAS	1	8	3	5	17
RIVERSIDE	72	67	80	92	311
SACRAMENTO	62	62	52	40	216
SAN BENITO	0	2	0	3	5
SAN BERNARDINO	57	68	80	73	278
SAN DIEGO	137	111	104	125	477
SAN FRANCISCO	57	80	31	37	205
SAN JOAQUIN	25	19	10	13	67
SAN LUIS OBISPO	36	20	18	25	99
SAN MATEO	26	30	32	27	115
SANTA BARBARA	21	19	20	22	82
SANTA CLARA	83	78	87	76	324
SANTA CRUZ	10	2	3	1	16
SHASTA	13	5	9	9	36
SIERRA	0	0	1	1	2
SISKIYOU	1	2	1	1	5
SOLANO	9	11	10	11	41
SONOMA	25	36	14	30	105
STANISLAUS	8	8	13	22	51
SUTTER	0	1	1	3	5
TEHAMA	1	5	1	3	10
TRINITY	0	0	0	0	0
TULARE	4	8	7	10	29
TUOLUMNE	1	13	1	0	15
VENTURA	28	22	27	22	99
YOLO	14	2	7	11	34
YUBA	1	0	0	1	2
CALIFORNIA	1,227	1,191	1,118	1,221	4,757
UTILITY					
SCE	325	303	301	351	1,280
PG&E	536	532	457	472	1,997
SDG&E	141	109	119	144	513
Non-IOU	225	247	241	254	967

**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													
Q3, 2000	98	41	6	24	34	42	319	230	103	103	139	88	1,227
Q4, 2000	84	40	6	16	35	33	314	238	79	100	165	81	1,191
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
1-Year Total	344	143	41	71	142	151	1,177	984	395	386	599	324	4,757
SCE													
Q3, 2000	29	12	3	9	9	9	83	72	21	18	40	20	325
Q4, 2000	17	14	.	6	8	5	59	81	14	17	60	22	303
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
1-Year Total	89	44	5	20	33	26	256	337	102	73	208	87	1,280
PG&E													
Q3, 2000	45	16	2	11	17	20	162	77	53	40	48	45	536
Q4, 2000	43	16	6	6	15	14	152	98	49	48	45	40	532
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
1-Year Total	146	54	16	39	60	65	573	335	200	165	189	155	1,997
SDG&E													
Q3, 2000	12	7	.	1	6	5	33	35	9	13	14	6	141
Q4, 2000	8	6	.	.	8	5	32	16	7	11	10	6	109
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
1-Year Total	44	21	6	2	29	20	127	108	35	55	44	22	513
Non-IQU													
Q3, 2000	12	6	1	3	2	8	41	46	20	32	37	17	225
Q4, 2000	16	4	.	4	4	9	71	43	9	24	50	13	247
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
1-Year Total	65	24	14	10	20	40	221	204	58	93	158	60	967

**Table 2.5 F.W. Dodge Area of Nonresidential New Construction Project Starts
in Quarters 1-2, 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	10	.	3	44	351	48	1,319	858	278	361	1,008	531	4,810
ALPINE	.	.	.	.	.	.	.	.	.	.	.	.	0
AMADOR	.	.	.	4	24	2	8	16	.	.	.	2	56
BUTTE	24	.	5	52	.	183	23	311	5	15	27	46	690
CALAVERAS	.	.	.	.	.	.	2	6	.	.	.	.	8
COLUSA	.	.	.	.	.	.	4	.	.	.	.	.	4
CONTRA COSTA	5	.	11	206	.	12	654	194	119	411	83	194	1,888
DEL NORTE	.	.	.	.	.	.	.	.	.	.	.	.	0
EL DORADO	4	24	.	.	310	.	36	25	55	34	.	3	490
FRESNO	248	.	.	97	.	413	265	374	29	130	292	38	1,886
GLENN	.	.	.	.	.	.	.	2	.	.	.	.	2
HUMBOLDT	.	.	.	.	.	.	.	.	30	.	.	.	30
IMPERIAL	1	.	.	40	.	83	3	116	3	4	.	330	580
INYO	.	.	.	.	.	.	36	.	22	95	50	.	203
KERN	1	25	.	.	15	10	11	501	7	2	1,996	206	2,774
KINGS	170	5	.	2	.	.	.	6	104	.	.	22	309
LAKE	10	.	.	.	.	.	.	.	6	.	3	.	19
LASSEN	4	.	.	.	.	.	.	.	10	.	.	.	14
LOS ANGELES	458	215	207	31	324	1,558	4,628	3,666	1,203	3,047	4,973	872	21,180
MADERA	.	29	.	4	.	3	.	23	.	5	73	4	141
MARIN	27	.	.	.	.	2	94	37	58	.	3	130	351
MARIPOSA	.	.	.	.	.	.	.	.	.	.	.	.	0
MENDOCINO	.	.	.	2	17	.	.	.	6	5	.	.	30
MERCED	.	.	.	8	.	.	8	84	50	.	159	100	408
MODOC	.	.	.	.	.	.	.	.	.	.	.	.	0
MONO	.	.	.	.	.	.	.	.	29	.	.	.	29
MONTEREY	14	17	.	.	60	32	35	5	58	11	7	2	241
NAPA	.	.	.	.	15	25	3	77	.	.	42	92	253
NEVADA	4	.	.	.	.	6	.	.	5	.	237	.	252
ORANGE	296	62	.	.	1,862	88	1,650	1,368	219	352	2,448	530	8,875
PLACER	101	125	.	.	.	2	354	266	119	187	195	3	1,351
PLUMAS	0	.	.	2	.	.	2	9	.	.	4	23	41
RIVERSIDE	202	29	30	11	4	29	670	639	608	182	1,759	666	4,830
SACRAMENTO	24	37	.	21	333	104	569	490	137	1,449	528	260	3,951
SAN BENITO	.	.	.	.	.	28	2	.	32	.	.	.	62
SAN BERNARDINO	71	18	6	1,270	72	4	643	771	1,088	111	3,222	146	7,422
SAN DIEGO	360	129	74	1	1,346	674	1,680	1,162	680	1,289	477	69	7,940
SAN FRANCISCO	308	6	2	.	505	1	1,614	94	356	1,359	16	2	4,264
SAN JOAQUIN	.	24	.	14	68	.	20	179	8	166	423	420	1,322
SAN LUIS OBISPO	12	.	.	41	53	3	98	81	81	13	147	75	604
SAN MATEO	108	9	.	23	162	114	3,002	20	107	930	23	167	4,664
SANTA BARBARA	59	15	2	.	2	29	94	51	232	31	36	35	585
SANTA CLARA	192	31	24	.	70	148	2,179	1,535	767	3,104	695	43	8,786
SANTA CRUZ	.	.	.	.	.	2	6	.	260	.	.	.	268
SHASTA	.	.	.	.	.	.	24	12	2	.	14	4	57
SIERRA	.	.	.	.	.	.	.	.	19	9	.	.	27
SISKIYOU	1	.	.	.	.	.	2	.	.	.	.	.	3
SOLANO	.	.	.	.	50	.	263	41	34	125	206	6	725
SONOMA	52	19	42	14	228	.	448	12	33	22	5	236	1,109
STANISLAUS	10	.	.	13	.	29	31	337	91	4	184	12	711
SUTTER	.	.	.	.	.	25	.	142	10	.	.	.	177
TEHAMA	.	.	.	1	.	.	8	2	.	.	.	.	11
TRINITY	.	.	.	.	.	.	.	.	.	.	.	.	0
TULARE	43	.	.	.	2	.	2	.	91	.	112	15	264
TUOLUMNE	2	.	.	.	.	.	.	.	.	.	.	.	2
VENTURA	37	.	.	.	.	2	844	388	40	81	286	253	1,931
YOLO	9	.	.	.	.	3	74	6	24	31	60	5	211
YUBA	.	.	.	.	.	.	.	.	.	.	2	.	2
CALIFORNIA	2,865	818	405	1,899	5,872	3,661	21,407	13,908	7,115	13,563	19,793	5,540	96,844
UTILITY													
SCE	560	194	36	1,281	1,540	206	4,916	4,697	2,936	2,028	8,277	1,974	28,643
PG&E	1,378	322	73	533	1,891	1,101	9,823	5,188	2,523	8,198	5,602	2,349	38,981
SDG&E	432	129	74	1	1,842	675	1,933	1,457	707	1,289	631	138	9,308
Non-IOU	495	174	222	84	599	1,678	4,736	2,566	949	2,048	5,283	1,080	19,913

**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)**

	Q3, 2000	Q4, 2000	Q1, 2001	Q2, 2001	1-Year Total
COUNTY					
ALAMEDA	2,687	1,954	1,843	2,967	9,451
ALPINE	0	0	0	0	0
AMADOR	3	6	28	28	65
BUTTE	320	94	396	295	1,104
CALAVERAS	48	0	0	8	56
COLUSA	0	0	0	4	4
CONTRA COSTA	783	305	1,156	733	2,976
DEL NORTE	0	0	0	0	0
EL DORADO	531	418	34	457	1,439
FRESNO	424	419	527	1,359	2,729
GLENN	0	0	0	2	2
HUMBOLDT	39	39	0	30	108
IMPERIAL	241	149	396	184	970
INYO	0	15	117	86	218
KERN	458	399	2,215	559	3,630
KINGS	43	106	41	269	458
LAKE	21	16	19	0	55
LASSEN	0	0	4	10	14
LOS ANGELES	7,471	8,916	10,587	10,593	37,568
MADERA	71	23	121	20	234
MARIN	338	292	270	81	980
MARIPOSA	0	0	0	0	0
MENDOCINO	12	0	19	11	42
MERCED	11	85	229	179	504
MODOC	0	0	0	0	0
MONO	3	7	29	0	39
MONTEREY	166	262	61	180	669
NAPA	65	180	113	140	499
NEVADA	81	102	9	244	435
ORANGE	3,686	2,199	4,739	4,136	14,760
PLACER	905	797	559	793	3,053
PLUMAS	2	38	32	9	81
RIVERSIDE	1,985	1,384	1,920	2,910	8,199
SACRAMENTO	1,981	2,469	2,353	1,598	8,402
SAN BENITO	0	211	0	62	273
SAN BERNARDINO	3,462	5,124	4,185	3,237	16,009
SAN DIEGO	4,811	4,589	4,551	3,389	17,340
SAN FRANCISCO	1,883	4,128	3,253	1,010	10,274
SAN JOAQUIN	1,220	346	481	842	2,889
SAN LUIS OBISPO	363	262	294	310	1,228
SAN MATEO	1,797	2,629	2,161	2,503	9,089
SANTA BARBARA	431	201	214	371	1,217
SANTA CLARA	6,437	5,033	5,645	3,141	20,256
SANTA CRUZ	401	4	266	2	672
SHASTA	267	67	32	25	390
SIERRA	0	0	19	9	27
SISKIYOU	5	18	2	1	26
SOLANO	247	471	440	285	1,442
SONOMA	318	1,015	566	543	2,442
STANISLAUS	393	160	421	290	1,264
SUTTER	0	7	25	152	184
TEHAMA	2	15	6	5	27
TRINITY	0	0	0	0	0
TULARE	140	65	205	59	469
TUOLUMNE	20	389	2	0	411
VENTURA	824	559	1,419	512	3,314
YOLO	886	25	107	104	1,122
YUBA	37	0	0	2	39
CALIFORNIA	46,315	45,988	52,110	44,734	189,147
UTILITY					
SCE	13,003	11,625	14,027	14,616	53,271
PG&E	21,363	20,561	21,661	17,320	80,905
SDG&E	5,330	4,627	5,462	3,846	19,264
Non-IOU	6,619	9,175	10,961	8,952	35,707

**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													
Q3, 2000	2,566	474	68	657	2,362	1,469	11,825	5,365	3,608	6,464	9,306	2,153	46,315
Q4, 2000	1,112	524	609	259	1,809	1,055	12,142	6,794	2,341	7,459	9,959	1,927	45,988
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
1-Year Total	6,542	1,816	1,082	2,814	10,042	6,184	45,373	26,067	13,064	27,485	39,057	9,620	189,147
SCE													
Q3, 2000	478	106	28	97	390	373	1,677	2,549	982	912	4,996	416	13,003
Q4, 2000	263	140	.	183	151	41	1,194	1,721	598	558	6,465	312	11,625
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
1-Year Total	1,300	440	64	1,560	2,080	620	7,788	8,967	4,516	3,498	19,738	2,702	53,271
PG&E													
Q3, 2000	1,409	158	4	290	1,005	616	7,812	1,645	1,865	3,210	1,840	1,508	21,363
Q4, 2000	636	234	609	51	918	614	6,810	3,464	1,236	3,505	1,519	964	20,561
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
1-Year Total	3,423	715	686	874	3,815	2,331	24,445	10,297	5,624	14,914	8,961	4,821	80,905
SDG&E													
Q3, 2000	241	110	.	9	862	98	1,389	685	323	508	924	180	5,330
Q4, 2000	68	79	.	.	641	138	1,284	734	345	312	824	202	4,627
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
1-Year Total	741	317	74	10	3,345	911	4,606	2,876	1,375	2,109	2,380	520	19,264
Non-IQU													
Q3, 2000	437	100	36	262	104	382	946	486	437	1,834	1,545	49	6,619
Q4, 2000	145	71	.	25	99	262	2,854	874	163	3,084	1,150	449	9,175
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
1-Year Total	1,078	344	258	371	802	2,322	8,535	3,927	1,548	6,965	7,978	1,578	35,707

2.2 SBD NEW CONSTRUCTION PROGRAM PARTICIPATION IN QUARTERS 1-2, 2001

Savings By Design (SBD) Program activity for nonresidential new construction participants for whom the IOUs have committed funds in Quarters 1-2, 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 1-2, 2001.

Table 2.9 summarizes the number of square feet of new construction committed in Quarters 1-2, 2001.

Table 2.10 shows the estimated annual MWh savings attributable to new construction measures committed in Quarters 1-2, 2001.

Table 2.11 presents the frequency with which classes of measures were installed by new construction SBD participants in Quarters 1-2, 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 1-2, 2001.

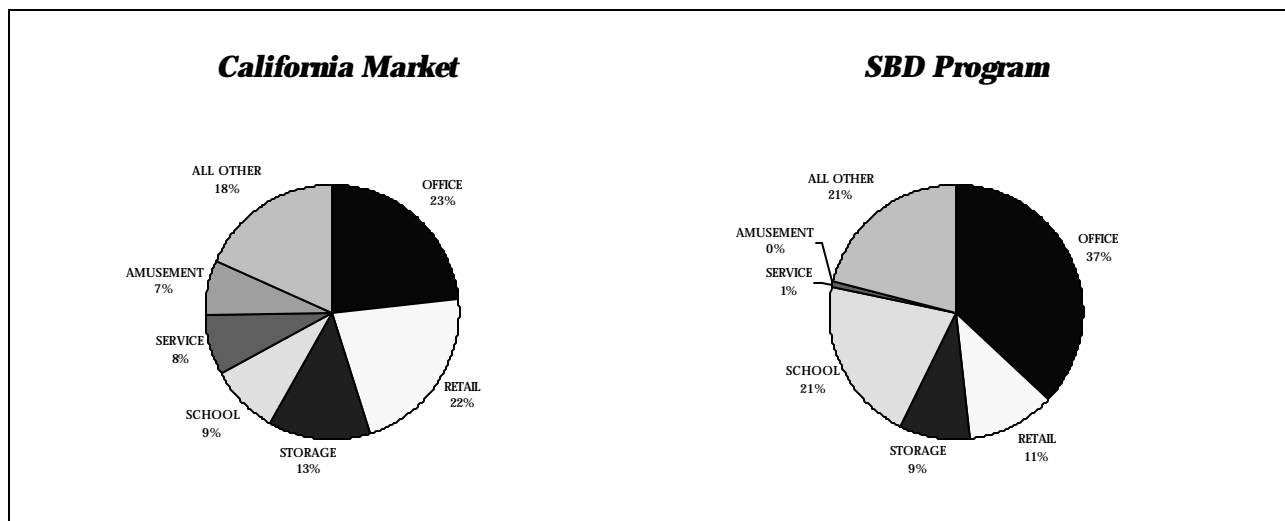
Table 2.8 Number of Nonresidential New Construction SBD Participants in Quarters 1-2, 2001

	AMUSEMENT	ASSEMBLY	EDUCATION	GOVT	HOTEL	MEDICAL	OFFICE	RETAIL	SCHOOL	SERVICE	STORAGE	OTHER	TOTAL
CALIFORNIA													
Whole Building Approach	.	1	1	.	.	.	41	.	19	.	6	3	71
Systems Approach	.	9	.	.	7	3	50	28	32	2	16	28	175
Total	.	10	1	.	7	3	91	28	51	2	22	31	246
SCE													
Whole Building Approach	1	.	.	.	6	.	7
Systems Approach	.	4	.	.	2	.	8	8	3	.	12	17	54
Total	.	4	.	.	2	.	9	8	3	.	18	17	61
PG&E													
Whole Building Approach	.	1	1	.	.	.	36	.	2	.	.	.	40
Systems Approach	.	4	.	.	.	1	32	6	26	2	1	5	77
Total	.	5	1	.	.	1	68	6	28	2	1	5	117
SDG&E													
Whole Building Approach	4	.	17	.	.	3	24
Systems Approach	.	1	.	.	5	2	10	14	3	.	3	6	44
Total	.	1	.	.	5	2	14	14	20	.	3	9	68

The majority of SBD Program participants in Quarters 1-2, 2001 belong to the office, school 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 1-2, 2001 is almost as high as the number of SBD participants in the entire PY2000. The high participation rates in Quarters 1-2, 2001 may be due to changes in program standards that went into effect on July 1, 2001 in response to changes in building codes, and which probably contributed to an increase in participation prior to the effective date of those standard changes.

**Exhibit 2.4
New Construction Building Segments with the Highest Number of Projects in Quarters 1-2, 2001**



**Table 2.9 Area of Nonresidential New Construction SBD Participants in Quarters 1-2, 2001
(1,000 sqft)**

	AMUSEMENT	ASSEMBLY	EDUCATION	GOVT	HOTEL	MEDICAL	OFFICE	RETAIL	SCHOOL	SERVICE	STORAGE	OTHER	TOTAL
CALIFORNIA													
Whole Building Approach	.	19	54	.	.	.	10,226	.	980	.	4,015	253	15,548
Systems Approach	.	258	.	.	1,187	103	4,719	1,153	858	19	2,220	1,372	11,891
Total	.	277	54	.	1,187	103	14,946	1,153	1,838	19	6,236	1,625	27,438
SCE													
Whole Building Approach	85	.	.	.	4,015	.	4,100
Systems Approach	.	140	.	.	261	.	1,611	359	182	.	1,698	615	4,866
Total	.	140	.	.	261	.	1,696	359	182	.	5,713	615	8,967
PG&E													
Whole Building Approach	.	19	54	.	.	.	9,725	.	598	.	.	.	10,396
Systems Approach	.	109	.	.	.	5	2,678	197	655	19	291	496	4,450
Total	.	128	54	.	.	5	12,403	197	1,253	19	291	496	14,846
SDG&E													
Whole Building Approach	417	.	382	.	.	253	1,052
Systems Approach	.	9	.	.	926	98	430	596	21	.	232	262	2,574
Total	.	9	.	.	926	98	847	596	403	.	232	514	3,626

The majority of SBD Program activity in terms of area committed in Quarters 1-2, 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 1-2, 2001, and the estimated MWh savings are larger than those committed in the entire PY2001. Again, this result is probably due to the changes in program standards that went into effect on July 1, 2001.

**Table 2.10 Estimated Annual MWh Savings
for New Construction SBD Participants in Quarters 1-2, 2001**

	AMUSEMENT	ASSEMBLY	EDUCATION	GOVT	HOTEL	MEDICAL	OFFICE	RETAIL	SCHOOL	SERVICE	STORAGE	OTHER	TOTAL
CALIFORNIA													
Whole Building Approach	.	11	204	.	.	.	19,567	.	2,092	.	3,973	4,983	30,831
Systems Approach	.	816	.	.	2,504	425	5,839	3,446	1,819	39	3,391	9,039	27,316
Total	.	827	204	.	2,504	425	25,405	3,446	3,911	39	7,364	14,022	58,147
SCE													
Whole Building Approach	377	.	.	.	3,973	.	4,350
Systems Approach	.	723	.	.	197	.	1,713	771	108	.	2,444	8,375	14,332
Total	.	723	.	.	197	.	2,089	771	108	.	6,417	8,375	18,682
PG&E													
Whole Building Approach	.	11	204	.	.	.	18,020	.	832	.	.	.	19,067
Systems Approach	.	75	.	.	.	6	3,471	333	693	39	447	473	5,537
Total	.	87	204	.	.	6	21,491	333	1,524	39	447	473	24,605
SDG&E													
Whole Building Approach	1,170	.	1,261	.	.	4,983	7,414
Systems Approach	.	17	.	.	2,307	419	655	2,342	1,018	.	499	191	7,447
Total	.	17	.	.	2,307	419	1,825	2,342	2,279	.	499	5,174	14,861

Table 2.11 Classes of Measures Installed by New Construction SBD Participants in Quarters 1-2, 2001

	WHOLE BUILDING	DAY-LIGHTING	SKYLIGHT	HVAC CHILLER	HVAC PACKAGE	HVAC CONTROLS	HVAC OTHER	MOTORS	LIGHTING	ENVELOPE	OTHER	TOTAL
CALIFORNIA												
Whole Building Approach	71	.	.	.	.	.	.	.	.	.	.	71
Systems Approach	.	19	.	13	121	.	51	.	89	24	26	343
Total	71	19	.	13	121	.	51	.	89	24	26	414
SCE												
Whole Building Approach	7	.	.	.	.	.	.	.	.	.	.	7
Systems Approach	.	17	.	9	5	.	21	.	16	.	4	72
Total	7	17	.	9	5	.	21	.	16	.	4	79
PG&E												
Whole Building Approach	40	.	.	.	.	.	.	.	.	.	.	40
Systems Approach	.	2	.	1	60	.	.	.	56	.	2	121
Total	40	2	.	1	60	.	.	.	56	.	2	161
SDG&E												
Whole Building Approach	24	.	.	.	.	.	.	.	.	.	.	24
Systems Approach	.	.	.	3	56	.	30	.	17	24	20	150
Total	24	.	.	3	56	.	30	.	17	24	20	174

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 envelope measures were installed very rarely, and HVAC controls and motors were not installed at all in Quarters 1-2, 2001.

Table 2.12 Estimated Annual MWh Savings by Measure Class for New Construction SBD Participants in Quarters 1-2, 2001

	WHOLE BUILDING	DAY-LIGHTING	SKYLIGHT	HVAC CHILLER	HVAC PACKAGE	HVAC CONTROLS	HVAC OTHER	MOTORS	LIGHTING	ENVELOPE	OTHER	TOTAL
CALIFORNIA												
Whole Building Approach	30,831	.	.	.	.	.	.	.	.	.	.	30,831
Systems Approach	.	3,426	.	1,242	1,126	.	9,584	.	5,715	162	6,061	27,316
Total	30,831	3,426	.	1,242	1,126	.	9,584	.	5,715	162	6,061	58,147
SCE												
Whole Building Approach	4,350	.	.	.	.	.	.	.	.	.	.	4,350
Systems Approach	.	3,413	.	375	124	.	8,310	.	784	.	1,327	14,332
Total	4,350	3,413	.	375	124	.	8,310	.	784	.	1,327	18,682
PG&E												
Whole Building Approach	19,067	.	.	.	.	.	.	.	.	.	.	19,067
Systems Approach	.	13	.	135	811	.	.	.	4,534	.	44	5,537
Total	19,067	13	.	135	811	.	.	.	4,534	.	44	24,605
SDG&E												
Whole Building Approach	7,414	.	.	.	.	.	.	.	.	.	.	7,414
Systems Approach	.	.	.	732	191	.	1,273	.	398	162	4,690	7,447
Total	7,414	.	.	732	191	.	1,273	.	398	162	4,690	14,861

In terms of estimated MWh savings, the whole building design, lighting, and “other HVAC” measures such as air handling units and pumps rank highest among measure classes.

3. STATEWIDE NONRESIDENTIAL ALTERATION (R&R) TRENDS

This chapter summarizes the nonresidential alterations that have occurred in Quarters 1-2, 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 1-2, 2001.

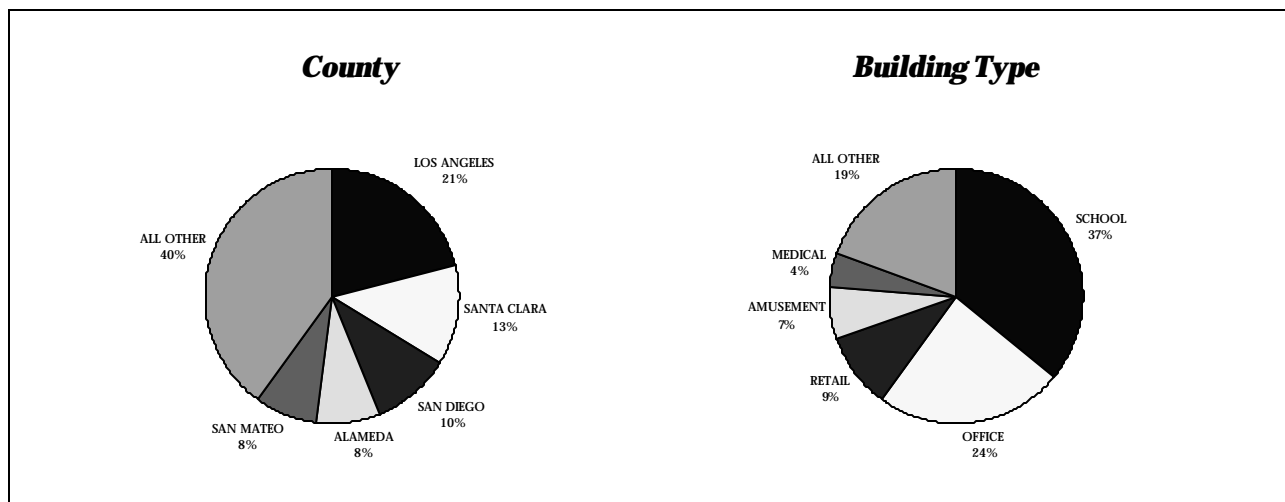
3.1 ALTERATION (R&R) MARKET CHARACTERISTICS IN QUARTERS 1-2, 2001

Nonresidential alteration market activity by building segment and county in Quarters 1-2, 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 1-2, 2001. The valuation reported by F.W. Dodge is roughly two-thirds 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, Santa Clara, San Diego, Alameda and San Mateo. There are ten counties for which F.W. Dodge does not record any nonresidential alteration project starts: Alpine, Colusa, Del Norte, Lassen, Mariposa, Mendocino, Modoc, Mono, Plumas and Sierra.

Exhibit 3.1
R&R Market Segments with the Highest Project Start Valuation in Quarters 1-2, 2001

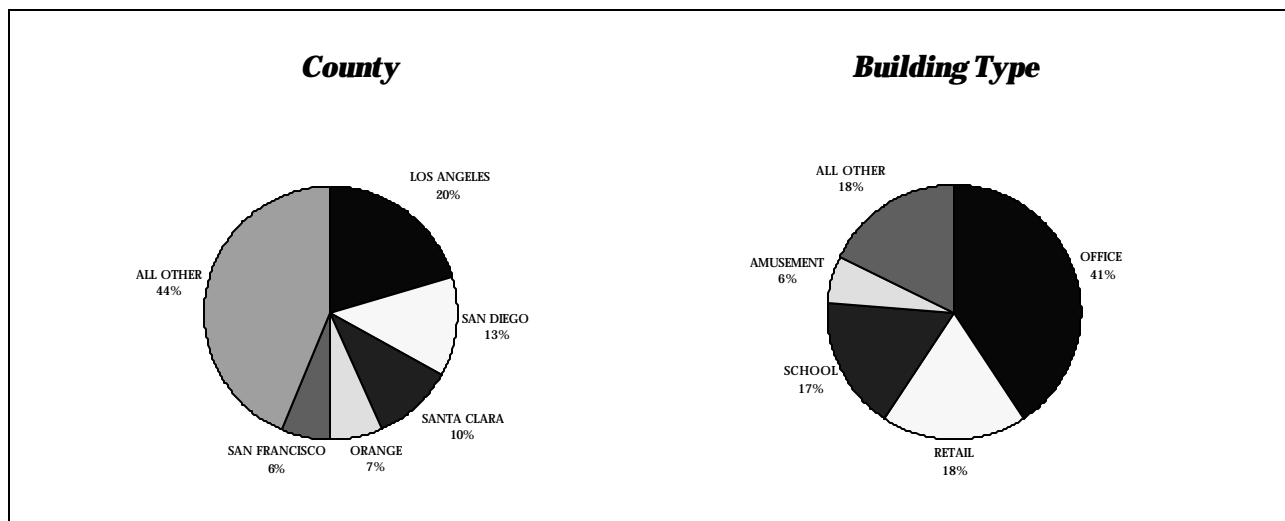


Among building types, school, office, retail and amusement account for the highest value of alteration projects that have started construction in Quarters 1-2, 2001, while assembly (churches) and service account for the lowest value in Quarters 1-2, 2001.

Among utility territories, PG&E accounts for almost half the statewide project start value in Quarters 1-2, 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 1-2, 2001. As shown in Exhibit 3.2 below, the counties with the largest number of alteration project starts are Los Angeles, San Diego, Santa Clara, Orange and San Francisco. 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 1-2, 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, approximately double when compared to the number in SDG&E territory.

Exhibit 3.2
R&R Market Segments with the Highest Number of Project Starts in Quarters 1-2, 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 June 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 1-2, 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	14,777	1,594	1,080	12,190	.	1,230	66,868	7,248	59,918	1,500	600	4,872	171,877
ALPINE	.	.	.	.	.	.	.	.	.	.	.	.	0
AMADOR	.	.	98	.	.	.	.	.	.	.	.	.	98
BUTTE	375	.	.	139	.	.	.	2,056	16,907	.	.	.	19,477
CALAVERAS	.	.	.	.	.	.	.	750	.	.	.	.	750
COLUSA	.	.	.	.	.	.	.	.	.	.	.	.	0
CONTRA COSTA	2,332	80	269	.	.	4,441	7,581	2,932	24,861	773	.	1,117	44,386
DEL NORTE	.	.	.	.	.	.	.	.	.	.	.	.	0
EL DORADO	1,277	.	.	.	.	.	991	1,060	6,111	.	.	678	10,117
FRESNO	297	.	.	.	.	.	2,163	5,145	25,071	.	390	600	33,666
GLENN	1,200	.	.	.	.	.	.	.	.	.	.	.	1,200
HUMBOLDT	3,118	.	.	843	.	.	915	.	4,734	.	.	.	9,610
IMPERIAL	798	.	.	.	.	.	.	.	798	.	85	.	1,681
INYO	.	.	.	.	.	.	.	200	.	.	.	510	710
KERN	3,975	.	.	964	.	.	900	1,508	6,535	795	415	.	15,092
KINGS	.	.	.	.	.	.	230	.	.	.	.	9,326	9,556
LAKE	.	.	.	.	.	.	1,279	.	.	.	.	.	1,279
LASSEN	.	.	.	.	.	.	.	.	.	.	.	.	0
LOS ANGELES	36,923	7,765	65,988	2,616	9,834	39,297	66,225	53,459	125,210	12,138	5,309	23,500	448,264
MADERA	.	.	.	.	.	449	319	.	582	.	.	.	1,350
MARIN	665	.	475	510	.	1,000	2,608	3,714	6,883	.	80	.	15,935
MARIPOSA	.	.	.	.	.	.	.	.	.	.	.	.	0
MENDOCINO	.	.	.	.	.	.	.	.	.	.	.	.	0
MERCED	.	.	.	.	.	175	360	2,175	1,366	.	.	.	4,076
MODOC	.	.	.	.	.	.	.	.	.	.	.	.	0
MONO	.	.	.	.	.	.	.	.	.	.	.	.	0
MONTEREY	866	118	80	1,139	400	2,500	3,622	5,393	14,196	.	.	146	28,460
NAPA	.	.	.	106	380	450	609	202	16,685	.	149	294	18,875
NEVADA	359	.	.	1,522	.	.	306	.	.	.	.	.	2,187
ORANGE	12,699	506	138	590	2,119	4,886	30,031	12,359	54,046	724	2,724	8,238	129,060
PLACER	878	.	127	1,090	.	.	3,638	782	2,996	.	.	513	10,024
PLUMAS	.	.	.	.	.	.	.	.	.	.	.	.	0
RIVERSIDE	765	1,017	.	.	.	175	8,442	7,819	19,956	80	.	2,998	41,252
SACRAMENTO	3,774	425	.	7,649	.	12,739	29,921	6,983	20,273	2,515	1,322	905	86,506
SAN BENITO	.	.	.	.	.	.	233	.	.	.	.	.	233
SAN BERNARDINO	599	.	253	3,101	500	3,880	2,702	4,053	31,960	180	5,437	11,960	64,625
SAN DIEGO	3,051	1,246	.	4,464	926	1,705	61,417	17,563	65,902	505	45,652	13,222	215,653
SAN FRANCISCO	6,145	10,200	500	.	5,750	1,788	39,011	19,508	9,122	8,600	.	7,720	108,344
SAN JOAQUIN	84	.	.	.	.	.	1,938	.	13,606	.	130	.	15,758
SAN LUIS OBISPO	667	.	.	.	.	312	1,952	442	2,089	.	.	237	5,699
SAN MATEO	6,607	1,000	.	.	14,500	572	77,102	9,718	33,338	.	299	26,941	170,077
SANTA BARBARA	6,713	.	.	1,253	75	640	7,496	1,699	15,657	.	.	2,584	36,117
SANTA CLARA	25,929	2,839	3,064	.	524	6,224	85,966	13,387	107,317	2,938	1,521	21,750	271,459
SANTA CRUZ	452	.	.	.	.	.	997	613	7,271	.	.	75	9,408
SHASTA	.	.	.	283	.	1,485	100	1,691	1,743	.	.	.	5,302
SIERRA	.	.	.	.	.	.	.	.	.	.	.	.	0
SISKIYOU	.	.	.	.	.	.	.	.	3,320	.	.	.	3,320
SOLANO	.	.	.	.	.	175	705	4,496	4,884	289	.	150	10,699
SONOMA	1,454	.	.	164	.	.	2,272	2,661	20,333	118	.	939	27,941
STANISLAUS	206	.	.	.	.	2,215	1,432	4,734	4,983	.	.	1,567	15,137
SUTTER	.	.	.	.	.	.	165	83	.	.	.	.	248
TEHAMA	.	.	.	.	.	.	.	.	.	.	.	190	190
TRINITY	.	.	.	.	.	.	.	.	.	.	.	226	226
TULARE	1,237	.	.	2,259	.	.	.	567	2,678	.	.	.	6,741
TUOLUMNE	.	139	.	.	186	.	200	.	.	.	.	.	525
VENTURA	2,415	240	43	214	.	5,570	1,827	5,106	18,163	.	.	2,353	35,931
YOLO	.	.	.	.	.	.	698	472	15,056	.	.	.	16,226
YUBA	832	.	.	.	.	.	540	.	.	.	.	.	1,372
CALIFORNIA	141,469	27,169	72,115	41,096	35,194	91,908	513,761	200,578	764,550	31,155	64,113	143,611	2,126,719
UTILITY													
SCE	36,071	2,495	65,391	9,545	2,584	46,175	61,919	47,254	172,988	8,560	9,466	37,734	500,182
PG&E	74,406	14,828	5,199	19,338	21,554	21,088	285,618	85,457	402,332	14,848	3,192	68,369	1,016,229
SDG&E	3,881	1,246	43	4,464	926	5,205	65,395	19,787	75,453	505	45,652	13,222	235,779
Non-IOU	27,111	8,600	1,482	7,749	10,130	19,440	100,829	48,080	113,777	7,242	5,803	24,286	374,529

**Table 3.2 F.W. Dodge Number of Nonresidential Alteration Project Starts
in Quarters 1-2, 2001
by Building Type, County and Service Territory**

	AMUSEMENT	ASSEMBLY	EDUCATION	GOVT	HOTEL	MEDICAL	OFFICE	RETAIL	SCHOOL	SERVICE	STORAGE	OTHER	TOTAL
COUNTY													
ALAMEDA	8	2	2	2	.	4	77	18	25	3	2	12	155
ALPINE	.	.	.	.	.	.	.	.	.	.	.	.	0
AMADOR	.	.	1	.	.	.	.	.	.	.	.	.	1
BUTTE	1	.	.	1	.	.	.	3	8	.	.	.	13
CALAVERAS	.	.	.	.	.	.	.	1	.	.	.	.	1
COLUSA	.	.	.	.	.	.	.	.	.	.	.	.	0
CONTRA COSTA	5	1	1	.	.	6	24	7	8	1	.	1	54
DEL NORTE	.	.	.	.	.	.	.	.	.	.	.	.	0
EL DORADO	1	.	.	.	.	.	6	3	6	.	.	1	17
FRESNO	2	.	.	.	.	.	8	11	19	.	1	1	42
GLENN	1	.	.	.	.	.	.	.	.	.	.	.	1
HUMBOLDT	1	.	.	1	.	.	2	.	7	.	.	.	11
IMPERIAL	1	.	.	.	.	.	.	.	1	.	1	.	3
INYO	.	.	.	.	.	.	.	1	.	.	.	1	2
KERN	5	.	.	1	.	.	6	3	10	2	3	.	30
KINGS	.	.	.	.	.	.	2	.	.	.	.	1	3
LAKE	.	.	.	.	.	.	3	.	.	.	.	.	3
LASSEN	.	.	.	.	.	.	.	.	.	.	.	.	0
LOS ANGELES	31	7	4	8	8	17	186	131	79	20	17	19	527
MADERA	.	.	.	.	.	1	1	.	1	.	.	.	3
MARIN	2	.	1	1	.	1	8	3	10	.	1	.	27
MARIPOSA	.	.	.	.	.	.	.	.	.	.	.	.	0
MENDOCINO	.	.	.	.	.	.	.	.	.	.	.	.	0
MERCED	.	.	.	.	.	1	2	4	2	.	.	.	9
MODOC	.	.	.	.	.	.	.	.	.	.	.	.	0
MONO	.	.	.	.	.	.	.	.	.	.	.	.	0
MONTEREY	5	1	1	1	2	4	22	13	8	.	.	1	58
NAPA	.	.	.	1	1	2	3	1	9	.	1	1	19
NEVADA	1	.	.	1	.	.	1	.	.	.	.	.	3
ORANGE	15	2	1	1	3	8	80	23	22	2	7	7	171
PLACER	1	.	1	1	.	.	11	4	6	.	.	4	28
PLUMAS	.	.	.	.	.	.	.	.	.	.	.	.	0
RIVERSIDE	3	1	.	.	.	2	23	20	10	1	.	2	62
SACRAMENTO	7	2	.	3	.	8	61	24	10	5	6	7	133
SAN BENITO	.	.	.	.	.	.	1	.	.	.	.	.	1
SAN BERNARDINO	3	.	2	4	1	2	13	17	8	1	6	6	63
SAN DIEGO	14	3	.	7	2	9	173	35	41	3	23	21	331
SAN FRANCISCO	9	2	1	.	4	2	108	25	7	3	.	2	163
SAN JOAQUIN	1	.	.	.	.	.	3	.	5	.	1	.	10
SAN LUIS OBISPO	3	.	.	.	.	2	9	4	3	.	.	1	22
SAN MATEO	6	1	.	.	3	2	26	10	16	.	1	6	71
SANTA BARBARA	5	.	.	1	1	4	23	10	6	.	.	2	52
SANTA CLARA	9	6	2	.	1	8	138	35	48	4	4	18	273
SANTA CRUZ	2	.	.	.	.	.	6	5	4	.	.	1	18
SHASTA	.	.	.	1	.	2	1	7	5	.	.	.	16
SIERRA	.	.	.	.	.	.	.	.	.	.	.	.	0
SISKIYOU	.	.	.	.	.	.	.	.	7	.	.	.	7
SOLANO	.	.	.	.	.	1	2	8	2	1	.	1	15
SONOMA	5	.	.	1	.	.	10	12	18	1	.	3	50
STANISLAUS	2	.	.	.	.	3	8	12	8	.	.	3	36
SUTTER	.	.	.	.	.	.	1	1	.	.	.	.	2
TEHAMA	.	.	.	.	.	.	.	.	.	.	.	1	1
TRINITY	.	.	.	.	.	.	.	.	.	.	.	1	1
TULARE	6	.	.	1	.	.	.	3	4	.	.	.	14
TUOLUMNE	.	1	.	.	1	.	1	.	.	.	.	.	3
VENTURA	7	1	1	1	.	4	11	19	10	.	.	10	64
YOLO	.	.	.	.	.	.	2	3	8	.	.	.	13
YUBA	1	.	.	.	.	.	1	.	.	.	.	.	2
CALIFORNIA	163	30	18	38	27	93	1,063	476	441	47	74	134	2,604
UTILITY													
SCE	41	5	5	11	4	22	163	129	82	9	15	32	518
PG&E	68	11	9	13	11	40	459	181	239	14	12	51	1,108
SDG&E	17	3	1	7	2	10	186	41	45	3	23	21	359
Non-IOU	37	11	3	7	10	21	255	125	75	21	24	30	619

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

	Q3, 2000	Q4, 2000	Q1, 2001	Q2, 2001	Total 1 yr
COUNTY					
ALAMEDA	96	64	61	94	315
ALPINE	0	0	0	0	0
AMADOR	1	0	0	1	2
BUTTE	3	1	4	9	17
CALAVERAS	0	0	0	1	1
COLUSA	0	0	0	0	0
CONTRA COSTA	39	16	19	35	109
DEL NORTE	0	0	0	0	0
EL DORADO	9	7	8	9	33
FRESNO	4	17	13	29	63
GLENN	0	0	0	1	1
HUMBOLDT	0	1	6	5	12
IMPERIAL	6	3	0	3	12
INYO	1	0	0	2	3
KERN	22	18	16	14	70
KINGS	2	1	3	0	6
LAKE	0	0	3	0	3
LASSEN	0	0	0	0	0
LOS ANGELES	327	243	255	272	1,097
MADERA	1	2	2	1	6
MARIN	16	12	13	14	55
MARIPOSA	0	0	0	0	0
MENDOCINO	0	0	0	0	0
MERCED	3	2	4	5	14
MODOC	0	0	0	0	0
MONO	0	0	0	0	0
MONTEREY	7	14	27	31	79
NAPA	9	10	14	5	38
NEVADA	1	0	2	1	4
ORANGE	89	82	73	98	342
PLACER	68	14	10	18	110
PLUMAS	0	1	0	0	1
RIVERSIDE	34	30	20	42	126
SACRAMENTO	49	65	69	64	247
SAN BENITO	0	0	0	1	1
SAN BERNARDINO	31	29	37	26	123
SAN DIEGO	183	150	184	147	664
SAN FRANCISCO	133	86	48	115	382
SAN JOAQUIN	8	4	5	5	22
SAN LUIS OBISPO	12	6	8	14	40
SAN MATEO	39	37	26	45	147
SANTA BARBARA	27	26	25	27	105
SANTA CLARA	116	117	123	150	506
SANTA CRUZ	8	9	7	11	35
SHASTA	3	0	4	12	19
SIERRA	0	0	0	0	0
SISKIYOU	2	1	1	6	10
SOLANO	9	12	8	7	36
SONOMA	17	23	14	36	90
STANISLAUS	3	3	21	15	42
SUTTER	0	0	2	0	2
TEHAMA	0	0	1	0	1
TRINITY	0	0	1	0	1
TULARE	3	4	7	7	21
TUOLUMNE	1	2	1	2	6
VENTURA	34	28	36	28	126
YOLO	9	4	7	6	26
YUBA	0	1	0	2	3
CALIFORNIA	1,425	1,145	1,188	1,416	5,174
UTILITY					
SCE	292	290	241	277	1,100
PG&E	620	471	456	652	2,199
SDG&E	176	133	192	167	668
Non-IOU	337	251	299	320	1,207

**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													
Q3, 2000	53	23	10	13	13	39	659	307	189	21	24	74	1,425
Q4, 2000	57	14	11	15	15	31	553	196	116	30	41	66	1,145
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
Total 1-yr	273	67	39	66	55	163	2,275	979	746	98	139	274	5,174
SCE													
Q3, 2000	17	5	3	3	6	5	121	65	36	4	6	21	292
Q4, 2000	16	2	1	4	4	11	126	49	35	6	15	21	290
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
Total 1-yr	74	12	9	18	14	38	410	243	153	19	36	74	1,100
PG&E													
Q3, 2000	22	12	4	7	5	24	285	135	87	7	8	24	620
Q4, 2000	23	6	7	8	8	10	234	74	54	13	7	27	471
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
Total 1-yr	113	29	20	28	24	74	978	390	380	34	27	102	2,199
SDG&E													
Q3, 2000	5	1	3	.	1	3	99	29	16	3	3	13	176
Q4, 2000	8	3	1	1	1	3	76	13	8	2	9	8	133
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
Total 1-yr	30	7	5	8	4	16	361	83	69	8	35	42	668
Non-IQU													
Q3, 2000	9	5	.	3	1	7	154	78	50	7	7	16	337
Q4, 2000	10	3	2	2	2	7	117	60	19	9	10	10	251
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
Total 1-yr	56	19	5	12	13	35	526	263	144	37	41	56	1,207

3.2 SBD R&R PROGRAM PARTICIPATION IN QUARTERS 1-2, 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 1-2, 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 1-2, 2001.

Table 3.6 shows the number of square feet of R&R construction committed as of Quarters 1-2, 2001.

Table 3.7 summarizes the estimated annual MWh savings attributable to R&R measures committed in Quarters 1-2, 2001.

Table 3.8 presents the frequency with which classes of measures were installed in R&R SBD projects committed in Quarters 1-2, 2001. A glossary of measures classes is presented in Appendix D.

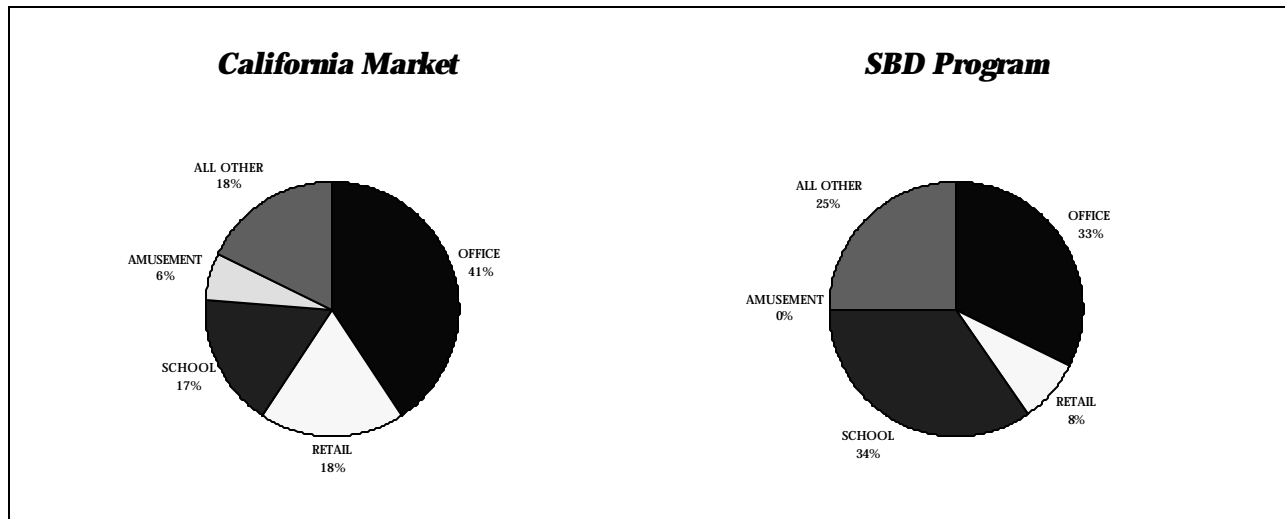
Table 3.9 shows the estimated annual MWh savings by measure class, for R&R projects committed in Quarters 1-2, 2001.

**Table 3.5 Number of Nonresidential R&R SBD Participants
in Quarters 1-2, 2001**

	AMUSEMENT	ASSEMBLY	EDUCATION	GOVT	HOTEL	MEDICAL	OFFICE	RETAIL	SCHOOL	SERVICE	STORAGE	OTHER	TOTAL
CALIFORNIA													
Whole Building Approach	2	.	.	.	.	.	2
Systems Approach	.	1	1	.	.	1	28	7	32	3	2	15	90
Total	.	1	1	.	.	1	30	7	32	3	2	15	92
SCE													
Whole Building Approach	0
Systems Approach	1	2	3	7	.	1	9	23
Total	1	2	3	7	.	1	9	23
PG&E													
Whole Building Approach	1	.	.	.	.	.	1
Systems Approach	.	.	1	.	.	.	19	3	11	3	.	1	38
Total	.	.	1	.	.	.	20	3	11	3	.	1	39
SDG&E													
Whole Building Approach	1	.	.	.	.	.	1
Systems Approach	.	1	.	.	.	.	7	1	14	.	1	5	29
Total	.	1	.	.	.	.	8	1	14	.	1	5	30

The number of R&R participants in Quarters 1-2, 2001 is higher than the number of R&R participants in Quarters 1-2, 2000, but is still less than half the number of new construction SBD participants (Table 2.8). The school and office 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 1-2, 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 amusement and hotel segments.

**Exhibit 3.3
R&R Building Segments with the Highest Number of Projects in Quarters 1-2, 2001**



**Table 3.6 Area for Nonresidential R&R SBD Participants
in Quarters 1-2, 2001 (1,000 sqft)**

	AMUSEMENT	ASSEMBLY	EDUCATION	GOVT	HOTEL	MEDICAL	OFFICE	RETAIL	SCHOOL	SERVICE	STORAGE	OTHER	TOTAL
CALIFORNIA													
Whole Building Approach	73	.	.	.	.	.	73
Systems Approach	.	18	18	.	.	29	1,603	573	916	117	1,103	1,140	5,517
Total	.	18	18	.	.	29	1,676	573	916	117	1,103	1,140	5,590
SCE													
Whole Building Approach	0
Systems Approach	29	82	181	351	.	1,096	790	2,528
Total	29	82	181	351	.	1,096	790	2,528
PG&E													
Whole Building Approach	55	.	.	.	.	.	55
Systems Approach	.	.	18	.	.	.	1,226	368	226	117	.	99	2,055
Total	.	.	18	.	.	.	1,281	368	226	117	.	99	2,110
SDG&E													
Whole Building Approach	18	.	.	.	.	.	18
Systems Approach	.	18	.	.	.	.	295	25	340	.	6	250	934
Total	.	18	.	.	.	.	313	25	340	.	6	250	952

The majority of SBD R&R Program activity in terms of area committed in Quarters 1-2, 2001 belongs to the office, storage 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 1-2, 2001**

	AMUSEMENT	ASSEMBLY	EDUCATION	GOVT	HOTEL	MEDICAL	OFFICE	RETAIL	SCHOOL	SERVICE	STORAGE	OTHER	TOTAL
CALIFORNIA													
Whole Building Approach	158	.	.	.	.	.	158
Systems Approach	.	118	60	.	.	40	1,704	1,397	1,130	130	2,632	12,300	19,511
Total	.	118	60	.	.	40	1,862	1,397	1,130	130	2,632	12,300	19,668
SCE													
Whole Building Approach	0
Systems Approach	40	263	822	573	.	2,625	9,271	13,594
Total	40	263	822	573	.	2,625	9,271	13,594
PG&E													
Whole Building Approach	98	.	.	.	.	.	98
Systems Approach	.	.	60	.	.	.	1,047	555	230	130	.	83	2,106
Total	.	.	60	.	.	.	1,145	555	230	130	.	83	2,203
SDG&E													
Whole Building Approach	60	.	.	.	.	.	60
Systems Approach	.	118	.	.	.	.	393	19	327	.	7	2,947	3,811
Total	.	118	.	.	.	.	453	19	327	.	7	2,947	3,871

It is important to note that the estimated MWh savings for Quarters 1-2, 2001 is more than double the committed MWh savings for Quarters 1-2, 2000.

Table 3.8 Classes of Measures Installed by R&R SBD Participants in Quarters 1-2, 2001

	WHOLE BUILDING	DAY-LIGHTING	SKYLIGHT	HVAC CHILLER	HVAC PACKAGE	HVAC CONTROLS	HVAC OTHER	MOTORS	LIGHTING	ENVELOPE	OTHER	TOTAL
CALIFORNIA												
Whole Building Approach	2	.	.	.	.	.	.	.	.	.	.	2
Systems Approach	.	8	.	2	97	.	28	.	66	1	8	210
Total	2	8	.	2	97	.	28	.	66	1	8	212
SCE												
Whole Building Approach	.	.	.	.	.	.	.	.	.	.	.	0
Systems Approach	.	7	.	.	7	.	11	.	7	.	2	34
Total	.	7	.	.	7	.	11	.	7	.	2	34
PG&E												
Whole Building Approach	1	.	.	.	.	.	.	.	.	.	.	1
Systems Approach	.	1	.	1	26	.	.	.	26	1	1	56
Total	1	1	.	1	26	.	.	.	26	1	1	57
SDG&E												
Whole Building Approach	1	.	.	.	.	.	.	.	.	.	.	1
Systems Approach	.	.	.	1	64	.	17	.	33	.	5	120
Total	1	.	.	1	64	.	17	.	33	.	5	121

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 motors or HVAC control measures.

Table 3.9 Estimated Annual MWh Savings by Measure Class for R&R SBD Participants in Quarters 1-2, 2001

	WHOLE BUILDING	DAY-LIGHTING	SKYLIGHT	HVAC CHILLER	HVAC PACKAGE	HVAC CONTROLS	HVAC OTHER	MOTORS	LIGHTING	ENVELOPE	OTHER	TOTAL
CALIFORNIA												
Whole Building Approach	158	.	.	.	.	.	.	.	.	.	.	158
Systems Approach	.	3,200	.	175	1,250	.	6,818	.	5,057	20	2,991	19,511
Total	158	3,200	.	175	1,250	.	6,818	.	5,057	20	2,991	19,668
SCE												
Whole Building Approach	.	.	.	.	.	.	.	.	.	.	.	0
Systems Approach	.	3,156	.	.	494	.	6,368	.	3,319	.	257	13,594
Total	.	3,156	.	.	494	.	6,368	.	3,319	.	257	13,594
PG&E												
Whole Building Approach	98	.	.	.	.	.	.	.	.	.	.	98
Systems Approach	.	44	.	114	607	.	.	.	1,258	20	64	2,106
Total	98	44	.	114	607	.	.	.	1,258	20	64	2,203
SDG&E												
Whole Building Approach	60	.	.	.	.	.	.	.	.	.	.	60
Systems Approach	.	.	.	61	150	.	450	.	480	.	2,669	3,811
Total	60	.	.	61	150	.	450	.	480	.	2,669	3,871

Daylighting, lighting, and “other HVAC” measures such as air handlers and pumps account for the highest estimated MWh savings in the R&R SBD Program in Quarters 1-2, 2001.

4. SBD PROGRAM PENETRATION INTO THE NRNC MARKET IN QUARTERS 1-2, 2001

This chapter presents SBD Program penetration into the NRNC market statewide and by utility territory, in Quarters 1-2, 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 28.3%. 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 35.7%. SBD committed square feet account for 31.3% market penetration in the SCE territory; 38.1% penetration in the PG&E territory; 39.0% penetration in the SDG&E territory.

In terms of number of projects committed, the statewide new construction market penetration of the SBD Program is 10.5%. In the three IOU service territories, program penetration by number of projects is 13.3%. SBD committed projects account for 9.4% market penetration in the SCE territory; 12.6% penetration in the PG&E territory; 25.9% 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 3.5%. In the three IOU service territories, program penetration by number of projects is 4.6%. SBD committed projects account for 4.4% market penetration in the SCE territory; 3.5% penetration in the PG&E territory; 8.4% 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 1-2, 2001

Program Type	Year/Quarter	Source	Value (\$ billions)	Area (millions of sqft)	%Area Penetration	Number of Projects	%Projects Penetration
New and Additions	2001 QTR 1-2	F. W. Dodge	7.645	96.84		2,339	
		SBD Whole Building	-	15.55	16.1%	71	3.0%
		SBD Systems Approach	-	11.89	12.3%	175	7.5%
		SBD Total	-	27.44	28.3%	246	10.5%
Alterations (R&R and TI)	2001 QTR 1-2	F. W. Dodge	2.127	-		2,604	
		SBD Whole Building	-	0.07	-	2	0.1%
		SBD Systems Approach	-	5.52	-	90	3.5%
		SBD Total	-	5.59	-	92	3.5%

Table 4.2 SBD Program Penetration in the SCE Service Territory in Quarters 1-2, 2001

Program Type	Year/Quarter	Source	Value (\$ billions)	Area (millions of sqft)	%Area Penetration	Number of Projects	%Projects Penetration
New and Additions	2001 QTR 1-2	F. W. Dodge	2.121	28.64		652	
		SBD Whole Building	-	4.10	14.3%	7	1.1%
		SBD Systems Approach	-	4.87	17.0%	54	8.3%
		SBD Total	-	8.97	31.3%	61	9.4%
Alterations (R&R and TI)	2001 QTR 1-2	F. W. Dodge	0.500	-		518	-
		SBD Whole Building	-	-	-	-	0.0%
		SBD Systems Approach	-	2.53	-	23	4.4%
		SBD Total	-	2.53	-	23	4.4%

Table 4.3 SBD Program Penetration in the PG&E Service Territory in Quarters 1-2, 2001

Program Type	Year/Quarter	Source	Value (\$ billions)	Area (millions of sqft)	%Area Penetration	Number of Projects	%Projects Penetration
New and Additions	2001 QTR 1-2	F. W. Dodge	3.336	38.98		929	
		SBD Whole Building	-	10.40	26.7%	40	4.3%
		SBD Systems Approach	-	4.45	11.4%	77	8.3%
		SBD Total	-	14.85	38.1%	117	12.6%
Alterations (R&R and TI)	2001 QTR 1-2	F. W. Dodge	1.016	-		1,108	
		SBD Whole Building	-	0.06	-	1	0.1%
		SBD Systems Approach	-	2.05	-	38	3.4%
		SBD Total	-	2.11	-	39	3.5%

Table 4.4 SBD Program Penetration in the SDG&E Service Territory in Quarters 1-2, 2001

Program Type	Year/Quarter	Source	Value (\$ billions)	Area (millions of sqft)	%Area Penetration	Number of Projects	%Projects Penetration
New and Additions	2001 QTR 1-2	F. W. Dodge	0.792	9.31		263	
		SBD Whole Building	-	1.05	11.3%	24	9.1%
		SBD Systems Approach	-	2.57	27.7%	44	16.7%
		SBD Total	-	3.63	39.0%	68	25.9%
Alterations (R&R and TI)	2001 QTR 1-2	F. W. Dodge	0.236	-		359	
		SBD Whole Building	-	0.02	-	1	0.3%
		SBD Systems Approach	-	0.93	-	29	8.1%
		SBD Total	-	0.95	-	30	8.4%

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. Declines in subsequent months, and especially towards the end of 2001 are expected, due in part from permits being issued in June 2001 that would otherwise have been issued later in the year.

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	0.000	0.00	0
Alterations	2001	4	0.000	0.00	0
	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	0.000	-	0	
2001	4	0.000	-	0	

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	0.000	0.00	0
Alterations	2001	4	0.000	0.00	0
	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	0.000	-	0	
2001	4	0.000	-	0	

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	0.000	0.00	0
Alterations	2001	4	0.000	0.00	0
	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	0.000	-	0
	2001	4	0.000	-	0

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	0.000	0.00	0
Alterations	2001	4	0.000	0.00	0
	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	0.000	-	0	
2001	4	0.000	-	0	

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	3.81	11.14	24
	2000	1	0.33	2.12	3
	2000	2	2.51	8.07	21
	2000	3	1.01	4.95	5
	2000	4	4.34	7.82	18
	2001	1	8.96	12.65	35
	2001	2	6.59	18.19	36
	2001	3	.	.	.
Systems Approach	1999	3	3.86	8.19	29
	1999	4	7.46	17.08	77
	2000	1	1.67	3.59	16
	2000	2	3.29	7.21	48
	2000	3	3.90	6.32	66
	2000	4	5.28	16.90	131
	2001	1	3.75	5.37	51
	2001	2	8.14	21.95	124
	2001	3	.	.	.
Total	1999	3	3.96	8.48	31
	1999	4	11.27	28.22	101
	2000	1	2.00	5.71	19
	2000	2	5.80	15.28	69
	2000	3	4.91	11.27	71
	2000	4	9.62	24.72	149
	2001	1	12.71	18.01	86
	2001	2	14.73	40.13	160
	2001	3	0.00	0.00	0
R&R, incl. TI	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	.	.	.
Systems Approach	1999	3	1.39	5.56	16
	1999	4	1.71	3.57	34
	2000	1	3.99	3.41	25
	2000	2	2.57	5.03	34
	2000	3	1.96	5.53	38
	2000	4	3.93	9.89	79
	2001	1	1.26	10.06	27
	2001	2	4.26	9.45	63
	2001	3	.	.	.
Total	1999	3	1.39	5.56	16
	1999	4	1.90	4.67	36
	2000	1	4.01	3.42	26
	2000	2	2.70	5.38	37
	2000	3	1.96	5.53	38
	2000	4	4.78	12.45	88
	2001	1	1.26	10.06	27
	2001	2	4.33	9.61	65
	2001	3	0.00	0.00	0
2001	4	0.00	0.00	0	

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	0.27	1.57	1
	2000	1	0.09	1.32	1
	2000	2	0.65	1.58	1
	2000	3	0.78	4.43	3
	2000	4	1.11	2.25	4
	2001	1	4.02	3.97	6
	2001	2	0.09	0.38	1
	2001	3	.	.	.
	2001	4	.	.	.
Systems Approach	1999	3	3.78	8.14	27
	1999	4	5.50	13.16	48
	2000	1	1.21	3.13	7
	2000	2	1.98	5.19	18
	2000	3	1.82	3.03	24
	2000	4	1.16	8.65	25
	2001	1	1.44	2.02	17
	2001	2	3.43	12.31	37
	2001	3	.	.	.
	2001	4	.	.	.
Total	1999	3	3.78	8.14	27
	1999	4	5.77	14.73	49
	2000	1	1.30	4.46	8
	2000	2	2.63	6.78	19
	2000	3	2.61	7.46	27
	2000	4	2.27	10.90	29
	2001	1	5.46	5.99	23
	2001	2	3.51	12.69	38
	2001	3	0.00	0.00	0
	2001	4	0.00	0.00	0
R&R, incl. TI					
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	.	.	.
Systems Approach	1999	3	1.23	5.34	11
	1999	4	1.10	2.48	15
	2000	1	0.41	0.54	5
	2000	2	1.58	2.65	10
	2000	3	0.77	3.93	12
	2000	4	2.61	7.02	37
	2001	1	0.44	6.45	10
	2001	2	2.09	7.15	13
	2001	3	.	.	.
	2001	4	.	.	.
Total	1999	3	1.23	5.34	11
	1999	4	1.10	2.48	15
	2000	1	0.41	0.54	5
	2000	2	1.58	2.65	10
	2000	3	0.77	3.93	12
	2000	4	3.46	9.58	46
	2001	1	0.44	6.45	10
	2001	2	2.09	7.15	13
	2001	3	0.00	0.00	0
	2001	4	0.00	0.00	0

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	2.59	6.55	17
	2000	1	.	.	.
	2000	2	1.11	2.42	5
	2000	3	0.23	0.52	2
	2000	4	3.20	5.51	13
	2001	1	4.76	8.00	15
	2001	2	5.64	11.07	25
	2001	3	.	.	.
Systems Approach	1999	3	.	.	.
	1999	4	1.34	1.74	18
	2000	1	0.07	0.18	1
	2000	2	0.57	0.60	14
	2000	3	0.95	1.45	27
	2000	4	2.75	6.26	79
	2001	1	1.54	2.03	17
	2001	2	2.91	3.51	60
	2001	3	.	.	.
Total	1999	3	0.00	0.00	0
	1999	4	3.93	8.29	35
	2000	1	0.07	0.18	1
	2000	2	1.68	3.03	19
	2000	3	1.18	1.97	29
	2000	4	5.95	11.77	92
	2001	1	6.30	10.03	32
	2001	2	8.55	14.58	85
	2001	3	0.00	0.00	0
2001	4	0.00	0.00	0	
R&R, incl. TI					
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	1999	3	.	.	.
	1999	4	0.34	0.56	6
	2000	1	0.04	0.06	2
	2000	2	0.35	1.25	9
	2000	3	0.30	0.26	4
	2000	4	0.82	2.01	25
	2001	1	0.44	0.56	5
	2001	2	1.61	1.54	33
	2001	3	.	.	.
Total	1999	3	0.00	0.00	0
	1999	4	0.34	0.56	6
	2000	1	0.04	0.06	2
	2000	2	0.44	1.50	10
	2000	3	0.30	0.26	4
	2000	4	0.82	2.01	25
	2001	1	0.44	0.56	5
	2001	2	1.67	1.64	34
	2001	3	0.00	0.00	0
2001	4	0.00	0.00	0	

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	0.68	14
	2001	2	0.87	6.74	10
	2001	3	.	.	.
	2001	4	.	.	.
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	1.99	27
	2001	1	0.77	1.32	17
	2001	2	1.81	6.13	27
	2001	3	.	.	.
	2001	4	.	.	.
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	2.05	28
	2001	1	0.95	1.99	31
	2001	2	2.68	12.87	37
	2001	3	0.00	0.00	0
	2001	4	0.00	0.00	0
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	.	.	.
	2001	4	.	.	.
Systems Approach	1999	3	0.16	0.22	5
	1999	4	0.27	0.53	13
	2000	1	3.54	2.81	18
	2000	2	0.64	1.13	15
	2000	3	0.89	1.34	22
	2000	4	0.49	0.86	17
	2001	1	0.38	3.05	12
	2001	2	0.55	0.76	17
	2001	3	.	.	.
	2001	4	.	.	.
Total	1999	3	0.16	0.22	5
	1999	4	0.46	1.63	15
	2000	1	3.56	2.82	19
	2000	2	0.68	1.23	17
	2000	3	0.89	1.34	22
	2000	4	0.49	0.86	17
	2001	1	0.38	3.05	12
	2001	2	0.57	0.82	18
	2001	3	0.00	0.00	0
	2001	4	0.00	0.00	0

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	11.27	29.5%	1,068	101	9.5%
	2000	1	48.08	2.00	4.2%	1,160	19	1.6%
	2000	2	39.77	5.80	14.6%	1,096	69	6.3%
	2000	3	46.31	4.91	10.6%	1,227	71	5.8%
	2000	4	45.99	9.62	20.9%	1,191	149	12.5%
	2001	1	52.11	12.71	24.4%	1,118	86	7.7%
	2001	2	44.73	14.73	32.9%	1,221	160	13.1%
	2001	3	0.00	0.00	0.0%	0	0	0.0%
2001	4	0.00	0.00	0.0%	0	0	0.0%	
Alterations (R&R)	1999	3	-	1.39	-	1,374	16	1.2%
	1999	4	-	1.90	-	1,026	36	3.5%
	2000	1	-	4.01	-	983	26	2.6%
	2000	2	-	2.70	-	1,101	37	3.4%
	2000	3	-	1.96	-	1,425	38	2.7%
	2000	4	-	4.78	-	1,145	88	7.7%
	2001	1	-	1.26	-	1,188	27	2.3%
	2001	2	-	4.33	-	1,416	65	4.6%
	2001	3	-	0.00	-	0	0	0.0%
2001	4	-	0.00	-	0	0	0.0%	

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	5.77	41.7%	340	49	14.4%
	2000	1	23.25	1.30	5.6%	416	8	1.9%
	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	2.27	19.6%	303	29	9.6%
	2001	1	14.03	5.46	38.9%	301	23	7.6%
	2001	2	14.62	3.51	24.0%	351	38	10.8%
	2001	3	0.00	0.00	0.0%	0	0	0.0%
2001	4	0.00	0.00	0.0%	0	0	0.0%	
Alterations (R&R)	1999	3	-	1.23	-	429	11	2.6%
	1999	4	-	1.10	-	343	15	4.4%
	2000	1	-	0.41	-	311	5	1.6%
	2000	2	-	1.58	-	293	10	3.4%
	2000	3	-	0.77	-	292	12	4.1%
	2000	4	-	3.46	-	290	46	15.9%
	2001	1	-	0.44	-	241	10	4.1%
	2001	2	-	2.09	-	277	13	4.7%
	2001	3	-	0.00	-	0	0	0.0%
2001	4	-	0.00	-	0	0	0.0%	

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	3.93	29.8%	387	35	9.0%
	2000	1	13.00	0.07	0.5%	371	1	0.3%
	2000	2	13.05	1.68	12.9%	392	19	4.8%
	2000	3	21.36	1.18	5.5%	536	29	5.4%
	2000	4	20.56	5.95	29.0%	532	92	17.3%
	2001	1	21.66	6.30	29.1%	457	32	7.0%
	2001	2	17.32	8.55	49.3%	472	85	18.0%
	2001	3	0.00	0.00	0.0%	0	0	0.0%
	2001	4	0.00	0.00	0.0%	0	0	0.0%
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	-	0.44	-	458	10	2.2%
	2000	3	-	0.30	-	620	4	0.6%
	2000	4	-	0.82	-	471	25	5.3%
	2001	1	-	0.44	-	456	5	1.1%
	2001	2	-	1.67	-	652	34	5.2%
	2001	3	-	0.00	-	0	0	0.0%
	2001	4	-	0.00	-	0	0	0.0%

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	0.95	17.4%	119	31	26.1%
	2001	2	3.85	2.68	69.6%	144	37	25.7%
	2001	3	0.00	0.00	0.0%	0	0	0.0%
	2001	4	0.00	0.00	0.0%	0	0	0.0%
Alterations (R&R)	1999	3	-	0.16	-	139	5	3.6%
	1999	4	-	0.46	-	126	15	11.9%
	2000	1	-	3.56	-	140	19	13.6%
	2000	2	-	0.68	-	106	17	16.0%
	2000	3	-	0.89	-	176	22	12.5%
	2000	4	-	0.49	-	133	17	12.8%
	2001	1	-	0.38	-	192	12	6.3%
	2001	2	-	0.57	-	167	18	10.8%
	2001	3	-	0.00	-	0	0	0.0%
	2001	4	-	0.00	-	0	0	0.0%

6. MOST ACTIVE MARKET PLAYERS IN QUARTERS 1-2, 2001

This chapter presents the most active market players in Quarters 1-2, 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 1-2, 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 1-2, 2001.

Table 6.2 presents the most active market players in SCE territory during Quarters 1-2, 2001.

Table 6.3 shows the most active market players in PG&E territory during Quarters 1-2, 2001.

Table 6.4 summarizes the most active market players in SDG&E territory during Quarters 1-2, 2001.

**Table 6.1 Most Active Market Players in California in Quarters 1-2, 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								
Gruen Associates	LOS ANGELES	CA	229.890	225.600	4.290	3	1	2
Hill Pinckert Architects	NEWPORT BEACH	CA	202.805	198.675	4.130	15	12	3
Perkins & Will Architects	SANTA MONICA	CA	166.510	164.910	1.500	4	2	1
HMC Group	ONTARIO	CA	164.691	92.235	72.456	14	6	8
HOK/Hellmuth Obata & Kassabaum Inc	SAN FRANCISCO	CA	153.880	153.880	-	2	2	-
Johnson Fain & Pereira Associates	LOS ANGELES	CA	147.500	147.500	-	3	3	-
Gordon H Chong & Associates	SAN FRANCISCO	CA	142.571	140.571	2.000	7	6	1
M B T Associates	SAN FRANCISCO	CA	139.700	139.200	0.500	5	4	1
Korth Sunseri Hagey Architects	SAN FRANCISCO	CA	135.482	135.482	-	4	4	-
Rochlin Baran & Balbona - RBB Architects Inc.	LOS ANGELES	CA	129.967	129.967	-	3	3	-
Top 10 by Number of Projects								
Casco Corporation	SAINT LOUIS	MO	68.202	41.627	26.375	35	6	27
LPA	IRVINE	CA	114.130	87.160	26.970	17	7	10
Perkowitz & Ruth Architects	LONG BEACH	CA	91.074	84.000	7.074	16	12	4
Ware & Malcomb Architects	IRVINE	CA	70.651	66.555	3.511	16	5	6
Hill Pinckert Architects	NEWPORT BEACH	CA	202.805	198.675	4.130	15	12	3
HMC Group	ONTARIO	CA	164.691	92.235	72.456	14	6	8
W L C Architects	RANCHO CUCAMONGA	CA	85.292	67.936	17.356	13	6	7
Greenberg Farrow Architecture	TUSTIN	CA	74.642	70.642	4.000	12	11	1
The Steinberg Group	SAN JOSE	CA	86.686	69.600	17.086	12	2	10
M B H Architects	ALAMEDA	CA	95.897	86.000	9.897	10	4	6
ENGINEERS								
Top 10 by Project Value								
John A Martin & Associates	LOS ANGELES	CA	189.910	189.910	-	3	3	-
Flores Lund Mobayed	SAN DIEGO	CA	148.774	144.774	4.000	6	5	1
Ove Arup & Partners	LOS ANGELES	CA	142.410	142.410	-	2	2	-
Capitol Engineering Consultants Inc	SACRAMENTO	CA	129.441	62.526	66.915	52	17	35
Alfa Tech Consulting Engineers	SAN JOSE	CA	121.910	109.230	12.680	16	7	9
Dasse Design Inc	SAN FRANCISCO	CA	120.756	78.053	42.703	24	6	18
Rogoway Borkovetz & Assoc (aka) RBA Partner	LOS ANGELES	CA	119.535	119.535	-	3	3	-
Flack & Kurtz Consulting Engineers	SAN FRANCISCO	CA	118.450	66.450	52.000	5	3	2
LRM Limited	CULVER CITY	CA	114.910	114.910	-	1	1	-
Planning Associates Inc	VAN NUYS	CA	100.000	100.000	-	1	1	-
Top 10 by Number of Projects								
Capitol Engineering Consultants Inc	SACRAMENTO	CA	129.441	62.526	66.915	52	17	35
ANF and Associates	EL MONTE	CA	99.077	98.202	0.875	28	27	1
Dasse Design Inc	SAN FRANCISCO	CA	120.756	78.053	42.703	24	6	18
Palmieri & Associates Inc	SOUTH PASADENA	CA	85.695	85.695	-	24	24	-
Alfa Tech Consulting Engineers	SAN JOSE	CA	121.910	109.230	12.680	16	7	9
Frederick Brown & Associates	NEWPORT BEACH	CA	92.701	71.689	21.012	15	8	7
TMAD Engineers Inc.	ONTARIO	CA	91.308	27.242	64.066	15	4	11
Kanda & Tso Associates	SOUTH PASADENA	CA	58.677	31.201	27.476	10	5	5
Burkett & Wong	SAN DIEGO	CA	68.662	68.662	-	8	8	-
McParlane & Associates	SAN DIEGO	CA	99.616	99.616	-	8	8	-

**Table 6.2 Most Active Market Players in SCE Territory in Quarters 1-2, 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								
HMC Group	ONTARIO	CA	147.191	92.235	54.956	13	6	7
Hill Pinckert Architects	NEWPORT BEACH	CA	134.293	130.800	3.493	11	9	2
HOK/Hellmuth Obata & Kassabaum Inc	SAN FRANCISCO	CA	109.880	109.880	-	1	1	-
R K Z Architects	TUSTIN	CA	78.228	78.228	-	8	8	-
AMFAB Inc	CORONA	CA	77.500	77.500	-	2	2	-
LPA	IRVINE	CA	57.491	33.396	24.095	10	3	7
W L C Architects	RANCHO CUCAMONGA	CA	57.474	46.421	11.053	9	5	4
RGA Architectural Design	LONG BEACH	CA	56.481	56.481	-	4	4	-
Samuel Wacht Associates	CALABASAS	CA	52.000	52.000	-	1	1	-
Perkowitz & Ruth Architects	LONG BEACH	CA	50.500	44.500	6.000	9	6	3
Top 10 by Number of Projects								
HMC Group	ONTARIO	CA	147.191	92.235	54.956	13	6	7
Casco Corporation	SAINT LOUIS	MO	33.875	24.000	9.875	11	2	9
Hill Pinckert Architects	NEWPORT BEACH	CA	134.293	130.800	3.493	11	9	2
LPA	IRVINE	CA	57.491	33.396	24.095	10	3	7
Ware & Malcomb Architects	IRVINE	CA	28.802	25.000	3.511	10	2	6
Perkowitz & Ruth Architects	LONG BEACH	CA	50.500	44.500	6.000	9	6	3
W L C Architects	RANCHO CUCAMONGA	CA	57.474	46.421	11.053	9	5	4
R K Z Architects	TUSTIN	CA	78.228	78.228	-	8	8	-
Nadel Architects Inc.	LOS ANGELES	CA	21.002	19.952	1.050	6	5	1
C C Architects Inc	IRVINE	CA	33.610	33.610	-	5	5	-
ENGINEERS								
Top 10 by Project Value								
Frederick Brown & Associates	NEWPORT BEACH	CA	150.269	114.967	35.302	24	13	11
Ajit Randhava Engineers	LA MIRADA	CA	110.000	110.000	-	6	6	-
F T Andrews Inc	ANAHEIM	CA	105.435	72.565	32.870	24	9	15
TMAD Engineers Inc.	ONTARIO	CA	78.150	49.621	28.529	21	10	11
Martin Chow & Nakabara Inc	NEWPORT BEACH	CA	73.124	54.267	18.857	10	7	3
John Denton & Associates	LOS ANGELES	CA	73.005	52.414	20.591	18	6	12
GLP Karjala Associates	COSTA MESA	CA	64.568	39.762	24.806	29	16	13
Culp & Tanner	LAKE FOREST	CA	64.000	64.000	-	6	6	-
Palmieri & Associates Inc	SOUTH PASADENA	CA	63.744	62.244	1.500	27	25	2
OMB Electrical Engineers Inc	IRVINE	CA	60.338	48.838	11.500	14	12	2
Top 10 by Number of Projects								
GLP Karjala Associates	COSTA MESA	CA	64.568	39.762	24.806	29	16	13
Palmieri & Associates Inc	SOUTH PASADENA	CA	63.744	62.244	1.500	27	25	2
Mechanical Building Systems Engineering Inc	WEST HILLS	CA	57.644	43.445	14.199	26	16	10
Frederick Brown & Associates	NEWPORT BEACH	CA	150.269	114.967	35.302	24	13	11
F T Andrews Inc	ANAHEIM	CA	105.435	72.565	32.870	24	9	15
TMAD Engineers Inc.	ONTARIO	CA	78.150	49.621	28.529	21	10	11
ANF and Associates	EL MONTE	CA	47.474	46.724	0.750	19	18	1
John Denton & Associates	LOS ANGELES	CA	73.005	52.414	20.591	18	6	12
OMB Electrical Engineers Inc	IRVINE	CA	60.338	48.838	11.500	14	12	2
Johnson & Nielsen Associates	RIVERSIDE	CA	36.119	26.569	9.550	13	8	5

**Table 6.3 Most Active Market Players in PG&E Territory in Quarters 1-2, 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								
Gordon H Chong & Associates	SAN FRANCISCO	CA	135.920	133.920	2.000	6	5	1
Korth Sunseri Hagey Architects	SAN FRANCISCO	CA	123.232	123.232	-	3	3	-
Skidmore Owings & Merrill LLP	SAN FRANCISCO	CA	106.859	85.059	21.800	4	2	2
Kenneth Rodrigues Associates Inc	SAN JOSE	CA	100.999	100.999	-	5	5	-
Simon Martin Vegue Winkelstein Moris	SAN FRANCISCO	CA	94.825	26.500	68.325	5	2	3
M B H Architects	ALAMEDA	CA	94.674	86.000	8.674	9	4	5
SRG Partnership PC Architects	PORTLAND	OR	92.000	92.000	-	1	1	-
DES Architects + Engineers	REDWOOD CITY	CA	88.888	85.588	3.300	8	5	3
The Steinberg Group	SAN JOSE	CA	86.686	69.600	17.086	12	2	10
Kwan Henmi Architecture/Planning Inc	SAN FRANCISCO	CA	85.260	80.000	5.260	2	1	1
Top 10 by Number of Projects								
The Steinberg Group	SAN JOSE	CA	86.686	69.600	17.086	12	2	10
Lionakis Beaumont Design Group	SACRAMENTO	CA	43.443	29.115	14.328	12	5	7
Edwin S Darden Associates Inc	FRESNO	CA	48.137	13.349	34.788	11	4	7
M B H Architects	ALAMEDA	CA	94.674	86.000	8.674	9	4	5
DES Architects + Engineers	REDWOOD CITY	CA	88.888	85.588	3.300	8	5	3
Gordon H Chong & Associates	SAN FRANCISCO	CA	135.920	133.920	2.000	6	5	1
Ware & Malcomb	SAN RAMON	CA	71.997	71.997	-	6	6	-
Gensler & Associates	SAN FRANCISCO	CA	50.733	50.000	0.303	5	1	1
Kenneth Rodrigues Associates Inc	SAN JOSE	CA	100.999	100.999	-	5	5	-
Simon Martin Vegue Winkelstein Moris	SAN FRANCISCO	CA	94.825	26.500	68.325	5	2	3
ENGINEERS								
Top 10 by Project Value								
Capitol Engineering Consultants Inc	SACRAMENTO	CA	123.770	57.077	66.693	47	13	34
Alfa Tech Consulting Engineers	SAN JOSE	CA	121.910	109.230	12.680	16	7	9
Flack & Kurtz Consulting Engineers	SAN FRANCISCO	CA	118.450	66.450	52.000	5	3	2
Dasse Design Inc	SAN FRANCISCO	CA	114.024	78.053	35.971	21	6	15
Rutherford & Chekene	OAKLAND	CA	97.996	40.800	57.196	6	3	3
Associated Engineers	SAN BERNARDINO	CA	92.000	92.000	-	1	1	-
KPF Consulting Engineers	PORTLAND	OR	92.000	92.000	-	1	1	-
Glumac International	SAN FRANCISCO	CA	82.000	82.000	-	3	3	-
Forell-Elsesser Engineers Inc	SAN FRANCISCO	CA	81.998	80.500	1.498	4	2	2
Nishkian Menninger	SAN FRANCISCO	CA	70.000	70.000	-	2	2	-
Top 10 by Number of Projects								
Capitol Engineering Consultants Inc	SACRAMENTO	CA	123.770	57.077	66.693	47	13	34
Zucco Fagent Associates	SANTA ROSA	CA	54.732	24.973	29.759	23	6	17
Dasse Design Inc	SAN FRANCISCO	CA	114.024	78.053	35.971	21	6	15
Alfa Tech Consulting Engineers	SAN JOSE	CA	121.910	109.230	12.680	16	7	9
Harry Yee & Associates	SACRAMENTO	CA	39.783	22.928	16.855	13	5	8
Lefler Engineering Inc	SAN RAFAEL	CA	39.676	36.170	3.506	6	4	2
Rutherford & Chekene	OAKLAND	CA	97.996	40.800	57.196	6	3	3
S J Engineers	OAKLAND	CA	40.543	10.275	30.268	6	3	3
The Crosby Group	REDWOOD CITY	CA	39.380	38.289	1.091	5	3	2
Flack & Kurtz Consulting Engineers	SAN FRANCISCO	CA	118.450	66.450	52.000	5	3	2

**Table 6.4 Most Active Market Players in SDG&E Territory in Quarters 1-2, 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								
Martinez Cutri	SAN DIEGO	CA	87.500	87.500	-	2	2	-
Carrier Johnson Architects	SAN DIEGO	CA	82.153	78.005	4.148	8	6	2
Kaufman-Meeks & Partners	NEWPORT BEACH	CA	75.000	75.000	-	2	2	-
KMA Architects	SAN DIEGO	CA	67.885	66.909	0.875	7	5	1
Pacific Cornerstone Architects	SAN DIEGO	CA	35.638	30.597	5.041	7	5	2
Anshen and Allen	LOS ANGELES	CA	30.669	30.669	-	1	1	-
Wimberly Allison Tong & Goo Architects	NEWPORT BEACH	CA	28.827	-	28.827	2	-	2
Form 4 Architecture	SAN FRANCISCO	CA	28.000	28.000	-	1	1	-
Austin Veum Robbins Parshalle	SAN DIEGO	CA	27.912	27.247	0.399	8	5	1
Joseph Wong Design Associates Inc.	SAN DIEGO	CA	27.289	22.000	5.012	7	1	4
Top 10 by Number of Projects								
Austin Veum Robbins Parshalle	SAN DIEGO	CA	27.912	27.247	0.399	8	5	1
Carrier Johnson Architects	SAN DIEGO	CA	82.153	78.005	4.148	8	6	2
Smith Consulting Architects	SAN DIEGO	CA	25.597	24.338	1.076	7	2	3
Joseph Wong Design Associates Inc.	SAN DIEGO	CA	27.289	22.000	5.012	7	1	4
KMA Architects	SAN DIEGO	CA	67.885	66.909	0.875	7	5	1
Pacific Cornerstone Architects	SAN DIEGO	CA	35.638	30.597	5.041	7	5	2
Architects Delawie Wilkes Rodrigues Barker	SAN DIEGO	CA	12.059	8.910	2.963	5	2	1
McGraw/Baldwin Architects	SAN DIEGO	CA	24.325	9.338	14.987	5	2	3
Wheeler Wimer Blackman & Associates	SAN DIEGO	CA	8.081	6.475	1.606	4	2	2
HMC Group	SAN DIEGO	CA	8.472	-	8.472	2	-	2
ENGINEERS								
Top 10 by Project Value								
Flores Lund Mobayed	SAN DIEGO	CA	123.599	119.599	4.000	5	4	1
McParlane & Associates	SAN DIEGO	CA	99.616	99.616	-	8	8	-
Ila Zannit Engineering Group	SAN DIEGO	CA	82.868	82.770	0.098	6	5	1
Burkett & Wong	SAN DIEGO	CA	67.412	67.412	-	7	7	-
Wimmer Yamada & Caughey	SAN DIEGO	CA	66.035	66.035	-	6	6	-
Randall Lamb Associates	SAN DIEGO	CA	62.500	62.500	-	2	2	-
Project Design Consultants	SAN DIEGO	CA	58.000	58.000	-	3	3	-
G E M Engineering Inc	SAN DIEGO	CA	55.270	55.270	-	3	3	-
KPFF/Alagia Consulting Engineers	SAN DIEGO	CA	52.098	52.000	0.098	3	2	1
CBM Engineers Inc	HOUSTON	TX	50.000	50.000	-	1	1	-
Top 10 by Number of Projects								
McParlane & Associates	SAN DIEGO	CA	99.616	99.616	-	8	8	-
Burkett & Wong	SAN DIEGO	CA	67.412	67.412	-	7	7	-
Hope Engineering	SAN DIEGO	CA	26.871	26.871	-	6	6	-
Ila Zannit Engineering Group	SAN DIEGO	CA	82.868	82.770	0.098	6	5	1
Wimmer Yamada & Caughey	SAN DIEGO	CA	66.035	66.035	-	6	6	-
Flores Lund Mobayed	SAN DIEGO	CA	123.599	119.599	4.000	5	4	1
Stedman & Dyson	SAN DIEGO	CA	14.611	10.059	4.552	5	2	3
Martin & Martin	SAN DIEGO	CA	14.475	14.475	-	4	4	-
GEM Engineering Inc	SAN DIEGO	CA	15.742	15.629	0.113	4	3	1
Nowak-Meulmester & Associates	SAN DIEGO	CA	47.842	47.500	0.342	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 1-2, 2001

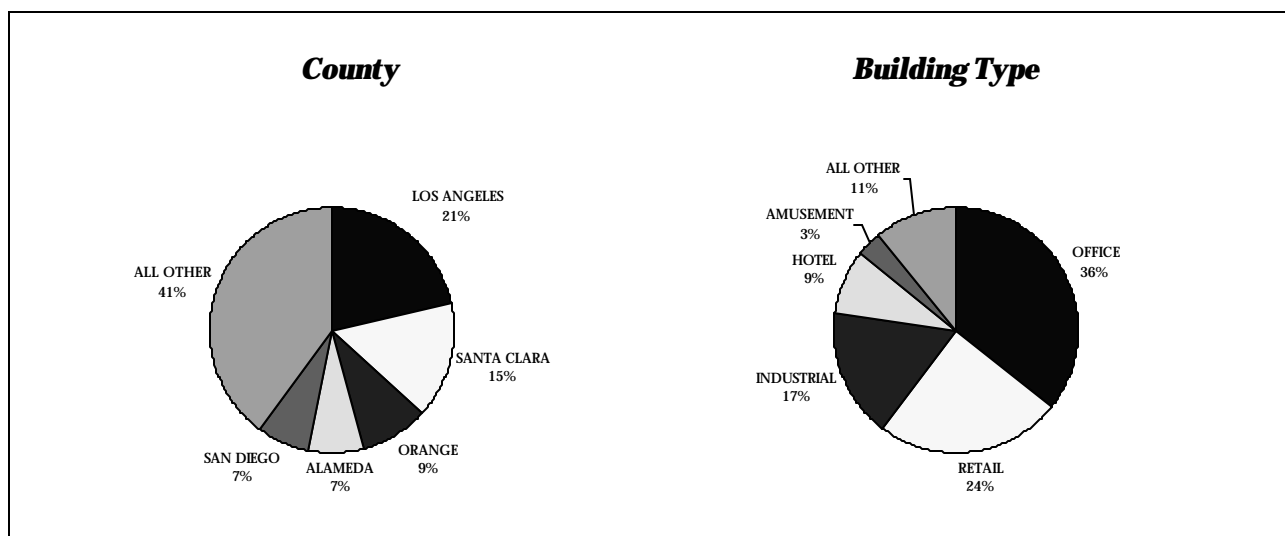
This Appendix presents information on the value of nonresidential new construction permits that were filed in Quarters 1-2, 2001 in the State of California. The data were collected by the Construction Industry Research Board from the more than 515 city and county building departments in California.

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 1-2, 2001, by building type. As shown in Exhibit B.1 below, Los Angeles, Santa Clara, Orange, Alameda and San Diego Counties account for the highest value of permits filed in the State during Quarters 1-2, 2001. Conversely, Sierra, Alpine, Plumas, and Modoc Counties had the lowest volume of permit activity in Quarters 1-2, 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 1-2, 2001



**Table B.1 CIRB Statewide Nonresidential Permit Valuation in Quarters 1-2, 2001
by Building Type and County (\$1,000)**

COUNTY	AMUSEMENT	CHURCH	HOTEL	MEDICAL	OFFICE	OTHER	EDUCATION	RETAIL	SERVICE	INDUSTRIAL	TOTAL NEW	ALTERATION	TOTAL
ALAMEDA	.	354	67,477	.	104,419	1,787	1,600	62,780	4,594	52,944	295,954	279,459	575,414
ALPINE	.	.	.	.	.	20	.	.	.	.	20	.	20
AMADOR	.	.	.	.	.	531	.	.	.	.	531	267	799
BUTTE	832	790	.	162	10,615	2,107	300	16,521	568	1,539	33,434	5,560	38,995
CALAVERAS	.	.	.	.	.	390	.	3,094	.	.	3,484	1,534	5,019
COLUSA	.	.	.	.	.	5,268	.	55	.	.	5,323	551	5,874
CONTRA COSTA	13,125	3,430	.	.	87,275	5,101	1,909	24,973	.	3,750	139,563	73,896	213,458
DEL NORTE	600	.	.	.	.	386	.	.	.	.	986	240	1,227
EL DORADO	.	.	61,941	.	829	1,712	1,431	4,950	.	.	70,863	16,554	87,417
FRESNO	924	363	.	.	22,483	3,882	.	29,329	662	14,721	72,363	55,664	128,027
GLENN	.	.	.	.	.	939	.	203	199	.	1,341	420	1,761
HUMBOLDT	.	.	1,889	.	.	2,868	.	4,439	.	.	9,196	3,601	12,797
IMPERIAL	.	.	.	.	358	806	.	1,590	.	548	3,303	3,187	6,490
INYO	.	.	.	.	.	215	.	.	.	.	215	523	737
KERN	455	4,428	.	854	33,086	15,083	237	17,989	808	9,191	82,132	21,275	103,407
KINGS	.	.	.	.	122	740	.	888	.	22,584	24,334	4,614	28,948
LAKE	.	.	.	.	.	124	.	436	.	.	560	646	1,206
LASSEN	.	.	.	.	.	159	.	.	.	.	159	510	669
LOS ANGELES	46,306	10,007	3,116	24,356	413,130	35,418	48,096	236,350	4,173	103,777	924,730	810,244	1,734,974
MADERA	.	637	.	.	389	1,066	.	5,469	.	876	8,436	3,274	11,710
MARIN	.	.	.	.	28,747	652	.	1,650	.	3,303	34,352	21,749	56,101
MARIPOSA	.	.	.	.	.	1,957	.	.	.	.	1,957	13	1,970
MENDOCINO	.	2,704	8,329	.	1,369	1,574	.	2,804	.	992	17,773	2,825	20,598
MERCED	.	.	.	.	650	11,573	.	6,711	.	1,953	20,886	4,743	25,629
MODOC	.	.	.	.	.	75	.	.	.	.	75	59	134
MONO	.	.	.	.	.	273	.	.	.	.	273	469	743
MONTEREY	2,516	472	1,151	.	4,077	3,824	.	1,554	.	2,610	16,203	22,648	38,851
NAPA	9,082	.	3,350	.	1,277	4,911	.	39,095	.	4,332	62,048	17,636	79,684
NEVADA	309	.	.	9,480	3,624	2,040	.	.	.	.	15,453	256	15,709
ORANGE	16,102	13,780	109,429	11,087	95,869	4,572	7,828	115,479	2,483	64,238	440,869	294,547	735,416
PLACER	2,357	.	.	.	9,378	1,477	.	23,021	886	3,732	40,851	34,649	75,500
PLUMAS	.	.	.	.	.	.	.	.	.	.	0	101	101
RIVERSIDE	2,100	1,609	1,955	.	26,598	13,620	881	85,006	1,007	26,322	159,097	73,413	232,510
SACRAMENTO	.	335	4,141	.	57,927	7,909	6,154	56,951	307	16,895	150,618	90,147	240,765
SAN BENITO	.	.	.	.	.	699	.	662	.	.	1,361	3,094	4,455
SAN BERNARDINO	2,961	1,311	4,727	630	13,102	11,335	3,202	73,009	3,783	141,434	255,495	51,997	307,492
SAN DIEGO	16,061	7,427	62,541	17,956	79,075	16,615	16,659	73,137	5,607	47,339	342,419	225,138	567,557
SAN FRANCISCO	.	.	24,000	.	104,650	612	10,300	4,729	.	550	144,841	250,831	395,673
SAN JOAQUIN	.	6,336	5,516	.	8,486	5,363	262	17,677	.	7,266	50,905	35,160	86,065
SAN LUIS OBISPO	.	177	1,901	.	3,970	5,980	.	13,334	1,201	3,145	29,708	11,376	41,084
SAN MATEO	300	.	9,487	787	169,145	2,973	.	3,943	1,500	3,223	191,358	128,243	319,601
SANTA BARBARA	.	474	.	.	7,130	7,424	376	14,767	.	6,128	36,299	30,512	66,811
SANTA CLARA	6,766	900	23,569	.	304,456	5,291	10,705	94,742	.	165,744	612,173	635,284	1,247,457
SANTA CRUZ	.	.	.	737	9,491	765	.	992	.	450	12,435	7,445	19,880
SHASTA	9,900	386	.	.	2,482	1,792	.	7,484	90	1,091	23,226	6,532	29,758
SIERRA	.	.	.	.	.	.	.	.	.	.	0	.	0
SISKIYOU	.	.	.	.	.	1,411	.	.	.	2,794	4,205	1,642	5,847
SOLANO	.	465	6,107	.	6,391	5,036	883	6,701	.	4,389	29,972	20,816	50,788
SONOMA	1,188	1,496	2,463	.	24,050	5,844	.	16,203	.	18,548	69,791	30,430	100,221
STANISLAUS	1,000	.	1,514	4,000	6,362	13,144	.	28,628	550	2,029	57,228	28,042	85,270
SUTTER	.	1,299	.	.	2,923	367	.	7,515	.	2,292	14,396	3,415	17,811
TEHAMA	.	406	.	.	.	3,681	.	.	.	1,847	5,934	608	6,542
TRINITY	.	.	.	.	.	324	.	.	.	.	324	302	626
TULARE	500	.	1,000	.	4,233	5,340	.	5,879	482	17,019	34,453	12,833	47,287
TUOLUMNE	10,000	.	.	.	4,535	803	.	1,542	.	.	16,881	1,622	18,503
VENTURA	5,057	380	.	.	28,827	7,935	431	26,532	.	38,137	107,299	47,287	154,586
YOLO	.	.	.	.	3,075	1,597	.	5,628	157	5,678	16,134	13,839	29,973
YUBA	832	.	.	1,308	500	2,233	.	117	.	179	5,169	1,253	6,422
CALIFORNIA	149,272	59,965	405,603	71,357	1,685,106	239,629	111,254	1,144,562	29,058	803,588	4,699,394	3,392,976	8,092,370

Tables B.2 and B.3 present quarterly permit activity, by county and building type for a 1-year period ending in June 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					1-YEAR TOTAL
	Q3, 2000	Q4, 2000	Q1, 2001	Q2, 2001	1-yr Total	Q3, 2000	Q4, 2000	Q1, 2001	Q2, 2001	1-yr Total	
ALAMEDA	102,245	137,860	205,105	90,849	536,059	130,520	109,247	161,899	117,560	519,227	1,055,286
ALPINE	65	689	20	0	774	65	38	0	0	103	877
AMADOR	662	1,987	438	94	3,180	563	103	71	196	933	4,113
BUTTE	14,467	12,125	21,348	12,087	60,027	5,627	6,086	2,817	2,743	17,273	77,300
CALAVERAS	762	5,163	3,144	340	9,409	582	964	851	683	3,080	12,489
COLUSA	1,007	2,317	2,289	3,034	8,648	74	73	179	372	698	9,345
CONTRA COSTA	52,773	79,911	30,581	108,982	272,248	38,855	38,704	39,997	33,899	151,454	423,702
DEL NORTE	633	81	733	254	1,701	1,094	85	166	75	1,420	3,120
EL DORADO	10,659	16,464	4,556	66,307	97,985	3,129	2,200	10,235	6,319	21,884	119,869
FRESNO	64,062	34,983	38,342	34,021	171,409	18,217	31,533	31,810	23,854	105,413	276,822
GLENN	1,349	347	453	889	3,038	335	98	284	137	854	3,892
HUMBOLDT	3,310	955	2,735	6,461	13,461	3,290	1,202	1,438	2,162	8,092	21,553
IMPERIAL	11,827	29,769	2,405	897	44,898	1,263	526	922	2,266	4,976	49,874
INYO	0	0	1	214	215	50	138	196	327	710	925
KERN	23,199	18,459	44,134	37,998	123,790	10,680	11,051	11,576	9,699	43,007	166,796
KINGS	486	16,111	4,391	19,943	40,931	455	842	1,238	3,376	5,912	46,842
LAKE	2,259	995	560	0	3,814	126	288	614	32	1,060	4,874
LASSEN	105	5	125	34	269	66	28	356	154	604	873
LOS ANGELES	320,582	319,680	468,642	456,088	1,564,993	401,044	343,258	397,271	412,973	1,554,546	3,119,539
MADERA	2,965	1,914	6,035	2,400	13,315	3,242	1,137	1,136	2,138	7,653	20,968
MARIN	23,275	4,500	18,956	15,395	62,127	15,143	19,955	7,925	13,825	56,848	118,975
MARIPOSA	381	248	797	1,160	2,586	34	26	0	13	72	2,658
MENDOCINO	3,294	644	15,094	2,679	21,710	954	1,959	1,275	1,550	5,738	27,448
MERCED	9,659	8,998	3,766	17,120	39,544	3,057	3,473	1,319	3,425	11,274	50,818
MODOC	112	337	28	47	524	37	22	45	14	117	642
MONO	4,374	96	0	273	4,744	123	509	46	423	1,101	5,845
MONTEREY	19,972	31,874	7,230	8,973	68,049	14,143	9,625	11,229	11,420	46,416	114,465
NAPA	15,515	8,838	34,926	27,122	86,400	24,477	12,413	10,830	6,807	54,527	140,926
NEVADA	4,791	3,052	11,036	4,417	23,296	145	100	125	131	501	23,797
ORANGE	217,246	159,086	223,603	217,266	817,200	177,954	146,614	134,841	159,707	619,115	1,436,316
PLACER	34,626	37,686	12,330	28,522	113,163	20,410	15,044	19,818	14,831	70,103	183,266
PLUMAS	0	114	0	0	114	99	0	26	75	200	314
RIVERSIDE	112,616	139,408	72,564	86,533	411,122	42,032	38,223	29,004	44,409	153,668	564,790
SACRAMENTO	66,655	88,738	40,811	109,808	306,011	56,863	66,002	43,665	46,482	213,012	519,023
SAN BENITO	6,955	1,123	940	421	9,439	673	479	2,314	780	4,246	13,685
SAN BERNARDINO	135,186	108,226	158,359	97,136	498,907	32,312	30,170	25,846	26,150	114,478	613,385
SAN DIEGO	130,712	160,751	166,688	175,730	633,881	124,878	107,600	116,230	108,908	457,617	1,091,498
SAN FRANCISCO	388,195	235,503	134,782	10,059	768,540	166,196	159,866	130,826	120,006	576,893	1,345,433
SAN JOAQUIN	48,938	45,291	25,121	25,784	145,135	18,644	14,588	14,043	21,116	68,392	213,527
SAN LUIS OBISPO	19,632	12,968	15,875	13,833	62,307	7,033	4,329	5,683	5,694	22,737	85,045
SAN MATEO	107,078	140,420	107,752	83,606	438,856	51,390	73,218	40,204	88,038	252,851	691,707
SANTA BARBARA	16,297	12,245	18,859	17,440	64,840	12,207	15,741	16,243	14,269	58,459	123,300
SANTA CLARA	431,057	352,098	325,451	286,722	1,395,329	432,806	436,401	325,982	309,302	1,504,492	2,899,821
SANTA CRUZ	1,724	4,378	7,924	4,511	18,537	9,693	6,442	3,928	3,517	23,579	42,116
SHASTA	12,192	4,102	6,120	17,106	39,520	4,496	1,450	3,968	2,563	12,477	51,997
SIERRA	0	22	0	0	22	0	0	0	0	0	22
SISKIYOU	2,298	8,455	2,800	1,405	14,959	322	1,345	439	1,202	3,308	18,267
SOLANO	18,966	19,030	23,674	6,298	67,968	7,471	15,545	7,467	13,349	43,831	111,799
SONOMA	45,479	15,751	39,443	30,348	131,021	16,084	14,451	11,643	18,788	60,965	191,987
STANISLAUS	35,384	37,368	23,368	83,860	129,980	14,297	9,716	10,284	17,759	52,056	182,036
SUTTER	3,695	21,757	4,044	10,352	39,848	888	432	910	2,506	4,735	44,583
TEHAMA	1,938	1,246	1,519	4,415	9,119	464	60	367	240	1,131	10,250
TRINITY	1,177	207	282	42	1,708	159	37	295	7	497	2,205
TULARE	37,340	12,099	26,667	7,786	83,893	11,583	3,696	4,765	8,069	28,112	112,005
TUOLUMNE	1,381	1,890	14,718	2,163	20,152	884	348	649	973	2,854	23,005
VENTURA	40,393	34,091	58,151	49,148	181,783	22,985	22,916	18,817	28,470	93,188	274,971
YOLO	17,799	23,692	5,795	10,338	57,625	7,082	14,326	5,758	8,082	35,247	92,872
YUBA	1,300	862	1,980	3,190	7,331	1,576	856	775	478	3,685	11,017
CALIFORNIA	2,631,052	2,417,008	2,447,491	2,251,902	9,747,454	1,918,869	1,795,577	1,670,638	1,722,339	7,107,422	16,854,876

**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													
Q3, 2000	36,526	58,338	104,193	55,932	1,097,633	108,520	26,487	524,660	12,743	606,019	2,631,052	1,918,869	4,549,921
Q4, 2000	61,602	20,923	182,840	99,458	903,156	88,793	38,595	539,314	19,344	462,984	2,417,008	1,795,577	4,212,585
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
1-Year Total	247,400	139,225	692,636	226,748	3,685,895	436,942	176,336	2,208,536	61,146	1,872,591	9,747,454	7,107,422	16,854,876

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”.