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2001

# Energy Efficiency Annual Report

- ◆ Summary Report  
2000 Results – 2001 Plans
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2000 Results

May 2001



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# Executive Summary

Southern California Edison (SCE) has been assisting customers in the efficient use of electricity since the early 1900's, when it first worked with its agricultural customers in testing the efficiency of electrical pumps. In this long-standing tradition, SCE continues to ensure that customers receive high-quality energy efficiency services.

With the onset of the recent energy crisis in summer 2000, SCE's historic achievements in energy efficiency placed it in a unique position to respond quickly to new energy initiatives in summer 2000. SCE's 2000 energy efficiency programs achieved over 590 million kilowatt-hours (kWh) of net annualized energy savings and a net load reduction of 115 megawatts (MW). In addition to achieving this level of energy savings, SCE continued to develop innovative programs designed to more effectively reach existing energy efficiency target markets. In 2000, SCE developed new ways to serve hard-to-reach customers. SCE's 2000 programs were targeted both to end-use customers and energy efficiency suppliers to advance energy savings and peak capacity reductions in California's electricity infrastructure.

SCE's goals for 2001 reflect the urgency of today's energy supply situation in California. In 2001, SCE is striving to continue its tradition of cost-efficient delivery of energy efficiency

services that provide energy-saving solutions to all customer classes. SCE will continue to offer solutions in the form of energy efficiency information, energy management audits, financial incentives for the implementation of energy-efficient products, and low or no-cost energy efficiency services for qualifying low income customers. These solutions will continue to preserve SCE's long tradition of assisting customers in the efficient use of electricity.

## **THE CURRENT ENERGY EFFICIENCY ENVIRONMENT**

In 1998, SCE and the other utilities began to implement the California Public Utilities Commission's new goals for energy efficiency, as specified in the Commission's decision on Public Purpose Programs, Decision 97-02-014. This Decision described the Commission's overarching goal of fostering a robust, sustainable market for energy efficiency products and services. This Decision and subsequent decisions also discussed the Commission's new focus for energy efficiency programs which transform the market for energy efficiency. The onset of the energy crisis in summer 2000 resulted in a return to traditional energy efficiency objectives of achieving immediate capacity reductions and energy savings.

SCE maintains its commitment to assist the Commission in meeting the state's goals for energy efficiency. In 2000, SCE continued to work with the Commission and other interested

parties in the development of program plans which meet the Commission's goals and provide high quality energy services to SCE's customers.

## **2000 ENERGY EFFICIENCY RESULTS**

SCE's 2000 energy efficiency programs continued to provide all customer groups with the energy efficiency solutions they expect and the energy savings to assist them in the prudent use of electricity. Residential customers realized nearly 160 million kWh of annualized energy savings and a load reduction of over 20 MW through their participation in SCE's programs; nonresidential customers achieved over 270 million kWh of net annualized energy savings, and a load reduction of over 50 MW; and participants in SCE's new construction programs saved another 35 million annualized kWh and a load reduction of over 15 MW.

## **RESIDENTIAL PROGRAMS**

SCE in 2000 continued to provide its residential customers a multitude of delivery channels for energy efficiency products and services.

SCE's residential information through programs provide energy efficiency information directly to customers and through upstream delivery entities serving SCE's residential customers. In 2000, SCE provided a mixture

## Executive Summary

of new and existing information services including:

- a new Online Energy Survey for residential customers;
- expanded procurement and delivery channels for ENERGY STAR® appliances; and
- Computer-assisted diagnostics of HVAC systems.

SCE also continued the provision of its successful residential energy management services through the In-Home Energy Survey, Telephone Survey, and the Mail-in Survey, which provide customized energy advice to residential customers.

SCE's residential financial incentive programs continue to be extremely successful programs in providing energy savings to the participating customers. Highlights of the 2000 residential financial assistance programs are:

- expanded participation in the Residential Contracting program, a performance-based program for third-party energy efficiency service providers;
- continuation of the highly-successful Residential Appliance Rebate and Residential Refrigerator Recycling programs; and
- expansion of the statewide ENERGY STAR® labeling programs.

### **NONRESIDENTIAL PROGRAMS**

SCE's 2000 nonresidential programs included information, standard performance contracts, rebates, energy management services, pump tests, and upstream programs.

SCE's nonresidential information programs provided an array of energy efficiency information for many specific individual needs. SCE's Customer Technology Application Center and Agricultural Technology Application Center serve as focal points for customers to attend workshops and observe product demonstrations and displays featuring state-of-the-art energy efficiency technologies for commercial, industrial, and agricultural customers. SCE's Emerging Technologies Showcasing projects offer real-world applications for the commercialization of innovative technologies.

SCE's energy management services programs provided general information regarding energy efficiency solutions and information on the programs which will support their particular needs. This includes the highly successful agricultural energy management services program, which in its eleventh decade continues to provide customer-specific information that serves the distinct needs of this customer group.

Small nonresidential customers were eligible to participate in SCE's energy efficiency incentive program, which offers financial incentives to small business and agricultural customers who implement approved energy efficiency activities. These programs continue a long-standing tradition of assisting small nonresidential customers in the management of their energy costs.

The cornerstone of the financial incentives programs for both small and large nonresidential customers are SCE's Non-Residential Standard Performance Contract (SPC) Programs. For the third year since its inception, SCE's SPC programs were successful in achieving full subscription of incentive funding allocations. Forty-two energy efficiency services providers (EESP) sponsored at least one project for large customers and thirty-five EESPs sponsored at least one project for the small customer program.

### **NEW CONSTRUCTION PROGRAMS**

SCE provided programs in both the residential and nonresidential sector designed to influence the energy efficiency of new buildings.

In 2000, residential customers continued to benefit from SCE's performance-based Residential New Construction program, which educates and assists builders, developers, and industry associates in producing more energy-efficient new homes.

In the nonresidential new construction area, SCE's Savings By Design program provides a multi-faceted program that is designed to encourage building owners, developers, and lenders to continue to make energy-efficient design and construction decisions through analysis of systems and building performance. The program offered site-specific design analysis, financial incentives, and design team incentives to participating customers.

SCE in 2000 continued to develop enhancements to products and services in the Energy Design Resources program, which provides an integrated package of information and software tools that promote the design and construction of high-performance buildings. This statewide program continues to utilize tools previously developed by SCE that were

shared with the other California utilities.

In 2000, SCE continued the Local Government Initiative program. This program provided assistance to local governments in the development and implementation of energy efficiency in their buildings and local communities.

### **LOW INCOME ENERGY EFFICIENCY PROGRAMS**

SCE's low income energy efficiency programs provided energy management assistance to low income customers in SCE's service territory. Examples of services provided by SCE in 2000 to eligible customers include weatherization, distribution and installation of compact fluorescent bulbs, replacements of refrigerators, and installation of evaporative coolers in hot dry climates. To ensure low income customers across California receive a similar set of services, SCE in 2000 worked with the other California utilities and low income stakeholders to develop standardized procedures for the selection and installation of measures by climate zone.

### **SUMMER INITIATIVE**

In response to the energy crisis, the Commission selected eight initiatives within SCE's service territory that had the common goal of achieving energy savings during the 2000 and 2001 timeframe. An even greater

goal of the selected initiatives was reducing peak summer demand. The program was funded with unspent funds from prior years' energy efficiency program funds. For the most part, these funds became available when customers who had previously committed to install energy efficiency measures failed to do so.

Among the selected initiatives was an expansion of SCE's successful refrigerator recycling program into a statewide program. The program targets residential customers and provides a cash incentive to customers for recycling their old, inefficient refrigerators or freezers. In SCE's territory, the Summer Initiative Refrigerator Recycling program resulted in over 8,800 units being collected and recycled.

Other summer initiatives were directed to increasing traffic signal efficiency, pool efficiency and off-peak operation of pool equipment; increasing energy efficiency at California State Polytechnic University Pomona, and California State University Long Beach; and halogen torchiere replacement in commercial and industrial facilities. A third-party initiative solicitation process resulted in the selection and funding of two Third-Party Initiatives targeted at residential customers and two targeted at small commercial customers.

## Executive Summary

The California Oil Producers Electric Cooperative summer initiative will focus on incentives to members that achieve peak demand reduction.

A Hard-to-Reach Initiative was directed at achieving peak demand savings through the installation of energy efficiency measures at multifamily apartment complexes, mobile home parks, and condominium complexes.

### **SHAREHOLDER INCENTIVE MECHANISM**

The 2000 performance incentive mechanism allows SCE to recover incentives for successful program implementation and management. SCE's earnings claim for 2000 energy efficiency activities is \$5.544 million.



# Executive Summary

Table 1.1  
2001 Energy Efficiency Annual Report  
SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC

	2000 Budget	[1]	2000 Recorded	[1,2]	2001 Budget	[3]
Residential	\$ 28,612,600		\$ 29,169,673		\$ 27,945,000	
Nonresidential	34,642,300		38,771,381		33,466,584	
New Construction	12,501,800		11,972,538		15,407,416	
MA&E and Regulatory Oversight	6,410,000		5,632,346		5,090,000	
Shareholder Performance Incentives	5,544,000	[4]	5,544,000	[4]	5,591,000	[5]
Other Energy Efficiency [6]	2,443,300		1,885,404		2,500,000	
Unallocated [7]	-		-		-	
<b>Total Energy Efficiency</b>	<u>\$ 90,154,000</u>		<u>\$ 92,975,341</u>		<u>\$ 90,000,000</u>	
<b>Total Summer Initiative [8]</b>	<u>\$ 21,250,000</u>		<u>\$ 15,914,380</u>		<u>\$ 5,335,620</u>	
<b>Total Low Income</b>	<u>\$ 7,700,960</u>		<u>\$ 8,229,421</u>		<u>\$ 7,452,880</u>	
<b>Total Energy Efficiency, Summer Initiative, and Low Income [9]</b>	<u>\$ 119,104,960</u>		<u>\$ 117,119,143</u>		<u>\$ 102,788,500</u>	

[1] Amounts reflect Program Year 2000 (PY00) funds, including fund shifts during 2000.

[2] All Recorded amounts include payments in 2000 and amounts committed to projects in 2000.  
Committed amounts may not be fully realized.

[3] Amounts reflect Program Year 2001 (PY01) funds, as of March 27, 2001.

[4] SCE's 2000 Shareholder Performance Award Cap is \$5.544 million.

[5] SCE's 2001 Shareholder Performance Award Cap is \$5.591 million.

[6] 2000 Recorded costs include utility administrative costs associated with the Summer Initiative programs.

2001 Budget includes utility administrative costs associated with the Summer Initiative programs.

[7] Funds not authorized by the CPUC for expenditure.

[8] Does not include utility administrative costs associated with these programs.

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

# Executive Summary

Table 1.2  
2001 Energy Efficiency Annual Report  
SUMMARY OF ENERGY EFFICIENCY PROGRAM EFFECTS: ELECTRIC

	2000 First Year Net Annualized Capacity Savings (MW)	[1]	2000 First Year Net Annualized Energy Savings (kWh)	[1]	2001 First Year Net Annualized Capacity Savings (MW)	[1]	2001 First Year Net Annualized Energy Savings (kWh)	[1]
Residential	22.23		159,118,237		44.25		111,564,643	
Nonresidential	50.60		271,970,678		68.16		261,586,842	
New Construction	15.18		36,576,131		27.82		61,659,360	
<b>Total Energy Efficiency</b>	<u>88.01</u>		<u>467,665,046</u>		<u>140.23</u>	[2]	<u>434,810,845</u>	[2]
<b>Total Summer Initiative</b>	<u>24.11</u>		<u>104,359,395</u>		<u>41.21</u>		<u>12,417,374</u>	
<b>Total Low Income</b>	<u>3.09</u>		<u>19,697,893</u>		<u>1.67</u>		<u>10,669,700</u>	
<b>Total Energy Efficiency, Summer Initiative, and Low Income</b>	<u>115.20</u>		<u>591,722,334</u>		<u>183.11</u>		<u>457,897,918</u>	

[1] Net Savings for reflect Commission-adopted net-to-gross ratios for each year (1.0 for 2000, Program-Specific for 2001).

[2] Forecasted Net Capacity and Energy Savings for 2001, based on the net-to-gross ratios from 2000, are 179 MW and 564 million kWh, respectively.

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Table 1.3  
2001 Energy Efficiency Annual Report  
SUMMARY OF COST-EFFECTIVENESS: ELECTRIC  
(Benefit-Cost Ratios)

	2000 Utility Cost Test	2000 Total Resource Cost Test	2001 Utility Cost Test	2001 Total Resource Cost Test
Residential	1.78	1.17	2.60	1.74
Nonresidential	3.27	2.72	6.38	3.86
New Construction	1.28	0.96	5.31	4.39
<b>Total Energy Efficiency</b>	<u>2.43</u>	<u>1.82</u>	<u>4.89</u>	<u>3.24</u>
<b>Total Low Income</b>	<u>0.53</u>	<u>0.63</u>	<u>0.23</u>	<u>0.23</u>

## Executive Summary

Table 1.4  
2001 Energy Efficiency Annual Report  
SUMMARY OF COST-EFFECTIVENESS: ELECTRIC  
(Net Benefits)

	2000 TRC	2001 TRC
Residential	\$ 7,948,145	\$ 33,506,330
Nonresidential	84,954,869	195,562,552
New Construction	(715,935)	75,074,265
<b>Total Energy Efficiency</b>	<u>\$ 92,187,079</u>	<u>\$ 304,143,147</u>
<b>Low Income Total</b>	<u>\$ (250,523)</u>	<u>\$ (775,000)</u>
<b>Total Energy Efficiency and Low Income</b>	<u>\$ 91,936,556</u>	<u>\$ 303,368,147</u>

## Residential Information

### MASS MARKET INFORMATION

#### Program Description

Mass Market Information (MMI) is an interactive energy efficiency service that gives residential and small business customers the tools to manage their energy costs. The online service provides direct access to SCE's energy efficiency products and services and links to other resources to help enhance home comfort and provide businesses with additional energy efficiency resources.

MMI provides an abundance of energy-saving tips and useful information about energy-efficient appliances and equipment. Interactive features enable customers to sign up for programs and services estimate appliance and equipment energy costs, and obtain the latest information on energy-efficient technologies.

#### 2000 Results and Achievements

During 2000, there were more than 90,000 visitor sessions made to the energy efficiency sections of SCE's website,

[www.sce.com](http://www.sce.com). The site provides easy access to energy-saving tips, the latest information on energy-efficient technologies, and features an interactive energy cost calculator to help residential customers estimate the energy costs of home appliances and equipment. Customers can request online specific energy advice and participate in SCE's energy efficiency programs and services.

SCE, working collaboratively with other California utilities, developed an Energy Guide to provide energy efficiency information to residential customers. The Energy Guides were available English as well as Spanish and Chinese for residential customers. Awareness of the Energy Guide included bill inserts reaching all residential customers, a flyer placed in energy conservation boxes for children reaching 6,000 homes, and an advertisement on SCE's website with a direct link to order the Energy Guide. The Energy Guides were distributed through

phone center inquiries, home/trade shows and fairs, trade and ethnic associations, energy centers, home improvement stores, schools, chambers of commerce, community-based organizations, non-profit agencies, and integration with other energy efficiency activities.

#### 2001 Program Plans

In early 2001, the California Public Utilities Commission (CPUC) provided SCE with added flexibility to modify its current energy efficiency program portfolio to respond to California's possible energy supply shortage and higher prices. As directed by the CPUC, SCE will report on the programmatic and funding modifications made to the portfolio, including this program, in SCE's 2001 Energy Efficiency 1<sup>st</sup> Quarter Report to the CPUC due on May 15, 2001. This energy efficiency report will be available at the CPUC and on SCE's website ([www.sce.com](http://www.sce.com)).

# Residential Information

CONSORTIUM FOR ENERGY EFFICIENCY RESIDENTIAL ELECTRIC END-USE EFFICIENCY INITIATIVE (CEEREEE)

### Program Description

The goal of the Consortium For Energy Efficiency Residential Electric End-Use Efficiency Initiative (CEEREEE) is to increase the acceptance and installation of energy-efficient equipment and devices by residents in private multi-family dwellings through volume purchasing. SCE provides regional support for this national initiative. Target customer organizations include: owners/operators of private and public multi-family housing, local governments, and institutions who utilize a “centralized buying authority” approach for purchasing residential end-use equipment. Although the target appliances are refrigerators, additional energy-efficient products are evaluated to assess if they can be successfully promoted within the multi-family market.

The CEEREEE initiative plans include: (1) establishing common specifications; (2) assisting centralized purchasing authorities at private multi-family properties to make effective volume/aggregated purchases; (3) assisting local government procurement authorities to make effective

volume/aggregated purchases; (4) assisting other governmental procurement and purchasing influence centers to make energy-efficient procurement decisions; (5) educating centralized purchasing authorities; (6) possibly implementing manufacturer/distributor (retailer) incentives, or other upstream incentive design; and (7) possibly financing third-party offers.

### 2000 Results and Achievements

SCE and Pacific Northwest National Laboratory continued work with the three largest apartment associations in California and the largest appliance manufacturer to choose the most energy-efficient refrigerators and dishwashers in the market as the target appliance for the program.

In 2000, SCE increased the number of ENERGY STAR® qualified refrigerators sold to multi-family owner/operators from 106 to 273 units. In addition, 74 dishwashers were sold to multi-family owner/operators. SCE implemented a clothes washer demonstration project at a multi-family complex to

evaluate the energy and water efficiency of high performance coin-operated clothes washers.

SCE continued the ENERGY STAR® qualified appliance procurement and established the distribution channel for multi-family properties.

Promotional activities included participation in four trade shows, aggressively promoting the procurement program in five apartment associations, and advertising in trade journals.

### 2001 Program Plans

In early 2001, the CPUC provided SCE with added flexibility to modify its current energy efficiency program portfolio to respond to California’s possible energy supply shortage and higher prices. As directed by the CPUC, SCE will report on the programmatic and funding modifications made to the portfolio, including this program, in SCE’s 2001 Energy Efficiency 1<sup>st</sup> Quarter Report to the CPUC due on May 15, 2001. This energy efficiency report will be available at the CPUC and on SCE’s website ([www.sce.com](http://www.sce.com)).

# Residential Energy Management Services

## RESIDENTIAL ENERGY SURVEYS

### Program Description

Residential energy survey programs are 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. The energy surveys take various forms such as mail-in, in-home, phone, or online and provide customers (including moderate income) or their children (e.g., school-based audits) with energy efficiency information to help them reduce their energy bills. The surveys also provide a segue for offering other energy efficiency products and services such as residential rebates and retail outlets that feature ENERGY STAR® qualified products. Marketing and promotion strategies include the ENERGY STAR® Mobil Education Unit, e-mail promotions, direct mail, bill messages or inserts, print media advertising, Internet, local governments, phone centers, and ethnic, trade, and community associations.

### IN-HOME SURVEY

The In-Home Energy Survey provides customers with a more personalized energy survey. Customers request

in-home surveys in response to a direct mailer or to an offer made by a customer representative. An appointment is scheduled and a trained energy auditor travels to the customer's home for the scheduled appointment, explains the purpose of the program and survey, and identifies the focus of the customer's interests or needs.

After the onsite walk-through, the auditor reviews the customer's appliance inventory and makes cost-effective energy-saving recommendations. The auditor also explains the benefits of implementing these recommendations and addresses any remaining customer concerns. Appropriate program literature and referrals to other energy efficiency programs are given to the customer, together with a copy of the appliance inventory.

California Home Energy Efficiency Rating System (CHEERS) has become an integral component of the In-Home Energy Survey for homeowners. With this addition, homeowners receive a more comprehensive analysis through an SCE report that is mailed to their homes.

### TELEPHONE SURVEY

The Telephone Energy Survey is offered to customers who cannot complete a Mail-In Energy Survey; do not have time to participate in an In-Home Energy Survey; or do not have access to a computer for the Online Survey. The trained energy auditor verbally walks the customer through the home and follows the same procedures as the in-home survey. The results of the survey along with program literature and referrals to other energy efficiency programs are mailed to the customer, together with a copy of the appliance inventory.

### MAIL-IN SURVEY

The Mail-In Survey is a self-completed questionnaire that contains specific questions about the types of appliances, their usage pattern and the structure of the home. Customers can request Mail-In Surveys via the phone or the web. It is completed by the customer and then mailed in for processing. The questionnaire is processed and the customer receives computer-generated graphs depicting their annual energy-use and itemized lists of their electric appliance energy usage. In addition, customers receive specific energy and cost-savings

## Residential Program Area

recommendations.

Customers also receive other educational material on other energy efficiency programs and services.

### **ONLINE ENERGY SURVEY**

SCE introduced the Online Energy Survey for residential customers in September 2000. The survey is accessible through [www.sce.com](http://www.sce.com). The program allows residential customers to receive the same personalized energy usage information and cost-savings recommendations over the Internet.

### **2000 Results and Achievements**

In 2000, the Residential Energy Surveys program completed over 45,000 audits for residential customers. A majority of the customers opted for the mail-in audit to conduct the survey. In September 2000, SCE fully launched an on-line energy survey where customers can perform a survey through SCE's website ([www.sce.com](http://www.sce.com)).

### **2001 Program Plans**

In early 2001, the CPUC provided SCE with added flexibility to modify its current energy efficiency program portfolio to respond to California's possible energy supply shortage and higher prices. As directed by the CPUC, SCE will report on the programmatic and funding modifications made to the portfolio, including this program, in SCE's 2001 Energy Efficiency 1<sup>st</sup> Quarter Report to the CPUC due on May 15, 2001. This energy efficiency report will be available at the CPUC and on SCE's website ([www.sce.com](http://www.sce.com)).



# Residential Energy Efficiency Incentives

## RESIDENTIAL CONTRACTOR PROGRAM (RCP)

### Program Description

The overarching goal of SCE's Residential Contractor Program (RCP) is to stimulate a competitive and sustainable market for residential energy efficiency products and services. The RCP features two distinct program elements: Single-Family and Multi-Family.

The Single-Family element applies to single-family homes, condominium dwelling units, small attached apartments (e.g., duplexes, triplexes and four-plexes) and mobile homes (within the dwelling). This element promotes a whole system approach, emphasizing certain comprehensiveness measure packages, for example, a set of heating, ventilating and air conditioning (HVAC) measures, and delivers the program through contractors approved for the program.

The Multi-Family element applies to apartment dwelling units, mobile homes, and common areas of condominium and apartment complexes. It provides a performance-based standard performance contract offering similar to the Small Business Standard Performance Contract program.

### 2000 Results and Achievements

In 2000, the Single-Family element recorded over \$3.5 million, totaling more than 34,600 vouchers, and representing approximately 13,000 MWh of annualized energy savings and a peak demand reduction of over 3 MW.

The Multi-family element of the program paid/committed over \$1.28 million including a 10 percent contingency totaling 130 multi-dwelling sites that represent over 6,000 MWh in annualized energy savings. Although the Multi-family element offered incentives for a variety of measures, lighting measures accounted for over 92 percent of the savings and the remainder resulted from water heater controller installations.

### 2001 Program Plans

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## Residential Energy Efficiency Incentives

### RESIDENTIAL APPLIANCE DIRECT REBATE PROGRAM (RADR)

#### Program Description

The Residential Appliance Direct Rebate (RADR) program seeks to transform the market for residential appliances through a set of market interventions. The RADR program focuses on providing financial incentives to residential customers for the purchase and installation of energy-efficient appliances and on improving the knowledge, attitudes, and acceptance of certain energy-efficient appliances. The program complements the nationwide DOE/Environmental Protection Agency ENERGY STAR® (DOE/EPA ENERGY STAR®) program.

#### 2001 Program Plans

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#### 2000 Results and Achievements

In 2000, the RADR program encouraged residential customers to purchase and install over 14,000 ENERGY STAR®-qualified refrigerators and 18,000 energy efficient clothes washers. This represents over 53,000 MWh of annualized energy savings and a peak demand reduction of 2.2 MW.

# Residential Energy Efficiency Incentives

## RESIDENTIAL REFRIGERATOR RECYCLING

### Program Description

This program is designed to dispose of operable, old, inefficient refrigerators in an environmentally responsible, energy-saving process. SCE utilizes a turnkey recycling company to implement and maintain the pickup and disposal procedures. The vendor is responsible for establishing and operating recycling centers, scheduling and performing pickups, and for the actual recycling process, which involves dismantling the appliance and removing refrigerants in an environmentally safe manner. The vendor recovers and recycles chlorofluorocarbons (CFC) and metals, along with non-CFC replacement refrigerants under section 608 of the 1990 amendments to the Clean Air Act.

Program guidelines require the following:

- participant must be an SCE residential customer;
- refrigerator/freezer must be working; and
- appliance volume should be between 10 and 25 cubic feet.

### 2000 Results and Achievements

In 2000, the Refrigerator Recycling program recycled more than 42,000 refrigerators and freezers, which produced a total annualized energy savings of about 62,000 MWh and peak demand reduction of 14.3 MW. Customers were given the ability to request a refrigerator pick up through SCE's website, [www.sce.com](http://www.sce.com), 24 hours a day, 7 days a week or by calling SCE's toll-free number.

Over 5,000 tons of scrap metal; 18,800 pounds of CFC refrigerants; 3,900 gallons of compressor oil; 3,100 pounds of capacitors/ballasts; approximately .70 pounds of mercury switches and thermocouples; and approximately 192 pounds of batteries were recovered and recycled in an environmentally safe manner.

### 2001 Program Plans

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# Upstream Programs

## CALIFORNIA HOME ENERGY EFFICIENCY RATING SYSTEM (CHEERS)

### Program Description

The California Home Energy Efficiency Rating System (CHEERS) is a non-profit corporation whose mission is to develop, implement, and manage a market-driven residential Home Energy Rating (HERS) audit for new and existing homes in California. Representatives from the building, lending, real estate, and utility industries along with various state regulators, are involved in the CHEERS effort.

CHEERS audits and rates the energy efficiency of a home, primarily focusing on the thermal envelope and HVAC system (lighting and appliances also). The audit and subsequent rating provides energy efficiency recommendations based on the overall cost effectiveness of the improvement. The traditional HERS rating is an in-depth energy audit which provides the house a “score” (from 1 to 100) of its energy efficiency rating. It offers documentation in support of consumers’ applications for Energy Efficiency Mortgages (EEM) for existing homes.

Two less comprehensive audits, the Energy Snapshot and Energy Wizard, provide potential new homeowners

information on possible energy efficiency upgrades the home may need. The Energy Snapshot and the Energy Wizard are useful measurement tools; however, they do not include the HERS rating.

CHEERS is currently the only HERS provider certified in California which qualifies to facilitate the Title 24’s Alternative Calculation Methodology (ACM) for residential new construction. CHEERS worked with the building industry in 1999 to create the “Cookbook,” a manual for Title 24 and ENERGY STAR® compliance.

### 2000 Results and Achievements

In 2000, 320 traditional CHEERS ratings were performed. In support of the In-Home Audit Program, CHEERS conducted over 2,520 Energy Wizards. In addition, over 1,000 third-party inspections and verifications were conducted in support of residential new construction program initiatives and activities. Eight training sessions were held resulting in 65 trained Title 24 consultants and HVAC subcontractors.

### 2001 Program Plans

In early 2001, the CPUC provided SCE with added flexibility to modify its current energy efficiency program portfolio to respond to California’s possible energy supply shortage and higher prices. As directed by the CPUC, SCE will report on the programmatic and funding modifications made to the portfolio, including this program, in SCE’s 2001 Energy Efficiency 1<sup>st</sup> Quarter Report to the CPUC due on May 15, 2001. This energy efficiency report will be available at the CPUC and on SCE’s website ([www.sce.com](http://www.sce.com)).

## Upstream Programs

### RETAIL INITIATIVE PROGRAMS (ENERGY STAR® LABELING)

#### Program Description

Retail Initiative is designed to be complementary to the nationwide DOE/EPA ENERGY STAR® program. The programs include hardwired fixtures, portable torchiere floor lamps, and appliances.

In 2000, SCE worked collaboratively with other California utilities to implement an appliance and lighting program operated in close cooperation with the federal ENERGY STAR® program. The statewide program implementer negotiated participation agreements with manufacturers and/or retailers, covering such items as qualifying product stocking and flooring, sales staff compensation, education and training, Point of Purchase (POP) displays, advertising, promotion, and other options.

SCE conducted the following ENERGY STAR® device rating and labeling market transformation programs:

- Residential Appliance program;
- Residential Lighting program;
- Window Frame System Labeling program.

#### RESIDENTIAL APPLIANCE PROGRAM

The Residential Appliance Program seeks to transform specific components of the residential appliance market through a comprehensive and coordinated set of market interventions. The program is comprised of various market intervention strategies including information/education to retailers and financial incentives for residential customers. SCE, in conjunction with other California utilities and a statewide implementer, worked with major appliance retailers to increase the number of qualifying ENERGY STAR® -rated appliances available on participating retailers' showroom floor. These appliances include refrigerators that are compliant with the national DOE July 2001 standard, dishwashers, clothes washers, and room air conditioners.

#### RESIDENTIAL LIGHTING FIXTURE PROGRAM

The Residential Lighting Fixture program endeavors to increase the number of qualifying ENERGY STAR®-rated lighting products available for the program in California. The program

provides training directed at retail lighting sales staff to increase their knowledge about the statewide lighting program, ENERGY STAR® qualifying products, and the benefits for customers who install them.

#### WINDOW FRAME SYSTEM LABELING

This SCE program provides regional support for the national initiative by the ENERGY STAR® program to encourage purchasing energy-efficient windows and frames. Target customer organizations include private, single- and multi-family housing owners/operators which make purchases of residential retrofit and replacement windows.

#### ENERGY EFFICIENCY EDUCATION UNIT

The Mobile Education Unit (MEU) is a 45-foot converted recreational vehicle equipped with energy-efficient household products and computerized educational tools designed to promote consumer interest in energy efficiency and ENERGY STAR® qualified products. The MEU was developed under the 1998 third-party initiative solicitation process.

## Residential Program Area

### 2000 Results and Achievements

Accomplishments in 2000 include:

- recruited 267 appliance stores in SCE's service territory to participate in the Residential Appliance program;
- provided ENERGY STAR® appliance training to 182 storefronts and 921 sales associates;
- implemented two market intervention strategies; (1) appliance salesperson incentive program for clothes washers and room air conditioners, and (2) retailer cooperative advertising program;
- provided point-of-purchase materials to 130 stores participating in the cooperative purchase program;
- executed a Window Frame System Labeling program participation agreement with five qualifying window manufacturers who achieved program product distribution and massive on-floor stocking of their ENERGY STAR® qualified products at home improvement stores;
- facilitated 175 retail lighting stores to participating manufacturers;
- conducted training classes of 106 sales associates for the Window Frame System Labeling program;
- provided assistance to retailers to achieve 100 percent product labeling compliance at approximately 492 appliance, lighting, and windows retail store locations/program display areas in SCE's service territory;
- attracted direct participation of 267 appliance stores in SCE's service territory;
- facilitated 130 retail lighting stores to participating manufacturers;
- recruited ten lighting manufacturers to offer \$10 discounts on torchieres;
- facilitated sale and installation of over 40,000 torchieres;
- performed frequent in-store visits, maintained kiosks, distributed program literature, monitored in-store stocking, conducted ad-hoc intercept surveys;
- designed new collateral materials with ENERGY STAR® brochures, sales tip sheets, and banners;
- visited 370 locations with the Mobile Educational Unit to appliance, lighting retail stores and major events; and
- conducted training classes of 340 sales associates which includes the design, production, and training of two ENERGY STAR® training videos.

### 2001 Program Plans

In early 2001, the CPUC provided SCE with added flexibility to modify its current energy efficiency program portfolio to respond to California's possible energy supply shortage and higher prices. As directed by the CPUC, SCE will report on the programmatic and funding modifications made to the portfolio, including this program, in SCE's 2001 Energy Efficiency 1<sup>st</sup> Quarter Report to the CPUC due on May 15, 2001. This energy efficiency report will be available at the CPUC and on SCE's website ([www.sce.com](http://www.sce.com)).

## Upstream Programs

### HVAC DIAGNOSTICS (CHECK ME!™)

#### Program Description

The HVAC Diagnostic Program (CheckMe!™) offers air conditioning technicians a computer-based system that provides an aid to correctly install air conditioning systems in existing and new homes. The system provides immediate feedback of corrective action necessary to assure compliance with specifications. The program's education and information efforts reduce consumer barriers and, through training, aid contractors in providing more efficient processes of adjusting existing air conditioners for maximum efficiency.

The system analyzes areas that include: (1) system leaks; (2) proper air flow across evaporator coils; and (3) correct refrigerant charge level based on line length and diameter.

#### 2000 Results and Achievements

In 2000, over 100 HVAC technicians were trained in the use of the CheckMe!™ software. In addition, more

than 2,500 tests/diagnostics were performed using the computer-based system. SCE promoted the CheckMe!™ program with a message inside customer bills from June through October 2000.

#### 2001 Program Plans

In early 2001, the CPUC provided SCE with added flexibility to modify its current energy efficiency program portfolio to respond to California's possible energy supply shortage and higher prices. As directed by the CPUC, SCE will report on the programmatic and funding modifications made to the portfolio, including this program, in SCE's 2001 Energy Efficiency 1<sup>st</sup> Quarter Report to the CPUC due on May 15, 2001. This energy efficiency report will be available at the CPUC and on SCE's website ([www.sce.com](http://www.sce.com)).

## Residential Program Area

# Upstream Programs

### THIRD-PARTY INITIATIVE – SOFTWARE TOOL FOR RESIDENTIAL ENERGY-USE ANALYSIS

#### **Program Description**

Initiated through the TPis, the Software Tool For Residential Energy End-Use Analysis, is a user-friendly software program for assessing energy efficiency opportunities for residential customers. It provides graphical descriptions of the energy and economic implications of residential building design decisions accessible to the average residential customer. The project is creating a Java graphical user interface for the Solar 5.4 Energy Modeling Program, and customizing the energy data for SCE's service territory.

#### **2000 Results and Achievements**

The beta version of a UCLA software tool to analyze the energy efficiency of home remodeling options is now completed. The tool is currently being demonstrated at several professional meetings and is now available on the UCLA website ([www.aud.ucla.edu/heed](http://www.aud.ucla.edu/heed)). Because of the rapid changes in the California environment, certain features of the tool (such as the energy costs and Title 24 code requirements) must be updated before the tool can be publicized by SCE

for customer use and placed on SCE's website.

#### **2001 Program Plans**

In early 2001, the CPUC provided SCE with added flexibility to modify its current energy efficiency program portfolio to respond to California's possible energy supply shortage and higher prices. As directed by the CPUC, SCE will report on the programmatic and funding modifications made to the portfolio, including this program, in SCE's 2001 Energy Efficiency 1<sup>st</sup> Quarter Report to the CPUC due on May 15, 2001. This energy efficiency report will be available at the CPUC and on SCE's website ([www.sce.com](http://www.sce.com)).



## Residential Program Area

Table 2.1  
2001 Energy Efficiency Annual Report  
SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC  
RESIDENTIAL PROGRAM AREA

	2000 Budget	[1,2]	2000 Recorded	[1,2,3]	2001 Budget	[1,4]
<b>Information</b>	\$ 1,489,300		\$ 1,449,709		\$ 3,137,250	
<b>EMS</b>	2,890,000		2,820,520		1,700,000	
<b>EEI</b>						
SPCs (RCP)	5,640,000		5,641,542		4,816,500	
Rebates	8,930,000		9,925,067		11,503,250	
Loans	-		-		-	
Other	-		-		-	
<b>Upstream Programs</b>						
Information	2,148,300		2,142,856		3,338,000	
Financial Assistance	7,515,000		7,189,980		3,450,000	
<b>Residential Total</b>	<u>\$ 28,612,600</u>		<u>\$ 29,169,673</u>		<u>\$ 27,945,000</u>	

[1] Excludes Shareholder Incentives

[2] Amounts reflect Program Year 2000 (PY00) funds, including fund shifts during 2000.

[3] All Recorded amounts include payments in 2000 and amounts committed to projects in 2000.

Committed amounts may not be fully realized.

[4] Amounts reflect Program Year 2001 (PY01) funds, as of March 27, 2001.

## Residential Program Area

**Table 2.2**  
**2001 Energy Efficiency Annual Report**  
**SUMMARY OF ENERGY EFFICIENCY PROGRAM EFFECTS: ELECTRIC**  
**RESIDENTIAL PROGRAM AREA**

	2000 First Year Net Annualized Capacity Savings (MW)	[1]	2000 First Year Net Annualized Energy Savings (kWh)	[1]	2001 First Year Net Annualized Capacity Savings (MW)	[1]	2001 First Year Net Annualized Energy Savings (kWh)	[1]
<b>Information</b>	-		-		-		-	
<b>EMS</b>	1.92		10,888,048		3.03		8,058,550	
<b>EEl</b>								
SPCs (RCP)	3.74		19,517,279		1.55		15,327,705	
Rebates	16.47		114,987,517		13.90		55,849,588	
Loans	-		-		-		-	
Other	-		-		-		-	
<b>Upstream Programs</b>								
Information	-		-		-		3,270,960	
Financial Assistance	0.10		13,725,394		25.77		29,057,840	
<b>Residential Total</b>	<u>22.23</u>		<u>159,118,237</u>		<u>44.25</u>		<u>111,564,643</u>	

[1] Net Savings for reflect Commission-adopted net-to-gross ratios for each year (1.0 for 2000, Program-Specific for 2001).

## Residential Program Area

Table 2.3  
2001 Energy Efficiency Annual Report  
SUMMARY OF COST-EFFECTIVENESS: ELECTRIC  
(Benefit-Cost Ratios)  
RESIDENTIAL PROGRAM AREA

	2000 Utility Cost Test	[1]	2000 Total Resource Cost Test	[1]	2001 Utility Cost Test [2]	2001 Total Resource Cost Test [2]
<b>Information</b>	-		-		-	-
<b>EMS</b>	0.17		0.17		3.14	3.14
<b>EEI</b>						
SPCs (RCP)	1.63		0.61		2.82 [3]	1.61
Rebates	3.62		2.81		2.94	2.87
Loans	-		-		-	-
Other	-		-		-	-
<b>Upstream Programs</b>						
Information					1.53	0.43
Financial Assistance	0.98		0.69		4.01	2.68
<b>Residential Total</b>	<u>1.78</u>		<u>1.17</u>		<u>2.60</u>	<u>1.74</u>

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

[2] Includes general support costs not included in the 2000 cost-effectiveness (e.g., MA&E, other overhead).

[3] RCP forecast incentive amounts include portion paid by the Southern California Gas Company for current measures.

## Residential Program Area

Table 2.4				
2001 Energy Efficiency Annual Report				
SUMMARY OF COST-EFFECTIVENESS: ELECTRIC				
RESIDENTIAL PROGRAM AREA				
(Net Benefits)				
		2000		2001
		TRC		TRC
<b>Information</b>	\$	(1,557,891)	\$	(3,137,250)
<b>EMS</b>		(2,409,065)		4,017,404
<b>EEl</b>				
SPCs (RCP)		(6,119,393)		5,628,997
Rebates		23,735,011		24,139,146
Loans		-		-
Other		-		-
<b>Upstream Programs</b>				
Information		(2,298,765)		(6,989,326)
Financial Assistance		(3,401,753)		9,847,358
<b>Residential Total</b>	\$	<u>7,948,145</u>	\$	<u>33,506,330</u>

## Nonresidential Information

### CUSTOMER TECHNOLOGY APPLICATION CENTER (CTAC)/ AGRICULTURAL TECHNOLOGY APPLICATION CENTER (AGTAC)

#### Program Description

CTAC offers customers current, objective information on state-of-the-art, energy-efficient electric technologies and environmentally sensitive solutions to their energy challenges. CTAC is 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 CTAC to attend a seminar or workshop, and to demonstrate or to test a product. CTAC also shares technical expertise and energy education products with its companion center, AGTAC.

Located in the heart of one of the most densely populated areas in Southern California, CTAC is a 42,000 square-foot facility with several distinct product and technology centers including the: Commercial Products Center (CPC), Lighting Products Center, Industrial Technology Center (ITC), Home Efficiency Center, Small Business Center, and Foodservice Technology Center, all where vendors and manufacturers contribute equipment to showcase technologies. CTAC's 110-seat Executive

Conference Center is a focal point for many of the workshops and seminars.

AGTAC offers valuable environmentally positive, energy-efficient and cost-competitive solutions to the agricultural community. This 16,000 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 and an Outdoor Demonstration Grounds.

A 4.5-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, 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.

AGTAC specialists offer seminars and consultation in the areas of energy management and services, lighting applications, irrigation, heating and venting, pumping, motor technologies, industrial processes, and communications. Video-conference technology allows

## Nonresidential Program Area

AGTAC visitors the opportunity to take advantage of seminars, lectures, and demonstrations offered globally and at CTAC without leaving the San Joaquin Valley.

### 2000 Results and Achievements

The following activities took place at CTAC in 2000: 21,409 attendees, 1,272 events, 16 off-site events, 57 energy efficiency seminars, 99 technical demonstrations, and 1,001 technical consultations.

Over 70 customer events were supported by Outreach activities and SCE's Total Home Solutions booth. New displays were designed and produced, including the ENERGY STAR® Office Exhibit. An internal web-based method of accessing resources was also designed and implemented to expedite the use of energy-efficient displays by SCE personnel who wished to educate customers at the various trade shows.

Several new classes were developed and offered at CTAC including: Lighting Fixture Maintenance, EMS-Planning & Implementation, EMS-Strategies, Chilled Water, Compressed Air Systems, and Lighting Technologies.

New displays at CTAC in 2000 included a heliodon, which is a design tool used by architects. An energy-efficient portable schools classroom was constructed

behind the CTAC facility. A new window display was completed in the CPC. An air conditioning duct display was completed in the Home Efficiency Center. Pulse-Start metal halide light fixtures were installed in CPC, as well as high bay T-5 fluorescent fixtures.

In 2000, CTAC provided an exhibit and in many cases staffed the exhibit as well, at over 68 events, which targeted SCE's small business, commercial, and industrial customers. Some of the trade shows included: West Coast Energy Management Congress, Association of Professional Energy Managers, and the Institute of Electrical and Electronics Engineers Conference.

New exhibits include a fully functional chilled water-cooling system with multi-stage compressors, variable speed drives (on the air handler, circulating water pump and cooling tower), direct digital controls, and variable air volume boxes. A new energy-efficient office display has been added which includes T5 lamps and ENERGY STAR® office equipment.

In 2000, CTAC continued a partnership with Cal Poly Pomona's Center for Lighting Education and Applied Research to develop a "Multimedia Lighting Education Program." This program provides education and training on energy efficiency for lighting professionals and

practitioners. Information on energy-efficient practices and new technologies are disseminated through existing California statewide educational/instructional networks (i.e. satellite down links, internet sites, community colleges, etc.)

As part of a joint effort with Pacific Gas & Electric (PG&E) and Southern California Gas (SoCalGas), each utility sponsored one class three times during the year at their respective facilities. The classes were: Glass Class, Lighting and Daylighting, and the Green Building Rating Class. In addition to the classes, the three utilities collaborated to create a web-based energy efficiency library, which was implemented in April 2000, as "energyefficiencycenter.com."

CTAC and AGTAC completed market transformation studies that again confirmed that the information customers receive at the centers has an influence on their decisions regarding energy efficiency. In addition, market penetration studies were completed showing that both centers have reached a relatively small portion of the target audience. The first phase of a satellite center feasibility study was completed, with the draft received after the first of the year, 2001. This first phase looks at where SCE customers, by industry type, are located relative to their distance from the existing centers.

## Nonresidential Program Area

The following activities took place at AGTAC in 2000: 11,718 attendees; 293 business events; 751 technical demonstrations; and 20 energy efficiency seminars.

At AGTAC, the following displays and exhibits were completed: an irrigation emitter technology exhibit involving most of the irrigation manufacturers throughout the State of California. The exhibit currently showcases over 50 irrigation products related to efficient use of water and energy.

AGTAC, with the cooperation of the Center of Irrigation Technology from California State University, Fresno, completed a hands-on-interactive Pumping Efficiency Exhibit to be used in teaching basic hydraulic principles and pumping efficiency classes. Other exhibits completed include a portable compact fluorescent high-bay fixture display, a premium efficiency motor display, additions to the residential/commercial glazing display, and an efficient office/conference room technology advancements exhibit.

At AGTAC, UC Davis completed its third year of a five-year applied research project on "Best Management Practices for Irrigation Scheduling of Trees and Vines." Three electronic devices are used in the research to control waterings for efficiency while seeking to maximize crop yield.

### 2001 Program Plans

In early 2001, the California Public Utilities Commission (CPUC) provided SCE with added flexibility to modify its current energy efficiency program portfolio to respond to California's possible energy supply shortage and higher prices. As directed by the CPUC, SCE will report on the programmatic and funding modifications made to the portfolio, including this program, in SCE's 2001 Energy Efficiency 1<sup>st</sup> Quarter Report to the CPUC due on May 15, 2001. This energy efficiency report will be available at the CPUC and on SCE's website ([www.sce.com](http://www.sce.com)).

# Nonresidential Energy Management Services

## AGRICULTURAL SERVICES

### Program Description

The Agricultural/Pumping Services program element is intended to influence water agencies, municipalities, agricultural, and other pumping customers to adopt preventative maintenance practices that should ultimately improve the overall efficiency of their pumping systems. This objective will be 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.

### 2001 Program Plans

In early 2001, the CPUC provided SCE with added flexibility to modify its current energy efficiency program portfolio to respond to California's possible energy supply shortage and higher prices. As directed by the CPUC, SCE will report on the programmatic and funding modifications made to the portfolio, including this program, in SCE's 2001 Energy Efficiency 1<sup>st</sup> Quarter Report to the CPUC due on May 15, 2001. This energy efficiency report will be available at the CPUC and on SCE's website ([www.sce.com](http://www.sce.com)).

### 2000 Results and Achievements

In 2000, SCE hydraulic test specialists tested over 3,600 pumps. This resulted in nearly 22,000 MWh of annualized energy savings. In addition to the basic hydraulic test, over 250 enhanced pump tests were performed resulting in an additional 2,000 MWh of annualized energy savings.



# Nonresidential Energy Management Services

## SMALL BUSINESS ENERGY-USE SURVEY/SMALL ENERGY MANAGEMENT SERVICES

### Program Description

This program element is designed to augment other utility program elements which serve the nonresidential market by providing special services to serve the “under served” market segment which includes minority and women owned businesses. This includes promoting awareness of energy efficiency and its benefits to businesses and to specific customer trade and ethnic associations and their members. This program also cultivates relationships between vendors and traditionally “hard-to-reach” small business market sub-segments (e.g., non-English primary language, etc.)

### Small Business Energy Use Survey

The Small Business Energy Use Survey (SBEUS) is provided in three formats: hardcopy, on-line or CD ROM. It provides customers with energy efficiency information to help them reduce their energy bills. The surveys also provide an opportunity to introduce other energy efficiency

products and services such as small commercial/industrial rebates and retail outlets that feature ENERGY STAR®-rated products.

### Small Energy Management Services

Small Energy Management Services (SBEUS) are provided to customers through direct customer contact, or in response to direct mail/program advertisement. Through this program, SCE also responds to contacts initiated by customers when they have questions about energy efficiency programs or measures.

### 2000 Results And Achievements

#### Small Business Energy Use Survey

In 2000, over 1,500 small business customers received the SBEUS. In addition, a method was developed to measure how many of the survey recommendations were actually adopted by the customer. The method will be implemented in 2001.

### Small Energy Management Services

In 2000, the program supported nearly 50 presentations to trade associations and over 400 direct customer contacts for technical support.

### 2001 Program Plans

In early 2001, the CPUC provided SCE with added flexibility to modify its current energy efficiency program portfolio to respond to California’s possible energy supply shortage and higher prices. As directed by the CPUC, SCE will report on the programmatic and funding modifications made to the portfolio, including this program, in SCE’s 2001 Energy Efficiency 1<sup>st</sup> Quarter Report to the CPUC due on May 15, 2001. This energy efficiency report will be available at the CPUC and on SCE’s website ([www.sce.com](http://www.sce.com)).

# Nonresidential Energy Management Services

## LARGE COMMERCIAL AND INDUSTRIAL SERVICES

### Program Description

The Large Commercial and Industrial Energy Management Services (EMS) program is designed to promote the customers' implementation of energy efficiency while simultaneously informing them about the current status of energy efficiency. Program representatives continue to inform customers on current energy efficiency program offerings.

SCE informs customers of energy efficiency programs available to them and keep them informed of energy efficiency regulations as they continue to evolve. Outreach activities and collateral materials inform customers of the developing statewide focus of energy efficiency programs.

Customers often contact SCE when they have questions about energy efficiency programs or measures. SCE continues to provide the resources in order to respond to these inquiries with explanations of the current program offerings in today's marketplace.

### 2000 Results And Achievements

In 2000, customers continued to be contacted through workshops or individually regarding energy efficiency programs. Customer contact continues to be a contributing factor to the success of Standard Performance Contract and other programs. These customer communications were used as the primary means to educate customers on the value of

energy efficiency in today's market and thus positively influence the sustainability of the energy efficiency market.

### 2001 Program Plans

In early 2001, the CPUC provided SCE with added flexibility to modify its current energy efficiency program portfolio to respond to California's possible energy supply shortage and higher prices. As directed by the CPUC, SCE will report on the programmatic and funding modifications made to the portfolio, including this program, in SCE's 2001 Energy Efficiency 1<sup>st</sup> Quarter Report to the CPUC due on May 15, 2001. This energy efficiency report will be available at the CPUC and on SCE's website ([www.sce.com](http://www.sce.com)).

# Nonresidential Energy Efficiency Incentives

## SMALL BUSINESS INCENTIVES

### Program Description

The Energy Efficiency Incentive program (Express Efficiency) provides financial incentives to small businesses. Eligible customers include small- and medium-size commercial customers with individual site demand of less than 500 kW. In order to facilitate the use of available funds primarily by the smaller customers, an incentive cap of \$25,000 was instituted. Measure types available for rebates include lighting retrofits, food service equipment retrofits, small air conditioning units, and other space conditioning measures.

CPUC, SCE will report on the programmatic and funding modifications made to the portfolio, including this program, in SCE's 2001 Energy Efficiency 1<sup>st</sup> Quarter Report to the CPUC due on May 15, 2001. This energy efficiency report will be available at the CPUC and on SCE's website ([www.sce.com](http://www.sce.com)).

### 2000 Results And Achievements

In 2000, the Express Efficiency Program achieved over 59,000 MWh of annualized energy savings and approximately 11.7 MW of demand reductions. Nearly 1,000 customers were provided with direct rebates.

### 2001 Program Plans

In early 2001, the CPUC provided SCE with added flexibility to modify its current energy efficiency program portfolio to respond to California's possible energy supply shortage and higher prices. As directed by the

## Nonresidential Energy Efficiency Incentives

### PREMIUM EFFICIENCY MOTOR DISTRIBUTION INCENTIVES

#### Program Description

The Premium Efficiency Motor Distributor Incentive program is a multi-year market intervention strategy, which seeks to transform the market for premium efficiency three-phase electric motors. The program objectives are accomplished mainly through an upstream financial incentive strategy for distribution channel members other than original equipment manufacturers, to encourage stocking of qualifying motors.

CPUC, SCE will report on the programmatic and funding modifications made to the portfolio, including this program, in SCE's 2001 Energy Efficiency 1<sup>st</sup> Quarter Report to the CPUC due on May 15, 2001. This energy efficiency report will be available at the CPUC and on SCE's website ([www.sce.com](http://www.sce.com)).

#### 2000 Results And Achievements

There were 65 distributors/dealers enrolled in the program and 17 participating distributors/dealers. During the program year 1,021 motors were processed representing 920 MWh of annualized energy savings and 0.2 MW of demand reduction.

#### 2001 Program Plans

In early 2001, the CPUC provided SCE with added flexibility to modify its current energy efficiency program portfolio to respond to California's possible energy supply shortage and higher prices. As directed by the

# Nonresidential Energy Efficiency Incentives

## HVAC CONTRACTOR INCENTIVE PROGRAM

### Program Description

The Nonresidential HVAC Contractor Incentive Program seeks to transform the market for nonresidential single-phase and three-phase central air conditioners and central heat pump units (65,000 Btu/hour and smaller) through a multi-year upstream financial incentive strategy for HVAC installation contractors. At the point of a planned or emergency equipment replacement market event, the program focuses on creating a “market pull” condition to increase penetration rates of higher energy-efficient air conditioning units installed at small and medium (less than 500 kW demand) customer locations. In addition, the market pull condition will serve to change the stocking practices of local key HVAC distributors based on increased order rates of energy-efficient units by their installation contractor customers. This approach mirrors the existing standard business practices of the HVAC distribution channel.

### 2000 Results And Achievements

In 2000, the program achieved 353 MWh of annualized energy savings and 0.3 MW of demand reductions.

### 2001 Program Plans

In early 2001, the CPUC provided SCE with added flexibility to modify its current energy efficiency program portfolio to respond to California’s possible energy supply shortage and higher prices. As directed by the CPUC, SCE will report on the programmatic and funding modifications made to the portfolio, including this program, in SCE’s 2001 Energy Efficiency 1<sup>st</sup> Quarter Report to the CPUC due on May 15, 2001. This energy efficiency report will be available at the CPUC and on SCE’s website ([www.sce.com](http://www.sce.com)).

## Nonresidential Energy Efficiency Incentives

### AGRICULTURAL ENERGY EFFICIENCY INCENTIVE PROGRAM

#### Program Description

The Agricultural Energy Efficiency Incentive program provides financial incentives to agricultural customers who implement measures to improve the energy efficiency of their pumping systems. Incentives are available for high-efficiency pump motors and variable speed drives. The incentive levels are fixed and are based on premium efficiency motor standards.

program portfolio to respond to California's possible energy supply shortage and higher prices. As directed by the CPUC, SCE will report on the programmatic and funding modifications made to the portfolio, including this program, in SCE's 2001 Energy Efficiency 1<sup>st</sup> Quarter Report to the CPUC due on May 15, 2001. This energy efficiency report will be available at the CPUC and on SCE's website ([www.sce.com](http://www.sce.com)).

#### 2000 Results And Achievements

In 2000, the Agricultural Energy Efficiency Incentive program achieved more than 4,000 MWh of annualized energy savings and 0.3 MW of demand reduction. The program was primarily targeted at the dairy industry during 2000. The program achieved minimal success primarily due to dairy customers' reservations regarding newer energy efficient vacuum system technology.

#### 2001 Program Plans

In early 2001, the CPUC provided SCE with added flexibility to modify its current energy efficiency

# Nonresidential Energy Efficiency Incentives

## STANDARD PERFORMANCE CONTRACT (SPC) PROGRAM

### Program Description

The Large and Small Nonresidential Standard Performance Contracting program is a statewide, performance-based financial incentive program targeted to nonresidential customers and the energy efficiency service provider (EESPs) market. The program is a “standard offer” consisting of payment of a fixed-price incentive by the utility administrator to end users or third-party EESPs in exchange for measured kilowatt-hour energy savings achieved by the installation of an energy efficiency project at a host customer facility.

### 2000 Results And Achievements

#### Large SPC

The Large SPC program operation commenced in late March 2000. By year-end 2000, the program was fully subscribed. Forty-two energy efficiency service providers sponsored at least one project. Through this program, approved projects are expected to yield more than 145,000 MWh of annualized savings and a demand reduction of more than 31 MW.

#### Small SPC

The Small SPC program was introduced in March 2000. By year-end, the program’s entire incentive budget was subscribed. Thirty-seven EESPs sponsored at least one project. Approved projects are expected to yield nearly 15,000 MWh of annualized energy savings and a demand reduction of nearly 3 MW.

### 2001 Program Plans

In early 2001, the CPUC provided SCE with added flexibility to modify its current energy efficiency program portfolio to respond to California’s possible energy supply shortage and higher prices. As directed by the CPUC, SCE will report on the programmatic and funding modifications made to the portfolio, including this program, in SCE’s 2001 Energy Efficiency 1<sup>st</sup> Quarter Report to the CPUC due on May 15, 2001. This energy efficiency report will be available at the CPUC and on SCE’s website ([www.sce.com](http://www.sce.com)).

## Nonresidential Program Area

# Upstream Programs

### HVAC CONTRACTOR PROGRAM (CheckMe!™)

#### **Program Description**

The Nonresidential HVAC Contractor program (CheckMe!™) seeks to transform the market for nonresidential single phase central air conditioners and central heat pump units through an upstream strategy for HVAC installation contractors. At the point of the equipment replacement market event, the program focuses on creating a “market pull” condition to increase penetration rates of 12 SEER and above air conditioning units installed at small and medium nonresidential customer locations.

supply shortage and higher prices. As directed by the CPUC, SCE will report on the programmatic and funding modifications made to the portfolio, including this program, in SCE’s 2001 Energy Efficiency 1<sup>st</sup> Quarter Report to the CPUC due on May 15, 2001. This energy efficiency report will be available at the CPUC and on SCE’s website ([www.sce.com](http://www.sce.com)).

#### **2000 Results And Achievements**

In 2000, over 100 HVAC technicians were trained in the use of the CheckMe!™ software. In addition, over 3,000 tests/diagnostics were performed using the computer-based system.

#### **2001 Program Plans**

In early 2001, the CPUC provided SCE with added flexibility to modify its current energy efficiency program portfolio to respond to California’s possible energy



## Upstream Programs

### EMERGING TECHNOLOGIES SHOWCASING

#### Program Description

The audience for SCE's showcase alliances is residential, commercial, industrial, and agricultural customers, builders, building owners, and design professionals. These are customers and business groups that are normally reluctant to try innovative energy efficiency solutions. Their natural tendency is to operate just as they have in the past. To overcome their reluctance, one must have actual data on the performance of energy-efficient systems installed in actual projects. Showcase alliances with customers in key market segments are carefully structured projects that are well documented, generate actual data on energy-efficient technologies, and are widely publicized through the media.

Showcases have the following characteristics:

- demonstration projects at customer sites in order to showcase promising "off-the-shelf" technologies, or new and innovative techniques that develop through the design and construction documentation process;

- documentation of energy and demand impacts through engineering analysis;
- documentation of performance and maintenance requirements;
- customer visits to showcase sites to increase knowledge and comfort level; and
- transference of results through fact sheets, web pages, ads, technical journals, newspapers, magazines, and technical presentations.

The program reduces market barriers in several ways. The data generated at showcase sites make it convenient and less costly for the target audience to acquire information about energy-efficient technologies. Similarly, criticism of the rationale for emerging energy-efficient technologies is reduced through actual site information, and through customer visits to the showcase sites. Both of these help to provide a better understanding of the benefits provided by energy-efficient building practices. Finally, the showcase sites help to overcome years of "business as usual" building and design practices that continue the use of outdated technologies.

#### 2000 Results And Achievements

In 2000, SCE signed more than 30 agreements with customers to showcase energy efficiency emerging technologies at their place of business. Due to the new construction nature of showcasing activities, project construction, testing, and monitoring are not typically completed within a calendar year. It is expected that these showcase projects will be constructed, tested, and monitored for performance over the next two years. The specific results on project performance will be shared with the participating customer and the industry as whole.

# Nonresidential Program Area

## **2001 Program Plans**

In early 2001, the CPUC provided SCE with added flexibility to modify its current energy efficiency program portfolio to respond to California's possible energy supply shortage and higher prices. As directed by the CPUC, SCE will report on the programmatic and funding modifications made to the portfolio, including this program, in SCE's 2001 Energy Efficiency 1<sup>st</sup> Quarter Report to the CPUC due on May 15, 2001. This energy efficiency report will be available at the CPUC and on SCE's website ([www.sce.com](http://www.sce.com)).

## Nonresidential Program Area

Table 3.1  
2001 Energy Efficiency Annual Report  
SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC  
NONRESIDENTIAL PROGRAM AREA

	2000 Budget	[1,2]	2000 Recorded	[1,2,3]	2001 Budget	[1,4]
<b>Information</b>	1,968,100		\$ 1,929,459		\$ 3,338,918	
<b>EMS</b>						
Large	1,535,300		1,535,245		1,150,000	
Small/Medium	2,899,700		2,657,470		2,785,000	
<b>EEl: Customized Rebates</b>						
Large	-		-		-	
Small/Medium	280,000		272,594		-	
<b>EEl: Prescriptive Rebates</b>						
Large	2,000,000		2,000,000		9,795,000	[5]
Small/Medium	2,950,000		3,892,563		6,150,000	
<b>EEl: SPCs</b>						
Large	15,657,000		19,062,551		5,026,730	
Small/Medium	2,500,000		2,627,397		1,500,000	
<b>Upstream Programs</b>						
Information	3,167,000		3,135,923		3,320,936	
Financial Assistance	1,685,200		1,658,178		400,000	
<b>Nonresidential Total</b>	<u>\$ 34,642,300</u>		<u>\$ 38,771,381</u>		<u>\$ 33,466,584</u>	

[1] Excludes Shareholder Incentives

[2] Amounts reflect Program Year 2000 (PY00) funds, including fund shifts during 2000.

[3] All Recorded amounts include payments in 2000 and amounts committed to projects in 2000.

    Committed amounts may not be fully realized.

[4] Amounts reflect Program Year 2001 (PY01) funds, as of March 27, 2001.

[5] Includes budgeted amounts for LED traffic signals for small/medium customers.

# Nonresidential Program Area

**Table 3.2**  
**2001 Energy Efficiency Annual Report**  
**SUMMARY OF ENERGY EFFICIENCY PROGRAM EFFECTS: ELECTRIC**  
**NONRESIDENTIAL PROGRAM AREA**

	2000 First Year Net Annualized Capacity Savings (MW) [1]	2000 First Year Net Annualized Energy Savings (kWh) [1]	2001 First Year Net Annualized Capacity Savings (MW) [1]	2001 First Year Net Annualized Energy Savings (kWh) [1]
<b>Information</b>	-	-	-	-
<b>EMS</b>				
Large	-	-	-	-
Small/Medium	0.07	24,110,809	4.63	14,070,083
<b>EEl: Customized Rebates</b>				
Large	-	-	-	-
Small/Medium	0.25	4,018,874	-	-
<b>EEl: Prescriptive Rebates</b>				
Large	4.04	22,892,026.19	45.21 [2]	152,847,680 [2]
Small/Medium	11.73	59,013,861	13.97	74,539,958
<b>EEl: SPCs</b>				
Large	31.05	145,864,263	4.21	19,424,500
Small/Medium	2.97	14,797,866	0.03	160,416
<b>Upstream Programs</b>				
Information	-	-	-	-
Financial Assistance	0.49	1,272,979	0.12	544,204
<b>Nonresidential Total</b>	<u>50.60</u>	<u>271,970,678</u>	<u>68.16</u>	<u>261,586,842</u>

[1] Net Savings for reflect Commission-adopted net-to-gross ratios for each year (1.0 for 2000, Program-Specific for 2001).

[2] Includes savings from LED traffic signals for small/medium customers.

## Nonresidential Program Area

Table 3.3  
2001 Energy Efficiency Annual Report  
SUMMARY OF COST-EFFECTIVENESS: ELECTRIC  
(Benefit-Cost Ratios)  
NONRESIDENTIAL PROGRAM AREA

	2000 Utility Cost Test	[1]	2000 Total Resource Cost Test	[1]	2001 Utility Cost Test [2]	2001 Total Resource Cost Test [2]
<b>Information</b>	-		-		-	-
<b>EMS</b>						
Large	-		-		-	-
Small/Medium	4.50		2.99		4.37	3.67
<b>EEl: Customized Rebates</b>						
Large	-		-		-	-
Small/Medium	7.38		2.77		-	-
<b>EEl: Prescriptive Rebates</b>						
Large	4.89		1.94		10.98 [3]	5.78 [3]
Small/Medium	5.89		9.84		8.20	3.16
<b>EEl: SPCs</b>						
Large	3.85		3.17		3.83	3.81
Small/Medium	2.70		2.49		0.14	0.14
<b>Upstream Programs</b>						
Information	-		-		-	-
Financial Assistance	0.39		0.33		1.58	1.20
<b>Nonresidential Total</b>	<u>3.27</u>		<u>2.72</u>		<u>6.38</u>	<u>3.86</u>

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

[2] Includes general support costs not included in the 2000 cost-effectiveness (e.g., MA&E, other overhead).

[3] Includes savings from LED traffic signals for small/medium customers.

## Nonresidential Program Area

Table 3.4			
2001 Energy Efficiency Annual Report			
SUMMARY OF COST-EFFECTIVENESS: ELECTRIC			
NONRESIDENTIAL PROGRAM AREA			
(Net Benefits)			
		2000 TRC	2001 TRC
<b>Information</b>	\$	(2,168,096)	\$ (3,338,918)
<b>EMS</b>			
Large		(1,535,245)	(1,150,000)
Small/Medium		8,343,257	10,193,174
<b>EEl: Customized Rebates</b>			
Large		-	-
Small/Medium		1,338,594	-
<b>EEl: Prescriptive Rebates</b>			
Large		4,816,204	132,605,263 [1]
Small/Medium		21,093,038	45,704,993
<b>EEl: SPCs</b>			
Large		53,253,477	16,036,111
Small/Medium		4,630,469	(1,279,209)
<b>Upstream Programs</b>			
Information		(3,406,377)	(3,320,936)
Financial Assistance		(1,410,451)	112,075
<b>Nonresidential Total</b>	<b>\$</b>	<b>84,954,869</b>	<b>\$ 195,562,552</b>

[1] Includes savings from LED traffic signals for small/medium customers.

## Residential New Construction

### RESIDENTIAL NEW CONSTRUCTION PROGRAM

#### Program Description

The SCE Residential New Construction program is a performance-based program whose primary objective is to change the current energy efficiency practices of the residential builder. This program is intended to promote the efforts of those builders who are proactively seeking to update their current energy efficiency practices. As a result of this program, new residential homes are more energy efficient than current state building standards.

The program targets the single-family production homebuilders in SCE's service territory. The program incorporates the following minimum requirements:

- builder must exceed 1993 Model Energy Code (Title 24) by 30 percent in order to qualify for the Environmental Protection Agency's ENERGY STAR® rating;
- builder must have the duct system designed and sized according to the Air Conditioning Contractors of America procedures,
- all energy efficiency features are randomly inspected by a third-party vendor;

- system diagnostics must be performed by a third-party vendor; and
- builder must maintain promotional materials marketing energy efficiency provided by SCE.

The program also provides builders with a HERS rating through the CHEERS program. This rating can be given to the prospective homebuyer that can serve as supporting documentation for an energy efficient mortgage (EEM).

In response to the 2000 summer capacity crisis, SCE expanded and enhanced the Residential New Construction program by offering financial incentives direct to builders starting construction in 2000 for the downsizing of HVAC systems (by a minimum average of 0.5 tons).

SCE's Residential New Construction program also conducts Builder Energy Code training classes focused on improving energy efficiency in the new construction process. This training educates builders and their staff, as well as some of their subcontractors, on the concepts behind Title 24 [i.e., using efficiency tradeoffs for compliance, proper design and layout of

HVAC systems, etc.]. The program also is actively promoted at industry trade shows throughout the year to promote this initiative to a diverse group of building industry professionals. Additional promotional efforts are carried out through various media avenues, trade shows, and educational seminars.

#### 2000 Results And Achievements

In 2000, over 4,000 residential units were committed to participate in the program. It is expected that these units will be built over the next few years. Additionally, SCE's Residential New Construction program continued its far reaching marketing and advertising campaign which included insertions in a variety of builder trade magazines, consumer home-buyer's guides, local and regional newspapers, billboards, and builder grand opening support.

Also, in 2000, a mini trade show with window manufacturers of spectrally selective glass was organized for builders, to create awareness and promotion of energy efficiency through SCE's Residential New Construction program. SCE also expanded its existing

## New Construction Program Area

Residential New Construction website by incorporating user-friendly enhancements and updates such as on-line requests for Builder Resource Guides and training registration.

Approximately 100 *Builder Resource Guides* were distributed to builders, architects, engineers, and others in the building industry. This guide covers a wide range of topics, including Title 24, the EPA's ENERGY STAR® Home Program, as well as HERS ratings, and is intended to be an "encyclopedia" reference for nearly all actors within the building industry.

### **2001 Program Plans**

In early 2001, the California Public Utilities Commission (CPUC) provided SCE with added flexibility to modify its current energy efficiency program portfolio to respond to California's possible energy supply shortage and higher prices. As directed by the CPUC, SCE will report on the programmatic and funding modifications made to the portfolio, including this program, in SCE's 2001 Energy Efficiency 1<sup>st</sup> Quarter Report to the CPUC due on May 15, 2001. This energy efficiency report will be available at the CPUC and on SCE's website ([www.sce.com](http://www.sce.com)).



## Nonresidential New Construction

### SAVINGS BY DESIGN

#### Program Description

Savings By Design (SBD) is a program designed to encourage high performance nonresidential remodeling and renovation. This process seeks to permanently reduce the transaction costs associated with developing and evaluating energy efficiency design alternatives. It also seeks to improve the comfort, efficiency, and performance of buildings by promoting an integrated team approach to design. The program provides direct benefits to all market actors and market segments, including building owners - large or small, public or private, occupant or developer - and design professionals involved in building remodeling and renovation.

This program encourages building owners, developers, and lenders to continue to make energy efficient design and construction decisions through analysis of financial benefits resulting from energy efficiency including life cycle cost considerations.

SBD offers two alternative approaches to energy efficiency: Systems Approach and a Whole Building Approach. The Systems

Approach is used for projects where design of the energy systems is done at different phases, where one energy system predominates, intervention occurs late in the design, or for small buildings with simple system interactions. The Whole Building Approach is used for projects where the design team can work closely to integrate the building's energy systems for buildings with complex system interactions and for large, multi-use facilities.

The program offers three types of assistance:

- design assistance - which includes recommendations for efficient equipment and consultation on enhanced design strategies;
- financial incentives - to building owners when the efficiency of the building exceeds the minimum SBD requirements; and
- design team incentives - offered to support the extra effort for integrated energy design and to reward exceptional design accomplishments.

#### 2000 Results And Achievements

In 2000, SBD achieved nearly 27,500 MWh of net annualized energy savings and over 7.0 MW of net peak demand reduction.

#### 2001 Program Plans

In early 2001, the CPUC provided SCE with added flexibility to modify its current energy efficiency program portfolio to respond to California's possible energy supply shortage and higher prices. As directed by the CPUC, SCE will report on the programmatic and funding modifications made to the portfolio, including this program, in SCE's 2001 Energy Efficiency 1<sup>st</sup> Quarter Report to the CPUC due on May 15, 2001. This energy efficiency report will be available at the CPUC and on SCE's website ([www.sce.com](http://www.sce.com)).

# Nonresidential New Construction

## ENERGY DESIGN RESOURCES

### Program Description

Energy Design Resources (EDR) is an integrated package of design tools and information resources that promote the design and construction of high-performance buildings. These tools are readily available and accessible to designers working in the new construction market and inherently complement the Whole Building Approach strategies of the SBD program. The program provides:

- information resources supporting a wide range of energy efficiency design strategies, techniques, and technologies;
- software tools that facilitate design practices and financial processes that lead to increased energy efficiency in buildings;
- technology transfer, including industry seminars, targeted training events, and an easily-accessible Internet website; and
- validation of and peer recognition for designers and developers of exemplary projects that successfully incorporate

principles of energy efficient design.

### 2000 Results And Achievements

SCE developed enhancements and expansions to the products or tools in several areas, including three new customized design briefs for the Southern California audience, updates to the eQUEST and eVALUator software tools to include a school district user profile and several improvements to the feature. SCE continued the series of newsletters directed at the building owner and developer market. SCE also provided in-house seminars for local architectural and engineering firms to promote the program.

### 2001 Program Plans

In early 2001, the CPUC provided SCE with added flexibility to modify its current energy efficiency program portfolio to respond to California's possible energy supply shortage and higher prices. As directed by the CPUC, SCE will report on the programmatic and funding modifications made to the portfolio, including this program, in SCE's 2001 Energy Efficiency 1<sup>st</sup> Quarter Report to the CPUC due on

May 15, 2001. This energy efficiency report will be available at the CPUC and on SCE's website ([www.sce.com](http://www.sce.com)).

# Nonresidential New Construction

## LOCAL GOVERNMENT INITIATIVE

### Program Description

The Local Government Initiative (LGI) program assists local governments in the development and implementation of policies and practices that will institutionalize energy efficiency activities at the local level. This activity included a continuation of a three-year pilot with two cities within SCE's service territory.

The following items comprise the core elements of the LGI:

- identify and assist community planning departments in the approval for planning and zoning area changes that improve community-level and building-level energy efficiency;
- develop and distribute software designed to evaluate the impact of incorporating energy efficiency policies and plans to the planning departments of local governments. Local governments will use the software to evaluate the energy

- impacts of their local planning decisions including their general plan update processes; and
- collect, produce, and disseminate information regarding energy efficiency issues to local governments to ensure continuous exposure to this subject.

### 2000 Results And Achievements

The program recruited 12 new cities within SCE's service territory this year to participate: Corona, Delano, Highland, Lancaster, Loma Linda, Palmdale, Palm Springs, Rancho Mirage, Riverside County, Ontario, Santa Barbara, and Ventura. The primary program activity was providing assistance to planning departments with analysis of residential development plans to improve energy efficiency. LGI also finalized upgrades to its LEAP 1 computer analysis tool, which evaluates energy efficiency measures at sites proposed for development.

The LGI program provided facility energy efficiency audits, and conducted a number of energy awareness outreach activities. These included participation in workshops and conferences, newsletter publication, and maintenance of its library and website which contain energy efficiency information available for distribution.

### 2001 Program Plans

In early 2001, the CPUC provided SCE with added flexibility to modify its current energy efficiency program portfolio to respond to California's possible energy supply shortage and higher prices. As directed by the CPUC, SCE will report on the programmatic and funding modifications made to the portfolio, including this program, in SCE's 2001 Energy Efficiency 1<sup>st</sup> Quarter Report to the CPUC due on May 15, 2001. This energy efficiency report will be available at the CPUC and on SCE's website ([www.sce.com](http://www.sce.com)).

# New Construction Program Area

**Table 4.1**  
**2001 Energy Efficiency Annual Report**  
**SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC**  
**NEW CONSTRUCTION PROGRAM AREA**

	2000 Budget	[1,2]	2000 Recorded	[1,2,3]	2001 Budget	[1,4]
<b>Residential</b>	\$ 4,136,100		\$ 3,821,909		\$ 5,283,000	
<b>Nonresidential</b>	8,365,700		8,150,629		10,124,416	
<b>New Construction Total</b>	<u>\$ 12,501,800</u>		<u>\$ 11,972,538</u>		<u>\$ 15,407,416</u>	

[1] Excludes Shareholder Incentives

[2] Amounts reflect Program Year 2000 (PY00) funds, including fund shifts during 2000.

[3] All Recorded amounts include payments in 2000 and amounts committed to projects in 2000.  
Committed amounts may not be fully realized.

[4] Amounts reflect Program Year 2001 (PY01) funds, as of March 27, 2001.

## New Construction Program Area

**Table 4.2**  
**2001 Energy Efficiency Annual Report**  
**SUMMARY OF ENERGY EFFICIENCY PROGRAM EFFECTS: ELECTRIC**  
**NEW CONSTRUCTION PROGRAM AREA**

	2000 First Year Net Annualized Capacity Savings (MW)	[1]	2000 First Year Net Annualized Energy Savings (kWh)	[1]	2001 First Year Net Annualized Capacity Savings (MW)	[1]	2001 First Year Net Annualized Energy Savings (kWh)	[1]
<b>Residential</b>	8.01		5,691,792		8.52		5,704,000	
<b>Nonresidential</b>	7.17		30,884,339		19.30		55,955,360	
<b>New Construction Total</b>	<u>15.18</u>		<u>36,576,131</u>		<u>27.82</u>		<u>61,659,360</u>	

[1] Net Savings for reflect Commission-adopted net-to-gross ratios for each year (1.0 for 2000, Program-Specific for 2001).

# New Construction Program Area

**Table 4.3**  
**2001 Energy Efficiency Annual Report**  
**SUMMARY OF COST-EFFECTIVENESS: ELECTRIC**  
**(Benefit-Cost Ratios)**  
**NEW CONSTRUCTION PROGRAM AREA**

	2000 Utility Cost Test	[1]	2000 Total Resource Cost Test	[1]	2001 Utility Cost Test [2]	2001 Total Resource Cost Test [2]
<b>Residential</b>	0.88		0.74		2.29	2.56
<b>Nonresidential</b>	1.46		1.04		6.66	4.94
<b>New Construction Total</b>	<u>1.28</u>		<u>0.96</u>		<u>5.31</u>	<u>4.39</u>

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

[2] Includes general support costs not included in the 2000 cost-effectiveness (e.g., MA&E, other overhead).

## New Construction Program Area

Table 4.4  
2001 Energy Efficiency Annual Report  
SUMMARY OF COST-EFFECTIVENESS: ELECTRIC  
NEW CONSTRUCTION PROGRAM AREA  
(Net Benefits)

	2000 TRC	2001 TRC
Residential	\$ (1,216,318)	\$ 7,917,884
Nonresidential	500,383	67,156,381
<b>New Construction Total</b>	<u><u>\$ (715,935)</u></u>	<u><u>\$ 75,074,265</u></u>





## Market Assessment & Evaluation

### Program Description

Market Assessment & Evaluation (MA&E) is the set of activities needed: (1) to provide market and product assessment studies and analyses useful to energy efficiency program planners and policy makers; and (2) to evaluate the performance of energy efficiency programs.

### 2000 Results And Achievements

#### Statewide Studies

SCE had responsibility for four statewide study areas:

- market share tracking for key residential energy efficiency measures;
- the residential retrofit and remodeling market and the RCP related to that market;
- large nonresidential customers and the large customer SPC program; and
- the nonresidential new construction market, the nonresidential new construction programs, and nonresidential construction codes and standards.

During PY 2000, SCE completed the studies in these four areas that were initiated in 1999. SCE initiated and, in some cases, completed the studies proposed in SCE's PY 2000 program application and

authorized by the CPUC for implementation.

#### Residential Market Share Tracking Study Area

##### *Residential Market Share Tracking Study*

The goal of this project is to track information on the market share of ten key types of energy-efficient equipment. Analysis of the information will be provided in annual reports, and the data will be provided in a publicly available database. It can be used to assess the success of specific residential programs and to offer guidance for any mid-course corrections. Tailored reports can also be generated to provide the data needed to verify utility achievement of milestones for performance

The Residential Market Share Tracking Study has now established the baseline market share for 14 residential energy efficiency measures that are major targets of Program Year (PY) 1998-2001 California energy efficiency programs. It has also established a system for monitoring changes in market share by decision type over time and incorporates a dynamic database for this continued data tracking. Data are being gathered from distributors and retailers, on-site surveys of new homes, county building departments,

and from point-of-sales reports purchased from national sources.

The First-Year Interim Report of the Residential Market Share Tracking Study was completed in fall 2000. In addition, the first in a planned series of semi-annual Lighting Reports (Lamps 2000 - Volume I) was completed soon afterwards, in early January of 2001. The second volume is scheduled to be completed in April of 2001 (Lamps 2000 - Volume II). A continuing series of measure-specific tracking reports that provide quarterly tracking information are due to be published in May and June of 2001.

#### Large Nonresidential Retrofit and Turnover Area

##### *1999 Nonresidential Standard Performance Contracting Program Process and Impact Evaluation*

The initial tasks of this study were begun in late 1999. Because of issues raised in the PY 2000 program planning process, SCE recommended that additional data analyses be planned, that certain sample sizes be enlarged to provide greater precision and generalizability of the conclusions, and that more work be planned on the synthesis of the program tracking data and comparison

## MA&E and Regulatory Oversight

of the 1998 program with the 1999 program.

The preliminary deliverables were completed on the original schedule by the end of the second quarter, and a draft version of the report was circulated to SPC program managers for review and comment. The evaluators for this program, the 1999 Small/Medium Business SPC program, and the Express Efficiency programs presented their results to program managers and planners in time for them to use the information in adjusting their PY 2001 program plans, at a two-day forum held at the end of July.

With the delay of the PY 2001 planning process and the scheduling of related workshops in October, additional work on this project was scheduled to update the results in order to be of most value to the program planners and other stakeholders. The additional analyses provided them with better information with which to plan PY 2001 changes, and the final report, received January 10, 2001, reflects a more current state of the program than originally planned.

### ***Large Nonresidential Customer Wants and Needs Analysis***

This project has investigated the motivations, issues faced, and decision processes of large nonresidential customers within a few key segments, with regard to their

choices of whether to implement energy efficiency measures. The study involved identifying a set of experts on these issues for each market segment and bringing them to one-day workshops to share responses to these questions with each other. Its goal is to identify opportunities for more effective program design and marketing approaches that administrators can use to increase participation in energy efficiency programs. Early findings from the first workshops were informally transmitted to appropriate program managers and field staff. A draft of the study report, completed in December 2000, has been circulated to stakeholders, in preparation for a seminar scheduled for mid-January to share the results with them and get their feedback. The final report will be completed and distributed to the California MA&E community a few weeks later. The findings from this study should have additional impact outside the state: two papers based on the study have been accepted for presentation at national professional association meetings.

### ***Study of the Decision Process and Strategies for Successful Energy Efficiency Service Providers***

This project investigates the business prospects and barriers for new or existing business services companies to become EESPs. It searches out strategies used by

successful companies in related business services fields. It is intended to identify ways in which program planners can broaden trade ally participation in their programs and in the provision of energy efficiency services in general. The study was initiated in fall 2000 and is scheduled for completion in the second quarter of 2001.

### ***Evaluation of the PY 2000 Nonresidential SPC Program***

This evaluation has dual goals: a process evaluation of the program and development of estimates of eventual program impacts on annual energy use and peak demand. The PY 2000 Large SPC program incorporates changes from earlier years. It is being evaluated to determine if the changes have been successfully implemented and have resulted in the desired improvements over the preceding programs. There should also be, to the extent possible, an evaluation of the expected load impacts of the program, including net-to-gross ratios and benefit/cost ratios of the program. This project began near the end of the program year, and it will be completed by July 2001, in time to contribute to the planning of PY 2002 programs.

### ***Evaluation of the PY 2000 C/I Energy Efficiency Information Programs***

This planned study was eliminated in favor of doing

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new studies in PY 2001 of PY 2001 programs. Programs are being significantly modified for PY 2001, and the Commission wants energy savings estimates for 2001 programs rather than for previous programs that have been significantly changed.

### **Residential Retrofit, Renovation and Remodeling/Residential Contractor Area**

#### ***Residential Contractor Program Evaluation Study***

The Statewide Residential Contractor Program (RCP) Evaluation Study Phase II was initiated in August 1999 to build on the extensive market assessment information provided by the PG&E-managed study of the 1998 Residential SPC Program and the Residential Contractor Program Market Assessment Phase I. Specific objectives of this study include:

- assessing the effectiveness of the design and delivery of PY 1999 RCP and providing program and policy suggestions;
- completing the characterization of the residential contracting market, which includes the perspectives of both multi-family owners and single-family homeowners; and
- developing an approach for tracking market effects indicators and measuring any near-term market effects of the PY 1999 RCP.

Work completed in 1999-2000 included:

- a complete characterization of the residential contracting market using research into consumer baseline awareness, perceptions, and practices; segmentation analysis of contractors; and single family homes trends;
- a process evaluation memo that included qualitative interviews with program staff and both participant and non-participant contractors, and surveys of single family homeowner participants;
- a near-term market effects analysis of the 1999 RCP; and
- establishment of a geographic information system and its use in two case studies tracking contractor coverage and voucher distribution within the market.

The study was completed during the first half of 2000, and the following deliverables were provided:

- a draft final report;
- a follow-up workshop with program managers;
- the final report, incorporating feedback from utility and CEC study managers and the program managers' workshop; and
- presentation of results in a California Measurement Advisory Council (CALMAC) forum in November 2000, to make results available to policy

makers and other stakeholders.

### ***Statewide Multi-family Common Area Survey***

This statewide project was initiated in November 1999. Its purpose is to provide baseline equipment saturation and decision-making data for common areas in apartment complexes, condominiums, and homeowner association developments. The saturation data collected are being used to determine the existing efficiency levels of equipment in the common areas. The decision-making surveys, linked to the saturation data, will provide valuable information to program planners about this market.

Specific data collection objectives of this study included:

- 840 on-sites surveys of multi-family housing common areas, stratified by four size related strata;
- 40 qualitative interviews with management companies and owners; and
- 840 short telephone surveys with management companies and owners.

Work completed in 2000 included:

- Data on energy-using equipment for common areas collected on-site for 540 apartment complexes and 303 condominium/homeowner associations located throughout the state;

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- In-depth interviews of 25 key professionals in the multi-family industry; and
- Interviews with over 690 decision-makers for the apartment complexes and condominium/homeowner associations that were surveyed on-site, to obtain information on decision-making procedures and attitude and perceptions regarding energy efficiency for their facilities.

The study was completed in mid 2000, and the following deliverables were provided:

- A database of the on-site and telephone survey data sufficient to determine the existing efficiency and saturation levels of equipment in the common areas by state and utility service territory;
- Tabulations of the major survey data;
- A report documenting the study methods and analyzing the data collected for apartment complexes and condominium/homeowner associations each; and
- Presentation of results in a California Measurement Advisory Council (CALMAC) forum in November 2000, to make results available to policy makers and other stakeholders.

### ***Statewide Process Evaluation Study of PY 2000 Residential Contracting Program***

The Statewide Residential Contractor Program (RCP) Evaluation Study Phase III was initiated in the last quarter of 2000. This study is to determine short-term modification needs of the RCP program. This was done by analyzing the status of the PY 2000 program and examining several overarching issues examined through both program staff and contractors' perspectives on various administrative features of the program, including incentive levels, contractor screening and training, and trade specific issues.

Work completed in 2000 included:

- A preliminary analysis and summary of the PY 2000 program activity in the single family and multi-family RCP;
- Six focus groups to obtain feedback from customers and contractors;
- Interviews with stakeholders who have been involved with various aspects of the program such as program administration, training and screening;
- Structured interviews with 35 participating single family RCP contractors scattered throughout the state;
- Structured interviews with seven contractors participating in the multi-family RCP; and
- An interim summary report on the PY 2000

RCP program and contractor feedback.

The study will be completed by the end of April 2000, and the following deliverables will be provided:

- A complete summary of the PY 2000 program including analysis of the year-end program data;
- Additional interviews with eligible and participating multi-family property owners and contractors and additional interviews with single-family contractors;
- An update of the geographical analysis that was performed in the PY 1999 study to determine contractor coverage in PY 2000;
- A draft final report; and
- A final report, incorporating feedback from utility study managers and the program managers.

### ***Baseline Efficiency Data Tracking for Building Shell Measures in Existing Homes***

This study was proposed due to lack of existing sources of statewide baseline information on building shell efficiencies, including both major and minor insulation upgrades, windows, infiltration repairs and duct-sealing measures. Because the SDG&E-managed statewide Residential Appliances and Lighting MA&E Study already had on-site residential surveys planned, it was possible to track these additional measures as a supplement to

that study. This approach substantially reduced both costs and customer contacts, but it was not possible to collect infiltration and duct testing data. The supplementary data collected are intended to provide both baseline information on the state of building shell efficiencies in the current building stock and information on the current flow of building shell retrofit activity in the state.

This work was completed in 2000. The data collected included attic, floor, and wall insulation R-values, wall construction types, and window type and number of panes. The data were collected from a sample of 1,258 single family, multi-family and mobile homes through out the service territories of PG&E, SCE, SDG&E and Sacramento Municipal Utility District (SMUD).

### ***Study of Customer Decision-Making Processes and the Role of Information Delivery Channels in the Residential Retrofit, Remodeling/Renovation Market***

This study modeled customers' decision-making processes for remodeling, especially with respect to such remodeling projects as kitchen, bathroom, windows, insulation, hardwired lighting, HVAC, and roof. This involved modeling key drivers that result in satisfactory completions of such projects and factors that influence such decisions,

including pay-back, comfort and safety, warranty, financing, choice of contractor, etc. It also examined the effectiveness of various consumer information delivery channels, including media, Internet, word-of-mouth, and sales staff, that result in consumers taking action on information.

Results from this research will supply important feedback on the demand-side behavior of this market. This study is scheduled to be completed by May 2001 and the following deliverables will be provided:

- An analysis of the key drivers of remodeling decisions, using neural network modeling techniques;
- A segmentation analysis to identify market segments for residential remodeling, using neural network modeling techniques;
- An analysis of key market barriers for remodeling decisions;
- A description of program preferences for remodeling customers;
- An examination of information channels ranked in their importance to remodeling customers;
- Tabulations of the data collected;
- A draft final report; and
- A final report, incorporating feedback from utility study managers and the program managers.

### ***Nonresidential New Construction Study Area***

#### ***NRNC Baseline Extension – Whole Building vs. Systems Projects***

This project was planned in 1999 and a draft report was completed by year-end 2000, with the final report being produced in January 2001.

One of the hypotheses of the Savings By Design program is that integrated whole building design produces significantly greater energy savings than the prescriptive-type measure-by-measure approach (called the Systems Approach in the new program). Using data from the NRNC Baseline study, this project was designed to test that hypothesis by comparing whole building and systems projects along several parameters. Its results support the hypothesis, with the whole building designs producing about 25 percent greater savings than the prescriptively designed ones.

#### ***NRNC Baseline Extension – Lighting Power Density Measurement Error and Lighting Quality Assessment***

According to the NRNC Baseline Study, 73 percent of the energy savings beyond Title 24 in the 667 new buildings studied was attributable to lighting. The estimates are based on on-site survey data which amounted to fixture counts and estimates of fixture wattages. Some parties expressed concern that these large

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savings estimates could be either the result of measurement error or of poor lighting quality in the high efficiency buildings. This study gathered data to assess these two hypotheses. The project carried out a detailed lighting survey of a sub-sample of the projects in the Baseline Study, including detailed fixture counts and wattage, measurements of illuminance levels, and an occupant satisfaction survey.

The first part of the study calculated the lighting power density measurement error associated with previous on-site data collection activity and found that there was no significant systematic bias. The second part of this study investigated the correlation between the lighting power density of a lighting installation and the lighting quality provided. The analysis shows that there is virtually no correlation between lighting power density and two measures of lighting quality - illuminance uniformity and occupant satisfaction.

The final report was submitted to SCE in February 2001.

### ***NRNC Baseline Extension – Analysis of New LPD Baseline***

The new July 1, 1999, Title 24 LPD requirements represent a substantial increase in the stringency of required lighting system efficiency. There is not a clear assessment of how easy or

difficult it will be for designers to meet these new requirements, but this is what the SBD program requires. The NRNC Baseline study database has sufficient detail to document how it has been accomplished in the past and what types of changes to current practice will be required to exceed the new Title 24 requirements. The study documents that most of the 1995-98 buildings could already meet the new standards, so compliance should be easy. A second objective was to obtain a better understanding of energy savings at the end-use level. A sequence of parametric runs of the energy simulation models were prepared for several measure categories, in order to better understand the direct and interactive effects of these measures.

This study was completed in November 2000.

### ***NRNC Statewide Program Needs Assessment (Market Transformation Barriers and Strategies Study)***

The general purpose of this study is to develop a better understanding of the process of and impediments to energy-efficient design in new nonresidential buildings. Within this context, we also wanted to:

- Examine the market model and the nature of market barriers from the Nonresidential New Construction Baseline Study;

- Assess market actor response to possible market interventions and program strategies;
- Assess the acceptance and preliminary success of Savings By Design, the newly launched statewide new construction program; and
- Provide recommendations on additional methods for positively influencing the energy efficiency design process.

Through a series of focus groups, this project gathered information on the needs and desires of NRNC designers and building owners as related to energy efficiency programs. The consultant analyzed the information to assess how successfully the current program designs are meeting those needs and to recommend new or revised program elements to make the NRNC programs more effective in the future. The final report was completed in February 2000.

### ***NRNC Market Characteristics and Program Tracking Project***

This project provides quarterly reports of statewide NRNC program activity and of NRNC market activity. Tracking the changing characteristics of the NRNC market over time provides information for refining program design and for assessing program accomplishments. A PY 2000 annual report was prepared

analyzing the patterns found in the quarterly reports. A verification report was also prepared to document whether the utilities met their shareholder earnings milestone for PY 2000 of increasing the market share of new building designs that exceed a given efficiency level. The quarterly 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.

### ***NRNC Building Efficiency Assessment (BEA) Project***

This study quantifies the whole-building and end-use energy savings and efficiencies of both participant and non-participant buildings. The approach to developing these data is similar to that used in preparing the statewide NRNC Baseline Study and the results can be referenced back to that study to assess progress on an annual (or more frequent) basis. Unlike previous studies, however, 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 were built based on detailed on-site surveys of a sample of buildings. Energy savings were calculated by end use and for whole buildings. Quantifiable information was 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.

This project provides quarterly analysis of Savings By Design program participants and non-participants. A draft PY 2000 annual report has been prepared analyzing the sampled projects that were completed in PY 1999 and PY 2000.

### ***NRNC Program Process Evaluation***

This study, which is a sub-task of the BEA study described above, assesses the attitudes and responses to the SBD program of the program participants as they go through the program process. The results will provide immediate feedback to program managers and policymakers and should facilitate incremental improvements to program process and operations. The

results will also identify changes in design practices as a result of program operation. This project establishes an early baseline of program participant attitudes and responses to the program, including information on program design, the application process, the design assistance services provided by the programs, the timing of program events relative to project events, etc. These data will then be gathered on a repetitive basis to track changes over time. The data will also help identify differences between the approaches of different utility programs, and to assess which work best.

The process evaluation results are incorporated into the BEA draft PY 2000 annual report.

### ***Nonresidential Building Codes and Standards***

SCE's PY 2000 program plans application included this study as a follow-on to another statewide study being managed by PG&E. As reported in SCE's May 1, 2000, Annual Report, by second quarter 2000 it appeared that no follow-on work would be required until PY 2001.

### ***Relocatable Classrooms***

The Relocatable Classroom Program at PG&E has been a pilot program. The program managers have been experimenting with their marketing approach and learning about the market actors' responses to their

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program of market intervention. In last year's Annual Report, SCE reported that there appeared to be little need for PY 2000 MA&E activity, as it would be largely redundant with what the program has been doing already. Consequently, this project was dropped from the plans for the year.

### **CEC Data Collection and Statewide Studies**

SCE transferred funds to a CEC balancing account in 2000 to fund CEC implementation of the following studies: a statewide residential appliance saturation survey; the nonresidential market share tracking study; and the statewide study of the nonresidential R&R market. These studies are described in detail in the CEC's Appendix to this report.

### **SCE Studies**

SCE also worked on several projects designed to meet the information needs of SCE program planners and implementation contractors, and to meet the measurement milestone in SCE's shareholder earnings mechanism for PY 1999 and PY 2000 programs.

#### ***Study of Small Customer Awareness of the SPC Program***

A post-program survey of target segments of the small commercial and industrial customer market was undertaken in early 2000. Its

results were compared to a similar survey undertaken before the 1999 SPC program for smaller nonresidential customers was well underway. The surveys, analysis, and results were documented in a final report completed in spring 2000. The goal of the study was to monitor customer awareness of and attitudes towards the new performance contracting program for small nonresidential customers. This study was required for assessment of SCE's attainment of a program performance milestone required for shareholder earnings.

#### ***Survey of Residential Builders***

To monitor progress in the residential new construction market, a survey of residential builders was conducted in early 2000. It assessed the level of awareness, knowledge, and value placed on the ENERGY STAR® label among production homebuilders. This study was required to determine whether SCE met a new construction program performance goal for shareholder earnings. A parallel survey assessed the awareness and attitudes of smaller builders.

#### ***Evaluation of Emerging Technology Showcase Activities***

This study gathered baseline data on market actor awareness, attitudes, and knowledge regarding key

technologies promoted by SCE's Design and Engineering Services group. The project involves review of project materials, interviews with program staff, development of an analysis plan, surveys of affected customers and trade allies, and analysis of comparative survey results. One research objective is to develop a theory of market change resulting from demonstration projects. Another is to use the data collected to refine the ways that information is provided to customers through demonstration projects. The study was completed in November 2000.

#### ***Evaluation of Market Effects of the SCE Technology Application Centers***

This study of selected activities undertaken by the CTAC and the AGTAC Energy Centers focused on assessing their market impacts. The study includes detailed analysis of each selected activity by review of available project materials, interviews with project personnel, and surveys of customers and trade allies affected by the activity. The objective is to identify changes in awareness, knowledge, attitudes, practices, and outcomes related to energy-efficient options that can be attributed at least in part to the technology centers. The study is intended to provide estimates of CTAC's and AGTAC's market effects and to provide information about



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the way program strategies have worked that may help center staff to develop effective revisions to their strategies. This study was completed in September 2000.

### *Small Commercial Do-It-Yourself Energy Survey Milestone Study*

Gather data on the rate of measure and practice implementation achieved from the 1999 survey program and from the 2000 survey program, to see if a goal of increasing the implementation rate has been met. The 1999 implementation data were collected by a telephone survey in 2000; the 2000 implementation data was collected in February 2001, with the final report to be completed in the following two months.

### ***Analysis of High Efficiency Window Stocking (Performance Incentives Milestone Memorandum)***

This analysis was designed and implemented to develop an estimate of market change identified in SCE's performance incentive milestones. Information was gathered by two surveys of the available stock at samples of stores within the service territory, one undertaken before the program was well underway, and the other late in the program year. The data will be analyzed and the results described in a milestone memorandum that will be completed in first quarter 2001.

### *Residential Energy-Efficient Window Awareness Study (Performance Indicator)*

The requirement for collecting performance indicator information relating to customer awareness of high-efficiency windows has been met without the need for a utility-specific study. The Consortium for Energy Efficiency, which SCE supports, undertook a national study of Energy Star awareness among customers. This study, completed in February 2001, provides helpful information about customer awareness of high efficiency windows.

### ***Analysis of High Efficiency Refrigerator Stocking (Performance Incentives Milestone Memorandum)***

The data collection and analysis for this milestone memorandum were carried out as part of the statewide Residential Appliance and Lighting Study. The only additional work required specifically for SCE will be the production of a brief memorandum documenting the data and the analysis. The memorandum will be completed in first quarter 2001.

### *New Home Energy Efficiency Milestone Report*

The data necessary to show achievement of this milestone are being collected through the program. An evaluation project was not required.

### *Marketing Training for Residential New Construction Sales Agents (Performance Indicator Analysis)*

The data necessary for this performance indicator was collected as part of program records, so an evaluation project was not required.

### ***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***

In the nonresidential customer classification and analysis project, Standard Industrial Classification (SIC) codes were assigned to new customers throughout the year. The software for code assignment, database management, and data analysis was maintained and enhanced. The database of customer classifications was enhanced to allow for the

## MA&E and Regulatory Oversight

assignment of North American Industrial Classification System (NAICS) codes.

Classification by NAICS codes has now begun. Once the database enhancement was completed, NAICS codes, in addition to SIC codes, were assigned to all new customers classified after that date. NAICS codes were also assigned to all existing customers for whom there is a one-to-one or multiple-to-one relationship between the old SIC code and the new NAICS code. Recoding of the cases where one SIC code splits into multiple NAICS codes has been proposed to be worked on during the next two years.

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.

### ***Support for CEC Data Collection and Analysis***

During 2000, SCE prepared and delivered data from SCE databases as needed for CEC studies and analyses. CEC needs these data to carry out its energy demand forecasting, market monitoring, and statewide study activities. In addition, SCE maintained a commercial load research data collection and database maintenance project for a set of customer to be included in the CEC-managed statewide Commercial Energy Use Survey.

### ***Ad Hoc Analyses***

Numerous ad hoc analyses were required to meet the requirements of CPUC Decision 00-07-017 and following Administrative Law

Judge Rulings, which required massive amounts of data and analysis to be included in the development of PY 2001 program plans and in the filings associated with these plans. These notably included the compilation and assessment of data on saturation rates and effective useful lives of all individual energy efficiency measures included in the planned programs and on net-to-gross ratios for programs.

Ad hoc analyses of data from existing saturation survey and end-use load research data sources were also undertaken as requested by program managers. Such analyses are often requested so that program managers can 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 design and program implementation.

# Shareholder Performance Incentives

Table 5.1  
2001 Energy Efficiency Annual Report  
SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC  
MARKET ASSESSMENT & EVALUATION (MA&E)

	2000 Budget	[1]	2000 Recorded	[1,2]	2001 Budget	[3]
Measurement for Program Admin Incentives:						
Utility Studies/Reports for PY00 Programs	\$ 420,000		\$ 120,000		\$ -	
Utility Studies/Reports for PY01 Programs	-				-	
Demand Assessment:						
Customer Data (for CEC): Utility Costs	70,000		70,000		70,000	
Customer Data Analysis: CEC costs (cost of studies)	680,000		680,000		550,000	
DEER Updates	-		-		130,000	
EE Market Assessment (Res Program Area)	-		-		-	
EE Market Assessment (Nonres Program Area)	254,000		254,000		65,000	
EE Market Assessment (New Const. Program Area)	-		-		-	
EE Product Assessment (All Markets)	-		-		-	
Other Program Evaluation Studies:						
General	180,000		280,000		470,000	
PY00, Residential	1,042,000		1,042,000		-	
PY00, Nonresidential	1,090,000		1,090,000		-	
PY00, New Construction	870,000		1,070,000		-	
PY01, Residential	-		-		1,215,000	
PY01, Nonresidential	-		-		880,000	
PY01, New Construction	-		-		420,000	
<b>MA&amp;E Total</b>	<b>\$ 4,606,000</b>		<b>\$ 4,606,000</b>		<b>\$ 3,800,000</b>	
Regulatory Compliance and Reporting (utility)	1,000,000		880,497		1,200,000	
Oversight Costs	804,000		145,849		90,000	
<b>Total Regulatory Oversight</b>	<b>\$ 1,804,000</b>		<b>\$ 1,026,346</b>		<b>\$ 1,290,000</b>	
<b>Total MA&amp;E and Regulatory Oversight</b>	<b>\$ 6,410,000</b>		<b>\$ 5,632,346</b>		<b>\$ 5,090,000</b>	

[1] Amounts reflect Program Year 2000 (PY00) funds, including fund shifts during 2000.

[2] All Recorded amounts include payments in 2000 and amounts committed to projects in 2000.  
Committed amounts may not be fully realized.

[3] 2001 Budget includes both the statewide budget already approved by the Commission in D.01-01-070 and the utility-specific budget submitted to the Commission for approval in a compliance filing on March 6. SCE will modify this budget as required to comply with Commission response to SCE's compliance filing.



## 2000 Performance Incentives

### Summary

The 2000 performance incentive award mechanism allows SCE to recover incentives for successful program implementation and management. The mechanism encourages SCE to work enthusiastically and aggressively towards meeting the California Public Utilities Commission's (CPUC) goal to transform the market so that individual customers and suppliers in the future competitive generation market will make rational energy service choices.

In 2000, SCE's performance award mechanism was based upon achievement of specific program milestones. This mechanism rewards SCE for achievement of predetermined market effects and program activity goals, and aggressive program implementation.

#### Performance Milestones

The 2000 performance award mechanism has four components:

- Base Milestones
- Market Change/Effect Milestones
- Program Activity Milestones
- Aggressive Implementation

The first three components of the performance award mechanism are based on a pre-determined set of program milestones. Each milestone has a corresponding performance award. The milestone-specific award has two levels of performance: acceptable and superior.

These three components represent specific milestones as described below.

**Base Milestones** - rewards SCE for effective and timely implementation (e.g., roll-out) of programs with a special emphasis on aggressive roll-out of selective program improvements.

**Market Change/Effect Milestones** - provides an award opportunity for the achievement of measurable market changes in the energy efficiency marketplace.

**Program Activity Milestones** - rewards the utility for performing administrative tasks and achieving various program results such as reaching pre-determined energy savings goals for a particular program strategy.

### AGGRESSIVE IMPLEMENTATION

The aggressive implementation component links the level of program expenditures to aggressive program implementation. Encouraging aggressive spending assures that program activity will provide a significant impact in the marketplace during the program year and that energy efficiency funds do not go unspent or uncommitted.

The mechanism provides earnings opportunities related to each of the three program areas: residential, nonresidential, and new construction. A minimum of 70 percent of the pre-determined program area budget must be spent or committed before earnings can be claimed for the particular program area. The award increases linearly to the maximum level set at the 95 percent spending/commitment target. Additionally, program area awards will be reduced by ten percent for each program (within a program area) that is less than 50 percent of the authorized program budget. Expenditures include those actual and committed program costs related to new program activities that occurred during calendar year 2000.

# Shareholder Performance Incentives

## **PERFORMANCE INCENTIVES LIMITATIONS**

In order to strike a balance between risk and reward for implementing and managing 2000 energy efficiency programs, the performance incentive mechanism includes an earnings cap. For 2000, SCE's earnings cap associated with this mechanism is set at \$5.544 million. The program activities conducted under the Summer Initiative are not eligible under the 2000 incentive mechanism.

primarily on the achievement of energy savings.

The 2001 performance incentive mechanism rewards SCE for the achievement of pre-determined energy savings and demand reduction goals in each of the program areas: residential, nonresidential, and new construction. The mechanism also provides rewards for the achievement of selective market effects milestones and continues the aggressive spending for certain informational programs.

## **2000 Performance Incentive Results**

Table 6.1 shows SCE's 2000 performance award claim by program activity. If the CPUC approves SCE's 2000 performance award claim, SCE will recover these shareholder earnings in one installment through funds collected as part of the 2000 public goods charge for energy efficiency.

## **2001 Performance Incentives**

For 2001, the CPUC has redirected the energy efficiency program focus away from the pursuit of market transformation to the achievement of energy savings. The change in policy comes with California's current energy supply shortage and high prices for electricity. To encourage achievement of this new policy goal, the CPUC has authorized an earnings mechanism for 2001 focused

# Shareholder Performance Incentives

Table 6.1  
 2001 Energy Efficiency Annual Report  
 SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC  
 SHAREHOLDER PERFORMANCE INCENTIVES

	2000 Budget	2000 Recorded	2001 Budget
Residential Total	\$ 1,514,545	\$ 1,481,136	\$ 1,921,000
Nonresidential Total	2,354,545	2,286,136	2,215,000
New Construction Program Area	843,182	715,909	895,000
General / Other	1,386,000	1,386,000	560,000
<b>Total Shareholder Performance Incentives - Subtotal</b>	<u>\$ 6,098,273</u>	<u>\$ 5,869,182</u>	<u>\$ 5,591,000</u>
<b>Total Shareholder Performance Incentives</b>	<u>\$ 5,544,000</u> [1]	<u>\$ 5,544,000</u> [1]	<u>\$ 5,591,000</u> [2]

[1] SCE's 2000 Shareholder Performance Award Cap is \$5.544 million

[2] SCE's 2001 Shareholder Performance Award Cap is \$5.591 million





## Low Income Energy Efficiency

### Program Description

SCE's Low Income Energy Efficiency (LIEE) programs provide energy management assistance at low or no cost to low income customers whose household income meets guidelines established by the CPUC. These customers may include physically challenged individuals and qualifying senior citizens. SCE holds program costs to a minimum by providing assistance through community-based organizations (CBOs), purchasing materials in bulk, and selecting contractors through a competitive bid process.

Services include energy education and the installation of hardware such as an evaporative cooler to use in place of an air conditioner, energy-efficient refrigerator, compact fluorescent bulbs (CFBs) and weatherization measures.

### EVAPORATIVE COOLER INSTALLATION

SCE helps low income customers control their summer space cooling costs by offering an evaporative cooler to use in place of their air conditioners. The program targets customers in hot, dry climates where coolers are most effective.

To reduce program costs, SCE buys the coolers in bulk and

has them shipped directly to the contractor thereby avoiding warehouse costs. Also, contractors are selected through a competitive bid process. Contractors collect a small co-payment from customers who participate to help offset installation costs. The purpose of collecting a co-payment is to lower program costs, which allows SCE to serve more customers. To further reduce program costs and provide more services to qualifying customers, installation contractors deliver other services to qualifying customers such as Relamping and Porch Light Replacement, if feasible. Finally, customers are provided Energy Education packets to reinforce the energy efficiency message.

### WEATHERIZATION

SCE and the Southern California Gas Company (SoCalGas) entered into an inter-utility agreement in late 1992 and subsequently amended, whereby vendors working with SoCalGas provide weatherization services to electrically-heated homes in service territory areas shared by both utilities. One private contractor provides services for SCE customers living in communities not served by SoCalGas. Weatherization services include, but are not limited to: attic insulation, weather-stripping/caulking, low-flow showerheads,

electric water heater blankets, sunscreens, and energy education.

### RELAMPING

The Relamping program is designed to help low income customers conserve energy and control their lighting costs by offering free CFBs to replace incandescent bulbs. Each CFB provides the same amount of light as an incandescent, but at a lower wattage. A household may receive as many as four CFBs, for indoor use of varying wattages, to replace 60- to 150-watt incandescent equivalents. In addition, participants receive Energy Education packets which serve to reinforce the energy efficiency message.

Through a competitive bid process, SCE purchases CFBs directly from the manufacturers and has them shipped directly to the CBOs, thereby avoiding warehouse charges. The CBOs use surveyors to identify low income customers, verify income eligibility, and install CFBs in homes at no cost to the customer. These agencies are used because they are qualified to assure customer eligibility for relamping services and have close ties with the communities they serve.

## Low Income Energy Efficiency

Generally, a customer is not eligible to participate again for seven years, the expected life of a CFB.

### **ENERGY EDUCATION**

Low income customers that participate in the Evaporative Cooler Installation, Relamping, and Weatherization programs receive Energy Education packets that contain information on energy saving tips and other programs SCE offers. Representatives from CBOs and private contractors provide energy education while at the customer's home.

### **REFRIGERATOR REPLACEMENT**

The Refrigerator Replacement program replaces non-energy efficient refrigerators with energy-efficient models. In order to qualify for the program, the customer must own the refrigerator, the unit must be ten years or older, plugged into a legally grounded three-prong outlet, and the customer must allow SCE to recycle the old refrigerator.

To facilitate customer outreach, information about the existing refrigerator is collected when service providers of other low income programs visit customers' homes. If the customer qualifies for the new refrigerator, the customer's name will be placed in a database and the customer will be sent a brochure with more detailed information about the program. Interested customers also can call the

program support center's toll-free number, and determine if they meet income eligibility guidelines and technical program qualifications.

### **PORCH LIGHT REPLACEMENT**

Qualified customers receive one free CFB to replace an existing incandescent light in a porch light fixture. On rare occasions, if the fixture is not designed for a CFB in an owner-occupied dwelling, a new fixture with a CFB, will be installed so that the CFB can be safeguarded from the outdoor elements.

### **FURNACE REPAIR/REPLACEMENT**

In an attempt to standardize LIEE program offerings statewide, the CPUC required SCE to include furnace repair and replacement in its portfolio of low income energy efficiency programs. To qualify, the customer must be a homeowner, reside in SCE's service territory, meet low income guidelines, have electric space heating, and the unit must require repair or replacement at a cost not in excess of \$750.

### **Energy-Related Hardship**

The utilities and Low Income stakeholders in 2000 held extensive discussions on the role of the LIEE programs in reducing energy-related hardship. In addition, to developing a working definition, the parties initiated efforts to quantify the benefits of reducing energy-related

hardship through development of the Low Income Public Purpose Test for determining program cost effectiveness.

SCE's Evaporative Cooler and Weatherization programs address energy-related hardship. These programs increase comfort and help customers ease energy-related stress from inadequate control over ambient climate and temperature due to insufficient energy efficiency measures. The programs provide additional protection from outside elements. Without these programs, customers would have less relief from energy-related stress from ambient climate or temperature especially in extreme temperature regions.

SCE provides evaporative coolers in the desert regions. Without evaporative coolers, these customers would be subject to the extreme desert heat. The Evaporative Cooler program enhances the physical health of customers by protecting them from excessive heat. In addition to increasing comfort, the repair of doors and broken windows provided in the Weatherization program enhances the customers' physical and mental well being because it reduces exposure to outdoor elements and increases the customers' sense of home security and safety. SCE's Porch Light program also enhances home security.

## Measurement and Evaluation, and Regulatory Oversight

SCE in 2000 provided measurement support for statewide efforts to develop a needs assessment for low income customers, the pay-for-measured savings pilots, and the standardized bill savings report ordered by the Commission. Areas of support included providing comments and technical assistance on workshop proposals and filings, and participating in workshops with other stakeholders.

Regulatory oversight consists of activities that are undertaken to meet regulatory requirements for the reporting of program information. They include such activities as developing responses to data requests, and filing annual reports and applications for program funding.

In 2000, regulatory oversight included preparation of regulatory filings, and participation in statewide initiatives, including the Low Income Needs Assessment Workshops, and revisions to the Reporting Requirements Manual for low income programs. Examples of regulatory activities in 2000 included analysis of legislation related to low income programs, development of a pilot program for pay-for-measured savings, attendance at Low Income Governing Board meetings, and

development of the bill savings report.

## Shareholder Incentive Mechanism

The Commission approved the 2000 LIEE incentive mechanism in the Decision issued for the 1999 Annual Earnings Assessment Proceeding (AEAP). The mechanism was adopted on a trial basis for 2000 and is designed to encourage utility administrators to achieve maximum energy savings in the provision of these programs.

The 2000 mechanism was based upon the applicability of forecasted energy savings on a measure-level basis to the actual number of measures installed in 2000. This would provide an incentive for the utility to maximize the energy savings from the measures installed in 2000, while maintaining an expected level of shareholder earnings nearly the same as in prior years.

The initial level of the 2000 shareholder incentive goal for each of the utilities was established based upon the incentive level filed by each utility in its 2000 program year LIEE funding application. In prior years, the incentive levels were equal to 5% of the non-mandatory measure costs for the program year. For 2000, energy efficiency expenditures on required items that produce either no energy savings or savings that are difficult to measure, the

mechanism allows the utility to continue to earn on a percentage of spending on such items.

In 2000, SCE's LIEE programs achieved 19,698 MWh of annualized energy savings, resulting in SCE's earnings claim for energy savings measures from 2000 programs of \$0.245 million. SCE's earnings claim for non-energy savings measures is \$0.099 million.

## 2000 Results and Achievements

### EVAPORATIVE COOLER INSTALLATION

In 2000, SCE continued to implement the co-payment requirement. Participants were asked to make a small contribution of \$40 in order to receive the cooler.

In 2000, 2,083 evaporative coolers were installed. These installations resulted in an annualized energy savings of 1,406 MWh and a peak load reduction of 2.2 MW.

### WEATHERIZATION

In 2000, 1,347 electrically-heated homes were weatherized resulting in net annualized savings of 742 MWh. Of the homes serviced, 269 were weatherized through SCE's Inter-Utility Cooperative with SoCalGas, and 1,078 homes by a private contractor working in areas not jointly serviced by SoCalGas and SCE.

## Low Income Energy Efficiency

### **RELAMPING**

SCE provided relamping services to 45,220 homes, installing more than 168,846 CFBs. The program achieved a net annualized energy savings of 7,716 MWh and a peak load reduction of 0.5 MW.

To streamline the low income programs, relamping agencies delivered Energy Education packets and porch lights in conjunction with the relamping service.

### **ENERGY EDUCATION**

As part of the Weatherization, Evaporative Cooler Installation, Relamping and Porch Light Replacement programs, approximately 46,032 customers received in-house counseling and Energy Education packets designed to help them lower energy use through simple conservation practices.

### **REFRIGERATOR REPLACEMENT**

In 2000, 2,613 refrigerators were delivered to replace older inefficient models. The annualized energy savings of replacing these refrigerators was 3,407 MWh, and the peak load reduction was 0.3 MW.

### **PORCH LIGHT REPLACEMENT**

In 2000, SCE installed 62 outdoor light fixtures and replaced 31,423 incandescent outdoor bulbs CFBs. These installations resulted in an annualized energy savings of 6,426 MWh.

### **FURNACE REPAIR/REPLACEMENT**

During the year, SCE weatherized 1,347 homes with electric space heating. Only 12 homes were owner-occupied and, therefore, potentially eligible for this program. The maximum cost for this service cannot exceed \$750. Of the 12 homes that were owner-occupied, none required furnace repair or replacement.

# Low Income Energy Efficiency

## 2001 Energy Efficiency Annual Report

Table 7.1

### SUMMARY OF COSTS: LOW INCOME - SOUTHERN CALIFORNIA EDISON (Electric only)

LIEE Programs:	2000		2001
	Budgeted	Recorded	Budgeted
Energy Efficiency			
- Gas Appliances			
- Electric Appliances	\$ 2,072,200	\$ 3,116,618	\$ 3,008,000
- Weatherization, includes CFBs	4,001,800	3,760,610	2,999,000
- Outreach & Assessment			
- In Home Energy Education	1,007,000	608,817	710,000
- Education Workshops			
<i>Energy Efficiency Total</i>	<i>\$ 7,081,000</i>	<i>\$ 7,486,045</i>	<i>\$ 6,717,000</i>
Pilots			
- Pilot (A)			
- Pilot (B)			
<i>Total Pilots</i>	<i>-</i>	<i>-</i>	<i>-</i>
Training Center			
Inspections	93,000	82,393	93,000
Advertising			
M&E Studies		13,000	25,000
Regulatory Compliance	15,000	125,000	135,000
Other Administration			
Indirect Costs		167,736	
Oversight Costs			
- LIAB Start-up			
- LIAB PY 2000	86,000	314	86,000
- LIAB PY 2001	85,000	8,917	18,000
- CPUC Energy Division	35,460	2,137	35,000
Total Oversight Costs	206,460	11,368	139,000
Shareholder Incentives [1]	305,500	343,880	343,880
<b>TOTAL COSTS</b>	<b>\$ 7,700,960</b>	<b>\$ 8,229,421</b>	<b>\$ 7,452,880</b>

[1] Shareholder incentives associated with (electric) low-income programs are not funded by Public Goods Charge collections, per Decision 98-06-063

# Low Income Energy Efficiency

## 2001 Energy Efficiency Annual Report

TABLE 7.2

### SUMMARY OF LIEE PROGRAM EFFECTS - SOUTHERN CALIFORNIA EDISON (Annual Energy Reduction)

	2000 (recorded)	2001 (planned)
mWh	19,698	10,670
mtherm	N/A	N/A

# Low Income Energy Efficiency

2001 Energy Efficiency Annual Report

TABLE 7.3

SUMMARY OF LIEE COST EFFECTIVENESS - SOUTHERN CALIFORNIA EDISON  
(Annual Energy Reduction)

	2000 (recorded)			2001		
	Utility Cost Test	Total Resource Cost Test	Low Income Public Purpose Test (LIPPT)	Utility Cost Test	Total Resource Cost Test	Low Income Public Purpose Test (LIPPT)
Energy Efficiency	0.53	0.63	2.21	0.23	0.23	1.61

# Low Income Energy Efficiency

2001 Energy Efficiency Annual Report

TABLE 7.4

SUMMARY OF LIEE COST EFFECTIVENESS - SOUTHERN CALIFORNIA EDISON  
(Net Benefits; \$MIL)

	2000 (recorded)		2001	
	TRC	LIPPT	TRC	LIPPT
Energy Efficiency	\$ (0.251)	\$10.096	\$ (0.775)	\$7.865



# Summer Initiative

## Summary

In July 2000, the California Public Utilities Commission (CPUC) issued a solicitation for program ideas that would provide maximum impact of demand and energy capacity shortage and for the potential energy shortage projected over the next few years. The CPUC's solicitation was coined the "Summer Initiative." The program offerings associated with the Summer Initiative are focused on achieving energy savings results during 2000 and 2001, with the greatest focus on reducing peak summer demand.

Unspent funds from prior years' energy efficiency programs fund this Summer Initiative activity. For the most part, these unspent funds became available when customers who had previously committed to install energy efficiency measures failed to do so.

As a result of the Summer Initiative solicitation, the CPUC chose a number of proposals for immediate implementation. The criteria used in the selection process included: (1) cost-effectiveness; (2) immediate realization of significant demand reduction and energy savings; (3) programs delivered by non-utility

entities; (4) programs focused on residential and small commercial customers; (5) programs based on proven technologies; (6) programs focused on the San Diego or the San Francisco Bay areas; and (7) unique or new ideas.

Within SCE's service territory, the CPUC selected the following eight initiatives: Residential Refrigerator Recycling Program, Pool Efficiency Program, LED Traffic Signal Rebate Program, Campus Energy-Efficient Project, Beat The Heat, Hard To Reach, California Oil Producers Electric Cooperative, and a Third Party Initiative solicitation conducted by SCE. These initiatives are either delivered by SCE or non-utility entities. A summary of these Summer Initiative programs is provided in the following section.

## Summer Initiative

### RESIDENTIAL REFRIGERATOR RECYCLING

#### Program Description

As part of the Summer Initiative, the California Public Utilities Commission directed SCE to contract with the Appliance Centers of America (ARCA) to implement a Summer Initiative (SI) Residential Refrigerator Recycling Program in the service territories of SCE, San Diego Gas and Electric (SDG&E), and Pacific Gas & Electric (PG&E).

The Summer Initiative Refrigerator Recycling program targets residential customers in SCE, SDG&E, and PG&E's service territories and provides a cash incentive to customers for recycling their old, inefficient refrigerators or freezers. ARCA picks up the old appliance from the customer's home at no charge to the customer and recycles it in an environmentally safe manner. The old appliances are taken to a staging area where they are later shipped to ARCA's recycling facility located in Compton, California.

#### 2000 Results And Achievements

During the third Quarter of 2000, a contract was signed between ARCA and SCE to collect and recycle over 45,000 refrigerator/freezers from the three service territories from September 2000 through December 2001.

By December 31, 2000, the SI Refrigerator Recycling program had been completed in SCE's service territory. Over 8,800 units were collected in SCE's service territory, representing more than 14,000 MWh of annualized energy savings and 2.4 MW of demand reduction.

In September 2000, advertising for the SI Refrigerator Recycling program began in SDG&E's service territory. There was no activity in PG&E's service territory during 2000. ARCA plans to focus its efforts in these two service territories in 2001.

#### 2001 Program Plans

The program within SCE service territory was concluded in 2000. Nevertheless, SCE will continue to offer its Refrigerator Recycling program during 2001.

For 2001, the program will continue in SDG&E and PG&E's service territories through the end of 2001. Advertising will begin in PG&E's service area starting in January 2001 and will continue in SDG&E's area. By the end of 2001, it is expected that the SI Refrigerator Recycling program will collect more than 34,000 units in both of these service territories.

## Summer Initiative

### RESIDENTIAL POOL EFFICIENCY PROGRAM

#### Program Description

The residential Pool Efficiency Program (PEP!) was “piloted” towards the end of summer 2000 by PG&E, SCE, and SDG&E, as a comprehensive swimming pool intervention strategy, designed as a rapid response to reduce demand and energy usage of residential pool pumps.

PEP! is a comprehensive set of swimming pool intervention strategies designed to reduce peak demand, energy consumption, and electric bills for consumers. It is designed to offer residential pool owners, who are receiving service on a non-time-of-use tariff, financial incentives for the purchase and installation of high efficient pool pump efficiency improvements and the re-set of pool pump timers to run during summer off-peak hours. The program also includes an informational element to help build consumer awareness of energy consumption with pools.

Market objectives include: (1) reduction of peak demand by encouraging the operation of pool pumps during off peak hours; (2) reduction in electricity consumption by encouraging

the replacement of pool pumps or motors with more efficient units; and (3) increase in the consumer awareness of swimming pool efficiencies through an educational campaign directed at pool end users.

#### 2000 Results And Achievements

In 2000, SCE, PG&E, and SDG&E began development of a coordinated program that included a pilot to test market approaches, common assumptions, and program design criteria. The utilities worked together to develop qualification criteria for high efficiency pool pumps and appropriate incentive levels for pool pump replacements and off-peak operation.

Within SCE's service territory, SCE established a 24-hour phone hotline and an Internet web page for easy and convenient program sign-up. SCE also actively promoted the program through a bill insert.

As a result of the aggressive program

implementation, by the end of 2000, SCE signed nearly 2,000 customers to the pool pump timer element and nearly 1,400 customers to the pump/motor element of PEP! This represents 3.6 MW of demand reduction.

#### 2001 Program Plans

During 2001, SCE plans to aggressively promote PEP! in expectation of a higher demand for electricity during the summer months. Program plans include the development of a pool energy guide to acquaint customers with ways to maintain a swimming pool and to operate pool equipment efficiently, reducing energy costs.

By June 2001, SCE expects to have approximately 40,000 participants enrolled in the pool pump timer element of the program, which equates to 30.0 MW of demand reduction. The program also expects to replace 10,000 pool pumps/motors by the end of 2001 equating to approximately 3,500 MWh of energy savings and 12.0 MW of demand reduction.

# Summer Initiative

## LED TRAFFIC SIGNAL REBATE PROGRAM

### Program Description

The LED Traffic Signal Rebate Program is an offering designed to encourage cities and other public agencies within SCE's service territory to replace incandescent traffic signals with efficient light emitting diode (LED) versions. The program provides incentives for the following LED traffic signals:

- Red ball and arrow
- Green ball and arrow
- Amber flashing beacon
- Pedestrian hand
- Pedestrian hand/person combination

This Summer Initiative program is designed to achieve demand reductions by June 2001; therefore, incentives of up to 100 percent of the hardware cost (installation cost and sales tax are the responsibility of the participant) will be offered for signals installed by this time. For signals installed after June 2001, incentives will be reduced by 50 percent. Incentives are provided for hardwired fixtures only (as available). These fixtures must meet the maximum power demand ratings set forth by the program requirements.

### 2000 Results And Achievements

To assure consistent implementation, SCE coordinated with SDG&E and PG&E a number of planning meetings. During this planning phase, discussions were also held with various stakeholders including cities and vendors to solicit ideas on incentive pricing, product availability, etc.

Per the schedule set by the Commission, the program was developed and introduced on September 11, 2000. Customer reservation forms were available as of this date. The first reservation was received on September 21, 2000. Program brochures and application materials were being developed through September 30, 2000. As a result of SCE's aggressive outreach during September 2000, the program was fully committed by early October 2000. By mid-December 2000, the cities of Westminster and Fountain Valley had begun retrofitting their traffic signals.

In sum, SCE committed \$7,500,000 in financial incentives to 34 cities within SCE's service territory. When installed by summer 2001, the program will realize

approximately 38,000 MWh of annualized energy savings and 8.2 MW of demand reduction.

### 2001 Program Plans

Although this Summer Initiative program is fully committed, SCE will continue a similar offering to cities through SCE's Express Efficiency Rebate program. Express Efficiency will continue to offer cities financial incentives, up to 50% of estimated hardware costs, to encourage the installation of LED traffic signals.

## Summer Initiative

### CAMPUS ENERGY-EFFICIENT PROJECT

#### Program Description

The Campus Energy Efficiency Project provides financial incentives for energy demand reduction projects at California State and University of California (UC/CSU) campuses within SCE's service territory. Originally, this Summer Initiative included projects at three campuses. However, at the time of implementation only two campuses, California State Polytechnic University Pomona (Cal Poly Pomona) and California State University of Long Beach (CSULB), have indicated that they would proceed with their projects.

#### 2000 Results And Achievements

By the end of October 2000, contract negotiations were completed and SCE signed agreements with both Cal Poly Pomona and CSULB for the installation of a thermal energy storage and lighting projects, respectively. The Cal Poly Pomona project is expected to produce demand reduction of 1.5 MW and 3,900 MWh of annualized energy savings. The CSULB project is expected to produce 3,692 MWh of annualized energy savings and 1.6 MW of demand reduction.

By September 2000, Cal Poly Pomona notified SCE that it was near completion of its thermal energy storage project with an expected completion date of mid-January.

#### 2001 Program Plans

During 2001, the thermal energy storage system installed at the campus of Cal Poly Pomona will be fully operational generating approximately 1.5 MW of demand reduction. The CSULB project has an expected completion date of June 2001.

No other activity is expected from the Campus Energy-Efficient Project in SCE's service territory. However, SCE will offer rebates for the installation of qualifying energy-efficient equipment to all educational institutions, including the UC/CSU schools, during 2001.

# Summer Initiative

## BEAT THE HEAT

### Program Description

The Beat The Heat Summer Initiative targets commercial and industrial users of halogen torchiere lamps and encourages them to replace those lamps with ENERGY STAR® models that save energy and demand, improve building comfort, and eliminate fire danger. The program also provides for recycling of halogen torchieres that are replaced. The program is offered through a third party vendor, ECOS Consulting. SDG&E is tasked with the overall contract management between ECOS Consulting and the three electric California utilities.

### 2000 Results And Achievements

SDG&E, on behalf of PG&E and SCE, entered into a contract with ECOS Consulting on September 11, 2000.

The research phase that involves characterizing the market and testing the hypotheses about the high incidence of halogen torchiere lighting in commercial spaces was completed by December 2000. Research identified approximately 1,200 torchieres and thirteen

potential participants. Survey results also showed torchieres appear to be concentrated in fewer quantities and at smaller companies than was originally believed.

An initial order of 3,840 replacement torchieres is currently warehoused at an ECOS Consulting facility in southern California.

As of year-end 2000, no torchieres have been exchanged and/or returned.

### 2001 Program Plans

The Beat The Heat initiative will continue to explore ways to replicate the success the torchiere replacement model experienced in other parts of the country. By the end of 2000, the program has been unable to achieve similar results. This is primarily due to the lack of significant torchiere applications in the commercial and industrial sectors within SCE's service territory. Nevertheless, SCE will attempt to assist the initiative by attempting to identify customers who may be using torchiere fixtures as part of their business. SCE will also offer rebates, through the Express Efficiency program, to customers who replace their torchiere lighting with more efficient lighting applications.

## Summer Initiative

### CALIFORNIA OIL PRODUCERS ELECTRIC COOPERATIVE (COPE)

#### Program Description

Under the Summer Initiative's California Oil Producers Electric Cooperative (COPE) program, \$4,000,000 in funding is provided to COPE to run an incentive program for its members in the PG&E and SCE service territories. \$1,500,000 of the funding will derive from SCE's Summer Initiative funds and will support the COPE members in the SCE service territory. The program will focus on measures known to reduce peak demand. The program is expected to produce 4.6 MW of demand reduction, with 2.0 MW resulting from measures in SCE's service territory.

#### 2001 Program Plans

For 2001, the COPE initiative is expected to have installed approximately 2.0 MW of demand reduction within SCE's service territory. SCE will also offer financial incentives to customers, either through Express Efficiency or Standard Performance Contract programs, for the installation of these same energy-efficient technologies.

#### 2000 Results And Achievements

The contract was executed on September 18, 2000 between COPE and PG&E on behalf of both PG&E and SCE. By the end of 2000, COPE had developed a detailed program design, which was agreed to by PG&E and SCE. Also, PG&E was invoiced and paid \$125,000 for this first deliverable, the program design, in late December.

## Summer Initiative

### HARD TO REACH

#### Program Description

The Hard To Reach (HTR) program seeks to achieve peak demand savings through the installation of energy efficiency measures at multi-family apartment complexes, mobile home parks, and condominium complexes. HTR offers incentives (posted prices) for a wide variety of qualifying measures including: lighting equipment, refrigerators, clothes washers, dishwashers, HVAC equipment, thermal shell measures, water heaters, and water flow restrictors.

The program is open to all project sponsors that have the appropriate licenses, bonding, certification, and insurance to perform the required work. HTR is a statewide offering with standardized incentive levels, procedures, and contracts. Program participants (a.k.a., Project sponsors) identify and sell individual projects based upon an approved marketing plan. SCE's program incentive budget is \$2.6 million.

#### 2000 Results And Achievements

The HTR Summer Initiative program was designed collaboratively by market

participants and the California investor-owned utilities based upon guidance from the California Public Utilities Commission.

Applications were accepted beginning November 8, 2000. Program funds of \$2.1 million or about 81% of SCE's \$2.6 million budget was subscribed as of December 31, 2000. The program produced approximately 23,105 MWh of annualized energy savings and 2.5 MW of demand reduction.

#### 2001 Program Plans

SCE expects the remaining uncommitted funds to be committed in early 2001. SCE expects the first installations to occur beginning in the second quarter of 2001 and continuing throughout the year.

In addition to the HTR program, SCE will continue to offer financial incentives to both the residential and small business customers through various program offerings such as the Residential Home Efficiency Rebates and Nonresidential Express Efficiency programs during 2001.



# Summer Initiative

## THIRD PARTY INITIATIVES

### Program Description

SCE's Summer Initiative third party initiative (SI TPI) is designed to solicit innovative strategies and technologies from the marketplace. The significant difference for this solicitation, compared to previous TPI solicitations, is the focus on bidders to identify peak demand reductions rather than energy savings. For the SI TPI, bidders were asked to submit bids of no more than \$850,000, with the total award amount for all projects to be \$1,700,000.

Selection criteria included:

- Cost-effectiveness;
- Achieving peak demand reductions by June, 2001;
- Innovative approaches and reaching under-served markets;
- Feasibility of proposal and capability and experience of the project team.

### 2000 Results And Achievements

As a result of the SI TPI solicitation process, nineteen bids were submitted and four were selected for implementation. In sum, \$1,700,000 was committed to these four TPIs. A summary description of each of the

selected TPIs is provided below:

**Residential Energy Efficiency Audit and Air Conditioner Rebate Project:** Certified home inspectors will add free energy efficiency audits to their time-of-sale home inspections (which are paid for by the customer). Homebuyers often plan remodeling and renovation work at the time of purchase, and this service provides the opportunity for energy efficiency upgrades to be included in the work. Qualifying customers will be offered rebates, matched by manufacturers, for highly efficient air conditioning units.

**Residential New Construction Air Conditioning Project:** This project offers builders who dropped out of the SCE Residential New Construction program (which allowed their homes to be promoted as ENERGY STAR® homes) a rebate for installing high-efficiency air conditioners in 200 new homes that will be completed by May 2001. There is some likelihood that builders who accept this rebate for the first few homes in a subdivision will go ahead with installation of the same air conditioner models in all

homes in the development, increasing the final program effect.

**Small Commercial Evaporative Pre-Coolers Project:** This project will install evaporative pre-coolers on package rooftop air conditioner units of small commercial customers, resulting in a substantial reduction in the energy requirement for a given level of air conditioning.

**Small Commercial Efficient Lighting Program:** This local contractor will perform lighting audits, design and install energy-efficient replacement lighting systems at a subsidized cost for small/medium commercial customers with inefficient lighting systems, with projects to be completed by the beginning of summer 2001.

As of the end of 2000, these TPIs produced, in aggregate, 11 MWh of annualized energy savings.

### 2001 Program Plans

It is expected that these TPIs will produce nearly 3,500 MWh of annualized energy savings and 2.3 MW of peak demand reduction by the end of 2001.

# Summer Initiative

	2000 Authorized [1]	2000 Budget [1,2]	2000 Recorded [2]	2001 Authorized [1]	2001 Budget [1,2,3]
Hard To Reach	\$ 2,600,000	\$ 2,600,000	\$ 2,080,000	\$ 520,000	\$ 520,000
Residential Pool Efficiency Program	3,000,000	3,000,000	277,840	2,722,160	2,722,160
Residential Refrigerator Recycling	1,200,000	1,200,000	1,200,000	-	-
Beat The Heat	250,000	250,000	-	250,000	250,000
Campus Energy-Efficient Project	3,500,000	3,500,000	1,656,540	1,843,460	1,843,460
LED Traffic Signal Rebate Program	7,500,000	7,500,000	7,500,000	-	-
COPE	1,500,000	1,500,000	1,500,000	-	-
Third Party Initiatives	1,700,000	1,700,000	1,700,000	-	-
<b>Summer Initiative Total</b>	<b>\$ 21,250,000</b>	<b>\$ 21,250,000</b>	<b>\$ 15,914,380</b>	<b>\$ 5,335,620</b>	<b>\$ 5,335,620</b>

[1] Summer Initiative Authorization is for program years 2000 and 2001.  
 [2] Amounts do not include utility administrative costs.  
 [3] 2001 Budget amounts represent all budgeted funds not recorded in 2000.

**Table 8.2**  
**2001 Energy Efficiency Annual Report**  
**SUMMARY OF ENERGY EFFICIENCY PROGRAM EFFECTS: ELECTRIC**  
**SUMMER INITIATIVES**

	2000 First Year Net Annualized Capacity Savings (MW) [1]	2000 First Year Net Annualized Energy Savings (kWh) [1]	2001 First Year Net Annualized Capacity Savings (MW) [1,2]	2001 First Year Net Annualized Energy Savings (kWh) [1,2]
Hard To Reach	2.51	23,105,495	0.63	5,776,374
Residential Pool Efficiency Program	3.60	697,000	38.05	2,803,000
Residential Refrigerator Recycling	2.40	14,039,000	-	-
Beat The Heat	-	-	2.53	3,838,000
Campus Energy-Efficient Project	3.10	7,592,000	-	-
LED Traffic Signal Rebate Program	8.20	37,927,000	-	-
COPE	2.00	17,520,000	-	-
Third Party Initiatives	2.30	3,478,900	-	-
<b>Summer Initiative Total</b>	<b>24.11</b>	<b>104,359,395</b>	<b>41.21</b>	<b>12,417,374</b>

[1] Load impacts are estimated for only SCE's service territory.

[2] The total forecasted energy and capacity reductions are based on third party proposals submitted to the Commission on July 21, 2000.  
 2001 impacts are forecasted based upon these goals, reduced by the 2000 impacts



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## 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 2000 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 2000. This forecast is consistent with the forecast utilized in SCE's September 27, 1999 Application for 2000 energy efficiency program funding. The forecast represents avoided cost forecasts for energy, transmission and distribution, and environmental externalities. All calculations in this report related to the 2000 energy efficiency programs utilize avoided costs with these environmental externalities.

Avoided costs for the 2000 programs, as presented in Table TA 1.1A, represent the statewide avoided costs as presented in Advice 1-G/1-E submitted by the California Board for Energy Efficiency (CBEE) on October 16, 1998. This avoided cost forecast was adopted by the Commission for program year 2000 in Decision 99-08-021. The 2000 program cost-effectiveness utilizing this forecast was further adopted in Decision 00-07-017.

### **Table TA 1.1B - Avoided Costs for 2001 Programs**

The avoided cost forecast in Table TA 1.1B represents those costs utilized in the planning and delivery of SCE energy efficiency programs in 2001. This forecast is consistent with the forecast utilized in SCE's November 15, 2000 Application for 2001 energy efficiency program funding. The forecast represents avoided cost forecasts for energy, transmission and distribution, and environmental externalities. All calculations in this report related to the 2001 energy efficiency programs utilize avoided costs with these environmental externalities.

Avoided costs for the 2001 programs, as presented in Table TA 1.1B, reflect the statewide inputs to avoided costs as adopted in the Commission's October 25, 2000 Ruling on Cost Effectiveness Issues for 2001 Programs. The October 25 Ruling also required that the 2001 cost-effectiveness calculations include a showing of the portfolio cost-effectiveness with on-peak energy multipliers and with and without off-peak energy multipliers. The avoided cost forecast shown in Table TA 1.1B utilizes the avoided costs without off-peak energy multipliers. The 2001 program cost-effectiveness utilizing this forecast was further adopted in Decision 01-01-060.

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Table TA 1.1A  
2001 Energy Efficiency Annual Report  
AVOIDED COSTS: ELECTRIC (\$/kWh)

2000				
Year	Generation	T&D	Environmental Externalities	Total
2000	\$0.03	\$0.00	\$0.01	\$0.05
2001	0.03	0.01	0.01	0.05
2002	0.04	0.01	0.01	0.05
2003	0.04	0.01	0.01	0.05
2004	0.04	0.01	0.01	0.05
2005	0.04	0.01	0.01	0.05
2006	0.04	0.01	0.01	0.06
2007	0.05	0.01	0.01	0.06
2008	0.05	0.01	0.01	0.06
2009	0.05	0.01	0.01	0.06
2010	0.05	0.01	0.01	0.07
2011	0.05	0.01	0.01	0.07
2012	0.06	0.01	0.01	0.07
2013	0.06	0.01	0.01	0.08
2014	0.06	0.01	0.01	0.08
2015	0.06	0.01	0.01	0.08
2016	0.07	0.01	0.01	0.08
2017	0.07	0.01	0.01	0.09
2018	0.07	0.01	0.01	0.09
2019	0.07	0.01	0.01	0.10



Table TA 1.1B  
2001 Energy Efficiency Annual Report  
AVOIDED ELECTRIC GENERATION COSTS (\$/kWh)

2001					
Year	Summer On-Peak [1]	Summer Mid-Peak	Summer Off-Peak	Winter Mid-Peak	Winter Off-Peak
2001	\$0.74	\$0.12	\$0.10	\$0.07	\$0.05
2002	0.74	0.12	0.10	0.07	0.05
2003	0.29	0.06	0.03	0.07	0.05
2004	0.28	0.05	0.03	0.06	0.04
2005	0.28	0.05	0.03	0.06	0.05
2006	0.25	0.05	0.03	0.06	0.05
2007	0.26	0.05	0.03	0.07	0.05
2008	0.27	0.06	0.03	0.07	0.05
2009	0.28	0.06	0.04	0.07	0.05
2010	0.29	0.06	0.04	0.07	0.05
2011	0.25	0.05	0.03	0.06	0.05
2012	0.26	0.05	0.03	0.07	0.05
2013	0.27	0.06	0.03	0.07	0.05
2014	0.28	0.06	0.04	0.07	0.05
2015	0.29	0.06	0.04	0.07	0.05
2016	0.31	0.06	0.04	0.08	0.06
2017	0.32	0.07	0.04	0.08	0.06
2018	0.34	0.07	0.04	0.09	0.06
2019	0.36	0.07	0.05	0.09	0.07
2020	0.38	0.08	0.05	0.09	0.07

[1] Includes On-Peak multipliers required for the Program Year 2001 Funding Applications.

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Table TA 1.1B  
2001 Energy Efficiency Annual Report  
AVOIDED ELECTRIC T&D COSTS (\$/kW)

2001					
Year	Summer On-Peak	Summer Mid-Peak	Summer Off-Peak	Winter Mid-Peak	Winter Off-Peak
2001	\$ 11.92	\$ 11.92	\$ 11.92	\$ 11.92	\$ 11.92
2002	12.01	12.01	12.01	12.01	12.01
2003	12.12	12.12	12.12	12.12	12.12
2004	12.24	12.24	12.24	12.24	12.24
2005	12.34	12.34	12.34	12.34	12.34
2006	12.46	12.46	12.46	12.46	12.46
2007	12.57	12.57	12.57	12.57	12.57
2008	12.67	12.67	12.67	12.67	12.67
2009	12.90	12.90	12.90	12.90	12.90
2010	13.13	13.13	13.13	13.13	13.13
2011	13.43	13.43	13.43	13.43	13.43
2012	13.74	13.74	13.74	13.74	13.74
2013	14.06	14.06	14.06	14.06	14.06
2014	14.38	14.38	14.38	14.38	14.38
2015	14.71	14.71	14.71	14.71	14.71
2016	15.05	15.05	15.05	15.05	15.05
2017	15.40	15.40	15.40	15.40	15.40
2018	15.75	15.75	15.75	15.75	15.75
2019	16.11	16.11	16.11	16.11	16.11
2020	16.48	16.48	16.48	16.48	16.48

Table TA 1.1B  
 2001 Energy Efficiency Annual Report  
 AVOIDED ELECTRIC ENVIRONMENTAL EXTERNALITIES (\$/kWh)

2001					
Year	Summer On-Peak	Summer Mid-Peak	Summer Off-Peak	Winter Mid-Peak	Winter Off-Peak
2001	\$0.01	\$0.01	\$0.01	\$0.01	\$0.01
2002	0.01	0.01	0.01	0.01	0.01
2003	0.01	0.01	0.01	0.01	0.01
2004	0.01	0.01	0.01	0.01	0.01
2005	0.01	0.01	0.01	0.01	0.01
2006	0.01	0.01	0.01	0.01	0.01
2007	0.01	0.01	0.01	0.01	0.01
2008	0.01	0.01	0.01	0.01	0.01
2009	0.01	0.01	0.01	0.01	0.01
2010	0.01	0.01	0.01	0.01	0.01
2011	0.01	0.01	0.01	0.01	0.01
2012	0.01	0.01	0.01	0.01	0.01
2013	0.01	0.01	0.01	0.01	0.01
2014	0.01	0.01	0.01	0.01	0.01
2015	0.01	0.01	0.01	0.01	0.01
2016	0.01	0.01	0.01	0.01	0.01
2017	0.01	0.01	0.01	0.01	0.01
2018	0.01	0.01	0.01	0.01	0.01
2019	0.01	0.01	0.01	0.01	0.01
2020	0.01	0.01	0.01	0.01	0.01



## Section II - Residential Program Area

This section contains narrative that documents and explains the data shown for Tables TA 2.1 through TA 2.4.

### **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 2000 and those costs associated with commitments from 2000 programs.

#### **Program Incentives (Recorded)**

Incentive costs represent incentives paid to customers during 2000 (Actual) as well as incentives associated with commitments from the 2000 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 2000 (Actual) as well as administrative costs associated with the handling of commitments from the 2000 residential programs (Committed).

#### **Shareholder Incentives**

Costs represented in the Shareholder Incentives column are those relating to the performance awards earned during 2000 from the 2000 residential programs. The Residential Total of the Shareholder Incentives column will not necessarily be collected by SCE for meeting the performance award goals during 2000. This is due to the performance award cap placed on SCE's total energy efficiency earnings claim for 2000 of \$5.544 million. However, these full "potential" amounts are utilized to calculate the cost-effectiveness in this 2001 Annual Energy Efficiency Report. This is not necessarily the case for all showings of cost-effectiveness for these programs.

#### **Other Costs**

All program costs associated with SCE's 2000 residential programs were delineated in the remaining categories. SCE does not have any 2000 residential program costs classified as "Other".

#### **Total Utility Costs**

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

# Technical Appendix

## **Incremental Measure Costs (Net)**

These costs generally represent the incremental costs of energy efficiency measures over the standard replacement measures. The gross amounts of these costs are reduced by appropriate net-to-gross ratios for the particular measure or end-use. These ratios were 1.0 for all programs offered in the 2000 program year, based upon Commission direction. SCE's incremental measure costs are typically derived from the latest cost source available for the particular measure(s), including recent measure cost studies.

## **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 2000. These program costs do not include energy efficiency support costs represented elsewhere in this report, such as Market Assessment & Evaluation and Regulatory Oversight (Section 5), Other Energy Efficiency (Section 1), or Shareholder Performance Incentives (Section 6).

### **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 2000 in support of 2000 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.

### **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 consistent with the measure level savings data submitted in SCE's September 27, 1999 Application for 2000 Energy Efficiency Program Funding and adopted in Decision 00-07-017. These estimates have been updated, as applicable, to correspond with the actual program implementation and program results as of December 31, 2000. Recorded savings amounts reflect all 2000 program impacts, including impacts from measures installed in 2000 and those impacts associated with commitments from 2000 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 will be discussed in the individual sections herein.

### **Program Energy Reduction Assumptions**

Annual program energy reduction estimates for residential programs supplied in the September 27, 1999 Application for 2000 Energy Efficiency Program Funding and submitted herein as the 2000 program results are the result of a summation of measure-level savings from the measures installed as a result of the 2000 residential programs. The measure-level savings information used to calculate the 2000 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. These ratios were 1.0 for all programs offered in the 2000 program year, based upon Commission direction.

**Table TA 2.4      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 2.4 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 2.4 is separated into Table TA 2.4A and Table TA 2.4B to separate SCE's RCP program between the single-family element and the multi-family element.

Table TA 2.4 for RCP payments is submitted herein in lieu of TA 2.4 as defined in the May 1999 version of the Reporting Requirements Manual 2. Table TA 2.4 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.

# Technical Appendix

Table TA 2.1  
 2001 Energy Efficiency Annual Report  
 SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC  
 PROGRAM COST ESTIMATES USED FOR COST-EFFECTIVENESS - RESIDENTIAL PROGRAM AREA  
 2000

	Program Incentives (Recorded)		Program Administrative Costs (Recorded)		Shareholder Incentives [1]	Other Costs	Total Utility Costs	Incremental Measure Costs
	Actual	Committed	Actual	Committed				
<b>Information</b>	\$ -	\$ -	\$ 1,271,209	\$ 178,500	\$ 108,182	\$ -	\$ 1,557,891	\$ -
<b>EMS</b>	-	-	2,710,661	109,859	79,545	-	2,900,065	-
<b>EEl</b>								
SPCs (RCP)	1,093,580	3,841,296	588,366	118,300	222,727	-	5,864,269	14,761,000
Rebates	7,014,615	1,745,462	1,058,214	106,775	245,000	-	10,170,067	11,686,000
Loans	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-
<b>Upstream Programs</b>								
Information	-	-	1,346,450	796,406	155,909	-	2,178,074	-
Financial Assistance	-	-	5,757,980	1,432,000	669,773	-	7,859,753	3,266,000
<b>Residential Total</b>	<u>\$ 8,108,196</u>	<u>\$ 5,586,758</u>	<u>\$ 12,732,879</u>	<u>\$ 2,741,840</u>	<u>\$ 1,481,136</u>	<u>\$ -</u>	<u>\$ 30,650,809</u>	<u>\$ 29,713,000</u>

[1] The incentive amounts shown may not be fully collected. SCE's 2000 Shareholder Performance Award Cap is \$5.544 million.



# Technical Appendix

Table TA 2.2  
 2001 Energy Efficiency Annual Report  
 SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC  
 DIRECT AND ALLOCATED ADMINISTRATIVE COSTS - RESIDENTIAL PROGRAM AREA  
 2000

	Actual Labor	Actual Non-Labor	Actual Contract	Actual Allocated	Actual Admin Total
<b>Information</b>	\$ 233,364	\$ 989,485	\$ 4,302	\$ 44,058	\$ 1,271,209
<b>EMS</b>	45,160	2,531,894	67,732	65,874	2,710,661
<b>EEl</b>					
SPCs (RCP)	84,778	299,666	163,779	40,142	588,366
Rebates	158,223	576,941	232,096	90,954	1,058,214
Loans	-	-	-	-	-
Other	-	-	-	-	-
<b>Upstream Programs</b>					
Information	116,589	1,184,052	30,998	14,812	1,346,450
Financial Assistance	48,047	5,642,971	66,695	268	5,757,980
<b>Residential Total</b>	<u>\$ 686,161</u>	<u>\$ 11,225,009</u>	<u>\$ 565,602</u>	<u>\$ 256,108</u>	<u>\$ 12,732,879</u>

# Technical Appendix

Table TA 2.3  
 2001 Energy Efficiency Annual Report  
 SUMMARY OF ENERGY EFFICIENCY PROGRAM EFFECTS: ELECTRIC  
 MARKET EFFECTS: PROJECTED ANNUAL PROGRAM ENERGY REDUCTIONS - RESIDENTIAL PROGRAM AREA  
 2000

Information			EMS			EEl SPCs (RCP)		
Year	(MW)	(MWH)	Year	(MW)	(MWH)	Year	(MW)	(MWH)
2000	0	0	2000	0	10,888	2000	0	19,517
2001	0	0	2001	0	0	2001	0	19,517
2002	0	0	2002	0	0	2002	0	19,517
2003	0	0	2003	0	0	2003	0	19,517
2004	0	0	2004	0	0	2004	0	19,517
2005	0	0	2005	0	0	2005	0	19,517
2006	0	0	2006	0	0	2006	0	19,517
2007	0	0	2007	0	0	2007	0	19,517
2008	0	0	2008	0	0	2008	0	19,517
2009	0	0	2009	0	0	2009	0	0
2010	0	0	2010	0	0	2010	0	0
2011	0	0	2011	0	0	2011	0	0
2012	0	0	2012	0	0	2012	0	0
2013	0	0	2013	0	0	2013	0	0
2014	0	0	2014	0	0	2014	0	0
2015	0	0	2015	0	0	2015	0	0
2016	0	0	2016	0	0	2016	0	0
2017	0	0	2017	0	0	2017	0	0
2018	0	0	2018	0	0	2018	0	0
2019	0	0	2019	0	0	2019	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>Total</b>	<b>0</b>	<b>10,888</b>	<b>Total</b>	<b>0</b>	<b>175,656</b>

  

EEl Rebates			EEl Loans			EEl Other		
Year	(MW)	(MWH)	Year	(MW)	(MWH)	Year	(MW)	(MWH)
2000	0	114,988	2000	0	0	2000	0	0
2001	0	114,988	2001	0	0	2001	0	0
2002	0	114,988	2002	0	0	2002	0	0
2003	0	114,988	2003	0	0	2003	0	0
2004	0	114,988	2004	0	0	2004	0	0
2005	0	114,988	2005	0	0	2005	0	0
2006	0	114,988	2006	0	0	2006	0	0
2007	0	114,988	2007	0	0	2007	0	0
2008	0	114,988	2008	0	0	2008	0	0
2009	0	114,988	2009	0	0	2009	0	0
2010	0	114,988	2010	0	0	2010	0	0
2011	0	114,988	2011	0	0	2011	0	0
2012	0	114,988	2012	0	0	2012	0	0
2013	0	114,988	2013	0	0	2013	0	0
2014	0	0	2014	0	0	2014	0	0
2015	0	0	2015	0	0	2015	0	0
2016	0	0	2016	0	0	2016	0	0
2017	0	0	2017	0	0	2017	0	0
2018	0	0	2018	0	0	2018	0	0
2019	0	0	2019	0	0	2019	0	0
<b>Total</b>	<b>0</b>	<b>1,609,825</b>	<b>Total</b>	<b>0</b>	<b>0</b>	<b>Total</b>	<b>0</b>	<b>0</b>

# Technical Appendix

Table TA 2.3  
 2001 Energy Efficiency Annual Report  
 SUMMARY OF ENERGY EFFICIENCY PROGRAM EFFECTS: ELECTRIC  
 MARKET EFFECTS: PROJECTED ANNUAL PROGRAM ENERGY REDUCTIONS - RESIDENTIAL PROGRAM AREA  
 2000

Upstream Programs Information			Upstream Programs Financial Assistance		
Year	(MW)	(MWH)	Year	(MW)	(MWH)
2000	0	0	2000	0	13,725
2001	0	0	2001	0	13,725
2002	0	0	2002	0	13,725
2003	0	0	2003	0	13,725
2004	0	0	2004	0	13,725
2005	0	0	2005	0	13,725
2006	0	0	2006	0	13,725
2007	0	0	2007	0	13,725
2008	0	0	2008	0	13,725
2009	0	0	2009	0	13,725
2010	0	0	2010	0	13,725
2011	0	0	2011	0	13,725
2012	0	0	2012	0	13,725
2013	0	0	2013	0	13,725
2014	0	0	2014	0	13,725
2015	0	0	2015	0	13,725
2016	0	0	2016	0	13,725
2017	0	0	2017	0	13,725
2018	0	0	2018	0	0
2019	0	0	2019	0	0
Total	0	0	Total	0	247,057

# Technical Appendix

Table TA 2.4A  
 2001 Energy Efficiency Annual Report  
 SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC  
 DISTRIBUTION OF RCP PAYMENTS - RESIDENTIAL PROGRAM AREA  
 SINGLE-FAMILY PROGRAM AREA  
 2000

	Lighting	(1)	HVAC	(1)	Other	(1)	Total	(1)
Affiliate 1	\$ -		\$ -		\$ -		\$ -	
Total Affiliate	\$ -		\$ -		\$ -		\$ -	
ESCO 1	\$ -		\$ 3,195		\$ -		\$ 3,195	
ESCO 2	-		3,114		516		3,630	
ESCO 3	-		7,479		-		7,479	
ESCO 4	-		825		-		825	
ESCO 5	-		641		-		641	
ESCO 6	-		3,006		-		3,006	
ESCO 7	-		2,094		-		2,094	
ESCO 8	-		441		-		441	
ESCO 9	-		1,401		-		1,401	
ESCO 10	-		228		-		228	
ESCO 11	-		2,111		95		2,197	
ESCO 12	-		8,997		2,173		11,170	
ESCO 13	-		3,672		-		3,672	
ESCO 14	-		2,975		-		2,975	
ESCO 15	-		225		-		225	
ESCO 16	-		6,650		-		6,650	
ESCO 17	-		3,875		-		3,875	
ESCO 18	-		15,525		-		15,525	
ESCO 19	-		4,852		-		4,852	
ESCO 20	-		6,473		-		6,473	
ESCO 21	-		999		-		999	
ESCO 22	-		949		-		949	
ESCO 23	-		500		16		516	
ESCO 24	-		30,924		-		30,924	
ESCO 25	-		758		-		758	
ESCO 26	-		15,020		-		15,020	
ESCO 27	-		15,062		-		15,062	
ESCO 28	-		11,736		-		11,736	
ESCO 29	825		546,598		-		547,423	
ESCO 30	-		3,067		-		3,067	
ESCO 31	-		872		-		872	
ESCO 32	-		6,547		-		6,547	
ESCO 33	-		3,439		-		3,439	
ESCO 34	-		124		-		124	
ESCO 35	-		1,001		-		1,001	
ESCO 36	-		13,393		-		13,393	
ESCO 37	-		36,196		-		36,196	
ESCO 38	-		91		-		91	
ESCO 39	-		24,790		-		24,790	
ESCO 40	-		13,908		503		14,410	
ESCO 41	-		1,741		-		1,741	
ESCO 42	-		82,690		-		82,690	
ESCO 43	-		2,521		-		2,521	
ESCO 44	-		298		63		361	
ESCO 45	-		495		-		495	
ESCO 46	-		9,078		-		9,078	
ESCO 47	-		67,289		15		67,305	
ESCO 48	-		216		-		216	
ESCO 49	-		1,347		-		1,347	
ESCO 50	-		701		-		701	
ESCO 51	94		4,951		-		4,945	
ESCO 52	-		957		141		1,109	
ESCO 53	-		17,386		-		17,386	
ESCO 54	-		1,022		-		1,022	
ESCO 55	-		13,947		-		13,947	
ESCO 56	-		14,841		-		14,841	
ESCO 57	-		9,945		-		9,945	
ESCO 58	-		403		-		403	
ESCO 59	-		14,057		40		14,097	
ESCO 60	-		5,128		-		5,128	

# Technical Appendix

Table TA 2.4A  
 2001 Energy Efficiency Annual Report  
 SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC  
 DISTRIBUTION OF RCP PAYMENTS - RESIDENTIAL PROGRAM AREA  
 SINGLE-FAMILY PROGRAM AREA  
 2000

ESCO 61	-	329	-	329
ESCO 62	-	2,969	-	2,969
ESCO 63	-	5,164	-	5,164
ESCO 64	-	117,876	-	117,876
ESCO 65	-	37,450	-	37,450
ESCO 66	-	14,240	-	14,240
ESCO 67	-	4,376	-	4,376
ESCO 68	-	10,405	-	10,405
ESCO 69	-	36,187	-	36,187
ESCO 70	-	11,134	-	11,134
ESCO 71	-	2,341	621	2,962
ESCO 72	-	49,161	-	49,161
ESCO 73	-	693	-	693
ESCO 74	-	25,167	-	25,167
ESCO 75	-	10,943	-	10,943
ESCO 76	-	52,470	-	52,470
ESCO 77	-	825	-	825
ESCO 78	-	17,401	-	17,401
ESCO 79	-	5,992	-	5,992
ESCO 80	-	1,894	-	1,894
ESCO 81	-	18,726	-	18,726
ESCO 82	-	856	-	856
ESCO 83	-	98,822	-	98,822
ESCO 84	-	8,176	479	8,655
ESCO 85	-	18,683	-	18,683
ESCO 86	-	310	-	310
ESCO 87	-	2,684	-	2,684
ESCO 88	-	22,931	-	22,931
ESCO 89	-	8,856	-	8,856
ESCO 90	-	1,575	-	1,575
ESCO 91	-	1,315	-	1,315
ESCO 92	1,125	41,596	4,903	47,624
ESCO 93	-	941	-	941
ESCO 94	-	5,697	-	5,697
ESCO 95	-	3,639	24	3,663
ESCO 96	-	2,323	-	2,323
ESCO 97	-	83,002	-	83,002
ESCO 98	-	1,412	20	1,432
ESCO 99	-	18,033	17	18,050
ESCO 100	-	624	-	624
ESCO 101	-	26,300	-	26,300
ESCO 102	-	10,266	-	10,266
ESCO 103	-	15,086	86	15,172
ESCO 104	25	2,056	-	2,081
ESCO 105	-	4,888	-	4,888
ESCO 106	-	3,682	-	3,682
ESCO 107	15	1,853	-	1,868
ESCO 108	-	23,787	-	23,787
ESCO 109	-	109	-	109
ESCO 110	-	8,804	-	8,804
ESCO 111	-	62,665	-	62,665
ESCO 112	-	17,514	-	17,514
ESCO 113	-	33,340	-	33,340
ESCO 114	-	430	-	430
ESCO 115	-	2,431	-	2,431
ESCO 116	-	820	-	820
ESCO 117	-	7,376	-	7,376
ESCO 118	-	4,255	-	4,255
ESCO 119	-	1,084	-	1,084
ESCO 120	-	2,226	-	2,226

# Technical Appendix

Table TA 2.4A  
2001 Energy Efficiency Annual Report  
SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC  
DISTRIBUTION OF RCP PAYMENTS - RESIDENTIAL PROGRAM AREA  
SINGLE-FAMILY PROGRAM AREA  
2000

ESCO 121	-	9,968	-	9,968
ESCO 122	-	10,004	-	10,004
ESCO 123	-	2,637	-	2,637
ESCO 124	-	484	-	484
ESCO 125	-	27,633	16	27,650
ESCO 126	-	963	-	963
ESCO 127	-	10,165	449	10,614
ESCO 128	-	14,669	-	14,669
ESCO 129	-	22,781	-	22,781
ESCO 130	-	13,152	-	13,152
ESCO 131	-	4,913	-	4,913
ESCO 132	-	2,188	-	2,188
ESCO 133	-	577	-	577
ESCO 134	-	7,707	-	7,707
ESCO 135	-	20,728	1,987	22,715
ESCO 136	-	1,774	14	1,788
ESCO 137	75	5,665	237	5,977
ESCO 138	-	18,998	-	18,998
ESCO 139	-	3,247	-	3,247
ESCO 140	-	3,793	-	3,793
ESCO 141	-	33,359	-	33,359
ESCO 142	-	12,723	-	12,723
ESCO 143	-	25,774	20	25,794
ESCO 144	-	5,163	-	5,163
ESCO 145	-	396	-	396
ESCO 146	-	3,303	-	3,303
ESCO 147	-	5,368	785	6,153
ESCO 148	-	3,870	-	3,870
ESCO 149	-	22,490	-	22,490
ESCO 150	-	11,139	-	11,139
ESCO 151	-	5,197	-	5,197
ESCO 152	-	6,103	-	6,103
ESCO 153	-	9,461	-	9,461
ESCO 154	-	24,845	29	24,874
ESCO 155	-	40,253	-	40,253
ESCO 156	-	24,909	-	24,909
ESCO 157	-	177,467	-	177,467
ESCO 158	-	6,212	21	6,233
ESCO 159	-	3,323	-	3,323
ESCO 160	-	17,042	-	17,042
ESCO 161	-	4,920	19	4,939
ESCO 162	-	1,072	-	1,072
ESCO 163	-	1,603	-	1,603
ESCO 164	-	266,062	38	266,100
ESCO 165	-	15,605	-	15,605
ESCO 166	-	423	-	423
Other Commitments [2]	294	557,129	2,655	560,078
<b>Total ESCO</b>	<b>\$ 2,443</b>	<b>\$ 3,497,727</b>	<b>\$ 15,943</b>	<b>\$ 3,516,113</b>
Customer Project 1	\$ -	\$ -	\$ -	\$ -
<b>Total Customer Projects</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
<b>Total Payments</b>	<b>\$ 2,443</b>	<b>\$ 3,497,727</b>	<b>\$ 15,943</b>	<b>\$ 3,516,113</b>

[1] Includes Actual and Committed Payments

[2] Committed projects with no contractor-specific information available.

# Technical Appendix

Table TA 2.4B  
 2001 Energy Efficiency Annual Report  
 SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC  
 DISTRIBUTION OF RCP PAYMENTS - RESIDENTIAL PROGRAM AREA  
 MULTI-FAMILY PROGRAM AREA  
 2000

	Lighting	[1,2]	HVAC	[1,2]	Other	[1,2]	Total	[1,2]
Affiliate 1	\$ -		\$ -		\$ -		\$ -	
<b>Total Affiliate</b>	<u>\$ -</u>		<u>\$ -</u>		<u>\$ -</u>		<u>\$ -</u>	
ESCO 1	\$ 275,784		\$ -		\$ -		\$ 275,784	
ESCO 2	26,257		-		-		26,257	
ESCO 3	57,088		-		-		57,088	
ESCO 4	195,028		-		-		195,028	
ESCO 5	53,128		-		-		53,128	
ESCO 6	9,695		-		-		9,695	
ESCO 7	178,984		-		-		178,984	
ESCO 8	231,405		-		-		231,405	
ESCO 9	257,282		-		-		257,282	
<b>Total ESCO</b>	<u>\$ 1,284,652</u>		<u>\$ -</u>		<u>\$ -</u>		<u>\$ 1,284,652</u>	
Customer Project 1	\$ -		\$ -		\$ -		\$ -	
<b>Total Customer Projects</b>	<u>\$ -</u>		<u>\$ -</u>		<u>\$ -</u>		<u>\$ -</u>	
<b>Total Payments</b>	<u><u>\$ 1,284,652</u></u>		<u><u>\$ -</u></u>		<u><u>\$ -</u></u>		<u><u>\$ 1,284,652</u></u>	

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

[2] Includes Actual and Committed Payments





## Section III - Nonresidential Program Area

This section contains narrative that documents and explains the data shown for Tables TA 3.1 through TA 3.4.

### **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 2000 and those costs associated with commitments from 1999 programs.

#### **Program Incentives (Recorded)**

Incentive costs represent incentives paid to customers during 2000 (Actual) as well as incentives associated with commitments from the 2000 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 2000 (Actual) as well as administrative costs associated with the handling of commitments from the 2000 nonresidential programs (Committed).

#### **Shareholder Incentives**

Costs represented in the Shareholder Incentives column are those relating to the performance awards earned during 2000 from the 2000 nonresidential programs. The Nonresidential Total of the Shareholder Incentives column will not necessarily be collected by SCE for meeting the performance award goals during 2000. This is due to the performance award cap placed on SCE's total energy efficiency earnings claim for 2000 of \$5.544 million. However, these full "potential" amounts are utilized to calculate the cost-effectiveness in this 2001 Annual Energy Efficiency Report. This is not necessarily the case for all showings of cost-effectiveness for these programs.

#### **Other Costs**

All program costs associated with SCE's 2000 nonresidential programs were delineated in the remaining categories. SCE does not have any 2000 nonresidential program costs classified as "Other".

#### **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. The gross amounts of these costs are reduced by appropriate net-to-gross ratios for the particular measure or end-use. These ratios were 1.0 for all programs offered in the 2000 program year, based upon Commission direction. SCE's incremental measure costs are typically derived from the latest cost source available for the particular measure(s), including recent measure cost studies.

# 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 2000. These program costs do not include energy efficiency support costs represented elsewhere in this report, such as Market Assessment & Evaluation and Regulatory Oversight (Section 5), Other Energy Efficiency (Section 1), or Shareholder Performance Incentives (Section 6).

**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 2000 in support of 2000 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.

**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 consistent with the measure level savings data submitted in SCE's September 27, 1999 Application for 2000 Energy Efficiency Program Funding and adopted in Decision 00-07-017. These estimates have been updated, as applicable, to correspond with the actual program implementation and program results as of December 31, 2000. Recorded savings amounts reflect all 2000 program impacts, including impacts from measures installed in 2000 and those impacts associated with commitments from 2000 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 will be discussed in the individual sections herein.

### **Program Energy Reduction Assumptions**

Annual program energy reduction estimates for nonresidential programs supplied in the September 27, 1999 Application for 2000 Energy Efficiency Program Funding and submitted herein as the 2000 program results are the result of a summation of measure-level savings from the measures installed as a result of the 2000 nonresidential programs. The measure-level savings information used to calculate the 2000 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. These ratios were 1.0 for all programs offered in the 2000 program year, based upon Commission direction.

**Table TA 3.4      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 3.4 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 3.4 is separated into Table TA 3.4A and Table TA 3.4B to reflect the significant differences between SCE's SPC programs for large and that for medium/small customers.

# Technical Appendix

Table TA 3.1  
2001 Energy Efficiency Annual Report  
SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC  
PROGRAM COST ESTIMATES USED FOR COST-EFFECTIVENESS - NONRESIDENTIAL PROGRAM AREA  
2000

	Program Incentives (Recorded)		Program Administrative Costs (Recorded)		Shareholder Incentives [1]	Other Costs	Total Utility Costs	Incremental Measure Costs
	Actual	Committed	Actual	Committed				
<b>Information</b>	\$ -	\$ -	\$ 1,838,296	\$ 91,164	\$ 238,636.36	\$ -	\$ 2,168,096	\$ -
<b>EMS</b>								
Large	-	-	961,244	574,001	-	-	1,535,245	-
Small/Medium	-	-	2,637,470	20,000	127,273	-	2,784,743	1,411,000
<b>EEl: Customized Rebates</b>								
Large	-	-	-	-	-	-	-	-
Small/Medium	215,325	-	57,270	-	11,136	-	283,731	686,000
<b>EEl: Prescriptive Rebates</b>								
Large	86,546	1,531,476	262,964	119,014	31,818	-	2,031,818	4,702,000
Small/Medium	515,199	2,172,857	1,104,507	100,000	95,455	-	3,988,018	1,086,000
<b>EEl: SPCs</b>								
Large	111,000	16,156,482	1,516,489	1,278,580	1,145,455	-	20,208,005	20,562,000
Small/Medium	211,309	1,722,192	492,895	201,000	238,636	-	2,866,033	2,166,000
<b>Upstream Programs</b>								
Information	-	-	1,206,348	1,929,575	270,455	-	3,406,377	-
Financial Assistance	-	-	1,377,408	280,771	127,273	-	1,785,451	313,000
<b>Nonresidential Total</b>	<b>\$ 1,139,380</b>	<b>\$ 21,583,007</b>	<b>\$ 11,454,890</b>	<b>\$ 4,594,104</b>	<b>\$ 2,286,136</b> [1]	<b>\$ -</b>	<b>\$ 41,057,517</b>	<b>\$ 30,926,000</b>

[1] The incentive amounts shown may not be fully collected. SCE's 2000 Shareholder Performance Award Cap is \$5.544 million

# Technical Appendix

Table TA 3.2  
 2001 Energy Efficiency Annual Report  
 SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC  
 DIRECT AND ALLOCATED ADMINISTRATIVE COSTS - NONRESIDENTIAL PROGRAM AREA  
 2000

	Actual Labor	Actual Non-Labor	Actual Contract	Actual Allocated	Actual Admin Total
<b>Information</b>	\$ 622,650	\$ 999,665	\$ 73,063	\$ 142,918	\$ 1,838,296
<b>EMS</b>					
Large	545,871	374,840	28,241	12,292	961,244
Small/Medium	1,897,524	459,591	73,792	206,562	2,637,470
<b>EEl: Customized Rebates</b>					
Large	-	-	-	-	-
Small/Medium	32,453	9,814	14,316	686	57,270
<b>EEl: Prescriptive Rebates</b>					
Large	128,375	86,386	40,457	7,747	262,964
Small/Medium	142,875	724,644	107,454	129,534	1,104,507
<b>EEl: SPCs</b>					
Large	730,436	677,869	92,683	15,500	1,516,489
Small/Medium	66,091	369,641	25,072	32,092	492,895
<b>Upstream Programs</b>					
Information	288,492	872,229	38,542	7,084	1,206,348
Financial Assistance	30,316	1,298,891	47,482	719	1,377,408
<b>Nonresidential Total</b>	<u>\$ 4,485,084</u>	<u>\$ 5,873,570</u>	<u>\$ 541,102</u>	<u>\$ 555,134</u>	<u>\$ 11,454,890</u>

# Technical Appendix

Table TA 3.3  
 2001 Energy Efficiency Annual Report  
 SUMMARY OF ENERGY EFFICIENCY PROGRAM EFFECTS: ELECTRIC  
 MARKET EFFECTS: PROJECTED ANNUAL PROGRAM ENERGY REDUCTIONS - NONRESIDENTIAL PROGRAM AREA  
 2000

Information	EMS Large			EMS Small/Medium					
	Year	(MW)	(MWH)	Year	(MW)	(MWH)	Year	(MW)	(MWH)
2000	0	0		2000	0	0	2000	0	24,111
2001	0	0		2001	0	0	2001	0	24,111
2002	0	0		2002	0	0	2002	0	24,111
2003	0	0		2003	0	0	2003	0	24,111
2004	0	0		2004	0	0	2004	0	24,111
2005	0	0		2005	0	0	2005	0	24,111
2006	0	0		2006	0	0	2006	0	24,111
2007	0	0		2007	0	0	2007	0	24,111
2008	0	0		2008	0	0	2008	0	24,111
2009	0	0		2009	0	0	2009	0	24,111
2010	0	0		2010	0	0	2010	0	24,111
2011	0	0		2011	0	0	2011	0	24,111
2012	0	0		2012	0	0	2012	0	24,111
2013	0	0		2013	0	0	2013	0	24,111
2014	0	0		2014	0	0	2014	0	24,111
2015	0	0		2015	0	0	2015	0	0
2016	0	0		2016	0	0	2016	0	0
2017	0	0		2017	0	0	2017	0	0
2018	0	0		2018	0	0	2018	0	0
2019	0	0		2019	0	0	2019	0	0
<b>Total</b>	<b>0</b>	<b>0</b>		<b>Total</b>	<b>0</b>	<b>0</b>	<b>Total</b>	<b>0</b>	<b>361,662</b>

EEI: Customized Rebates Large			
Year	(MW)	(MWH)	
2000	0	0	
2001	0	0	
2002	0	0	
2003	0	0	
2004	0	0	
2005	0	0	
2006	0	0	
2007	0	0	
2008	0	0	
2009	0	0	
2010	0	0	
2011	0	0	
2012	0	0	
2013	0	0	
2014	0	0	
2015	0	0	
2016	0	0	
2017	0	0	
2018	0	0	
2019	0	0	
<b>Total</b>	<b>0</b>	<b>0</b>	

EEI: Customized Rebates Small/Medium			
Year	(MW)	(MWH)	
2000	0	4,019	
2001	0	4,019	
2002	0	4,019	
2003	0	4,019	
2004	0	4,019	
2005	0	4,019	
2006	0	4,019	
2007	0	4,019	
2008	0	4,019	
2009	0	4,019	
2010	0	4,019	
2011	0	4,019	
2012	0	4,019	
2013	0	4,019	
2014	0	4,019	
2015	0	0	
2016	0	0	
2017	0	0	
2018	0	0	
2019	0	0	
<b>Total</b>	<b>0</b>	<b>60,283</b>	

EEI: Prescriptive Rebates Large			
Year	(MW)	(MWH)	
2000	0	22,892	
2001	0	0	
2002	0	0	
2003	0	0	
2004	0	0	
2005	0	0	
2006	0	0	
2007	0	0	
2008	0	0	
2009	0	0	
2010	0	0	
2011	0	0	
2012	0	0	
2013	0	0	
2014	0	0	
2015	0	0	
2016	0	0	
2017	0	0	
2018	0	0	
2019	0	0	
<b>Total</b>	<b>0</b>	<b>22,892</b>	

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Table TA 3.3  
 2001 Energy Efficiency Annual Report  
 SUMMARY OF ENERGY EFFICIENCY PROGRAM EFFECTS: ELECTRIC  
 MARKET EFFECTS: PROJECTED ANNUAL PROGRAM ENERGY REDUCTIONS - NONRESIDENTIAL PROGRAM AREA  
 2000

EEl: Prescriptive Rebates Small/Medium			EEl: SPCs Large			EEl: SPCs Small/Medium		
Year	(MW)	(MWH)	Year	(MW)	(MWH)	Year	(MW)	(MWH)
2000	0	59,014	2000	0	145,864	2000	0	14,798
2001	0	59,014	2001	0	145,864	2001	0	14,798
2002	0	59,014	2002	0	145,864	2002	0	14,798
2003	0	59,014	2003	0	145,864	2003	0	14,798
2004	0	59,014	2004	0	145,864	2004	0	14,798
2005	0	59,014	2005	0	145,864	2005	0	14,798
2006	0	59,014	2006	0	145,864	2006	0	14,798
2007	0	59,014	2007	0	145,864	2007	0	14,798
2008	0	59,014	2008	0	145,864	2008	0	14,798
2009	0	59,014	2009	0	145,864	2009	0	14,798
2010	0	59,014	2010	0	145,864	2010	0	14,798
2011	0	59,014	2011	0	145,864	2011	0	14,798
2012	0	0	2012	0	145,864	2012	0	14,798
2013	0	0	2013	0	145,864	2013	0	14,798
2014	0	0	2014	0	145,864	2014	0	14,798
2015	0	0	2015	0	0	2015	0	0
2016	0	0	2016	0	0	2016	0	0
2017	0	0	2017	0	0	2017	0	0
2018	0	0	2018	0	0	2018	0	0
2019	0	0	2019	0	0	2019	0	0
<b>Total</b>	<b>0</b>	<b>708,166</b>	<b>Total</b>	<b>0</b>	<b>2,187,964</b>	<b>Total</b>	<b>0</b>	<b>221,968</b>

Upstream Programs Information		
Year	(MW)	(MWH)
2000	0	0
2001	0	0
2002	0	0
2003	0	0
2004	0	0
2005	0	0
2006	0	0
2007	0	0
2008	0	0
2009	0	0
2010	0	0
2011	0	0
2012	0	0
2013	0	0
2014	0	0
2015	0	0
2016	0	0
2017	0	0
2018	0	0
2019	0	0
<b>Total</b>	<b>0</b>	<b>0</b>

Upstream Programs Financial Assistance		
Year	(MW)	(MWH)
2000	0	1,273
2001	0	1,273
2002	0	1,273
2003	0	1,273
2004	0	1,273
2005	0	1,273
2006	0	1,273
2007	0	1,273
2008	0	1,273
2009	0	1,273
2010	0	1,273
2011	0	1,273
2012	0	1,273
2013	0	1,273
2014	0	1,273
2015	0	0
2016	0	0
2017	0	0
2018	0	0
2019	0	0
<b>Total</b>	<b>0</b>	<b>19,095</b>

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Table TA 3.4A  
 2001 Energy Efficiency Annual Report  
 SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC  
 DISTRIBUTION OF SPC PAYMENTS - NONRESIDENTIAL PROGRAM AREA  
 LARGE SPC  
 2000

	Lighting	[1,2]	HVAC	[1,2]	Other	[1,2]	Total	[1,2]
Edison Source	\$ -		\$ -		\$ -		\$ -	
Total Affiliate	\$ -		\$ -		\$ -		\$ -	
ESCO 1	\$ -		\$ -		\$ 260,696		\$ 260,696	
ESCO 2	39,383		-		-		39,383	
ESCO 3	-		-		25,086		25,086	
ESCO 4	11,033		-		-		11,033	
ESCO 5	606,043		-		-		606,043	
ESCO 6	-		48,419		-		48,419	
ESCO 7	87,994		86,357		53,222		227,574	
ESCO 8	-		-		19,261		19,261	
ESCO 9	-		-		54,656		54,656	
ESCO 10	412,815		-		-		412,815	
ESCO 11	-		-		160,571		160,571	
ESCO 12	56,751		-		-		56,751	
ESCO 13	-		-		15,928		15,928	
ESCO 14	20,746		-		-		20,746	
ESCO 15	-		436,933		157,347		594,280	
ESCO 16	-		-		160,593		160,593	
ESCO 17	38,968		-		20,964		59,932	
ESCO 18	51,257		363,325		88,918		503,500	
ESCO 19	-		-		64,620		64,620	
ESCO 20	98,217		-		-		98,217	
ESCO 21	137,202		-		274,395		411,597	
ESCO 22	136,451		-		-		136,451	
ESCO 23	62,750		93,358		42,011		198,119	
ESCO 24	55,750		452,923		393,488		902,162	
ESCO 25	8,787		-		-		8,787	
ESCO 26	231,363		77,907		-		309,270	
ESCO 27	26,032		17,421		14,836		58,290	
ESCO 28	-		-		1,043,750		1,043,750	
ESCO 29	21,679		-		-		21,679	
ESCO 30	9,827		110,722		17,865		138,414	
ESCO 31	-		-		182,954		182,954	
ESCO 32	-		-		14,133		14,133	
ESCO 33	9,661		-		-		9,661	
ESCO 34	78,886		275,494		12,230		366,609	
ESCO 35	158,383		-		-		158,383	
ESCO 36	-		108,900		-		108,900	
ESCO 37	12,246		-		-		12,246	
ESCO 38	67,474		-		-		67,474	
ESCO 39	-		17,745		69,838		87,583	
ESCO 40	-		178,734		-		178,734	
ESCO 41	-		-		10,549		10,549	
ESCO 42	-		-		17,806		17,806	
Total ESCO	\$ 2,439,696		\$ 2,268,238		\$ 3,175,718		\$ 7,883,652	



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Table TA 3.4A  
 2001 Energy Efficiency Annual Report  
 SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC  
 DISTRIBUTION OF SPC PAYMENTS - NONRESIDENTIAL PROGRAM AREA  
 LARGE SPC  
 2000

Customer Project 1	\$ -	\$ -	\$ 167,399	\$ 167,399
Customer Project 2	-	-	250,494	250,494
Customer Project 3	164,585	-	-	164,585
Customer Project 4	56,889	-	-	56,889
Customer Project 5	3,718	-	85,800	89,518
Customer Project 6	49,172	-	7,761	56,933
Customer Project 7	16,163	9,622	70,273	96,058
Customer Project 8	-	-	92,232	92,232
Customer Project 9	-	-	36,879	36,879
Customer Project 10	-	86,827	-	86,827
Customer Project 11	-	54,460	-	54,460
Customer Project 12	73,024	-	-	73,024
Customer Project 13	-	-	88,951	88,951
Customer Project 14	-	-	88,466	88,466
Customer Project 15	-	254,823	25,932	280,755
Customer Project 16	-	455,553	-	455,553
Customer Project 17	-	-	22,239	22,239
Customer Project 18	22,685	-	-	22,685
Customer Project 19	-	33,650	-	33,650
Customer Project 20	-	37,813	-	37,813
Customer Project 21	-	94,356	87,058	181,414
Customer Project 22	-	-	204,720	204,720
Customer Project 23	43,295	-	-	43,295
Customer Project 24	121,135	-	-	121,135
Customer Project 25	57,737	-	-	57,737
Customer Project 26	-	-	225,444	225,444
Customer Project 27	151,412	-	-	151,412
Customer Project 28	-	-	118,610	118,610
Customer Project 29	-	-	24,984	24,984
Customer Project 30	-	791,577	814,650	1,606,227
Customer Project 31	-	-	35,290	35,290
Customer Project 32	-	161,609	11,043	172,652
Customer Project 33	-	-	319,323	319,323
Customer Project 34	185,037	27,267	-	212,304
Customer Project 35	-	-	264,000	264,000
Customer Project 36	-	-	141,133	141,133
Customer Project 37	-	-	11,307	11,307
Customer Project 38	-	-	126,040	126,040
Customer Project 39	-	-	92,124	92,124
Customer Project 40	-	81,288	20,043	101,330
Customer Project 41	-	1,176,108	306,493	1,482,601
Customer Project 42	-	76,113	-	76,113
Customer Project 43	30,917	-	-	30,917
Customer Project 44	-	257,351	-	257,351
Customer Project 45	-	45,764	25,195	70,958
<b>Total Customer Projects</b>	<b>\$ 975,768</b>	<b>\$ 3,644,178</b>	<b>\$ 3,763,884</b>	<b>\$ 8,383,830</b>
<b>Total Payments</b>	<b>\$ 3,415,464</b>	<b>\$ 5,912,416</b>	<b>\$ 6,939,602</b>	<b>\$ 16,267,482</b>

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

[2] Includes Actual and Committed Payments

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Table TA 3.4B  
2001 Energy Efficiency Annual Report  
SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC  
DISTRIBUTION OF SPC PAYMENTS - NONRESIDENTIAL PROGRAM AREA  
SMALL SPC  
2000

	Lighting	[1,2]	HVAC	[1,2]	Other	[1,2]	Total	[1,2]
Affiliate 1	\$ -		\$ -		\$ -		\$ -	
Total Affiliate	\$ -		\$ -		\$ -		\$ -	
ESCO 1	\$ -		\$ -		\$ 7,923		\$ 7,923	
ESCO 2	-		13,540		-		13,540	
ESCO 3	19,780		-		-		19,780	
ESCO 4	-		13,561		-		13,561	
ESCO 5	-		30,242		1,671		31,913	
ESCO 6	252		15,683		16,264		32,199	
ESCO 7	-		200,031		95,524		295,555	
ESCO 8	1,954		-		-		1,954	
ESCO 9	-		4,091		-		4,091	
ESCO 10	5,609		-		-		5,609	
ESCO 11	-		-		41,500		41,500	
ESCO 12	-		-		59,121		59,121	
ESCO 13	-		-		101,542		101,542	
ESCO 14	266,158		-		-		266,158	
ESCO 15	-		-		68,395		68,395	
ESCO 16	19,354		-		-		19,354	
ESCO 17	5,480		-		-		5,480	
ESCO 18	-		5,665		-		5,665	
ESCO 19	12,710		-		-		12,710	
ESCO 20	-		3,969		-		3,969	
ESCO 21	-		-		3,676		3,676	
ESCO 22	82,596		-		-		82,596	
ESCO 23	116,565		-		-		116,565	
ESCO 24	-		18,487		-		18,487	
ESCO 25	158,448		-		-		158,448	
ESCO 26	10,266		-		-		10,266	
ESCO 27	-		11,089		10,303		21,392	
ESCO 28	-		-		21,369		21,369	
ESCO 29	-		7,291		3,461		10,752	
ESCO 30	-		-		45,085		45,085	
ESCO 31	9,429		24,909		-		34,339	
ESCO 32	-		5,130		-		5,130	
ESCO 33	37,070		-		-		37,070	
ESCO 34	77,588		-		-		77,588	
ESCO 35	-		30,159		-		30,159	
ESCO 36	-		5,109		-		5,109	
ESCO 37	-		34,145		-		34,145	
Total ESCO	\$ 823,257		\$ 423,100		\$ 475,835		\$ 1,722,192	
Customer Project 1	\$ -		\$ -		\$ -		\$ -	
Total Customer Projects	\$ -		\$ -		\$ -		\$ -	
<b>Nonresidential Total</b>	<b>\$ 823,257</b>		<b>\$ 423,100</b>		<b>\$ 475,835</b>		<b>\$ 1,722,192</b>	

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

[2] Includes Actual and Committed Payments

## Section IV - New Construction Program Area

This section contains narrative that documents and explains the data shown for Tables TA 4.1 through TA 4.4.

**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 2000 and those costs associated with commitments from 2000 programs.

**Program Incentives (Recorded)**

Incentive costs represent incentives paid to customers during 2000 (Actual) as well as incentives associated with commitments from the 2000 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 2000 (Actual) as well as administrative costs associated with the handling of commitments from the 2000 new construction programs (Committed).

**Shareholder Incentives**

Costs represented in the Shareholder Incentives column are those relating to the performance awards earned during 2000 from the 2000 new construction programs. The New Construction Total of the Shareholder Incentives column will not necessarily be collected by SCE for meeting the performance award goals during 2000. This is due to the performance award cap placed on SCE's total energy efficiency earnings claim for 1999 of \$5.544 million. However, these full "potential" amounts are utilized to calculate the cost-effectiveness in this 2001 Annual Energy Efficiency Report. This is not necessarily the case for all showings of cost-effectiveness for these programs.

**Other Costs**

All program costs associated with SCE's 2000 new construction programs were delineated in the remaining categories. SCE does not have any 2000 new construction program costs classified as "Other".

**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. The gross amounts of these costs are reduced by appropriate net-to-gross ratios for the particular measure or end-use. These ratios were 1.0 for all programs offered in the 2000 program year, based upon Commission direction. SCE's incremental measure

## Technical Appendix

costs are typically derived from the latest cost source available for the particular measure(s), including recent measure cost studies.

### **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 2000. These program costs do not include energy efficiency support costs represented elsewhere in this report, such as Market Assessment & Evaluation and Regulatory Oversight (Section 5), Other Energy Efficiency (Section 1), or Shareholder Performance Incentives (Section 6).

#### **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 2000 in support of 2000 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.

#### **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 consistent with the measure level savings data submitted in SCE's September 27, 1999 Application for 2000 Energy Efficiency Program Funding and adopted in Decision 00-07-017. These estimates have been updated, as applicable, to correspond with the actual program implementation and program results as of December 31, 2000. Recorded savings amounts reflect all 2000 program impacts, including impacts from measures installed in 2000 and those impacts associated with commitments from 2000 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 will be discussed in the individual sections herein.

#### **Program Energy Reduction Assumptions**

Annual program energy reduction estimates for new construction programs supplied in the September 27, 1999 Application for 2000 Energy Efficiency Program Funding and submitted herein as the 2000 program results are the result of a summation of measure-level savings from the measures installed as a result of the 2000 new construction programs. The measure-level savings information used to calculate the 2000 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. These ratios were 1.0 for all programs offered in the 2000 program year, based upon Commission direction.

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Table TA 4.1  
 2001 Energy Efficiency Annual Report  
 SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC  
 PROGRAM COST ESTIMATES USED FOR COST-EFFECTIVENESS - NEW CONSTRUCTION PROGRAM AREA  
 2000

	Program Incentives (Recorded)		Program Administrative Costs (Recorded)		Shareholder Incentives [1]	Other Costs	Total Utility Costs	Incremental Measure Costs
	Actual	Committed	Actual	Committed				
<b>Residential</b>	\$ -	\$ 764,500	\$ 3,032,409	\$ 25,000	\$ 190,909	\$ -	\$ 4,012,818	\$ 1,500,000
<b>Nonresidential</b>	366,091	2,357,921	3,216,573	2,210,044	525,000	-	8,675,629	6,252,000
<b>New Construction Total</b>	<u>\$ 366,091</u>	<u>\$ 3,122,421</u>	<u>\$ 6,248,982</u>	<u>\$ 2,235,044</u>	<u>\$ 715,909</u>	<u>\$ -</u>	<u>\$ 12,688,447</u>	<u>\$ 7,752,000</u>

[2] The incentive amounts shown may not be fully collected. SCE's 2000 Shareholder Performance Award Cap is \$5,544 million

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Table TA 4.2  
 2001 Energy Efficiency Annual Report  
 SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC  
 DIRECT AND ALLOCATED ADMINISTRATIVE COSTS - NEW CONSTRUCTION PROGRAM AREA  
 2000

	Actual Labor	Actual Non-Labor	Actual Contract	Actual Allocated	Actual Admin Total
<b>Residential</b>	\$ 216,108	\$ 2,754,212	\$ 16,350	\$ 45,739	\$ 3,032,409
<b>Nonresidential</b>	973,543	2,184,558	48,048	10,426	3,216,573
<b>New Construction Total</b>	<u>\$ 1,189,651</u>	<u>\$ 4,938,769</u>	<u>\$ 64,397</u>	<u>\$ 56,165</u>	<u>\$ 6,248,982</u>

# Technical Appendix

Table TA 4.3  
 2001 Energy Efficiency Annual Report  
 SUMMARY OF ENERGY EFFICIENCY PROGRAM EFFECTS: ELECTRIC  
 MARKET EFFECTS: PROJECTED ANNUAL PROGRAM ENERGY REDUCTIONS - NEW CONSTRUCTION PROGRAM AREA  
 2000

Residential			Nonresidential			
Year	(MW)	(MWH)	Year	(MW)	(MWH)	(MWH)
2000	0	5,692	2000	0	0	30,884
2001	0	5,692	2001	0	0	30,884
2002	0	5,692	2002	0	0	30,884
2003	0	5,692	2003	0	0	30,884
2004	0	5,692	2004	0	0	30,884
2005	0	5,692	2005	0	0	30,884
2006	0	5,692	2006	0	0	30,884
2007	0	5,692	2007	0	0	30,884
2008	0	5,692	2008	0	0	30,884
2009	0	5,692	2009	0	0	30,884
2010	0	5,692	2010	0	0	0
2011	0	5,692	2011	0	0	0
2012	0	5,692	2012	0	0	0
2013	0	5,692	2013	0	0	0
2014	0	5,692	2014	0	0	0
2015	0	5,692	2015	0	0	0
2016	0	5,692	2016	0	0	0
2017	0	5,692	2017	0	0	0
2018	0	5,692	2018	0	0	0
2019	0	0	2019	0	0	0
Total	0	108,144	Total	0	0	308,843



## **Section V - MA&E and Regulatory Oversight**

### **Annotated Bibliography**

#### **Statewide Studies**

##### **NRNC STATEWIDE PROGRAM NEEDS ASSESSMENT (MARKET TRANSFORMATION BARRIERS AND STRATEGIES STUDY)**

**HESCHONG MAHONE GROUP**

**FEBRUARY 2000**

This report aims to provide a better understanding of the process of and impediments to energy efficient design in new nonresidential buildings. Using data from the Nonresidential New Construction Baseline Study, it examines the market model and the nature of market barriers. Through a series of focus groups, the study gathered information on the needs and desires of designers and building owners as related to energy efficiency programs. Using these information sources, it assesses the acceptance and preliminary success of Savings By Design, the newly launched statewide new construction program. And it provides recommendations on additional methods for positively influencing the energy efficiency design process.

##### **STATEWIDE MULTI-FAMILY COMMON AREA SURVEY**

**ADM ASSOCIATES**

**JUNE 2000**

This study provides baseline equipment saturation and decision-making data for common areas in apartment complexes, condominiums, and homeowner association developments. The saturation data collected are being used to determine the existing efficiency levels of equipment in the common areas. The decision-making surveys, linked to the saturation data, provide valuable information on decision-making procedures and attitude and perceptions regarding energy efficiency for their facilities. The data were gathered through on-sites surveys of multi-family housing common areas, qualitative interviews with management companies and owners; and short telephone surveys with management companies and owners. The report documents the study methods and analyzes the data collected for the two major groups, apartment complexes and condominium/homeowner associations.

# Technical Appendix

## **RESIDENTIAL CONTRACTOR PROGRAM EVALUATION STUDY**

### **PHASE II FINAL REPORT**

**WIRTSHAFTER ASSOCIATES**

**JULY 2000**

This study assesses the effectiveness of the design and delivery of PY1999 Residential Contractor Program (RCP) and provides program and policy suggestions. This process evaluation was based on qualitative interviews with program staff and both participant and non-participant contractors, and surveys of single family homeowner participants. It also included establishment of a geographic information system and its use in two case studies tracking contractor coverage and voucher distribution within the market.

The study also completes the characterization of the residential contracting market initiated in the PG&E-managed study of the PY 1998 program. It includes discussion of research into: consumer baseline awareness, perceptions, and practices; segmentation analysis of contractors; and single family homes trends.

Finally, the study develops an approach for tracking market effects indicators and measuring any near-term market effects of the PY1999 RCP.

## **FIRST-YEAR INTERIM REPORT OF THE RESIDENTIAL MARKET SHARE TRACKING STUDY**

**REGIONAL ECONOMIC RESEARCH, INC.**

**OCTOBER 2000**

The Residential Market Share Tracking Study has now established the baseline market share for fourteen residential energy efficiency measures that are major targets of Program Year (PY) 1998-2001 California energy efficiency programs. It has also established a system for monitoring changes in market share by decision type over time and incorporates a dynamic database for this continued data tracking. Data are being gathered from distributors and retailers, on-site surveys of new homes, county building departments, and from point-of-sales reports purchased from national sources.

## **NONRESIDENTIAL NEW CONSTRUCTION MARKET AND PROGRAM TRACKING REPORT: QUARTER 1, 2000**

**QUANTUM CONSULTING, INC.**

### **OCTOBER 2000**

This is the first of a series of quarterly reports produced by the statewide Market Characterization and Program Activity Tracking Study for the Nonresidential New Construction sector. The study and the quarterly reports track trends in the nonresidential new construction market, based on F.W. Dodge Report data and Construction Industry Research Board database records on building permits. The reports show the location and type of nonresidential construction activity that is occurring in California and the most active market actors. Using program data provided by the utility program managers, the study and the quarterly reports also track participation of projects in the statewide Savings By Design program by both new construction and renovation/remodeling projects.

## **NONRESIDENTIAL NEW CONSTRUCTION MARKET AND PROGRAM TRACKING REPORT: QUARTER 2, 2000**

**QUANTUM CONSULTING, INC.**

### **OCTOBER 2000**

This is the second of a series of quarterly reports produced by the statewide Market Characterization and Program Activity Tracking Study for the Nonresidential New Construction sector. The report contents are the same as described above, but using data for second quarter 2000.

## **NONRESIDENTIAL NEW CONSTRUCTION MARKET AND PROGRAM TRACKING REPORT: QUARTER 3, 2000**

**QUANTUM CONSULTING, INC.**

### **NOVEMBER 2000**

This is the third of a series of quarterly reports produced by the statewide Market Characterization and Program Activity Tracking Study for the Nonresidential New Construction sector. The report contents are the same as described above, but using data for third quarter 2000.

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### **EXTENSION OF THE NONRESIDENTIAL NEW CONSTRUCTION BASELINE STUDY – UPDATED BASELINE COMPARED TO 1998 T-24 CODE AND END USE SAVINGS BY MEASURE CATEGORY**

**RLW ANALYTICS, INC.**

**NOVEMBER 2000**

The new July 1, 1999, Title 24 LPD requirements represent a substantial increase in the stringency of required lighting system efficiency. There is not a clear assessment of how easy or difficult it will be for designers to meet these new requirements, but this is what the SBD program requires. The NRNC Baseline study database has sufficient detail to document how it has been accomplished in the past and what types of changes to current practice will be required to exceed the new Title 24 requirements. The study documents that most of the 1995-98 buildings could already meet the new standards, so compliance should be easy. A second objective was to obtain a better understanding of energy savings at the end-use level. A sequence of parametric runs of the energy simulation models were prepared for several measure categories, in order to better understand the direct and interactive effects of these measures.

## **SCE Studies**

### **A MILESTONE VERIFICATION REPORT ON PRODUCTION RESIDENTIAL BUILDERS’ AWARENESS OF THE ENERGY STAR® HOMES PROGRAM IN SOUTHERN CALIFORNIA EDISON TERRITORY**

**KVDR, INC.**

**FEBRUARY 2000**

This study was required to determine whether SCE met a new construction program performance goal for shareholder earnings. It assessed the level of awareness, knowledge, and value placed on the ENERGY STAR® label among production homebuilders. A parallel survey assessed the awareness and attitudes of smaller builders.

**A REPORT ON FAMILIARITY WITH ENERGY STAR® AND COMFORTWISE HOMES PROGRAMS IN SOUTHERN CALIFORNIA EDISON TERRITORY AMONG NON-PRODUCTION BUILDERS**

**KVDR, INC.**

**FEBRUARY 2000**

While not required for assessing achievement of a program performance goal, this study was conducted in parallel with the study described immediately above. Program planners desired to have the same information available about non-production builders as the study above provided for high-volume builders. This small study assessed the level of awareness, knowledge, and value placed on the ENERGY STAR® label among non-production homebuilders.

**SMALL BUSINESS STANDARD PERFORMANCE CONTRACTING PROGRAM AWARENESS**

**ADR ASSOCIATES**

**MARCH 2000**

This study documents and analyzes a pre-program and a post-program survey of target segments of the small commercial and industrial customer market, in relation to the newly launched standard performance contracting (SPC) program for smaller nonresidential customers. The goal of the study was to monitor customer awareness of and attitudes towards the new performance contracting program for small nonresidential customers. This study was required for assessment of SCE's attainment of a program performance milestone required for shareholder earnings.

**EVALUATION OF MARKET EFFECTS OF THE SCE TECHNOLOGY APPLICATION CENTERS**

**XENERGY, INC.**

**SEPTEMBER 2000**

This study assesses the market impacts of selected activities undertaken by the Customer Technology Application Center (CTAC) and the Agricultural Technology Application Center (AgTAC), SCE's two energy centers. The study includes detailed analysis of each selected activity by review of available project materials, interviews with project personnel, and surveys of customers and trade allies affected by the activity. The objective is to identify changes in awareness, knowledge, attitudes, practices, and outcomes related to energy-efficient options that can be attributed at least in part to the technology centers. The study is intended to provide estimates of CTAC's and AgTAC's market effects and to provide information about the way program strategies have worked that may help center staff to develop effective revisions to their strategies. This study was completed in September 2000.

# Technical Appendix

## **EVALUATION OF THE SOUTHERN CALIFORNIA EDISON EMERGING TECHNOLOGIES PROGRAM: PHASE I REPORT**

### **RIDGE ASSOCIATES**

#### **DECEMBER 2000**

This study gathered baseline data on market actor awareness, attitudes, and knowledge regarding key technologies promoted by SCE's Design and Engineering Services group. The project involves review of project materials, interviews with program staff, development of an analysis plan, surveys of affected customers and trade allies, and analysis of comparative survey results. One research objective is to develop a theory of market change resulting from demonstration projects. Another is to use the data collected to refine the ways that information is provided to customers through demonstration projects.

## **CEC 2000 Results and Achievements**

The California Energy Commission (CEC) has assumed responsibility for managing two statewide study areas, Nonresidential Market Share Tracking and Nonresidential Remodeling and Renovation. The CEC is also conducting data collection activities that provide benefits to cost-effective energy efficiency activities, including commercial and residential customer characteristics surveys and development of energy efficiency measure cost and savings data. In addition, CEC staff will continue to support to MA&E planning and coordination by providing technical expertise on buildings codes and standards, and through dissemination of studies. CEC staff manages the CALMAC website and maintains both physical and on-line libraries of statewide MA&E studies.

The CEC received two years of funding from Planning Years 1999 and 2000, with the stipulation that funds not encumbered by December 31, 2000 revert to the utilities. The disposition of these funds are summarized in tables at the end of this section.

### **Statewide Studies**

#### **Nonresidential Remodeling and Renovation**

The nonresidential remodeling and renovation study was begun, with completion scheduled for July 2001. This study seeks to characterize the decision-making process for purchase of energy using equipment during remodeling or renovating events, and to describe the level and types of such activity by market segment. The study will use these results to identify targeted strategies that may facilitate energy efficient investment during remodeling and renovation and identify market segments with high potential for energy savings. The qualitative data collection phase of the study is complete. Work on quantitative data collection is underway. Data is being drawn from building permits, Title 24 documentation, telephone surveys and on-site visits to remodeling and renovation projects completed in 2000. Information on construction practices specific to the remodeling and renovation market will be combined with survey results and simulations to define the dimensions and characteristics of the remodeling and renovation market in California. Also, an in-house literature review is underway to collate information from studies that have touched on the remodeling and renovation market in a peripheral way. Final results from this study are expected in summer 2001.

#### **Nonresidential Market Share Tracking Study**

This study, begun in June 2000, seeks to track and analyze the adoption of commercial and industrial energy efficiency services and products in California. The study is identifying and collecting data on key energy efficiency measures, and processing the data into parameters for an efficiency market share tracking database. The market shares will be used as indicators of both the effectiveness of individual programs as well as the extent to which markets have been transformed. The current contract provides funding for two years of data collection. Major categories of measures under study include motors, refrigeration, chillers, windows, lighting, compressed air, water re-use and recycling, electronic process controls, lubrications practices, and distributed generation.

# Technical Appendix

## CEC Data Collection Activities

The focus of this area is the collection and analysis of basic data about customer characteristics, energy use, and energy-using technologies that provide the foundation for energy efficiency program planning and evaluation, energy demand analysis, and market monitoring. In the past, customer characteristics data were provided to the CEC by the state's utilities through general rate case authorizations. However, with the passage of California State Assembly Bill 1890, these data collection efforts were no longer funded, although utilities are still required to provide the data under the California Code of Regulations, Title 20. In Resolution E-3592, the CPUC, acknowledging the value of Title 20 survey research to cost-effective energy efficiency and conservation activities (Ordering Paragraph 82), authorized the utilities to transfer a total of \$2.1 million for two years to the CEC for Title 20 data collection activities.

### Commercial End Use Survey (CEUS)

The Commercial End Use Survey has begun, and is expected to be complete in 2003. This project will collect and analyze building characteristic information for use in commercial sector market characterization and for developing estimates of energy usage by end-use, end-use saturations, and end-use load shapes by building type. The CEC will develop site-specific engineering models to simulate energy efficiency technology options and assess the results to the sector as a whole. The individual site models will be combined into a building energy demand analysis model that can analyze hourly energy use for user-defined market segments, for applications such as assessing hourly impacts of load management strategies and building standards.

### Residential Appliance Saturation Survey (RASS)

In 2000, the CEC selected a contractor and encumbered funds to conduct a residential customer characteristics survey, but work will not begin until CPUC approval of CEC's 2001 MA&E plan. The RASS will gather basic information on building characteristic, appliance holdings, demographic data, awareness of energy efficiency measures and programs, and load shifting opportunities and behavior. The project will produce appliance saturations, end-use intensities, and both confidential and public data sets and reports on project results. The analysis will incorporate data provided by utilities and collected through other surveys, including the Statewide Residential Lighting and Appliance Saturation Study completed in 2000.

### Improvements to the Database of Energy Efficient Resources (DEER)

The DEER contains data on costs and energy impacts for commercially available efficiency measures and is used by utilities and the CEC for cost-effectiveness evaluation. In 2000 an update of the measure cost and residential peak and energy savings portions of the database was begun and will be completed in May 2001. This update is using measure-specific data collection methods, cost models, and analyses to develop recommended cost values and estimates of energy use savings and peak load impacts. The measures included in the updated database were revised and prioritized in consultation with utilities and other program planning stakeholders and include information to support both Energy Efficiency and Low Income programs.



## **CEC 2001 Plans**

### **CEC Data Collection Activities**

2001 funding, if approved, will be used to continue the CEUS and RASS as budgeted, and conduct additional updates to the DEER.

### **Database of Energy Efficiency Resources (DEER) - Load Shape Data Collection and Analysis**

The focus of this project is to maintain the value of the DEER to planning and evaluation in the face of evolving energy efficiency programs and strategies. The nonresidential standard performance contract (SPC) program has a need for development of incremental measure cost data for measures currently not included in the DEER. Because SPC incentives are paid per kilowatt-hour saved, rather than per measure installed, new methodologies for applying measure cost data to the SPC program must be developed. Other program areas may also have new measures for which cost data is needed as well. The CEC will contact all program managers to identify new data needs.

With the recent shift in focus to achieving peak savings through energy efficiency, load management, and distributed generation, we also anticipate the need to incorporate updated load shapes and load impacts at the end use level to assist program managers in estimating the cost effectiveness of new programs, load control technologies, or energy management systems.

### **Statewide Studies**

#### **Nonresidential Remodeling and Renovation Program Opportunities**

Depending on the results of the current nonresidential remodeling and renovation study, a follow up study may be undertaken in 2001. Research would focus on applying the 2000 study to see how well assumptions and performance indicators in current program offerings match up with the market characterization findings. Results will help program managers identify new or redefined program opportunities regardless of whether remodeling and renovation remains a separate program or is integrated into another program. Work is expected to include market-level evaluation of related nonresidential programs, e.g., Small Nonresidential Comprehensive Retrofit, Commercial New Construction, etc., and interviews with program staff and key market actors.

# Technical Appendix

## CEC MA&E Expenditures and Budgets

*Table 1: CEC MA&E Expenditures and Budgets*

	<i>PY 1999 and 2000 Authorized</i>	<i>PY 1999 and 2000 Actual and Committed*</i>	<i>2001 Planned Budget</i>
<b>CEC Data Collection</b>	\$ 4,200,000.00		
Commercial End Use Survey (CEUS)		\$ 2,106,133.90	\$ 1,500,000.00
Residential Appliance Saturation Survey (RASS)		\$ 1,700,000.00	\$ 200,000.00
Database of Energy Efficient Resources (DEER)		\$ 353,562.00	\$ 400,000.00
Total		\$ 4,159,695.90	\$ 4,200,000.00
<b>CEC-Managed Statewide Studies</b>	\$ 1,600,000.00		
Nonresidential Market Share Tracking		\$ 1,009,054.00	
Nonresidential Remodeling & Renovation		\$ 205,310.00	\$ 200,000.00
Total		\$ 1,214,364.00	\$ 200,000.00
<b>TOTAL AUTHORIZED</b>	<b>\$ 5,800,000.00</b>		
<b>TOTAL ACTUAL AND COMMITTED</b>		<b>\$ 5,374,059.90</b>	
<b>TOTAL RETURNED TO UTILITIES (PY 2000)</b>		<b>\$ 425,940.10</b>	

\* If the CEC's 2001 budget is not approved, committed funds will be redirected from the RASS to the CEUS as approved by E-3592, and remaining funds will be returned to the utilities.

*Table 2: 1999 and 2000 Funding Contribution to CEC MA&E Budget by Utility*

	Statewide Studies		CEC Data Collection and Analysis		Total Contribution by Utility
	Contribution	Percent	Contribution	Percent	
(1) PG&E	\$ 708,000.00	0.44	\$ 1,894,000.00	0.45	\$ 2,602,000.00
(2) SCE	\$ 508,000.00	0.32	\$ 1,360,000.00	0.32	\$ 1,868,000.00
(3) SDG&E	\$ 348,000.00	0.22	\$ 574,000.00	0.14	\$ 922,000.00
(4) SoCalGas	\$ 36,000.00	0.02	\$ 372,000.00	0.09	\$ 408,000.00
Total	\$ 1,600,000.00	1.00	\$ 4,200,000.00	1.00	\$ 5,800,000.00
<b>Unencumbered PY 2000 Funds Returned by CEC</b>					
	Statewide Studies		CEC Data Collection and Analysis		Total Returned to Utility
(1) PG&E	\$ 170,643.93		\$ 18,175.23		\$ 188,819.16
(2) SCE	\$ 122,439.43		\$ 13,050.85		\$ 135,490.28
(3) SDG&E	\$ 83,875.83		\$ 5,508.23		\$ 89,384.06
(4) SoCalGas	\$ 8,676.81		\$ 3,569.79		\$ 12,246.60
Total	\$ 385,636.00		\$ 40,304.10		\$ 425,940.10

## **Section VI - Shareholder Performance Incentives**

This section contains narrative that documents and explains the data shown for Tables TA 6.1 and TA 6.2.

### **Table TA 6.1      2000 Performance Award Claim By Component**

The 2000 performance incentive award mechanism is comprised of four components: base milestones, market change/effect milestones, program activity milestones, and aggressive implementation. The potential earnings for each component is shown in Table TA-6.1. The overall potential award is \$6.098 million. The overall award cap is limited to \$5.544 million for 2000. For 2000, SCE realized \$5.869 million of potential earnings. However, the overall incentive cap reduced the earnings claim downward to \$5.544 million.

### **Table TA 6.2      2000 Performance Award Achievements**

The table lists each of the 2000 performance milestones along with SCE's corresponding achievements.

# Technical Appendix

Table TA 6.1  
2001 Energy Efficiency Annual Report  
SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC  
2000 PERFORMANCE AWARD CLAIM BY COMPONENT  
(\$ in millions)  
2000

Component	Potential Award	Award Claim
Base Award	\$ 0.662	\$ 0.662
Market Changes / Market Effects	2.230	2.151
Administrative/Program Process	1.820	1.670
Aggressive Implementation	1.386	1.386
Pre-Adjusted Earnings Subtotal	\$ 6.098	\$ 5.869
<b>Total Claimed Earnings, Adjusted*</b>	<b>\$ 5.544</b>	<b>\$ 5.544</b>

\* - Applies Performance Award Cap To Earnings Results.

# Technical Appendix

Table TA 6.2  
 2001 Energy Efficiency Annual Report  
 SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC  
 2000 Performance Award Achievements  
 (\$ in millions)

2000 - Residential Program Area								
Program: <u>Residential Heating and Cooling</u>								
Milestone Code	Milestone Type	Program Element	Milestone	Superior Level		Acceptable Level		Award Claim
				Target	Award	Target	Award	
SCER-1	Program Activity	Residential Audits	Encourage 5% of the baseline to complete an online energy survey in PY 2000.	5%	\$ 0.080	4%	\$ 0.056	\$ 0.080
SCER-2	Market Change	Residential Contractor	Achieve 30% increase in number of single-family RCP contractors who are actively participating in the program. Actively participating in the program is defined as installing one or more measure/service for at least 5 customers.	30%	\$ 0.111	20%	\$ 0.078	\$ 0.111
SCER-3	Market Change	Residential Contractor	Achieve the larger of (a) a 70-100% increase (relative) in the number of contractors, or (b) an increase of 4 contractors that are actively participating in the multi-family RCP. Actively participating defined a in terms of energy savings.	100%	\$ 0.111	70%	\$ 0.078	\$ 0.111
SCER-4	Program Activity	Constortium For Energy Efficiency, Residential Electric End-Use Efficiency (CEEREEE)	Insitute a joint effort with a manufacturer to provide a high efficiency appliance bulk purchase opportunity to multi-family housing owner/operators within 150 days of 1/1/00.	150 days of 1/1/00	\$ 0.095	180 days of 1/1/00	\$ 0.067	\$ 0.095
SCER-5	Base	Mass Market Information	Develop Chinese language version of the residential statewide Energy Guide within 120 days of 1/1/00.	120 days of 1/1/00	\$ 0.013	150 days of 1/1/00	\$ 0.009	\$ 0.013

# Technical Appendix

Table TA 6.2  
2001 Energy Efficiency Annual Report  
SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC  
2000 Performance Award Achievements  
(\$ in millions)

Program: **Residential Lighting**

Code	Milestone Type	Program Element	Performance Award Milestone	Performance Award Levels				Award Claim
				Level 1		Level 2		
SCER-6	Program Activity	Residential Lighting Program	Sales Staff Training: conduct ENERGY STAR® sales training for at least 65% of sales staff in 60% of the participating lighting retailers.	65%/60%	\$ 0.111	65%/50%	\$ 0.078	\$ 0.078
SCER-7	Program Activity	Residential Lighting Program	Obtain lighting fixture manufacturer participation commitments (including issuance of fixture allotments) for the PY2000 Statewide Lighting pgm. within 45 working days of 1/1/00.	45 days of 1/1/00	\$ 0.064	75 days of 1/1/00	\$ 0.045	\$ 0.064
SCER-8	Market Change	Residential Lighting Program	Increase by 10% (relative) the number of qualifying fixture models offered by lighting manufacturers. Baseline to be determined in January, 2000 when EPA completes its verification of qualifying ENERGY STAR® rated fixtures.	10%	\$ 0.064	3%	\$ 0.045	\$ 0.064
SCER-9	Program Activity	Residential Refrigerator Recycling	50 million kWh in energy savings through refrigerator and freezer recycling efforts.	50 million kWh	\$ 0.245	42 million kWh	0.1715	\$ 0.245

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Table TA 6.2  
 2001 Energy Efficiency Annual Report  
 SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC  
 2000 Performance Award Achievements  
 (\$ in millions)

Program: **Residential Appliances**

SCER-10	Market Change	Residential Appliance Program	Obtain signed retailer agreements which represent 75% of the total of 250 storefronts throughout the service territory for the PY2000 Statewide Appliance Program.	75%	\$ 0.153	50%	\$ 0.107	\$ 0.153
SCER-11	Market Change	Residential Appliance Program	Increase the average percent of "on-floor" stock that complies with DOE's 7/01 refrigerator standards by 25% in appliance retail stores throughout the service territory.	25%	\$ 0.153	10%	\$ 0.107	\$ 0.153
SCER-12	Program Activity	Residential Appliance Program	Conduct ENERGY STAR® sales training for at least 65% of sales staff in 60% of the participating retailers (65/50).	25%	\$ 0.111	10%	\$ 0.078	\$ 0.111

Program: **Residential Retrofit & Renovation**

Code	Milestone Type	Program Element	Performance Award Milestone	Performance Award Levels		Award Claim		
				Level 1	Level 2			
SCER-13	Market Change	Window/Frame System Labeling	Increased inventory and stocking levels of high performance window with ENERGY STAR®- ratings by 10% over 1999 levels.	10%	\$ 0.048	5%	\$ 0.033	\$ 0.048

Program: **Crosscutting Activities**

SCER-14	Base	Third-Party Initiatives	Sign 100% of the Purchase Order agreements within 60 days of 1/1/00.	100%	\$ 0.156	70%	\$ 0.109	\$ 0.156
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Residential Subtotal \$ 1.435                      \$ 1.005      \$ 1.402

# Technical Appendix

Table TA 6.2  
 2001 Energy Efficiency Annual Report  
 SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC  
 2000 Performance Award Achievements  
 (\$ in millions)

<b>2000 - Nonresidential Program Area</b>								
Program: <b>Small Nonresidential Comprehensive Retrofit</b>								
Code	Milestone Type	Program Element	Performance Award Milestone	Performance Award Levels				Award Claim
				Level 1		Level 2		
SCENR-1	Market Change	Small Commercial/Industrial Survey	A 10% increase (relative) the adoption rate of do-it-yourself energy efficiency survey recommendations.	10%	\$ 0.048	70%	\$ 0.033	\$ -
SCENR-2	Market Change	Small/Medium Standard Performance Contracting	SCE -- Increase the number of EESPs participating in the program by 60% compared to 1999. The combined kWh savings of new EESP projects must be greater than or equal to: [# of new EESPs x 25,000 kwh/yr]	60%	\$ 0.159	40%	\$ 0.111	\$ 0.159
SCENR-3	Program Activity	Small/Medium Standard Performance Contracting	Conduct pre- and post-installation inspections of every PY2000 Small/Medium NonRes SPC project within 13 working days (average) of receipt of "complete" Detailed Project Application and Project Installation Report.	13 days	\$ 0.080	24 days	\$ 0.056	\$ 0.080
SCENR-4	Program Activity	Small/Medium Energy Management Services	Reach 400 small businesses (via phone, site visits) by providing recommendations and assistance toward the implementation of energy efficiency.	400	\$ 0.016	280	\$ 0.011	\$ 0.016



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Table TA 6.2  
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 SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC  
 2000 Performance Award Achievements  
 (\$ in millions)

SCENR-5	Program Activity	Small/Medium Energy Management Services	Promote energy efficiency to 40 customer trade and ethnic associations.	40	\$ 0.016	28	\$ 0.011	\$ 0.016
SCENR-6	Program Activity	Small Nonresidential Mass Market Information	Develop Spanish language version of the nonresidential statewide Energy Guide within 120 days of 1/1/00.	120 days of 1/1/00	\$ 0.016	150 days of 1/1/00	\$ 0.011	\$ 0.016
SCENR-7	Program Activity	Nonresidential Small/Medium C/I Standard Incentives (Express Efficiency)	Demonstrate that small and medium-size (<500kW) customers are completing projects making use of the Express Efficiency strategy by achieving net first year savings of 30 GWh.	30 GWh	\$ 0.095	21 GWh	\$ 0.067	\$ 0.095
SCENR-8	Market Change	HVAC Diagnostic Program (CheckMe!)	Increase the number of contractor technicians trained, as part of the CheckMe! Program, by 15% over 1999 levels.	15%	\$ 0.016	10%	\$ 0.011	\$ 0.016

# Technical Appendix

Table TA 6.2  
 2001 Energy Efficiency Annual Report  
 SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC  
 2000 Performance Award Achievements  
 (\$ in millions)

Program: **Large Nonresidential Comprehensive Retrofit**

Code	Milestone Type	Program Element	Performance Award Milestone	Performance Award Levels				Award Claim
				Level 1		Level 2		
SCENR-9	Market Change	Large Standard Performance Contracting	SCE -- Increase the number of EESPs participating in the program by 15% over combined 98 and 99 year-end total. The combined annual savings of new EESP projects must be greater than or equal to: [# of new EESPs x 150,000 kwh/yr].	15%	\$ 0.445	10%	\$ 0.312	\$ 0.445
SCENR-10	Program Activity	Large Standard Performance Contracting	SCE --Conduct pre- and post-installation inspections of every (i.e. PY 98, 99,00) Large NRSPC projects within 13 working days (average) of receipt of "complete" Detailed Project Application and Project Installation Report.	13 days	\$ 0.414	24 days	\$ 0.290	\$ 0.414

Program: **Nonresidential HVAC Equipment Turnover**

SCENR-11	Base	Small C/I HVAC Contractor Program	Rollout a new Small C/I HVAC Contractor Program within 90 days of 1/1/00.	90 days of 1/1/00	\$ 0.032	120 days of 1/1/00	\$ 0.022	\$ 0.032
SCENR-12	Market Change	Small C/I HVAC Contractor Program	Increase number of high-efficiency packaged HVAC systems sold/installed by participating contractors by 10% over 1999 levels.	10%	\$ 0.032	7%	\$ 0.022	\$ 0.032

Table TA 6.2  
 2001 Energy Efficiency Annual Report  
 SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC  
 2000 Performance Award Achievements  
 (\$ in millions)

Program: **Nonresidential Motor Turnover**

SCENR-13	Base	Small/Medium C/I Motor Distributor Incentive Program	Rollout a new Premium Efficiency Motor Distributor Incentive Program within 90 days of 1/1/00.	90 days of 1/1/00	\$ 0.032	120 days of 1/1/00	\$ 0.022	\$ 0.032
SCENR-14	Market Change	Small/Medium C/I Motor Distributor Incentive Program	Increase number of premium efficiency motors sold by participating distributors by 10%	10%	\$ 0.032	7%	\$ 0.022	\$ 0.032
SCENR-15	Program Activity	Agricultural/Dairy Incentives	Achieve 6 million kWh in annualized energy savings.	6 MkwH	\$ 0.016	4 MkwH	\$ 0.011	\$ 0.011
SCENR-16	Program Activity	Agricultural/Dairy Incentives	Increase 1999 participation levels by 10%.	10%	\$ 0.016	7%	\$ 0.011	\$ -
SCENR-17	Program Activity	Agricultural/Pumping Services	Perform diagnostic services on 3,500 pumps.	3,500	\$ 0.048	2,450	\$ 0.033	\$ 0.048
SCENR-18	Program Activity	Agricultural/Pumping Services	Achieve 18 million kWh in annualized energy savings.	18 MkwH	\$ 0.048	12 MkwH	\$ 0.033	\$ 0.048

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Table TA 6.2  
2001 Energy Efficiency Annual Report  
SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC  
2000 Performance Award Achievements  
(\$ in millions)

Program: **Nonresidential Process**

Code	Milestone Type	Program Element	Performance Award Milestone	Performance Award Levels				Award Claim
				Level 1		Level 2		
SCENR-19	Market Change	Large NonRes Standard Performance Contract Program	Increase the number of approved process overhaul BPAs by 40% over PY99 level.	40%	\$ 0.191	25%	\$ 0.134	\$ 0.191

Program: **Nonresidential Renovation & Remodeling**

SCENR-20	Market Change	Savings By Design (Renovation & Remodel)	A 10% increase in projects utilizing the Whole Building Approach (measured in annualized kWh savings) submitted for program inclusion in PY2000 Savings By Design relative to PY1999.	10%	\$ 0.016	70%	\$ 0.011	\$ 0.016
SCENR-21	Market Change	Savings By Design (Renovation & Remodel)	In PY2000, a 3% (absolute) increase in the market share of new building designs that exceed the 1998 Title 24 standards by at least 10% based on the most numerically quantifiable efficiency indicators.	3%	\$ 0.016	2%	\$ 0.011	\$ 0.016
SCENR-22	Market Change	Large NonRes Standard Performance Contract Program	Increase the number of approved commercial renovation/remodel BPAs by 100% over PY99 level.	100%	\$ 0.095	70%	\$ 0.067	\$ 0.095

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Table TA 6.2  
 2001 Energy Efficiency Annual Report  
 SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC  
 2000 Performance Award Achievements  
 (\$ in millions)

Program: **Nonresidential Renovation & Remodeling**

SCENR-23	Program Activity	Emerging Technologies	20* showcase commitments 12 months after 1/1/00.	20	\$ 0.048	16	\$ 0.033	\$ 0.048
SCENR-24	Program Activity	Emerging Technologies	7,500 showcase audience reached after 12 months of 1/1/00.	7,500	\$ 0.048	5,000	\$ 0.033	\$ 0.048
SCENR-25	Base	Emerging Technologies	Establish the ETCC within 60 days of 1/1/00.	60 days of 1/1/00	\$ 0.095	90 days of 1/1/00	\$ 0.067	\$ 0.095
SCENR-26	Base	Emerging Technologies	Design and populate database within 90 days after the first official ETCC meeting.	90	\$ 0.064	120	\$ 0.045	\$ 0.064
SCENR-27	Program Activity	Energy Centers - CTAC and AgTAC	Seminars conducted at each energy center from joint curricula (Award scaled from 1 to 3 classes conducted at all centers).	3	\$ 0.127	1	\$ 0.089	\$ 0.127
SCENR-28	Base	Energy Centers - CTAC and AgTAC	Web-based energy efficiency library on-line.	12/31/00	\$ 0.095			\$ 0.095
Nonresidential Subtotal					\$ 2.355	\$ 1.581	\$ 2.286	

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Table TA 6.2  
2001 Energy Efficiency Annual Report  
SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC  
2000 Performance Award Achievements  
(\$ in millions)

2000 - New Construction Program Area								
Program: Residential New Construction								
Code	Milestone Type	Program Element	Performance Award Milestone	Performance Award Levels				Award Claim
				Level 1		Level 2		
SCENC-1	Market Change	Residential New Construction	8 percent/6 percent of the new single family homes permitted in SCE's service territory in 2000 will have plans exceeding T24 by at least 10%.	8%	\$ 0.191	6%	\$ 0.134	\$ 0.191
Program: Commercial New Construction								
SCENC-2	Market Change	Savings By Design	A 15% increase in energy savings from year 2000 participating projects utilizing the Whole Building approach relative to energy savings from PY1999 participating projects. 15% or more gets 100% of award; or a 10% increase for 70% of award.	15%	\$ 0.127	10%	\$ 0.089	\$ 0.127
SCENC-3	Market Change	Savings By Design	In PY2000, a 3% increase in the market share of new building designs that exceed the 1998 Title 24 standards by at least 10%.	3%	\$ 0.064	2%	\$ 0.045	\$ 0.064
SCENC-4	Base	Energy Design Resources	PY2000 - Develop a statewide Energy Design Resources program within 90 days of decision	90 days from 1/1/00	\$ 0.127	180 days from 1/1/00	\$ 0.089	\$ 0.127
SCENC-5	Market Change	Energy Design Resources	Train at least 400 decision makers and design professionals in integrated building design and demonstrate that 35%/25% understand key concepts from training and that 20%/15% of the trainees intend to use these concepts in their business practice.	35% and 20%	\$ 0.064	25% and 15%	\$ 0.045	\$ 0.064

Table TA 6.2  
 2001 Energy Efficiency Annual Report  
 SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC  
 2000 Performance Award Achievements  
 (\$ in millions)

Program: **Industrial And Agricultural New Construction**

Code	Milestone Type	Program Element	Performance Award Milestone	Performance Award Levels				Award Claim
				Level 1		Level 2		
SCENC-6	Program Activity	Industrial and Agricultural New Construction	Obtain long term annualized energy savings of 15 M kWh compared to current standards or applicable industry practices.	15 million kWh, annualized	\$ 0.064	10 million kWh, annualized	\$ 0.045	\$ -
SCENC-7	Market Change	Industrial and Agricultural New Construction	Obtain 2 (or 1) projects designed to achieve a minimum of 3 M kWh annualized savings in an under-served industrial sub-category. Underserved sgmts. are defined as fabricated metals, stone, clay, glass, concrete, ag. production customers.	2 projects	\$ 0.032	1 project	\$ 0.022	\$ -
SCENC-8	Program Activity	Industrial and Agricultural New Construction	Increase estimated savings from program participants by at least 20% and increase number of participants to a minimum of 12.	20%	\$ 0.032	10%	\$ 0.022	\$ -

# Technical Appendix

Table TA 6.2  
2001 Energy Efficiency Annual Report  
SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC  
2000 Performance Award Achievements  
(\$ in millions)

Program: **Local Government Initiatives And Codes & Standards**

SCENC-9	Program Activity	Codes & Standards	Prepare and technically refine case studies (technical arguments) for code improvement and submit to the CEC and interested parties.	270 days from 1/1/00	\$ 0.032	330 days from 1/1/00	\$ 0.022	\$ 0.032
SCENC-10	Base	Codes & Standards	Initiate discussions with key stakeholders. Manage and actively participate in a public consensus building process with key stakeholders. Provide summary report to key stakeholders.	330 days from 1/1/00	\$ 0.048	360 days from 1/1/00	\$ 0.033	\$ 0.048
SCENC-11	Market Change	Local Gov't. Initiatives	Increase the number of local governments that participate in the Local Energy Assistance Program from 8 to a minimum of 10 to 12.	12	\$ 0.032	10	\$ 0.022	\$ 0.032
SCENC-12	Market Change	Local Gov't. Initiatives	A 30% or 20% increase in the estimated energy savings attributable to actions by local governments to zoning ordinances, building codes, design guidelines, Public Works standards, General Plan Elements, changes or adoption of specific plans for a city/county requiring energy efficiency improvements as a condition of approval of a subdivision map, and revising plan review processes to incorporate more energy efficiency practices.	30%	\$ 0.032	20%	\$ 0.022	\$ 0.032
New Construction Subtotal					\$ 0.843	\$ 0.590	\$ 0.716	
Performance Milestone Totals					\$ 4.712	\$ 3.232	\$ 4.483	



## Section VII - Low Income Energy Efficiency

This section contains narrative that documents and explains the data shown for Tables TA 7.1 through TA 7.4.

**Table TA 7.1 Program Cost Estimates Used for Cost-Effectiveness - Low Income Energy Efficiency**

This table documents those costs used in determining the cost-effectiveness of low income energy efficiency programs. These tables provide all program costs, including costs expended in 2000 and those costs associated with commitments from 2000 programs. However, there are no commitments for any low income programs.

**Program Incentives (Recorded)**

These costs represent incentives paid to customers during 2000 (Actual) as well as incentives associated with commitments from the 2000 low income energy efficiency programs (Committed). However, there are no commitments for any low income programs.

**Program Administrative Costs (Recorded)**

These costs include expenditures directly charged for SCE and contract labor associated with program administrative costs.

**Shareholder Incentives**

Costs represented in the Shareholder Incentives column are those relating to the performance awards earned during 2000 from the 2000 low income energy efficiency programs.

**Other Costs**

Costs for non-incentive and non-administrative activities including energy education, printing of materials, refrigerator surveys, Low Income Advisory Board, CPUC Energy Division staff, SCE pensions and benefits, and Measurement and Evaluation costs.

**Total Utility Costs**

The sum of the Program Incentives (Actual and Committed) columns, Program Administrative Costs column, 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. The gross amounts of these costs are reduced by appropriate net-to-gross ratios for the particular measure or end-use. SCE's incremental measure costs are typically derived from the latest cost source available for the particular measure(s), including recent measure cost studies.

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## **Table TA 7.2      Program Cost Elements - Low Income Energy Efficiency**

This table documents the breakdown of costs of the low income energy efficiency programs. These tables provide detail of program costs expended in 2000.

### **Labor Costs**

Any internal direct (administrative and/or implementation) costs (indirect costs are a separate line item), burdened by overhead, that represents person hours.

### **Non-Labor Costs**

All direct internal (administrative and/or implementation) costs (indirect costs are given as a separate line item) not covered under labor.

### **Contract Labor Costs**

All outsourced costs (administrative and/or implementation). Contract costs do not need to be further broken out by labor/non-labor. This category includes agency employees.

### **Total Administrative Costs**

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

## **Table TA 7.3      Program Detail by Housing Type and Heating Source - Low Income Energy Efficiency**

The table provides, by housing type and heating source, the MWh savings for program year 2000, direct program costs, and the number of dwellings served. Also, an estimate of the total dwellings that will receive program services in 2001 is provided.

## **Table TA 7.4      Program Detail by Measure - Low Income Energy Efficiency**

The table provides, by measure grouping, the MWh savings for program year 2000, direct program costs, and the number of dwellings served. Also, for specific measures within the measure groupings, the number of dwellings receiving service is provided.

# Technical Appendix

2001 Energy Efficiency Annual Report  
 TABLE TA 7.1  
 LIEE PROGRAM COST ESTIMATES USED FOR COST-EFFECTIVENESS  
 SOUTHERN CALIFORNIA EDISON - ELECTRIC ONLY

UTILITY COST

LIEE	Program Incentives (Recorded)		Admin	Shareholder Incentives	Other	Total	IMC
	Actual	Committed					
Energy Efficiency	\$ 5,972,519	\$ -	\$ 624,422	\$ 343,800	\$ 1,288,601	\$ 8,229,342	\$ 2,656,000

# Technical Appendix

## 2001 Energy Efficiency Annual Report

Table TA 7.2

### LIEE COST ELEMENTS - SOUTHERN CALIFORNIA EDISON

LIEE Programs	Expenditures Recorded by Cost Element - 2000			
	Labor	Non-Labor	Contract	Total
Energy Efficiency				
- Furnaces - Gas	\$ -	\$ -	\$ -	\$ -
- Other Measures	87,001	36,633	3,329,945	3,453,579
- Weatherization, includes CFBS	155,813	121,130	3,146,705	3,423,648
- Outreach & Assessment	-	-	-	-
- In Home Energy Education	11,289	91,326	506,202	608,817
- Education Workshop	-	-	-	-
Energy Efficiency TOTAL	\$ 254,103	\$ 249,089	\$ 6,982,853	\$ 7,486,045
Pilots				\$ -
- Pilot (A)	-	-	-	-
- Pilot (B)	-	-	-	-
Total Pilots	-	-	-	-
Training Center	-	-	-	-
Inspections	45,425	4,143	32,825	82,393
Advertising	-	-	-	-
M&E Studies	13,000	-	-	13,000
Regulatory Compliance	125,000	-	-	125,000
Other Administration	-	-	-	-
Indirect Costs	167,736	-	-	167,736
Oversight Costs				
- LIAB Start-up	-	-	-	-
- LIAB PY 2000	-	-	314	314
- LIAB PY 2001	-	-	8,917	8,917
CPUC Energy Division	-	-	2,137	2,137
Total Oversight Costs	-	-	11,368	11,368
<b>TOTAL COSTS</b>	<b>\$ 605,264</b>	<b>\$ 253,232</b>	<b>\$ 7,027,046</b>	<b>\$ 7,885,542</b>

# Technical Appendix

2001 Energy Efficiency Annual Report  
 TABLE TA 7.3  
 PROGRAM DETAIL BY HOUSING TYPE AND HEATING SOURCE  
 SOUTHERN CALIFORNIA EDISON

	Energy Saved and Program Costs			Number of Dwellings		
	Last Year (mWh)	Last Year (mTherm)	Last Year Expenses [1]	Last Year (Planned)	Last Year (Actual)	This Year (Planned)
Gas Heat - Own						
- Single Family						
- Multi Family						
- Mobile Home						
Sub Total Dwellings Served	-	-	-	-	-	-
Gas Heat - Rent						
- Single Family						
- Multi Family						
- Mobile Home						
Sub Total Dwellings Served	-	-	-	-	-	-
Electric Heat - Own						
- Single Family	2,596		\$ 1,529,528		5,309	
- Multi Family	2,103		\$ 687,217		4,832	
- Mobile Home	728		\$ 364,772		1,373	
Sub Total Dwellings Served	5,428	-	\$ 2,581,517	-	11,514	-
Electric Heat - Rent						
- Single Family	5,445		\$ 1,752,731		13,223	
- Multi Family	7,517		\$ 2,825,433		18,093	
- Mobile Home	1,309		\$ 408,756		3,511	
Sub Total Dwellings Served	14,270	-	\$ 4,986,921	-	34,827	-
<b>TOTAL DWELLINGS SERVED</b>	<b>19,698</b>	<b>-</b>	<b>\$ 7,568,438</b>	<b>44,300</b>	<b>46,341</b>	<b>33,500</b>

[1] LIEE program direct costs.

# Technical Appendix

2001 Energy Efficiency Annual Report  
TABLE TA 7.4 - PROGRAM DETAIL BY MEASURE - SOUTHERN CALIFORNIA EDISON

	Energy Saved and Program Costs (Last Year)			Number of Dwellings (Last Year)
	(mWh)	(mTherm)	Expenses [1]	Actual Dwellings Served
<b>Furnaces</b>				
- Repair, Gas				-
- Replacement, Gas				-
- Repair, Electric				-
- Replacement, Electric				-
<b>Total Furnaces</b>	-		\$ -	-
<b>Infiltration &amp; Space Conditioning.</b>				
- Caulking				1,076
- Door Weatherstripping				1,340
- Duct Repair				107
- Cover Plates/Gaskets				1,327
- Evaporative Cooler/Air Cond. Covers				2
- Window Replacements				1
- Glass Replacements				28
- Wall Repair (exterior)				928
- Door Repair				102
- Door Replacement				197
- Threshold Installed				224
- Attic Ventilation				-
- Attic Insulation				6
- Attic Access Weatherstripping				21
- HVAC Air Filter Replacement				-
<b>Total Infiltration &amp; Space Conditioning</b>	741,650		\$ 813,050	1,347
<b>Water Heating Savings</b>				
- Water Heater Blanket				49
- Low Flow Showerhead				1,186
- Water Heater Pipe Wrap				1
- Faucet Aerators				261
<b>Total Water Heating Savings [2]</b>	-		\$ -	1,347
<b>Minor Home Repairs (other than above) [2]</b>	-		\$ -	997
<b>Miscellaneous Measures [2]</b>	-		\$ -	514
<b>Evaporative Coolers</b>	1,406,083		\$ 1,318,763	2,083
<b>Refrigerators</b>	3,407,352		\$ 1,850,671	2,613
<b>Compact Fluorescents (inc. porchlights)</b>	14,142,809		\$ 2,977,136	76,705
<b>Energy Education</b>				
- Outreach & Assessment			\$ -	-
- In-Home Education			\$ 608,817	46,032
- Education Workshops			\$ -	-
<b>Total Energy Education</b>			\$ 608,817	46,032

[1] LIEE program direct costs.

[2] SCE only reports these numbers in the weatherization program results.

## Section VIII – Summer Initiative

This section contains narrative that documents and explains the data shown for Tables TA 8.1 and TA 8.2.

### **Table TA 8.1      Program Expenditures – Summer Initiatives**

This table documents those costs used in the summer initiative energy efficiency programs. These tables provide all program costs, including costs expended in 2000 and those costs associated with commitments from 2000 programs.

#### **Program Incentives (Recorded)**

Incentive costs represent incentives paid to customers during 2000 (Actual) as well as incentives associated with commitments from the 2000 summer initiative 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 8.2). These costs represent administrative costs expended during 2000 (Actual) as well as administrative costs associated with the handling of commitments from the 2000 summer initiative programs (Committed). 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.

#### **Other Costs**

All program costs associated with SCE's 2000 summer initiative programs were delineated in the remaining categories. SCE does not have any 2000 summer initiative program costs classified as "Other".

#### **Total Utility Costs**

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

# Technical Appendix

**Table TA 8.2      Direct and Allocated Administrative Costs –  
Summer Initiative Program Area**

This table documents the breakdown of the actual administrative costs used in determining the cost-effectiveness of the summer initiative energy efficiency programs. These tables provide detail of all actual program administrative costs expended in 2000. 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 2000 in support of 2000 summer initiative 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 8.1  
2001 Energy Efficiency Annual Report  
SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC  
PROGRAM EXPENDITURES - SUMMER INITIATIVES  
2000

	Program Incentives (Recorded)		Program Administrative Costs (Recorded) [1]		Other Costs	Total Utility Costs
	Actual	Committed	Actual	Committed		
	Hard To Reach	\$ -	\$ 2,080,000	\$ 9,350		
Residential Pool Efficiency Program	-	277,840	65,144	-	-	342,984
Residential Refrigerator Recycling	1,200,000	-	31,330	-	-	1,231,330
Beat The Heat	-	-	865	-	-	865
Campus Energy-Efficient Project	1,750,000	(93,460)	1,886	-	-	1,658,426
LED Traffic Signal Rebate Program	-	7,500,000	13,374	-	-	7,513,374
COPE	-	1,500,000	156	-	-	1,500,156
Third Party Initiatives	3,960	1,696,040	9,342	-	-	1,709,342
<b>Summer Initiative Total</b>	<b>\$ 2,953,960</b>	<b>\$ 12,960,420</b>	<b>\$ 131,447</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 16,045,827</b>

[1] Administrative costs represent utility administrative costs only, as represented in Table TA 8.2.

# Technical Appendix

Table TA 8.2  
 2001 Energy Efficiency Annual Report  
 SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC  
 DIRECT AND ALLOCATED ADMINISTRATIVE COSTS - SUMMER INITIATIVES  
 2000

	Actual Labor [1]	Actual Non-Labor [1]	Actual Contract [1]	Actual Allocated [1]	Actual Admin Total
Hard To Reach	\$ -	\$ 9,350	\$ -	\$ -	\$ 9,350
Residential Pool Efficiency Program	3,471	60,023	1,628	22	65,144
Residential Refrigerator Recycling	-	27,082	4,248	-	31,330
Beat The Heat	-	865	-	-	865
Campus Energy-Efficient Project	-	1,886	-	-	1,886
LED Traffic Signal Rebate Program	-	13,314	60	-	13,374
COPE	-	156	-	-	156
Third Party Initiatives	-	9,342	-	-	9,342
<b>Summer Initiative Total</b>	<b><u>\$ 3,471</u></b>	<b><u>\$ 122,018</u></b>	<b><u>\$ 5,936</u></b>	<b><u>\$ 22</u></b>	<b><u>\$ 131,447</u></b>

[1] Administrative costs represent utility administrative costs only.

## **Section IX - Balancing Accounts for Post-1997 Energy Efficiency Activities**

This section contains narrative that documents and explains the data shown for Table TA 9.1 through TA 9.5.

### **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. 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 incurs 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 compliance with this decision SCE filed Advice 1288-E, which established the appropriate balancing accounts as described in TA 9.1.

### **Table TA 9.2      Program Portfolio Budgets and Benefits - 2000**

The program budgets, recorded expenditures, and corresponding energy savings resulting from the 2000 energy efficiency programs are documented in Table TA 9.2. The budgets and results are presented by Program and Program Element, as categorized in SCE's September 27, 1999 Application for 2000 Energy Efficiency Program Funding.

#### **Program Budgeted and Recorded Amounts**

Total energy efficiency funds budgeted for 2000 were the result of Decision 00-07-017. The program element budgets provided in Table TA 9.2 correspond to the budgets resulting from this authorization as well as any fund shifts performed in 2000 related to the 2000 energy efficiency programs. Recorded amounts reflect all 2000 program costs, including costs expended in 2000 and those costs associated with commitments from 2000 programs.

#### **Program Energy Reductions**

The annual program energy reductions presented in TA 9.2 are derived from ex ante estimates of energy savings. These estimates are consistent with the measure level savings data submitted in SCE's September 27, 1999 Application for 2000 Energy Efficiency Program Funding and adopted in Decision 00-07-017. These estimates have been updated, as applicable, to correspond with the

## Technical Appendix

actual program implementation and program results as of December 31, 2000. Recorded savings amounts reflect all 2000 program impacts, including impacts from measures installed in 2000 and those impacts associated with commitments from 2000 programs.

Annual program energy reduction estimates supplied in the September 27, 1999 Application for 2000 Energy Efficiency Program Funding and submitted herein as the 2000 program results are the result of a summation of measure-level savings from the measures installed as a result of the 2000 programs. The measure-level savings information used to calculate the 2000 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. These ratios were 1.0 for all programs offered in the 2000 program year, based upon Commission direction.

### **Table TA 9.2A Program Portfolio Expenditures – 1999, 2000, 2001**

In compliance with Decision 00-07-017, Table TA 9.2A presents three years of funds spent and committed by the fourteen program elements as well as by strategy.

1999 Budgeted and Recorded Costs are as of December 31, 1999.

Energy efficiency funds budgeted for 2000 were the result of Decision 00-07-017. The program element budgets provided in Table TA 9.2A correspond to the budgets resulting from this authorization as well as any fund shifts performed in 2000 related to the 2000 energy efficiency programs. Committed funds are those associated with commitments from the 2000 programs.

Total energy efficiency funds budgeted for 2001 were the result of Decision 01-01-060. The program element budgets provided in Table TA 9.2A correspond to the current program budgets for 2001, reflecting the budget flexibility of Decision 01-01-060.

### **Table TA 9.3 Program Portfolio Budgets and Benefits - 2001**

The program budgets and corresponding energy savings estimates resulting from the 2001 energy efficiency programs are documented in Table TA 9.3. The budgets and results are presented by Program and Program Element, as categorized in SCE's November 15, 2000 Application for 2001 Energy Efficiency Program Funding.

#### **Program Budgeted and Recorded Amounts**

Total energy efficiency funds budgeted for 2001 were the result of Decision 01-01-060. The program element budgets provided in Table TA 9.3 correspond to the current program budgets for 2001, reflecting the budget flexibility of Decision 01-01-060.

#### **Program Energy Reductions**

The projected annual program energy reductions presented in TA 9.3 are derived from ex ante estimates of energy savings. These estimates are consistent with the measure level savings data submitted in SCE's November 15, 2000 Application for 2001 Energy Efficiency Program Funding and adopted in Decision 01-01-060, but have been updated to correspond with the current program plans.

**Table TA 9.4 Program Portfolio Cost Effectiveness – 2000  
(Without non-energy and market effects benefits)**

The program energy and demand impacts, resource benefits, PPT costs, PPT net benefits, PPT and TRC ratios resulting from the 2000 energy efficiency programs are documented in Table TA 9.4. The results are presented by Program Area and Program, as categorized in SCE's September 27, 1999 Application for 2000 Energy Efficiency Program Funding.

### **Program Energy and Demand Reductions**

The annual program energy reductions presented in TA 9.4 are derived from ex ante estimates of energy savings. These estimates are consistent with the measure level savings data submitted in SCE's September 27, 1999 Application for 2000 Energy Efficiency Program Funding and adopted in Decision 00-07-017. These estimates have been updated, as applicable, to correspond with the actual program implementation and program results as of December 31, 2000. Recorded savings amounts reflect all 2000 program impacts, including impacts from measures installed in 2000 and those impacts associated with commitments from 2000 programs.

Annual program energy reduction estimates supplied in the September 27, 1999 Application for 2000 Energy Efficiency Program Funding and submitted herein as the 2000 program results are the result of a summation of measure-level savings from the measures installed as a result of the 2000 programs. The measure-level savings information used to calculate the 2000 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. These ratios were 1.0 for all programs offered in the 2000 program year, based upon Commission direction.

### **PPT Energy Benefits (RBn)**

The resource benefits presented in TA 9.4 are derived from energy and capacity savings estimates, as applied to the 2000 avoided costs shown in TA 1.1A. The avoided cost forecast in Table TA 1.1A is consistent with the forecast utilized in SCE's September 27, 1999 Application for 2000 energy efficiency program funding. The forecast represents avoided cost forecasts for energy, transmission and distribution, and environmental externalities.

### **PPT Costs**

The administrative costs included in the PPT costs reflect all 2000 administrative costs, including costs expended in 2000 and those costs associated with commitments from 2000.

The incremental measurement costs included in the PPT costs generally represent the incremental costs of energy efficiency measures over the standard replacement measures. The gross amounts of these costs are reduced by appropriate net-to-gross ratios for the particular measure or end-use. These ratios were 1.0 for all programs offered in the 2000 program year, based upon Commission direction. SCE's incremental measure costs are typically derived from the latest cost source available for the particular measure(s), including recent measure cost studies.

### **PPT Net Benefits, PPT Ratio, and TRC Ratio**

The Net Benefits are the results of the subtraction of the PPT Costs from the PPT Energy Benefits (RBn). The PPT and TRC Ratio are each a ratio of the PPT Energy Benefits (RBn) to the PPT Costs. There is no difference between the PPT and TRC ratio in table TA 9.4.

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**Table TA-9.5      Program Portfolio Cost Effectiveness – 2000  
(With non-energy and market effects benefits)**

The program energy and demand impacts, resource benefits, PPT costs, PPT net benefits, PPT and TRC ratios resulting from the 2000 energy efficiency programs are documented in Table TA 9.5. The results are presented by Program Area and Program, as categorized in SCE's September 27, 1999 Application for 2000 Energy Efficiency Program Funding.

## **Program Energy and Demand Reductions**

The annual program energy reductions presented in TA 9.4 are derived from ex ante estimates of energy savings. These estimates are consistent with the measure level savings data submitted in SCE's September 27, 1999 Application for 2000 Energy Efficiency Program Funding and adopted in Decision 00-07-017. These estimates have been updated, as applicable, to correspond with the actual program implementation and program results as of December 31, 2000. Recorded savings amounts reflect all 2000 program impacts, including impacts from measures installed in 2000 and those impacts associated with commitments from 2000 programs.

Annual program energy reduction estimates supplied in the September 27, 1999 Application for 2000 Energy Efficiency Program Funding and submitted herein as the 2000 program results are the result of a summation of measure-level savings from the measures installed as a result of the 2000 programs. The measure-level savings information used to calculate the 2000 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. These ratios were 1.0 for all programs offered in the 2000 program year, based upon Commission direction.

For specific measures, the energy and capacity savings for the 2000 programs included the use of the report from Regional Economic Research, Inc. (RER). This report provided estimates of the impact of multi-period spillover on first year energy savings. SCE utilized the spillover impacts from this report in the calculation of its cost-effectiveness for 2000 programs. The energy savings in 9.5 reflect these additional impacts.

## **PPT Energy Benefits (RBn)**

The resource benefits presented in TA 9.4 are derived from energy and capacity savings estimates, as applied to the 2000 avoided costs shown in TA 1.1A. The avoided cost forecast in Table TA 1.1A is consistent with the forecast utilized in SCE's September 27, 1999 Application for 2000 energy efficiency program funding. The forecast represents avoided cost forecasts for energy, transmission and distribution, and environmental externalities.

For specific measures, the energy and capacity savings for the 2000 programs included the use of the report from Regional Economic Research, Inc. (RER). This report provided estimates of the impact of multi-period spillover on first year energy savings. SCE utilized the spillover impacts from this report in the calculation of its cost-effectiveness for 2000 programs. The resulting Market Effects Benefits are shown in Table 9.5.

## **PPT Costs**

The administrative costs included in the PPT costs reflect all 2000 administrative costs, including costs expended in 2000 and those costs associated with commitments from 2000.

The incremental measurement costs included in the PPT costs generally represent the incremental costs of energy efficiency measures over the standard replacement measures. The

gross amounts of these costs are reduced by appropriate net-to-gross ratios for the particular measure or end-use. These ratios were 1.0 for all programs offered in the 2000 program year, based upon

Commission direction. SCE's incremental measure costs are typically derived from the latest cost source available for the particular measure(s), including recent measure cost studies.

**PPT Net Benefits, PPT Ratio, and TRC Ratio**

The Net Benefits are the results of the subtraction of the PPT Costs from the PPT Energy Benefits (RBn). The PPT and TRC Ratio are each a ratio of the PPT Energy Benefits (RBn) to the PPT Costs. The PPT ratio does not include the market effects benefits.

# Technical Appendix

Table TA 9.1  
2001 Energy Efficiency Annual Report  
SUMMARY OF ENERGY EFFICIENCY EXPENDITURES: ELECTRIC  
PUBLIC PURPOSE PROGRAM BALANCING ACCOUNTS  
2000

Balancing Account	Description	Authorized by
Demand Side Management Adjustment Clause (DSMAC)	Records costs incurred after January 1, 1998 for pre-1998 program expenditures.	Decision 97-12-103
Energy Efficiency Programs Balancing Account (EEPBA)	Tracks the Public Purpose Program Charge (PPPC) funds allocable to the 1998 energy efficiency programs and the 1998 energy efficiency program expenses.	Decision 97-12-103
Low Income Energy Efficiency Programs Balancing Account (LIEEPBA)	Tracks the Public Purpose Program Charge (PPPC) funds allocable to the 1998 low income energy efficiency programs and the 1998 low income energy efficiency program expenses.	Decision 97-12-103



**Table TA-9.2**  
**Southern California Edison Company**

2001 Energy Efficiency Budgets and Benefits  
May 1, 2001

**Table TA-9.2: 2000 Program Portfolio Budgets and Benefits (without Non-energy and Market Effects Benefits)**

PROGRAM AREAS Programs	PROGRAM BUDGETS (\$000)		ENERGY SAVINGS	
	Budgeted Amount Electric	Recorded Amount Electric	MWh	MW
<b>RESIDENTIAL</b>				
<b>Residential Heating &amp; Cooling Systems</b>				
<i>Residential Audits</i>	0.945	0.928	2,693	0.47
<i>Res EE Procurement Program (REEPP)</i>	0.080	0.080	-	-
<i>Calif Home Energy Eff Rating System (CHEERS)</i>	0.100	0.100	-	-
<i>Mass Market Information</i>	0.050	0.042	-	-
<i>Emerging Technologies</i>	0.500	0.500	-	-
<i>Energy Centers - CTAC/AGTAC</i>	0.073	0.071	-	-
<i>TPI Administration/Solicitation Process</i>	0.250	0.250	-	-
<i>Residential Appliance Direct Rebate</i>	-	-	-	-
<b>Residential Lighting</b>				
<i>Residential Audits</i>	0.660	0.646	2,201	0.39
<i>Res EE Procurement Program (REEPP)</i>	0.225	0.225	-	-
<i>Calif Home Energy Eff Rating System (CHEERS)</i>	0.100	0.100	-	-
<i>Mass Market Information</i>	0.050	0.042	-	-
<i>Energy Centers - CTAC/AGTAC</i>	0.142	0.140	-	-
<i>TPI Administration/Solicitation Process</i>	0.250	0.250	-	-
<i>Retail Initiative Lighting (Statewide)</i>	3.009	2.839	13,695	0.10
<i>Residential Contractor (Statewide)</i>	0.600	0.600	2,076	0.40
<b>Residential Appliances</b>				
<i>Residential Audits</i>	0.390	0.386	550	0.10
<i>Res EE Procurement Program (REEPP)</i>	0.480	0.480	-	-
<i>Calif Home Energy Eff Rating System (CHEERS)</i>	0.045	0.045	-	-
<i>Mass Market Information</i>	0.050	0.042	-	-
<i>Energy Centers - CTAC/AGTAC</i>	0.106	0.105	-	-
<i>TPI Administration/Solicitation Process</i>	0.250	0.250	-	-
<i>Residential Spare Refrigerator Recycling</i>	7.130	7.130	61,751	14.27
<i>Residential Appliance (D)</i>	1.800	2.795	53,237	2.20
<i>Residential Appliance (U)</i>	3.731	3.649	-	-
<b>Residential Retrofit &amp; Renovation</b>				
<i>Residential Audits</i>	0.895	0.860	5,444	0.96
<i>Residential Contractor</i>	5.040	5.041	17,441	3.34
<i>Res EE Procurement Program (REEPP)</i>	0.080	0.080	-	-
<i>Calif Home Energy Eff Rating System (CHEERS)</i>	0.075	0.075	-	-
<i>Mass Market Information (Statewide)</i>	0.050	0.042	-	-
<i>Emerging Technologies</i>	0.200	0.200	-	-
<i>Energy Centers - CTAC/AGTAC</i>	0.103	0.101	-	-
<i>TPI Administration/Solicitation Process</i>	0.253	0.253	-	-
<i>Retail Initiative Window/Frame System Labeling</i>	0.775	0.703	30	-
<i>HVAC Diagnostic Program (Check-Me)</i>	0.125	0.121	-	-
<b>Residential Total</b>	<b>\$ 28.613</b>	<b>\$29.170</b>	<b>159,118</b>	<b>22.23</b>
<b>PROGRAM AREA TOTAL [1]</b>	<b>\$75.757</b>	<b>\$79.914</b>	<b>467,665</b>	<b>88.01</b>

[1] Does not include allocated administrative costs (e.g., MA&E, other overhead)

# Technical Appendix

**Table TA-9.2**  
**Southern California Edison Company**

2001 Energy Efficiency Budgets and Benefits  
May 1, 2001

**Table TA-9.2: 2000 Program Portfolio Budgets and Benefits (without Non-energy and Market Effects Benefits)**

PROGRAM AREAS Programs	PROGRAM BUDGETS (\$000)		ENERGY SAVINGS	
	Budgeted Amount Electric	Recorded Amount Electric	MWh	MW
<b>NONRESIDENTIAL</b>				
<b>Large Nonresidential Comprehensive Retrofit</b>				
<i>Emerging Technologies</i>	0.400	0.400	-	-
<i>Energy Centers - CTAC/AGTAC</i>	0.507	0.496	-	-
<i>Agricultural/Pumping Services</i>	1.165	1.075	12,528	-
<i>Nonresidential SPC</i>	7.525	9.162	70,105	14.92
<i>Large Commercial Informational Services</i>	0.150	0.150	-	-
<i>Large Industrial Informational Services</i>	0.150	0.150	-	-
<i>TPI Administration/Solicitation Process</i>	-	-	-	-
<b>Small Nonresidential Comprehensive Retrofit</b>				
<i>Mass Market Information (Statewide)</i>	0.150	0.150	-	-
<i>Emerging Technologies</i>	0.350	0.350	-	-
<i>Energy Centers - CTAC/AGTAC</i>	0.339	0.332	-	-
<i>TPI Administration/Solicitation Process</i>	0.442	0.442	-	-
<i>Small Business Survey &amp; Services</i>	1.175	1.103	187	0.07
<i>Small SPC (Statewide)</i>	2.380	2.627	14,798	2.97
<i>Agricultural/Pumping Services</i>	0.540	0.499	5,807	-
<i>Express Efficiency</i>	3.070	3.893	59,014	11.73
<i>Small Business Space Rental Upgrade</i>	-	-	-	-
<b>Nonresidential HVAC Equipment Turnover</b>				
<i>Emerging Technologies</i>	0.200	0.200	-	-
<i>Energy Centers - CTAC/AGTAC</i>	0.191	0.187	-	-
<i>TPI Administration/Solicitation Process</i>	-	-	-	-
<i>Express Efficiency - Upstream HVAC</i>	0.890	0.863	353	0.31
<i>Nonresidential SPC</i>	3.932	4.787	36,631	7.80
<i>Large Commercial Informational Services</i>	0.275	0.275	-	-
<i>Large Industrial Informational Services</i>	0.275	0.275	-	-
<i>HVAC Diagnostic Program (Check-Me)</i>	0.150	0.119	-	-
<b>Nonresidential Motor Turnover</b>				
<i>Emerging Technologies</i>	0.100	0.100	-	-
<i>Energy Centers - CTAC/AGTAC</i>	0.128	0.124	-	-
<i>Agricultural/Pumping Services</i>	0.240	0.222	2,581	-
<i>Express Efficiency - Upstream Motors</i>	0.795	0.795	920	0.18
<i>Nonresidential SPC</i>	0.500	0.609	4,658	0.99
<i>Large Commercial Informational Services</i>	0.050	0.050	-	-
<i>Large Industrial Informational Services</i>	0.050	0.050	-	-
<i>Agricultural Energy Efficiency Incentives</i>	0.280	0.273	4,019	0.25
<i>TPI Administration/Solicitation Process</i>	-	-	-	-
<b>Nonresidential Process</b>				
<i>Emerging Technologies</i>	0.200	0.200	-	-
<i>Energy Centers - CTAC/AGTAC</i>	0.173	0.168	-	-
<i>Agricultural/Pumping Services</i>	0.280	0.259	3,008	-
<i>Nonresidential SPC</i>	2.700	3.287	25,154	5.36
<i>Large Industrial Informational Services</i>	0.335	0.335	-	-
<i>TPI Administration/Solicitation Process</i>	-	-	-	-
<b>Nonresidential Remodeling/Renovation</b>				
<i>Emerging Technologies</i>	0.825	0.825	-	-
<i>Energy Centers - CTAC/AGTAC</i>	0.482	0.472	-	-
<i>Nonresidential SPC</i>	1.000	1.218	9,316	1.98
<i>Large Commercial Informational Services</i>	0.250	0.250	-	-
<i>Large Industrial Informational Services</i>	-	-	-	-
<i>Savings By Design</i>	2.000	2.000	22,892	4.04
<i>TPI Administration/Solicitation Process</i>	-	-	-	-
<b>NonResidential Total</b>	<b>34.642</b>	<b>\$38.771</b>	<b>271,971</b>	<b>50.60</b>
<b>PROGRAM AREA TOTAL [1]</b>	<b>\$75.757</b>	<b>\$79.914</b>	<b>467,665</b>	<b>88.01</b>

[1] Does not include allocated administrative costs (e.g., MA&E, other overhead)

**Table TA-9.2**  
**Southern California Edison Company**

2001 Energy Efficiency Budgets and Benefits  
May 1, 2001

**Table TA-9.2: 2000 Program Portfolio Budgets and Benefits (without Non-energy and Market Effects Benefits)**

PROGRAM AREAS Programs <i>Program Elements</i>	PROGRAM BUDGETS (\$000)		ENERGY SAVINGS	
	Budgeted Amount Electric	Recorded Amount Electric	MWh	MW
<b>NEW CONSTRUCTION</b>				
<b>Residential New Construction</b>				
<i>Emerging Technologies</i>	0.200	0.200	-	-
<i>Energy Centers - CTAC/AGTAC</i>	0.135	0.128	-	-
<i>TPI Administration/Solicitation Process</i>	0.382	0.382	-	-
<i>Residential New Construction</i>	3.200	3.255	5,497	8.01
<i>HVAC Diagnostics</i>	-	-		
<b>Commercial New Construction</b>				
<i>Emerging Technologies</i>	0.725	0.725	-	-
<i>Energy Centers - CTAC/AGTAC</i>	0.111	0.077	-	-
<i>TPI Administration/Solicitation Process</i>	0.402	0.402	-	-
<i>Savings By Design</i>	2.827	2.827	26,532	6.77
<i>Energy Design Resources</i>	1.300	1.300	-	-
<i>Energy Design Software</i>	-	-		
<b>Industrial &amp; Agricultural New Construction</b>				
<i>Emerging Technologies</i>	0.200	0.200	-	-
<i>Energy Centers - CTAC/AGTAC</i>	0.085	0.060	-	-
<i>Savings By Design (statewide)</i>	0.500	0.500	930	0.27
<i>Energy Efficiency Incentives</i>	0.971	0.481	3,423	0.13
<i>TPI Administration/Solicitation Process</i>	-	-		
<b>Codes &amp; Standards Support, Local Gov't. Initiatives</b>				
<i>Emerging Technologies</i>	0.700	0.700	-	-
<i>Energy Centers - CTAC/AGTAC</i>	0.047	0.033	-	-
<i>TPI Administration/Solicitation Process</i>	0.018	0.018	-	-
<i>Local Government Initiatives</i>	0.700	0.687	195	-
<i>Energy Design Resources</i>	-	-		
<b>New Construction Subtotal</b>	<b>12.502</b>	<b>\$11.973</b>	<b>36,576</b>	<b>15.18</b>
<b>PROGRAM AREA TOTAL [1]</b>	<b>\$75.757</b>	<b>\$79.914</b>	<b>467,665</b>	<b>88.01</b>

[1] Does not include allocated administrative costs (e.g., MA&E, other overhead)

# Technical Appendix

**Table TA-9.2A**  
**Southern California Edison Company**

2001 Energy Efficiency Budgets and Benefits  
May 1, 2001  
(\$ in millions)

**Table TA-9.2A: 2000 Program Portfolio Budgets**

Program	1999 Authorized Budget	1999 Recorded Expenses	2000 Authorized Budget	Year-end		2000 Year-end Actual + Committed	2001 Proposed Budget
				Actual 12/31/00	Commitments 12/31/00		
<b>Residential Programs</b>							
<b>Heating and Cooling Systems</b>							
Residential Audits	\$1.407	\$1.376	\$0.945	\$0.901	\$0.027	\$0.928	\$0.475
Local Government Initiative	-	-	-	-	-	-	0.200
Res EE Procurement Program (REEPP)	0.075	0.074	0.080	0.063	0.017	0.080	-
Calif Home Energy Eff Rating System (CHEERS)	0.094	0.038	0.100	0.080	0.020	0.100	0.080
Mass Market Information	0.088	0.071	0.050	0.042	-	0.042	0.615
Emerging Technologies	-	-	0.500	0.218	0.282	0.500	0.135
Energy Centers - CTAC/AGTAC	0.082	0.060	0.073	0.071	-	0.071	0.172
TPI Administration/Solicitation Process	0.013	-	0.250	0.167	0.083	0.250	0.170
Residential Appliance Direct Rebate	0.412	0.445	-	-	-	-	-
General Support Activities	0.114	0.109	0.097	0.063	0.004	0.068	0.069
<b>Sub Total</b>	<b>2.284</b>	<b>2.173</b>	<b>2.094</b>	<b>1.606</b>	<b>0.433</b>	<b>2.038</b>	<b>1.916</b>
<b>Residential Lighting</b>							
Residential Audits	0.428	0.403	0.660	0.624	0.022	0.646	0.260
Local Government Initiative	-	-	-	-	-	-	0.300
Res EE Procurement Program (REEPP)	0.175	0.173	0.225	0.178	0.046	0.225	-
Calif Home Energy Eff Rating System (CHEERS)	0.094	0.038	0.100	0.080	0.020	0.100	0.080
Mass Market Information	0.088	0.071	0.050	0.042	-	0.042	0.594
Energy Centers - CTAC/AGTAC	0.104	0.080	0.142	0.140	-	0.140	0.144
TPI Administration/Solicitation Process	0.013	-	0.250	0.167	0.083	0.250	0.873
Retail Initiative Lighting (Statewide)	2.000	1.661	3.009	2.114	0.725	2.839	3.200
Residential Contractor (Statewide)	-	-	0.600	0.179	0.421	0.600	-
General Support Activities	0.153	0.146	0.149	0.097	0.007	0.104	0.203
<b>Sub Total</b>	<b>3.054</b>	<b>2.572</b>	<b>5.185</b>	<b>3.621</b>	<b>1.324</b>	<b>4.945</b>	<b>5.654</b>
<b>Residential Appliances</b>							
Residential Audits	0.285	0.279	0.390	0.381	0.006	0.386	0.215
Local Government Initiative	-	-	-	-	-	-	0.200
Res EE Procurement Program (REEPP)	0.175	0.173	0.480	0.381	0.099	0.480	-
Calif Home Energy Eff Rating System (CHEERS)	0.094	0.038	0.045	0.036	0.009	0.045	0.080
Mass Market Information	0.088	0.071	0.050	0.042	-	0.042	0.855
Energy Centers - CTAC/AGTAC	0.108	0.076	0.105	0.105	-	0.105	0.103
TPI Administration/Solicitation Process	0.013	-	0.250	0.167	0.083	0.250	0.560
Residential Spare Refrigerator Recycling	7.915	8.954	7.130	7.020	0.110	7.130	7.500
Residential Appliance (D)	3.288	3.549	1.800	1.053	1.742	2.795	4.003
Residential Appliance (U)	3.820	3.598	3.731	3.182	0.467	3.649	0.250
General Support Activities	0.785	0.748	0.694	0.453	0.031	0.484	0.513
<b>Sub Total</b>	<b>16.569</b>	<b>17.486</b>	<b>14.676</b>	<b>12.819</b>	<b>2.546</b>	<b>15.366</b>	<b>14.279</b>
<b>Residential Retrofit &amp; Renovation</b>							
Residential Audits	1.070	1.008	0.895	0.805	0.055	0.860	0.750
Local Government Initiative	-	-	-	-	-	-	0.200
Residential Contractor	2.600	1.942	5.040	1.503	3.538	5.041	4.817
Res EE Procurement Program (REEPP)	0.075	0.074	0.080	0.063	0.017	0.080	-
Calif Home Energy Eff Rating System (CHEERS)	0.094	0.038	0.075	0.060	0.015	0.075	0.060
Mass Market Information (Statewide)	0.088	0.071	0.050	0.042	-	0.042	0.553
Emerging Technologies	0.408	0.408	0.200	0.087	0.113	0.200	-
Energy Centers - CTAC/AGTAC	0.111	0.081	0.103	0.101	-	0.101	0.103
TPI Administration/Solicitation Process	0.013	-	0.253	0.169	0.084	0.253	0.400
Retail Initiative/Window/Frame System Labeling	0.500	0.238	0.775	0.463	0.240	0.703	-
HVAC Diagnostic Program (Check-Me)	0.200	0.151	0.125	0.114	0.007	0.121	-
General Support Activities	0.319	0.304	0.261	0.171	0.012	0.182	0.257
<b>Sub Total</b>	<b>5.477</b>	<b>4.316</b>	<b>7.858</b>	<b>3.579</b>	<b>4.079</b>	<b>7.659</b>	<b>7.139</b>
<b>Residential Subtotal</b>	<b>\$ 27.384</b>	<b>\$ 26.546</b>	<b>\$ 29.813</b>	<b>\$ 21.625</b>	<b>\$ 8.382</b>	<b>\$ 30.008</b>	<b>\$ 28.987</b>

**Table TA-9.2A**  
**Southern California Edison Company**  
 2001 Energy Efficiency Budgets and Benefits  
 May 1, 2001  
 (\$ in millions)

Technical Appendix

Program	1999	1999	2000	Year-end		2000	2001
	Authorized Budget	Recorded Expenses	Authorized Budget	Actual 12/31/00	Commitments 12/31/00	Year-end Actual + Commitments	Proposed Budget
<b>Nonresidential Programs</b>							
<b>Large Nonresidential Comprehensive Retrofit</b>							
Emerging Technologies	0.320	0.308	0.400	0.096	0.304	0.400	-
Mass Market Information	-	-	-	-	-	-	0.170
Energy Centers - CTAC/AGTAC	0.406	0.458	0.507	0.461	0.016	0.496	0.513
Agricultural/Pumping Services	1.015	0.962	1.165	1.065	0.010	1.075	1.068
Nonresidential SPC	12.546	10.933	7.525	0.782	8.380	9.162	0.221
Express Efficiency (Large)	-	-	-	-	-	-	2.250
Large Commercial Informational Services	0.080	0.074	0.150	0.093	0.057	0.150	0.141
Large Industrial Informational Services	-	-	0.150	0.095	0.055	0.150	0.120
TPI Administration/Solicitation Process	0.003	-	-	-	-	-	-
General Support Activities	0.758	0.722	0.641	0.496	0.032	0.498	0.202
<b>Sub Total</b>	<b>15.127</b>	<b>13.456</b>	<b>10.537</b>	<b>3.077</b>	<b>8.054</b>	<b>11.931</b>	<b>4.674</b>
<b>Small Nonresidential Comprehensive Retrofit</b>							
Mass Market Information (Statewide)	0.150	0.141	0.150	0.114	0.036	0.150	1.097
Emerging Technologies	0.150	0.144	0.350	0.094	0.266	0.350	0.300
Energy Centers - CTAC/AGTAC	0.276	0.307	0.339	0.321	0.010	0.332	0.333
TPI Administration/Solicitation Process	0.003	-	0.442	0.097	0.345	0.442	1.910
Small Business Survey & Services	0.825	0.685	1.175	1.103	-	1.103	0.685
Small SPC (Statewide)	2.100	1.169	2.380	0.704	1.923	2.627	1.500
Agricultural/Pumping Services	0.609	0.577	0.540	0.494	0.005	0.499	0.536
Express Efficiency (Sm/Med)	3.360	3.239	3.070	1.620	2.273	3.893	5.610
Express Efficiency (Large)	-	-	-	-	-	-	4.000
Local Government Initiative	-	-	-	-	-	-	0.300
Small Business Space Rental Upgrade	-	-	-	-	-	-	0.490
General Support Activities	0.393	0.375	0.310	0.226	0.015	0.241	0.625
<b>Sub Total</b>	<b>7.866</b>	<b>6.638</b>	<b>8.756</b>	<b>4.763</b>	<b>4.674</b>	<b>9.637</b>	<b>17.376</b>
<b>Nonresidential HVAC Turnover</b>							
Emerging Technologies	0.490	0.471	0.200	0.048	0.152	0.200	-
Mass Market Information	-	-	-	-	-	-	0.050
Energy Centers - CTAC/AGTAC	0.153	0.172	0.191	0.181	0.006	0.187	0.290
TPI Administration/Solicitation Process	0.003	-	-	-	-	-	0.011
Express Efficiency - Upstream HVAC	-	-	0.890	0.645	0.216	0.863	0.070
Express Efficiency (Sm/Med)	-	-	-	-	-	-	0.060
Express Efficiency (Large)	-	-	-	-	-	-	0.995
Nonresidential SPC	4.900	4.422	3.932	0.409	4.379	4.787	1.980
Large Commercial Informational Services	0.080	0.074	0.275	0.171	0.104	0.275	0.180
Large Industrial Informational Services	0.070	0.071	0.275	0.174	0.101	0.275	0.130
HVAC Commissioning Pilot Program	-	-	-	-	-	-	0.200
HVAC Diagnostic Program (Check-Me)	-	-	0.150	0.112	0.007	0.119	-
General Support Activities	0.301	0.287	0.374	0.272	0.019	0.291	0.260
<b>Sub Total</b>	<b>6.017</b>	<b>5.497</b>	<b>6.287</b>	<b>2.012</b>	<b>4.905</b>	<b>6.997</b>	<b>5.026</b>
<b>Motor Turnover</b>							
Emerging Technologies	0.168	0.161	0.100	0.024	0.076	0.100	-
Mass Market Information	-	-	-	-	-	-	0.015
Energy Centers - CTAC/AGTAC	0.120	0.120	0.128	0.121	0.003	0.124	0.135
Agricultural/Pumping Services	0.305	0.289	0.240	0.220	0.002	0.222	0.262
Express Efficiency - Upstream Motors	-	-	0.795	0.732	0.063	0.795	0.330
Nonresidential SPC	0.492	0.447	0.500	0.052	0.557	0.609	0.540
Large Commercial Informational Services	0.082	0.076	0.050	0.031	0.019	0.050	0.084
Large Industrial Informational Services	0.075	0.076	0.050	0.032	0.018	0.050	0.070
Agricultural Energy Efficiency Incentives	0.250	0.331	0.280	0.273	-	0.273	-
TPI Administration/Solicitation Process	0.003	-	-	-	-	-	-
General Support Activities	0.079	0.075	0.092	0.067	0.005	0.071	0.072
<b>Sub Total</b>	<b>1.573</b>	<b>1.576</b>	<b>2.234</b>	<b>1.550</b>	<b>0.743</b>	<b>2.294</b>	<b>1.508</b>
<b>Nonresidential Process Overhaul</b>							
Emerging Technologies	0.449	0.432	0.200	0.048	0.152	0.200	-
Mass Market Information	-	-	-	-	-	-	0.015
Energy Centers - CTAC/AGTAC	0.151	0.160	0.173	0.164	0.005	0.168	0.170
Agricultural/Pumping Services	0.102	0.096	0.280	0.296	0.003	0.299	0.244
Nonresidential SPC	2.962	2.645	2.700	0.281	3.007	3.287	0.800
Large Industrial Informational Services	0.176	0.179	0.336	0.212	0.124	0.336	0.105
TPI Administration/Solicitation Process	0.003	-	-	-	-	-	-
General Support Activities	0.202	0.193	0.233	0.169	0.012	0.181	0.078
<b>Sub Total</b>	<b>4.034</b>	<b>3.604</b>	<b>3.920</b>	<b>1.129</b>	<b>3.302</b>	<b>4.431</b>	<b>1.412</b>
<b>Commercial Remodeling Renovation</b>							
Emerging Technologies	0.995	0.956	0.825	0.198	0.627	0.825	-
Mass Market Information	-	-	-	-	-	-	0.086
Energy Centers - CTAC/AGTAC	0.317	0.359	0.482	0.457	0.015	0.472	0.485
Nonresidential SPC	2.880	2.324	1.000	0.104	1.114	1.218	1.486
Express Efficiency (Large)	-	-	-	-	-	-	1.200
Large Commercial Informational Services	0.080	0.074	0.250	0.165	0.095	0.260	0.170
Large Industrial Informational Services	-	-	-	-	-	-	0.150
Savings By Design	-	-	2.000	0.350	1.650	2.000	1.150
TPI Administration/Solicitation Process	0.003	-	-	-	-	-	-
General Support Activities	0.226	0.215	0.196	0.143	0.010	0.153	0.198
<b>Sub Total</b>	<b>4.510</b>	<b>3.928</b>	<b>4.753</b>	<b>1.406</b>	<b>3.511</b>	<b>4.918</b>	<b>4.905</b>
<b>Nonresidential Subtotal</b>	<b>\$39.116</b>	<b>\$34.780</b>	<b>\$36.488</b>	<b>\$13.937</b>	<b>\$26.269</b>	<b>\$40.297</b>	<b>\$34.900</b>

# Technical Appendix

**Table TA-9.2A**

**Southern California Edison Company**

2001 Energy Efficiency Budgets and Benefits

May 1, 2001

(\$ in millions)

**Table TA-9.2A: 2000 Program Portfolio Budgets**

Program	1999 Authorized Budget	1999 Recorded Expenses	2000 Authorized Budget	Year-end		2000 Year-end Actual + Committed	2001 Proposed Budget
				Actual 12/31/00	Commitments 12/31/00		
<b>New Construction Programs</b>							
<b>Residential New Construction</b>							
Emerging Technologies	0.160	0.160	0.200	0.057	0.143	0.200	-
Mass Market Information	-	-	-	-	-	-	0.355
Energy Centers - CTAC/AGTAC	0.068	0.070	0.135	0.128	-	0.128	0.136
TPI Administration/Solicitation Process	0.009	-	0.382	0.243	0.139	0.382	0.892
Residential New Construction	2.100	1.702	3.200	2.465	0.790	3.255	3.100
HVAC Diagnostics	0.100	0.069	-	-	-	-	-
Local Government Initiatives	-	-	-	-	-	-	0.800
General Support Activities	0.109	0.104	0.095	0.081	0.006	0.087	0.197
<b>Sub Total</b>	<b>2.546</b>	<b>2.105</b>	<b>4.012</b>	<b>2.974</b>	<b>1.077</b>	<b>4.051</b>	<b>5.480</b>
<b>Commercial New Construction</b>							
Emerging Technologies	0.982	0.982	0.725	0.238	0.487	0.725	-
Mass Market Information	-	-	-	-	-	-	0.077
Energy Centers - CTAC/AGTAC	0.105	0.054	0.111	0.077	-	0.077	0.108
TPI Administration/Solicitation Process	0.009	-	0.402	0.256	0.146	0.402	0.474
Savings By Design	3.397	2.193	2.827	0.782	2.044	2.827	7.050
Energy Design Resources	1.050	1.054	1.300	0.849	0.451	1.300	0.100
Energy Design Software	0.050	-	-	-	-	-	-
General Support Activities	0.307	0.292	0.147	0.125	0.009	0.134	0.291
<b>Sub Total</b>	<b>5.900</b>	<b>4.576</b>	<b>5.511</b>	<b>2.328</b>	<b>3.136</b>	<b>5.464</b>	<b>8.100</b>
<b>Industrial and Agricultural New Construction</b>							
Emerging Technologies	0.500	0.500	0.200	0.066	0.134	0.200	-
Energy Centers - CTAC/AGTAC	0.065	0.026	0.085	0.060	-	0.060	0.084
Savings By Design (statewide)	0.910	0.588	0.500	0.138	0.362	0.500	0.800
Energy Efficiency Incentives	0.750	0.817	0.971	0.299	0.182	0.481	-
TPI Administration/Solicitation Process	0.009	-	-	-	-	-	-
General Support Activities	0.126	0.120	0.107	0.091	0.006	0.097	0.033
<b>Sub Total</b>	<b>2.359</b>	<b>2.051</b>	<b>1.863</b>	<b>0.654</b>	<b>0.684</b>	<b>1.338</b>	<b>0.917</b>
<b>New Construction Codes &amp; Standards Support and Local Government Initiatives</b>							
Emerging Technologies	0.075	0.075	0.700	0.230	0.470	0.700	0.700
Energy Centers - CTAC/AGTAC	0.039	0.011	0.047	0.033	-	0.033	0.047
TPI Administration/Solicitation Process	0.009	-	0.018	0.011	0.007	0.018	0.300
Local Government Initiatives	0.700	0.832	0.700	0.683	0.003	0.687	0.385
Energy Design Resources	0.100	0.100	-	-	-	-	-
General Support Activities	0.049	0.046	0.048	0.041	0.003	0.043	0.053
<b>Sub Total</b>	<b>0.971</b>	<b>1.065</b>	<b>1.513</b>	<b>0.998</b>	<b>0.483</b>	<b>1.481</b>	<b>1.485</b>
<b>New Construction Subtotal</b>	<b>\$11.776</b>	<b>\$9.796</b>	<b>\$12.899</b>	<b>\$6.953</b>	<b>\$5.381</b>	<b>\$12.334</b>	<b>\$15.982</b>
<b>TOTALS</b>	<b>\$78.276</b>	<b>\$71.041</b>	<b>\$79.200</b>	<b>\$42.516</b>	<b>\$40.032</b>	<b>\$82.548</b>	<b>\$79.869</b>

**Table TA 9.3**  
**Southern California Edison Company**

2001 Energy Efficiency Budgets and Benefits  
 May 1, 2001  
 (\$ in millions)

Table TA 9.3: 2001 Program Portfolio Budgets and Benefits (without Non-energy and Market Effects Benefits)

PROGRAM AREAS Programs <i>Program Elements</i>	PROGRAM BUDGETS [1]	BENEFITS	
		MWh	MW
<b>RESIDENTIAL</b>			
<b>Residential Heating &amp; Cooling Systems</b>	\$1.847	3,131	0.85
<i>Residential Audits</i>	0.475	2,258	0.85
<i>Local Government Initiative</i>	0.200	-	-
<i>CA Home EE Rating System (CHEERS)</i>	0.080	872	-
<i>Mass Market Information</i>	0.615	-	-
<i>Emerging Technologies</i>	0.135	-	-
<i>Energy Centers - CTAC and AgTAC</i>	0.172	-	-
<i>Third Party Initiatives</i>	0.170	-	-
<b>Residential Lighting</b>	5.451	31,152	26.24
<i>Residential Audits</i>	0.260	1,222	0.47
<i>Local Government Initiative</i>	0.300	-	-
<i>CA Home EE Rating System (CHEERS)</i>	0.080	872	-
<i>Mass Market Information</i>	0.594	-	-
<i>Energy Centers - CTAC and AgTAC</i>	0.144	-	-
<i>Third Party Initiatives</i>	0.873	-	-
<i>Residential Lighting</i>	3.200	29,058	25.77
<b>Residential Appliances</b>	13.766	57,758	14.28
<i>Residential Audits</i>	0.215	1,037	0.38
<i>Local Government Initiative</i>	0.200	-	0.00
<i>CA Home EE Rating System (CHEERS)</i>	0.080	872	0.00
<i>Mass Market Information</i>	0.855	-	0.00
<i>Energy Centers - CTAC and AgTAC</i>	0.103	-	0.00
<i>Third Party Initiatives</i>	0.560	-	0.00
<i>Residential Refrigerator Recycling</i>	7.500	47,844	8.10
<i>Residential Appliance (D)</i>	4.003	8,006	5.80
<i>Residential Appliance (U)</i>	0.250	-	0.00
<b>Residential Retrofit &amp; Renovation</b>	6.882	19,524	2.89
<i>Residential Audits</i>	0.750	3,542	1.34
<i>Residential Contractor</i>	4.817	15,328	1.55
<i>Local Government Initiative</i>	0.200	-	0.00
<i>CA Home EE Rating System (CHEERS)</i>	0.080	654	0.00
<i>Mass Market Information</i>	0.553	-	0.00
<i>Emerging Technologies</i>	-	-	0.00
<i>Energy Centers - CTAC and AgTAC</i>	0.103	-	0.00
<i>Third Party Initiatives</i>	0.400	-	0.00
<b>Residential Total</b>	\$27.945	111,565	44.25
<b>PROGRAM AREA TOTAL [1]</b>	<b>\$76.819</b>	<b>434,811</b>	<b>140.23</b>

[1] Does not include allocated administrative costs (e.g., MA&E, other overhead)

# Technical Appendix

**Table TA 9.3**  
**Southern California Edison Company**  
 2001 Energy Efficiency Budgets and Benefits  
 May 1, 2001  
 (\$ in millions)

Table TA 9.3: 2001 Program Portfolio Budgets and Benefits (without Non-energy and Market Effects Benefits)

PROGRAM AREAS Programs	PROGRAM BUDGETS [1]	BENEFITS	
		MWh	MW
<b>NONRESIDENTIAL</b>			
<b>Large Nonresidential Comprehensive Programs</b>			
Large Nonresidential Comprehensive Programs	\$4.473	46,115	13.87
Emerging Technologies	-	-	0.00
Mass Market Information	0.170	-	0.00
Energy Centers - CTAC and AgTAC	0.513	-	0.00
Agricultural/Pumping Services	1.058	6,795	2.04
Express Efficiency (Large)	2.250	38,467	11.64
Large Std. Perf. Contracting (SPC)	0.221	852	0.18
Commercial EE Information Services	0.141	-	0.00
Industrial EE Information Services	0.120	-	0.00
<b>Small Nonresidential Comprehensive Programs</b>	16.751	145,979	36.10
Emerging Technologies	0.300	-	0.00
Mass Market Information	1.097	-	0.00
Energy Centers - CTAC and AgTAC	0.333	-	0.00
Third Party Initiatives	1.910	-	0.00
Small Business Survey & Services	0.685	583	0.58
Small Std. Perf. Contracting (SPC)	1.500	180	0.03
Agricultural/Pumping Services	0.536	3,443	1.03
Express Efficiency (Sm/Med)	5.610	73,751	13.82
Express Efficiency (Large)	4.000	68,042	20.83
Local Government Initiative	0.300	-	0.00
Small Business Space Rental Upgrade	0.480	-	0.00
<b>Nonresidential HVAC Equipment Turnover</b>	4.766	25,365	6.94
Emerging Technologies	-	-	0.00
Mass Market Information	0.050	-	0.00
Energy Centers - CTAC and AgTAC	0.290	-	0.00
Third Party Initiatives	0.811	-	0.00
Express Efficiency - Upstream HVAC	0.070	-	0.00
Large Std. Perf. Contracting (SPC)	1.980	7,651	1.86
Express Efficiency (Sm/Med)	0.090	789	0.15
Express Efficiency (Large)	0.665	16,825	5.13
HVAC Commissioning Pilot	0.200	-	0.00
Commercial EE Information Services	0.180	-	0.00
Industrial EE Information Services	0.130	-	0.00
<b>Nonresidential Motor Turnover</b>	1.436	4,314	1.07
Emerging Technologies	-	-	0.00
Mass Market Information	0.015	-	0.00
Energy Centers - CTAC and AgTAC	0.135	-	0.00
Agricultural/Pumping Services	0.262	1,683	0.50
Express Efficiency - Upstream Motors	0.330	544	0.12
Large Std. Perf. Contracting (SPC)	0.540	2,087	0.45
Commercial EE Information Services	0.084	-	0.00
Industrial EE Information Services	0.070	-	0.00
<b>Nonresidential Process</b>	1.334	4,659	1.14
Emerging Technologies	-	-	0.00
Mass Market Information	0.015	-	0.00
Energy Centers - CTAC and AgTAC	0.170	-	0.00
Agricultural/Pumping Services	0.244	1,587	0.47
Large Std. Perf. Contracting (SPC)	0.800	3,091	0.67
Industrial EE Information Services	0.105	-	0.00
<b>Nonresidential Remodeling/Renovation</b>	4.707	35,158	9.05
Emerging Technologies	-	-	0.00
Mass Market Information	0.088	-	0.00
Energy Centers - CTAC and AgTAC	0.485	-	0.00
Large Std. Perf. Contracting (SPC)	1.486	5,743	1.24
Express Efficiency (Large)	1.200	20,413	6.19
Commercial EE Information Services	0.170	-	0.00
Industrial EE Information Services	0.150	-	0.00
Savings By Design	1.150	9,000	1.81
<b>NonResidential Total</b>	<b>\$33.467</b>	<b>281,587</b>	<b>68.16</b>
<b>PROGRAM AREA TOTAL [1]</b>	<b>\$76.819</b>	<b>434,811</b>	<b>140.23</b>

[1] Does not include allocated administrative costs (e.g., M&E, other overhead)



**Table TA 9.3**  
**Southern California Edison Company**

2001 Energy Efficiency Budgets and Benefits  
May 1, 2001  
(\$ in millions)

**Table TA 9.3: 2001 Program Portfolio Budgets and Benefits (without Non-energy and Market Effects Benefits)**

PROGRAM AREAS Programs <i>Program Elements</i>	PROGRAM BUDGETS [1]	BENEFITS	
		MWh	MW
<b>NEW CONSTRUCTION</b>			
<b>Residential New Construction</b>	\$5.283	5,704	8.52
<i>Emerging Technologies</i>	-	-	0.00
<i>Mass Market Information</i>	0.355	-	0.00
<i>Energy Centers - CTAC and AgTAC</i>	0.136	-	0.00
<i>Third Party Initiatives</i>	0.892	-	0.00
<i>Local Government Initiative</i>	0.800	-	0.00
<i>Residential New Construction</i>	3.100	5,704	8.52
<b>Commercial New Construction</b>	7.808	39,780	10.21
<i>Emerging Technologies</i>	-	-	0.00
<i>Mass Market Information</i>	0.077	-	0.00
<i>Energy Centers - CTAC and AgTAC</i>	0.108	-	0.00
<i>Third Party Initiatives</i>	0.474	-	0.00
<i>Savings By Design</i>	7.050	39,780	10.21
<i>Energy Design Resources</i>	0.100	-	0.00
<b>Industrial &amp; Agricultural New Construction</b>	0.884	7,875	1.12
<i>Emerging Technologies</i>	-	-	0.00
<i>Energy Centers - CTAC and AgTAC</i>	0.084	-	0.00
<i>Savings By Design</i>	0.800	7,875	1.12
<b>Codes &amp; Standards Support, Local Gov't. In</b>	1.432	8,301	7.97
<i>Emerging Technologies</i>	0.700	-	0.00
<i>Energy Centers - CTAC and AgTAC</i>	0.047	-	0.00
<i>Third Party Initiatives</i>	0.300	-	0.00
<i>Local Government Initiative</i>	0.385	8,301	7.97
<b>New Construction Total</b>	\$15.407	61,659	27.82
<b>PROGRAM AREA TOTAL [1]</b>	<b>76.819</b>	<b>434,811</b>	<b>140.23</b>

[1] Does not include allocated administrative costs (e.g., MA&E, other overhead)

# Technical Appendix

**Table TA 9.4**

**Southern California Edison Company**

2001 Energy Efficiency Budgets and Benefits

May 1, 2001

(\$ in millions)

**Table TA 9.4: 2000 Program Portfolio Cost Effectiveness (without Non-energy and Market Effects Benefits)**

PROGRAM AREAS Programs	MWh	MW	PPT	PPT	PPT	PPT Ratio	TRC Ratio
			Energy Benefits (RBn) (\$000)	Costs (\$000)	Net Benefits (\$000) [1]		
<b>RESIDENTIAL</b>							
Residential Heating & Cooling Systems	2,693	0.47	\$ 122	\$ 2,197	\$ (2,075)	0.06	0.06
Residential Lighting	17,973	0.88	8,821	9,363	(542)	0.94	0.94
Residential Appliances	115,538	16.57	36,855	18,508	18,347	1.99	1.99
Residential Retrofit & Renovation	22,915	4.30	8,819	16,600	(7,781)	0.53	0.53
<b>Residential Total</b>	<b>159,118</b>	<b>22.23</b>	<b>54,617</b>	<b>46,669</b>	<b>7,948</b>	<b>1.17</b>	<b>1.17</b>
<b>NONRESIDENTIAL</b>							
Large Nonresidential Comprehensive Retrofit	82,633	14.92	43,896	15,115	28,781	2.90	2.90
Small Nonresidential Comprehensive Retrofit	79,806	14.77	34,311	8,957	25,354	3.83	3.83
Nonresidential HVAC Equipment Turnover	36,984	8.11	19,736	8,121	11,615	2.43	2.43
Nonresidential Motor Turnover	12,178	1.42	6,398	3,276	3,122	1.95	1.95
Nonresidential Process	28,162	5.36	14,977	5,388	9,589	2.78	2.78
Nonresidential Remodeling/Renovation	32,208	6.02	14,898	8,403	6,495	1.77	1.77
<b>Nonresidential Total</b>	<b>271,971</b>	<b>50.60</b>	<b>134,216</b>	<b>49,261</b>	<b>84,955</b>	<b>2.72</b>	<b>2.72</b>
<b>NEW CONSTRUCTION</b>							
Residential New Construction	5,497	8.01	3,385	4,891	(1,506)	0.69	0.69
Commercial New Construction	26,532	6.77	10,568	9,041	1,527	1.17	1.17
Industrial & Agricultural New Construction	4,353	0.40	2,136	1,432	704	1.49	1.49
Codes & Standards Support, Local Gov't. Initiatives	195	0.00	147	1,589	(1,442)	0.09	0.09
<b>New Construction Total</b>	<b>36,576</b>	<b>15.18</b>	<b>16,236</b>	<b>16,952</b>	<b>(716)</b>	<b>0.96</b>	<b>0.96</b>
<b>PROGRAM AREA TOTAL</b>	<b>467,665</b>	<b>88.01</b>	<b>205,069</b>	<b>\$112,882</b>	<b>\$92,187</b>	<b>1.82</b>	<b>1.82</b>

[1] PPT Net Benefits = PPT Energy Benefits (RBn) - PPT Costs

**Table TA 9.5**  
**Southern California Edison Company**  
 2001 Energy Efficiency Outputs and Benefits  
 May 1, 2001  
 (\$ in millions)

**Table TA 9.5: 2000 Program Portfolio Cost Effectiveness (with Non-energy and Market Effects Benefits)**

PROGRAM AREAS	MWh	MW	PPT Benefits			PPT Costs (\$000)	PPT Net Benefits (\$000) [1]	PPT Ratio	TRC Ratio
			Market Effects Benefits (\$000)	Non-Energy Benefits (\$000)	Energy Benefits (RBs) (\$000)				
<b>RESIDENTIAL</b>									
Residential Heating & Cooling Systems	2,693	0.47	\$ -	\$ -	\$ 122	\$ 2,197	\$ (2,075)	0.06	0.06
Residential Lighting	18,452	0.50	-	150	-	8,821	9,515	(544)	0.93
Residential Appliances	172,887	18.29	22,213	-	-	38,855	21,901	37,167	1.68
Residential Retrofit & Renovation	22,817	4.31	-	-	-	8,819	16,816	(7,797)	0.53
<b>Residential Total</b>	<b>216,848</b>	<b>23.98</b>	<b>22,383</b>	<b>-</b>	<b>54,617</b>	<b>60,230</b>	<b>26,750</b>	<b>1.08</b>	<b>1.17</b>
<b>NONRESIDENTIAL</b>									
Large Nonresidential Comprehensive Retrofit	82,633	14.92	\$ -	\$ -	43,898	15,115	28,781	2.80	2.90
Small Nonresidential Comprehensive Retrofit	85,362	15.92	2,502	-	-	34,311	9,014	27,799	3.01
Nonresidential HVAC Equipment Turnover	38,984	8.11	-	-	-	19,738	8,121	11,615	2.43
Nonresidential Motor Turnover	12,178	1.42	-	-	-	6,398	3,276	3,122	1.85
Nonresidential Process	28,162	5.36	-	-	-	14,977	5,388	9,589	2.78
Nonresidential Renodeling/Renovation	32,298	6.02	-	-	-	14,898	8,403	6,495	1.77
<b>Nonresidential Total</b>	<b>278,527</b>	<b>51.75</b>	<b>2,502</b>	<b>-</b>	<b>134,218</b>	<b>49,318</b>	<b>87,400</b>	<b>2.72</b>	<b>2.72</b>
<b>NEW CONSTRUCTION</b>									
Residential New Construction	5,487	8.01	\$ -	\$ -	3,385	4,891	(1,506)	0.69	0.69
Commercial New Construction	26,532	8.77	-	-	-	10,589	9,941	1,527	1.17
Industrial & Agricultural New Construction	4,353	0.40	-	-	-	2,135	1,432	794	1.49
Codes & Standards Support, Local Gov't. Initiatives	185	0.00	-	-	-	147	1,589	(1,442)	0.09
<b>New Construction Total</b>	<b>36,578</b>	<b>15.18</b>	<b>-</b>	<b>-</b>	<b>16,238</b>	<b>16,952</b>	<b>(716)</b>	<b>0.96</b>	<b>0.96</b>
<b>PROGRAM AREA TOTAL</b>	<b>532,652</b>	<b>89.90</b>	<b>\$ 24,885</b>	<b>\$ -</b>	<b>295,869</b>	<b>\$116,589</b>	<b>\$113,434</b>	<b>1.76</b>	<b>1.82</b>

[1] PPT Net Benefits = Total PPT Benefits - PPT Costs

