
2004 Energy Efficiency Annual Report

- ◆ Summary Report
2003 Results – 2004 Plans
- ◆ Technical Appendix
2003 Results

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An EDISON INTERNATIONAL Company

CONTENTS

1. EXECUTIVE SUMMARY

EXECUTIVE SUMMARY..... 1.1

2. RESIDENTIAL PROGRAM AREA

RESIDENTIAL ENERGY MANAGEMENT SERVICES..... 2.1

RESIDENTIAL ENERGY EFFICIENCY INCENTIVES..... 2.6

3. NONRESIDENTIAL PROGRAM AREA

NONRESIDENTIAL INFORMATION..... 3.1

NONRESIDENTIAL ENERGY MANAGEMENT SERVICES..... 3.3

NONRESIDENTIAL ENERGY EFFICIENCY INCENTIVES..... 3.6

4. NEW CONSTRUCTION PROGRAM AREA

RESIDENTIAL NEW CONSTRUCTION..... 4.1

NONRESIDENTIAL NEW CONSTRUCTION..... 4.4

5. CROSSCUTTING PROGRAM AREA

CROSSCUTTING INFORMATION..... 5.1

UPSTREAM PROGRAMS..... 5.8

6. MA&E AND REGULATORY OVERSIGHT

MARKET ASSESSMENT & EVALUATION..... 6.1

7. SHAREHOLDER PERFORMANCE INCENTIVES

2004 PERFORMANCE INCENTIVES..... 7.1

8. SUMMER INITIATIVE

SUMMER INITIATIVE..... 8.1

Executive Summary

Southern California Edison Company's (SCE) 2003 energy efficiency programs helped customers live more comfortably, manage their energy bills, and operate more efficiently in California's competitive business environment. The 2003 program results build upon SCE's nationally recognized expertise, leadership and track record of success in energy efficiency. SCE was able to reliably deliver substantial resource benefits for its ratepayers and the state at reasonable cost.

SCE's 2003 programs created considerable, ongoing resource benefits to all ratepayers by providing over 405 million kilowatt-hours (kWh) of net annualized energy savings, 85.6 megawatts (MW) of net peak demand reduction, and over \$250 million of resource benefits.

Additionally, SCE stepped up efforts to reach traditionally

underserved markets. By leveraging resources through community partnerships and using innovative targeted outreach techniques, SCE was able to make energy savings opportunities available to Californians who typically have not participated in energy efficiency programs.

Funding for SCE's 2003 energy efficiency programs was collected pursuant to California Public Utilities Code Sections 381 and 399. California Public Utilities Commission (CPUC) approval for the specific 2003 program activities was provided in Decisions 03-01-038, 03-03-028, and 03-04-055.

SCE remains committed to working closely with the CPUC, the state and other stakeholders to ensure that California's energy-related public policy goals are attained, and energy efficiency programs achieve reliable and

durable energy savings and demand reduction.

This report describes the energy efficiency program activities SCE administered and implemented during calendar year 2003.

2003 Energy Efficiency Results

RESIDENTIAL

SCE's 2003 residential programs provided considerable energy savings and resource benefits while reaching a significant number of hard-to-reach (HTR) customers. The CPUC's current definition of residential HTR segments includes customers living in rural communities, multifamily residences, moderate-income households and non-English speaking customers. In 2003 SCE's residential energy efficiency programs created over 67.5 million kWh of energy savings, 22 MW of demand reduction and produced over \$33.6 million in net benefits to SCE ratepayers.

SCE offered customers its highly successful residential energy management services through its Statewide Home Energy Efficiency Surveys program, offering mail-in and online energy efficiency surveys, and its Local In-Home Audits program.

Each of these programs provides customized energy advice to residential customers. SCE's residential energy management services programs targeted customers defined by the CPUC as hard-to-reach through non-English solicitation packages and outreach events in rural communities.

SCE's Single-Family and Multi-Family Energy Efficiency Rebate programs focused on hardware-based energy savings and resource benefits by providing rebates to participating customers for the purchase and installation of whole house fans and ENERGY STAR®-qualified central air conditioners, among many other products. More than 38% of applications received and paid were from HTR customers for the single-family program. More than 55% of customers served were HTR for the multifamily program. SCE managed the programs, developed outreach materials and point-of-

purchase displays, tracked program budgets, commitments and installations, and ensured that applications adhered to program guidelines. In total, the Single-Family Rebate program achieved over 23.7 million kWh of annual energy savings and a demand reduction in excess of 15.1 MW, while the Multi-Family rebate program saved an additional 4.6 million kWh of energy savings and 0.8 MW of peak demand reduction.

SCE's Appliance Recycling program recycled more than 34,000 refrigerators and freezers, which resulted in a total annualized energy savings of over 39.2 million kWh and a demand reduction of 6 MW. SCE offered participants a choice between a cash incentive, or a five-pack of compact fluorescent bulbs to further increase the energy savings impact of the program.

NONRESIDENTIAL

SCE continued to produce significant energy savings and resource benefits through the provision of its nonresidential energy

Executive Summary

efficiency programs while more fully addressing the needs of its hard-to-reach customers. In 2003 SCE's nonresidential energy efficiency programs produced over 219 million kWh of energy savings, 40.2 MW of demand reduction and produced over \$134 million in benefits to SCE ratepayers.

The statewide Building Operators Certification program provided training and certification for operators of medium and large commercial buildings to establish and support a professional credential for building operators in California. SCE marketed the program through direct communications with customers by SCE account managers. In 2003, SCE expanded the course curriculum to include advanced training on effective troubleshooting methods for problem identification, testing procedures, problem solving and operational analysis. A total of 134 students were enrolled in this program in 2003.

SCE continued to provide answers to customers' questions, and advice regarding energy efficiency products and services through the statewide Nonresidential Energy Audits program. In 2003 the program completed 8,533 audits, including 3,100 audits for hard-to-reach SCE customers.

The highly successful Pump Test local program performed 3,665 pump tests. Approximately 45% of the tests were for SCE customers previously considered as "non-participants". SCE achieved these results by strengthening current relationships and cultivating new relationships with agribusiness, water districts, trade and ethnic associations, vendors, manufacturers, and local and state governments.

The Local Small Nonresidential HTR program, provided no-cost energy-efficient equipment and

information to very small business (under 20kW), targeting customers defined as hard-to-reach by the CPUC. In past years these customers typically have not participated in SCE's energy efficiency programs. Through SCE's directed marketing activities, more than 1,000 HTR customers participated in SCE's 2003 program.

The 2003 Express Efficiency program was offered to small and medium nonresidential customers. This highly successful program achieved nearly 123.1 million kWh of annualized energy savings and 27.1 MW of demand reduction. Customers classified as HTR received 57.5% of the paid incentives for this program.

The Standard Performance Contract (SPC) program continued its success in providing significant energy savings to SCE's nonresidential customers. SCE customers participating in the SPC program achieved over 90.7

million kWh of annualized energy savings and 11.9 MW of demand reduction.

NEW CONSTRUCTION

In 2003, SCE continued its programs in the new construction market, providing information and incentives to promote the construction of energy-efficient residential and nonresidential dwellings.

In 2003, SCE promoted the statewide California Energy Star® New Homes Programs at industry trade shows and local building industry affiliations throughout the year to a diverse group of building industry professionals. Through these efforts, SCE approved more than 5,900 applications for single-family units and over 2,300 multifamily applications.

SCE provided marketing support for the nonresidential new construction program, Savings By Design, through distribution of over 9,000 program brochures, and

distributed 250 compact discs with Energy Design Resources software. The program provides energy design education, design assistance, and cash incentives for all project types and sizes that meet eligibility criteria for the program. In 2003, the Savings By Design program achieved over 70 million kWh and 9.9 MW of demand reduction in SCE's service area.

CROSSCUTTING

SCE's statewide energy efficiency education and training program provided customers with valuable energy efficiency information. SCE's Customer Technology Application Center (CTAC) and Agricultural Technology Application Center (AGTAC) continued to serve as focal points for customers to attend workshops and observe product demonstrations and displays featuring state-of-the-art energy efficiency technologies.

SCE continued to make significant contributions

to the Emerging Technologies Coordination Council (ETCC), a statewide information exchange and coordination effort by investor-owned utilities and the California Energy Commission's (CEC) Public Interest Energy Research (PIER) program. The ETCC maintains a website and database of applications and projects, featuring descriptions of emerging technology projects as well as many of the CEC's PIER projects.

The Codes & Standards programs are information-only programs that promote upgrades and enhancements to various energy efficiency standards and codes, thereby capturing the benefits for society from California's diverse energy efficiency efforts. During 2003, SCE's technical staff participated in workshops towards the revision of both residential and nonresidential building standards and initiated several Codes and Standards Enhancement

studies to investigate promising technologies that could lead to the development of new standards.

SCE's Local Government Initiative educates and informs community leaders, local government planners, building officials, builders, building owners, small business owners, and consumers about the economic benefits of energy efficiency in the areas of residential and nonresidential new construction as well as small business. In 2003, the program secured participation from 18 new Southern California jurisdictions, bringing the total to 61 participating jurisdictions since 2001.

The statewide crosscutting Upstream Residential Lighting program provides a point-of-purchase discount to customers who purchase qualifying fluorescent Energy Star® lighting products. SCE provides manufacturers with rebates, which allows manufacturers to pass the rebates on to the

retailers, who promote the competitive pricing of these products. SCE also provides incentives directly to large statewide big-box retail chains for products not bearing the manufacturer buy-down discounts.

Through SCE's efforts with lighting manufacturers and retailers to buy down the cost of energy-efficient lighting products, customers received a \$1 to \$2 discount per unit off the purchase price of an Energy Star® -qualified compact fluorescent lamp (CFL) and a \$5 to \$10 discount per unit for a torchiere or hardwired indoor /outdoor lighting fixture. In 2003, the Upstream Residential Lighting program provided rebates on nearly 1 million energy-saving lighting products.

STATEWIDE MARKETING AND OUTREACH

Flex Your Power – Energy Efficiency is a statewide consumer marketing campaign

that focuses exclusively on energy efficiency. The goal is to build awareness of Energy Star® products and the message is delivered through newspaper, radio and television media.

SCE facilitated the statewide coordination between the IOUs and Flex Your Power as the administrator of this statewide program. SCE fulfilled the same role as statewide administrator of the Univision Television Energy Efficiency Marketing (U-TEEM) and Runyon Saltzman & Einhorn's (RS&E) "Reach for the Stars" marketing campaigns. U-TEEM is a consumer marketing and outreach program that targets Spanish speaking customers. RS&E's campaign is focused on moderate and low-income customers in rural areas within the state of California.

At the end of December 2003, all three campaigns achieved their goal of raising general awareness of energy efficiency.

NON-IOU PROGRAMS

SCE administered 15 third-party (a.k.a., non-IOU) programs which were selected by the CPUC in 2002 to be implemented by non-utilities in California over a two-year period. The budgets and payments made in 2003 by SCE for the administration of these programs are included in this report. A total of 23 programs are offered in SCE's service area by non-utility entities. The results achieved by these third-parties for their non-utility programs are submitted to the CPUC by each of the non-utility entities and are not included in this report.

MARKET ASSESSMENT & EVALUATION AND REGULATORY OVERSIGHT

Market Assessment & Evaluation (MA&E) is the set of activities needed to provide market, program, and product assessment studies and analyses useful to energy efficiency program planners and policy makers. CPUC Decision

03-04-055, issued April 17, 2003, allocated \$10.7 million for 2003 evaluation activities. \$5.7 million of this was total was set aside for evaluation activities to be contracted and overseen by the Energy Division. As directed, the utilities consulted with Energy Division staff, held a California Measurement Advisory Council (CALMAC) public workshop to solicit input on the 2003 study plans, and submitted plans for the remaining funding on June 16, 2003. The assigned administrative law judge approved these plans on September 12, 2003. SCE, in 2003, directed significant MA&E resources to the 2002 statewide studies that were approved in February 2003. Other activities included evaluations of 2002 local programs.

SHAREHOLDER PERFORMANCE INCENTIVES

The CPUC did not approve a performance incentive mechanism for 2003 energy efficiency programs.

Executive Summary

Table 1.1
2004 Energy Efficiency Annual Report
SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC

	2003 PGC Budaet	(1)	2003 PGC Recorded	(1.2)	2004 PGC Budaet	(3)	2004 Procurement Budaet	(3)	2004 TOTAL Budaet	(3)
Residential	\$ 17,261.654		\$ 17,185.698		\$ 14,500.000		\$ 24,522.380		\$ 39,022.380	
Nonresidential	26,150.000		27,558.856		22,400.720		23,991.433		46,392.153	
New Construction	13,900.000		14,546.891		13,400.000		5,221.843		18,621.843	
Crosscutting	11,216.700		10,973.372		15,821.953		6,264.345		22,086.298	
Total IOU Programs	68,528.354		70,264.817		66,122.673		60,000.000		126,122.673	
Statewide Marketing	20,507.459	(5)	17,804.300	(6)	6,709.753	(7)	-		6,709.753	
Non-IOU Programs	30,189.432	(8)	16,739.710	(9)	14,682.836		-		14,682.836	
Total Non-IOU Programs	50,696.891		34,544.010		21,392.589		-		21,392.589	
Utility Administration of Non-IOU Programs	964.654		123.608	(10)	734.142		-		734.142	
MA&E and Regulatory Oversight	1,975.429	(11)	3,618.985	(11)	1,528.775	(11)	-		1,528.775	
Shareholder Performance Incentives	-	(12)	-	(12)	-	(12)	-		-	
Total Energy Efficiency	\$ 122,165,328		\$ 108,551,420		\$ 89,778,178		\$ 60,000,000		\$ 149,778,178	
Total Summer Initiative	\$ -		\$ -		\$ -		\$ -		\$ -	
Total Energy Efficiency and Summer Initiative	\$ 122,165,328		\$ 108,551,420		\$ 89,778,178		\$ 60,000,000		\$ 149,778,178	

(1) Amounts reflect Program Year 2003 (PY03) funds, including fund shifts during 2003.

(2) All Recorded amounts include payments in 2003 and amounts committed to projects in 2003, unless otherwise noted. Committed amounts may not be fully realized.

(3) Amounts reflect Program Year 2004 (PY04) funds, as approved in D.03-12-060 and D.04-02-059.

(4) Includes SCE's 2004 Partnership Programs.

(5) SCE's portion of the 2003 Statewide Marketing and Outreach Budget (D.03-04-055).

(6) Total Statewide amount expended by SCE on Statewide Marketing and Outreach Budget, not just SCE's portion.

(7) SCE's portion of the 2004 Statewide Marketing and Outreach Budget (D.03-12-060).

(8) Total amount budgeted for SCE's portion of all Non-IOU programs offered in SCE's service territory, covering multiple years.

(9) Total amount paid towards Non-IOU programs administered by SCE, not SCE's portion, covering multiple years. Excludes committed funds.

(10) Total amount expended in 2003 for Non-IOU program administration by SCE. Excludes committed funds.

(11) Excludes MA&E related to Local Programs.

(12) The Commission authorized no Shareholder Performance Awards in 2003 or 2004.

(13) Additional Pensions and Benefits (P&B) costs not included in any funding tables.

Table 1.2
2004 Energy Efficiency Annual Report
SUMMARY OF ENERGY EFFICIENCY PROGRAM EFFECTS: ELECTRIC

	2003		2003		2003		2004		2004		2004		2004		2004		2004		
	PGC	First Year	PGC	Lifecycle	PGC	First Year	PGC	First Year	Procurement	First Year	PGC	First Year	Procurement	First Year	PGC	First Year	Procurement	TOTAL	
	Net Annualized	Net Annualized	Energy Savings	Energy Savings	Net Annualized	Net Annualized	Net Annualized	Net Annualized	Net Annualized	Net Annualized	Net Annualized	Net Annualized	Net Annualized	Net Annualized	Net Annualized	Net Annualized	Net Annualized	Net Annualized	Net Annualized
	Capacity Savings	Energy Savings	(kWh)	(kWh)	Capacity Savings	Capacity Savings	Capacity Savings	Capacity Savings	Capacity Savings	Capacity Savings	Capacity Savings	Capacity Savings	Capacity Savings	Capacity Savings	Capacity Savings	Capacity Savings	Capacity Savings	Capacity Savings	Energy Savings
	(MW)	(kWh)	(kWh)	(kWh)	(MW)	(MW)	(MW)	(MW)	(MW)	(MW)	(MW)	(MW)	(MW)	(MW)	(MW)	(MW)	(MW)	(MW)	(kWh)
	[1]	[1]	[1]	[1]	[1,2]	[1,2]	[1,2]	[1,2]	[1,2]	[1,2]	[1,2]	[1,2]	[1,2]	[1,2]	[1,2]	[1,2]	[1,2]	[1,2]	[1,2]
Residential	22.00	67,579,456	743,374,011	16.77	44.26	61.03	71,300,638	258,135,745	329,436,387										
Nonresidential	40.15	219,044,796	3,248,153,484	32.74	27.58	60.33	166,417,168	164,077,576	330,494,734										
New Construction	17.65	77,241,005	1,250,152,407	14.08	11.00	25.08	48,047,277	36,368,556	84,415,833										
Crosscutting	5.79	41,255,257	495,063,085	3.91	-	3.91	14,900,885	-	14,900,885										
Total Energy Efficiency	85.59	405,120,513	5,736,742,988	67.51	82.84	150.35	300,665,958	458,501,881	759,247,839										
Total Summer Initiative																			
Total Energy Efficiency and Summer Initiative	85.59	405,120,513	5,736,742,988	67.51	82.84	150.35	300,665,958	458,501,881	759,247,839										

[1] Net Savings reflect Commission-adopted net-to-gross ratios.
 [2] Amounts reflect Net Capacity and Energy Savings as approved in D.03-12-060 and D.04-02-059. Not all programs are required to claim energy savings.
 [3] Includes SCE's 2004 Partnership Programs.

Executive Summary

Table 1.3
2004 Energy Efficiency Annual Report
SUMMARY OF COST-EFFECTIVENESS: ELECTRIC
(Benefit-Cost Ratios)

	2003 PGC Program Administrator Cost Test [1]	2003 PGC Total Resource Cost Test [1]	2004 PGC Program Administrator Cost Test [2]	2004 PGC Total Resource Cost Test [2]	2004 Procurement Program Administrator Cost Test [2]	2004 Procurement Total Resource Cost Test [2]
Residential	1.91	1.45	2.40	2.63	5.85	4.25
Nonresidential	4.80	3.19	4.97	3.61	4.35	3.09
New Construction	4.09	2.25	2.54	1.99	3.23	2.35
Crosscutting	1.97	1.32	1.07 [3]	1.23 [3]	-	-
Total Energy Efficiency	3.49	2.30	3.19	2.73	4.78	3.43

[1] Includes all costs from Tables TA 2.1, TA 3.1, TA 4.1, TA 5.1 - Program Cost Estimates Used for Cost-Effectiveness.

[2] Based upon programs approved in D.03-12-060 and D.04-02-059. Includes MA&E costs. Includes costs and benefits only from programs which required energy savings estimates.

[3] Includes SCE's 2004 Partnership Programs.

Executive Summary

Table 1.4
2004 Energy Efficiency Annual Report
SUMMARY OF COST-EFFECTIVENESS: ELECTRIC
(Net Benefits)

	2003 PGC TRC [1]	2004 PGC TRC [2]	2004 Procurement TRC [2]
Residential	\$ 10,452,101	\$ 20,076,448	\$ 95,900,831
Nonresidential	92,019,612	68,068,542	70,617,772
New Construction	33,684,622	17,585,991	15,367,784
Crosscutting	\$ 5,338,427	1,307,635 [3]	-
Total Energy Efficiency	<u>\$ 141,494,762</u>	<u>\$ 107,038,616</u>	<u>\$ 181,886,387</u>

[1] Includes all costs from Tables TA 2.1, TA 3.1, TA 4.1, TA 5.1 - Program Cost Estimates Used for Cost-Effectiveness.

[2] Based upon programs approved in D.03-12-060 and D.04-02-059. Includes MA&E costs. Includes costs and benefits only from programs which required energy savings estimates.

[3] Includes SCE's 2004 Partnership Programs.

Residential Energy Management Services

HOME ENERGY EFFICIENCY SURVEY PROGRAM

Program Description

The Statewide Home Energy Efficiency Survey (HEES) program is designed to increase consumer awareness of energy efficiency opportunities, encourage adoption of energy-efficient practices and induce a permanent change in attitudes and actions toward energy-efficient products and services. SCE offers both mail-in and online energy surveys to provide customers, including hard-to-reach (HTR), with energy efficiency information to help them reduce their energy bills. The surveys are available in multiple languages and promote other energy efficiency products and services such as residential rebates and incentives. HEES also supports the federal

government's ENERGY STAR® program by promoting ENERGY STAR® qualified appliances, equipment and lighting products. Marketing and promotion strategies include: direct mail, e-mail blasts and online banner ads, bill messages or inserts, radio and print media advertising, Internet, local governments, SCE's Energy Efficiency Mobile Education Unit and phone center and ethnic, trade, and community associations.

MAIL-IN SURVEY

The Mail-In Survey is a self-completed questionnaire that contains specific questions about the types of appliances and equipment, their usage pattern and the structure of the home.

It is completed by the customer and then mailed to SCE for processing. The questionnaire is processed and a personalized energy report is mailed to the customer. The report includes computer-generated graphs depicting the customer's annual energy -usage and how much various appliances and equipment cost to operate. The energy report also includes specific energy- and cost-saving recommendations, along with estimates of the annual savings that could result if the energy efficient practices are adopted. Customers also receive educational materials on other energy efficiency programs and services. The Mail-In Survey is also

Residential Program Area

available in Spanish and Chinese.

ONLINE ENERGY SURVEY

The Online Survey, accessible through www.sce.com, provides customers with 24-hour access to a secured website that gives immediate energy efficiency recommendations based on the responses to the online questionnaire. The survey provides a personalized online energy report that includes specific energy- and cost-saving recommendations and information on available rebates and incentives to encourage adoption of energy efficiency measures identified through the energy survey. Web postings of the Online Survey are available in Spanish and Chinese on SCE's website.

2003 Results and Achievements

In 2003, 25,856 Mail-In Surveys were completed along with

15,648 Online Surveys. The program also SCE mailed 200,000 solicitation packages directed at HTR customers, including 25,000 Spanish and 25,000 Chinese language packages.

ONLINE SURVEYS

In May 2003, SCE implemented a "fast track" version of the English Online Survey to increase customer participation. The "fast track" survey allowed customers to receive personalized energy-saving information within five minutes without the use of their account number.

SCE continued its successful "Blockbuster" online marketing campaign through the first quarter of 2003. The "Blockbuster" campaign offered customers a free movie rental coupon for completing an Online Survey. In the second quarter of 2003, SCE launched a new online marketing campaign to continue

customer participation in the program. The "Starbucks" campaign offered customers a complimentary \$5 "Starbucks" card for the completion of an Online Survey. The online marketing campaign included about 1.4 million e-mail blasts and a variety of online banners on six local and regional websites.

During the third quarter, SCE developed and launched the new statewide Spanish Online Survey. The launch included a Spanish "fast track" survey component for quick results. With the addition of this new interactive Spanish survey, the program expanded its HTR outreach efforts to include a larger segment of California's diverse population.

With the launch of the Spanish Online Survey, SCE enhanced its online marketing campaign by sending 60,000 Spanish e-mail

Residential Program Area

blasts and posting Spanish banner ads on Univision's regional website.

SCE developed and implemented a three-month pilot program which involved working side-by-side with local community-based organizations to promote the survey programs to the Chinese, Vietnamese and Spanish communities SCE's HTR outreach efforts resulted in 1,500 completed surveys.

Residential Energy Management Services

IN-HOME ENERGY SURVEY PROGRAM

Program Description

The local residential In-Home Energy Survey program provides residential customers who do not respond to online or mail-in survey options, with a more personalized, face-to-face energy survey. The In-Home Survey has the advantage of being able to respond to the needs of certain HTR customer groups by providing an alternative delivery channel.

Upon the customer's request, an appointment is scheduled, and a trained energy auditor is sent to the customer's home to assess energy usage and to provide energy-saving recommendations. Energy auditors are bilingual and will conduct in-home

surveys in Spanish, if requested.

Customers are provided with information on energy efficiency products and services, rebate programs and other energy-related information to encourage the adoption of energy efficiency measures identified in the in-home survey.

TELEPHONE SURVEY

Telephone Energy Surveys are offered to customers who do not have time to participate in an In-Home Survey. The trained energy auditor conducts the survey over the phone and provides the customer with energy-saving recommendations. The results of the survey, along with program literature

and referrals to other energy efficiency programs, are mailed to the customer.

2003 Results and Achievements

SCE achieved a total of 5,366 in-home and telephone surveys, 3,399 of those were performed in hard-to-reach customer segments.

SCE continued to promote equity and remove market barriers by enhancing access to energy efficiency programs by Spanish-speaking customers. SCE developed and implemented a three-month pilot program which involved working side-by-side with local community-based organizations to promote the survey program and other SCE rebate and

Residential Program Area

incentive programs to
the Spanish-speaking
community.

Residential Energy Efficiency Incentives

SINGLE FAMILY ENERGY EFFICIENCY REBATES PROGRAM

Program Description

The Single Family Energy Efficiency Rebates (SFEER) program is a statewide program which provides rebates on various home improvement products, heating and cooling equipment, appliances and residential pool equipment.

Rebates were offered for the following energy-efficient equipment:

- Advanced Whole-House Evaporative Coolers
- ENERGY STAR® Qualified Programmable Thermostats
- Energy-Efficient Central Air Conditioners
- Energy-Efficient Central Heat Pumps
- High-Performance Low E Dual-Pane Windows

- ENERGY STAR® Qualified Room Air Conditioners
- Whole House Fans
- Pool Pump and Motor Systems
- Electric Water Heaters

This program also includes customer information and education for residential customers, manufacturers, retailers, and distributors.

2003 Results and Achievements

In 2003, the SFEER program encouraged residential customers to purchase and install over 34,100 ENERGY STAR® qualified programmable thermostats; 5,900 pool pumps and motor systems; 1,800 whole house fans; and 8,600 ENERGY STAR® qualified central air conditioners among

many other products. SCE also continued its successful point-of-sale programmable thermostat rebate in coordination with three major retailers. Overall, the program achieved 23,738 MWh of net annualized energy savings and net demand reduction of 15.1 MW.

As a result of high customer demand, SCE achieved full subscription for the program and received Commission approval on December 3, 2003, to increase the budget by \$1,116,000. The request for additional funds was supported by the significant download of rebate applications from SCE's website. More than 15,000 heating, ventilation and air conditioning (HVAC) rebate applications were downloaded by customers.

CUSTOMER INFORMATION AND EDUCATION

SCE implemented a series of targeted mailings and bill inserts to customers to encourage the purchase and installation of qualifying products, in particular programmable thermostats, pool pump and motor systems, electric water heaters and whole house fans. This effort was highly successful and resulted in more than 52,000 hardware installations.

More than 38.2% of the program applications received and paid were from HTR customers. This surpasses the goal of 34%.

Energy efficiency information was also disseminated to customers through SCE's Energy Efficiency Mobile Education Unit (MEU). The MEU is a 45-foot converted recreational vehicle equipped with

energy-efficient household products and computerized educational tools designed to increase consumer awareness of the benefits of energy efficiency and promote SCE's rebate and incentive programs. In 2003, the MEU conducted 94 visits at community events and home shows throughout SCE's service area.

MARKETING AND OUTREACH

A new one-page rebate application/brochure and point-of-purchase displays were developed for the pool pump and motor measures. These items were distributed to approximately 250 pool retailers in SCE's service area. In addition, the new one-page rebate application/brochure was included in the Independent Pool and Spa Service Association's monthly newsletter in June. This newsletter was distributed to approximately 1,500 pool service

professionals in the SCE service area.

Point-of-purchase materials promoting the electric water heater and whole house fan were printed and distributed to major home improvement centers in SCE's service area.

SCE also printed the rebate application and program brochure in Spanish and Chinese and worked with community-based organizations to distribute the materials to HTR customer groups.

Residential Energy Efficiency Incentives

MULTIFAMILY ENERGY EFFICIENCY REBATES PROGRAM

Program Description

The goal of the Multifamily Energy Efficiency Rebate program (MFEER) is to stimulate the multifamily market segment to install energy-efficient products. The MFEER program is a statewide program providing a broad list of qualifying energy efficiency measures. Prescribed rebates are available for the installation of qualifying energy-efficient improvements in apartment dwelling units and in the common areas of apartment and condominium complexes, and common areas of mobile home parks. Property owners and property managers of existing residential multifamily complexes with five or more dwelling

units may qualify. The program is uniform throughout all the IOU service areas, with consistent terms, requirements and implementation characteristics, including rebate levels and application procedures.

The following energy-efficient products are eligible for rebates:

- Energy Star®-Labeled Compact Fluorescent Lights (CFLs) (both interior and exterior)
- Energy Star®-Labeled Reflector CFLs (both interior and exterior)
- Energy Star®-Labeled Programmable Thermostats
- Energy Star®-Labeled Ceiling Fans with Energy Star® CFLs
- Energy Star®-Labeled Interior Hardwired Fluorescent Fixtures
- Energy Star®-Labeled Exterior Hardwired Fluorescent Fixtures
- Energy Efficient Electric Water Heaters
- High Performance Low E Dual-Pane Windows
- Insulation (electric resistance heating required)
- Low-Flow Showerheads (electric water heating required)
- Low-Flow Faucet Aerators (electric water heating required)
- Energy Star®-Labeled Exit Signs
- Occupancy Sensors
- Photocells
- Energy Star®-Labeled Room Air Conditioners
- Energy Efficient Package Terminal

Residential Program Area

- Air Conditioners and Heat Pumps
- Energy Efficient Central Air Conditioners
- Energy Efficient Central Heat Pumps

Many of these measures are available as apartment and common area improvements resulting in both the property owner and resident tenant reaping benefits from reduced energy costs.

2003 Results and Achievements

A total of 213 multifamily complexes received direct incentives through the MFEER program representing approximately 4,607 MWh in annualized energy savings and a demand reduction of approximately .8 MW. Program highlights include the installation of approximately 38,900 CFLs and 25,300 hardwired fluorescent fixtures. Halogen torchiere turn-in events resulted in

2,146 halogen torchieres exchanged for energy-saving fluorescent torchieres.

In early October, SCE developed and mailed over 24,000 postcards to its multifamily service accounts promoting CFL rebates. As a result of this mailing, SCE received reservations for over 3,000 CFLs from first-time program participants.

To strengthen the program's prominence among industry actors and participants, the IOUs developed a full-page advertisement in the "Multifamily Trends" magazine that was distributed at the Urban Land Institute's Fall Conference.

By third quarter, the program reached near full subscription. As a result, SCE sought authorization to increase the program's incentive budget to extend the program offering through the end of 2003. On December 3,

2003, The California Public Utilities Commission approved SCE's request to shift \$100,000 from unspent 2002 energy efficiency funds to SCE's 2003 MFEER program.

Through successful marketing efforts, SCE achieved a 55.9% penetration rate of HTR customers which is approximately twice the annual goal, for the second consecutive year.

During the fourth quarter, SCE conducted three torchiere exchange events. These events specifically target apartment renters through joint marketing outreach efforts between SCE, property managers and owners, and the local retail anchor where the events were conducted. Over the three events, 2,146 high consumption and hazardous halogen torchieres were exchanged for energy-saving fluorescent torchieres.

Residential Energy Efficiency Incentives

RESIDENTIAL APPLIANCE RECYCLING PROGRAM (RARP)

Program Description

The Residential Appliance Recycling Program (RARP) is a statewide program designed to reduce energy usage by allowing eligible residential customers (single family and multifamily owners/landlords and tenants) to dispose of their working, inefficient primary and secondary refrigerators and freezers in an environmentally safe manner. Two units, refrigerators or freezers, may be recycled per customer service location per program year. Participation is on a first-come, first serve basis. A recycling incentive of \$35 or a five-pack of compact fluorescent lamps (CFLs) is offered to customers who turn in working units

between 14-27 cubic feet.

Program guidelines require the following:

- Participant must be an SCE residential customer;
- Refrigerator/ Freezer must be in working condition (cooling); and
- Appliance size should be between 14 and 27 cubic feet.

RARP is a statewide program offered in the SCE, PG&E and SDG&E service areas with SCE serving as the statewide administrator.

2003 Results and Achievements

In SCE's service area, 34,143 refrigerators and freezers were picked up and recycled producing a total net annualized energy savings of 39,234 MWh and a net

demand reduction of 6 MW, including the savings from customers receiving CFLs (in lieu of the \$35 check).

Approximately 5% of the customers requested the five-pack CFL incentive offer.

SCE launched an intensive marketing promotion targeting its HTR customers. These efforts included: a bill insert to HTR customers in the September billing cycle, a bill message in the November billing cycle, and newspaper advertisements in November and December. In addition, SCE launched an ethnic outreach door hanger campaign and a point-of-purchase outreach campaign in rural SCE areas that resulted in nearly achieving 56.4%, or

Residential Program Area

slightly lower than the
HTR target of 57%.

Residential Program Area

Table 2.1
2004 Energy Efficiency Annual Report
SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC
RESIDENTIAL PROGRAM AREA

	2003 Budget	[1]	2003 Recorded	[1,2]
Information	\$	-	\$	-
EMS		2,025,654		1,954,051
EEl				
SPCs (RCP)		-		-
Rebates		15,236,000		15,231,647
Loans		-		-
Other		-		-
Upstream Programs				
Information		-		-
Financial Assistance		-		-
Residential Total	<u>\$</u>	<u>17,261,654</u>	<u>\$</u>	<u>17,185,698</u>

[1] Excludes Shareholder Incentives and Other Costs, as shown in Table TA 2.1.

[2] All Recorded amounts include payments in 2003 and amounts committed to projects in 2003.
Committed amounts may not be fully realized.

Table 2.2
2004 Energy Efficiency Annual Report
SUMMARY OF ENERGY EFFICIENCY PROGRAM EFFECTS: ELECTRIC
RESIDENTIAL PROGRAM AREA

	2003 First Year Net Annualized Capacity Savings (MW)	[1]	2003 First Year Net Annualized Energy Savings (kWh)	[1]	2003 Net Lifecycle Energy Savings (kWh)	[1]
Information	-		-		-	
EMS	-		-		-	
EEl						
SPCs (RCP)	-		-		-	
Rebates	22.00		67,579,456		743,374,011	
Loans	-		-		-	
Other	-		-		-	
Upstream Programs						
Information	-		-		-	
Financial Assistance	-		-		-	
Residential Total	<u>22.00</u>		<u>67,579,456</u>		<u>743,374,011</u>	

[1] Net Savings reflect Commission-adopted net-to-gross ratios.

Residential Program Area

Table 2.3
2004 Energy Efficiency Annual Report
SUMMARY OF COST-EFFECTIVENESS: ELECTRIC
(Benefit-Cost Ratios)
RESIDENTIAL PROGRAM AREA

	2003 Program Administrator Cost Test	[1]	2003 Total Resource Cost Test	[1]	2003 Levelized Cost (cents/kWh)	[1]
Information	-		-		-	
EMS	-		-		-	
EEI						
SPCs (RCP)	-		-		-	
Rebates	2.15		1.59		4.43	
Loans	-		-		-	
Other	-		-		-	
Upstream Programs						
Information	-		-		-	
Financial Assista	-		-		-	
Residential Total	<u>1.91</u>		<u>1.45</u>		<u>4.85</u>	

[1] Includes costs depicted in Table TA 2.1 -
Program Cost Estimates Used for Cost-Effectiveness - Residential Program Area.

Table 2.4
 2004 Energy Efficiency Annual Report
 SUMMARY OF COST-EFFECTIVENESS: ELECTRIC
 RESIDENTIAL PROGRAM AREA
 (Net Benefits)

		2003 TRC
Information	\$	-
EMS		(2,021,377)
EEl		
SPCs (RCP)		-
Rebates		12,473,479
Loans		-
Other		-
Upstream Programs		
Information		-
Financial Assistance		-
Residential Total	\$	<u>10,452,101</u>

Nonresidential Information

BUILDING OPERATOR CERTIFICATION PROGRAM

Program Description

This is a statewide training and certification program that seeks to establish and support a professional credential for operators of medium and large commercial buildings (including governmental and institutional buildings and complexes). Certified operators receive the training and background to identify and implement energy savings opportunities as an integral part of their operations and maintenance activities. The Building Operator Certification (BOC) Level I training course consists of eight days of training classes offered once per month over a seven-month period, and the BOC Level II training course consists of seven days of training classes offered once

per month over a five-month period.

2003 Results and Achievements

In 2003, the BOC program held six training course sessions and enrolled 134 students in these sessions. SCE's course locations were placed throughout southern California and within areas that have high concentrations of commercial buildings to make it easier for building operators to attend. SCE also leveraged the use of its energy center to deliver two of the six training courses. The program relied on direct outreach to recruit students such as using SCE's customer account representatives to enlist students.

SCE, in coordination with other California IOUs, designed a Level II training course that would build on the program's success from the prior year. The purpose of the Level II course was to emphasize equipment and troubleshooting and maintenance. As a result of this coordinated program enhancement process, the Level II course curriculum in 2003 consisted of Preventive Maintenance and Operations, Advanced Electrical Diagnostics, HVAC Troubleshooting and Maintenance, HVAC Controls and Optimization, Introduction to Building Commissioning, and Electric Motor Management. The topics covered in the Level II course

Nonresidential Program Area

expand on the
maintenance and
operational practices
covered in BOC's
Level I course.

Nonresidential Energy Management Services

NONRESIDENTIAL ENERGY AUDITS

Program Description

This statewide information program offers free energy audits to nonresidential customers. The audit assists the customer by providing information on the benefits of installing measures or adopting practices that can reduce the customer's utility bills. The energy audit recommendations are based on the customer's recent billing history and/or customer-specific information regarding equipment and building characteristics. The types of energy audits

offered by the program include: on-site, online, mail-in, over-the-phone and CD-ROM audits. Online audits are available in Spanish and English. In addition, on-site audits may be conducted in the following languages: Spanish, Korean, Chinese, as well as English.

2003 Results and Achievements

By the end of 2003, the program completed 8,533 audits, of which 3,100 audits were classified as HTR. To achieve these results, the program used a combination of

targeted marketing and outreach along with an expansion of the online audit in Spanish to enlarge and enhance the market for SCE's online audit tool.

SCE used various channels to create additional program awareness among the nonresidential customer class. These channels assured the program's overall success and included activities such as direct mailings, informational classes, customer outreach events, e-mail blasts, promotional online giveaways and newsletters.

Nonresidential Energy Management Services

PUMP TEST AND HYDRAULIC SERVICES

Program Description

The Local Pump Test and Hydraulic Services (PTHS) program is intended to influence water agencies, municipalities, agricultural, and other customers with pumping applications to adopt maintenance and capital investment practices that will ultimately improve the overall efficiency of their pumping systems. This objective is accomplished through hydraulic test specialists who provide pump efficiency tests that determine overall plant system efficiency, electrical motor performance, pump hydraulics, and water well characteristics.

In addition, SCE delivered activities to this group of customers that were

historically known as energy management services. These included education and training activities that promote energy efficiency. SCE accomplished this through strengthening current relationships and cultivating new relationships with agri-businesses, water districts, trade and ethnic associations, vendors, manufacturers, and local and state governments.

2003 Results and Achievements

In 2003, the SCE PTHS program performed specialized pump tests on 3,665 pumps for agricultural and water agency customers.

Customers that were previously considered “non-participants” accounted for 45% of these tests. It is anticipated that

recommendations from tests performed in 2003 will result in over 22,940,000 kWh in energy savings.

Program activity in 2003 included distributing approximately 350 brochures to prospective customers and mailing 200 letters directed to reach SCE’s “non-participating” agricultural/water customers to encourage them to take advantage of the program’s services. Specifically, the letters provided information regarding SCE’s free energy efficiency pump test and identified available rebates/incentives through SCE’s incentive programs.

SCE developed a compact disc in conjunction with the Department of Energy to promote the

Nonresidential Program Area

efficient pumping systems. Over 20 compact discs were distributed to customers, vendors, and other industry participants.

In 2003, the SCE Pump Test program participated in the 36th Annual World Ag Expo in Tulare, California, which attracted over 100,000 people. Over 900 attendees engaged in various discussions and demonstrations, and received SCE's Pumping Productivity Manuals and Pumping Energy and financial evaluations compact disc based tools from SCE's exhibit.

SCE's Pump Test program promoted energy efficiency and its pump test services at the Inland Counties Water Association Vendor's Fair. Approximately 150

attendees received literature and engaged in various discussions and demonstrations. In addition, a presentation was given to the Association of Ventura County Water Agencies.

To help educate customers regarding energy efficiency and the program's services, SCE sponsored the Home Town Utility event at AgTAC in Tulare, California. Approximately 40 customers attended the convention and received an overview of the pump test program, how to implement energy efficiency measures and how to save money.

As members of the energy committee, SCE attended and participated in the

American Water Works Association Conference. During the conference, the manager of the PT&HS program delivered a presentation focused on the benefits of saving energy through pump test services offered through SCE's program. Approximately 40 customers attended.

Even though agricultural customers by accepted definition are considered HTR customers, SCE used a direct mailing solicitation to reach additional HTR customers. Specially prepared letters were mailed to 200 customers with 6% of those customers responding with a request for a pump test for their operations.

Nonresidential Energy Efficiency Incentives

SMALL NONRESIDENTIAL HARD-TO-REACH PROGRAM

Program Description

The Small Nonresidential Hard-to-Reach program, implemented as the Small Business Lighting Retrofit program, offers energy efficiency information, equipment, and education to very small business customers typically located in rural areas within SCE's service area. SCE's HTR customers are defined as all customers who are located in rural zip codes and/or all customers with a monthly demand of less than 20 kW. The program introduces small business customers to the

benefits of energy efficiency through lighting system upgrades which consist of the replacement of low efficiency lighting with high efficiency lighting. An energy audit is performed to determine the potential for energy savings. This is part of the education piece of the program. After discussing the audit results with the customer, the upgrades are provided. Since cost is a major concern for the small business owner, and the largest barrier to participation in the traditional rebate programs, all program services are

provided free of charge. Professional electrical contractors, hired through a competitive bid process, provide the audits, education, and installation of the lighting system upgrades.

2003 Results and Achievements

By the end of 2003, more than 1,000 very small businesses participated in the program and, in aggregate, realized 5,108 MWh of net annualized energy savings and 1.08 MW of net peak load reduction.

Nonresidential Energy Efficiency Incentives

EXPRESS EFFICIENCY

Program Description

This statewide program offers nonresidential prescriptive rebates for specific, proven energy efficient measures including lighting; heating, ventilation and air conditioning (HVAC); refrigeration; agricultural; gas; food service; and motor retrofit measures. The program is targeted to HTR, small and medium-sized commercial, industrial, and agricultural customers with monthly demand equal to or less than 500 kW or 250,000 annual therms.

2003 Results and Achievements

The Express Efficiency program realized a total of 123,173 MWh of net annualized energy savings and 27.1 MW of net peak load reductions for

small and medium-sized businesses in SCE's service area.

The statewide Express Efficiency program offered customers higher rebates for installing selected energy efficient lighting, light emitting diodes (LED), air conditioning, refrigeration, agricultural, and motor equipment during the bridge period, through April 17, 2003. In the third quarter of 2003, SCE in coordination with the other California IOUs submitted a joint proposal to the Commission requesting increased incentive levels for selected energy efficient measures. The Commission allowed the Express Efficiency program to increase incentive rebate levels by up to 60 percent for

qualifying measures that utility program managers deemed appropriate. The IOUs agreed to increase incentives on selected measures and began promoting the new rebate levels effective September 22, 2003.

During the year, the Express Efficiency program was marketed to SCE nonresidential customers in more than 1.9 million direct mail pieces. These included the "Simple Solutions, Smart Savings" direct mail package, two Business Connections bill inserts (June and September), and three mailers targeted by Standard Identification Code (SIC) which promoted cooling, lighting, and refrigeration.

In December 2003, the Express Efficiency

Nonresidential Program Area

program received recognition from the American Council for an Energy-Efficient Economy (ACEEE) as an “exemplary program”. This is part of ACEEE’s national awards program to honor America’s best energy efficiency programs. Programs selected for this honor were deemed to be especially noteworthy for their effectiveness and innovation in helping customers achieve greater levels of energy efficiency.

The Express Efficiency program was challenged to achieve a HTR participation rate of 47 percent, meaning that a minimum of 47 percent of rebates actually paid would go to HTR customers. HTR customers were identified as all very small businesses (i.e., customers on a GS-1 rate) and any small business (i.e., customers on a GS-2 rate) with a service address located in a rural zip code within SCE’s service area.

The actual HTR participation was 57.5 percent, or 122 percent of goal.

Express Efficiency coordinated its efforts with SCE’s Business Solutions Team. They are a diverse group of account executives that generally belong to organizations within the communities in which they work. They have a sense of community needs, know the customers well, and are positioned locally to help the individual members of these business organizations and customer groups to identify energy efficiency opportunities and overcome the market barriers related to the achievement of their full energy efficiency potential. Some examples of Business Solutions Team involvement in HTR community events in 2003 are:

- Energy Star Expo (19 locations) – May 17, 2003
- Nonprofit Community

Energy Efficiency Workshop – July 8, 2003

- African American Small Business Energy Efficiency Outreach – July 25, 2003
- Korean Energy Efficiency Expo – July 26, 2003
- El Monte Energy Walk, Hispanic Small Business Outreach – August 23, 2003
- Chinese Small Business Energy Efficiency Forum – August 27, 2003

In a pilot program element, SCE enrolled 2,600 HTR customers in the Express Efficiency program at a series of community and association energy expos in 2003 (some listed above). As part of enrollment, and to introduce HTR customers to energy efficiency, each HTR customer received one to six free compact florescent lamps (CFLs) depending on individual need. This outreach method proved to be highly effective in stimulating HTR

Nonresidential Program Area

enrollment and
allowed participants
to begin saving
energy and money
immediately.

Nonresidential Energy Efficiency Incentives

STANDARD PERFORMANCE CONTRACT (SPC)

Program Description

This statewide program offers incentives to large and medium size businesses for custom-designed, energy savings retrofits of existing facilities. Small and very small businesses can also participate, if their measures do not qualify for the Express Efficiency program. Any utility customer paying the gas or electric Public Goods Charge (PGC) in the IOU service areas is eligible. This includes utility customers who may have opted to purchase electricity or gas from other suppliers. Third party Energy Efficiency Service Providers (EESPs) who sponsor energy efficiency retrofit projects at utility customer facilities are also

eligible to participate.

The program consists of a “standard offer” payment of a fixed-price incentive by the utility administrator to end-users or third-party EESPs in exchange for kilowatt-hour energy savings achieved by the installation of an energy efficiency project at a host customer facility. Incentives are based on the amount of kWh saved and applicants are eligible to receive up to 50 percent of the total project cost.

2003 Results and Achievements

In 2003, the program achieved over 90,763 MWh in net annualized energy savings and nearly 11.9 MW of net demand reduction.

The dollar value of paid and committed incentives attributed to the 2003 SPC program totals more than \$11.6 million. As in previous years, the customer demand for the SPC program outstripped its budget and by July 2003, the program was fully subscribed and a customer wait list was instituted. As funds became available or earlier projects dropped out, the wait list applicants were funded in the order approved. The continued demand for the program is due to the aggressive outreach strategy SCE employs. The program primarily uses SCE customer account representatives to inform customers about the program.

Nonresidential Program Area

Table 3.1
2004 Energy Efficiency Annual Report
SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC
NONRESIDENTIAL PROGRAM AREA

	2003 Budget	[1]	2003 Recorded	[1,2]
Information	450,000	\$	350,343	
EMS				
Large	-		-	
Small/Medium	3,550,000		3,265,181	
EEl: Customized Rebates				
Large	-		-	
Small/Medium	-		-	
EEl: Prescriptive Rebates				
Large	-		-	
Small/Medium	8,400,000		8,777,355	
EEl: SPCs				
Large	13,750,000		15,165,977	
Small/Medium	-		-	
Upstream Programs				
Information	-		-	
Financial Assistance	-		-	
Nonresidential Total	<u>\$ 26,150,000</u>		<u>\$ 27,558,856</u>	

[1] Excludes Shareholder Incentives and Other Costs, as shown in Table TA 3.1.

[2] All Recorded amounts include payments in 2003 and amounts committed to projects in 2003.
Committed amounts may not be fully realized.

Nonresidential Program Area

Table 3.2
2004 Energy Efficiency Annual Report
SUMMARY OF ENERGY EFFICIENCY PROGRAM EFFECTS: ELECTRIC
NONRESIDENTIAL PROGRAM AREA

	2003 First Year Net Annualized Capacity Savings (MW)	[1]	2003 First Year Net Annualized Energy Savings (kWh)	[1]	2003 Net Lifecycle Energy Savings (kWh)	[1]
Information	-		-		-	
EMS						
Large	-		-		-	
Small/Medium	-		-		-	
EEl: Customized Rebates						
Large	-		-		-	
Small/Medium	-		-		-	
EEl: Prescriptive Rebates						
Large	-		-		-	
Small/Medium	28.20		128,281,623		1,795,942,717	
EEl: SPCs						
Large	11.95		90,763,173		1,452,210,767	
Small/Medium	-		-		-	
Upstream Programs						
Information	-		-		-	
Financial Assistance	-		-		-	
Nonresidential Total	<u>40.15</u>		<u>219,044,796</u>		<u>3,248,153,484</u>	

[1] Net Savings reflect Commission-adopted net-to-gross ratios.

Nonresidential Program Area

Table 3.3
 2004 Energy Efficiency Annual Report
SUMMARY OF COST-EFFECTIVENESS: ELECTRIC
 (Benefit-Cost Ratios)
NONRESIDENTIAL PROGRAM AREA

	2003 Program Administrator Cost Test	[1]	2003 Total Resource Cost Test	[1]	2003 Levelized Cost (cents/kWh)	[1]
Information	-		-		-	
EMS						
Large	-		-		-	
Small/Medium	-		-		-	
EEl: Customized Rebates						
Large	-		-		-	
Small/Medium	-		-		-	
EEl: Prescriptive Rebates						
Large	-		-		-	
Small/Medium	7.77		3.63		1.82	
EEl: SPCs						
Large	4.23		3.36		2.42	
Small/Medium	-		-		-	
Upstream Programs						
Information	-		-		-	
Financial Assist	-		-		-	
Nonresidential Total	4.80		3.19		2.27	

[1] Includes costs depicted in Table TA 3.1 -
 Program Cost Estimates Used for Cost-Effectiveness - Nonresidential Program Area.

Nonresidential Program Area

Table 3.4
2004 Energy Efficiency Annual Report
SUMMARY OF COST-EFFECTIVENESS: ELECTRIC
NONRESIDENTIAL PROGRAM AREA
(Net Benefits)

	2003 TRC
Information	\$ (379,068)
EMS	
Large	-
Small/Medium	(3,348,396)
EI: Customized Rebates	
Large	-
Small/Medium	-
EI: Prescriptive Rebates	
Large	-
Small/Medium	50,251,495
EI: SPCs	
Large	45,495,581
Small/Medium	-
Upstream Programs	
Information	-
Financial Assistance	-
Nonresidential Total	<u>\$ 92,019,612</u>

Residential New Construction

CALIFORNIA ENERGY STAR® NEW HOMES PROGRAMS

Program Description

The California ENERGY STAR® New Homes Programs (CESNHP) are designed to encourage single-family and multifamily (including rental apartments, condominiums, and town homes) builders to construct units that reduce energy usage by at least 15 percent from the standard design required by the California Energy Efficiency Standards. The programs goals are achieved through a combination of financial incentives, design assistance and education. The 15 percent level has been designated by the Environmental Protection Agency (EPA) as the new Energy Star® homes baseline for California, subsequent to the Title 24

revisions (2001 Standards) brought about in Assembly Bill 970. As a result, buyers of single-family homes and renters in multifamily dwellings enjoy reduced energy bills and superior comfort compared to standard new housing.

The program also offers a multifamily high-rise component for projects that use the 2001 Energy Efficiency Standards for High-Rise Residential Buildings. The EPA's ENERGY STAR® currently does not have a designation for multifamily buildings above three stories. The information gathered as a result of this component is shared with EPA ENERGY STAR®. EPA is interested in the outcome of this program activity for

possible future ENERGY STAR® designation of multifamily buildings that are four or more stories.

This program is also promoted at industry trade shows and local building industry affiliations throughout the year to a diverse group of building industry professionals. Additional promotional efforts are carried out through various media avenues, trade shows, and educational seminars.

2003 Results and Achievements

During 2003, the California ENERGY STAR® New Homes Programs approved more than 5,900 applications for single-family units and over 2,300

New Construction Program Area

multifamily applications. As a result, the programs achieved a combined total of 7,148 MWh of net annualized energy savings and 7.68 MW of net peak load reduction.

California ENERGY STAR® New Homes Programs' hard-to-reach (HTR) target requires that, at a minimum, 20 percent of the combined direct implementation funds of both the single-family and multifamily programs be directed to HTR customers. By year's end, the programs achieved a combined total of 45.8 percent.

AWARDS

SCE and the other three California investor-owned utilities were awarded the "2002 Partner of the Year for New Homes" at the EPA's ENERGY STAR® Awards ceremony held on April 15, 2003, in Washington, D.C.

In addition, they were awarded the ENERGY STAR® Award for

"Regional, State and Community Leadership in Energy Efficiency," as well as retaining the "Partner of the Year" designation. The 2004 ENERGY STAR® Awards Ceremony will be held on March 2, 2004 in Washington, D.C.

OUTREACH

SCE promoted the CESNHP as an exhibitor at the 2003 Building Industry Show at the Anaheim Convention Center on October 16 and 17, 2003. Over 8,000 attendees converged on the exhibition center where nearly 400 exhibitors promoted their products and services.

In addition, SCE maintained booths at the June 18 – 20, 2003, trade show at the Pacific Coast Builders Conference (PCBC) at the Moscone Convention Center in San Francisco. PCBC is the largest regional trade show in the U.S. Over 25,000 attendees visited 650 exhibits.

During the third quarter, SCE began its "Twinkle, Twinkle ENERGY STAR®" outreach campaign. This is a new advertising campaign initiated by SCE in 2003 in which the slogan reads: "Twinkle, Twinkle, Energy Star®....When you wish upon the California Energy Star® New Homes program, your dreams come true for a new, energy-efficient home that brings you savings, comfort and quality."

SCE helped raise awareness of the ENERGY STAR® program to potential home buyers by advertising in the Los Angeles Newspaper Group (which includes eight newspapers within the Los Angeles metro area). The advertisements ran from August through the remainder of 2003 and promoted ENERGY STAR® subdivisions with homes open or "open soon".

New Construction Program Area

TRAINING

SCE worked to develop and deliver a multifamily Buildings Energy Efficiency Design Training course specifically targeted to multifamily builders; affordable housing developers; architects; energy consultants; heating, ventilating and air conditioning (HVAC) contractors; home energy rating systems raters; mechanical and plumbing engineers; and building department inspectors. Based on an overwhelming response, two additional dates were added. A total of eight training sessions were held for 300 multifamily building industry professionals.

SCE partnered with the CEC in offering statewide web-cast training on the California Title 24 Energy Codes. Builders could also access this training on the Internet. At least 500 builders, architects, HVAC and

insulation contractors throughout California attended the training.

TRADE ADVERTISEMENT

In coordination with California's three other investor-owned utilities, SCE developed the 2003 statewide program Single-family, Multifamily Low Rise and Multifamily High Rise applications, as well as the Design Assistance Application. In addition, a new statewide trade advertisement was developed which ran in trade publications in May, June, and July 2003 to coincide with the Pacific Coast Builders Conference show in June 2003.

STATE LOGO

SCE worked with EPA to design their new California ENERGY STAR® logo for statewide use in branding the program on applications and marketing materials.

SCE worked with graphic designers to create a variety of

point-of-sale (POS) marketing materials that promote the ENERGY STAR® label within the new communities. The items currently include yard signs, flags, vinyl cling window decals, and small table tents.

Nonresidential New Construction

SAVINGS BY DESIGN

Program Description

The Savings by Design (SBD) program influences nonresidential building owners, tenants, and design teams to exceed current Title 24 standards (or industry standards for processes) by 10 percent or more for their new construction or renovation/remodel projects. SBD provides energy design education, design assistance, and cash incentives for all project types and sizes that meet eligibility criteria for the program. SBD also leverages resources from industry relationships, strategic alliances, and other public purpose programs to accomplish the goals of energy savings, peak demand reductions, and long-

term market change.

The program has three elements: the Whole Building Approach, the Systems Approach, and Education and Outreach. The core strategy centers on an integrated design approach to optimize energy efficiency, known as the Whole Building Approach. To include participants who would not normally consider a fully integrated design approach, the Systems Approach provides a simpler, performance-based method, which moves owners and design teams far beyond prescriptive approaches. Finally, program Education and Outreach strategies, focusing on the successful Energy Design Resources (EDR) model, address market barriers by

providing owners and designers with the information, education, and tools to help them make the best possible energy efficiency choices. All three elements support the California Energy Commission's (CEC's) goals for market transition to the 2005 Title 24 code revision cycle.

2003 Results and Achievements

In 2003, SCE's SBD program achieved 70,093 MWh of net annualized energy savings and 9.9 MW of net peak load reduction. More than 55 percent of the program's customer incentive monies were allocated to Whole Building Approach projects. Approximately 9 percent of the committed and/or paid projects qualified as hard-to-reach

New Construction Program Area

under the California Public Utilities Commission's definition.

Outreach and marketing activities included the distribution of more than: 9,000 SBD brochures; 250 EDR compact discs; and 3,500 statewide mailings for the SBD Energy Efficiency Integration Award Call for Entries. In addition, the SBD website attracted nearly 15,000 visits and more than 680,000 hits, and the EDR website attracted approximately 20,000 visits and nearly 800,000 hits. A total of 11 trainees completed the EDR on-line training course. More than 300 compact discs were distributed to customers from EDR website requests.

In 2003, SBD co-sponsored and/or participated in 21 seminars and workshops throughout the year. These seminars and workshops attracted

approximately 968 attendees, and encompassed a wide spectrum of topics, such as Title 24 Nonresidential Energy Efficiency Standards, Design Strategies for High Performance Glass, eQUEST training, Cool Roofs, Rebuild America Technology Series, Lighting, Daylighting, Skylighting, and Labs 21.

SBD partnered with the American Institute of Architects, California Council to co-sponsor the Monterey Design Conference. This conference hosted 626 attendees and held workshops that covered integrated design principles as well as SBD-sponsored seminars on designing energy efficient, green buildings.

To provide an additional distribution channel for new building science research completed through the CEC's PIER program, SCE partnered with the New Buildings Institute to produce two new EDR Design Briefs: Design Guide for Skylights with Suspended Ceilings and an Advanced Variable Air Volume Design Guide. Completion of the briefs is estimated for second quarter, 2004.

SBD met with key personnel from the University of California, Office of the President (UCOP), to establish working practices for implementing the new UCOP directive mandating green buildings and clean energy, including participation in the SBD program.

In addition, the following conferences were attended by SBD program representatives to

New Construction Program Area

promote the SBD and
EDR programs:

- Municipal Green Building Conference, Downey
- Association of Energy Engineers Annual Western Region Conference, City of Industry
- Natural Products Expo, Anaheim
- AIA National Convention, San Diego
- Urban Market Place Expo., Los Angeles
- ASHRAE National Conference, Kansas City

New Construction Program Area

Table 4.1
2004 Energy Efficiency Annual Report
SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC
NEW CONSTRUCTION PROGRAM AREA

	2003 Budget	[1]	2003 Recorded	[1,2]
Residential	\$ 5,000,000	\$	6,042,725	
Nonresidential	8,900,000		8,504,166	
New Construction Total	<u>\$ 13,900,000</u>	<u>\$</u>	<u>14,546,891</u>	

[1] Excludes Shareholder Incentives and Other Costs, as shown in Table TA 4.1.

[2] All Recorded amounts include payments in 2003 and amounts committed to projects in 2003.
Committed amounts may not be fully realized.

New Construction Program Area

Table 4.2
2004 Energy Efficiency Annual Report
SUMMARY OF ENERGY EFFICIENCY PROGRAM EFFECTS: ELECTRIC
NEW CONSTRUCTION PROGRAM AREA

	2003 First Year Net Annualized Capacity Savings (MW) [1]	2003 First Year Net Annualized Energy Savings (kWh) [1]	2003 Lifecycle Energy Savings (kWh) [1]
Residential	7.68	7,148,165	128,666,966
Nonresidential	9.97	70,092,840	1,121,485,441
New Construction Total	<u>17.65</u>	<u>77,241,005</u>	<u>1,250,152,407</u>

[1] Net Savings reflect Commission-adopted net-to-gross ratios.

New Construction Program Area

Table 4.3
 2004 Energy Efficiency Annual Report
 SUMMARY OF COST-EFFECTIVENESS: ELECTRIC
 (Benefit-Cost Ratios)
 NEW CONSTRUCTION PROGRAM AREA

	2003 Program Administrator Cost Test	[1]	2003 Total Resource Cost Test	[1]	2003 Levelized Cost (cents/kWh)	[1]
Residential	0.92		0.77		11.04	
Nonresidential	6.29		2.80		3.20	
New Construction Total	4.09		2.25		3.87	

[1] Includes costs depicted in Table TA 4.1 -
 Program Cost Estimates Used for Cost-Effectiveness - New Construction Program Area.

New Construction Program Area

		2003 TRC
Residential	\$	(1,692,835)
Nonresidential		35,377,456
New Construction Total	\$	<u>33,684,622</u>

Crosscutting Information

ENERGY EFFICIENCY EDUCATION & TRAINING PROGRAM

Program Description

The statewide Energy Efficiency Education and Training program promotes energy efficiency to end-use customers through a variety of education and training techniques, including SCE's energy centers, Product Labeling, commercial and industrial informational services and the Refrigeration and Thermal Testing Center (RTTC).

ENERGY CENTERS

SCE is home to two distinct energy centers. The Customer Technology Application Center (CTAC) and, its companion center, the Agricultural Technology Application Center (AGTAC), share technical expertise and resources, to provide customers with a diverse range

of educational products and services.

The Energy Centers offer customers current, objective information on state-of-the-art, energy efficient electric technologies and environmentally sensitive solutions to their energy challenges. They are designed to help businesses run their operations more effectively while reducing energy costs, improving product quality, and meeting stringent area air quality standards. Customers and visitors from throughout the nation and the world have come to the centers to attend seminars and workshops, and to demonstrate or to test new products.

Located in the heart of one of the most densely populated

areas in Southern California, CTAC is a 44,000 square-foot facility with several distinct product and technology centers including the: Commercial Products Center; Lighting Products Center; Industrial Technology Center; Home Efficiency Center; Daylight Center, Foodservice Technology Center; Wet Cleaning Demonstration Center, EMF & Power Quality Center, and the Refrigeration and Thermal Testing Center, all where vendors and manufacturers contribute equipment to showcase technologies. CTAC's 110-seat Executive Conference Center is used for workshops and seminars.

AGTAC offers valuable environmentally

Crosscutting Program Area

friendly, energy efficient and cost-competitive solutions to the agricultural community. This 21,000 square-foot facility on a 10-acre site is a companion to CTAC and is located in the heart of one of the most productive agricultural regions in the world - the San Joaquin Valley. The facility has several distinct product and technology centers including the: Business Resource Center; Exhibit Hall; Lighting Products Center; 200-seat Learning Center; Office Technologies Center; 5,000 square foot Annex and an Outdoor Demonstration Grounds.

At AGTAC, a 3.5-acre outdoor demonstration area is a microcosm of agricultural crops grown within the Central Valley and displays a variety of working pumps, water conserving irrigation systems, and other efficient technologies for

outdoor use in landscape, row crops, vineyards, trees and other farming applications. Inside the Center are permanent and short-term displays on energy efficient technologies including electric motors; pumping equipment; heating, ventilating and air conditioning (HVAC); lighting; and other innovative products and services.

AGTAC's informational education program and service offerings primarily focus on agricultural customers; however, offerings also are available to industrial, commercial, and residential customers. AGTAC offers farmers, growers, dairymen, food processors, and businesses a large portfolio of programs and services that can help them save money on their energy bills and make more informed decisions about energy use, equipment purchases,

and production processes. In addition, a variety of business and community meetings are held at AGTAC. By holding these meetings, AGTAC connects customers to energy efficiency ideas, technologies, and solutions.

Energy Center specialists offer seminars and consultation in the areas of energy management and services, lighting applications, irrigation, heating and ventilation, pumping, motor technologies, industrial processes, and communications. Video-conference technology allows the center's visitors the opportunity to take advantage of seminars, lectures, and demonstrations offered globally; and seminars offered at CTAC can be seen at AGTAC without leaving the San Joaquin Valley.

PRODUCT LABELING

The Product Labeling program strategy complements SCE's residential energy efficiency rebate programs by improving the sales and distribution of energy efficient products for the home. The program strategy disseminates rebate information and point-of-purchase materials to retail stores and home improvement centers within SCE's service area. The strategy also provides rebate program training to sales associates at home improvement centers and pool stores.

INFORMATIONAL SERVICES

SCE's Informational Services delivers vital energy efficiency information to all commercial and industrial customers. This component of the Education and Training program helps customers overcome the information barrier to ultimately make

informed decisions regarding energy efficient equipment purchases and operational practices.

REFRIGERATION AND THERMAL TESTING CENTER (RTTC)

The RTTC was established in 1996 and since its inception; this state-of-the-art 4,000 square-foot testing facility has conducted numerous energy efficiency test projects. The mission of the RTTC is to promote the application of energy efficient refrigeration and HVAC technologies by performing realistic and impartial laboratory tests. In the absence of refrigeration energy efficiency standards, the RTTC's services play an instrumental role in quantifying the impact of energy efficient technologies and informing SCE's customers and the industry members.

The results of the RTTC's test projects have been rolled into

a number of statewide energy efficiency incentive programs and training workshops. Also, information obtained from the RTTC's energy efficiency projects has been referenced in numerous trade journals and technical publications and presented in several energy-related conferences and meetings nationwide. The RTTC's testing capabilities can be summarized as follows:

1. Testing of HVAC equipment and related technologies
2. Testing of supermarket refrigeration systems including compressors, expansion valves, condensers and evaporators and controls
3. Testing of refrigeration units including, self-contained display cases, beverage vending machines and ice makers

Crosscutting Program Area

4. Testing of technologies used in cold storage and walk-in cooler/freezer facilities
5. Calorimetric testing of various appliances
6. Testing of various refrigerants

The RTTC is equipped with four environmental chambers and five refrigeration rack systems, as well as specialized environmental control systems. The sophisticated data acquisition of the RTTC monitors over 400 channels of data in intervals of seconds.

2003 Results and Achievements

CTAC/ AGTAC

In 2003, 240 energy events were held by CTAC and AGTAC. Of these energy events, 74 were directed at hard-to-reach customer segments.

CTAC developed the NewDaylight Center which is a 1,000-square foot meeting area inside the CTAC building which features the following energy efficient technologies: daylighting and solar responsive lighting/dimming controls, T-5 indirect/direct lighting system, displacement ventilation for improved comfort and indoor air quality, high-performance glazing, and single-ply membrane "Cool Roof."

In addition, CTAC opened the Professional "Wet Cleaning Demonstration Center," in partnership with the South Coast Air Quality Management District (SCAQMD) in August 2003. Professional "Wet Cleaning" is an energy efficient and environment friendly

alternative to the standard method of dry cleaning garments with perchloroethylene (PERC). The "wet cleaning" technique employs special machines, soaps and finishing equipment to gently wash, dry and press clothes.

AGTAC added new displays which include: Tri-Level Lighting Controls, Fan Cooling System and Automated Venting System Exhibit, Cool Roof display, Light-Emitting Diode (LED) Message Board, LED/Incandescent Traffic Signal Comparison Exhibit, House of Pressure Exhibit and phase II of the Outdoor Demonstration Grounds Low Pressure Pumping Exhibit which added SCADA (Supervisory Control And Data Acquisition) capabilities.

PRODUCT LABELING

The tri-fold pool pump brochure/application was completed and posted in approximately 250 retail pool stores along with a point-of-purchase piece on each floor model pool pump. Training was provided to the sales personnel at each store concerning the program's requirements. Color tear-off coupons for Energy Star® labeled programmable thermostats were posted in all Home Depot stores in the SCE service area. These coupons draw the customers' attention to the merits of a programmable thermostat and the availability of an instant \$20 rebate at the register. At year-end, we found that the use of point-of-purchase materials and rebates for programmable thermostats increased our results by more than 100% over 2002. SCE also developed point-of-purchase

materials for electric water heaters and whole house fans and posted them in the home improvement stores as well. The sale of energy efficient electric water heaters began to increase after posting the materials, as did the whole house fans. The materials were posted too late in the year to draw a meaningful comparison to 2002 results. However, the encouraging results for all three measures emphasized in the product labeling program have prompted us to expand the concept for the 2004 program.

INFORMATIONAL SERVICES

SCE's energy efficiency customer representatives successfully delivered energy efficiency messages and programming directly to over 28,000 small, medium, and large customers through face-to-face meetings, presentations, direct mail brochures, e-mail, and by telephone. These

contacts helped make customers aware of available incentive programs such as Savings by Design, Express Efficiency, and Standard Performance Contracts, as well as events and training offered through SCE's CTAC and AGTAC. Customer representatives also induced higher levels of customer participation in incentive program processes and procedures.

RTTC

In 2003, the following projects were conducted at the RTTC:

- Evaluation of the impact of high ambient temperatures on the performance, energy use and peak electric demand of roof top air conditioners. This project was funded by the Codes and Standards initiative.
- Evaluation of the impact of high ambient temperatures on the performance, energy

Crosscutting Program Area

use and peak electric demand of closed-front beverage vending machines. This project was funded by the Codes and Standards initiative.

- Investigation of energy efficient supermarket display cases – under this project, the U.S. Department of Energy through Oak Ridge National Lab sought services of the RTTC in this \$180,000 grant project.
- Provide numerous tours of the facility for SCE customers. Energy efficiency training workshops for SCE customers and SCE account representatives.

Energy efficiency publications in technical journals and energy related conferences:

- November 2003 – Refrigeration Systems and Store Design: Energy Efficiency Display Cases
- May 5, 2003 (FMI) and June 29, 2003

(ASHRAE Annual Conference)

- June 29, 2003 (ASHRAE Annual Conference): Provided and promoted energy efficiency solutions in refrigerated display cases while enhancing product temperature without hampering merchandizing facets. Attendees were from all sectors of the food industry including display case manufacturers, retail and food service refrigeration suppliers, supermarket owners, engineers and facility management personnel.
- August 2003 – International Congress of Refrigeration: Investigation of Energy Efficient Supermarket Display Cases
- April 1, 2003 (Edison Electric Institute): Assisted participants, predominantly maintenance personnel, to

operate their facilities economically by relying on energy efficiency technologies while improving food safety. Also, energy efficiency recommendations and solutions were provided.

- February 18, 2003 (ASHRAE-local chapter meeting): and, January 22, 2003 (American Society of Mechanical Engineers - ASME):

Informed engineers about the latest available energy efficient technologies and equipment related to food and retail refrigeration. These engineers are in close contact with customers on a regular basis so they are able to disseminate information on energy efficiency on a wider scale.

- January 26, 2003 (ASHRAE Winter Conference): Informed and educated the

audience about the most energy efficiency supermarket refrigeration system using commercially available technologies. The national audience included academia, HVAC and refrigeration industry, and maintenance personnel.

Upstream Programs

EMERGING TECHNOLOGIES - STATEWIDE PROGRAM

Program Description

The Emerging Technologies (ET) program is an information-only program that seeks to accelerate the introduction of energy efficient technologies, applications, and analytical tools that are not widely adopted in California. The program consists of two parts: Demonstration & Information Transfer activities, and the Emerging Technologies Coordinating Council (ETCC). The Demonstration & Information Transfer portion of the program focuses on near-commercial applications with significant market opportunities, and commercial energy efficient applications with low market penetration. The ETCC is a statewide information exchange

and coordination effort between the investor owned utilities (IOU), and the California Energy Commission's (CEC) Public Interest Energy Research (PIER) program.

The Demonstration & Information Transfer component introduces new energy efficient applications to the market through ET Application Assessment projects. The assessments may consist of a diversity of project types including: feasibility studies, simulation analyses, field demonstrations, controlled environment tests, commercial product development, design methodologies and tool development. The assessments may take up to three years to complete. Demonstration projects, conducted at

either customer sites or in controlled environments, measure, verify, and document the potential energy savings of specific applications in different market segments, helping to reduce the market barriers to their wider acceptance. Information Transfer efforts disseminate project results, and are customized to the targeted markets.

The ETCC was founded in 2000, and serves as a statewide information exchange and coordination effort between the IOUs and the PIER program. The ETCC coordination effort ensures an effective linkage among entities involved in either the development or delivery of new energy efficient technologies in

California. The ETCC maintains a website at www.ca-etcc.com, and a database of ET applications and projects.

2003 Results and Achievements

EMERGING TECHNOLOGY APPLICATION ASSESSMENTS

The Emerging Technology Application Assessments require program staff to remain informed of potential emerging technology applications from a variety of sources including the California Energy Commission's PIER program, NASA, E-Source, American Society of Heating, Refrigerating and Air-Conditioning Engineers, national laboratories, universities, journals, manufacturers and vendors. ET assessments may take place at either viable customer field sites, i.e., a customer willing to innovate, or

they may be pursued through laboratory testing, simulation modeling and studies, in-house demonstrations, or a combination of these approaches. Staff project managers formulate the project plans and work with utility account representatives to negotiate customer agreements if required. At times, a single customer site may host several assessments if more than one emerging technology application was included in the planned project for the site. Once project results become available, targeted information transfer activities may commence.

Through the ETCC meetings, several viable emerging technology applications from the PIER program were identified as potential candidates for assessment projects. Additional opportunities were identified through

other sources such as manufacturers. By the end of 2003, SCE had committed a total of nine emerging technology application assessment projects using either customer sites or SCE facilities. The following is a list of the nine assessment projects underway:

- In coordination with the other utilities' ET programs through the ETCC, SCE initiated the following three assessments to build upon past PIER work on Electrochromic Glazing, Advanced Classroom Lighting Systems, and Stairwell Lighting Bi-level Switching.
- Customer interest in energy efficiency opportunities for new construction permitted SCE to initiate three ET application assessments considering Rapid Start Super T-8

Crosscutting Program Area

Fluorescent Lighting Systems, Instant Start Super T-8 Fluorescent Lighting Systems, and a Voltage Reducer System for Dimming Control.

- SCE initiated three ET application assessments using SCE facilities: Displacement Ventilation, Network Management of Computer Power Options, and Anti-Corrosion Condenser Coil Coatings.

EMERGING TECHNOLOGY DATABASE UPDATES

The Emerging Technology database updates began with a review of the existing ET Database. During the year, both the IOUs and the CEC updated existing records from the previous database and added new technologies, applications, and project information. SCE served as the integrator of each

group's datasets. SCE staff worked with the utilities and the CEC to characterize projects in terms of technologies and applications. The commercial readiness of emerging technology applications were identified in the ET Database. Specifically, ET applications were characterized to be in one of the following stages: Basic Research, Applied Research, Development, Commercial Introduction, Commercial Growth, Commercial Maturity, or Commercial Decline. It is important to note that the ET database was not intended as a program and project tracking system, but as a means to follow product readiness, facilitate the exchange of information, and as a comprehensive list of energy efficient emerging technologies originating from a variety of sources.

Upstream Programs

DEMONSTRATION & INFORMATION TRANSFER

Program Description

The Demonstration & Information Transfer (D&IT) program is an information-only program that seeks to accelerate the introduction of energy efficient technologies, applications, and analytical tools that are not widely adopted in SCE's service area. The program targets both residential and nonresidential customer segments, including new construction, and engages in demonstration and information transfer activities. The program is related to the statewide Emerging Technology program, but is local in scope. The program focuses on near-commercial applications with significant market opportunities, and commercial energy efficient applications

with low market penetration.

The program introduces new energy efficient applications to the market through Emerging Technology Application Assessment projects. The assessments may consist of a diversity of project types including: feasibility studies, simulation analyses, field demonstrations, controlled environment tests, commercial product development, design methodologies and tool development. The assessments may take up to three years to complete. Demonstration projects, conducted at either customer sites or in controlled environments, measure, verify, and document the potential energy savings of specific applications in

different market segments, helping to reduce the market barriers to their wider acceptance. Information Transfer efforts disseminate project results, and are customized to the targeted markets.

2003 Results and Achievements

Through ongoing information research from a variety of sources, program staff identified viable emerging technology application candidates for assessment projects. As a result, SCE initiated a total of seven Emerging Technology Application Assessments for the 2003 Local Crosscutting Demonstration and Information Transfer program, as listed below:

Crosscutting Program Area

1. Initiated four assessments of processes targeted to replace perchloroethylene (PERC) solvent based dry cleaning: (1) Professional Wet Cleaning, (2) Hydrocarbon Based Dry Cleaning, (3) Silicone Based Dry Cleaning, and (4) Carbon Dioxide Based Dry Cleaning. All the assessments are taking place at customer sites. SCE has partnered with Occidental College, Southern California Gas Company, and the South Coast Air Quality Management District for these assessment projects.
2. Customer interest in energy efficiency opportunities led to one assessment project to evaluate Cold Storage Controls. The project is evaluating at a customer site whether chilling the concentrates in the storage facility at night, when the refrigeration system may operate more efficiently, has significant demand and energy impacts.
3. The Advanced Controls for Plastics Granulators assessment project is investigating the potential demand and energy savings of different control systems for plastics granulator machines. Plastics granulators are specialized chopping and shredding machines used in a number of secondary plastics manufacturing processes like injection molding and blow molding. The project will assess mesh size and on/off automated controls, and will document option costs and potential energy savings.
4. The Ultra High Lime-Pellet Softening of Brine Concentrate Waste Streams assessment project will estimate the potential savings that can be achieved by using pellet softening ultra high lime (PS-UHL) processing of wastewater streams for water and wastewater membrane plants within SCE's service area. The on-site assessment will lead to a field study report. Membrane facilities treating potable and wastewater in the SCE service area have been identified. A total of ninety facilities, including full-scale municipal reclamation plants, desalination plants, and brackish potable groundwater sources were identified. Available water quality, chemical, energy and

Crosscutting Program Area

equipment data
were compiled for
the sites.

Upstream Programs

CODES AND STANDARDS

Program Description

STATEWIDE CODES AND STANDARDS

The Statewide Codes & Standards (C&S) program is an information-only program that promotes upgrades and enhancements to various energy efficiency standards and codes, thereby capturing the benefits for society from California's diverse energy efficiency efforts. The program sponsors Codes and Standards Enhancement (CASE) studies as part of its advocacy activities. CASE initiatives for promising energy efficiency design practices and technologies may be targeted, as well as energy efficiency measures promoted through both the

residential and nonresidential new construction programs. The completed CASE initiative reports are presented to the standards and code-setting bodies to encourage the adoption of energy efficiency measures.

The C&S program activities have inherent synergies with other programs, such as the ET program, energy efficiency equipment rebates, and energy audits, through the advocacy of specific energy efficiency measures. The 2003 C&S efforts are conducted within the long-term code upgrade cycles. For example, the California building code cycles are typically three years.

LOCAL CODES AND STANDARDS

The Local C&S program is an information-only program that helps to bring about cost-effective upgrades to the State's energy-related codes and standards that will benefit California as a whole. The CEC has begun the 2005/2008-revision process for both the Title 24 and Title 20 energy standards. This program supports the CEC 2005/2008 standard revision process for both California Title 20 and Title 24.

2003 Results and Achievements

STATEWIDE CODES AND STANDARDS

Throughout 2003, the Statewide C&S technical staff

Crosscutting Program Area

participated in statewide team meetings, CEC workshops for the 2005 Title 24 code revision cycle for both the Residential and Nonresidential Building Energy Efficiency Standards, CEC's Existing Building Energy Efficiency Opportunity Study (Assembly Bill 549) report, CEC public workshops for Time Dependent Valuation Life (TDV) Cycle Costing and Outdoor Lighting Standards. Also, the program's technical staff attended and participated in meetings of organizations that impact California building and appliance standards, including: American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE), Cool Roof Rating Council (CRRC), and the National Fenestration Rating Council (NFRC).

The targets for this program area were

established at six new case studies initiated in 2003. SCE exceeded that goal. As part of the process of identifying likely candidates for study, SCE first assembled a long list of potential case study projects for review. Each was presented by the initiator of the study idea to SCE's C&S team for a critical review. Members of the team included supervision, engineers and architects from SCE's Design and Engineering Services technical staff. The member of the technical staff proposing the case study actively promoted the project based on its fundamental benefit to the overall program. As part of the group dynamics, the case study presentation discussions encompassed issues such as the long-term potential for technology adoption through the standards, market size, savings potential and cost. A series of

meetings was required to identify the final portfolio of case studies.

For the 2003 program year, the following 15 case studies were initiated and represent SCE's case study portfolio. The duration of each of the studies varies depending upon the nature and complexity of the work, but all will be completed within the required three-year project limit authorized for this program year.

- Testing of Refrigerated Vending Machines (Part 1)
- Design Guidelines for Compressed Air
- Testing for the Hospitality Segment
- AgTAC Ground Source Heat Pumps
- Sky Light Efficacy Test
- Advanced Lighting Systems
- High Efficacy Signage
- Advanced Building Design Guideline
- T-5 High Output Fluorescent (Costco)

Crosscutting Program Area

- Natural Ventilation Design Guideline
- Automated Weather Processing
- Testing of Economizers for 5-ton air conditioners
- Time Differentiated Valuation version of eQuest
- Field Tests of Unitary HVAC Equipment
- Advanced Lighting Guidelines

LOCAL CODES AND STANDARDS

During 2002, SCE sponsored a one-day training class in Tulare, California. The class focused on high performance schools and energy efficiency opportunities. SCE had the goal of accomplishing three workshops/training sessions in support of the revision process for the 2005/2008 standard revision process for Title 20 and Title 24. The goal was achieved. The details are described further below.

One workshop, one training session and a seminar were

conducted in 2003. The following is a description of each of the three events:

1. SCE Workshop on Ground Thermal Conductivity Assessment Methods for GSHP Applications.

This workshop was targeted to engineers, specifiers and designers of ground source heat pump systems who need to understand the basic fundamentals of designing a system for optimal operation in California. GEO Hills Associates, was contracted to organize and teach the class in conjunction with SCE's Design and Engineering Services staff. The session took place at CTAC on June 5, 2003. Ground coupled heat pumps hold the potential of improving heat pump

performance in extreme weather environments, thus reducing peak demand and overall energy consumption. If better understood by the engineering community in California, a wider application of the technology could be made by showing the benefits of its use as a means for complying with the state's Title 24 building standards.

2. Training Course - Laboratories of the 21st Century.

In an effort to help designers, engineers and specifiers understand the latest state-of-the-art design recommendations for laboratory construction, a course was held at CTAC on November 29, 2003. The course provides the participants with information that could help them

with alternative means of complying with Title 24. The agenda included case studies, exhaust system design, lighting and controls, commissioning, emerging rating systems, benchmarking, and a video regarding improved performance of our nation's laboratories. Co-Sponsors of the course were the Environmental Protection Agency and the Federal Energy Management Program.

present the latest methods of implementing energy efficiency measures in state and community colleges. Measures discussed included lighting improvements, HVAC upgrades, controls, shading and window treatments. The target audience for this information was the operation and maintenance personnel from the colleges.

3. Los Angeles Community College District Sustainable Design Seminar.

A seminar was conducted in cooperation with the California Science Center on December 2, 2003 in Los Angeles, California. The purpose of the seminar was to

Upstream Programs

LOCAL GOVERNMENT INITIATIVE (LGI)

Program Description

SCE's Local Government Initiative (LGI) educates and informs community leaders, local government planners, building officials, builders, building owners, small business owners, and consumers about the economic benefits of energy efficiency in the areas of residential and nonresidential new construction, as well as small business, and residential retrofit and surveys.

Through a partnering with local governments and cities, (collectively referred to as Jurisdictions), SCE's LGI facilitates the offering of statewide, local energy efficiency information and education, hardware rebates, and increased energy efficiency opportunities using a variety of intervention

strategies. The primary target audiences for this initiative are the various departments/offices within the local governments such as: Building Departments, Community Development/Outreach, Economic Development, and Housing Authorities. The secondary audience and the ultimate benefactors of this initiative include: SCE's small-to medium-business owners, lower-to-moderate income residential customers, existing single and multifamily residential customers, and residential and small commercial builders.

2003 Results and Achievements

The LGI exceeded its goal of 16 new

jurisdictions by obtaining 18 new participants. This brings the total number of participating jurisdictions in SCE's area up to 61 since 2001. Out of the 18 new jurisdictions in the LGI program, 12 of them have at least 30 percent of the city zip codes within the HTR. These cities include: Arcadia, Chino, Diamond Bar, Highland, La Habra, Loma Linda, Montclair, Orange, Redondo Beach, Rialto, Signal Hill, and Tustin.

SCE, along with the Building Industry Institute, embarked upon a far-reaching training component in the 2003 program year. In doing so, the program conducted CEEP and related energy code training for the following 30 jurisdictions:

Crosscutting Program Area

Victorville, Palm Springs, Temecula, Moreno Valley, Ontario, Upland, Garden Grove, Thousand Oaks, Lancaster, Manhattan Beach, San Jacinto, Indian Wells, Tustin, Camarillo, Santa Clarita, Palmdale, Huntington Beach, Loma Linda, Rancho Cucamonga, Norco, Banning, Hesperia, Fontana, Corona, Orange County, Fullerton, Redlands, Highland, Yorba Linda, and San Bernardino.

Upstream Programs

UPSTREAM RESIDENTIAL LIGHTING

Program Description

The statewide crosscutting Upstream Residential Lighting program provides a point-of-sale (POS) discount to customers who purchase qualifying fluorescent ENERGY STAR® lighting products.

Customers receive the discounts either through the program's manufacturer component, or its retailer component. In the manufacturer component, SCE provides manufacturers with incentive allocations, which allow manufacturers to pass wholesale buy-down discounts on to the retailers, who pass discounts on to customers for these products. SCE later reimburses manufacturers for the discounts they

provided. More retail channels can be developed and opened with this approach because the manufacturers' reach is much longer than other market actors such as retailers.

In the retailer component, SCE provides incentive allocations and subsequent reimbursements directly to large statewide big-box retail chains instead of the manufacturers. The retailer component is for energy efficient lighting products not bearing the manufacturer buy-down discount. Incentive discounts in this retailer component are provided in the same amounts as in the manufacturer component. The retailer has the option

of using either the retailer or manufacturer component for a particular product.

Through SCE's efforts with lighting manufacturers and retailers to buy down the cost of energy efficient lighting products, customers received a \$1 to \$2 discount per unit off the purchase price of a compact fluorescent lamp (CFL) and a \$5 to \$10 discount per unit for a torchiere or hardwired indoor or outdoor lighting fixture. All products had to have the ENERGY STAR® - label to qualify. All products were sold in stores catering to SCE residential customers.

The 10 manufacturers who participated in the Upstream Residential Lighting program were:

Crosscutting Program Area

American Top Lighting, Feit Electric Company, Greenlite Corporation, Lights of America, LightWave PDL Inc., Sunpark Electronics Corp., Sunrise Lighting, Inc., Surya Roshni, Inc., Technical Consumer Products Inc., and USPAR Enterprises Inc.

One statewide retailer, Costco, participated in the retailer component. Others including Sam's Club, Lowe's, and Home Depot preferred to participate in the manufacturer component.

2003 Results and Achievements

In 2003, the program resulted in the sale of 997,203 energy-saving lighting products through 54 retailers or chains. With an energy savings target of 34,959,185 kWh, SCE achieved 41,255,257 kWh. SCE had a demand reduction target of 4,913 kW and achieved 5,788 kW.

HARD-TO-REACH

In 2003, SCE was assigned goals to expend at least 15 percent of the incentives to retailers in geographic HTR areas and ten percent of the incentives to food and drug stores. By year-end 2003, \$410,028 or 24 percent of the total incentives was paid to retailers in geographic HTR areas and \$341,760 or 20 percent was paid to grocery or drug retailers. SCE also took part in ethnic outreach events to reach customers for whom English is a second language.

MARKETING

Primary marketing was completed through email and phoned announcements of the various promotions as a statewide team. Secondary mass marketing was completed by means of multi-program brochures and materials, the www.sce.com website, and bill inserts.

In September 2003, SCE sent a bill insert to all 4.3 million residential SCE customers promoting ENERGY STAR® Lighting, the California "Flex Your Power" message, and the EPA's "Change A Light" campaign. It featured a prominent television star giving energy-saving tips and recommending ENERGY STAR® labeled compact fluorescent lighting. Manufacturers and retailers used in-store promotional materials, newspaper, radio, and circular advertising to attract customers to buy program-discounted lighting products.

INDUSTRY INVOLVEMENT

SCE continued support and participation in the Program for the Evaluation and Analysis of Residential Lighting (PEARL) which tests residential lighting products available from retailers.

Crosscutting Program Area

Support was provided to changes in the specification for both ENERGY STAR®-qualified compact fluorescent lights (CFLs) and fixtures. These proposed changes will also raise the bar for quality energy efficiency products for California's consumers.

SCE worked with Kema-Xenergy to assist in providing the data to identify a lower incremental cost for CFLs, which will allow a more accurate account of program cost-effectiveness.

Crosscutting Program Area

Table 5.1
2004 Energy Efficiency Annual Report
SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC
CROSSCUTTING PROGRAM AREA

	2003 Budget	[1]	2003 Recorded	[1,2]
Information	\$ 5,700,000		\$ 5,581,282	
EMS	-		-	
EEl				
SPCs	-		-	
Rebates	-		-	
Loans	-		-	
Other	-		-	
Upstream Programs				
Information	3,516,700		3,422,072	
Financial Assistance	2,000,000		1,970,017	
Crosscutting Total	<u>\$ 11,216,700</u>		<u>\$ 10,973,372</u>	

[1] Excludes Shareholder Incentives and Other Costs, as shown in Table TA 5.1.

[2] All Recorded amounts include payments in 2003 and amounts committed to projects in 2003.
Committed amounts may not be fully realized.

Crosscutting Program Area

Table 5.2
2004 Energy Efficiency Annual Report
SUMMARY OF ENERGY EFFICIENCY PROGRAM EFFECTS: ELECTRIC
CROSSCUTTING PROGRAM AREA

	2003 First Year Net Annualized Capacity Savings (MW)	[1]	2003 First Year Net Annualized Energy Savings (kWh)	[1]	2003 Net Lifecycle Energy Savings (kWh)	[1]
Information	-		-		-	
EMS	-		-		-	
EEl						
SPCs	-		-		-	
Rebates	-		-		-	
Loans	-		-		-	
Other	-		-		-	
Upstream Programs						
Information	-		-		-	
Financial Assistance	5.79		41,255,257		495,063,085	
Residential Total	<u>5.79</u>		<u>41,255,257</u>		<u>495,063,085</u>	

[1] Net Savings reflect Commission-adopted net-to-gross ratios.

Crosscutting Program Area

Table 5.3
 2004 Energy Efficiency Annual Report
 SUMMARY OF COST-EFFECTIVENESS: ELECTRIC
 (Benefit-Cost Ratios)
 CROSSCUTTING PROGRAM AREA

	2003 Program Administrator Cost Test	[1]	2003 Total Resource Cost Test	[1]	2003 Levelized Cost (cents/kWh)	[1]
Information	-		-		-	
EMS	-		-		-	
EEl						
SPCs	-		-		-	
Rebates	-		-		-	
Loans	-		-		-	
Other	-		-		-	
Upstream Programs						
Information	-		-		-	
Financial Assistance	10.56		2.89		2.48	
Crosscutting Total	<u>1.97</u>		<u>1.32</u>		<u>5.44</u>	

[1] Includes all costs depicted in Table TA 5.1 -
 Program Cost Estimates Used for Cost-Effectiveness - Crosscutting Program Area.

Crosscutting Program Area

Table 5.4 2004 Energy Efficiency Annual Report SUMMARY OF COST-EFFECTIVENESS: ELECTRIC CROSSCUTTING PROGRAM AREA (Net Benefits)		
		2003 TRC
Information	\$	(5,642,847)
EMS		-
EI		
SPCs		-
Rebates		-
Loans		-
Other		-
Upstream Programs		
Information		(3,501,909)
Financial Assistance		14,483,183
Crosscutting Total	<u>\$</u>	<u>5,338,427</u>

Market Assessment & Evaluation

Program Description

Market Assessment & Evaluation (MA&E) is the set of activities needed to provide market, program, and product assessment studies and analyses useful to energy efficiency program planners and policy makers. Within this broad category, Evaluation, Measurement & Verification (EM&V) is the subset of activities that: (1) independently assess how and whether energy efficiency programs met their stated goals; (2) use available secondary data, program-specific data and measurements, and appropriate sampling and modeling processes to produce reliable estimates of the energy savings achieved by a program; and (3) assess how well the program operated in terms of effectiveness

and efficiency in meeting program goals.

Quarterly summary reports on the progress of all MA&E studies are provided to the Commission and other parties, as part of the utilities' quarterly reports on their energy efficiency programs.

Beginning in 2002, the Commission mandated two types of energy efficiency programs, statewide and local. EM&V studies for local programs are funded from the individual program budgets. However, work on these studies is summarized here and completed studies are listed in the Annotated Bibliography.

2003 Results and Achievements

A. 2003 STATEWIDE STUDIES

CPUC Decision 03-04-055, issued April 17, 2003, allocated \$10.7 million for 2003 evaluation activities. \$5.7 million of this was total was set aside for evaluation activities to be contracted and overseen by the Energy Division. As directed, the utilities consulted with Energy Division staff, held a CALMAC public workshop to solicit input on the 2003 study plans, and submitted plans for the remaining funding on June 16. The assigned administrative law judge (ALJ) approved these plans on September 12. On October 20, Robert Mowris & Associates filed a motion requesting modification of the

MA&E and Regulatory Oversight

ALJ's approval of the study plans, proposing multiple changes to the submitted plans. Some other parties filed comments in support of portions of

the motion, and the utilities filed reply comments opposing the motion. The motion was withdrawn by its originator in January, 2004, and its

withdrawal was accepted by the CPUC in Decision 04-02-059, issued February 26, 2004.

The projects and the lead utility for each are shown in the following table.

OVERARCHING STUDIES

Utility	Project
PG&E	CALMAC Website Maintenance and Workshops
SCE	Master Contract for Coordination - supplemental funding
SDG&E	Database for Energy Efficiency Resources - supplemental funding
SCE	Update of Hard-to-Reach Markets Data
PG&E	Energy Efficiency Potential Study
PG&E	New Construction Saturation and Potential Study
SCE	Data Integration Scoping Study
PG&E	Best Practices Database - supplemental funding

EVALUATION, MEASUREMENT & VERIFICATION FOR STATEWIDE ENERGY EFFICIENCY PROGRAMS

Residential Retrofit Programs

PG&E	Single-Family Rebates
SDG&E	Multi-Family Rebates
SCE	Home Energy Efficiency Surveys
SCE	Refrigerator Recycling

Nonresidential Retrofit Programs

SCE	Standard Performance Contracting
PG&E	Express Efficiency
PG&E	On-Site Audits
PG&E	Building Operator Certification

MA&E and Regulatory Oversight

New Construction Programs

SCE	Savings By Design Building Efficiency Assessment
SCE	Savings By Design Market & Program Tracking
SCE	Nonresidential New Construction Technical Support
PG&E	Residential New Construction

Cross-Cutting Statewide Programs

SDG&E	Residential Lighting
SCE	Education & Training Services
SCE	Emerging Technology Demonstration
SCE	Codes & Standards Advocacy

Descriptions of activities undertaken for SCE-led 2003 projects are given below.

Master Evaluation Contract for the Coordination and Consolidation of Studies of 2002-3 Energy Efficiency Programs

The master evaluation contract team worked on further database development to allow the use of its database structure by Energy Division staff for tracking of 2002-03 programs. The team reviewed and provided advice to Energy Division staff on the revised evaluation, measurement and verification plans for local programs that

were submitted to the CPUC for approval in early 2003.

Work on a summary study of the accomplishments of the 2002 and 2003 programs was deferred to 2004, to allow for completion of EM&V studies of utilities' 2002 statewide and local programs.

Data Integration Scoping Study

Rather than being established as a separate project, the responsibility for monitoring and addressing data integration issues was added to the scopes of projects already under way, notably the DEER project and the Energy

Division's Groupware project.

MA&E and Regulatory Oversight

Update of Hard-to-Reach Markets Data

Mail-In and Online Home Energy Surveys

Refrigerator Recycling

Standard Performance Contracting Program Evaluation

Emerging Technology Demonstration Program Evaluation

Savings By Design Building Efficiency Assessment

Savings By Design Market & Program Tracking

Education & Training Services Program Evaluation

Codes & Standards Advocacy Program Evaluation

Due to the scheduling difficulties encountered during 2003, work on these projects was deferred to early 2004.

B. 2003 LOCAL PROGRAM EVALUATIONS

No work on the evaluations of 2003 local programs was undertaken during the program year.

C. STATEWIDE STUDIES WITH PRIOR-YEAR FUNDING

In February, 2003, the ALJ approved the utilities' selected bidders for twenty-two 2002 statewide studies. After this approval, the utilities issued purchase orders for all of these projects and work began. During 2003, SCE completed several studies that were initiated with earlier-year MA&E funds. Descriptions of these studies are provided below.

In addition, SCE participated in funding and providing input to some multiple-sponsor studies that were completed during 2003.

Finally, SCE Measurement & Evaluation staff members participated actively on the project advisory committees for Public Goods Charge-funded studies being managed by the other utilities and the California Energy Commission.

Master Evaluation Contract for the Coordination and Consolidation of Studies of 2002 Energy Efficiency Programs

This project was given early approval and began work in September 2002. During 2003, the primary activity under the original scope of work was reviewing and making recommendations to the Energy Division on the EM&V plans submitted by all local program implementers.

Next Generation Evaluation Framework

Most of the work on this project was completed in 2003. The consultant team and the project advisory group decided on the general approach and format. The consultant team developed drafts of chapters, presented them in CALMAC workshops to solicit input, and sent them out to interested parties for review and suggestions. By the end of the year, a full draft document had been completed and provided to the project advisory group for final review. It is anticipated that the final document will be submitted to the CPUC in spring 2004. The document has been developed as a set of guidelines for scheduling, designing, conducting and using good market assessment and evaluation studies for energy efficiency

programs and program portfolios.

Residential Market Share Tracking Project

This ongoing project continued to gather information on the market share of ten key types of energy efficient equipment measures that are major targets of PY 1998-2003 California energy efficiency programs. It also has established a system for monitoring changes in market share by decision type over time. Data are being gathered from distributors and retailers, on-site surveys of new homes, county building departments, and point-of-sales reports purchased from national sources. Analysis of the information is provided in both detailed and summary form annual or semi-annual reports for lighting and for appliance measures, and the data are also updated and provided in a

publicly available database. The *California Residential Efficiency Market Share Tracking: HVAC 2002* report was completed during 2003, as was a summary version of the report in brochure format.

2002 Home Energy Efficiency Survey Program Evaluation

The study gathered program data and program materials and conducted interviews and customer surveys as input for the analysis. The verification component of the study was completed in the first half of the year. The energy savings analysis will require adequate time into 2004 for program participants to carry through with actions prompted by survey recommendations.

2002 Residential Appliance Recycling Program Evaluation

Most of the work for this study was completed during 2003. A sample of refrigerators and

MA&E and Regulatory Oversight

freezers recycled through the program was metered to add to the metering database of refrigerators and freezers sampled during previous years and locations of the program, and a regression analysis was undertaken to develop unit energy savings estimates that could be applied to all the units recycled through the 2002 program. A part-year usage analysis and analyses of what would have happened to the units in the absence of the program were developed from data collected through surveys. The results of these analyses were used to develop a new net-to-gross ratio for the program. The final report was completed in first quarter 2004.

2002 Standard Performance Contracting Program Evaluation

The process evaluation and market assessment analysis was completed in summer and fall 2003, including a conference call with program managers to review preliminary results,

thereby providing early feedback to program managers. The final report was issued in March 2004. Completion of the impact evaluation was delayed by the need to wait until sampled customers completed installation of their projects. Consequently, the final report was completed in first quarter 2004.

2002 Emerging Technology Demonstration Program Evaluation

This project was initiated and completed during 2003. The evaluation entailed a process evaluation that examined key program activities occurring in 2002, while recognizing that the various products developed, implemented, and evaluated by the ET program typically require more than a single year to complete. Additionally, the evaluation measures some elements of program effectiveness by examining program inputs and includes a verification of established program

goals. The study is further described in the Annotated Bibliography.

1999-2001 and 2002 Savings By Design Building Efficiency Assessment

This project quantifies the energy savings and efficiencies of both participant and non-participant buildings. These data are developed on an on-going basis (sampled quarterly), capturing the data stream as the projects enter the program and are carried through to construction. DOE-2 models are built based on detailed on-site surveys of a sample of buildings. Energy savings are calculated by end use and for whole buildings. Quantifiable information is developed on the changes in building efficiency attributable to the SBD program influences. Specific building and equipment characteristics (e.g., types of glazing, types of lamps, ballasts and

light fixtures, HVAC system types) are also tracked and can be analyzed for trends.

In addition, the project collects information on program participants' attitudes and responses to the SBD program as they go through the program process. The results also identify changes in design practices as a result of program operation.

The final report providing analysis of Savings By Design program participants and non-participants, whose buildings were completed between fourth quarter 1999 and fourth quarter 2001, was completed in first quarter 2003.

Work then began on the study of the 2002 program, with completion expected in 2004.

2002 Savings By Design Market Characteristics & Program Activity Tracking

This project provides reports of statewide NRNC program activity and market activity. Tracking the changing characteristics of the NRNC market over time provides information for refining program design and for assessing program accomplishments. The PY 2002 annual report was completed in March 2002. The study reports on the characteristics of the NRNC market include construction value and volume, types of buildings, types of owners, design team characteristics, etc. The program activities reports include number, square footage, and estimated savings of the projects approved for incentives. Program activity is summarized by building type and by program approach for each of the IOUs as

well as statewide. Program activity is also described in terms of program penetration into the new construction market, at both the utility and statewide level.

2002 Education & Training Services Program Evaluation

This study was initiated and completed in 2003. Data collection activities included review of program materials and participation data, interviews with program managers and other individuals and entities involved in providing the training and education opportunities, and surveys of samples of participants in the training and other educational activities. Areas of analysis included verification, process evaluation, assessment of the program's effectiveness at increasing the adoption of energy-efficiency measures

MA&E and Regulatory Oversight

and inducing behavioral changes, testing the program theory, and assessing reductions in market barriers resulting from the program.

2002 Codes & Standards Advocacy Program Evaluation

This project includes process evaluation and an assessment of the energy savings created by program activities that result in state appliance and building energy efficiency standards. Data collection for this evaluation included gathering of program materials and activity data and, interviews with program managers and California Energy Commission staff and stakeholders, and gathering energy usage data needed to estimate energy savings. The final report is expected in the first half of 2004.

SCE 2002 Energy Design Resources Program Evaluation

This utility-specific study evaluated the usage patterns of building energy design tools provided by SCE to architects and design and mechanical engineers for building design. The study was completed in March 2003 and is described in the Annotated Bibliography.

California Summary Study of 2001 Energy Efficiency Programs

This project gathered cost, energy savings, and demand savings data on California's energy efficiency programs in 2001, including Public Goods Charge-funded programs, California Energy Commission Programs, programs funded by state energy crisis legislation, and programs of major municipal utilities. The project included assessment of program documentation and

evaluation practices and recommendations for standard statewide protocols. Most work on the study was done in 2002, but the final report was completed in March 2003.

Weather Data Project

SCE's system of 23 weather stations was maintained, and weather data were gathered, stored, and made readily accessible to SCE program managers, program implementation contractors, and customer contact staff. These data are used in the residential mail-in audit program. They are also provided to nonresidential customers, EESPs, and design professionals for use in energy simulation modeling to develop more accurate estimates of the energy savings particular customers can expect from retrofit, renovation, or construction design decisions.

Nonresidential Customer Classification and Analysis Project

Standard Industrial Classification (SIC) and North American Industrial Classification System (NAICS) codes were assigned to new nonresidential customers throughout the year. The software for code assignment, database management, and data analysis was maintained. NAICS classifications were also added for the majority of existing customers that did not yet have them, in preparation for beginning to report energy usage by NAICS groups in 2003.

The nonresidential SIC and NAICS data and analyses are used as basic information for the following purposes:

- program evaluations and market characterizations;
- drawing study samples;

- identifying target customer groups for specific energy efficiency program elements and intervention strategies; and
- tailoring energy efficiency marketing messages to specific customer needs.

Ad Hoc Analyses

Ad hoc analyses of data from existing saturation survey, end-use load research, and other study data sources were also undertaken as requested by program and study managers. Such analyses are often requested to estimate market potential for specific technologies, identify high-potential market segments to whom program marketing should be targeted, and provide other information of value to program and study designers and program implementers.

D. 2002 LOCAL PROGRAM EVALUATIONS

Local Demonstration and Information Transfer Program

Data collection and analysis for the evaluation of this program was largely completed in 2003, with the final report issued in February 2004. The activities are similar to those in the statewide Emerging Technologies program.

Local Pump Testing and Hydraulic Services Program

This study included verification activities, collection of data to develop energy savings impact estimates, and interviews, customer surveys and analysis for process evaluation. The study was completed in 2003. It is further described in the annotated bibliography.

MA&E and Regulatory Oversight

Local Government Initiative Program

Data collection activities for this evaluation consisted primarily of gathering data from officials of target jurisdictions, supplemented with information from program staff, program advisors, local builders, and local small businesses. Topics addressed included experiences with the program operations and market response, satisfaction levels and drivers of satisfaction, program-specific recommendations, and general recommendations for collaboration between SCE and the jurisdictions on energy efficiency activities. The study was completed in 2003 and is described in the annotated bibliography.

Local In-Home Audits Program

Process evaluation and verification activities for this program were

completed in 2003. Impact analysis could not be completed until 2004, in order to provide adequate time for 2002 participants to undertake actions prompted by the audit.

SCE Emerging Technology Demonstration

The evaluation of this very small program was completed in 2003, with an analysis of a high-performance schools training seminar offered through the program.

Local Nonresidential Hard-to-Reach Program

Evaluation of this program was combined with that of a similar direct installation local program run by San Diego Gas & Electric Company, with the evaluation being managed by SDG&E. The study was initiated and completed in 2003

MA&E and Regulatory Oversight

Table 6.1
 2004 Energy Efficiency Annual Report
 SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC
 MARKET ASSESSMENT & EVALUATION (MA&E)

Project	Activity Cost	[1]	SCE Cost	[1]
Overarching Studies				
CALMAC Website & Wkshps	\$ 226,000	\$	74,404	
EM&V Master Contract	58,250		19,177	
Evaluation Framework	80,000		26,338	
Database for Energy Efficiency Resources	138,500		45,597	
Hard-to-Reach Customer Update	81,750		26,914	
Potential/Saturation Study	618,250		203,542	
Best Practices Database	230,500		75,886	
Total Overarching Studies	\$ 1,433,250	\$	471,858	
Statewide Program EM&V				
Residential Retrofit	1,445,500		475,894	
Nonresidential Retrofit	1,319,250		434,413	
New Construction	1,083,000		356,714	
Cross-Cutting Statewide	719,000		236,549	
Total Statewide Program EM&V	\$ 4,566,750	\$	1,503,570	
CPUC Energy Division and Project Funding				
1998-2002 PGC Financial Audit	3,000,000		987,714	
AEAP-Related Studies	500,000		164,619	
Avoided Cost/Externality Update	600,000		197,543	
EE Program Groupware Application	600,000		197,543	
Energy Division Operating Costs	292,000		96,138	
Total CPUC Energy Division Funding	\$ 4,992,000	\$	1,643,557	
Statewide MA&E Total	<u>\$ 10,992,000</u>	<u>\$</u>	<u>3,618,985</u>	
Regulatory Compliance and Reporting (utility)	-		-	
Oversight Costs	-		-	
Total Regulatory Oversight:	<u>\$0</u>		<u>\$0</u>	
Statewide MA&E Total	<u>\$ 10,992,000</u>	<u>\$</u>	<u>3,618,985</u>	

[1] Amounts reflect Program Year 2003 (PY03) funds, including fund shifts during 2003.

[2] All Recorded amounts include payments in 2003 and amounts committed to projects in 2003.

2003 Performance Incentives

Summary

This section is not applicable for the 2003 Energy Efficiency Program Year.

There were no shareholder performance incentives authorized by the California Public Utilities Commission for 2003 Energy Efficiency Programs. The Energy Efficiency Policy Manual, adopted by Decision 01-11-066 stated, "In the past, the Commission has offered shareholder incentives to large IOUs for successful program delivery, in lieu of a profit margin. The Commission will no longer make a special provision for shareholder earnings." (D.01-11-066, Attachment 1, p.28) Decision D.02-03-056, authorizing the 2002 Statewide Energy Efficiency Programs, reiterated the Commission's position on this matter. There were no changes to this position for the 2003

energy efficiency programs.

The Commission did not approve a mechanism for 2003 that would provide an incentive for meeting program performance goals. However, in 2003 a percentage of the budget for each savings program was made payable upon a finding that the program administrator took reasonable steps to meet its energy savings goals. This performance achievement mechanism is based on: (1) pre-determined energy savings and demand reduction targets, and (2) a set of program-specific targets including hard-to-reach targets. The program results related to this performance achievement mechanism are located in SCE's Updated 2003 4th Quarter Report, included as part of the 2004 AEAP.

Summer Initiative

Program Description

This section is not applicable for the 2003 Energy Efficiency Program Year.

SCE completed its activities related to the Summer Initiative prior to 2003.

CONTENTS

SECTION I - GENERAL INFORMATION

SECTION II - RESIDENTIAL PROGRAM AREA

SECTION III - NONRESIDENTIAL PROGRAM AREA

SECTION IV - NEW CONSTRUCTION PROGRAM AREA

SECTION V - CROSSCUTTING PROGRAM AREA

SECTION VI - MA&E AND REGULATORY OVERSIGHT; ANNOTATED
BIBLIOGRAPHY

SECTION VII - SHAREHOLDER PERFORMANCE INCENTIVES

SECTION VIII - SUMMER INITIATIVE

SECTION IX - BALANCING ACCOUNTS FOR POST-1997 ENERGY
EFFICIENCY ACTIVITIES AND NON-IOU PAYMENT
INFORMATION

Section I - General Information

This section contains narrative that documents and explains the data shown for Table TA-1.1.

Table TA 1.1A Avoided Costs for 2003 Programs

The avoided cost forecast in Table TA 1.1A represents those costs utilized in the planning and delivery of SCE energy efficiency programs in 2003. This forecast is consistent with the forecast utilized in SCE's November 4, 2002 Application for 2003 energy efficiency program funding.

Avoided costs for the 2003 programs, as presented in Table TA 1.1A, reflect the statewide inputs to avoided costs as adopted in the Commission's Energy Efficiency Policy Manual, Decision 01-11-066 and included in the "Cost Effectiveness Spreadsheet.xls" circulated by the Commission for public use in calculating the 2003 program forecast cost effectiveness. This workbook followed the same format used for 2002 Program Implementation Plans.

Table TA 1.1B Avoided Costs for 2004 Programs

The avoided cost forecast in Table TA 1.1B represents those costs utilized in the planning of SCE energy efficiency programs in 2004. This forecast is consistent with the forecast utilized in SCE's September 23, 2003, 2002 Application for 2004-2005 energy efficiency program funding.

Avoided costs for the 2004 programs, as presented in Table TA 1.1B, reflect the statewide inputs to avoided costs as adopted in the Commission's Energy Efficiency Policy Manual, Decision 03-08-067. These costs remained unchanged from those adopted in Decision 01-11-066. These costs were also included in the program workbooks circulated by the Commission for public use in calculating the 2004 program forecast cost effectiveness.

Technical Appendix

Table TA 1.1A
2004 Energy Efficiency Annual Report
AVOIDED COSTS: ELECTRIC (\$/kWh)

2003				
Year	Gen \$/kWh	T&D \$/kWh	Env.Ext. \$/kWh	Total \$/kWh
2003	\$0.10	\$0.01	\$0.01	\$0.11
2004	\$0.06	\$0.01	\$0.01	\$0.07
2005	\$0.05	\$0.01	\$0.01	\$0.07
2006	\$0.05	\$0.01	\$0.01	\$0.07
2007	\$0.05	\$0.01	\$0.01	\$0.06
2008	\$0.05	\$0.01	\$0.01	\$0.07
2009	\$0.05	\$0.01	\$0.01	\$0.07
2010	\$0.06	\$0.01	\$0.01	\$0.07
2011	\$0.06	\$0.01	\$0.01	\$0.07
2012	\$0.06	\$0.01	\$0.01	\$0.08
2013	\$0.06	\$0.01	\$0.01	\$0.08
2014	\$0.06	\$0.01	\$0.01	\$0.08
2015	\$0.07	\$0.01	\$0.01	\$0.08
2016	\$0.07	\$0.01	\$0.01	\$0.09
2017	\$0.07	\$0.01	\$0.01	\$0.09
2018	\$0.08	\$0.01	\$0.01	\$0.10
2019	\$0.08	\$0.01	\$0.01	\$0.10
2020	\$0.08	\$0.01	\$0.01	\$0.11
2021	\$0.09	\$0.01	\$0.01	\$0.11
2022	\$0.09	\$0.01	\$0.01	\$0.12

Technical Appendix

Table TA 1.1B
2004 Energy Efficiency Annual Report
AVOIDED COSTS: ELECTRIC (\$/kWh)

2004				
Year	Gen \$/kWh	T&D \$/kWh	Env.Ext. \$/kWh	Total \$/kWh
2004	\$0.05	\$0.01	\$0.01	\$0.07
2005	\$0.05	\$0.01	\$0.01	\$0.07
2006	\$0.05	\$0.01	\$0.01	\$0.06
2007	\$0.05	\$0.01	\$0.01	\$0.07
2008	\$0.05	\$0.01	\$0.01	\$0.07
2009	\$0.06	\$0.01	\$0.01	\$0.07
2010	\$0.06	\$0.01	\$0.01	\$0.07
2011	\$0.06	\$0.01	\$0.01	\$0.08
2012	\$0.06	\$0.01	\$0.01	\$0.08
2013	\$0.06	\$0.01	\$0.01	\$0.08
2014	\$0.07	\$0.01	\$0.01	\$0.08
2015	\$0.07	\$0.01	\$0.01	\$0.09
2016	\$0.07	\$0.01	\$0.01	\$0.09
2017	\$0.08	\$0.01	\$0.01	\$0.10
2018	\$0.08	\$0.01	\$0.01	\$0.10
2019	\$0.08	\$0.01	\$0.01	\$0.11
2020	\$0.09	\$0.01	\$0.01	\$0.11
2021	\$0.09	\$0.01	\$0.01	\$0.12
2022	\$0.10	\$0.01	\$0.01	\$0.12
2023	\$0.10	\$0.01	\$0.01	\$0.13

Section II - Residential Program Area

This section contains narrative that documents and explains the data shown for Tables TA 2.1 through TA 2.5.

Table TA 2.1 Program Cost Estimates Used for Cost-Effectiveness - Residential Program Area

This table documents those costs used in determining the cost-effectiveness of residential energy efficiency programs. These tables provide all program costs, including costs expended in 2003 and those costs associated with commitments from 2003 programs.

Program Incentives (Recorded)

Incentive costs represent incentives paid to customers during 2003 (Actual) as well as incentives associated with commitments from the 2003 residential programs (Committed).

Program Administrative Costs (Recorded)

These costs include all expenditures directly charged to the program with the exception of incentive costs. The administrative costs consist of labor, non-labor, contract labor, and allocated material costs (See Also Table TA 2.2). These costs represent administrative costs expended during 2003 (Actual) as well as administrative costs associated with the handling of commitments from the 2003 residential programs (Committed).

Shareholder Incentives

Costs represented in the Shareholder Incentives column would represent an allocated amount of the total performance awards earned during a particular program year. There were no shareholder incentives authorized for 2003.

Other Costs

Costs represented in the Other Costs column represent the MA&E costs for the statewide programs. MA&E costs for the Local programs are included in the Program Administrative Costs column. Other allocated costs recorded in the Other Costs category in previous Energy Efficiency Annual Reports (e.g., General Support, Regulatory Support, CPUC Staff, and Summer Initiative Administrative) are now recorded in the Program Administrative Costs column.

Total Utility Costs

The sum of the Program Incentives (Recorded) columns, Program Administrative Costs (Recorded) columns, Shareholder Incentives, and Other costs.

Incremental Measure Costs (Net)

These costs generally represent the incremental costs of energy efficiency measures over the standard replacement measures. SCE's incremental measure costs are typically derived from the latest cost source available for the particular measure(s), including recent measure cost studies. The gross amounts of these costs are reduced by appropriate net-to-gross ratios for the particular measure or end-use. The net-to-gross ratios are consistent with the ratios utilized in SCE's November 4, 2002 Application for 2003 energy efficiency program funding.

Technical Appendix

Table TA 2.2 Direct and Allocated Administrative Costs - Residential Program Area

This table documents the breakdown of the actual administrative costs used in determining the cost-effectiveness of residential energy efficiency programs. These tables provide detail of all actual program administrative costs expended in 2003. These costs include the costs of Market Assessment & Evaluation for the Local Energy Efficiency Programs, regulatory support, and other energy efficiency support costs.

Labor Costs (Actual)

Labor costs consist of SCE labor charges that are directly charged to the program. These costs include salaries and expenses of SCE employees engaged in developing energy efficient marketing strategies, plans, and programs; developing program implementation procedures; reporting, monitoring, and evaluating systems. The reported costs reflect only the actual costs incurred in 2003 in support of 2003 residential programs.

Non-Labor Costs (Actual)

Non-labor costs include materials, consultant fees, vendor contracts, and other miscellaneous costs charged directly to the program. These costs include items such as booklets, brochures, promotions, training, membership dues, postage, telephone, supplies, printing/photocopying services, and computer support services. Several programs contain a significant amount of Non-Labor administrative costs due to the use of vendor contracts in the delivery of these programs.

Contract Labor Costs (Actual)

Labor costs consist of contract employees' labor charges that are directly charged to the program. These costs include salaries and expenses of contract employees engaged in developing energy efficient marketing strategies, plans, and programs; developing program implementation procedures; reporting, monitoring, and evaluating systems.

Allocated Administrative Costs (Actual)

Allocated administrative costs represent those for building lease and maintenance costs and management oversight expenditures. In addition, the 2003 Allocated Administrative Costs (Actual) category includes costs related to systems support, regulatory support, internal audits, and other costs which are allocated to the programs. In previous years these latter costs were displayed in other sections of the Energy Efficiency Annual Report and not in this section.

Total Administrative Costs (Actual)

The summation of the aforementioned utility administrative costs - Labor, Non-labor, Contract, and Allocated Administrative costs.

Table TA 2.3 Market Effects: Projected Annual Program Energy Reductions - Residential Program Area

The projected annual program energy reductions for the residential program area, presented in TA 2.3, are derived from ex ante estimates of energy savings. These estimates are based upon the measure level savings data submitted in SCE's November 4, 2002 Application for 2003 Energy Efficiency Program Funding and adopted in Decision D.03-04-055. These estimates have been updated, as applicable, to correspond with the actual program implementation during 2003 and to reflect actual program results as of December 31, 2003. Recorded savings amounts reflect all 2003 program impacts, including impacts from measures installed in 2003 and those impacts associated with commitments from 2003 programs.

Inputs and assumptions for these estimates are described in this section. Projections of annual program energy reductions are developed similarly across program areas, but the specifics of each program area will be discussed in the individual sections to this Technical Appendix.

Program Energy Reduction Assumptions

Annual program energy reduction estimates for residential programs supplied in the November 4, 2002 Application for 2003 Energy Efficiency Program Funding and submitted herein as the 2003 program results are the result of a summation of measure-level savings from the measures installed or committed to be installed as a result of the 2003 residential programs. The measure-level savings information used to calculate the 2003 program results are based upon the latest energy savings data available for the particular measure(s), including measurement studies, historical program results, and engineering estimates. The gross amounts of these costs are reduced by appropriate net-to-gross ratios for the particular measure or end-use.

The Effective Useful Life is the length of time (years) for which the load impacts of an energy efficiency measure are expected to last. The useful life estimates are also based upon the Energy Efficiency Policy Manual, adopted in Decision D.01-11-066.

Table TA 2.4 Measure Detail - Residential Program Area

Table TA 2.4 provides measure-level detail for all of SCE's residential energy efficiency programs with 2003 energy saving goals.

End Use & Measure Description

Detail the actual measures installed or committed to be installed as a result of the 2003 residential programs.

Quantity (Recorded)

Derived from SCE's program tracking databases, the number of units installed or committed to be installed as a result of the 2003 residential programs.

Total Resource Costs – Administrative Costs (Recorded)

These costs include all expenditures directly charged to the program with the exception of incentive costs. These costs represent administrative costs expended during 2003 as well as administrative costs associated with the handling of commitments from the 2003 residential programs. The Summation of the "Total Resource Costs – Admin" and "Total Resource Costs – IMC" column values comprise the Total Resource Costs for Levelizing ("LCRC") as specified in the California Standard Practice Manual: Economic Analysis of Demand-Side Programs and Projects, October 2001.

Total Resource Costs – Incremental Measure Costs (Recorded)

Technical Appendix

These costs generally represent the incremental costs of energy efficiency measures over the standard replacement measures. SCE's incremental measure costs are typically derived from the latest cost source available for the particular measure(s), including recent measure cost studies. The gross amounts of these costs are reduced by appropriate net-to-gross ratios for the particular measure or end-use. The net-to-gross ratios are consistent with the ratios utilized in SCE's November 4, 2002 Application for 2003 energy efficiency program funding. The Summation of the "Total Resource Costs - Admin" and "Total Resource Costs - IMC" column values comprise the Total Resource Costs for Levelizing ("LCRC") as specified in the California Standard Practice Manual: Economic Analysis of Demand-Side Programs and Projects, October 2001.

Total Resource Benefits - Lifecycle kWh

Annual net kWh savings multiplied by the measure Useful Life.

Useful Life

Assumption of the useful life of the measure, used to determine the lifecycle energy savings. The useful life estimates are consistent with the ratios utilized in SCE's November 4, 2002 Application for 2003 energy efficiency program funding.

Levelized Costs

The TRC Levelized Cost, calculated pursuant to the California Standard Practice Manual: Economic Analysis of Demand-Side Programs and Projects, October 2001. These costs, represented as a cents/kWh, are calculated by the summation of the "Total Resource Costs - Admin" and "Total Resource Costs - IMC" column values which comprise the Total Resource Costs for Levelizing ("LCRC") divided by the Total Discounted Load Impacts of the Program ("IMP"). The discount rate utilized is 8.15 %, as specified in the Energy Efficiency Policy Manual, Decision D.01-11-066.

Table TA 2.5 Distribution of RCP Payments - Residential Program Area

SCE's Residential Contractor Program (RCP) was designed to provide incentives to different energy service providers and customers. Table TA 2.5 identifies the distribution of recorded payments to project sponsors (multi-family), energy service providers, and contractors (single-family), and delineates any payments made to affiliates of the utility distribution company. Thus, the amounts in the "Total" column represent the total dollar amount allocated to a particular project sponsor or contractor. The table also demonstrates the payments made for particular end-uses. Each of these allocations of payments, by recipient and end-use, is based upon information contained in SCE's tracking system for this program.

Table TA 2.5 is separated into Table TA 2.5A and Table TA 2.5B to separate RCP programs between the single-family element and the multi-family element.

Table TA 2.5 for RCP payments is submitted herein in lieu of TA 2.5 as defined in the May 1999 version of the Reporting Requirements Manual 2. Table TA 2.5 as defined in the May 1999 version of the Reporting Requirements Manual 2 refers to SCE's Residential Standard Performance Contracting (SPC) program, which is no longer applicable.

Table TA 2.5 is not applicable to SCE's 2003 Energy Efficiency programs. SCE did not offer the RCP or a Residential SPC program in 2003.

Technical Appendix

Table TA 2.1
 2004 Energy Efficiency Annual Report
 SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC
 PROGRAM COST ESTIMATES USED FOR COST-EFFECTIVENESS - RESIDENTIAL PROGRAM AREA
 2003

	Program Incentives (Recorded) [1]		Program Administrative Costs (Recorded)		Shareholder Incentives [1]	Other Costs [2]	Total Utility Costs	Incremental Measure Costs
	Actual	Committed	Actual	Committed				
Information	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
FMS	-	-	1,713,409	240,642	-	67,326	2,021,377	-
EI								
SPCs (RCP)	-	-	-	-	-	-	-	-
Rebates	11,168,681	1,228,141	2,780,961	53,864	-	408,566	15,640,213	17,964,291
Loans	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-
Instream Programs								
Information	-	-	-	-	-	-	-	-
Financial Assistance	-	-	-	-	-	-	-	-
Residential Total	<u>\$ 11,168,681</u>	<u>\$ 1,228,141</u>	<u>\$ 4,494,370</u>	<u>\$ 294,506</u>	<u>\$ -</u>	<u>\$ 475,892</u>	<u>\$ 17,661,590</u>	<u>\$ 17,964,291</u>

[1] The Commission authorized no Shareholder Performance Awards in 2003.

[2] Statewide Market Assessment and Evaluation costs.

Technical Appendix

Table TA 2.2
 2004 Energy Efficiency Annual Report
 SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC
 DIRECT AND ALLOCATED ADMINISTRATIVE COSTS - RESIDENTIAL PROGRAM AREA
 2003

	Actual Labor	Actual Non-Labor	Actual Contract	Actual Allocated	Actual Admin Total
Information	\$ -	\$ -	\$ -	\$ -	\$ -
EMS	126,536	1,473,490	1,640	111,743	1,713,409
EEI					
SPCs (RCP)	-	-	-	-	-
Rebates	680,517	1,054,452	322,471	723,520	2,780,961
Loans	-	-	-	-	-
Other	-	-	-	-	-
Upstream Programs					
Information	-	-	-	-	-
Financial Assistance	-	-	-	-	-
Residential Total	<u>\$ 807,053</u>	<u>\$ 2,527,943</u>	<u>\$ 324,111</u>	<u>\$ 835,264</u>	<u>\$ 4,494,370</u>

Technical Appendix

Table TA 2.3
 2004 Energy Efficiency Annual Report
 SUMMARY OF ENERGY EFFICIENCY PROGRAM EFFECTS: ELECTRIC
 MARKET EFFECTS: PROJECTED ANNUAL PROGRAM ENERGY REDUCTIONS - RESIDENTIAL PROGRAM AREA
 2003

Information			FMS			FFI SPCs (RCP)		
Year	(MW)	(MWH)	Year	(MW)	(MWH)	Year	(MW)	(MWH)
2003	0.000	0	2003	0.000	0	2003	0.000	0
2004	0.000	0	2004	0.000	0	2004	0.000	0
2005	0.000	0	2005	0.000	0	2005	0.000	0
2006	0.000	0	2006	0.000	0	2006	0.000	0
2007	0.000	0	2007	0.000	0	2007	0.000	0
2008	0.000	0	2008	0.000	0	2008	0.000	0
2009	0.000	0	2009	0.000	0	2009	0.000	0
2010	0.000	0	2010	0.000	0	2010	0.000	0
2011	0.000	0	2011	0.000	0	2011	0.000	0
2012	0.000	0	2012	0.000	0	2012	0.000	0
2013	0.000	0	2013	0.000	0	2013	0.000	0
2014	0.000	0	2014	0.000	0	2014	0.000	0
2015	0.000	0	2015	0.000	0	2015	0.000	0
2016	0.000	0	2016	0.000	0	2016	0.000	0
2017	0.000	0	2017	0.000	0	2017	0.000	0
2018	0.000	0	2018	0.000	0	2018	0.000	0
2019	0.000	0	2019	0.000	0	2019	0.000	0
2020	0.000	0	2020	0.000	0	2020	0.000	0
2021	0.000	0	2021	0.000	0	2021	0.000	0
2022	0.000	0	2022	0.000	0	2022	0.000	0
Total	0.000	0	Total	0.000	0	Total	0.000	0

EEI Rebates			EEI Insulation			EEI Other		
Year	(MW)	(MWH)	Year	(MW)	(MWH)	Year	(MW)	(MWH)
2003	0.022	67.579	2003	0.000	0	2003	0.000	0
2004	0.022	67.579	2004	0.000	0	2004	0.000	0
2005	0.022	67.579	2005	0.000	0	2005	0.000	0
2006	0.022	67.579	2006	0.000	0	2006	0.000	0
2007	0.022	67.579	2007	0.000	0	2007	0.000	0
2008	0.022	67.579	2008	0.000	0	2008	0.000	0
2009	0.022	67.579	2009	0.000	0	2009	0.000	0
2010	0.022	67.579	2010	0.000	0	2010	0.000	0
2011	0.022	67.579	2011	0.000	0	2011	0.000	0
2012	0.022	67.579	2012	0.000	0	2012	0.000	0
2013	0.022	67.579	2013	0.000	0	2013	0.000	0
2014	0.000	0	2014	0.000	0	2014	0.000	0
2015	0.000	0	2015	0.000	0	2015	0.000	0
2016	0.000	0	2016	0.000	0	2016	0.000	0
2017	0.000	0	2017	0.000	0	2017	0.000	0
2018	0.000	0	2018	0.000	0	2018	0.000	0
2019	0.000	0	2019	0.000	0	2019	0.000	0
2020	0.000	0	2020	0.000	0	2020	0.000	0
2021	0.000	0	2021	0.000	0	2021	0.000	0
2022	0.000	0	2022	0.000	0	2022	0.000	0
Total	0.022	743.374	Total	0.000	0	Total	0.000	0

Technical Appendix

Table TA 2.3
 2004 Energy Efficiency Annual Report
 SUMMARY OF ENERGY EFFICIENCY PROGRAM EFFECTS: ELECTRIC
 MARKET EFFECTS: PROJECTED ANNUAL PROGRAM ENERGY REDUCTIONS - RESIDENTIAL PROGRAM AREA
 2003

Upstream Programs Information			Upstream Programs Financial Assistance		
Year	(MW)	(MWH)	Year	(MW)	(MWH)
2003	0.000	0	2003	0.000	0
2004	0.000	0	2004	0.000	0
2005	0.000	0	2005	0.000	0
2006	0.000	0	2006	0.000	0
2007	0.000	0	2007	0.000	0
2008	0.000	0	2008	0.000	0
2009	0.000	0	2009	0.000	0
2010	0.000	0	2010	0.000	0
2011	0.000	0	2011	0.000	0
2012	0.000	0	2012	0.000	0
2013	0.000	0	2013	0.000	0
2014	0.000	0	2014	0.000	0
2015	0.000	0	2015	0.000	0
2016	0.000	0	2016	0.000	0
2017	0.000	0	2017	0.000	0
2018	0.000	0	2018	0.000	0
2019	0.000	0	2019	0.000	0
2020	0.000	0	2020	0.000	0
2021	0.000	0	2021	0.000	0
2022	0.000	0	2022	0.000	0
Total	0.000	0	Total	0.000	0

Technical Appendix

Table TA 2.4
2004 Energy Efficiency Annual Report
MEASURE DETAIL- ELECTRIC
RESIDENTIAL PROGRAM AREA
2003

End Use	Measure Description	Quantity (Recorded)	Total Resource Costs (Recorded, \$000)		Total Resource Benefits (Lifecycle kWh)	Useful Life	Levelized Costs (cents/kWh)
			Admin	IMC			
Residential Refrigerator Recycling							
Refrigeration	Refrigerators (Q1-Q4)	31,051	658	1,990	212,098,203	6	1.63
Refrigeration	Screw-in CFL 15W (Q1-Q4)	3,198	2	-	709,188	9	0.40
Refrigeration	Screw-in CFL 20W (Q1-Q4)	1,599	2	-	565,135	9	0.40
Refrigeration	Screw-in CFL 23W (Q1-Q4)	3,198	3	-	1,041,621	9	0.40
Refrigeration	Freezers (Q1-Q4)	3,092	68	213	21,762,609	6	1.68
Residential - Single Family							
Residential All	Pool Pump & Motor (Q1)	393	39	104	7,661,468	15	3.30
Residential All	Pool Pump & Motor (Q2-Q4)	5,259	518	1,397	102,523,306	15	3.30
Residential All	Room A/C - 5,000 to 18,000 btuh	814	6	69	1,207,511	15	11.00
Residential All	High Performance Window	1,522,194	173	2,276	38,036,019	20	13.26
Residential All	Programmable Thermostat	34,116	567	1,761	104,053,234	12	3.59
Residential All	Attic Insulation	15,918	0	7	8,393	20	174.79
Residential All	Wall Insulation	322	0	0	258	20	207.22
Residential All	Whole House Fan (Q1)	23	0	3	81,453	18	7.84
Residential All	Whole House Fan (Q2-4)	1,788	30	226	6,332,097	18	7.84
Residential All	Evaporative Cooler	1,567	83	502	12,916,929	7	6.13
Residential All	Central AC - Tier I w/TVX	1,592	50	901	10,518,805	18	17.54
Residential All	Central AC - Tier I	619	18	350	3,822,348	18	18.71
Residential All	Central AC - Tier II	2,134	69	1,683	14,614,661	18	23.26
Residential All	Central AC - Tier III	3,471	138	5,202	29,251,251	18	35.43
Residential All	Central Heat Pump - Tier I w/TVX	46	2	16	404,157	18	8.74
Residential All	Central Heat Pump - Tier I	15	1	5	123,169	18	9.29
Residential All	Central Heat Pump - Tier II	62	4	27	802,129	18	7.46
Residential All	Central Heat Pump - Tier III	41	3	22	674,143	18	7.36
Residential All	Pool Pump & Motor Two Speed (Q1)	11	1	3	100,862	15	6.02
Residential All	Pool Pump & Motor Two Speed (Q2-Q4)	254	12	67	2,328,984	15	6.02
Residential All	Electric Water Heater >.91	123	2	7	389,248	13	3.68
Residential - Multifamily							
Residential All	ES Screw-in CFL 13 Watt-Exterior	117	0	1	30,124	9	4.97
Residential All	ES Screw-in CFL 14 Watt-Exterior	74	0	1	41,281	9	2.84
Residential All	ES Screw-in CFL 15 Watt-Exterior	27	0	0	14,580	9	2.90
Residential All	ES Screw-in CFL 18 Watt-Exterior	3	0	0	2,060	9	2.50
Residential All	ES Screw-in CFL 20 Watt-Exterior	26	0	0	22,314	9	2.20
Residential All	ES Screw-in CFL 23 Watt-Exterior	245	1	2	194,499	9	2.30
Residential All	ES Screw-in CFL 25 Watt-Exterior	24	0	0	25,747	9	1.96
Residential All	ES Screw-in CFL 27 Watt-Exterior	48	0	0	49,435	9	2.00
Residential All	ES Screw-in CFL 30 Watt-Exterior	-	-	-	-	9	#DIV/0!
Residential All	ES Screw-in CFL 13 Watt-Interior	27	0	0	2,981	9	10.25
Residential All	ES Screw-in CFL 14 Watt-Interior	12,775	21	90	3,056,311	9	5.28
Residential All	ES Screw-in CFL 15 Watt-Interior	12,481	20	88	2,875,622	9	5.44
Residential All	ES Screw-in CFL 18 Watt-Interior	132	0	1	38,868	9	4.48
Residential All	ES Screw-in CFL 20 Watt-Interior	3,378	9	24	1,243,320	9	3.78
Residential All	ES Screw-in CFL 23 Watt-Interior	3,525	8	25	1,200,119	9	4.01
Residential All	ES Screw-in CFL 24 Watt-Interior	40	0	0	13,250	9	4.09
Residential All	ES Screw-in CFL 25 Watt-Interior	1,151	4	8	530,381	9	3.23
Residential All	ES Screw-in CFL 27 Watt-Interior	3,327	10	23	1,469,459	9	3.32
Residential All	ES Screw-in CFL 30 Watt-Interior	-	-	-	-	9	#DIV/0!
Residential All	ES R30 Reflector CFL 15 Watt	1,201	9	13	1,288,433	9	2.52
Residential All	ES R40 Reflector CFL 23 Watt	340	4	4	561,718	9	2.13
Residential All	ES Indoor Fluorescent Fixtures	17,279	130	442	24,605,296	20	4.79
Residential All	ES Exterior Fluorescent Fixtures 13 Watt	8,095	76	84	14,247,200	20	2.31
Residential All	ES Exterior Fluorescent Fixtures 27 Watt	-	-	-	-	20	#DIV/0!
Residential All	Energy Star Ceiling Fan w/ CFL	-	-	-	-	15	#DIV/0!
Residential All	Room A/C - 5,000 to 18,000 btuh	136	1	12	207,264	15	10.88
Residential All	High Performance Window	58,292	8	87	1,496,427	20	13.09
Residential All	Programmable Thermostat	2,457	49	127	7,698,760	12	3.66
Residential All	Attic Insulation	-	-	-	-	20	#DIV/0!
Residential All	Wall Insulation	-	-	-	-	20	#DIV/0!
Residential All	Central AC - SEER 12	-	-	-	-	18	#DIV/0!
Residential All	Central AC - Tier I	7	0	4	44,393	18	18.39
Residential All	Central AC - Tier I with TVX	59	2	33	400,365	18	17.26
Residential All	Central AC - Tier II	-	-	-	-	18	#DIV/0!
Residential All	Central AC - Tier III	-	-	-	-	18	#DIV/0!
Residential All	Central Heat Pump - SEER 12	-	-	-	-	18	#DIV/0!
Residential All	Central Heat Pump - Tier I	-	-	-	-	18	#DIV/0!
Residential All	Central Heat Pump - Tier I with TVX	-	-	-	-	18	#DIV/0!
Residential All	Central Heat Pump - Tier II	-	-	-	-	18	#DIV/0!
Residential All	Central Heat Pump - Tier III	-	-	-	-	18	#DIV/0!
Residential All	Package Terminal AC (>2, <50 tons)	-	-	-	-	15	#DIV/0!
Residential All	Package Terminal HP	-	-	-	-	15	#DIV/0!
Residential All	Occupancy Sensor wall mounted	54	0	2	35,930	8	9.81
Residential All	Occupancy Sensor ceiling mounted	-	-	-	-	8	#DIV/0!
Residential All	Photocell	-	-	-	-	8	#DIV/0!
Residential All	Exit Sign Retrofit Kit (LED)	-	-	-	-	16	#DIV/0!
Residential All	LED Exit Sign	88	2	7	395,184	16	4.45
Residential All	2.0 gpm Showerhead	-	-	-	-	10	#DIV/0!
Residential All	Faucet Aerator	-	-	-	-	10	#DIV/0!
Residential All	Turn-In-Torchiere Floor Lamps replacing h	2,146	30	51	4,264,531	9	2.73
Residential All	Electric Water Heater EF .91	-	-	-	-	13	#DIV/0!

Technical Appendix

Table TA 2.5A
2004 Energy Efficiency Annual Report
SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC
DISTRIBUTION OF RCP PAYMENTS - RESIDENTIAL PROGRAM AREA
SINGLE-FAMILY PROGRAM AREA
2003

**THIS TABLE IS NOT APPLICABLE
TO THE 2003 ENERGY EFFICIENCY PROGRAMS**

Technical Appendix

Table TA 2.5B
2004 Energy Efficiency Annual Report
SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC
DISTRIBUTION OF RCP PAYMENTS - RESIDENTIAL PROGRAM AREA
MULTI-FAMILY PROGRAM AREA
2003

**THIS TABLE IS NOT APPLICABLE
TO THE 2003 ENERGY EFFICIENCY PROGRAMS**

Section III - Nonresidential Program Area

This section contains narrative that documents and explains the data shown for Tables TA 3.1 through TA 3.5.

Table TA 3.1 Program Cost Estimates Used for Cost-Effectiveness - Nonresidential Program Area

This table documents those costs used in determining the cost-effectiveness of nonresidential energy efficiency programs. These tables provide all program costs, including costs expended in 2003 and those costs associated with commitments from 2003 programs.

Program Incentives (Recorded)

Incentive costs represent incentives paid to customers during 2003 (Actual) as well as incentives associated with commitments from the 2003 nonresidential programs (Committed).

Program Administrative Costs (Recorded)

These costs include all expenditures directly charged to the program with the exception of incentive costs. The administrative costs consist of labor, non-labor, contract labor, and allocated material costs (See Also Table TA 3.2). These costs represent administrative costs expended during 2003 (Actual) as well as administrative costs associated with the handling of commitments from the 2003 nonresidential programs (Committed).

Shareholder Incentives

Costs represented in the Shareholder Incentives column would represent an allocated amount of the total performance awards earned during a particular program year. There were no shareholder incentives authorized for 2003.

Other Costs

Costs represented in the Other Costs column represent the MA&E costs for the statewide programs. MA&E costs for the Local programs are included in the Program Administrative Costs column. Other allocated costs recorded in the Other Costs category in previous Energy Efficiency Annual Reports (e.g., General Support, Regulatory Support, CPUC Staff, and Summer Initiative Administrative) are now recorded in the Program Administrative Costs column.

Total Utility Costs

The sum of the Program Incentives (Recorded) columns, Program Administrative Costs (Recorded) columns, Shareholder Incentives, and Other costs.

Incremental Measure Costs (Net)

These costs generally represent the incremental costs of energy efficiency measures over the standard replacement measures. SCE's incremental measure costs are typically derived from the latest cost source available for the particular measure(s), including recent measure cost studies. The gross amounts of these costs are reduced by appropriate net-to-gross ratios for the particular measure or end-use. The net-to-gross ratios are consistent with the ratios utilized in SCE's November 4, 2002 Application for 2003 energy efficiency program funding.

Technical Appendix

**Table TA 3.2 Direct and Allocated Administrative Costs -
Nonresidential Program Area**

This table documents the breakdown of the actual administrative costs used in determining the cost-effectiveness of nonresidential energy efficiency programs. These tables provide detail of all actual program administrative costs expended in 2003. These costs include the costs of Market Assessment & Evaluation for the Local Energy Efficiency Programs, regulatory support, and other energy efficiency support costs.

Labor Costs (Actual)

Labor costs consist of SCE labor charges that are directly charged to the program. These costs include salaries and expenses of SCE employees engaged in developing energy efficient marketing strategies, plans, and programs; developing program implementation procedures; reporting, monitoring, and evaluating systems. The reporting costs reflect only the actual costs incurred in 2003 in support of 2003 nonresidential programs.

Non-Labor Costs (Actual)

Non-labor costs include materials, consultant fees, vendor contracts, and other miscellaneous costs charged directly to the program. These costs include items such as booklets, brochures, promotions, training, membership dues, postage, telephone, supplies, printing/photocopying services, and computer support services. Several programs contain a significant amount of Non-Labor administrative costs due to the use of vendor contracts in the delivery of these programs.

Contract Labor Costs (Actual)

Labor costs consist of contract employees' labor charges that are directly charged to the program. These costs include salaries and expenses of contract employees engaged in developing energy efficient marketing strategies, plans, and programs; developing program implementation procedures; reporting, monitoring, and evaluating systems.

Allocated Administrative Costs (Actual)

Allocated administrative costs represent those for building lease and maintenance costs and management oversight expenditures. In addition, the 2003 Allocated Administrative Costs (Actual) category includes costs related to systems support, regulatory support, internal audits, and other costs which are allocated to the programs. In previous years these latter costs were displayed in other sections of the Energy Efficiency Annual Report and not in this section.

Total Administrative Costs (Actual)

The summation of the aforementioned utility administrative costs - Labor, Non-labor, Contract, and Allocated Administrative costs.

Table TA 3.3 Market Effects: Projected Annual Program Energy Reductions - Nonresidential Program Area

The projected annual program energy reductions for the nonresidential program area, presented in TA 3.3, are derived from ex ante estimates of energy savings. These estimates are based upon the measure level savings data submitted in SCE's November 4, 2002 Application for 2003 Energy Efficiency Program Funding and adopted in Decision D.03-04-055. These estimates have been updated, as applicable, to correspond with the actual program implementation during 2003 and to reflect actual program results as of December 31, 2003. Recorded savings amounts reflect all 2003 program impacts, including impacts from measures installed in 2003 and those impacts associated with commitments from 2003 programs.

Inputs and assumptions for these estimates are described in this section. Projections of annual program energy reductions are developed similarly across program areas, but the specifics of each program area will be discussed in the individual sections to this Technical Appendix.

Program Energy Reduction Assumptions

Annual program energy reduction estimates for nonresidential programs supplied in the November 4, 2002 Application for 2003 Energy Efficiency Program Funding and submitted herein as the 2003 program results are the result of a summation of measure-level savings from the measures installed or committed to be installed as a result of the 2003 nonresidential programs. The measure-level savings information used to calculate the 2003 program results are based upon the latest energy savings data available for the particular measure(s), including measurement studies, historical program results, and engineering estimates. The gross amounts of these costs are reduced by appropriate net-to-gross ratios for the particular measure or end-use.

The Effective Useful Life is the length of time (years) for which the load impacts of an energy efficiency measure are expected to last. The useful life estimates are also based upon the Energy Efficiency Policy Manual, adopted in Decision D.01-11-066.

Table TA 3.4 Measure Detail - Nonresidential Program Area

Table TA 3.4 provides measure-level detail for all of SCE's nonresidential energy efficiency programs with 2003 energy saving goals.

End Use & Measure Description

Detail the actual measures installed or committed to be installed as a result of the 2003 nonresidential programs.

Quantity (Recorded)

Derived from SCE's program tracking databases, the number of units installed or committed to be installed as a result of the 2003 nonresidential programs.

Total Resource Costs – Administrative Costs (Recorded)

These costs include all expenditures directly charged to the program with the exception of incentive costs. These costs represent administrative costs expended during 2003 as well as administrative costs associated with the handling of commitments from the 2003 nonresidential programs. The Summation of the "Total Resource Costs – Admin" and "Total Resource Costs – IMC" column values comprise the Total Resource Costs for Levelizing ("LCRC") as specified in the California Standard Practice Manual: Economic Analysis of Demand-Side Programs and Projects, October 2001.

Total Resource Costs – Incremental Measure Costs (Recorded)

Technical Appendix

These costs generally represent the incremental costs of energy efficiency measures over the standard replacement measures. SCE's incremental measure costs are typically derived from the latest cost source available for the particular measure(s), including recent measure cost studies. The gross amounts of these costs are reduced by appropriate net-to-gross ratios for the particular measure or end-use. The net-to-gross ratios are consistent with the ratios utilized in SCE's November 4, 2002 Application for 2003 energy efficiency program funding. The Summation of the "Total Resource Costs - Admin" and "Total Resource Costs - IMC" column values comprise the Total Resource Costs for Levelizing ("LCRC") as specified in the California Standard Practice Manual: Economic Analysis of Demand-Side Programs and Projects, October 2001.

Total Resource Benefits - Lifecycle kWh

Annual net kWh savings multiplied by the measure Useful Life.

Useful Life

Assumption of the useful life of the measure, used to determine the lifecycle energy savings. The useful life estimates are consistent with the ratios utilized in SCE's November 4, 2002 Application for 2003 energy efficiency program funding.

Levelized Costs

The TRC Levelized Cost, calculated pursuant to the California Standard Practice Manual: Economic Analysis of Demand-Side Programs and Projects, October 2001. These costs, represented as a cents/kWh, are calculated by the summation of the "Total Resource Costs - Admin" and "Total Resource Costs - IMC" column values which comprise the Total Resource Costs for Levelizing ("LCRC") divided by the Total Discounted Load Impacts of the Program ("IMP"). The discount rate utilized is 8.15 %, as specified in the Energy Efficiency Policy Manual, Decision D.01-11-066.

Table TA 3.5 Distribution of SPC Payments - Nonresidential Program Area

SCE's Nonresidential Standard Performance Contracting (SPC) programs were designed to provide funding to a number of different energy service providers and customers alike. Table TA 3.5 identifies the distribution of recorded payments to energy service providers and customers, and delineates any payments made to affiliates of the utility distribution company. Thus, the amounts in the "Total" column represent the total dollar amount allocated to a particular energy service company or customer. The table also demonstrates the payments made for particular end-uses. Each of these allocations of payments, by recipient and end-use, is based upon information contained in SCE's tracking system for these programs.

Table TA 3.5 is separated into Table TA 3.5A and Table TA 3.5B to reflect the significant differences between SCE's SPC programs for large and that for medium/small customers. After 2002 only one SPC program is available to customers.

Technical Appendix

Table TA 3.1
 2004 Energy Efficiency Annual Report
 SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC
 PROGRAM COST ESTIMATES USED FOR COST-EFFECTIVENESS - NONRESIDENTIAL PROGRAM AREA
 2003

Information	Program Incentives (Recorded)		Program Administrative Costs (Recorded)		Shareholder Incentives [1]	Other Costs [2]	Total Utility Costs	Incremental Measure Costs
	Actual	Committed	Actual	Committed				
Information	\$ -	\$ -	\$ 184,279	\$ 166,065	-	28,725	\$ 379,068	\$ -
FMS								
Large	-	-	-	-	-	-	-	-
Small/Medium	-	-	3,255,000	10,180	-	83,216	3,348,396	-
EEI: Customized Rebates								
Large	-	-	-	-	-	-	-	-
Small/Medium	-	-	-	-	-	-	-	-
EEI: Prescriptive Rebates								
Large	-	-	-	-	-	-	-	-
Small/Medium	4,526,630	2,117,527	2,048,571	84,627	-	148,974	8,926,328	16,820,175
EEI: SPCs								
Large	1,884,697	9,800,950	2,879,275	601,056	-	143,290	15,309,267	15,648,442
Small/Medium	-	-	-	-	-	-	-	-
Instream Programs								
Information	-	-	-	-	-	-	-	-
Financial Assistance	-	-	-	-	-	-	-	-
Nonresidential Total	<u>\$ 6,411,327</u>	<u>\$ 11,918,477</u>	<u>\$ 8,367,124</u>	<u>\$ 861,928</u>	<u>\$ -</u>	<u>\$ 404,204</u>	<u>\$ 27,963,060</u>	<u>\$ 32,468,617</u>

[1] The Commission authorized no Shareholder Performance Awards in 2003.

[2] Statewide Market Assessment and Evaluation costs.

Technical Appendix

Table TA 3.2
2004 Energy Efficiency Annual Report
SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC
DIRECT AND ALLOCATED ADMINISTRATIVE COSTS - NONRESIDENTIAL PROGRAM AREA
2003

	Actual Labor	Actual Non-Labor	Actual Contract	Actual Allocated	Actual Admin Total
Information	\$ 21,599	\$ 138,577	\$ -	\$ 24,103	\$ 184,279
EMS					
Large	-	-	-	-	-
Small/Medium	2,027,211	614,835	238,082	374,873	3,255,000
EEl: Customized Rebates					
Large	-	-	-	-	-
Small/Medium	-	-	-	-	-
EEl: Prescriptive Rebates					
Large	-	-	-	-	-
Small/Medium	791,650	536,852	298,730	421,339	2,048,571
EEl: SPCs					
Large	891,444	1,239,106	79,931	668,793	2,879,275
Small/Medium	-	-	-	-	-
Upstream Programs					
Information	-	-	-	-	-
Financial Assistance	-	-	-	-	-
Nonresidential Total	<u>\$ 3,731,904</u>	<u>\$ 2,529,370</u>	<u>\$ 616,743</u>	<u>\$ 1,489,107</u>	<u>\$ 8,367,124</u>

Technical Appendix

Table TA 3.3
 2004 Energy Efficiency Annual Report
 SUMMARY OF ENERGY EFFICIENCY PROGRAM EFFECTS: ELECTRIC
 MARKET EFFECTS: PROJECTED ANNUAL PROGRAM ENERGY REDUCTIONS - NONRESIDENTIAL PROGRAM AREA
 2003

Information	EMS Large			EMS Small/Medium					
	Year	(MW)	(MWH)	Year	(MW)	(MWH)	Year	(MW)	(MWH)
2003	0.000	0		2003	0.000	0	2003	0.000	0
2004	0.000	0		2004	0.000	0	2004	0.000	0
2005	0.000	0		2005	0.000	0	2005	0.000	0
2006	0.000	0		2006	0.000	0	2006	0.000	0
2007	0.000	0		2007	0.000	0	2007	0.000	0
2008	0.000	0		2008	0.000	0	2008	0.000	0
2009	0.000	0		2009	0.000	0	2009	0.000	0
2010	0.000	0		2010	0.000	0	2010	0.000	0
2011	0.000	0		2011	0.000	0	2011	0.000	0
2012	0.000	0		2012	0.000	0	2012	0.000	0
2013	0.000	0		2013	0.000	0	2013	0.000	0
2014	0.000	0		2014	0.000	0	2014	0.000	0
2015	0.000	0		2015	0.000	0	2015	0.000	0
2016	0.000	0		2016	0.000	0	2016	0.000	0
2017	0.000	0		2017	0.000	0	2017	0.000	0
2018	0.000	0		2018	0.000	0	2018	0.000	0
2019	0.000	0		2019	0.000	0	2019	0.000	0
2020	0.000	0		2020	0.000	0	2020	0.000	0
2021	0.000	0		2021	0.000	0	2021	0.000	0
2022	0.000	0		2022	0.000	0	2022	0.000	0
Total	0.000	0		Total	0.000	0	Total	0.000	0

EEI: Customized Rebates Large		
Year	(MW)	(MWH)
2003	0.000	0
2004	0.000	0
2005	0.000	0
2006	0.000	0
2007	0.000	0
2008	0.000	0
2009	0.000	0
2010	0.000	0
2011	0.000	0
2012	0.000	0
2013	0.000	0
2014	0.000	0
2015	0.000	0
2016	0.000	0
2017	0.000	0
2018	0.000	0
2019	0.000	0
2020	0.000	0
2021	0.000	0
2022	0.000	0
Total	0.000	0

EEI: Customized Rebates Small/Medium		
Year	(MW)	(MWH)
2003	0.000	0
2004	0.000	0
2005	0.000	0
2006	0.000	0
2007	0.000	0
2008	0.000	0
2009	0.000	0
2010	0.000	0
2011	0.000	0
2012	0.000	0
2013	0.000	0
2014	0.000	0
2015	0.000	0
2016	0.000	0
2017	0.000	0
2018	0.000	0
2019	0.000	0
2020	0.000	0
2021	0.000	0
2022	0.000	0
Total	0.000	0

EEI: Prescriptive Rebates Large		
Year	(MW)	(MWH)
2003	0.000	0
2004	0.000	0
2005	0.000	0
2006	0.000	0
2007	0.000	0
2008	0.000	0
2009	0.000	0
2010	0.000	0
2011	0.000	0
2012	0.000	0
2013	0.000	0
2014	0.000	0
2015	0.000	0
2016	0.000	0
2017	0.000	0
2018	0.000	0
2019	0.000	0
2020	0.000	0
2021	0.000	0
2022	0.000	0
Total	0.000	0

Technical Appendix

Table TA 3.3
 2004 Energy Efficiency Annual Report
 SUMMARY OF ENERGY EFFICIENCY PROGRAM EFFECTS: ELECTRIC
 MARKET EFFECTS: PROJECTED ANNUAL PROGRAM ENERGY REDUCTIONS - NONRESIDENTIAL PROGRAM AREA
 2003

EEl: Prescriptive Rebates Small/Medium			EEl: SPCs Large			EEl: SPCs Small/Medium		
Year	(MW)	(MWH)	Year	(MW)	(MWH)	Year	(MW)	(MWH)
2003	0.028	128.282	2003	0.012	90.763	2003	0.000	0
2004	0.028	128.282	2004	0.012	90.763	2004	0.000	0
2005	0.028	128.282	2005	0.012	90.763	2005	0.000	0
2006	0.028	128.282	2006	0.012	90.763	2006	0.000	0
2007	0.028	128.282	2007	0.012	90.763	2007	0.000	0
2008	0.028	128.282	2008	0.012	90.763	2008	0.000	0
2009	0.028	128.282	2009	0.012	90.763	2009	0.000	0
2010	0.028	128.282	2010	0.012	90.763	2010	0.000	0
2011	0.028	128.282	2011	0.012	90.763	2011	0.000	0
2012	0.028	128.282	2012	0.012	90.763	2012	0.000	0
2013	0.028	128.282	2013	0.012	90.763	2013	0.000	0
2014	0.028	128.282	2014	0.012	90.763	2014	0.000	0
2015	0.028	128.282	2015	0.012	90.763	2015	0.000	0
2016	0.028	128.282	2016	0.012	90.763	2016	0.000	0
2017	0.000	0	2017	0.012	90.763	2017	0.000	0
2018	0.000	0	2018	0.012	90.763	2018	0.000	0
2019	0.000	0	2019	0.000	0	2019	0.000	0
2020	0.000	0	2020	0.000	0	2020	0.000	0
2021	0.000	0	2021	0.000	0	2021	0.000	0
2022	0.000	0	2022	0.000	0	2022	0.000	0
Total	0.028	1,795.943	Total	0.012	1,452.211	Total	0.000	0

Upstream Programs Information			Upstream Programs Financial Assistance		
Year	(MW)	(MWH)	Year	(MW)	(MWH)
2003	0.000	0	2003	0.000	0
2004	0.000	0	2004	0.000	0
2005	0.000	0	2005	0.000	0
2006	0.000	0	2006	0.000	0
2007	0.000	0	2007	0.000	0
2008	0.000	0	2008	0.000	0
2009	0.000	0	2009	0.000	0
2010	0.000	0	2010	0.000	0
2011	0.000	0	2011	0.000	0
2012	0.000	0	2012	0.000	0
2013	0.000	0	2013	0.000	0
2014	0.000	0	2014	0.000	0
2015	0.000	0	2015	0.000	0
2016	0.000	0	2016	0.000	0
2017	0.000	0	2017	0.000	0
2018	0.000	0	2018	0.000	0
2019	0.000	0	2019	0.000	0
2020	0.000	0	2020	0.000	0
2021	0.000	0	2021	0.000	0
2022	0.000	0	2022	0.000	0
Total	0.000	0	Total	0.000	0

Technical Appendix

Table TA 3.4
2004 Energy Efficiency Annual Report
MEASURE DETAIL: ELECTRIC
NONRESIDENTIAL PROGRAM AREA
2003

End Use	Measure Description	Quantity (Recorded)	Total Resource Costs (Recorded, \$000)		Total Resource Benefits (Lifecycle kWh)	Useful Life	Levelized Costs (cents/kWh)
			Admin	MC			
Express Efficiency							
HVAC	Package Terminal Air Conditioners	2,194	17	137	12,100,245	15	2.25
HVAC	Package single Tier 1-air cooled	1,961	25	297	17,506,663	15	3.25
HVAC	Split System single Tier 1 - air cooled	232	2	46	1,767,583	15	4.82
HVAC	Package single Tier 2 - air cooled	154	2	47	1,534,393	15	5.64
HVAC	Split System single Tier 2 - air cooled	78	1	30	751,013	15	7.40
HVAC	Package single Tier 3 - air cooled	22	0	9	240,435	15	6.79
HVAC	Split System Tier 3 - air cooled	-	2	-	1,541,962	15	0.25
HVAC	65-135kBTU air cooled, package or split T	760	2	58	1,385,110	15	7.61
HVAC	65-135kBTU water cooled, package or split	153	-	12	-	15	#DIV/0!
HVAC	135-240 kBTU air cooled, package or split	641	2	49	1,556,945	15	5.77
HVAC	>240 kBTU air cooled, package or split Tier	536	3	41	2,368,004	15	3.28
HVAC	Variable-Frequency Drives - HVAC Fans	537	1	104	932,515	15	20.00
HVAC	Variable-Frequency Drives - Chilled Water	-	-	-	-	15	#DIV/0!
HVAC	Setback Programmable Thermostats	880	5	49	3,157,018	11	2.65
HVAC	Reflective Window Film - Coastal	12,861	3	22	1,605,108	10	2.31
HVAC	Reflective Window Film - Inland	12,489	3	21	1,894,617	10	1.94
HVAC	Reflective Window Film - Desert	1,188	0	2	297,536	10	1.27
HVAC	Evaporative Coolers	18	0	2	278,640	15	1.64
HVAC	Evaporator Fan Controller	20	0	6	106,464	5	7.05
HVAC	Cool Roof	903,330	6	182	4,292,624	15	7.75
Lighting	Screw-in Compact Fluorescent Lamp, 5 - 1	1,164	2	16	1,296,812	8	1.98
Lighting	Screw-in Compact Fluorescent Lamp, 14-2	231,332	710	2,527	411,906,955	8	1.10
Lighting	Screw-in Compact Fluorescent Lamp, 14-2	68,196	209	745	121,461,062	8	1.10
Lighting	Screw-in Compact Fluorescent Lamp, >=2	40,709	237	821	137,509,935	8	1.08
Lighting	Hardwired Fluorescent Fixture, 5-13 watts	2,150	10	76	6,965,743	16	2.25
Lighting	Hardwired Fluorescent Fixture, 14-26 watts	1,362	10	58	7,256,894	16	1.70
Lighting	Hardwired Fluorescent Fixture, 27-65 watts	2,394	34	209	24,458,735	16	1.81
Lighting	Hardwired Fluorescent Fixture, 27-65 watt:	11	0	1	19,291	16	9.34
Lighting	Hardwired Fluorescent Fixture, 66-90 watt:	64	1	9	994,797	16	1.84
Lighting	Hardwired Fluorescent Fixture, 66-90 watts	337	4	46	2,813,123	16	3.21
Lighting	Hardwired Fluorescent Fixture, >90 watts(s	75	2	10	1,165,778	16	1.84
Lighting	Hardwired Fluorescent Fixture, >90 watts(r	-	-	-	-	16	#DIV/0!
Lighting	Induction Lamps and fixtures <55 watts	-	-	-	-	16	#DIV/0!
Lighting	Induction Lamps and fixtures 55 - 100 watt	207	4	59	2,681,289	16	4.24
Lighting	Induction Lamps and fixtures >100 watts	-	-	-	-	16	#DIV/0!
Lighting	Exit Sign Retrofit Kit	57	0	3	260,050	16	2.20
Lighting	LED Exit Sign	4,094	25	436	18,582,202	16	4.53
Lighting	LED Traffic Signal (RED)	74	0	5	253,373	6	2.80
Lighting	LED Traffic Signal Amber Flashing	-	-	-	-	6	#DIV/0!
Lighting	LED Traffic Signal (Green)	-	-	-	-	6	#DIV/0!
Lighting	LED Traffic Signal (hand/pedestrian)	1,041	3	110	1,462,277	6	10.05
Lighting	LED Channel Signage (Red) indoor <2ft	-	-	-	-	16	#DIV/0!
Lighting	LED Channel Signage (Red) indoor >2ft	-	-	-	-	16	#DIV/0!
Lighting	LED Channel Signage (Red) outdoor <2ft	-	-	-	-	16	#DIV/0!
Lighting	LED Channel Signage (Red) outdoor >2ft	-	-	-	-	16	#DIV/0!
Lighting	LED Strip Neon Replacement, Indoor	-	-	-	-	16	#DIV/0!
Lighting	LED Strip Neon Replacement, Outdoor	-	-	-	-	16	#DIV/0!
Lighting	Electronic Ballast, Non-Dimming	22,958	16	287	11,565,240	16	4.77
Lighting	Electronic Ballast, Dimming(with daylighting	278	0	11	260,069	16	8.12
Lighting	Premium T-8 Lamp and Electronic, 2-foot l	-	-	-	-	16	#DIV/0!
Lighting	Stand-T-8 Lamp and Electronic, 2-foot lam	3,920	4	94	2,934,296	16	6.10
Lighting	T-5 Lamp and Electronic ballast - 2 foot	-	-	-	-	16	#DIV/0!
Lighting	T-5 HO Lamp with electronic ballast - 2 foot	-	-	-	-	16	#DIV/0!
Lighting	2nd gen T-8 Lamp and Electronic, 2-foot l	410	0	10	232,916	16	7.96
Lighting	T-8 Lamp and Electronic, 2-foot lamp rem	429	2	8	1,157,698	16	1.48
Lighting	Premium T-8 Lamp and Electronic, 3-foot l	-	-	-	-	16	#DIV/0!
Lighting	Stand-T-8 Lamp and Electronic, 3-foot lam	1,815	2	44	1,506,082	16	5.53
Lighting	T-5 Lamp and Electronic ballast - 3 foot	-	-	-	-	16	#DIV/0!
Lighting	T-5 HO Lamp with electronic ballast - 3 foot	-	-	-	-	16	#DIV/0!
Lighting	2nd gen T-8 Lamp and Electronic, 3-foot l	22	0	1	24,330	16	4.21
Lighting	T-8 Lamp and Electronic, 3-foot lamp rem	936	4	17	2,963,667	16	1.30
Lighting	Premium T-8 Lamp and Electronic, 4-foot l	-	-	-	-	16	#DIV/0!
Lighting	T-5 Lamp and Electronic ballast - 4 foot	-	-	-	-	16	#DIV/0!
Lighting	T-5 HO Lamp with electronic ballast - 4 foot	-	-	-	-	16	#DIV/0!
Lighting	2nd gen T-8 Lamp and Electronic, 4-foot l	27,262	21	523	15,113,486	16	6.57
Lighting	Stand-T-8 Lamp and Electronic, 4-foot lam	267,640	273	5,139	198,750,350	16	4.97
Lighting	T-8 Lamp and Electronic, 4-foot lamp rem	30,234	128	1,016	93,555,702	16	2.23
Lighting	T-8 Lamp and Electronic, 8-foot lamp insta	9,491	8	178	6,147,299	16	5.53
Lighting	T-5 HO Lamp with electronic ballast - 8 foot	-	-	-	-	16	#DIV/0!
Lighting	T-8 Lamp and Electronic, 8-foot lamp rem	2,245	18	108	12,761,570	16	1.79
Lighting	Interior HID fixture 0-35 watts incandescent	-	-	-	-	16	#DIV/0!
Lighting	Interior HID fixture 0-35 watts mercury vap	-	-	-	-	16	#DIV/0!
Lighting	Interior HID fixture 36-70 watts incandesce	35	0	6	225,744	16	4.90
Lighting	Interior HID fixture 36-70 watts mercury vap	-	-	-	-	16	#DIV/0!
Lighting	Interior HID fixture 71-100 watts incandesce	-	-	-	-	16	#DIV/0!
Lighting	Interior HID fixture 71-100 watts mercury v.	-	-	-	-	16	#DIV/0!
Lighting	Interior HID fixture 101-175 watts incandes	12	0	0	250,491	16	0.52
Lighting	Interior HID fixture 101-175 watts mercury v	60	0	9	323,827	16	5.12
Lighting	Interior HID fixture 176 - 250 watts mercur	-	-	-	-	16	#DIV/0!
Lighting	Interior HID fixture 176-250 watts incandes	-	-	-	-	16	#DIV/0!
Lighting	Interior HID fixture 251 - 400 watts mercur	68	3	10	2,363,507	16	1.01
Lighting	Interior HID fixture 251-400 watts incandes	99	6	3	4,516,742	16	0.37
Lighting	Interior HID fixture 251-400 watts metal hal	-	-	-	-	16	#DIV/0!
Lighting	Exterior HID fixture 0-100 watts incandesce	39	1	4	452,167	16	1.69
Lighting	Exterior HID fixture 0-100 watts mercury ve	3	0	0	16,281	16	3.32
Lighting	Exterior HID fixture 101-175 watts incande:	59	1	8	651,239	16	2.63
Lighting	Exterior HID fixture 101-175 watts mercury	32	0	5	226,947	16	3.96
Lighting	Exterior HID fixture > 176 watts incandesce	20	1	4	594,503	16	1.43

Technical Appendix

Table TA 3.4
2004 Energy Efficiency Annual Report
MEASURE DETAIL: ELECTRIC
NONRESIDENTIAL PROGRAM AREA
2003

End Use	Measure Description	Quantity (Recorded)	Total Resource Costs (Recorded, \$000)		Total Resource Benefits (Lifecycle kWh)	Useful Life	Levelized Costs (cents/kWh)
			Admin	IMC			
Lighting	Exterior HID fixture > 176 watts mercury va	93	1	18	1,066,775	16	3.31
Lighting	Ceramic Metal Halide (CMH) .75 watts	27	0	2	142,249	16	2.74
Lighting	Interior Pulse Start Metal Halide (400 W req)	548	4	67	2,335,795	10	4.57
Lighting	Interior HO T-5 4 lamp fixture retrofits	4,995	94	1,208	68,743,987	16	3.46
Lighting	Occupancy Sensor wall mounted	1,390	8	60	4,451,185	8	2.13
Lighting	Occupancy Sensor ceiling mounted	1,610	30	124	17,668,434	8	1.22
Lighting	Plug Load sensor	-	-	-	-	8	#DIV/0!
Lighting	Photocell	30	1	0	410,181	8	0.34
Lighting	Timeclock	22	1	1	300,799	8	0.55
Refrigeration	Night Covers for Display Cases - med temp	-	-	-	-	5	#DIV/0!
Refrigeration	Night Covers for Display Cases - low temp	16	0	0	4,531	5	4.19
Refrigeration	Infiltration Barrier for Walk-ins (strip curtain)	-	-	-	-	4	#DIV/0!
Refrigeration	Retrofit Glass doors on open vertical displa	-	-	-	-	12	#DIV/0!
Refrigeration	Retrofit Glass doors on open vertical displa	40	1	10	536,615	12	3.29
Refrigeration	Replace reach in case w/doors with hi eff c	-	-	-	-	12	#DIV/0!
Refrigeration	New Low Temp reach in Display Case with	12	0	5	222,659	16	4.50
Refrigeration	New Medium Temp reach in Display Case	28	0	12	253,446	16	9.08
Refrigeration	Special Doors with Low Anti-Sweat Heat lo	-	-	-	-	12	#DIV/0!
Refrigeration	Anti-Sweat Heat Controller	288	1	15	758,661	8	3.10
Refrigeration	Insulate Bare Suction Pipes	108	0	0	152,412	11	0.42
Refrigeration	Main door Cooler Door Gaskets (Walk-in)	-	-	-	-	4	#DIV/0!
Refrigeration	Main Door Freezer Door Gaskets (Walk-in)	-	-	-	-	4	#DIV/0!
Refrigeration	Glass Cooler Door Gaskets (Reach-in or V	550	0	3	83,789	4	4.08
Refrigeration	Auto-closer for Coolers	13	0	2	202,076	8	1.32
Refrigeration	Auto-closer for Freezers	2	0	0	31,089	8	1.32
Refrigeration	Auto-closers Glass Door for Walk-in Cooler	-	-	-	-	8	#DIV/0!
Refrigeration	Oversized Air Cooled Condenser	6	-	2	-	16	#DIV/0!
Refrigeration	Oversized Evaporative Cooled Condenser	-	0	-	131,704	16	0.25
Refrigeration	Air cooled to Evaporative cooled condense	6	0	3	238,909	16	2.27
Refrigeration	Air cooled to Evaporative cooled condense	-	-	-	-	16	#DIV/0!
Refrigeration	Multiplex Compressor System air cooled	-	-	-	-	12	#DIV/0!
Refrigeration	Multiplex Compressor System - evap coole	-	-	-	-	12	#DIV/0!
Refrigeration	Multiplex Compressor System w/ eff cond -	-	-	-	-	12	#DIV/0!
Refrigeration	Multiplex Compressor System w/ eff cond -	-	-	-	-	12	#DIV/0!
Refrigeration	Floating Head Pressure Controller - air coo	-	-	-	-	16	#DIV/0!
Refrigeration	Floating Head Pressure Controller - evap c	-	-	-	-	16	#DIV/0!
Refrigeration	Efficient Evaporator Fan Motors (SHP to P)	-	-	-	-	16	#DIV/0!
Refrigeration	Efficient Evaporator Fan Motors (SHP to Et	4	0	0	41,349	16	1.54
Refrigeration	High Efficiency Compressor	6	0	1	83,239	15	1.73
Refrigeration	Evaporator Fan Controller	-	-	-	-	5	#DIV/0!
Refrigeration	Vending Machine Controller	26	1	5	595,296	15	1.73
Agricultural	Sprinkler to Micro-Irrigation conversion	268	4	77	2,876,390	20	5.79
Agricultural	Sprinkler to Drip Irrigation - Central Valley -	469	7	135	5,832,403	20	5.03
Agricultural	Sprinkler to Drip Irrigation - Central Valley -	100	1	29	1,111,680	20	5.60
Agricultural	Sprinkler to Drip Irrigation - Central Valley -	217	3	62	2,053,978	20	6.53
Agricultural	Sprinkler to Drip Irrigation - Coastal - Decid	-	-	-	-	20	#DIV/0!
Agricultural	Sprinkler to Drip Irrigation - Coastal - Field	-	-	-	-	20	#DIV/0!
Agricultural	Sprinkler to Drip Irrigation - Coastal - Viney	-	-	-	-	20	#DIV/0!
Agricultural	Low pressure impact sprinkler nozzles(per	-	-	-	-	5	#DIV/0!
Agricultural	Low pressure impact sprinkler nozzles(per	-	-	-	-	5	#DIV/0!
Agricultural	Variable Frequency Drives for Dairy Pump	-	-	-	-	15	#DIV/0!
Agricultural	Variable Frequency Drives for Injectin Mol	120	4	25	2,661,120	15	1.90
Motors	Motors 1-200 HP	1	0	0	1,354	15	4.14
Motors	1.5 hp motor	-	-	-	-	15	#DIV/0!
Motors	10 hp motor	-	-	-	-	15	#DIV/0!
Motors	100 hp motor	-	-	-	-	15	#DIV/0!
Motors	125 hp motor	1	0	-	144,130	15	0.25
Motors	15 hp motor	-	-	-	-	15	#DIV/0!
Motors	150 hp motor	-	-	-	-	15	#DIV/0!
Motors	1 hp motor	-	-	-	-	15	#DIV/0!
Motors	2.0 hp motor	-	-	-	-	15	#DIV/0!
Motors	20 hp motor	1	0	-	17,899	15	0.25
Motors	200 hp motor	-	-	-	-	15	#DIV/0!
Motors	25 hp motor	-	-	-	-	15	#DIV/0!
Motors	3 hp motor	-	-	-	-	15	#DIV/0!
Motors	30 hp motor	-	-	-	-	15	#DIV/0!
Motors	40 hp motor	-	-	-	-	15	#DIV/0!
Motors	5 hp motor	-	-	-	-	15	#DIV/0!
Motors	50 hp motor	-	-	-	-	15	#DIV/0!
Motors	60 hp motor	-	-	-	-	15	#DIV/0!
Motors	7.5 hp motor	-	-	-	-	15	#DIV/0!
Motors	75 hp motor	-	-	-	-	15	#DIV/0!
Food Service	Pressureless Steamers <=0.4 kW idle	8	1	-	610,099	12	0.24
Food Service	Pressureless Steamers <=0.2 kW idle	-	-	-	-	12	#DIV/0!
Food Service	Insulated Holding Cabinet- Full Size <=.8 k	8	1	8	359,424	12	3.67
Food Service	Insulated Holding Cabinet- Full Size <=.6 k	-	-	-	-	12	#DIV/0!
Food Service	Insulated Holding Cabinet-Three Quarter S	39	2	30	1,253,491	12	4.08
Food Service	Insulated Holding Cabinet-Three Quarter S	-	-	-	-	12	#DIV/0!
Food Service	Insulated Holding Cabinet-Half Size <=.4 k'	-	-	-	-	12	#DIV/0!
Food Service	Insulated Holding Cabinet-Half Size <=.3 k'	-	-	-	-	12	#DIV/0!

Technical Appendix

Table TA 3.4
2004 Energy Efficiency Annual Report
MEASURE DETAIL: ELECTRIC
NONRESIDENTIAL PROGRAM AREA
2003

End Use	Measure Description	Quantity (Recorded)	Total Resource Costs (Recorded, \$000)		Total Resource Benefits (Lifecycle kWh)	Useful Life	Levelized Costs (cents/kWh)
			Admin	IMC			
SPC							
Air Conditioning	Com. Reduced Internal Cooling Load	-	-	-	-	15	#DIV/0!
Air Conditioning	Com. Customized - Space Conditioning	2,722,898	55	311	21,955,652	15	2.95
Air Conditioning	Com. EMS (Space Conditioning)	-	-	-	-	15	#DIV/0!
Air Conditioning	Com. EMS (Space Conditioning)	4,034,037	82	461	32,527,812	15	2.95
Air Conditioning	Com. Chillers	3,918,329	95	222	42,126,425	20	1.55
Air Conditioning	Com. Package Units Replacement	1,888,397	38	155	15,226,787	15	2.25
Air Conditioning	Ind. Reduced Internal Cooling Load	-	-	-	-	15	#DIV/0!
Air Conditioning	Ind. Customized - Space Conditioning	312,912	6	36	2,523,116	15	2.96
Air Conditioning	Ind. Chillers	144,245	3	8	1,550,795	20	1.55
Air Conditioning	Com. Reduced Internal Cooling Load	-	-	-	-	15	#DIV/0!
Air Conditioning	Com. Customized - Space Conditioning	510,215	10	58	4,114,037	15	2.95
Air Conditioning	Com. EMS (Space Conditioning)	-	-	-	-	15	#DIV/0!
Air Conditioning	Com. Chillers	-	-	-	-	20	#DIV/0!
Air Conditioning	Com. Package Units Replacement	-	-	-	-	15	#DIV/0!
Air Conditioning	Ind. Reduced Internal Cooling Load	-	-	-	-	15	#DIV/0!
Air Conditioning	Ind. Customized - Space Conditioning	-	-	-	-	15	#DIV/0!
Air Conditioning	Ind. Chillers	-	-	-	-	20	#DIV/0!
Lighting	Com. Indoor Lighting Sys. Mod.	4,626,998	94	354	38,740,581	16	2.11
Lighting	Com. Indoor Lighting Sys. Repl.	35,346,850	718	1,285	295,949,446	16	1.24
Lighting	Com. Outdoor Lighting	1,451,445	30	53	12,152,549	16	1.24
Lighting	Com. Lighting Controls	11,817,115	240	903	98,941,451	16	2.11
Lighting	Ind. Indoor Lighting Sys. Mod.	3,405,721	71	260	28,515,165	16	2.12
Lighting	Ind. Indoor Lighting Sys. Repl.	6,137,371	127	223	51,386,518	16	1.24
Lighting	Ind. Outdoor Lighting Sys. Mod.	-	-	-	-	16	#DIV/0!
Lighting	Ind. Outdoor Lighting Sys. Repl.	25,342	1	1	212,182	16	1.24
Lighting	Ind. Lighting Controls	5,214,296	107	398	43,657,865	16	2.11
Lighting	Ind. LED Lamps	-	-	-	-	16	#DIV/0!
Lighting	Com. Indoor Lighting Sys. Mod.	-	-	-	-	16	#DIV/0!
Lighting	Com. Indoor Lighting Sys. Repl.	-	-	-	-	16	#DIV/0!
Lighting	Com. Outdoor Lighting	-	-	-	-	16	#DIV/0!
Lighting	Com. Lighting Controls	-	-	-	-	16	#DIV/0!
Lighting	Ind. Indoor Lighting Sys. Mod.	-	-	-	-	16	#DIV/0!
Lighting	Ind. Indoor Lighting Sys. Repl.	-	-	-	-	16	#DIV/0!
Lighting	Ind. Outdoor Lighting Sys. Mod.	-	-	-	-	16	#DIV/0!
Lighting	Ind. Outdoor Lighting Sys. Repl.	-	-	-	-	16	#DIV/0!
Lighting	Ind. LED Lamps	-	-	-	-	16	#DIV/0!
Other	Com. Customized - Process	50,834,582	995	5,927	396,720,104	15	3.09
Other	Com. Customized - Refrigeration	7,412,713	145	982	57,849,837	15	3.45
Other	Com. Customized - Refrigeration	-	-	-	-	15	#DIV/0!
Other	Com. Customized - Pumping	1,684,113	33	196	13,143,051	15	3.09
Other	Ind. Motors	257,863	5	30	2,012,398	15	3.09
Other	Ind. Adj. Speed Drive	5,284,218	103	616	41,238,768	15	3.09
Other	Ind. Pump System Controls	247,936	5	29	1,934,927	15	3.09
Other	Ind. Cooling Towers	314,672	6	37	2,455,744	15	3.09
Other	Ind. Customized - Process	13,044,593	255	1,521	101,801,807	15	3.09
Other	Ag. Adj. Speed Drive	934,647	18	109	7,294,114	15	3.09
Other	Ag. Cooling Towers	101,518	2	12	792,261	15	3.09
Other	Ag. Customized - Process	47,594	1	6	371,430	15	3.09
Other	Ag. Motors	118,547	2	14	925,157	15	3.09
Other	Com. Customized - Process	1,451,602	28	169	11,328,503	15	3.09
Other	Com. Customized - Refrigeration	4,204,800	82	557	32,814,840	15	3.45
Other	Com. Customized - Pumping	3,615,802	71	422	28,218,219	15	3.09
Other	Ind. Motors	-	-	-	-	15	#DIV/0!
Other	Ind. Adj. Speed Drive	-	-	-	-	15	#DIV/0!
Other	Ind. Pump System Controls	-	-	-	-	15	#DIV/0!
Other	Ind. Cooling Towers	-	-	-	-	15	#DIV/0!
Other	Ind. Customized - Process	2,496,444	49	291	19,482,594	15	3.09
Small Nonresidential Hard to Reach Program							
Nonresidential All	2X4 Flat lens	-	-	-	-	16	#DIV/0!
Nonresidential All	Lens (Q1)	3,285	-	13	-	16	#DIV/0!
Nonresidential All	4 Ft Fixtures (1 Lamp) (Q1)	268	0	5	168,857	16	5.86
Nonresidential All	4 Ft Fixtures (2 Lamp)	-	-	-	-	16	#DIV/0!
Nonresidential All	4 Ft Fixtures (2 Lamp) (Q1)	2,762	4	46	1,898,512	16	4.77
Nonresidential All	4 Ft Fixtures (3 Lamp)	-	-	-	-	16	#DIV/0!
Nonresidential All	4 Ft Fixtures (3 Lamp) (Q1)	3,807	6	37	3,071,910	16	2.55
Nonresidential All	4 Ft Fixtures (4 Lamp)	-	-	-	-	16	#DIV/0!
Nonresidential All	4 Ft Fixtures (4 Lamp) (Q1)	1,960	3	17	1,464,394	16	2.52
Nonresidential All	Screw-in Compact Fluorescent Lamp	-	-	-	-	8	#DIV/0!
Nonresidential All	Screw-in Compact Fluorescent Lamp (Q1)	1,063	5	24	1,841,831	8	2.21
Nonresidential All	High Output T5 (2 lamp)	-	-	-	-	16	#DIV/0!
Nonresidential All	High Output T5 (4 lamp)	-	-	-	-	16	#DIV/0!
Nonresidential All	High Output T5 (4 lamp) (Q1)	28	0	2	40,166	16	9.02
Nonresidential All	LED Exit Sign	-	-	-	-	16	#DIV/0!
Nonresidential All	LED Exit Sign (Q1)	124	1	7	550,358	16	2.67
Nonresidential All	Repair 4' Socket	6	-	0	-	16	#DIV/0!
Nonresidential All	U-bend Tubes (2 lamp) (Q1)	92	0	2	52,240	16	5.93
Nonresidential All	[1] 8ft Fixture [1] 8ft	-	-	-	-	16	#DIV/0!
Nonresidential All	[1] 8ft Fixture [2] 4ft (Q1)	2	0	0	2,510	16	5.18
Nonresidential All	[2] 2ft Ballast and Lamp	10	0	0	7,701	16	8.80
Nonresidential All	[2] 3ft Ballast and Lamp	-	-	-	-	16	#DIV/0!
Nonresidential All	[2] 8ft Fixtures [4] 4ft (Q1)	3,136	16	56	7,872,581	16	1.67

Technical Appendix

Table TA 3.4
2004 Energy Efficiency Annual Report
MEASURE DETAIL: ELECTRIC
NONRESIDENTIAL PROGRAM AREA
2003

End Use	Measure Description	Quantity (Recorded)	Total Resource Costs (Recorded \$000)		Total Resource Benefits (Lifecycle kWh)	Useful Life	Levelized Costs (cents/kWh)
			Admin	IMC			
Nonresidential All	[2] 8ft Fixtures [2] 8ft (O1)	146	0	5	183,258	16	4.95
Nonresidential All	[4] 8ft Fixtures [4] 8ft	-	-	-	-	16	#DIV/0!
Nonresidential All	[4] 8ft Fixtures [8] 4ft	-	-	-	-	16	#DIV/0!
Nonresidential All	Interior HID fixture 0-35 watts incandesce	-	-	-	-	16	#DIV/0!
Nonresidential All	Interior HID fixture 0-35 watts mercury vap	-	-	-	-	16	#DIV/0!
Nonresidential All	Interior HID fixture 36-70 watts incandesce	-	-	-	-	16	#DIV/0!
Nonresidential All	Interior HID fixture 36-70 watts mercury vap	-	-	-	-	16	#DIV/0!
Nonresidential All	Interior HID fixture 71-100 watts incandesce	-	-	-	-	16	#DIV/0!
Nonresidential All	Interior HID fixture 71-100 watts mercury va	-	-	-	-	16	#DIV/0!
Nonresidential All	Interior HID fixture 101-175 watts incandes	-	-	-	-	16	#DIV/0!
Nonresidential All	Interior HID fixture 101-175 watts mercury '	-	-	-	-	16	#DIV/0!
Nonresidential All	Interior HID fixture 176 - 250 watts mercury	-	-	-	-	16	#DIV/0!
Nonresidential All	Interior HID fixture 176-250 watts incandes	-	-	-	-	16	#DIV/0!
Nonresidential All	Interior HID fixture 251 - 400 watts mercury	-	-	-	-	16	#DIV/0!
Nonresidential All	Interior HID fixture 251-400 watts incandes	-	-	-	-	16	#DIV/0!
Nonresidential All	Interior HID fixture 251-400 watts metal hal	-	-	-	-	16	#DIV/0!
Nonresidential All	Exterior HID fixture 0-100 watts incandesce	-	-	-	-	16	#DIV/0!
Nonresidential All	Exterior HID fixture 0-100 watts mercury va	-	-	-	-	16	#DIV/0!
Nonresidential All	Exterior HID fixture 101-175 watts incande	-	-	-	-	16	#DIV/0!
Nonresidential All	Exterior HID fixture 101-175 watts mercury	-	-	-	-	16	#DIV/0!
Nonresidential All	Exterior HID fixture > 176 watts incandesce	-	-	-	-	16	#DIV/0!
Nonresidential All	Exterior HID fixture > 176 watts mercury va	-	-	-	-	16	#DIV/0!
Nonresidential All	Interior Pulse Start Metal Halide (400 W re)	-	-	-	-	10	#DIV/0!
Nonresidential All	Screw-in Compact Fluorescent Lamp, 5-13	2,336	7	34	2,534,813	8	2.22
Nonresidential All	Screw-in Compact Fluorescent Lamp, 14-2	127	1	2	220,049	8	1.53
Nonresidential All	Screw-in Compact Fluorescent Lamp, >27	-	-	-	-	8	#DIV/0!
Nonresidential All	LED Exit Sign	104	1	6	461,590	16	2.59
Nonresidential All	2nd Gen. (1) 24" T-8 Lamp with Elec. Bal.	-	-	-	-	16	#DIV/0!
Nonresidential All	2nd Gen. (1) 36" T-8 Lamp with Elec. Bal.	-	-	-	-	16	#DIV/0!
Nonresidential All	2nd Gen. (1) 48" T-8 Lamp with Elec. Bal.	257	1	7	287,869	16	4.91
Nonresidential All	2nd Gen. (2) 48" T-8 Lamp with Elec. Bal.	1,433	4	42	1,805,760	16	4.63
Nonresidential All	2nd Gen. (3) 48" T-8 Lamp with Elec. Bal.	136	1	4	371,317	16	2.53
Nonresidential All	2nd Gen. (4) 48" T-8 Lamp with Elec. Bal.	1,342	8	52	3,664,026	16	2.95
Nonresidential All	(4) 48" T-12 to (3) 48" T-8 Lamp with Elec.	1,886	19	61	8,978,257	16	1.61
Nonresidential All	(4) 48" T-12 to (2) 48" T-8 Lamp with Elec.	22	0	1	113,971	16	1.41
Nonresidential All	(3) 48" T-12 to (2) 48" T-8 Lamp with Elec.	-	-	-	-	16	#DIV/0!
Nonresidential All	(1) 96" T-12 to (2) 48" T-8 Lamp with Elec.	13	0	1	19,112	16	5.38
Nonresidential All	(2) 96" T-12 to (4) 48" T-8 Lamp with Elec.	1,184	4	84	1,906,430	16	8.45
Nonresidential All	(2) 96" T-12 to (4) 48" T-8 Lamp with Elec.	83	0	8	133,643	16	11.27
Nonresidential All	(1) 96" T-12 to (1) 96" T-8 Lamp with Elec.	-	-	-	-	16	#DIV/0!
Nonresidential All	(2) 96" T-12 to (2) 96" T-8 Lamp with Elec.	633	2	36	841,974	16	8.28
Nonresidential All	(2) U-Tube T-8 with Elec. Bal.	45	0	2	40,954	16	8.20
Nonresidential All	Screw-in Compact Fluorescent Lamp, 5-13	585	2	3	634,788	8	1.07
Nonresidential All	Screw-in Compact Fluorescent Lamp, 14-2	1,006	5	5	1,743,069	8	0.80
Nonresidential All	Screw-in Compact Fluorescent Lamp, >27	-	-	-	-	8	#DIV/0!
Nonresidential All	LED Exit Sign	75	1	3	332,878	16	2.02
Nonresidential All	2nd Gen. (1) 24" T-8 Lamp with Elec. Bal.	-	-	-	-	16	#DIV/0!
Nonresidential All	2nd Gen. (1) 36" T-8 Lamp with Elec. Bal.	-	-	-	-	16	#DIV/0!
Nonresidential All	2nd Gen. (1) 48" T-8 Lamp with Elec. Bal.	263	1	8	294,589	16	5.16
Nonresidential All	2nd Gen. (2) 48" T-8 Lamp with Elec. Bal.	1,656	4	52	2,086,768	16	4.91
Nonresidential All	2nd Gen. (3) 48" T-8 Lamp with Elec. Bal.	263	1	10	718,062	16	2.80
Nonresidential All	2nd Gen. (4) 48" T-8 Lamp with Elec. Bal.	3,759	21	149	10,263,095	16	3.03
Nonresidential All	(4) 48" T-12 to (3) 48" T-8 Lamp with Elec.	1	0	0	4,760	16	1.77
Nonresidential All	(4) 48" T-12 to (2) 48" T-8 Lamp with Elec.	-	-	-	-	16	#DIV/0!
Nonresidential All	(3) 48" T-12 to (2) 48" T-8 Lamp with Elec.	1	0	0	3,150	16	2.19
Nonresidential All	(1) 96" T-12 to (2) 48" T-8 Lamp with Elec.	64	0	3	94,089	16	5.92
Nonresidential All	(2) 96" T-12 to (4) 48" T-8 Lamp with Elec.	293	1	16	471,777	16	6.49
Nonresidential All	(1) 96" T-12 to (1) 96" T-8 Lamp with Elec.	-	-	-	-	16	#DIV/0!
Nonresidential All	(2) 96" T-12 to (2) 96" T-8 Lamp with Elec.	1,477	4	81	1,964,606	16	7.92
Nonresidential All	(2) U-Tube T-8 with Elec. Bal.	35	0	1	31,853	16	8.61
Nonresidential All	Screw-in Compact Fluorescent Lamp, 5-13	6	0	0	6,511	8	0.76
Nonresidential All	Screw-in Compact Fluorescent Lamp, 14-2	1,090	5	3	1,888,614	8	0.61
Nonresidential All	Screw-in Compact Fluorescent Lamp, >27	-	-	-	-	8	#DIV/0!
Nonresidential All	LED Exit Sign	112	1	7	497,097	16	3.11
Nonresidential All	2nd Gen. (1) 24" T-8 Lamp with Elec. Bal.	-	-	-	-	16	#DIV/0!
Nonresidential All	2nd Gen. (1) 36" T-8 Lamp with Elec. Bal.	-	-	-	-	16	#DIV/0!
Nonresidential All	2nd Gen. (1) 48" T-8 Lamp with Elec. Bal.	43	0	1	48,165	16	4.88
Nonresidential All	2nd Gen. (2) 48" T-8 Lamp with Elec. Bal.	5,187	14	164	6,536,273	16	4.95
Nonresidential All	2nd Gen. (3) 48" T-8 Lamp with Elec. Bal.	60	0	2	163,816	16	2.64
Nonresidential All	2nd Gen. (4) 48" T-8 Lamp with Elec. Bal.	1,570	9	64	4,286,528	16	3.10
Nonresidential All	(4) 48" T-12 to (3) 48" T-8 Lamp with Elec.	-	-	-	-	16	#DIV/0!
Nonresidential All	(4) 48" T-12 to (2) 48" T-8 Lamp with Elec.	68	1	2	352,275	16	1.49
Nonresidential All	(3) 48" T-12 to (2) 48" T-8 Lamp with Elec.	185	1	6	582,808	16	2.21
Nonresidential All	(1) 96" T-12 to (2) 48" T-8 Lamp with Elec.	-	-	-	-	16	#DIV/0!
Nonresidential All	(2) 96" T-12 to (4) 48" T-8 Lamp with Elec.	662	2	45	1,065,926	16	8.08
Nonresidential All	(1) 96" T-12 to (1) 96" T-8 Lamp with Elec.	-	-	-	-	16	#DIV/0!
Nonresidential All	(2) 96" T-12 to (2) 96" T-8 Lamp with Elec.	145	0	10	192,869	16	10.25
Nonresidential All	(2) U-Tube T-8 with Elec. Bal.	69	0	3	62,796	16	8.43

Technical Appendix

Table TA 3.5A
 2004 Energy Efficiency Annual Report
 SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC
 DISTRIBUTION OF SPC PAYMENTS - NONRESIDENTIAL PROGRAM AREA
 LARGE SPC
 2003

	Lighting [1,2]	HVAC [1,2]	Other [1,2]	Total [1,2]
Edison Source	\$ -	\$ -	\$ -	\$ -
Total Affiliate	\$ -	\$ -	\$ -	\$ -
ESCO 1			\$ 25,527	\$ 25,527
ESCO 2		89,337	29,113	118,450
ESCO 3			2,480	2,480
ESCO 4	17,046	77,316	95,562	189,924
ESCO 5	103,565			103,565
ESCO 6	142,540			142,540
ESCO 7		36,235		36,235
ESCO 8		3,315		3,315
ESCO 9			561,442	561,442
ESCO 10	23,729			23,729
ESCO 11	8,025	136,216		144,241
ESCO 12		3,126		3,126
ESCO 13	84,260			84,260
ESCO 14		43,663	49,381	93,044
ESCO 15	15,517			15,517
ESCO 16	62,855			62,855
ESCO 17	20,280			20,280
ESCO 18	687,148		20,692	707,840
ESCO 19			5,610	5,610
ESCO 20			119,716	119,716
ESCO 21	24,281			24,281
ESCO 22	35,723			35,723
ESCO 23	27,492			27,492
ESCO 24	39,078			39,078
ESCO 25			111,340	111,340
ESCO 26	43,187		23,145	66,332
ESCO 27	50,650			50,650
ESCO 28	19,823			19,823
ESCO 29	9,885			9,885
ESCO 30	33,566		58,189	91,755
ESCO 31			230,766	230,766
ESCO 32	8,674			8,674
ESCO 33	3,496			3,496
ESCO 34	2,250			2,250
Total ESCO	\$ 1,463,068	\$ 389,208	\$ 1,332,961	\$ 3,185,237
Customer Project 1	\$ 41,420			\$ 41,420
Customer Project 2			14,056	14,056
Customer Project 3		4,564		4,564
Customer Project 4	16,122	89,496	621	106,239
Customer Project 5	46,304		48,285	94,590
Customer Project 6			11,562	11,562
Customer Project 7			4,090	4,090
Customer Project 8			32,500	32,500
Customer Project 9	7,103		36,427	43,531
Customer Project 10	36,799		10,488	47,287
Customer Project 11	3,491			3,491
Customer Project 12			568	568

Technical Appendix

Table TA 3.5A
2004 Energy Efficiency Annual Report
SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC
DISTRIBUTION OF SPC PAYMENTS - NONRESIDENTIAL PROGRAM AREA
LARGE SPC
2003

	Lighting	[1,2]	HVAC	[1,2]	Other	[1,2]	Total	[1,2]
Customer Project 13					312,500		312,500	
Customer Project 14					3,713		3,713	
Customer Project 15	53,631						53,631	
Customer Project 16			17,000				17,000	
Customer Project 17					57,671		57,671	
Customer Project 18			69,606				69,606	
Customer Project 19			2,369				2,369	
Customer Project 20					14,548		14,548	
Customer Project 21			49,773				49,773	
Customer Project 22	164,080				199,294		363,374	
Customer Project 23					16,227		16,227	
Customer Project 24					12,615		12,615	
Customer Project 25			17,198				17,198	
Customer Project 26					11,250		11,250	
Customer Project 27					24,035		24,035	
Customer Project 28					39,766		39,766	
Customer Project 29					12,500		12,500	
Customer Project 30	21,605						21,605	
Customer Project 31			63,237		15,387		78,624	
Customer Project 32					45,002		45,002	
Customer Project 33			32,167				32,167	
Customer Project 34					82,646		82,646	
Customer Project 35					160,343		160,343	
Customer Project 36					120,473		120,473	
Customer Project 37	12,121		8,664				20,785	
Customer Project 38			101,958				101,958	
Customer Project 39	4,540						4,540	
Customer Project 40	43,697						43,697	
Customer Project 41					54,609		54,609	
Customer Project 42					8,150		8,150	
Customer Project 43					19,912		19,912	
Customer Project 44	5,396				10,604		16,000	
Customer Project 45			2,533				2,533	
Customer Project 46	13,118				1,550		14,669	
Customer Project 47	1,296				7,718		9,013	
Customer Project 48					55,000		55,000	
Customer Project 49	1,482						1,482	
Customer Project 50			74,000				74,000	
Customer Project 51	60,232						60,232	
Customer Project 52	78,637						78,637	
Customer Project 53					7,838		7,838	
Customer Project 54	1,669				1,750		3,419	
Customer Project 55					35,047		35,047	
Customer Project 56	9,493				2,304		11,797	
Customer Project 57					92,602		92,602	
Customer Project 58					11,060		11,060	
Customer Project 59					5,770		5,770	
Customer Project 60					18,250		18,250	
Customer Project 61					6,732		6,732	
Customer Project 62					4,844		4,844	
Customer Project 63	268,708						268,708	
Customer Project 64					29,809		29,809	
Customer Project 65			15,698		31,151		46,849	
Customer Project 66					51,424		51,424	
Customer Project 67	158,848				25,136		183,984	
Customer Project 68			26,422				26,422	
Customer Project 69			28,957				28,957	
Customer Project 70					20,910		20,910	
Customer Project 71					24,826		24,826	
Customer Project 72					25,095		25,095	
Customer Project 73					9,137		9,137	
Customer Project 74					16,354		16,354	

Technical Appendix

Table TA 3.5A
 2004 Energy Efficiency Annual Report
 SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC
 DISTRIBUTION OF SPC PAYMENTS - NONRESIDENTIAL PROGRAM AREA
 LARGE SPC
 2003

	Lighting	[1,2]	HVAC	[1,2]	Other	[1,2]	Total	[1,2]
Customer Project 75					43,200		43,200	
Customer Project 76			5,287				5,287	
Customer Project 77	14,005						14,005	
Customer Project 78			88,020				88,020	
Customer Project 79					10,293		10,293	
Customer Project 80	58,547		32,480		16,399		107,425	
Customer Project 81	21,129						21,129	
Customer Project 82					239,659		239,659	
Customer Project 83					232,780		232,780	
Customer Project 84					6,328		6,328	
Customer Project 85					8,121		8,121	
Customer Project 86	30,268				382,043		412,311	
Customer Project 87			14,473				14,473	
Customer Project 88			3,146		13,093		16,239	
Customer Project 89			31,265		22,006		53,271	
Customer Project 90	3,600						3,600	
Customer Project 91			7,116				7,116	
Customer Project 92	15,369						15,369	
Customer Project 93					16,808		16,808	
Customer Project 94	32,420						32,420	
Customer Project 95					17,500		17,500	
Customer Project 96					13,360		13,360	
Customer Project 97					300,000		300,000	
Customer Project 98					52,218		52,218	
Customer Project 99					6,838		6,838	
Customer Project 100	48,050				16,098		64,148	
Customer Project 101					12,033		12,033	
Customer Project 102					4,769		4,769	
Customer Project 103	95,118		16,406		9,936		121,461	
Customer Project 104					2,914		2,914	
Customer Project 105	6,946						6,946	
Customer Project 106	65,594		5,590		86,906		158,090	
Customer Project 107			8,746				8,746	
Customer Project 108					1,280		1,280	
Customer Project 109	23,862				46,029		69,891	
Customer Project 110	20,000						20,000	
Customer Project 111	43,766				33,057		76,823	
Customer Project 112					3,808		3,808	
Customer Project 113					5,172		5,172	
Customer Project 114					21,065		21,065	
Customer Project 115					34,231		34,231	
Customer Project 116					10,040		10,040	
Customer Project 117					48,643		48,643	
Customer Project 118			4,068				4,068	
Customer Project 119					18,861		18,861	
Customer Project 120			1,108				1,108	
Customer Project 121					27,886		27,886	
Customer Project 122					25,000		25,000	
Customer Project 123	24,759				132,324		157,083	
Customer Project 124					68,739		68,739	
Customer Project 125					148,825		148,825	
Customer Project 126					4,994		4,994	
Customer Project 127					39,979		39,979	
Customer Project 128					2,504		2,504	
Customer Project 129	54,573				20,489		75,062	
Customer Project 130	29,905				39,524		69,428	
Customer Project 131					11,000		11,000	
Customer Project 132					9,794		9,794	
Customer Project 133					9,947		9,947	
Customer Project 134					37,253		37,253	

Technical Appendix

Table TA 3.5A
2004 Energy Efficiency Annual Report
SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC
DISTRIBUTION OF SPC PAYMENTS - NONRESIDENTIAL PROGRAM AREA
LARGE SPC
2003

	Lighting	[1,2]	HVAC	[1,2]	Other	[1,2]	Total	[1,2]
Customer Project 135					441,536		441,536	
Customer Project 136					3,115		3,115	
Customer Project 137	2,933						2,933	
Customer Project 138					9,000		9,000	
Customer Project 139					19,438		19,438	
Customer Project 140					37,813		37,813	
Customer Project 141			138,283				138,283	
Customer Project 142					11,497		11,497	
Customer Project 143					20,278		20,278	
Customer Project 144					328,926		328,926	
Customer Project 145	3,095						3,095	
Customer Project 146					7,582		7,582	
Customer Project 147					2,750		2,750	
Customer Project 148					5,388		5,388	
Customer Project 149	15,181						15,181	
Customer Project 150	21,662						21,662	
Customer Project 151	35,678						35,678	
Customer Project 152	11,560				4,624		16,184	
Customer Project 153			6,205		14,869		21,073	
Customer Project 154			39,464				39,464	
Customer Project 155					15,588		15,588	
Customer Project 156					28,142		28,142	
Customer Project 157	8,930		22,154		168,162		199,246	
Customer Project 158			631				631	
Customer Project 159	415						415	
Customer Project 160					675		675	
Customer Project 161	8,172				5,828		14,000	
Customer Project 162	1,074						1,074	
Customer Project 163					300,000		300,000	
Customer Project 164			1,515		10,233		11,749	
Customer Project 165	70,339						70,339	
Customer Project 166					19,431		19,431	
Customer Project 167					9,606		9,606	
Customer Project 168					11,686		11,686	
Total Customer Projects	\$ 1,816,742		\$ 1,029,597		\$ 5,654,063		\$ 8,500,403	
Total Payments	\$ 3,279,810		\$ 1,418,806		\$ 6,987,024		\$ 11,685,640	

[1] Includes 110% contingent funds up to defined caps.

[2] Includes Actual and Committed Payments

Technical Appendix

Table TA 3.5B
2004 Energy Efficiency Annual Report
SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC
DISTRIBUTION OF SPC PAYMENTS - NONRESIDENTIAL PROGRAM AREA
SMALL SPC
2003

**THIS TABLE IS NOT APPLICABLE
TO THE 2003 ENERGY EFFICIENCY PROGRAMS**

Section IV - New Construction Program Area

This section contains narrative that documents and explains the data shown for Tables TA 4.1 through TA 4.5.

Table TA 4.1 Program Cost Estimates Used for Cost-Effectiveness - New Construction Program Area

This table documents those costs used in determining the cost-effectiveness of new construction energy efficiency programs. These tables provide all program costs, including costs expended in 2003 and those costs associated with commitments from 2003 programs.

Program Incentives (Recorded)

Incentive costs represent incentives paid to customers during 2003 (Actual) as well as incentives associated with commitments from the 2003 new construction programs (Committed).

Program Administrative Costs (Recorded)

These costs include all expenditures directly charged to the program with the exception of incentive costs. The administrative costs consist of labor, non-labor, contract labor, and allocated material costs (See Also Table TA 4.2). These costs represent administrative costs expended during 2003 (Actual) as well as administrative costs associated with the handling of commitments from the 2003 new construction programs (Committed).

Shareholder Incentives

Costs represented in the Shareholder Incentives column would represent an allocated amount of the total performance awards earned during a particular program year. There were no shareholder incentives authorized for 2003.

Other Costs

Costs represented in the Other Costs column represent the MA&E costs for the statewide programs. MA&E costs for the Local programs are included in the Program Administrative Costs column. Other allocated costs recorded in the Other Costs category in previous Energy Efficiency Annual Reports (e.g., General Support, Regulatory Support, CPUC Staff, and Summer Initiative Administrative) are now recorded in the Program Administrative Costs column.

Total Utility Costs

The sum of the Program Incentives (Recorded) columns, Program Administrative Costs (Recorded) columns, Shareholder Incentives, and Other costs.

Incremental Measure Costs (Net)

These costs generally represent the incremental costs of energy efficiency measures over the standard replacement measures. SCE's incremental measure costs are typically derived from the latest cost source available for the particular measure(s), including recent measure cost studies. The gross amounts of these costs are reduced by appropriate net-to-gross ratios for the particular measure or end-use. The net-to-gross ratios are consistent with the ratios utilized in SCE's November 4, 2002 Application for 2003 energy efficiency program funding.

Technical Appendix

Table TA 4.2 Direct and Allocated Administrative Costs - New Construction Program Area

This table documents the breakdown of the actual administrative costs used in determining the cost-effectiveness of new construction energy efficiency programs. These tables provide detail of all actual program administrative costs expended in 2003. These costs include the costs of Market Assessment & Evaluation for the Local Energy Efficiency Programs, regulatory support, and other energy efficiency support costs.

Labor Costs (Actual)

Labor costs consist of SCE labor charges that are directly charged to the program. These costs include salaries and expenses of SCE employees engaged in developing energy efficient marketing strategies, plans, and programs; developing program implementation procedures; reporting, monitoring, and evaluating systems. The reported costs reflect only the actual costs incurred in 2003 in support of 2003 new construction programs.

Non-Labor Costs (Actual)

Non-labor costs include materials, consultant fees, vendor contracts, and other miscellaneous costs charged directly to the program. These costs include items such as booklets, brochures, promotions, training, membership dues, postage, telephone, supplies, printing/photocopying services, and computer support services. Several programs contain a significant amount of Non-Labor administrative costs due to the use of vendor contracts in the delivery of these programs.

Contract Labor Costs (Actual)

Labor costs consist of contract employees' labor charges that are directly charged to the program. These costs include salaries and expenses of contract employees engaged in developing energy efficient marketing strategies, plans, and programs; developing program implementation procedures; reporting, monitoring, and evaluating systems.

Allocated Administrative Costs (Actual)

Allocated administrative costs represent those for building lease and maintenance costs and management oversight expenditures. In addition, the 2003 Allocated Administrative Costs (Actual) category includes costs related to systems support, regulatory support, internal audits, and other costs which are allocated to the programs. In previous years these latter costs were displayed in other sections of the Energy Efficiency Annual Report and not in this section.

Total Administrative Costs (Actual)

The summation of the aforementioned utility administrative costs - Labor, Non-labor, Contract, and Allocated Administrative costs.

Table TA 4.3 Market Effects: Projected Annual Program Energy Reductions - New Construction Program Area

The projected annual program energy reductions for the new construction program area, presented in TA 4.3, are derived from ex ante estimates of energy savings. These estimates are based upon the measure level savings data submitted in SCE's November 4, 2002 Application for 2003 Energy Efficiency Program Funding and adopted in Decision D.03-04-055. These estimates have been updated, as applicable, to correspond with the actual program implementation during 2003 and to reflect actual program results as of December 31, 2003. Recorded savings amounts reflect all 2003 program impacts, including impacts from measures installed in 2003 and those impacts associated with commitments from 2003 programs.

Inputs and assumptions for these estimates are described in this section. Projections of annual program energy reductions are developed similarly across program areas, but the specifics of each program area will be discussed in the individual sections to this Technical Appendix.

Program Energy Reduction Assumptions

Annual program energy reduction estimates for new construction programs supplied in SCE's November 4, 2002 Application for 2003 Energy Efficiency Program Funding and submitted herein as the 2003 program results are the result of a summation of measure-level savings from the measures installed or committed to be installed as a result of the 2003 new construction programs. The measure-level savings information used to calculate the 2003 program results are based upon the latest energy savings data available for the particular measure(s), including measurement studies, historical program results, and engineering estimates. The gross amounts of these costs are reduced by appropriate net-to-gross ratios for the particular measure or end-use.

The Effective Useful Life is the length of time (years) for which the load impacts of an energy efficiency measure are expected to last. The useful life estimates are also based upon the Energy Efficiency Policy Manual, adopted in Decision D.01-11-066.

Table TA 4.4 Measure Detail – New Construction Program Area

Table TA 4.4 provides measure-level detail for all of SCE's new construction energy efficiency programs with 2003 energy saving goals.

End Use & Measure Description

Detail the actual measures installed or committed to be installed as a result of the 2003 new construction programs.

Quantity (Recorded)

Derived from SCE's program tracking databases, the number of units installed or committed to be installed as a result of the 2003 new construction programs.

Total Resource Costs – Administrative Costs (Recorded)

These costs include all expenditures directly charged to the program with the exception of incentive costs. These costs represent administrative costs expended during 2003 as well as administrative costs associated with the handling of commitments from the 2003 new construction programs. The Summation of the "Total Resource Costs – Admin" and "Total Resource Costs – IMC" column values comprise the Total Resource Costs for Levelizing ("LCRC") as specified in the California Standard Practice Manual: Economic Analysis of Demand-Side Programs and Projects, October 2001.

Total Resource Costs – Incremental Measure Costs (Recorded)

These costs generally represent the incremental costs of energy efficiency measures over the standard replacement measures. SCE's incremental measure costs are typically derived from the latest cost source available for the particular measure(s), including recent measure cost studies. The gross amounts of these costs are reduced by appropriate net-to-gross ratios for the particular measure or end-use. The net-to-gross ratios are consistent with the ratios utilized in SCE's November 4, 2002 Application for 2003 energy efficiency program funding. The Summation of the "Total Resource Costs – Admin" and "Total Resource Costs – IMC" column values comprise the Total Resource Costs for Levelizing ("LCRC") as specified in the California Standard Practice Manual: Economic Analysis of Demand-Side Programs and Projects, October 2001.

Technical Appendix

Total Resource Benefits – Lifecycle kWh

Annual net kWh savings multiplied by the measure Useful Life.

Useful Life

Assumption of the useful life of the measure, used to determine the lifecycle energy savings. The useful life estimates are consistent with the ratios utilized in SCE's November 4, 2002 Application for 2003 energy efficiency program funding.

Levelized Costs

The TRC Levelized Cost, calculated pursuant to the California Standard Practice Manual: Economic Analysis of Demand-Side Programs and Projects, October 2001. These costs, represented as a cents/kWh, are calculated by the summation of the "Total Resource Costs – Admin" and "Total Resource Costs – IMC" column values which comprise the Total Resource Costs for Levelizing ("LCRC") divided by the Total Discounted Load Impacts of the Program ("IMP"). The discount rate utilized is 8.15 %, as specified in the Energy Efficiency Policy Manual, Decision D.01-11-066.

Technical Appendix

Table TA 4.1
 2004 Energy Efficiency Annual Report
 SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC
 PROGRAM COST ESTIMATES USED FOR COST-EFFECTIVENESS - NEW CONSTRUCTION PROGRAM AREA
 2003

	Program Incentives (Recorded)		Program Administrative Costs (Recorded)		Shareholder Incentives	I1	Other Costs	I2	Total Utility Costs	Incremental Measure Costs
	Actual	Committed	Actual	Committed						
Residential	\$ 111,900	\$ 4,433,560	\$ 1,294,518	\$ 202,747	\$ -		\$ 55,515		\$ 6,098,240	\$ 5,764,230
Nonresidential	459,881	4,798,365	1,457,280	1,788,640	-		245,683		8,749,849	16,192,971
New Construction Total	<u>\$ 571,781</u>	<u>\$ 9,231,925</u>	<u>\$ 2,751,799</u>	<u>\$ 1,991,387</u>	<u>\$ -</u>		<u>\$ 301,198</u>		<u>\$ 14,848,089</u>	<u>\$ 21,957,201</u>

I1 The Commission authorized no Shareholder Performance Awards in 2003
 I2 Statewide Market Assessment and Evaluation costs

Technical Appendix

Table TA 4.2
2004 Energy Efficiency Annual Report
SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC
DIRECT AND ALLOCATED ADMINISTRATIVE COSTS - NEW CONSTRUCTION PROGRAM AREA
2003

	Actual Labor	Actual Non-Labor	Actual Contract	Actual Allocated	Actual Admin Total
Residential	\$ 256,487	\$ 786,307	\$ 4,024	\$ 247,700	\$ 1,294,518
Nonresidential	525,887	378,090	118,201	435,103	1,457,280
New Construction Total	<u>\$ 782,375</u>	<u>\$ 1,164,397</u>	<u>\$ 122,225</u>	<u>\$ 682,802</u>	<u>\$ 2,751,799</u>

Technical Appendix

Table TA 4.3
 2004 Energy Efficiency Annual Report
 SUMMARY OF ENERGY EFFICIENCY PROGRAM EFFECTS: ELECTRIC
 MARKET EFFECTS: PROJECTED ANNUAL PROGRAM ENERGY REDUCTIONS - NEW CONSTRUCTION PROGRAM AREA
 2003

Residential			Nonresidential		
Year	(MM)	(MWH)	Year	(MM)	(MWH)
2003	0.008	7.148	2003	0.010	70.093
2004	0.008	7.148	2004	0.010	70.093
2005	0.008	7.148	2005	0.010	70.093
2006	0.008	7.148	2006	0.010	70.093
2007	0.008	7.148	2007	0.010	70.093
2008	0.008	7.148	2008	0.010	70.093
2009	0.008	7.148	2009	0.010	70.093
2010	0.008	7.148	2010	0.010	70.093
2011	0.008	7.148	2011	0.010	70.093
2012	0.008	7.148	2012	0.010	70.093
2013	0.008	7.148	2013	0.010	70.093
2014	0.008	7.148	2014	0.010	70.093
2015	0.008	7.148	2015	0.010	70.093
2016	0.008	7.148	2016	0.010	70.093
2017	0.008	7.148	2017	0.010	70.093
2018	0.008	7.148	2018	0.010	70.093
2019	0.008	7.148	2019	0.000	0
2020	0.008	7.148	2020	0.000	0
2021	0.000	0	2021	0.000	0
2022	0.000	0	2022	0.000	0
Total	0.008	128.667	Total	0.010	1,121.485

Technical Appendix

Table TA 4.4
2004 Energy Efficiency Annual Report
MEASURE DETAIL: ELECTRIC
NEW CONSTRUCTION PROGRAM AREA
2003

Fund Use	Measure Description	Quantity (Recorded)	Total Resource Costs (Recorded \$000)		Total Resource Benefits (Lifecycle kWh)	Useful Life	Levelized Costs (cents/kWh)
			Admin	IMC			
California Energy Star Homes Program							
Whole House - Single Family	Coastal SF (15%)	-	-	-	-	18	#DIV/0!
Whole House - Single Family	Non Coastal SF (15%)	1 879	296	1 066	31,197,413	18	8.47
Whole House - Single Family	Coastal SF (20%) (01)	28	2	22	254,016	18	18.96
Whole House - Single Family	Non Coastal SF (20%) (01)	1 395	292	1 478	30,726,864	18	11.18
Whole House - Single Family	Non Coastal SF (20%)	2 603	532	2 757	55,999,901	18	11.40
Whole House - Multi-Family	Multi-Family (20%) (01)	196	21	51	803,635	18	17.45
Whole House - Multi-Family	Multi-Family (15%)	2 169	257	390	9,685,138	18	12.97
Savings By Design							
Nonresidential Cooling	HVAC - Energy Reduction	4 164 554	104	542	37,954,180	15	3.01
Nonresidential Cooling	HVAC - Energy Reduction D&D	1 564 980	51	263	18,402,336	15	3.01
Nonresidential Lighting	Daylighting Controls	5 962 170	156	554	57,959,442	16	2.24
Nonresidential Lighting	LED Reductions	10 329 754	270	1 025	100,417,596	16	2.35
Nonresidential Lighting	Daylighting Controls R&R	-	-	-	-	16	#DIV/0!
Nonresidential Lighting	LED Reductions R&R	862 499	29	110	10,818,741	16	2.35
Nonresidential Refrigeration	Defrigration Systems	-	-	-	-	14	#DIV/0!
Nonresidential Refrigeration	Refrigeration Systems R&R	-	-	-	-	14	#DIV/0!
Nonresidential Other	Whole Buildings - Interactive	14 220 811	372	2 470	138,340,548	16	3.75
Nonresidential Other	Whole Buildings - Other	13 675 340	358	2 374	132,940,704	16	3.75
Nonresidential Other	Whole Buildings - Interactive R&R	1 203 646	41	270	15,097,913	16	3.75
Nonresidential Other	Whole Buildings - Other R&R	1 751 564	59	392	21,970,713	16	3.75
Nonresidential Other	Process Systems	-	-	-	-	20	#DIV/0!
Nonresidential Other	Process Systems R&R	-	-	-	-	20	#DIV/0!
Nonresidential Other	Boilers (Gas)	-	-	-	-	20	#DIV/0!
Nonresidential Other	Boilers R&R (Gas)	-	-	-	-	20	#DIV/0!
Nonresidential Other	Industrial	35 394 131	1 614	7 320	652,074,584	20	2.82
Nonresidential Other	Industrial R&R	4 217 940	192	872	77,708,123	20	2.82

Section V - Crosscutting Program Area

This section contains narrative that documents and explains the data shown for Tables TA 5.1 through TA 5.5.

Table TA 5.1 Program Cost Estimates Used for Cost-Effectiveness - Crosscutting Program Area

This table documents those costs used in determining the cost-effectiveness of crosscutting energy efficiency programs. These tables provide all program costs, including costs expended in 2003 and those costs associated with commitments from 2003 programs.

Program Incentives (Recorded)

Incentive costs represent incentives paid to customers during 2003 (Actual) as well as incentives associated with commitments from the 2003 crosscutting programs (Committed).

Program Administrative Costs (Recorded)

These costs include all expenditures directly charged to the program with the exception of incentive costs. The administrative costs consist of labor, non-labor, contract labor, and allocated material costs (See Also Table TA 5.2). These costs represent administrative costs expended during 2003 (Actual) as well as administrative costs associated with the handling of commitments from the 2003 crosscutting programs (Committed).

Shareholder Incentives

Costs represented in the Shareholder Incentives column would represent an allocated amount of the total performance awards earned during a particular program year. There were no shareholder incentives authorized for 2003.

Other Costs

Costs represented in the Other Costs column represent the MA&E costs for the statewide programs. MA&E costs for the Local programs are included in the Program Administrative Costs column. Other allocated costs recorded in the Other Costs category in previous Energy Efficiency Annual Reports (e.g., General Support, Regulatory Support, CPUC Staff, and Summer Initiative Administrative) are now recorded in the Program Administrative Costs column.

Total Utility Costs

The sum of the Program Incentives (Recorded) columns, Program Administrative Costs (Recorded) columns, Shareholder Incentives, and Other costs.

Incremental Measure Costs (Net)

These costs generally represent the incremental costs of energy efficiency measures over the standard replacement measures. SCE's incremental measure costs are typically derived from the latest cost source available for the particular measure(s), including recent measure cost studies. The gross amounts of these costs are reduced by appropriate net-to-gross ratios for the particular measure or end-use. The net-to-gross ratios are consistent with the ratios utilized in SCE's November 4, 2002 Application for 2003 energy efficiency program funding.

Technical Appendix

**Table TA 5.2 Direct and Allocated Administrative Costs -
Crosscutting Program Area**

This table documents the breakdown of the actual administrative costs used in determining the cost-effectiveness of crosscutting energy efficiency programs. These tables provide detail of all actual program administrative costs expended in 2003. These costs include the costs of Market Assessment & Evaluation for the Local Energy Efficiency Programs, regulatory support, and other energy efficiency support costs.

Labor Costs (Actual)

Labor costs consist of SCE labor charges that are directly charged to the program. These costs include salaries and expenses of SCE employees engaged in developing energy efficient marketing strategies, plans, and programs; developing program implementation procedures; reporting, monitoring, and evaluating systems. The reported costs reflect only the actual costs incurred in 2003 in support of 2003 crosscutting programs.

Non-Labor Costs (Actual)

Non-labor costs include materials, consultant fees, vendor contracts, and other miscellaneous costs charged directly to the program. These costs include items such as booklets, brochures, promotions, training, membership dues, postage, telephone, supplies, printing/photocopying services, and computer support services. Several programs contain a significant amount of Non-Labor administrative costs due to the use of vendor contracts in the delivery of these programs.

Contract Labor Costs (Actual)

Labor costs consist of contract employees' labor charges that are directly charged to the program. These costs include salaries and expenses of contract employees engaged in developing energy efficient marketing strategies, plans, and programs; developing program implementation procedures; reporting, monitoring, and evaluating systems.

Allocated Administrative Costs (Actual)

Allocated administrative costs represent those for building lease and maintenance costs and management oversight expenditures. In addition, the 2003 Allocated Administrative Costs (Actual) category includes costs related to systems support, regulatory support, internal audits, and other costs which are allocated to the programs. In previous years these latter costs were displayed in other sections of the Energy Efficiency Annual Report and not in this section.

Total Administrative Costs (Actual)

The summation of the aforementioned utility administrative costs - Labor, Non-labor, Contract, and Allocated Administrative costs.

Table TA 5.3 Market Effects: Projected Annual Program Energy Reductions - Crosscutting Program Area

The projected annual program energy reductions for the crosscutting program area, presented in TA 4.3, are derived from ex ante estimates of energy savings. These estimates are based upon the measure level savings data submitted in SCE's November 4, 2002 Application for 2003 Energy Efficiency Program Funding and adopted in Decision D.03-04-055. These estimates have been updated, as applicable, to correspond with the actual program implementation during 2003 and to reflect actual program results as of December 31, 2003. Recorded savings amounts reflect all 2003 program impacts, including impacts from measures installed in 2003 and those impacts associated with commitments from 2003 programs.

Inputs and assumptions for these estimates are described in this section. Projections of annual program energy reductions are developed similarly across program areas, but the specifics of each program area will be discussed in the individual sections to this Technical Appendix.

Program Energy Reduction Assumptions

Annual program energy reduction estimates for crosscutting programs supplied in the November 4, 2002 Application for 2003 Energy Efficiency Program Funding and submitted herein as the 2003 program results are the result of a summation of measure-level savings from the measures installed or committed to be installed as a result of the 2003 crosscutting programs. The measure-level savings information used to calculate the 2003 program results are based upon the latest energy savings data available for the particular measure(s), including measurement studies, historical program results, and engineering estimates. The gross amounts of these costs are reduced by appropriate net-to-gross ratios for the particular measure or end-use.

The Effective Useful Life is the length of time (years) for which the load impacts of an energy efficiency measure are expected to last. The useful life estimates are also based upon the Energy Efficiency Policy Manual, adopted in Decision D.01-11-066.

Table TA 5.4 Measure Detail – Crosscutting Program Area

Table TA 5.4 provides measure-level detail for all of SCE's crosscutting energy efficiency programs with 2003 energy saving goals.

End Use & Measure Description

Detail the actual measures installed or committed to be installed as a result of the 2003 crosscutting programs.

Quantity (Recorded)

Derived from SCE's program tracking databases, the number of units installed or committed to be installed as a result of the 2003 crosscutting programs.

Total Resource Costs – Administrative Costs (Recorded)

These costs include all expenditures directly charged to the program with the exception of incentive costs. These costs represent administrative costs expended during 2003 as well as administrative costs associated with the handling of commitments from the 2003 crosscutting programs. The Summation of the "Total Resource Costs – Admin" and "Total Resource Costs – IMC" column values comprise the Total Resource Costs for Levelizing ("LCRC") as specified in the California Standard Practice Manual: Economic Analysis of Demand-Side Programs and Projects, October 2001.

Total Resource Costs – Incremental Measure Costs (Recorded)

Technical Appendix

These costs generally represent the incremental costs of energy efficiency measures over the standard replacement measures. SCE's incremental measure costs are typically derived from the latest cost source available for the particular measure(s), including recent measure cost studies. The gross amounts of these costs are reduced by appropriate net-to-gross ratios for the particular measure or end-use. The net-to-gross ratios are consistent with the ratios utilized in SCE's November 4, 2002 Application for 2003 energy efficiency program funding. The Summation of the "Total Resource Costs - Admin" and "Total Resource Costs - IMC" column values comprise the Total Resource Costs for Levelizing ("LCRC") as specified in the California Standard Practice Manual: Economic Analysis of Demand-Side Programs and Projects, October 2001.

Total Resource Benefits - Lifecycle kWh

Annual net kWh savings multiplied by the measure Useful Life.

Useful Life

Assumption of the useful life of the measure, used to determine the lifecycle energy savings. The useful life estimates are consistent with the ratios utilized in SCE's November 4, 2002 Application for 2003 energy efficiency program funding.

Levelized Costs

The TRC Levelized Cost, calculated pursuant to the California Standard Practice Manual: Economic Analysis of Demand-Side Programs and Projects, October 2001. These costs, represented as a cents/kWh, are calculated by the summation of the "Total Resource Costs - Admin" and "Total Resource Costs - IMC" column values which comprise the Total Resource Costs for Levelizing ("LCRC") divided by the Total Discounted Load Impacts of the Program ("IMP"). The discount rate utilized is 8.15 %, as specified in the Energy Efficiency Policy Manual, Decision D.01-11-066.

Technical Appendix

Table TA 5.1
 2004 Energy Efficiency Annual Report
 SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC
 PROGRAM COST ESTIMATES USED FOR COST-EFFECTIVENESS - CROSSCUTTING PROGRAM AREA
 2003

	Program Incentives (Recorded)		Program Administrative Costs (Recorded)		Shareholder Incentives [1]	Other Costs [2]	Total Utility Costs	Incremental Measure Costs
	Actual	Committed	Actual	Committed				
Information	\$ -	\$ -	\$ 5,488,419	\$ 92,863	\$ -	\$ 61,565	\$ 5,642,847	\$ -
FMS	-	-	-	-	-	-	-	-
EEI								
SPCs	-	-	-	-	-	-	-	-
Rebates	-	-	-	-	-	-	-	-
Incentives	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-
Instream Programs								
Information	-	-	1,624,224	1,797,848	-	79,837	3,501,909	-
Financial Assistance	1,673,919	36,428	256,365	3,306	-	125,352	2,095,369	7,266,175
Crosscutting Total	<u>\$ 1,673,919</u>	<u>\$ 36,428</u>	<u>\$ 7,369,008</u>	<u>\$ 1,894,017</u>	<u>\$ -</u>	<u>\$ 266,753</u>	<u>\$ 11,240,125</u>	<u>\$ 7,266,175</u>

[1] The Commission authorized no Shareholder Performance Awards in 2003.

[2] Statewide Market Assessment and Evaluation costs.

Technical Appendix

Table TA 5.2
 2004 Energy Efficiency Annual Report
 SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC
 DIRECT AND ALLOCATED ADMINISTRATIVE COSTS - CROSSCUTTING PROGRAM AREA
 2003

	Actual Labor	Actual Non-Labor	Actual Contract	Actual Allocated	Actual Admin Total
Information	\$ 2,757,131	\$ 2,191,308	\$ 191,409	\$ 348,571	\$ 5,488,419
EMS	-	-	-	-	-
EEl					
SPCs	-	-	-	-	-
Rebates	-	-	-	-	-
Loans	-	-	-	-	-
Other	-	-	-	-	-
Upstream Programs					
Information	238,025	1,206,276	2,370	177,554	1,624,224
Financial Assistance	68,099	91,734	-	96,532	256,365
Crosscutting Total	<u>\$ 3,063,255</u>	<u>\$ 3,489,317</u>	<u>\$ 193,778</u>	<u>\$ 622,657</u>	<u>\$ 7,369,008</u>

Technical Appendix

Table TA 5.3
 2004 Energy Efficiency Annual Report
 SUMMARY OF ENERGY EFFICIENCY PROGRAM EFFECTS: ELECTRIC
 MARKET EFFECTS: PROJECTED ANNUAL PROGRAM ENERGY REDUCTIONS - CROSSCUTTING PROGRAM AREA
 2003

Information	FMS			FFI					
	Year	(MW)	(MWH)	Year	(MW)	(MWH)	SPCs Year	(MW)	(MWH)
2003	0.000	0		2003	0.000	0	2003	0.000	0
2004	0.000	0		2004	0.000	0	2004	0.000	0
2005	0.000	0		2005	0.000	0	2005	0.000	0
2006	0.000	0		2006	0.000	0	2006	0.000	0
2007	0.000	0		2007	0.000	0	2007	0.000	0
2008	0.000	0		2008	0.000	0	2008	0.000	0
2009	0.000	0		2009	0.000	0	2009	0.000	0
2010	0.000	0		2010	0.000	0	2010	0.000	0
2011	0.000	0		2011	0.000	0	2011	0.000	0
2012	0.000	0		2012	0.000	0	2012	0.000	0
2013	0.000	0		2013	0.000	0	2013	0.000	0
2014	0.000	0		2014	0.000	0	2014	0.000	0
2015	0.000	0		2015	0.000	0	2015	0.000	0
2016	0.000	0		2016	0.000	0	2016	0.000	0
2017	0.000	0		2017	0.000	0	2017	0.000	0
2018	0.000	0		2018	0.000	0	2018	0.000	0
2019	0.000	0		2019	0.000	0	2019	0.000	0
2020	0.000	0		2020	0.000	0	2020	0.000	0
2021	0.000	0		2021	0.000	0	2021	0.000	0
2022	0.000	0		2022	0.000	0	2022	0.000	0
Total	0.000	0		Total	0.000	0	Total	0.000	0

EEl	Rebates			EEl			EEl		
	Year	(MW)	(MWH)	Year	(MW)	(MWH)	Year	(MW)	(MWH)
2003	0.000	0		2003	0.000	0	2003	0.000	0
2004	0.000	0		2004	0.000	0	2004	0.000	0
2005	0.000	0		2005	0.000	0	2005	0.000	0
2006	0.000	0		2006	0.000	0	2006	0.000	0
2007	0.000	0		2007	0.000	0	2007	0.000	0
2008	0.000	0		2008	0.000	0	2008	0.000	0
2009	0.000	0		2009	0.000	0	2009	0.000	0
2010	0.000	0		2010	0.000	0	2010	0.000	0
2011	0.000	0		2011	0.000	0	2011	0.000	0
2012	0.000	0		2012	0.000	0	2012	0.000	0
2013	0.000	0		2013	0.000	0	2013	0.000	0
2014	0.000	0		2014	0.000	0	2014	0.000	0
2015	0.000	0		2015	0.000	0	2015	0.000	0
2016	0.000	0		2016	0.000	0	2016	0.000	0
2017	0.000	0		2017	0.000	0	2017	0.000	0
2018	0.000	0		2018	0.000	0	2018	0.000	0
2019	0.000	0		2019	0.000	0	2019	0.000	0
2020	0.000	0		2020	0.000	0	2020	0.000	0
2021	0.000	0		2021	0.000	0	2021	0.000	0
2022	0.000	0		2022	0.000	0	2022	0.000	0
Total	0.000	0		Total	0.000	0	Total	0.000	0

Technical Appendix

Table TA 5.3
 2004 Energy Efficiency Annual Report
 SUMMARY OF ENERGY EFFICIENCY PROGRAM EFFECTS: ELECTRIC
 MARKET EFFECTS: PROJECTED ANNUAL PROGRAM ENERGY REDUCTIONS - CROSSCUTTING PROGRAM AREA
 2003

Upstream Programs Information			Upstream Programs Financial Assistance		
Year	(MW)	(MWH)	Year	(MW)	(MWH)
2003	0.000	0	2003	0.006	41,255
2004	0.000	0	2004	0.006	41,255
2005	0.000	0	2005	0.006	41,255
2006	0.000	0	2006	0.006	41,255
2007	0.000	0	2007	0.006	41,255
2008	0.000	0	2008	0.006	41,255
2009	0.000	0	2009	0.006	41,255
2010	0.000	0	2010	0.006	41,255
2011	0.000	0	2011	0.006	41,255
2012	0.000	0	2012	0.006	41,255
2013	0.000	0	2013	0.006	41,255
2014	0.000	0	2014	0.006	41,255
2015	0.000	0	2015	0.000	0
2016	0.000	0	2016	0.000	0
2017	0.000	0	2017	0.000	0
2018	0.000	0	2018	0.000	0
2019	0.000	0	2019	0.000	0
2020	0.000	0	2020	0.000	0
2021	0.000	0	2021	0.000	0
2022	0.000	0	2022	0.000	0
Total	0.000	0	Total	0.006	495,063

Technical Appendix

Table TA 5.4
2004 Energy Efficiency Annual Report
MEASURE DETAIL: ELECTRIC
CROSSCUTTING PROGRAM AREA
2003

End Use	Measure Description	Quantity (Recorded)	Total Resource Costs (Recorded, \$000)		Total Resource Benefits (liters/cycle kWh)	Useful Life	Levelized Costs (cents/kWh)
			Admin	IMC			
Residential Upstream Lighting							
Lighting	Screw-in CFL < 13 Watt (800 lumens or >)	262,856	42	1,851	65,304,786	9	4.20
Lighting	Screw-in CFL 14 Watt	16,000	2	113	3,827,866	9	4.36
Lighting	Screw-in CFLs 15 Watt	176,418	26	1,242	40,583,197	9	4.53
Lighting	Screw-in CFL < 16 Watt	-	-	-	-	9	#DIV/0!
Lighting	Screw-in CFL < 17 Watt	-	-	-	-	9	#DIV/0!
Lighting	Screw-in CFLs 18 Watt	240	0	2	70,668	9	3.56
Lighting	Screw-in CFL 18.1 Watt (>=1100 lumens)	1,056	0	7	408,109	9	2.73
Lighting	Screw-in CFL < 19 Watt	867	0	6	327,089	9	2.80
Lighting	Screw-in CFL 20 Watt (01-04)	169,646	40	1,194	62,440,585	9	2.87
Lighting	Screw-in CFL 20 Watt (04)	182	0	1	66,988	9	2.87
Lighting	Screw-in CFL < 21 Watt	-	-	-	-	9	#DIV/0!
Lighting	Screw-in CFL < 22 Watt	200	0	1	69,932	9	3.01
Lighting	Screw-in CFLs 23 Watt	28,638	6	202	9,750,071	9	3.09
Lighting	Screw-in CFL < 24 Watt	-	-	-	-	9	#DIV/0!
Lighting	Screw-in CFL 25 Watt	302,336	90	2,128	139,098,747	9	2.31
Lighting	Screw-in CFLs 26 Watt	13,620	4	96	6,140,964	9	2.36
Lighting	Screw-in CFL < 27 Watt	-	-	-	-	9	#DIV/0!
Lighting	Screw-in CFL < 28 Watt	160	0	1	69,196	9	2.45
Lighting	Screw-in CFL 29 Watt	-	-	-	-	9	#DIV/0!
Lighting	Screw-in CFL < 30 Watt	-	-	-	-	9	#DIV/0!
Lighting	Screw-in CFL 32 Watt	-	-	-	-	9	#DIV/0!
Lighting	Screw-in CFL < 34 Watt	-	-	-	-	9	#DIV/0!
Lighting	Screw-in CFL < 36 Watt	50	0	0	29,445	9	2.06
Lighting	Screw-in CFL < 38 Watt	-	-	-	-	9	#DIV/0!
Lighting	Screw-in CFL < 40 Watt	100	0	1	101,218	9	1.24
Lighting	Screw-in CFLs 42 Watt	-	-	-	-	9	#DIV/0!
Lighting	Screw-in CFL < 45 Watt	-	-	-	-	9	#DIV/0!
Lighting	Screw-in CFL < 55 Watt	-	-	-	-	9	#DIV/0!
Lighting	Indoor Hardwired Fixtures 7 Watt	-	-	-	-	20	#DIV/0!
Lighting	Indoor Hardwired Fixtures 11 Watt	-	-	-	-	20	#DIV/0!
Lighting	Indoor Hardwired Fixtures 13 Watt	-	-	-	-	20	#DIV/0!
Lighting	Indoor Hardwired Fixtures 16 Watt	-	-	-	-	20	#DIV/0!
Lighting	Indoor Hardwired Fixtures 18 Watt	-	-	-	-	20	#DIV/0!
Lighting	Indoor Hardwired Fixtures 20 Watt	-	-	-	-	20	#DIV/0!
Lighting	Indoor Hardwired Fixtures 21 Watt	-	-	-	-	20	#DIV/0!
Lighting	Indoor Hardwired Fixtures 22 Watt	1,124	0	29	873,375	20	6.89
Lighting	Indoor Hardwired Fixtures 25 Watt	-	-	-	-	20	#DIV/0!
Lighting	Indoor Hardwired Fixtures 30 Watt	5,237	4	134	7,496,032	20	3.79
Lighting	Indoor Hardwired Fixtures 32 Watt	65	0	2	156,836	20	2.29
Lighting	Indoor Hardwired Fixtures 40 Watt	182	0	5	521,015	20	1.94
Lighting	Indoor Hardwired Fixtures 54 Watt	72	0	2	214,949	20	1.87
Lighting	Indoor Hardwired Fixtures 55 Watt	-	-	-	-	20	#DIV/0!
Lighting	Indoor Hardwired Fixtures 64 Watt	321	0	8	892,678	20	2.00
Lighting	Retail - Torchiere Floor Lamps 55 Watts (Q)	216	0	4	268,319	9	2.24
Lighting	Retail - Torchiere Floor Lamps 55 Watts (Q)	54	0	1	67,080	9	2.24
Lighting	Torchiere Floor Lamp 63 Watt	-	-	-	-	9	#DIV/0!
Lighting	Torchiere Floor Lamp 65 Watt	-	-	-	-	9	#DIV/0!
Lighting	Retail - Torchiere Floor Lamps 70 Watts	40	0	1	44,168	9	3.88
Lighting	Outdoor CFL < Fixtures 7 Watt	-	-	-	-	20	#DIV/0!
Lighting	Outdoor CFL < Fixtures 11 Watt	-	-	-	-	20	#DIV/0!
Lighting	Outdoor CFLs Fixtures Flood 13 Watt	-	-	-	-	20	#DIV/0!
Lighting	Outdoor CFL < Fixtures 16 Watt	-	-	-	-	20	#DIV/0!
Lighting	Outdoor CFL < Fixtures 18 Watt	5,000	5	52	10,012,800	20	1.17
Lighting	Outdoor CFL < Fixtures 20 Watt	1,488	2	15	3,902,131	20	0.92
Lighting	Outdoor CFLs Fixtures 25 Watt	-	-	-	-	20	#DIV/0!
Lighting	Outdoor CFLs Fixtures Flood 26 Watt	90	0	1	210,269	20	1.44
Lighting	Outdoor CFL < Fixtures 32 Watt	-	-	-	-	20	#DIV/0!
Lighting	Outdoor CFLs Fixtures 55 Watt	-	-	-	-	20	#DIV/0!
Lighting	Outdoor CFL < Fixtures 65 Watt	10,945	35	166	70,450,776	20	0.59
Lighting	Outdoor CFL < Fixtures 70 Watt	-	-	-	-	20	#DIV/0!
Lighting	Energ Star Ceiling Fan w/ CFL	-	-	-	-	15	#DIV/0!

Section VI - MA&E and Regulatory Oversight; Annotated Bibliography

All of the reports listed below are available on the website of the California Measurement Advisory Council (CALMAC), in the Searchable Database at www.calmac.org.

ENERGY DESIGN RESOURCES EVALUATION

OPINION DYNAMICS MARCH 2003

This report offers an evaluation of the SCE Energy Design Resources (EDR) Program. The EDR Program, under the auspices of the Savings By Design Program, offers a suite of tools to educate architects, engineers, lighting designers, developers, etc., about design techniques and technologies that contribute to energyefficient new construction. The results of this study indicate which tools are the most utilized, and which of the tools currently offered are of the most interest to each of the target market actor groups.

CALIFORNIA SUMMARY STUDY OF 2001 ENERGY EFFICIENCY PROGRAMS

GLOBAL ENERGY PARTNERS MARCH 2003

Summary of the cost and savings impact of California's energy efficiency programs in 2001, both at the aggregate statewide level and program level. Assessment of program documentation and evaluation practices and recommendations for standard statewide protocols.

1999-2001 BUILDING EFFICIENCY ASSESSMENT (BEA) STUDY: AN EVALUATION OF THE SAVINGS BY DESIGN PROGRAM

RLW ANALYTICS APRIL 2003

This document is the final report for the Building Efficiency Assessment (BEA) study for the statewide Non-Residential New Construction (NRNC) program area, covering program years 1999-2001. The report contains summary results for both program participants of Savings By Design (SBD) and program non-participants. Savings By Design is the statewide NRNC energy efficiency program administered by the California investor-owned utilities. The study presents gross and net energy and demand impact estimates of the Savings By Design program, as well as energy efficiency estimates of comparable non-participants. The evaluation is based on DOE-2 engineering models that are informed by detailed onsite audits and statistically projected to the program population, as well as by surveys with the building owners and design teams regarding the energy design choices made for these buildings. The study also includes a process evaluation of the SBD program from the perspective of the program participants.

Technical Appendix

MEASUREMENT AND EVALUATION OF THREE 2002 PROGRAMS:

- 1. SDG&E NONRESIDENTIAL SMALL BUSINESS ENERGY ASSESSMENT**
- 2. SDG&E NONRESIDENTIAL RETROFIT EZ TURNKEY**
- 3. SCE SMALL NONRESIDENTIAL HARD TO REACH LIGHTING RETROFIT**

**QUANTEC, LLC
JULY 2003**

This project was managed by SDG&E and will be reported by SDG&E. It is included in this list because the evaluation of the SCE program included in the study was funded by SCE local program funds. This study provided a process and an impact evaluation for the three programs that provide energy savings opportunities to economically disadvantaged, small, hard-to-reach nonresidential customers through energy assessments and installation of free energy-saving measures, primarily lighting.

NONRESIDENTIAL NEW CONSTRUCTION MARKET CHARACTERIZATION AND PROGRAM ACTIVITIES TRACKING REPORT PY2002

**QUANTUM CONSULTING
AUGUST 2003**

The on-going statewide Market Characterization and Program Activity Tracking (MCPAT) Study tracks trends in the nonresidential new construction (NRNC) Market, as well as participation in the Savings By Design statewide NRNC Program. 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. The study results may lead to program modifications 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 PY2002.

2002 LOCAL CODES & STANDARDS PROGRAM EVALUATION RLW ANALYTICS

SEPTEMBER 2003

The evaluation of this very small program confirmed presentation of a high-performance schools training seminar offered through the program, summarized participant response to the seminar, and assessed the seminar training materials.

CALIFORNIA RESIDENTIAL EFFICIENCY MARKET SHARE TRACKING: HVAC 2002

**ITRON, INC.
SEPTEMBER 2003**

This report is part of the California Residential Market Share Tracking project (RMST), which includes examinations of appliances, HVAC equipment, lamps, and new construction. The objective of each report is to present the market share of high efficiency products as well as average efficiencies of the examined groups of products over time within the California residential market. The biannual executive summaries, which contain midyear updates, are published in the interim six- month period. This report presents the results for three types of HVAC equipment: Central Air Conditioners (CAC), Air-Source Heat Pumps (HP) and Central Gas Furnaces (FUR) from 1999 through 2002. This report also contains general market information as well as estimates and analysis of HVAC equipment installed in newly constructed homes throughout California. The information from the new construction portion of the RMST also allows for analysis that estimates the average efficiencies of the retrofit/replacement market for central air conditioners and central gas furnaces. Additionally, efficiency standards information is also included for each type of HVAC equipment examined, including federal energy use standards, national ENERGY STAR® program standards, and California efficiency standards.

EVALUATION OF SOUTHERN CALIFORNIA EDISON'S PY2002 LOCAL GOVERNMENT INITIATIVE PROGRAM

**WIRTSCHAFTER ASSOCIATES
NOVEMBER 2003**

This evaluation examined responses to the LGI effort, gathering feedback both on current program offerings as well as soliciting input for future program direction. The approach used in this research consisted primarily of gathering data from officials of target jurisdictions, supplemented with information from program staff, program advisors, local builders, and local small businesses. Topics addressed in the research included experiences with the program operations and market response, satisfaction levels and drivers of satisfaction, program-specific recommendations, and general recommendations for collaboration between SCE and the jurisdictions on energy efficiency activities. This research found areas of opportunity for the LGI program which merit further effort. Collaboration with local government officials is a useful adjunct to the direct utility to consumer approach used in most programs, and leverages the influence of some useful partners who share some similar efficiency goals. The information SCE collected suggests that much greater success is possible for the LGI program, but that some important modifications will need to be instituted.

Technical Appendix

SOUTHERN CALIFORNIA EDISON COMPANY'S EVALUATION, MEASUREMENT AND VERIFICATION OF THE 2002 PUMP TEST AND HYDRAULIC SERVICES PROGRAM

**RIDGE & ASSOCIATES
NOVEMBER 2003**

This report provides results on verification of the 2002 program and recommendations for improvement of program process and impact estimates. The program exceeded the stated goals for pump tests and energy efficiency contacts. The evaluation found that 41% of program participants made changes to improve their pumping systems. Average customer satisfaction can be improved by shortening the turn-around times. Program outreach seems to be reaching its customers.

EVALUATION OF THE 2002 STATEWIDE EDUCATION, TRAINING AND SERVICES PROGRAM

**KEMA-XENERGY, INC.
DECEMBER 2003**

The report provides an overview of the results of the evaluation of the 2002 Statewide Education, Training and Services Program, sponsored by Southern California Edison, Pacific Gas and Electric Company, Southern California Gas Company, and San Diego Gas and Electric Company. The overall study objective was to evaluate program performance and effectiveness at achieving program objectives as well as provide feedback and corrective guidance. The evaluation assessed the program's effectiveness at increasing the adoption of energy-efficiency measures and inducing behavioral changes. First, program theory was tested by assessing linkages between attendance at program's seminars, and reduction of the relevant market barriers. Next, the evaluators assessed whether it was evident that market barriers were reduced as a result of attending the program's seminars. Finally, the program's effects on changes in participant behavior with regard to energy efficiency were assessed. Study results indicated that the program's seminars in theory are effective in reducing the relevant market barriers, including information costs, performance uncertainty, and information asymmetry. Results also provided evidence that the program reduced relevant market barriers for the majority of its attendees, resulting in changes in behavior for well over half of participants. Recommendations for improving program performance are provided.

EVALUATION OF THE 2002 CALIFORNIA STATEWIDE EMERGING TECHNOLOGIES PROGRAM

RIDGE & ASSOCIATES DECEMBER 2003

The evaluation entailed a process evaluation that examined key program activities occurring in 2002, while reinforcing the notion that the various products developed, implemented, and evaluated by the Emerging Technologies Program (ETP), typically require more than a single year to complete. In addition, the evaluation measures some elements of program effectiveness by examining program inputs and includes a verification of established program goals. The ETP is a statewide information-only program that seeks to accelerate the introduction of energy efficient technologies, applications, and analytical tools that are not widely adopted in California. The ETP covers a wide range of end uses, from HVAC to lighting to manufacturing processes. Within 2002, there were eleven projects completed. Over half of the completed projects were described as having been transferred to an energy efficiency incentive program or an information program. Only one of the eleven completed projects was not recommended as worth pursuing. With respect to sectors, 74 percent of the ETP projects cover the commercial sector while 36 percent cover the industrial sector. The evaluation report also provides recommendations that could be used to improve future programs.

ENERGY DESIGN RESOURCES 2003 EVALUATION

OPINION DYNAMICS DECEMBER 2003

Energy Design Resources (EDR) offers a variety of energy design tools and resources that make it easier to design and build energy efficient commercial and industrial buildings in California. These resources include the EDR web site (www.energydesignresources.com), software, training program and associated reference material. The goal of the EDR effort is to educate architects, engineers, lighting designers, and developers about techniques and technologies that contribute to energy efficient new construction. The primary study objective was to determine the level of usage of the energy design resources. This study consists of an examination of who uses the tools, how the tools are used, and the extent to which they are used. Additionally, the study will investigate the usefulness of the tools among designers who may not be actively using the tools. Implicit in this research is an investigation of who is not using the tools and why they are not using the tools.

Section VII - Shareholder Performance Incentives

This section is not applicable for the 2003 Energy Efficiency Program Year.

There were no shareholder performance incentives authorized by the California Public Utilities Commission for 2003 Energy Efficiency Programs.

Section VIII - Summer Initiative

This section is not applicable for the 2003 Energy Efficiency Program Year.

There were no Summer Initiative Program activities continued in 2003.

Section IX - Balancing Accounts for Post-1997 Energy Efficiency Activities and Non-IOU Payment Information

This section contains narrative that documents and explains the data shown for Table TA 9.1 through TA 9.3.

Table TA 9.1 Demand-Side Balancing Accounts

The balancing accounts described in Table TA 9.1 were authorized in Decision 97-12-103, the Interim Opinion on 1998 Utility Energy Efficiency Programs, and recently updated pursuant to Resolution E-3792.

In Decision 97-12-103, Ordering Paragraph 13, the Commission stated the following:

In Phase 1, before the CBEE has legal authority to receive funds, the utilities will continue to administer and implement 1998 energy efficiency programs and incur expenses associated with pre-1998 commitments. Procedures will be set up to track funds and expenditures associated with 1998 activities and pre-1998 commitments, and two balancing accounts will be created. The existing demand-side management balancing accounting will be maintained in one account, with unspent pre-1998 balancing account funds and expenditures associated with pre-1998 commitments (such as pre-1998 bidding program obligations) reflected in this account. No PGC moneys will be credited to the demand-side management balancing account; rather, a second new account will be established to track PGC funds that are allocable to the allowed 1998 energy efficiency programs, operating costs of the CBEE and the funds directed by the CBEE to a new administrator.

In Resolution E-3792 (as corrected by Resolution E-3807), Ordering Paragraph 1, the Commission stated the following:

Edison, PG&E, and SDG&E are directed to collect and track program funds, along with interest earned on collected funds, as specified in this Resolution, in separate balancing accounts. This tracking will begin with customer billings on January 1, 2002 forward.

Technical Appendix

Table TA 9.2 Non-IOU Payments - 2003

SCE administers 15 programs which are implemented by non-utilities in California. All of the non-utility programs were chosen by the Commission in a 2002 solicitation. The budgets and payments made in 2003 by SCE in the administration of these programs are included in TA 9.2.

Budget

The budget reflects an aggregation of the 2003 budget for activities performed by Non-utility implementers in all utility service territories supported by the program and may support both electric and gas activities.

Payments

Payments owed to non-IOU implementers for work performed from inception to 12/31/03.

Table TA 9.3 Direct and Allocated Administrative Costs – Utility Administration of Non-IOU Programs

This table documents the breakdown of the actual administrative costs used in the non-utility energy efficiency programs. These tables provide detail of all actual program administrative costs expended in 2003. These costs are representative of the utility administrative costs only. No administrative costs on the part of other parties are included in these administrative costs.

Labor Costs (Actual)

Labor costs consist of SCE labor charges that are directly charged to the program. These costs include salaries and expenses of SCE employees engaged in developing energy efficient marketing strategies, plans, and programs; developing program implementation procedures; reporting, monitoring, and evaluating systems. The reported costs reflect only the actual costs incurred in 2003 in support of 2003 non-utility programs.

Non-Labor Costs (Actual)

Non-labor costs include materials, consultant fees, vendor contracts, and other miscellaneous costs charged directly to the program. These costs include items such as booklets, brochures, promotions, training, membership dues, postage, telephone, supplies, printing/photocopying services, and computer support services.

Contract Labor Costs (Actual)

Labor costs consist of contract employees' labor charges that are directly charged to the program. These costs include salaries and expenses of contract employees engaged in developing energy efficient marketing strategies, plans, and programs; developing program implementation procedures; reporting, monitoring, and evaluating systems.

Allocated Administrative Costs (Actual)

Allocated administrative costs represent those for building lease and maintenance costs and management oversight expenditures.

Total Administrative Costs (Actual)

The summation of the aforementioned utility administrative costs - Labor, Non-labor, Contract, and Allocated Administrative costs.

Technical Appendix

Table TA 9.1
2004 Energy Efficiency Annual Report
SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC
PUBLIC PURPOSE PROGRAM BALANCING ACCOUNTS
2003

Balancing Account	Description	Authorized by
Public Purpose Programs Adjustment Mechanism (PPPAM)	Records Public Goods Charge Expenses authorized in P.U. Code 399.8.	Decision D.97-12-103; Resolution E-3792

Technical Appendix

Table TA 9.2
2004 Energy Efficiency Annual Report
SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC
NON-IOU PAYMENTS
2003

Non-IOU Implementer	Program Title	Budget [1]	Payments [2] (a/o 12/31/03)
ADM Associates, Inc	Mobil Energy Clinic	\$ 695,211	\$ 372,835
Alliance to Save Energy	Green Schools & Green Communities	1,265,000	539,588
American Synergy Corporation	Comp HTR Res & Sm Comm Energy Svgs Pgm	2,891,523	1,394,844
ASW Engineering	The Energy Savers Program	2,556,396	1,591,308
California State University Chancellor's	CSU E.E. Pgm Proposal	513,953	285,669
County of Los Angeles	Cnty of LA Internal Svcs Div. E.E. Pgm	3,233,333	1,390,150
Ecos Consulting	Energy Star CFL Pgm for Sm Hardware & Grocery	5,366,577	3,338,001
Energy Coalition	Energy Dist Approach for Sustainable E.E. in CAL	2,925,714	1,857,893
Geothermal Heat Pump Consortium	Proposal to promote geoechange to SCE Customers	1,236,030	546,772
Global Energy Partners, LLC	E.E. Svcs for Elec. Consump. & Dem. Red. In Oil	1,665,366	534,856
Global Energy Services	Chinese Language Efficiency Outreach (CLEO)	342,867	315,751
Proctor Engineering Group Ltd.	Check Me	2,738,286	1,170,915
Quantum Consulting Inc	Muni Wastewater Retro-Commissioning	1,467,565	1,301,991
Rita Norton & Associates	South Bay Communities & Affiliates Energy Eff Pgm	1,828,571	1,136,539
Xenergy	Comprehensive Compressed Air Program	1,463,04C	962,598
Total		\$ 30,189,432	\$ 16,739,710

notes -

[1] - Budget reflects an aggregation of all service territories supported by programs managed by SCE and may include both electric and gas.

[2] - Payments reflect payments owed to non-IOU implementer for worked performed from inception to 12/31/03.

Technical Appendix

Table TA 9.3
 2004 Energy Efficiency Annual Report
 SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC
 DIRECT AND ALLOCATED ADMINISTRATIVE COSTS - UTILITY ADMINISTRATION OF NON-IOU PROGRAMS
 2003

Contract Admin	Actual Labor	Actual Non-Labor	Actual Contract	Actual Allocated	Actual Admin Total
SCE	98,010	7,508	18,058	32	123,608
Total	<u>\$ 98,010</u>	<u>\$ 7,508</u>	<u>\$ 18,058</u>	<u>\$ 32</u>	<u>\$ 123,608</u>

notes -
 Does not include various support activities expenditures (e.g., procurement, legal support, etc.).