Attachment A
Program Description – Enhanced Express Efficiency

Program Name

Enhanced Express Efficiency Program

SCE proposes enhancements to the current Express Efficiency program element. The existing program is designed for small and medium-sized customers that use less than 600,000 kWh per year, and have three or fewer nonresidential accounts. Eligible measures include a comprehensive selection in the areas of lighting, air conditioning, and food service. SCE's proposal for an Enhanced Express Efficiency program adds the following elements to the basic program:

- Increased customer eligibility to encompass the entire nonresidential market, including large customers, to maximize overall on-peak demand reduction opportunities;
- Premium incentives for specific demand reduction measures;
- Additional measures targeted towards commercial and industrial customers such as air conditioning and refrigeration and motors;
- A more comprehensive outreach program to encourage early retirement of equipment;
- Procedures for accelerated processing of incentives for projects with significant peak mitigation potential;
- Targeted marketing to public works customers for early replacement of incandescent traffic signal lamps with LED lamps.

The Enhanced Express Efficiency will provide rebates, including premium incentive levels, for all nonresidential customers. The premium incentive levels are designed to encourage installation of energy efficient equipment that will reduce on-peak demand by June 2001. Participants will be offered premium incentives that will be up to double the standard incentive level for the selected measures during the Summer Initiative. For the smallest customer groups, the premium incentive may exceed this level. The Enhanced Express Efficiency will be available to eligible customers beginning September 2000 through June 2001 only. After June 2001, the premium incentives will not be offered to new participants.

Eligible Markets

Under the existing Express Efficiency program, the nonresidential market segment, building types include offices, restaurants, retail establishments, grocery stores, warehouses (conditioned and non-conditioned), educational institutions, hospitals and medical clinics, etc. The primary portion of this nonresidential market operates from office buildings, retail establishments, and warehouses. For this reason, products typically in use in offices, retail establishments and warehouses have been chosen to be eligible for the Enhanced Express Efficiency program element. Additionally, SCE will actively encourage cities to "early retire" incandescent traffic signal lamps and replace with LED lamps. The Enhanced Express Efficiency program expands the eligibility to all other nonresidential markets, including industrial markets. Therefore, motors and other refrigeration and HVAC

equipment have been added to expand the opportunities for peak reduction results in other areas.

Eligible Measures
The measures chosen for inclusion in the Enhanced Express Efficiency program element have historically had the most peak demand reduction effect. They are as follows:

Lighting
- T-8 and T-5 lamps (including 1st and 2nd generation and high output options)
- Electronic ballasts (dimming and non-dimming options)
- Exit signs (including retrofit kits)
- LED traffic signals (not previously in Express)
- High intensity discharge (HID) fixtures including higher wattage (up to 400 watts) HID's

Air Conditioning and Refrigeration
- Packaged/Rooftop units (greater than 5 tons)
- Chillers (air-cooled and water-cooled)
- Package Terminal Air Conditioners (up to 2 tons)
- Reflective Window Film
- Cooler or Freezer Door Gaskets
- Auto-Closers for Coolers or Freezers
- Glass or Acrylic Doors
- New Refrigeration Case with Doors (medium and low temp cases)

Motors
- Single and Three-phase
- Air Compressors

The Enhanced Express Efficiency program will include these measures along with standardized incentives for selective and innovative energy efficiency equipment applications not listed above. The standardized incentive amounts will be less than the itemized measures listed above. The energy savings determination of these standardized incentives will depend on the equipment and application. SCE will determine the values in these instances.

Program Process
The operational procedures for the Enhanced Express Efficiency program will be similar to those currently used for the standard Express Efficiency program. An increase in administrative support may be required due to the expected increase in application volume along with minimal changes to the program's application processing procedures.

A key component to the success of the Enhanced Express Efficiency program element will be the aggressive outreach and promotion of the premium incentives associated with the Summer Initiative. To this end, the Enhanced Express Efficiency program will be delivered through several interacting channels. Third-party resources such as equipment vendors, distributors, energy service companies, contractors and other supply or installation sources that target nonresidential customer segments are one main delivery channel. In addition to these third-party resources, regional and local associations that support business and ethnic membership organizations, trade associations and volume buying groups will be leveraged as well. These resources will interface with SCE's customer representatives to encourage and facilitate customer program participation. SCE's customer representatives will support customers by assisting them in identifying areas for efficiency improvements, recommending retrofit strategies, "selling" the benefits of demand reductions and energy savings that result from improving electric energy efficiency, and assisting customers with the submittal of all required program applications and documentation. Examples of such customer interfaces include direct outreach to: municipalities to encourage adoption of LED traffic signals; ethnic and minority small business markets through in-language program information such as Chinese, Spanish, and Korean; African-American business communities; and property managers. As an added synergistic effect, direct mail and print advertising programs will be used to disseminate the message of program availability and to promote the reduction of on-peak usage.

Expected On-peak Demand Reductions (Incremental Increase)
The Enhanced Express Efficiency program element will be available to participants during 2000 and 2001. It is expected that the program element will produce an incremental increase of nearly 6.3 MW of on-peak demand reduction, 47,700 MWh of annualized energy savings during PY2000 and over 12.6 MW of on-peak demand reduction and 92,515 MWh of annualized energy savings in PY2001.

PY2000	6.3 MW
PY2001	12.6MW
Total	18.9 MW

Budget (Incremental Increase)
 PY2000 –
Administrative $835,000
Incentives   <u>2,118,000</u>
PY2000 Total $2,953,000

PY2001 –
Administrative $1,588,000
Incentives   <u>4,112,000</u>
PY2000 Total $5,700,000

Measurement and Verification
SCE will commission a study of the peak demand impacts of this program. The study will be provided to the Commission along with the 2002 Annual Energy Efficiency Report, which will report on the success of the Summer 2001 initiatives. SCE may conduct this study jointly with other utilities. The study methodology will be developed in consultation with CALMAC. The study may be able to make effective use of the years of detailed, 15-minute metering data that SCE collected for various types of commercial building equipment as part of its long-running Commercial End Use Study which was included only two years ago.

Attachment B
Program Description – Standard Performance Contracting Peak Demand Reduction Program

Program Name

Standard Performance Contract (SPC) Peak Demand Reduction Program
The SPC Peak Demand Reduction Program (PDRP) is a modified version of the
existing SPC programs (Large and Small Business SPC and Multifamily
Residential Contractor Program). The modifications will speed up customer
adoption and installation of peak demand reducing energy efficiency equipment,
and will encourage installation of load management hardware and systems that
shift or reduce peak demand. Essentially, the PDRP will offer a new peak kW
incentive payment in addition to current incentives for energy savings. The PDRP
version of the SPC will be offered for a limited time and will require installation of
eligible peak demand reducing projects to be complete prior to summer peak
demand season 2001. After the cutoff date, the SPC programs will revert to all
currently approved rules and requirements.

Eligible Measures
Any equipment retrofit project that reduces peak demand will be eligible for peak
kW incentive payments, in addition to current energy savings incentives.

A new category of eligibility will be added to encourage hardware-based load
management retrofit projects. Table 1 is a partial listing of hardware-based, peak
kW demand reducing measures that would become eligible for incentives under the
modified program.

Table 1

Partial List Of Proposed Eligible Load Management Measures
1. Thermal Energy Storage For Air Conditioning or Process Cooling/Heating
2. Pumped Water Storage For Agricultural Irrigation
3. Daylighting Controls
4. Demand Limiting Lighting and Air Conditioning Controls
5. Demand Limiting Controls For Electric Water Heating

Eligible Customers
The PRDP will be open to all nonresidential customer segments, as is the case with
the current SPC programs. The Small Business SPC would target demand reducing
opportunities in the small to medium customer segment, while the Large
Nonresidential SPC program would target opportunities in the large customer
segment.

In the residential sector, the Multifamily Residential Contractor program would
target owners and property managers of multifamily housing units.

Market Size
It is assumed that past program participation rates are a reasonable proxy for market size, or potential. In 1998 and 1999, SCE's SPC programs have expended or committed about $16 million in incentives. Forecast participation rate for the 2000 program is about the same. These participation rates correspond to committed and/or installed annual energy and demand savings of about 150 million kWh and 25 MW.

Program Process
Large Nonresidential Program
This program would be marketed directly to customers and third-party service providers. SCE's customer representatives will create customer interest in the program, and therefore increased demand for energy efficiency retrofit services, through an intensive promotional campaign consisting of direct customer contacts, facility energy surveys, and direct mailings.

Immediate promotion to third-party service providers will allow them to increase their marketing to customers, and present new proposals that incorporate the new, limited time kW demand incentive. Service providers have indicated that an offer such as this will allow them to go back to customers with new proposals that would be financially attractive enough to cause a significant number of customers to act immediately in order to take advantage of the limited time offer.

Small Business Program
The primary delivery channel for this program will continue to be contractors and vendors that routinely deal with the smaller nonresidential customers. This would include primarily air conditioning contractors and lighting installation contractors.

Multifamily Residential Contractor Program
The program will be promoted to residential ESCOs and others that specialize in multifamily efficiency upgrades. Current and past program participants are expected to be the primary participants in the new PDRP program.

Program Operational Procedures
No significant changes to current program operational procedures are required to implement the PDRP. Where necessary to assure customer and project sponsor commitment to project completion by June 1, 2001, SCE will provide assistance with applications, savings calculations, and measurement and verification plans.

Key Dates
The most important element of the proposed PDRP is that the peak kW demand incentive will only be offered for a limited time. Below are dates that will be used to determine eligibility for the full peak kW incentive payment. Projects that are installed after June 1, 2001, and before July 15, 2001 will be eligible for 30% of the full peak kW demand incentive.

Limited Time Offer Begins:	September 1, 2000
Application Deadline:	May 1, 2001
Installations Complete:	June 1, 2001

Incentives

A peak kW incentive rate is added to the existing energy savings price schedule, and a new price category for load management projects is added. Incentive rates for energy savings would be the same as currently offered in the SPC programs. Tables 2, 3 and 4 show proposed incentive pricing for the Large Nonresidential SPC, the Small Business SPC, and the Multifamily RCP programs respectively.

Current incentive rates for energy saving projects result in total incentive payments of around 20 to 30% of total project installed cost. With proposed kW incentive payments, total incentive payment will be around 30 to 50% of total project installed cost, depending on the amount of peak kW demand for a given project. For load management projects, the total incentive should pay for about 20 to 40% of the installed cost.

The theory of this pricing scheme is that the additional peak kW payment will increase the total incentive on an energy efficiency project to the point where a customer will be compelled to act quickly to take advantage of the limited time increase in incentive payment. The availability of an incentive for load management retrofits will cause new interest in currently available technologies, and will stimulate the demand for these new technologies. In both cases, the limited-time nature of incentives for peak kW reduction will cause service providers to market their products or services more aggressively to customers.

Table 2
Proposed Large Nonresidential SPC Peak Demand Reduction Program Pricing

Measure	$/kWh	$/Peak kW
Lighting	0.050	100
Other	0.080	150
Air Conditioning	0.165	225
Load Shifting	Note 1	325

Table 3
Proposed Small Business SPC-PDR Incentives

Measure	$/kWh	$/Peak kW
Lighting	0.005	125
Other	0.090	175
Air Conditioning	0.185	250
Load Shifting	Note 1	350

Note 1: kW payment would be the only incentive paid for load management projects

Table 4
Proposed Multifamily RCP PDRP Incentives

Measure	$/kWh	$/Peak kW
Common Area Lighting (24 hour lighting)	Note 2	100
Electric Water Heater Demand Controls	Note 2	250

Note 2: kWh payment per proposed 2000 RCP program incentive rates and multipliers

Peak Demand Reductions
Because of the complex nature of the predominately large projects in the current SPC program, most energy savings and load reductions are not realized until approximately 12 to 18 months after initial application in the program. Also, load management hardware retrofits are not explicitly incented in the current SPC program because the program only pays incentives for energy savings, and many load management projects have little or no energy savings.

By offering an incentive for load reduction in the current three main end-use categories, and adding a load reduction incentive for load management, the SPC-PDRP will: (1) speed up completion of some projects; (2) cause new energy and demand reducing projects to be installed; and (3) cause new load management projects to be installed. The estimated load reductions in each category are shown in Table 5 below.

Table 5
Estimated Load Reductions For SPC-PDRP

Load Management Projects[1]	6 MW
New Efficiency Projects[2]	2 MW
Normally Occurring Efficiency Projects[3]	1 MW
Total	9 MW

[1]Projects include thermal energy storage, demand limiting controls, etc.
[2]Projects that are either driven from conception to installation by summer 2001, or installation is accelerated to completion by summer 2001, as a result of the peak kW incentive offer
[3]Projects that would be conceived of and installed by summer 2001 without the peak kW incentive offer

Budget
Additional funding beyond currently authorized level will not be required because it is anticipated that many of the lighting efficiency projects normally undertaken by large customers in the SPC program will be performed under the Express Efficiency program. Below are the expected costs associated with the Summer Initiative that will be funded under the SPC budgets.

Program Administration Cost
There would be an increase in administration cost of approximately $250,000 for additional promotion of peak kW incentive offer.

Incentive Cost
There will be an increase in incentive cost of approximately $2.52 million for measures receiving the peak kW incentive.

Timing of Budget Expenditures
It is estimated that about half of the applications received in the program will be received this year and half in 2001.

Measurement and Verification
All measurement and verification for the PDRP will be done by project applicants, in accordance with current SPC program protocols and contractual requirements. Cost of M&V is borne by the applicant.

Anticipated modifications to existing procedures will include:
1. One time peak demand reduction measurement for efficiency improvement projects;
2. Ongoing (for SPC contract duration) peak demand measurement required for peak load management/demand limiting measures; and
3. Pre-determined load shift measurement protocols with peak load shift measured and verified for two summer seasons (one for Small Business SPC-PDRP).

ATTACHMENT B

Attachment C
Program Description – Residential Refrigerator Recycling

Program Name

Residential Refrigerator Recycling Program

As part of the Summer Initiative, SCE plans to continue to aggressively promote a "summer sale" campaign for the current refrigerator recycling program element. The purpose of the "summer sale" promotion will be to accelerate customer participation in the program, thereby capturing peak mitigating energy savings that might otherwise either not be captured or captured too late to impact the summer peak period. The Residential Refrigerator Recycling program provides incentives to residential customers for the elimination of highly inefficient refrigerators and freezers, which reduces on-peak demand. Customers receive a $35 incentive for each unit recycled for program participation. Inefficient units are recycled by a turn-key service provider who removes and recycles the units in an environmentally safe manner. The service provider dismantles and removes all metal panels, components, and hazardous materials and recycles or disposes of hazardous materials according to law.

Program Objective

The objective of this program is to reduce on-peak load by removing primary and secondary inefficient refrigerators and freezers. SCE will provide an incentive to residential customers to recycle their refrigerators and freezers. The units are collected from residential customers and recycled according to environmental laws.

Market Statistics

Based on the 1995 Residential Appliance Saturation Study, there are approximately 1.3 million primary and secondary inefficient refrigerators and freezers 10 years and older in SCE's service territory (adjusted for population growth since 1995). The program's current participation goal is 36,000 refrigerator units in PY2000. In support of the Summer Initiative, SCE plans to collect an additional 11,000 units during PY2000. The PY2000 program has the potential of achieving an incremental increase in on-peak demand reduction of 3 MW and 17,500 MWh of annualized energy savings from approximately 11,000 recycled units.

Program Process

The program will generate interest through bill inserts, bill messages, billboards, and direct contact from appliance retailers targeting residential customers. Program participants (residential customers) will be provided an "800" number to call or they can access SCE's web site to schedule pick up of their refrigerators or freezers. Bill inserts and bill messages will target residential customers to increase program participation. The bill inserts and bill messages will promote the new online appointment system that allows customers to conveniently schedule pick-ups of their old, inefficient refrigerators or freezers. In conjunction with the bill inserts, billboards will be displayed throughout SCE's service area promoting the program. Program brochures will be distributed to appliance retailers targeting residential customers in the market to replace old refrigerators. Retailers have expressed a need to offer a recycling service to their customers purchasing new refrigerators.

More than 250 retailers (storefronts) located throughout SCE's service area will receive program brochures to promote the program to customers.

Expected On-Peak Demand Reductions (Incremental Increase)
PY2000 – 3 MW

Budget (Incremental Increase)
PY2000 --

Administrative	$ 100,000
Incentive	1,089,000
PY2000 Total Program Budget	$1,189,000

Measurement and Verification
To verify the peak demand reduction impacts of this program, SCE plans to commission a study that will use the results of previous studies to develop metering-based estimates of the energy and peak demand savings created by this program. SCE's intensive study of the 1996 Refrigerator Recycling Program will be used to develop an estimate of the energy savings and kW demand level of each refrigerator or freezer turned in.[1] This study included metering the actual energy usage of a sample of refrigerators turned in through the program and then using statistical analysis to develop an algorithm relating this measured energy usage to varied models and sizes of refrigerators and freezers. This algorithm can now be used to estimate the energy savings for the varied appliances turned in during the Summer Initiative. The data from SCE's Residential Appliance End Use Study[2], which has years of metered data for a service territory-wide sample of refrigerators, can be used to create estimates of cycle times and load diversity that can then be applied to the energy use and demand levels of the appliances turned in, to develop an estimate of the coincident load reduction due to the recycled refrigerators and freezers. These analyses and their final resulting estimates will be submitted after the end of the program as a separate report.

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[1] Study 537 by Xenergy, Inc., Impact Evaluation of the Spare Refrigerator Recycling Program, April, 1998.

[2] Quantum Consulting, Inc., Residential Appliance End Use Study.

Attachment D
Program Description – Savings By Design Premium Incentives

Program Name

Savings By Design Premium Incentive

In addition to the current energy savings-derived incentives for new construction and renovation & remodeling projects, the Savings By Design Premium Incentives program plans to include a premium incentive of $50 per kW for those projects under the Systems Approach, committed after September 1, 2000 and completing construction/installation by June 1, 2001. Due to this abbreviated timeframe, projects are expected to include small projects that are nearing design completion but may accommodate specification change/adds, quickly built prototype projects, and large, easily-constructed warehouse-type facilities. The premium incentive directly encourages the use of technologies that reduce on-peak demand, such as daylighting controls/systems and high efficiency HVAC units, by providing an increased incentive level.

Market Potential

Examples of areas of steady growth that may provide opportunities for this program are shown in the table below:

Table 1

Market Segment	Estimated projects/year	New Participating projects/year	kW impact per project	Total kW
QS restaurants (eff AC)	90	40	5	200
K-12 schools (new AC)	360	20	15	300
K-12 schools (eff AC/ltg)	200	25	20	500
C&I Storage (daylighting)	200	10	100	1000
C&I Work (daylighting)	180	5	100	500

Program Process

A brochure insert describing the premium incentive offer will be designed, produced, and included in current Savings By Design marketing materials provided to potential participants by existing new construction representatives. Information on the premium offer may also be added to the Savings By Design statewide program web site, as appropriate. The program calculation tool, which currently provides demand reductions, will be programmed to optionally calculate the premium incentive.

Expected On-peak Demand Reductions (Incremental Increase)

PY2000 commitments: 2.3 MW
PY2001 commitments: 0.2 MW
Total commitments: 2.5 MW

Budget (Incremental Increase)

	Comm NC	NR R&R	Total
PY2000			
Administrative	$7,500	$7,500	$15,000
Incentives	56,250	56,250	112,500
PY2000 Total	$60,000	$60,000	$127,500
PY2001			
Administrative	$1,000	$1,000	$2,000
Incentives	6,250	6,250	12,500
PY2001 Total	$7,250	$7,250	$14,500

Measurement and Verification

The Savings By Design Premium Incentives program develops site-specific engineering estimates of the energy savings and demand reductions of every project to which it awards incentives. SCE will commission an independent consulting firm to develop its own estimates of the demand reductions for a statistical sample of these premium incentive projects, and then use any resulting difference between the program estimates and the consultant estimates as an adjustment factor to develop a final estimate of the program-created demand reductions. The consultant will use the results of SCE's three previous studies of its Nonresidential New Construction Program,[3] as one guideline to assure that any needed adjustments to estimating procedures are made to ensure accurate estimates. The results of this analysis will be provided in a separate report.

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[3]   Three studies by RLW Analytics: Study 572, <u>Southern California Edison 1998 Nonresidential New Construction Evaluation</u>, December, 1999; Study 543, <u>Southern California Edison 1996 Nonresidential New Construction Evaluation Final Report</u>, February 1998; and Study 522, <u>Impact Evaluation of Pacific Gas & Electric Company and Southern California Edison 1994 Nonresidential New Construction Program</u>, March 1997.

Attachment E
Program Description - Cooperative Demand Response Initative

Program Name

Cooperative Demand Response Initiative
SCE proposes to include in the Summer Initiative the formation of a cooperative portfolio of responsive demand. SCE seeks funding to support the development and implementation of requisite energy settlement, energy information, and accounting systems to facilitate customer participation in the ISO's Ancillary Services (or successor) program. As part of this Summer Initiative, SCE seeks additional funding support to make necessary modifications to existing load management RTU technology to enable more customers to meet ISO load and scheduling information requirements. Monetary incentives for participating customers are funded by the ISO's Ancillary Services programs, and include avoided costs.

Program Objective

The objective of this program is to increase the customer's ability to respond to market signals thereby serving to foster greater market efficiency, and create an additional depth of resources available to the grid during periods of high demand. This objective is consistent with the purpose of restructuring, and supports the management of potential system emergency conditions by the ISO. Funding is required for infrastructure support and limited testing/modification of existing communication and load control equipment as necessary to support UDC and third-party participation in the ISO programs.

Eligible Customers

Eligible customers are large commercial and industrial customers, and smaller sized nonresidential customers currently on the following rates:

- TOU-8
- GS-2
- TOU-PA, AP-I (pending approval of Advice 1457-E)
- I-6 (pending approval of Advice 1457-E)

Participation Requirements

Participating customers must agree to shift electrical loads to off-peak periods, or shed specified load when notified pursuant to ISO program criteria. Customers will be apprised of the methods and benefits of responding to market price signals. They must further agree to the installation of necessary equipment, such as meters, data systems, and operational and communication devices to monitor performance and report results.

Program Process
The operational procedures for this program will be similar to the Voluntary PRC (DON, CHANGE TO FULL NAME) program. Existing SCE personnel will administer the program, operate systems, and provide eligible customers with program information and participation guidance. An increase in contract resources will be needed to process applications, and provide installation and maintenance services. Additional funding will be required for the modification of some automated systems.

Expected On-peak Demand Reductions
The Cooperative Demand Response Initiative expects to be available to participants for summer 2001. The following are expected goals.

Participating Load:	up to 400 MW (per ISO, available for Demand Relief and Ancillary Services programs)
Market Price Response:	up to 50 MW (non-ISO event)
Participating Service Accounts:	up to 100

Budget

PY2000:

Hardware & Systems Design	$250,000
Administrative	150,000
Total	$400,000

PY2001:

Programming and Testing	$600,000
Administration	200,000
Systems Maintenance & Support	75,000
Monitoring & Reporting	75,000
Material & Labor	400,000
Total	$1,350,000

Attachment F
Program Budget Tables

Attachment F

Table 1
SCE's Summer Initiative
($ in millions)

Program Strategies	2000	2001	Total	MW	MWh
In This Filing -					
Enhanced Express Efficiency	$ 2.953	$ 5.700	$ 8.653	19	140,215
SPC Peak Demand Reduction	-	-	-	9	19,000
Residential Refrigerator Recycling	1.189	-	1.189	3	17,500
Savings By Design Premium Incentive	0.128	0.015	0.142	3	6,000
Cooperative Demand Responsiveness	0.400	1.350	1.750	50	-
Phase 2 Subtotal	$ 4.670	$ 7.065	$ 11.734	83	182,715
Previously Filed - [1]					
Pool Pump Tripper	$ 0.383	$ 3.147	$ 3.530	60	-
Air Conditioner Cycling	3.700	3.600	7.300	133	-
Commercial and Industrial Interruptibles	0.500	0.500	1.000	315	-
Voluntary Power Reduction Credit	-	-	-	32	-
Phase 1 Subtotal	$ 4.583	$ 7.247	$ 11.830	540	-
Summer Initiative Total	$ 9.253	$ 14.311	$ 23.564	623	182,715

[1]-These progarm strategies were filed by SCE in Advice 1463-E, 1464-E, 1465-E and 1466-E.

Table 2
SCE - Summer Initiative
Program and Program Area
($ in millions)

Ln	PROGRAM AREAS Programs	2000 Budget	Summer Initiative		Total Summer Initiative Budget	Total Revised 2000 Budget
			2000	2001		
		(a)	(b)	(c)	(b) + (c) = (d)	(a) + (b) = (e)
1	**RESIDENTIAL**					
2	Residential Heating & Cooling Systems	$ 2.094				$ 2.094
3	Residential Lighting	4.326				4.326
4	Residential Appliances	15.900	1.189	-	1.189	17.089
5	Residential Retrofit & Renovation	5.218				5.218
6	**Residential Total**	$ 27.538	$ 1.189	$ 0.000	$ 1.189	$ 28.727
7	**NONRESIDENTIAL**					
8	Small Nonres. Comprehensive Retrofit [2]	$ 8.756	$ 0.591	$ 1.140	$ 1.731	$ 9.347
9	Large Nonres. Comprehensive Retrofit [2]	15.337	2.362	4.560	6.922	17.700
10	Nonresidential HVAC Equipment Turnover	7.027				7.027
11	Nonresidential Motor Turnover	1.944				1.944
12	Nonresidential Process	3.861				3.861
13	Commercial Remodeling/Renovation	2.787	0.064	0.007	0.071	2.851
14	**Nonresidential Total**	$ 39.713	$ 3.017	$ 5.707	$ 8.724	$ 42.730
15	**NEW CONSTRUCTION**					
16	Residential New Construction	$ 3.405				$ 3.405
17	Commercial New Construction	5.033	0.064	0.007	0.071	5.096
18	Industrial & Agricultural New Construction	2.191				2.191
19	Codes & Stds. Support, Local Gov't. Init.	1.320				1.320
20	**New Construction Total**	$ 11.949	$ 0.064	$ 0.007	$ 0.071	$ 12.012
21	**Total**	**$ 79.200**	**$ 4.270**	**$ 5.715**	**$ 9.984**	**$ 83.469**
22	**OTHER PEAK INITIATIVES**					
23	Pool Pump Tripper		$ 0.383	$ 3.147	$ 3.530	
24	Air Conditioner Cycling		3.700	3.600	7.300	
25	Commercial and Industrial Interruptibles		0.500	0.500	1.000	
26	Cooperative Demand Responsiveness		0.400	1.350	1.750	
27			$ 4.983	$ 8.597	$ 13.580	
28	**GRAND TOTAL**	**$ 79.200**	**$ 9.253**	**$ 14.311**	**$ 23.564**	**$ 83.469**

Table 3
SCE - Available Funds For Summer Initiative
($ in millions)

Ln.		SCE Total
1	1998 Unexpended/uncommitted Program Budget	$ 8.401
2	1998 Unexpended/uncommitted CBEE Operating Budget	-
3	1998 Unexpended/uncommitted MA&E Budget	1.209
4	1999 Unexpended/uncommitted Program Budget	5.874
5	- **less** Carryover Allocation	(5.000)
6	1999 Unexpended/uncommitted MA&E Support	1.243
7	1999 Unexpended Start-up Budget	2.961
8	1999 Unexpended CBEE Budget	0.006
9	1999 Unexpended State Reserve	0.158
10	2000 Unallocated Performance Awards	8.712
11	Total Energy Efficiency Funding Available For Summer Initiative	$ 23.564

notes:

1 Current estimate of PY1998 unexpended and uncommitted progam budget, D.99-08-021, OP 4.

2 Unexpended and uncommitted CBEE budget from PY1998.

3 Unexpended and uncommitted MA&E budget from PY1998.

4 Current estimate of PY1999 unexpended and uncommitted progam budget, D.99-08-021, OP 4.

5 2000 carryover allocation from unexpended and uncommitted PY1999 progam budget, Authorized in D. 00-07-017

6 Unexpended and uncommitted MA&E budget from PY1999.

7 Unallocated Start-up budget from PY1999. Resolution E-3592, OP 6.a.

8 Unallocated CBEE budget from PY1999. Resolution E3592, OP 6.b.

9 Unallocated State Reserve budget from PY1999, Resolution E-3592, OP 6.d.

Interest on various unallocated/unexpended/uncommitted amounts is not included.
Current interest estimates on various carryover amounts and unauthorized
amounts are between $2.000 million and $3.000 million.

Attachment G
Cost Effectiveness

Attachment G

The Summer Initiative described above is cost effective on an *ex ante* (before-the-fact) basis. SCE utilized the Total Resource Cost (TRC) test methodology in developing cost-effectiveness estimates for the energy efficiency program strategies herein. The TRC cost effectiveness methodology employed is consistent with the Commission-adopted Standard Practice Manual. This methodology measures the net benefits of the program when comparing the resource benefits to the participant and utility costs (See Table 1 below).

Table 1

2000 and 2001 Summer Energy Efficiency Initiative
Energy Efficiency Cost Effectiveness Summary

	TRC Costs ($mil)	TRC Benefits ($mil) (2000 Avoided Costs)	TRC Benefits ($mil) (Current Avoided Costs)	TRC Ratio (2000 Avoided Costs)	TRC Ratio (Current Avoided Costs)
Express Efficiency	$ 20.90	$ 72.91	$ 142.35	3.49	6.81
SPC Peak kW	$ 6.03	$ 10.71	$ 12.61	1.78	2.09
Refrigerator Recycling	$ 1.62	$ 4.31	$ 4.61	2.66	2.85
Renovation / Remodeling	$ 0.77	$ 2.28	$ 3.09	2.98	4.03
Total	**$ 29.32**	**$ 90.20**	**$ 162.66**	**3.08**	**5.55**

The driving input to this analysis is the source of resource benefits utilized. In determining the cost effectiveness of the Summer Initiative energy efficiency program strategies, SCE utilized two sets of avoided costs in the derivation of the resource benefits from the Summer Initiative: The first set of avoided costs utilized was the avoided cost stream adopted in Resolution E-3592 (See Table 3 below). The utilization of this conservative avoided cost stream provides a directly comparable benefit-cost ratio to those developed in SCE's PY2000 program application. The cost-effectiveness computation of the initiative results in a TRC benefit-cost ratio of 3.08 utilizing the avoided cost streams adopted for the PY2000 programs. Thus, since the TRC ratios were above 1.00 for the Summer Initiative utilizing the same avoided costs as in SCE's PY2000 and PY2001 application, the Commission can see that the Summer Initiative only improves the cost effectiveness of the existing PY2000 and PY2001 program portfolio.

The second set of avoided costs utilized was an avoided cost stream which utilizes the PX day ahead market zonal prices from June 1999 through June 2000, and the most recent costs for environmental adders and transmission and distribution costs, to match the costs included in the avoided costs for the PY2000 application, described above (See Table 4 below). These avoided costs result in a benefit-cost ratio of 5.55 for the summer.

The cost effectiveness computation of the Cooperative Demand Response Initiative was determined by a comparison of the benefits of providing demand-side resources during the summer peak hours to the costs of developing and delivering the programs. The benefits developed in this cost effectiveness calculation are used to approximate the value of available capacity during all peak hours (i.e., the hours in which a Stage III outage is most likely to occur). A proxy value of $500 per MWh, representative of the current energy price cap, was utilized in the calculation of

Attachment G

Total Benefits at Cap. These costs were compared to the program administrative and incentive costs incurred in the development and delivery of the program. The benefits of the program total $13.05 million compared with program costs of $1.750 million (See Table 2 below).

Table 2

Year: 2001 (Includes 2000 load impact)		Summer Capacity Savings (MW)	2000 and 2001 Program Costs ($M)			Summer Peak Hours	Energy Price Cap per MWh	Benefits ($M) Total Benefits at Cap
No. (a)	Program (b)	(c)	Cost (d)	Incentive (e)	Total Cost (f = d+e)	(g)	(h)	(i = c x g x h)
1	Cooperative DRI	50	$ 1.75	$ -	$ 1.75	522	$ 500	$ 13.05

In addition to the resource value attributed to the Summer Initiative's load reductions, the benefits of this program also include the customer value of uninterrupted service. SCE reported such a value in its March 1999 Customer Value of Service Reliability Study, submitted as part of its Performance-Based Ratemaking Mid-Term Review. This study provided a value of $5.36 that residential customers would be willing to pay during a summer weekday to avoid an afternoon service interruption, and $97.00 that commercial and industrial customers would be willing to pay during a summer weekday to avoid a one-hour afternoon service interruption that could occur as a result of a Stage III outage. While we have not included a service reliability adder as part of this cost effectiveness showing, it is clear that the inclusion of this adder would further increase the cost effectiveness of this program.

Table 3 - **2000 Avoided Costs**

		Summer			Winter	
Energy, Capacity, and T&D Costs w/ Losses, Env. Adders ($/kWh)						
Year #	**Year**	**On Peak**	**Mid Peak**	**Off Peak**	**Mid Peak**	**Off Peak**
1	2000	0.05	0.05	0.05	0.05	0.05
2	2001	0.05	0.05	0.05	0.05	0.05
3	2002	0.05	0.05	0.05	0.05	0.05
4	2003	0.05	0.05	0.05	0.05	0.05
5	2004	0.05	0.05	0.05	0.05	0.05
6	2005	0.05	0.05	0.05	0.05	0.05
7	2006	0.06	0.06	0.06	0.06	0.06
8	2007	0.06	0.06	0.06	0.06	0.06
9	2008	0.06	0.06	0.06	0.06	0.06
10	2009	0.06	0.06	0.06	0.06	0.06
11	2010	0.07	0.07	0.07	0.07	0.07
12	2011	0.07	0.07	0.07	0.07	0.07
13	2012	0.07	0.07	0.07	0.07	0.07
14	2013	0.08	0.08	0.08	0.08	0.08
15	2014	0.08	0.08	0.08	0.08	0.08
16	2015	0.08	0.08	0.08	0.08	0.08
17	2016	0.08	0.08	0.08	0.08	0.08
18	2017	0.09	0.09	0.09	0.09	0.09
19	2018	0.09	0.09	0.09	0.09	0.09
20	2019	0.10	0.10	0.10	0.10	0.10
21	2020	0.10	0.10	0.10	0.10	0.10
22	2021	0.11	0.11	0.11	0.11	0.11
23	2022	0.11	0.11	0.11	0.11	0.11
24	2023	0.12	0.12	0.12	0.12	0.12
25	2024	0.13	0.13	0.13	0.13	0.13
26	2025	0.13	0.13	0.13	0.13	0.13
27	2026	0.14	0.14	0.14	0.14	0.14
28	2027	0.15	0.15	0.15	0.15	0.15
29	2028	0.16	0.16	0.16	0.16	0.16
30	2029	0.17	0.17	0.17	0.17	0.17

Attachment G

Table 4 - Current Avoided Costs

| Avoided T&D Costs ($/kW-yr) | | | | | | Energy and Capacity w/ Losses, Env. Adders ($/kWh) | | | | | |
| | | Summer | | | Winter | | | | Summer | | | Winter | |

Year #	Year	On Peak	Mid Peak	Off Peak	Mid Peak	Off Peak	Year #	Year	On Peak	Mid Peak	Off Peak	Mid Peak	Off Peak
1	2000	4.62	0.28	0.59	0.82	1.30	1	2000	0.11	0.08	0.04	0.05	0.04
2	2001	4.78	0.29	0.61	0.85	1.34	2	2001	0.11	0.08	0.04	0.05	0.04
3	2002	4.95	0.30	0.63	0.88	1.39	3	2002	0.11	0.08	0.04	0.05	0.04
4	2003	5.12	0.32	0.65	0.91	1.44	4	2003	0.11	0.08	0.04	0.05	0.04
5	2004	5.30	0.33	0.67	0.94	1.49	5	2004	0.11	0.08	0.04	0.05	0.04
6	2005	5.49	0.34	0.70	0.97	1.54	6	2005	0.11	0.08	0.04	0.05	0.04
7	2006	5.68	0.35	0.72	1.01	1.59	7	2006	0.11	0.08	0.04	0.05	0.04
8	2007	5.88	0.36	0.75	1.04	1.65	8	2007	0.11	0.08	0.04	0.05	0.04
9	2008	6.08	0.37	0.77	1.08	1.71	9	2008	0.11	0.08	0.04	0.06	0.04
10	2009	6.30	0.39	0.80	1.11	1.77	10	2009	0.11	0.08	0.04	0.06	0.04
11	2010	6.52	0.40	0.83	1.15	1.83	11	2010	0.11	0.08	0.04	0.06	0.04
12	2011	6.75	0.42	0.86	1.19	1.89	12	2011	0.11	0.08	0.04	0.06	0.04
13	2012	6.98	0.43	0.89	1.24	1.96	13	2012	0.11	0.08	0.04	0.06	0.04
14	2013	7.23	0.44	0.92	1.28	2.03	14	2013	0.11	0.08	0.04	0.06	0.04
15	2014	7.48	0.46	0.95	1.32	2.10	15	2014	0.11	0.08	0.04	0.06	0.04
16	2015	7.74	0.48	0.99	1.37	2.17	16	2015	0.11	0.08	0.04	0.06	0.04
17	2016	8.01	0.49	1.02	1.42	2.25	17	2016	0.11	0.08	0.04	0.06	0.04
18	2017	8.29	0.51	1.06	1.47	2.33	18	2017	0.11	0.08	0.04	0.06	0.04
19	2018	8.58	0.53	1.09	1.52	2.41	19	2018	0.11	0.08	0.04	0.06	0.04
20	2019	8.88	0.55	1.13	1.57	2.49	20	2019	0.11	0.08	0.04	0.06	0.04
21	2020	9.19	0.57	1.17	1.63	2.58	21	2020	0.11	0.08	0.04	0.06	0.04
22	2021	9.52	0.59	1.21	1.68	2.67	22	2021	0.11	0.08	0.04	0.06	0.04
23	2022	9.85	0.61	1.25	1.74	2.76	23	2022	0.11	0.08	0.04	0.06	0.04
24	2023	10.19	0.63	1.30	1.80	2.86	24	2023	0.11	0.08	0.04	0.06	0.04
25	2024	10.55	0.65	1.34	1.87	2.96	25	2024	0.11	0.08	0.04	0.06	0.04
26	2025	10.92	0.67	1.39	1.93	3.06	26	2025	0.11	0.08	0.04	0.06	0.04
27	2026	11.30	0.70	1.44	2.00	3.17	27	2026	0.11	0.08	0.04	0.06	0.04
28	2027	11.70	0.72	1.49	2.07	3.28	28	2027	0.11	0.08	0.04	0.06	0.04
29	2028	12.11	0.74	1.54	2.14	3.40	29	2028	0.11	0.08	0.04	0.06	0.04
30	2029	12.53	0.77	1.60	2.22	3.52	30	2029	0.11	0.08	0.04	0.06	0.04