
2002 Low Income Energy Efficiency Annual Report

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2001 Results

May 2002

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Executive Summary

California's Legislature, the Commission, and the utilities moved swiftly to make low-income assistance programs available to those who needed it the most during the energy crisis. Senate Bill SBX1 5, passed by the Legislature on April 5 and signed by the Governor on April 11, 2001, provided a one-time statewide increase of \$20 million to the low-income energy efficiency (LIEE) program. The bill also authorized another \$50 million statewide for appliance replacement and other energy efficiency measures of which the Commission allocated \$25 million to further supplement LIEE funding during the Energy Crisis. The Commission set policy for both the 2002 LIEE program and the expenditures of SBX1 5 funds, in May 2001, through Decision 01-05-033 (D. 01-05-033). SCE received \$23.7 million in SBX1 5 LIEE and appliance funding that was allocated by the Commission in D.01-05-033, in addition to SCE's \$7.2 million in PGC funding for 2001. SCE responded with an

aggressive promotion of the Commission's Rapid Deployment initiative and successfully produced effective results.

Senate Bill SBX1 5 also included funding for increasing participation in the California Alternate Rates for Energy Program (CARE). The Commission also provided policy guidance for CARE in D.01-05-033. SCE's efforts to expand CARE enrollment during Rapid Deployment are described in SCE's CARE Annual Report that is to be filed with the Commission on May 1, 2002.

SCE met the challenge to rapidly deploy LIEE services in 2001, thus increasing energy conservation and reducing the likelihood of power outages. This was accomplished by rolling out programs to as many customers as could be reached with program services. Among program highlights in 2001, SCE's LIEE programs:

- installed approximately 4,000 evaporative coolers;

- relamped homes with over 275,000 compact fluorescent lamps;
- weatherized nearly 1,600 homes;
- provided Energy Education services to approximately 100,000 homes; and
- installed over 11,000 refrigerators to replace older inefficient models.

SCE's LIEE program helped alleviate energy capacity and supply shortages in 2001 through the installation of energy efficient hardware that resulted in an annualized energy savings of over 48,000 MWh, and a peak load reduction of nearly 17 MW.

Program Descriptions

SCE's LIEE programs provide energy efficiency assistance at no cost to low-income customers whose household income meets guidelines established by the Commission. Generally, the income-eligibility requirements for SCE's LIEE program match those for the CARE program, which is 175% of federal poverty guidelines. However, for qualified disabled and senior citizens, the income eligibility guidelines are slightly higher, at 200% of the federal poverty level.

SCE holds program costs to a minimum by leveraging with Low-Income Home Energy Assistance Program (LIHEAP) contractors, providing assistance through community-based organizations (CBOs), purchasing materials in bulk, and working with experienced contractors. Services provided to eligible customers include energy education and the installation of hardware such as evaporative coolers to use in place of air conditioners, energy-efficient refrigerators, compact fluorescent lights (CFLs) and weatherization measures. By educating low-income customers on how to conserve energy and by providing energy-efficient measures, these customers can better save electricity and money on their bill.

LIIE OUTREACH AND LEVERAGING EFFORTS

SCE contacted every LIHEAP provider in SCE's service territory to discuss potential leveraging and coordination options. In some cases, LIHEAP providers were issued contracts to implement expanded LIEE and/or Rapid Deployment measures. In other cases, LIHEAP providers agreed to work with SCE in the delivery of LIEE services. SCE also worked with housing authorities from Riverside, San Bernardino, Tulare, Los Angeles, and Orange counties to coordinate the installation of refrigerators to income-qualified tenants. In addition, SCE entered into a contract with a local LIHEAP provider for the installation of refrigerators in SCE's service territory. This contract assisted SCE in meeting a fourfold increase in refrigerator installations.

SCE delivered over 4,500 energy-efficient refrigerators to LIHEAP providers, with installation costs being paid through LIHEAP funds. 3,000 of those refrigerator units were paid for through SCE's program and 1,500 refrigerators were paid for by the LIHEAP agency, using SCE's bulk purchasing abilities. An added benefit to leveraging with LIHEAP was that SCE customers without a

grounded outlet were able to have that outlet grounded through the LIHEAP program and then receive a free refrigerator from SCE.

SCE developed an outreach plan for California Indian tribes to ensure that Native Americans had access to SCE's low-income assistance programs. Aggressive efforts were made to implement the outreach plan to tribes and nations, including Native American Indians living on and off reservations. The Southern California Indian Center advised and assisted SCE and Southern California Gas Company (SoCalGas) in the development of outreach methods and communication channels appropriate for targeting Indian tribes with low-income program information and services.

BULK PURCHASING

SCE contained costs and maximized program funding by purchasing energy-efficient appliances in bulk. These appliances were shipped from the manufacturer directly to SCE's contractors for installation in low-income customer homes. SCE bulk purchased all necessary CFLs, refrigerators, central heating, ventilating, and air conditioner (HVAC) systems and window/wall air conditioners to meet its goals for Rapid Deployment.

EVAPORATIVE COOLER INSTALLATION

SCE's Evaporative Cooler Installation Program helps qualified low-income customers better control their summer cooling costs by providing a free evaporative cooler to use in place of their air conditioner. The program targets eligible customers in hot, dry climates where evaporative 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. 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 SoCalGas entered into an inter-utility agreement in late 1992, whereby vendors working with SoCalGas provide weatherization services to electrically-heated homes in service territory areas shared by both utilities. In addition, two private contractors provide 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, and building envelope repair.

RELAMPING

SCE's Relamping program is designed to introduce low-income customers to energy conservation, and help these customers conserve energy and control their lighting costs by offering free CFLs to replace incandescent bulbs. Each CFL provides the same amount of light as an incandescent bulb, but at a lower wattage, thereby using less electricity. A household may receive as many as four CFLs, for indoor use of varying wattages, to replace 60- to 150-watt incandescent equivalents. Qualified customers may also receive one free CFL to replace an existing incandescent light in a porch light fixture. In an owner-occupied dwelling, if the fixture is not designed to accommodate a CFL, a new fixture with a CFL will be installed. As previously mentioned, the Relamping program also serves as a vehicle for introducing customers to energy conservation. To accomplish this task, customers receive energy education packets and instructions from surveyors. The Relamping program also serves as a referral source for other low-income programs.

SCE purchases CFLs directly from the lighting manufacturer and has them shipped directly to the CBOs,

thereby avoiding warehouse charges. The CBOs use surveyors to identify low-income customers, verify income eligibility, provide energy education, and install CFLs in homes at no cost to the customer. These agencies are used because of their presence in, and close ties with, the communities they serve, and thus are extremely effective.

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

ENERGY EDUCATION

Low-income customers that participate in SCE's LIEE programs receive Energy Education packets that contain information on energy saving tips and other programs SCE offers. Included in this packet are a CARE application, information on Medical Baseline and customer billing, and other energy efficiency programs. After customer eligibility has been determined, representatives from CBOs and private contractors provide energy education while at the customer's home and in conjunction with the delivery of other LIEE services.

REFRIGERATOR REPLACEMENT

SCE's Refrigerator Replacement program replaces non-energy efficient refrigerators with energy-efficient models. In order to

qualify for the program, the customer must meet the LIEE income guidelines and own the refrigerator, which must be ten years or older and which must be plugged into a legally grounded three-prong outlet. In addition, the customer must allow SCE to recycle the old refrigerator.

Customer referrals to the program are generated from customers participating in other LIEE programs.

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 home-owner, 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.

RAPID DEPLOYMENT PILOT PROGRAMS

As part of the Commission's Rapid Deployment initiative, the Commission authorized several pilot programs, including: replacement of inefficient air conditioners and other space conditioning equipment with high efficiency models, duct sealing and repair, installation of whole house fans, replacement of inefficient or inoperable water heaters with high efficiency

units, installation of set-back thermostats and maintenance of evaporative coolers.

PILOT "COOL CENTERS" IN HOT, DESERT CLIMATES

On July 25, 2001, the Commission approved SCE's Advice Letter 1563-E requesting authorization to use SBX1-5 funding to implement a number of Cool Centers in SCE's hot, desert climates. These Cool Centers were targeted at low- and moderate-income, disabled, and elderly customers and provided an air-conditioned location where customers, who could least afford high energy costs, could visit on hot days in lieu of running their own cooling devices. SCE entered into contracts with four agencies for the operation of Cool Centers for three months, with the first Cool Center beginning operation on August 13, 2001. These four agencies operated 29 Cool Centers throughout the hottest areas of SCE's service territory.

2001 Results and Achievements

EVAPORATIVE COOLER INSTALLATION

In 2001, SCE's Evaporative Cooler Installation Program installed nearly 4,000 evaporative coolers in low-income customers' homes. These installations resulted in an annualized energy savings of 1,265 MWh and a peak load reduction of 4.2 MW.

WEATHERIZATION

In 2001, nearly 1,600 electrically-heated homes were weatherized resulting in net annualized savings of 598 MWh. Of the homes serviced, approximately 426 were weatherized through SCE's Inter-Utility Cooperative with SoCalGas, and 1,167 homes by a Community Based Organizations and private contractors working in areas not jointly serviced by SoCalGas and SCE.

RELAMPING

SCE provided relamping services to over 73,000 homes, installing over 275,000 CFLs in 2001. The Relamping program achieved a net annualized energy savings of 7,317 MWh and a peak load reduction of 0.8 MW.

As part of the program, relamping agencies delivered

Energy Education packets and installed 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 97,000 customers received in-house counseling and Energy Education packets designed to help them lower their energy use through simple conservation practices.

REFRIGERATOR REPLACEMENT

In 2001, over 11,000 energy-efficient refrigerators were installed through SCE's Refrigerator Replacement Program to replace older inefficient models. The annualized energy savings of replacing these refrigerators was 6,273 MWh, and the peak load reduction was 1.2 MW.

PORCH LIGHT REPLACEMENT

In 2001, SCE replaced 62 outdoor light fixtures and installed nearly 60,000 CFLs through the Porch Light Replacement Program. These installations resulted in an annualized energy savings of 12,238 MWh. There is no

peak load reduction claimed for this program.

FURNACE REPAIR/REPLACEMENT

During 2001, SCE weatherized 1,593 homes with electric space heating. None of these homes met the program criteria for furnace repair or replacement.

Measurement, Evaluation, & Regulatory Oversight

Measurement & Evaluation funds and personnel are used to support the development and implementation of studies of the low-income population, load impact evaluations estimating the energy savings achieved by the utilities' low-income energy efficiency programs, process evaluations that assess opportunities for improvement in program design and delivery, and similar studies as required by the Commission or determined by the utilities to be necessary to develop and implement good programs.

MEASUREMENT & EVALUATION - 2001 RESULTS AND ACHIEVEMENTS

In 2001, SCE provided measurement and evaluation (M&E) support for statewide efforts to develop the pay-for-measured savings pilot proposals, and a needs assessment for low-income customers. Areas of support included providing comments and technical assistance on workshop proposals and filings, study reports, and participating in workshops with other stakeholders.

The M&E group also participated in statewide efforts to develop the standardized bill savings report and cost effectiveness studies ordered by the Commission. The bill savings report detailed a methodology for calculating customer bill savings and incorporated the standardized method for reporting program expenditures as developed by the Reporting Requirements Manual Working Group. Additional support was provided later to assist in developing monthly reporting formats for reporting bill savings results due to the increased Rapid Deployment effort. Early in 2001, measurement support was provided to develop the Low-income Public Purpose Test, a cost effectiveness measure that incorporated non-energy benefits (NEBs), which were intended to value the benefit of LIEE measures and services over and above the observed measure savings. A subsequent Commission order required the utilities to develop new tests that were similar to earlier versions of the cost effectiveness tests, but which incorporated the

NEBs developed in the earlier study effort. These new tests would later be used to assess the LIEE program measures.

In addition, the SCE M&E group managed the PY2000 statewide evaluation of the LIEE program, which included both a process and an impact evaluation. The process evaluation entailed a review of each utility's internal LIEE program processes to identify possible areas of best practice and recommend potential solutions for making mid-year program improvements. The process evaluation included a survey of program participants that was designed to inform the impact evaluation and to assess customer satisfaction with the LIEE program. The load impact evaluation involved a billing analysis to estimate first-year savings estimates by utility for the LIEE installed measures. The final (two-volume) report was distributed in April 2002 and is available in electronic format on the CALMAC website. As an outgrowth of the Rapid Deployment effort, the utilities were required to conduct an impact

evaluation of the new Rapid Deployment pilot measures to calculate first-year savings estimates by measure. In accordance with this requirement, the utilities held a public workshop to obtain public input on the study research plan. This evaluation plan and budget for evaluating the new Rapid Deployment measures was filed in September 2001 and approved in November 2001.

Measurement & Evaluation - 2002 Plans

In 2002, the SCE M&E group will manage a comprehensive evaluation of the PY2001 LIEE program. As stated previously, a plan and budget were filed and accepted in late 2001 for evaluating the new Rapid Deployment pilot measures. As indicated in the filed research plan and in an attempt to inform and improve the PY2002 program design and PY2003 program planning efforts, the utilities find it prudent to include the evaluation of the new Rapid Deployment measures in a comprehensive review and evaluation of the entire PY2001 LIEE program. This overall evaluation will entail a process evaluation of the Rapid Deployment efforts as well as an impact evaluation of the existing LIEE measures. The objective is

to assess process and customer satisfaction issues relating to Rapid Deployment. This effort will include a survey of samples of program participants statewide and interviews with statewide program administrators, implementers, CBOs, and contractors. As with the PY2000 process evaluation, the intent is to identify areas of best practice and provide recommendations for potential program improvements, with an emphasis on the Rapid Deployment efforts. A study research plan detailing these additional tasks along with the previously approved plan for evaluating the new Rapid Deployment measures was distributed in April 2002 to Energy Division and ORA staff, who will be working with the utilities to complete this evaluation effort.

REGULATORY OVERSIGHT

Regulatory oversight consists of activities that are undertaken to meet regulatory requirements for reporting program activities. Areas of support included developing responses to data requests, providing comments on workshop proposals and draft decisions, preparation of filings, and development of reporting formats for Rapid Deployment activities. Specific

examples include, among others, filing reports on the access of low-income program participants to programs provided by CBOs, distribution proposals for unallocated SBX1 5 funds, comments on Phase I of the Low-Income Needs Assessment, and comments on the establishment of the Low-Income Oversight Board. In addition, SCE participated in statewide initiatives such as: developing a "Customer Bill of Rights," developing new tables in the Reporting Requirements Manual, and participating in the Phase I and II of the Low-Income Utility Standardization Project Reports. SCE will continue to work with the other utilities and stakeholders on the Phase III Standardization Project to develop a statewide Policy and Procedures Manual and Statewide Weatherization Installation Standards.

Energy-Related Hardship

In the Assigned Commissioner Ruling dated April 28, 2000, the Commission directed the Reporting Requirements Manual Working Group (RRMWG) to develop a working definition of the term “energy-related hardship” as it relates to comfort level, employment, safety and security. The definition agreed upon by the RRMWG states that “energy-related hardship” are “adverse impacts on the comfort, health, and safety of low-income customers that can be mitigated by access to low-income energy efficiency programs and services.”

SCE’s LIEE programs assist in lessening the energy-related hardships experienced by some low-income customers. SCE’s Evaporative Cooler and Weatherization 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 resulting from ambient

climate or temperature especially in extreme temperature regions.

SCE provides evaporative coolers in the desert regions of its service territory through the Evaporative Cooler Installation Program. Without evaporative coolers, these customers would be subject to the extreme desert heat unless they operated their air conditioners at much greater cost. The Evaporative Cooler Program enhances the physical health of customers by protecting them from excessive heat they might be subject to if they could not afford to run their air conditioners. 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.

In addition, the Furnace Repair and Replacement Program contributes to customers’ well-being, comfort and by ensuring that a furnace is operable.

However, because this program is limited to customers who own their homes and to a maximum expenditure limit of \$750 per home, traditionally this is a small program that reaches a limited number of customers.

Access To Programs Provided By Community-Based Providers

SCE has contacted and is working with the California Department of Community Services and Development (DCSD) on the coordination and integration of resources and benefits between SCE's CARE program and Energy Assistance Fund (EAF) with DCSD's Home Energy Assistance Program (HEAP) and the requirements for reporting the CARE discount on California's LIHEAP Leveraging application. An agreement signed by both parties details the responsibilities of both entities in establishing the coordination of services to SCE's customers.

This agreement places DCSD within compliance of the Department of Health and Human Services' LIHEAP Leveraging Incentive Program requirements and enables the State of California to claim the CARE discount as a leverage resource. As part of the agreement, both DCSD and SCE agree to the referral of their customers to the other's energy assistance program through written and/or

verbal advertising of the programs. The agreement allows SCE to publish the telephone numbers of DCSD programs on SCE program applications and literature, and allows DCSD to include SCE program information on various DCSD literature pieces.

As part of their delivery of SCE's LIEE programs, and other programs they offer, CBOs attempt to identify customer needs that might be met by other CBO programs. Qualifying customers are referred to these programs. Not all CBOs offer all services to customers. SCE currently contracts with fourteen CBOs for the delivery of LIEE programs, not including the fourteen CBOs that perform weatherization services for SCE customers through the Inter-Utility Agreement with SoCalGas in the overlapping service areas. SCE's CBOs offer a variety of low-income services in addition to their LIEE service delivery. Examples of such services include senior nutrition and transportation, job training, and health care.

Finally, during 2001, SCE met regularly with DCSD

and the other three investor-owned utilities to discuss coordination efforts between programs and explore future opportunities for leveraging program resources.

Bill Savings

SCE, PG&E, SoCalGas, and SDG&E have coordinated to produce the Bill Savings estimates that are included in Tables TA.7, TA 8, and TA 9 of this report.

The Bill Savings Report, including any updates to the variables and calculations used in preparing the applicable standard tables in the Technical Appendix for this program area, is being filed separately as a stand-alone document and will include a discussion of variations across utilities.

Shareholder Performance Incentives

The Commission approved the 2001 LIEE incentive mechanism in Decision 01-06-082. The mechanism replaced the 2000 performance incentive mechanism with a mechanism designed to maximize the impact of the LIEE programs.

The 2001 mechanism was based upon the attainment of a minimum performance standard for the LIEE “Big Six” measures. Upon meeting the performance standard, the earnings mechanism calls for program administrators to earn a 2% management fee on all LIEE program expenditures in 2001. SCE’s minimum performance standard from the Big Six measures in 2001 was 416 MWh. SCE attained 598 MWh from these measures, thus exceeding the minimum performance standard. Earnings will be collected in two installments.

For the purpose of calculating SCE’s 2001 earnings claim, SCE did not include 2001 costs for bulk purchases of refrigerators, central air conditioners, and window/wall air conditioners that were not installed in 2001. The first installment of SCE’s 2001 earnings claim is \$0.191 million, requested for authorization in this 2002 AEAP. The second installment of SCE’s earnings claim of \$0.191 million will be collected following the 2003 AEAP.

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TABLE 1 (RRM Table 7.1)

SUMMARY OF COSTS: LOW INCOME

SOUTHERN CALIFORNIA EDISON

(Electric only)

LIEE Programs	2001		2002
	Budgeted [2]	Recorded	Budgeted
Energy Efficiency			
- Gas Appliances	\$ -	\$ -	\$ -
- Electric Appliances [1]	23,822,469	17,692,133	15,130,900
- Weatherization	1,854,389	443,132	1,010,900
- Outreach & Assessment	-	166,494	-
- In Home Energy Education	1,622,613	1,735,976	510,000
- Education Workshops	-	14,206	-
<i>Energy Efficiency TOTAL</i>	27,299,471	20,051,941	16,651,800
Pilots			
- Pilot (A)	-	-	-
- Pilot (B)	1,147,100	410,529	60,000
<i>Total Pilots</i>	1,147,100	410,529	60,000
Training Center	-	-	-
Inspections	293,000	103,523	293,000
Advertising	-	-	-
M&E Studies [3]	25,000	25,000	25,000
Regulatory Compliance [3]	65,000	65,000	65,000
Other Administration	-	-	-
Indirect Costs [3]	-	222,645	-
Oversight Costs			
- LIAB Start-up	-	-	-
- LIAB PY 2001	86,000	-	-
- LIAB PY 2002	18,000	-	-
- CPUC Energy Division	627,842	38,143	589,700
<i>Total Oversight Costs</i>	731,842	38,143	589,700
Shareholder Incentives [4]	589,669	381,033	340,096
TOTAL COSTS	\$ 30,151,082	\$ 21,297,814	\$ 18,024,596

[1] The recorded unit costs for bulk purchases of refrigerators, central air conditioning, and window/wall air conditioning are included for all units purchased in PY2001, regardless of installation date. These full costs were not utilized in the calculation of cost effectiveness, bill savings, or shareholder incentives.

[2] Estimates as reported in monthly Rapid Deployment report.

[3] Program costs that are not part of the LIEE budget.

[4] The following costs are excluded in the calculation of actual expenditures for 2002 shareholder incentives:

- Unit costs for refrigerators, central air conditioning, and window/wall air conditioning which were not installed in 2001
- M&E, Regulatory Compliance, Indirect Costs, and Oversight Costs.

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TABLE 2 (RRM Table 7.2)

SUMMARY OF LIEE PROGRAM EFFECTS

SOUTHERN CALIFORNIA EDISON

(Annual Energy Reduction)

	2001 (recorded)	2002 (planned) [1]
mWh	48,376	48,376
mtherm	N/A	N/A

[1] SCE has not updated its 2001 program plans for 2002. Similar programs will be offered in 2002.

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TABLE 3 (RRM Table 7.3)

SUMMARY OF LIEE COST EFFECTIVENESS

SOUTHERN CALIFORNIA EDISON

(Ratio of Benefits Over Costs)

LIEE Programs	2001			2002 [1]		
	Utility Cost Test [2]	Total Resource Cost Test	Modified Participant Test [2]	Utility Cost Test [2]	Total Resource Cost Test	Modified Participant Test [2]
Energy Efficiency [3]	1.57	1.26	1.33	1.57	1.26	1.33

[1] SCE has not updated its 2001 program plans for 2002. Similar programs will be offered in 2002.

[2] Includes Non-Energy Benefits (NEBs)

[3] The following costs are excluded in the calculation of actual expenditures for cost effectiveness:

- Unit costs for refrigerators, central air conditioning, and window/wall air conditioning which were not installed in 2001

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TABLE 4 (RRM Table 7.4)

SUMMARY OF LIEE COST EFFECTIVENESS

SOUTHERN CALIFORNIA EDISON

(Net Benefits; \$Mill)

LIEE Programs	2001			2002 [1]		
	Utility Cost Test [2]	Total Resource Cost Test	Modified Participant Test [2]	Utility Cost Test [2]	Total Resource Cost Test	Modified Participant Test [2]
Energy Efficiency [2]	\$ 11.928	\$ 10.897	\$ 6.582	\$11.928	\$ 10.897	\$6.582

[1] SCE has not updated its 2001 program plans for 2002. Similar programs will be offered in 2002.

[2] Includes Non-Energy Benefits (NEBs)

[3] The following costs are excluded in the calculation of actual expenditures for cost effectiveness:

- Unit costs for refrigerators, central air conditioning, and window/wall air conditioning which were not installed in 2001

Technical Appendix

This section contains narrative that documents and explains the data shown for Tables TA 1 through TA 9.

Table TA 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 2001 and those costs associated with commitments from 2001 programs. However, there are no commitments for any low income programs.

Program Incentives (Recorded)

These costs represent incentives paid to contractors, including installation and measure costs during 2001 (Actual) as well as incentives associated with commitments from the 2001 low income energy efficiency programs (Committed). Only the costs of measures actually installed in 2001 are included, not measures bulk purchased and held for installation in 2002. It should be noted that all commitments from the 2001 low income energy efficiency programs were realized during the first quarter of 2002.

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 2001 from the 2001 low income energy efficiency programs.

Other Costs

Costs for non-incentive and non-administrative activities including energy education, printing of materials, regulatory, legal, indirect costs, CPUC Energy Division staffing, and Cool Centers.

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. These ratios are 1.0 for all Low Income Energy Efficiency programs. SCE's incremental measure costs for the Low Income Energy Efficiency programs equal the total installation and measure costs for installed measures. Thus, for all LIEE programs, incremental measure costs are equal to the incentive costs.

Table TA 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 2001.

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, such as printing of materials.

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 and outsourced inspection contractors.

Total Costs

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

Table TA 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 2001, direct program costs, and the number of dwellings served. Also, an estimate of the total dwellings that will receive program services in 2002 is provided.

Table TA 4 Program Detail by Measure - Low Income Energy Efficiency

The table provides, by measure grouping, the MWh savings for program year 2001, 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.

Table TA 5 Installation Costs of LIEE Program Installation Contractors - Low Income Energy Efficiency

The table provides, by measure grouping, the units installed, dwelling served and costs by contractor type (either CBO or WMDVBE, or private, i.e., neither CBO nor WMDVBE).

Table TA 6 Percentage of Dwelling Served By Contractor Classification (Last Year) - Low Income Energy Efficiency

The table provides by program, the percentage of dwellings completed by each contractor (CBO or Non-CBO) and indicates whether each contractor is WMDVBE certified.

**Table TA 7 Lifecycle Bill Savings – Last Year - SCE - Low
Income Energy Efficiency**

The table indicates by measure, the number of measures installed, per measure electric kWh savings, gas therm savings, effective useful life, and Total Measure Lifecycle Bill Savings in dollars. The last two rows indicate the number of homes served by the program in 2001, and the life cycle bill savings in dollars per home.

**Table TA 8 Energy Rates Used for Bill Savings Calculations -
SCE - Low Income Energy Efficiency**

The table lists the energy rates used for bill savings calculations stated as \$/kWh for years from 2001 through 2025.

Table TA 9 Bill Savings - SCE - Low Income Energy Efficiency

The table lists for the 1999, 2000, and 2001 program years the program costs, program life cycle bill savings in dollars, bill savings over cost ratio, and per home average life cycle bill savings stated in dollars.

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 TABLE TA 1 (RRM Table TA 7.1)
 LIEE PROGRAM COST ESTIMATES USED FOR COST-EFFECTIVENESS
 SOUTHERN CALIFORNIA EDISON
 (Electric Only)

LIEE Programs	UTILITY COSTS						Incremental Measure Costs
	Program Incentives (Recorded)		Admin Costs	Shareholder Incentives	Other Costs	Total Utility Costs	
	Actual	Committed [1]					
Energy Efficiency [2]	\$ 13,728,238	\$ 1,224,644	\$ 947,756	\$ 381,033	\$ 3,501,791	\$ 19,783,462	\$ 15,406,251

[1] All Commitments from the 2001 LIEE programs have since been realized during the first quarter of 2002.

[2] The following costs are excluded in the calculation of actual expenditures for cost effectiveness:

- Unit costs for refrigerators, central air conditioning, and window/wall air conditioning which were not installed in 2001

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Table TA 2 (RRM Table TA 7.2)

LIEE COST ELEMENTS
SOUTHERN CALIFORNIA EDISON
(Electric only)

LIEE Programs	Expenditures Recorded by Cost Element - 2001			
	Labor	Non-Labor	Contract	Total
Energy Efficiency				
- Gas Appliances	\$ -	\$ -	\$ -	\$ -
- Electric Appliances [1]	319,849	417,652	16,954,632	17,692,133
- Weatherization	80,695	39,307	323,130	443,132
- Outreach & Assessment	-	-	166,494	166,494
- In Home Energy Education	4,880	429,074	1,302,022	1,735,976
- Education Workshop	-	14,206	-	14,206
Energy Efficiency TOTAL	405,424	900,239	18,746,278	20,051,941
Pilots				
- Pilot (A)	-	-	-	-
- Pilot (B)	11,338	734	398,457	410,529
Total Pilots	11,338	734	398,457	410,529
Training Center	-	-	-	-
Inspections	-	-	103,523	103,523
Advertising	-	-	-	-
M&E Studies [2]	25,000	-	-	25,000
Regulatory Compliance [2]	65,000	-	-	65,000
Other Administration	-	-	-	-
Indirect Costs [2]	-	222,645	-	222,645
Oversight Costs				
- LIAB Start-up	-	-	-	-
- LIAB PY 2001	-	-	-	-
- LIAB PY 2002	-	-	-	-
- CPUC Energy Division	-	38,143	-	38,143
Total Oversight Costs	-	38,143	-	38,143
TOTAL COSTS	\$ 506,762	\$ 1,161,761	\$ 19,248,258	\$ 20,916,781

[1] The recorded unit costs for bulk purchases of refrigerators, central air conditioning, and window/wall air conditioning are included for all units purchased in PY2001, regardless of installation date. These full costs were not utilized in the calculation of cost effectiveness, bill savings, or shareholder incentives. Thus, this table will differ from the Table TA 7.2 filed in the Bill Savings Report.

[2] Program costs that are not part of the LIEE budget.

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 TABLE TA 3 (RRM Table TA 7.3)
 PROGRAM DETAIL BY HOUSING TYPE AND HEATING SOURCE
 SOUTHERN CALIFORNIA EDISON

LIEE Programs	Energy Saved and Program Costs			Number of Dwellings		
	2001 (mWh)	2001 (mTherm)	2001 Expenses [1,2]	2001 (Planned)	2001 (Actual)	2002 (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	7,718		\$ 3,967,541		14,416	
- Multi Family	498		\$ 170,383		1,619	
- Mobile Home	3,517		\$ 1,553,049		8,491	
Sub Total Dwellings Served	11,732	-	\$ 5,690,973	-	24,526	-
Electric Heat - Rent						
- Single Family	6,261		\$ 1,992,592		12,016	
- Multi Family	29,910		\$ 10,783,416		53,261	
- Mobile Home	473		\$ 174,132		1,262	
Sub Total Dwellings Served	36,644	-	\$ 12,950,140	-	66,539	-
TOTAL DWELLINGS SERVED	48,376	-	\$ 18,641,113	44,300	91,065	33,500

[1] LIEE program direct costs.

[2] The following costs are excluded:

- Cool Center costs
- Unit costs for refrigerators, central air conditioning, and window/wall air conditioning which were not installed in 2002

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 TABLE TA 4 (RRM Table TA 7.4)
 PROGRAM DETAIL BY MEASURE
 SOUTHERN CALIFORNIA EDISON

LIEE Programs	Energy Saved and Program Costs 2001			Number of Dwellings 2001
	(mWh)	(mTherm)	Expenses (\$000)	Actual Dwellings Served
Furnaces				
- Repair, Gas	-		\$ -	-
- Replacement, Gas	-		-	-
- Repair, Electric	-		-	-
- Replacement, Electric	-		-	-
Total Furnaces	-		\$ -	-
Infiltration & Space Conditioning.				
- Caulking	78		\$ 58	917
- Door Weatherstripping	(See caulking)		142	1,580
- Duct Repair	134		2	50
- Cover Plates/Gaskets	(See Duct Repair)		49	1,361
- Evaporative Cooler/Air Cond. Covers	(See Duct Repair)		0	3
- Window Replacements	(See Duct Repair)		2	23
- Glass Replacements	(See Duct Repair)		-	-
- Wall Repair (exterior)	(See Duct Repair)		12	273
- Door Repair	(See Duct Repair)		64	807
- Door Replacement	(See Duct Repair)		15	101
- Threshold Installed	(See Duct Repair)		13	539
- Attic Ventilation	(See Duct Repair)		10	277
- Attic Insulation	4		4	13
- Attic Access Weatherstripping	(See Duct Repair)		1	34
- HVAC Air Filter Replacement				
Total Infiltration & Space Conditioning	217		\$ 372	5,978
Water Heating Savings				
- Water Heater Blanket	29		\$ 8	134
- Low Flow Showerhead	353		42	1,297
- Water Heater Pipe Wrap			3	113
- Faucet Aerators			9	649
Total Water Heating Savings	381		\$ 62	2,193
Minor Home Repairs (other than above)	-		\$ 13	276
Miscellaneous Measures	-		\$ 34	207
Evaporative Cooler Installation	1,265		\$ 2,744	3,962
Evaporative Coolers Maintenance	92		\$ 310	4,500
Clock Thermostat	19		\$ 1	40
Window AC	111		\$ 200	188
Central AC	1,499		\$ 1,426	538
Water Heater Replacement	-		\$ 40	114
Refrigerator Replacement	6,273		\$ 6,113	11,574
Refrigerator Recycle	18,965		\$ 964	8,829
Compact Fluorescents (inc. porchlights)	19,555		\$ 4,460	73,003
Energy Education				
- Outreach & Assessment [1]	-		\$ 577	-
- In-Home Education	-		1,736	97,635
- Education Workshops	-			
Total Energy Education	-		\$ 2,313	97,635

[1] - Included operating cost for Cool Center and Assessment/Implementation/Qualification cost for Weatherization program

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TABLE TA 6 (RRM Table TA 7.6)

PERCENTAGE OF DWELLINGS SERVED BY CONTRACTOR CLASSIFICATION (2001)
SOUTHERN CALIFORNIA EDISON

Program	Contractor Classification	Vendor Number	% Dwellings Completed	WMDVBE Certified (Yes or No)
Window AC				
	CBO Participants	1	0%	
		Subtotal	0%	
	Non-CBO Participants	1	24%	Yes
		2	76%	No
		Subtotal	100%	
Central AC				
	CBO Participants	1	0%	
		Subtotal	0%	
	Non-CBO Participants	1	7%	No
		2	93%	No
		Subtotal	100%	
Clock Thermostat				
	CBO Participants	1	0%	
		Subtotal	0%	
	Non-CBO Participants	1	100%	No
		Subtotal	100%	

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TABLE TA 6 (RRM Table TA 7.6)

PERCENTAGE OF DWELLINGS SERVED BY CONTRACTOR CLASSIFICATION (2001)
SOUTHERN CALIFORNIA EDISON

Evaporative Cooler Installation				
	CBO Participants	1	5%	No
		2	4%	No
		Subtotal	9%	
	Non-CBO Participants	1	20%	No
		2	11%	Yes
		3	26%	No
		4	9%	No
		5	24%	Yes
		Subtotal	91%	
Evaporative Cooler Maintenance				
	CBO Participants	1	17%	No
		Subtotal	17%	
	Non-CBO Participants	1	6%	No
		2	7%	Yes
		3	44%	No
		4	3%	No
		5	23%	Yes
		Subtotal	83%	

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TABLE TA 6 (RRM Table TA 7.6)

PERCENTAGE OF DWELLINGS SERVED BY CONTRACTOR CLASSIFICATION (2001)
SOUTHERN CALIFORNIA EDISON

Relamping				
	CBO Participants	1	1%	No
		2	7%	No
		3	3%	No
		4	8%	No
		5	3%	No
		6	14%	No
		7	28%	No
		8	0%	No
		9	6%	No
		10	1%	No
		11	3%	No
		12	4%	No
		13	21%	No
		Subtotal	97%	
	Non-CBO Participants	1	0%	No
		2	0%	Yes
		3	1%	No
		4	1%	No
		5	0%	No
		6	1%	Yes
		7	0%	No
		Subtotal	3%	

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TABLE TA 6 (RRM Table TA 7.6)

PERCENTAGE OF DWELLINGS SERVED BY CONTRACTOR CLASSIFICATION (2001)
SOUTHERN CALIFORNIA EDISON

Porch Light				
	CBO Participants	1	0%	No
		2	8%	No
		3	3%	No
		4	7%	No
		5	2%	No
		6	16%	No
		7	31%	No
		8	0%	No
		9	6%	No
		10	1%	No
		11	1%	No
		12	4%	No
		13	20%	No
		Subtotal	99%	
	Non-CBO Participants	1	0%	Yes
		2	1%	No
		3	0%	No
		4	1%	Yes
		Subtotal	1%	

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 TABLE TA 6 (RRM Table TA 7.6)
 PERCENTAGE OF DWELLINGS SERVED BY CONTRACTOR CLASSIFICATION (2001)
 SOUTHERN CALIFORNIA EDISON

Energy Education				
	CBO Participants	1	1%	No
		2	5%	No
		3	2%	No
		4	5%	No
		5	3%	No
		6	10%	No
		7	21%	No
		8	0%	No
		9	4%	No
		10	0%	No
		11	2%	No
		12	3%	No
		13	16%	No
		Subtotal	73%	
	Non-CBO Participants	1	1%	No
		2	1%	Yes
		3	22%	No
		4	2%	No
		5	1%	No
		6	0%	No
		7	1%	Yes
		8	0%	No
		Subtotal	27%	
Water Heater Replacement				
	CBO Participants	1	100%	No
		Subtotal	100%	
	Non-CBO Participants	1	0%	No
		Subtotal	0%	

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 TABLE TA 6 (RRM Table TA 7.6)
 PERCENTAGE OF DWELLINGS SERVED BY CONTRACTOR CLASSIFICATION (2001)
 SOUTHERN CALIFORNIA EDISON

Weatherization				
	CBO Participants	1	8%	No
		Subtotal	8%	
	Non-CBO Participants	1	27%	No
		2	44%	No
		3	14%	Yes
		4	8%	No
		Subtotal	92%	
Refrigerator Replacement				
	CBO Participants	1	4%	No
		2	35%	No
		3	1%	No
		Subtotal	39%	
	Non-CBO Participants	1	61%	No
		Subtotal	61%	
Refrigerator Recycle				
	CBO Participants	1	23%	No
		Subtotal	23%	
	Non-CBO Participants	1	77%	No
		Subtotal	77%	

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 TABLE TA 7 (RRM Table TA 7.7)
 LIFECYCLE BILL SAVINGS (2001)
 SOUTHERN CALIFORNIA EDISON

Measure Description	Number Installed (#)	Per Measure Electric Impact (kWh) [1]		Per Measure Gas Impact (Therms)	Effective Useful Life (EUL) (Yrs)	Total Measure Lifecycle Bill Savings (\$)
		Space Heating	Air Conditioning			
Energy Efficiency Measures						
Attic Access Weatherstripping [1]	34	-	-		5	\$ -
Attic Insulation	13	310	213		25	10,787
Caulking [1]	-	-	-		5	-
Compact Fluorescents (indoor)	276,126	27	-		6	4,827,578
Compact Fluorescents (outdoor)	59,661	204	-		2	2,942,996
Cover Plate/Gaskets [2]	827	-	-		15	-
Duct Repair [2]	50	-	-		25	-
Evaporative Cooler Installation	3,962	-	319		15	1,706,244
Evaporative Cooler/AC Covers [3]	3	-	-		3	-
Faucet Aerators [2]	1,101	-	-		5	-
Low Flow Showerhead	1,297	272	-		10	353,952
Minor Home Repairs	1,586	56	53		10	134,678
Miscellaneous [3]	859	-	-			-
Refrigerator Recycle [4]	8,829	-	-		6	-
Refrigerator Replacement	11,574	542	-		15	8,463,434
Water Heater Blanket	134	213	-		5	16,039
Water Heater Pipe Wrap [3]	1	-	-		15	-
Weatherstripping	1,580	32	32		5	44,127
<i>Subtotal for Energy Efficiency Measures</i>						\$ 18,499,835
Rapid Deployment Measures						
Air Conditioner Replacement - Central	538	-	2,786		18	\$ 2,212,017
Air Conditioner Replacement - Room	254	-	437		11	119,787
Evaporative Cooler Maintenance	4,556	-	20		4	42,208
Set-back Thermostats	40	-	475		12	21,889
<i>Subtotal for Rapid Deployment Measures</i>						\$ 2,395,901
Total Bill Savings for All Measures in Program Year 2001						\$ 20,895,736
Total Number of Homes Served by the Program						86,903
Life Cycle Bill Savings Per Home						\$ 240.45

[1] This measure has impacts included in the weatherstripping measure. No specific per-measure impact claimed.

[2] These measures have impacts included in the minor home repair measure. No specific per-measure impact claimed.

[3] Zero savings are claimed for this measure.

[4] Although there are savings from recycling refrigerators, these savings are not seen by the individual customer.

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 TABLE TA 8 (RRM Table TA 7.8)
 ENERGY RATES USED FOR BILL SAVINGS CALCULATIONS
 SOUTHERN CALIFORNIA EDISON

Year	\$/kWh	\$/Therm
2001	\$ 0.1238	
2002	0.2417	
2003	0.3540	
2004	0.4609	
2005	0.5628	
2006	0.6597	
2007	0.7521	
2008	0.8401	
2009	0.9239	
2010	1.0037	
2011	1.0797	
2012	1.1521	
2013	1.2210	
2014	1.2866	
2015	1.3492	
2016	1.3935	
2017	1.4357	
2018	1.4759	
2019	1.5141	
2020	1.5506	
2021	1.5853	
2022	1.6184	
2023	1.6499	
2024	1.6798	
2025	1.7084	

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 TABLE TA 9 (RRM Table TA 7.9)
 BILL SAVINGS
 SOUTHERN CALIFORNIA EDISON

Program Year	Program Costs	Program Lifecycle Bill Savings	Program Bill Savings / Cost Ratio	Per Home Average Lifecycle Bill Savings
1999	\$ 7,419,670	\$ 10,174,890	1.37	\$ 180
2000	7,885,542	13,602,273	1.72	294
2001 [1]	19,402,429	20,895,736	1.08	240

[1] The following costs are excluded in the calculation of program costs for bill savings:

- Unit costs for refrigerators, central air conditioning, and window/wall air conditioning which were not installed in 2001

