

**Joint Utility  
Low Income Energy Efficiency Program,  
2002 Costs and Bill Savings  
Standardization Report**

**Draft Report**

**Report Date:**

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# 1 EXECUTIVE SUMMARY

This report presents the results of applying the accepted methodology for determining costs and bill savings estimates of the Low Income Energy Efficiency (LIEE) program in compliance with Decision (D) 01-12-020, Ordering Paragraph 4. The method used is consistent with cost-effectiveness methods and calculations used in the Annual Earnings Assessment Proceedings (AEAP). Bill savings and expenditures are presented for the utilities' Program Year (PY) 2000, PY2001, and PY2002 LIEE programs.

The results are summarized in Exhibits 1.1 and 1.2. In order to compare average customer bill savings across the state, it is useful to compare the total service by service area. For the final analysis purposes of this document, the SoCalGas and SCE programs were assessed as a single entity since they serve roughly the same customers.

## Exhibit 1.1

### Summary of Bill Savings to Cost Ratios by Service Area

Program Year	PG&E	SDG&E	Combined SCE and SoCalGas	SCE	SoCalGas
2000	0.65	0.50	0.62	1.63	0.13
2001	0.53	0.64	0.54	1.01	0.13
2002	0.53	0.71	0.43	0.94	0.21

## Exhibit 1.2

### Summary of Average Per Home Life Cycle Bill Savings by Service Area

Program Year	PG&E	SDG&E	Combined SCE and SoCalGas	SCE	SoCalGas
2000	\$ 500	\$ 235	\$ 371	\$ 278	\$ 94
2001	\$ 415	\$ 384	\$ 317	\$ 226	\$ 92
2002	\$ 490	\$ 625	\$ 574	\$ 441	\$ 133

The following general comments can be made concerning these summary values:

- **PY2000** variations are mainly due to differences in installation and estimated energy savings of three measures – compact fluorescent lamps (CFLs), refrigerators, and low-flow showerheads.
- **PY2001** dissimilarities were mainly due to differences in installation rates of CFLs and refrigerators.
- **PY2002** variations are due to installation rates of refrigerators, the impacts for those refrigerators, and variation in energy rates.

The utilities continued to install refrigerators at a higher rate in PY2002 with subsequent larger estimated bill savings. This increase in the refrigerator measure also appeared to result in a higher program cost per home treated, as the cost per home treated increased dramatically in PY2002 for the electric utilities, while SoCalGas' cost per home treated decreased.



## **2 INTRODUCTION**

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In compliance with Decision (D.) 01-12-020, Ordering Paragraph 4, this report presents an analysis of the estimated costs and bill savings for the Low Income Energy Efficiency (LIEE) program using the methodology developed pursuant to an order from the California Public Utilities Commission (Commission) under D. 00-07-020, Ordering Paragraph 7. Those methods were reported in a report titled “Joint Utility Low Income Energy Efficiency Program Costs and Bill Savings Standardization Report” dated February 1, 2001, and filed with the Commission February 1, 2001, then re-filed on March 12, 2001 as a revised report dated March 5, 2001 (hereafter in this report referred to as the 2001 Bill Savings Report). The proposed methodology and the results of the analysis were adopted for future use under D.01-12-020 dated December 11, 2001. This report summarizes the standardized methods, explains how the methods are consistent with cost-effectiveness methods and Annual Earnings Assessment Proceeding (AEAP) calculations, and presents utility LIEE program bill savings and expenditure results for Program Year (PY) 2000, PY2001 and PY2002.

This report is the second annual such report on the LIEE Bill Savings. The first annual report was completed May 31, 2002 and covered PY1999, PY2000, and PY2001 (hereafter in this report referred to as the 2002 Bill Savings Report).

In order to maintain consistency between program years and to faithfully follow the methodology created in the 2001 Bill Savings Report, the results presented here do not incorporate any of the non-energy benefits of low income programs.

### ***2.1 Background to the Bill Savings Method***

In mid-2000, the Administrative Law Judge (ALJ) handed down a final opinion on the Program Year 2000 Low Income Assistance Programs (D.00-07-020, dated July 6, 2000). The opinion stated “...our inquiry is limited by the lack of consistent data on program bill savings, expenditures and cost-effectiveness calculations, with which to evaluate the relevant performance of the utilities’ LIEE programs.”<sup>1</sup> The utilities were directed as follows:

“7. With input from interested parties and the LIAB, the utilities shall jointly develop standardized methods for producing bill savings and expenditures for LIEE programs on an overall program and per unit basis, by utility. The methods used to produce this information shall be consistent with the methodologies used to evaluate energy efficiency costs and savings in the Annual Earnings and Assessment Proceedings (AEAP). The utilities shall coordinate with Energy Division on all aspects of methodology design and implementation.

The utilities shall file a joint report no later than February 1, 2001, presenting the proposed standardized methods and explain how the methods are consistent with cost-effectiveness methods and calculations utilized in the AEAP. In this report, the utilities shall apply the proposed methods to calculate bill savings and expenditures for their PY1997, PY1998, and PY1999 LIEE programs, or explain why a study of a particular program year would be duplicative of what has already been done in the

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<sup>1</sup> Page 70, Decision 00-07-020 July 6, 2000.

AEAP. In that event, the results of the AEAP study shall be presented. All assumptions and work papers shall be presented. To the extent that data has been compiled for PY2000 programs, the report shall provide bill savings and expenditure calculations for that PY (or portion thereof) as well.”<sup>2</sup>

The report ordered by D.00-07-020 was filed on time with errata filed on March 12, 2001 (2001 Bill Savings Report). Full details of the methodology used for the ordered report and this subsequent report are provided in the 2001 Bill Savings Report. However, highlights are presented next for clarity.

## **2.2 Costs**

Throughout this document, the term “cost” is used in lieu of the term “expenditure”. This is done because cost is deemed to be the net amount actually paid for goods or services. Expenditure, on the other hand, represents the amount spent, which can be different than the amount paid for the product or service if any portion is reimbursed or recompensed in any way. Costs can be synonymous with expenditure if there is no reimbursement. To reduce confusion, the term cost is used throughout. In addition, costs only refer to LIEE costs unless otherwise specifically stated. This distinction has been stated and used consistently in all of the LIEE bill savings reports to date.

The 2001 Bill Savings Report made a concerted effort to refine, for LIEE purposes, the cost definitions established in Table TA7.2 of the Reporting Requirements Manual (RRM).

Costs for the LIEE programs are parsed in several ways in Table TA 7.2. There are 16 cost variables along the left side of the table, and each cost variable is divided into columns for labor, non-labor, and contract costs. These are summed into a fourth column, total cost, for each variable.

Each utility used these common definitions to fill in the costs in Table TA 7.2 for each year being studied. Since the implementation costs cannot be readily allocated by fuel type, the Cost and Bill Savings Standardization Group (consisting of representatives from PG&E, Southern California Edison Company, San Diego Gas and Electric Company, Southern California Gas Company, Energy Division and the Office of Ratepayer Advocates) decided that each utility would prepare a single Table TA 7.2 for each year, covering all costs independent of fuel type.

It is necessary to acknowledge that utility accounting systems are complex and unique. Attempts were made to match costs across utilities, as allowed by the existing accounting systems, and to provide information on where and how reported costs differ.

## **2.3 Bill Savings**

### **2.3.1 Energy Savings Sources**

The bill savings in this report are the estimated lifecycle net present value saved by the average dwelling due to the measures installed under the LIEE programs. Historically, the first year impacts, which go into the life cycle savings estimates, have been determined from measurement

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<sup>2</sup> Page 147, Decision 00-07-020 July 6, 2000.



and evaluation impact studies performed after the program was fielded. These studies have followed the *Protocols and Procedures for the Verification of Costs, Benefits, and Shareholder Earnings from Demand-Side Management Programs* (Protocols)<sup>3</sup> and are filed in the AEAP. The LIEE programs were evaluated as per Protocol Tables 8A and 8B (Residential Direct Assistance Program) in 1995-6<sup>4</sup>. In addition, there was a statewide low-income study conducted in 1999 that collected measure level information for the top six measures. These impact studies were performed, filed, and the results verified by the Office of Ratepayer Advocates (ORA).

The statewide study estimated savings at the utility-wide level. However, SCE estimated measure savings for PY2000 by weather zone. As a result, for PY2000 SCE needed to use the results of the most recent utility evaluation, which assessed measure impact by weather zone, and not the statewide evaluation results. For PY2001 SCE used a result from a recent evaluation in PY2001 which accounted for weather zone variation but applied a single weather zone independent value. In order to assure consistency across utilities, the Cost and Bill Savings Standardization Group agreed that all utilities would use the results of the most recent utility-specific study to estimate bill savings.

In early 2003, the Cost and Bill Savings Standardization Group made the decision to use the most recent impact values to calculate the bill savings for PY2002. The Impact Evaluation of the 2000 Statewide LIEE Program report<sup>5</sup> (LIEE PY2000 Impact Report) documented the impact evaluation of the LIEE program for PY2000. Since this impact evaluation did not cover all the rapid deployment measures fielded in PY2002, a different source of impacts was required. In order to provide as much consistency as possible, the impact estimates from the LIEE Measure Cost Effectiveness Report<sup>6</sup> (LIEE CE Report) were used for all measures not covered in the LIEE PY2000 Impact report. All measures using the impacts from the LIEE CE Report are shown in Exhibit 2.1.

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<sup>3</sup> D.93-05-063 and revised by subsequent CPUC decisions.

<sup>4</sup> For PG&E, SCE, and SDG&E, this evaluation was required only in 1995 (per Protocol Table 8A) and for SoCalGas it was required in 1996 (Per Protocol Table 8B).

<sup>5</sup> *Impact Evaluation of the 2000 Statewide Low Income Energy Efficiency (LIEE) Program: Final Report*. XENERGY Inc. and Business Economic Analysis & Research. April 2, 2002.

<sup>6</sup> *LIEE Measure Cost Effectiveness Preliminary Report*. LIEE Standardization Team. September 23, 2002.

## Exhibit 2.1

### Measures Using LIEE CE Report Impacts

Measures	PG&E	SCE	SDG&E	SoCalGas	Comment
All Rapid Deployment Measures	X	X	X	X	These measures had no assessment in the LIEE PY2000 Impact Report.
Attic Access Weatherstripping and Door Weatherstripping	X				Other utilities tracked these two measures as "weatherstripping" and used the impact from the LIEE PY2000 Impact Report. The impacts for these two measures were derived from the LIEE PY2000 Impact Report, and is considered comparable.
CFL & CLF Hard Wire Porchlight	X	X	X		The LIEE PY2000 Impact Report impact value was both CFL and Porchlights in the same impact value. That value was disentagled to obtain CFL and CFL Porchlight impacts for the LIEE CE Study
Evaporative Cooler Covers	X	X	X	X	No Values in the LIEE PY2000 Impact Report for SCE for this measure, so used LIEE CE Report for all utilities that installed this measure.
Evaporative Cooler Replacement	X	X	X		No Values in the LIEE PY2000 Impact Report for SDG&E for this measure, so used LIEE CE Report for all utilities that installed this measure
Furnace Filters	X				This measure had no assessment in the LIEE PY2000 Impact Report.
Outlet Gaskets	X	X	X	X	This measure had no assessment in the LIEE PY2000 Impact Report.

It should be noted that SoCalGas estimates include the electric savings accrued by SCE that are attributable to the weatherization measures installed under the SoCalGas LIEE program. Since SoCalGas does not account for weatherization measures on electrically heated homes, the savings on these homes are attributable to air conditioning savings only. SoCalGas used SCE's ex-post per unit air conditioning kWh savings for caulking, minor home repairs, and weatherstripping to represent the electric savings from the air conditioning measures.

While the SCE LIEE program also weatherizes homes, they do so only in homes that are all electric (i.e., electric space and water heat). Therefore, there is no potential for therm savings.

### 2.3.2 Life Cycle Bill Savings – General Formula

Three of the variables that go into any lifecycle bill savings are:

- Residential electrical rate
- Residential therm rate
- Discount rate

The general algorithm proposed for estimating bill savings is presented in Exhibit 2.2.

## Exhibit 2.2

### Estimation of Bill Savings

$$\text{Life Cycle Bill Savings} = \sum_{m=1}^M \left[ \sum_{r=1}^2 \sum_{Y=1}^{\text{EUL}_m} \sum_{\text{CP}=1}^n \text{Impact}_m * \text{Number}_m * \text{energy rate}_{Y,r,\text{CP}} * \frac{1}{(1 + \text{DiscountRate})^{Y-1}} \right]$$

where:

- r = fuel type (gas or electric)
- Y = Year, starting with implementation program year
- m = measure type
- energy rate<sub>Y,r</sub> = energy rate (\$ per kWh<sup>7</sup> or therm) for fuel r in year Y
- Impact<sub>m</sub> = measure m gross<sup>8</sup> impact per year (kWh or therm)
- Number<sub>m</sub> = number of measure type m installed
- EUL<sub>m</sub> = effective useful life<sup>9</sup> (years) of measure type m
- CP = Costing period, n = number of costing periods

### 2.3.3 Specifics of Calculations and Variables

#### *Inflation and Discount Rates*

The discount rate was chosen to be consistent with the ALJ Bytof ruling, dated October 25, 2000, in Application (A.) 99-09-049, et. al. The inflation rate of 3% was used to develop the discount rate.<sup>10</sup> The following specific values were identified as appropriate for these calculations:

- The inflation rate used was 3%.
- The discount rate was 8.15%.

#### *Development of Energy Rate Escalation*

Exhibit 2.2 above is the general model for estimating the lifecycle bill savings. Originally, the Cost and Bill Savings Standardization Group thought that one of the best ways to estimate the energy rate escalation was to use values that had already been filed. As a result, the group investigated modeling energy rate escalation after the avoided cost escalation in A.99-09-049 for the Energy Efficiency Programs. However, this model was discarded after much discussion about the validity of a model that dramatically decreases rates at a time when rates are increasing. Since the aim of this method was to create bill savings that were comparable between utilities, a constant 3% escalation rate was adopted. The 3% value was chosen because it is equal to the annual inflation rate.

<sup>7</sup> Energy rate escalated by either 0%, 3%, or 6%.

<sup>8</sup> These are defined as gross savings because they are bill savings.

<sup>9</sup> EUL values are consistent with the October 25, 2000 ALJ ruling and the September 25, 2000 CALMAC Workshop Report.

<sup>10</sup> Conversations with Mike Wan of PG&E.

### ***Estimation of the Average Annual Energy Rates***

The average annual energy rates used by each utility are highly dependent upon the information available in the accounting systems of the individual utility. The 2001 Bill Savings Report<sup>11</sup> documented the specific calculation approach used by each utility. Those approaches were also used to estimate the average annual energy rates presented here.

Energy rates used by each utility are shown in Exhibit 2.3.

### **Exhibit 2.3**

#### **Energy Rates Used for Bill Savings Calculations**

Year	PG&E		SCE	SDG&E		SoCalGas	
	kWh	Therm	kWh	kWh	Therm	kWh	Therm
2000	0.1159	0.6537	0.1040	0.1179	0.5926	0.1040	0.6110
2001	0.1159	0.9546	0.1238	0.1174	0.7945	0.1238	0.6294
2002	0.1124	0.6235	0.1174	0.1365	0.6957	0.1174	0.5311
All years afterwards	Previous Year * (1+Escalation Rate)						

The therm rate for PG&E increased by 46% from PY2000 to PY2001 due to high gas rates at the beginning of the year. As shown in Exhibit 2.3, the methodology used in this report escalates the most current energy rate to forecast rates for all years beyond the most current year. The effect of this is that when temporary swings occur, as occurred in 2001, the method can potentially estimate falsely high life cycle bill savings. While the 2001 showed dramatic increases for PG&E and SDG&E, the 2002 therm rate provides a self-correction to this swing. This correction is evident when the bill savings for PY2000 and PY2001 are compared between the 2002 Bill Savings Report and this report.

### ***Effective Useful Life Agreements***

In order to compute life cycle savings, it is necessary to know the average life of the measures installed. In September of 2000, all utilities compared the historic Effective Useful Lives (EULs) being used for LIEE measures, compared these measure lives to the values developed by CALMAC, and, where possible, agreed on common EULs for common measures. EULs being used in this analysis are listed in Exhibit 2.4.

<sup>11</sup> Joint Utility Low Income Energy Efficiency Program Costs and Bill Savings Standardization Report, dated February 1, 2001, and filed with the Commission February 1, 2001 with errata filed March 5, 2001.

## Exhibit 2.4

### EULs Used in Bill Savings Calculations

Measure	EUL Used	
	year	source
Air Conditioner - Central	18	2
Air Conditioner - Room	15	2
Attic Access Weatherstripping	5	3
Attic Insulation (Ceiling Insulation)	25	2
Attic Venting	25	4
Building Envelope Repair	10	6
Caulking	5	6
Compact Fluorescent Hard Wired Porch Lights <sup>9</sup>	20 ; 5.3	2 ; 7
Compact Fluorescent Lights	8	7
Door Threshold	5	6
Door Weatherstripping	5	6
Duct Sealing and Testing	25	2
Energy Education	1	2
Evaporative Cooler (Permanent)	15	5
Evaporative Cooler (Portable)	7	2
Evaporative Cooler Covers (for Permanent)	3	5
Evaporative Cooler Maintenance	4	6
Faucet Aerators	5	5
Furnace Filters	5	3
Furnace Repair (Gas)	10	6
Furnace Replacement (Gas)	22	5
Low Flow Showerhead	10	2
Outlet Gaskets	15	5
Refrigerator Replacement	15	2
Set-back Thermostats	12	2
Water Heater Blanket	5	5
Water Heater Pipe Wrap	15	2
Water Heater Replacement	13	2
Weatherstripping	5	6
Whole House Fans	20	8

<sup>1</sup> PG&E's Residential Program: 2000/2001 Energy Efficiency Programs Application Attachment 12 Workpapers p. 12-13

<sup>2</sup> CALMAC Workshop Report on PY 2001 Energy Efficiency Programs

<sup>3</sup> Assumed to have the same EUL as Caulking or Weatherstripping.

<sup>4</sup> Assumed to have the same EUL as attic insulation

<sup>5</sup> DSM Measure Life Project, September 23, 1993 (adjusted and non-adjusted)

<sup>6</sup> Engineering Estimate

<sup>7</sup> LIEE Measure Cost Effectiveness Preliminary Report. September, 2002.

<sup>8</sup> Low Income Energy Efficiency Program Standardization Project Phase 3 Report - Appendix G. July 2001.

<sup>9</sup> The measure tracked here for SCE is one where CFLs in porch lights are installed. The EUL has been appropriately lowered in this case.

## **2.4 Consistency with AEAP**

Throughout the process of creating a program costs and bill savings standardization methodology, every effort was made to keep that methodology consistent with the protocols and practices adopted for the AEAP. The methodology is consistent because:

- The report uses the same project cost tables as proposed by the RRM, with slight modifications and refined definitions for each of the variables in the table.
- The modeling methodology is mathematically the same for the AEAP and this report. However, instead of estimating avoided costs, this methodology estimates life cycle bill savings.
- The discount rate and escalation factors are consistent with those used in the AEAP.
- The lifecycle bill savings used Effective Useful Life values consistent with those used in the AEAP.
- Most of the impacts used are from Protocol compliant M&E studies that are part of the AEAP.

The methodological difference is in the use of rate projections rather than avoided costs to develop bill savings.

This completes the summary of the methodology used for computing cost and bill savings. Readers wishing a more complete description of the methodology are referred to the 2001 Bill Savings Report.<sup>12</sup> The next section discusses the analysis of program cost and bill savings data for PY2000 through PY2002.

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<sup>12</sup> Ibid

### 3 ANALYSIS OF PROGRAM COST AND BILL SAVING RESULTS

This section discusses the program variables that affect the reported bill savings and costs.

#### 3.1 Data Presented in this Report

Costs were broken down into the 18 subcategories, and the labor, non-labor and contract elements defined in Table TA 7.2 of the RRM (this table has subsequently been renamed TA 2, but is referred to by TA 7.2 throughout this document), as discussed in Section 2.2. Because each utility's accounting system is different, it was not possible for each utility to break out the costs in identical fashion. Exhibit 3.1 presents a summary of where each utility reported costs. It should be noted that the current cost breakouts are more uniform than those recorded in the previous Bill Savings report. This is attributed to the ongoing standardization efforts for this program. Exhibit 3.1, in combination with the detailed cost tables and their footnotes presented in Exhibit 4.1 to Exhibit 4.23, creates a comprehensive picture of the cost breakdown supplied by each utility.

#### Exhibit 3.1

##### Summary of Reported Cost Elements by Utility

	Costs Recorded by Cost Element			
	PG&E	SCE	SDG&E	SoCalGas
<b>Energy Efficiency</b>				
Gas Appliances	X		X	X
Electric Appliances	X	X	X	
Weatherization Measures	X	X	X	X
Outreach & Assessment	X	X	X	X
In Home Energy Education	X	X	X	X
Education Workshops	X	X	X	X
Pilots	X	X	X	X
Training Center	X			X
Inspections	X	X	X	X
Advertising			X	
M&E Studies	X	X		X
Regulatory Compliance	X	X	X	X
Other Administration	X		X	X
Indirect Costs	X	X	X	X
<b>Oversight Costs</b>				
LIAB Start-up	X	X		
LIAB PY Past Year	X	X	X	
LIAB PY Present Year	X	X	X	X
CPUC Energy Division	X	X	X	X

Based on the bill savings methodology, the following values were calculated for each utility for each of the three years being assessed:

- the program costs,
- life cycle bill savings,
- bill savings to cost ratio, and
- per home average life cycle bill savings

PY2000 and PY2001 were completely analyzed and reported in the 2002 Bill Savings Report.

One might expect that the PY2000 and PY2001 bill savings values in this report should be the same as the values presented in the 2002 Bill Savings Report. However, the methodology for the life cycle bill savings uses actual energy rate data as they become available. Therefore, while the PY2002 energy rates were unknown for the analysis performed for the 2002 Bill Savings Report, the actual rates were known and used for the analysis in this report. This caused the PY2000 and PY2001 results to change between reports.

### ***3.2 Overall Results by Program Year and Utility***

Decision 01-12-020, Ordering Paragraph 4, requires the utilities to present a standardized set of tables summarizing the results both by utility and across utilities. The overall analysis results are summarized below by utility in Exhibit 3.2 and across utilities in Exhibit 3.3. These results, and discussion of the factors that explain variations, are addressed in the sections that follow these exhibits. Also, as was done in the 2002 Bill Savings Report, the results are then summarized by “utility service area”.



## Exhibit 3.2

### Results Summary by Utility

#### PG&E Summary

Program Year	Program Costs	Life Cycle Bill Savings	Bill Savings / Cost Ratio	Per Home Average Life Cycle Bill Savings
2000	\$ 25,211,145	\$ 16,349,572	0.65	\$ 500
2001	\$ 29,634,528	\$ 15,736,668	0.53	\$ 415
2002	\$ 65,599,305	\$ 34,650,898	0.53	\$ 490

#### SCE Summary

Program Year	Program Costs	Life Cycle Bill Savings	Bill Savings / Cost Ratio	Per Home Average Life Cycle Bill Savings
2000	\$ 7,885,542	\$ 12,864,463	1.63	\$ 278
2001	\$ 19,402,429	\$ 19,610,154	1.01	\$ 226
2002	\$ 13,971,543	\$ 13,095,830	0.94	\$ 441

#### SDG&E Summary

Program Year	Program Costs	Life Cycle Bill Savings	Bill Savings / Cost Ratio	Per Home Average Life Cycle Bill Savings
2000	\$ 6,414,270	\$ 3,215,210	0.50	\$ 235
2001	\$ 11,515,307	\$ 7,412,892	0.64	\$ 384
2002	\$ 12,355,709	\$ 8,802,381	0.71	\$ 625

#### SoCalGas Summary

Program Year	Program Costs	Life Cycle Bill Savings	Bill Savings / Cost Ratio	Per Home Average Life Cycle Bill Savings
2000	\$ 16,411,616	\$ 2,123,421	0.13	\$ 94
2001	\$ 22,596,860	\$ 3,027,615	0.13	\$ 92
2002	\$ 30,666,410	\$ 6,304,314	0.21	\$ 133

### Exhibit 3.3 Results Summary Across Utility

#### *Program Costs*

Program Year	PG&E	SCE	SDG&E	SoCalGas
2000	\$ 25,211,145	\$ 7,885,542	\$ 6,414,270	\$ 16,411,616
2001	\$ 29,634,528	\$ 19,402,429	\$ 11,515,307	\$ 22,596,860
2002	\$ 65,599,305	\$ 13,971,543	\$ 12,355,709	\$ 30,666,410

#### *Life Cycle Bill Savings*

Program Year	PG&E	SCE	SDG&E	SoCalGas
2000	\$ 16,349,572	\$ 12,864,463	\$ 3,215,210	\$ 2,123,421
2001	\$ 15,736,668	\$ 19,610,154	\$ 7,412,892	\$ 3,027,615
2002	\$ 34,650,898	\$ 13,095,830	\$ 8,802,381	\$ 6,304,314

#### *Bill Savings to Cost Ratio*

Program Year	PG&E	SCE	SDG&E	SoCalGas
2000	0.65	1.63	0.50	0.13
2001	0.53	1.01	0.64	0.13
2002	0.53	0.94	0.71	0.21

#### *Per Home Life Cycle Bill Savings*

Program Year	PG&E	SCE	SDG&E	SoCalGas
2000	\$ 500	\$ 278	\$ 235	\$ 94
2001	\$ 415	\$ 226	\$ 384	\$ 92
2002	\$ 490	\$ 441	\$ 625	\$ 133

While the results by and across utilities allows for some insight into the results of the program, a more detailed analysis and discussion of the results identifies some of the reasons for apparent variations. A discussion of the year-to-year differences for each utility will be presented first, followed by an analysis and discussion of the differences seen across utilities.

### 3.2.1 Year-to-Year Differences by Utility

The number of homes treated each year (Exhibit 3.4) helps explain some of the values in Exhibit 3.2 and Exhibit 3.3.

### Exhibit 3.4 Number of Homes Treated by Year by Utility

Program Year	PG&E	SCE	SDG&E	SoCalGas
2000	32,730	46,341	13,660	22,617
2001	37,935	86,903	19,315	33,046
2002	70,683	29,685	14,089	49,464

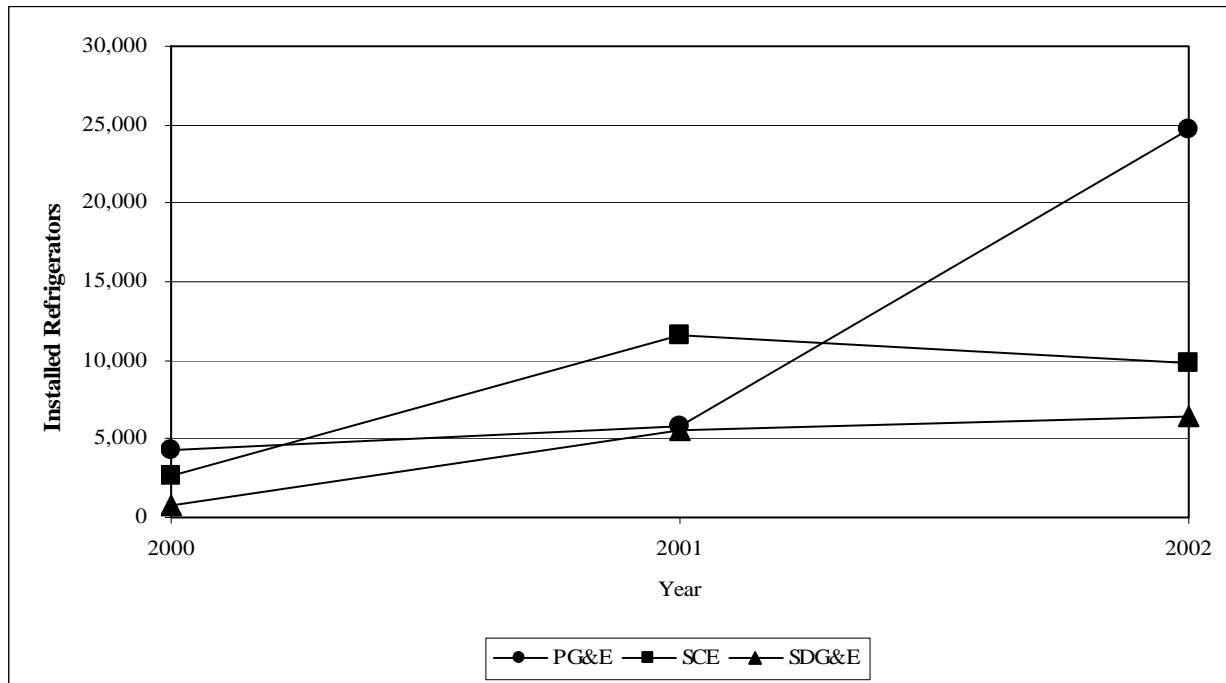
Exhibit 3.4 illustrates that while SCE and SDG&E had their highest per year installations in 2001 (for the three year period), SoCalGas showed steady and substantial increases over the period,

and PG&E saw a dramatic increase in the number of homes treated in 2002. This information will be used in the following discussions to explain some of the variations in cost and bill savings.

Exhibit 3.2 supplies a summary of the analysis results, by utility, from 2000 through 2002. The increased program costs for PY2001 across all utilities are due to the influx of SBX 5 money starting in the second quarter of 2001. The trends shown in Exhibit 3.2 are explained in the following utility-by-utility discussion. Detailed explanations are based on line-by-line examination of Exhibit 4.1 through Exhibit 4.23, which present in-depth cost breakdowns by utility. Readers wishing to review the accuracy of the conclusions may wish to refer to the cost or bill savings exhibit for the appropriate year, which are presented in Section 4.

One of the biggest reasons for differences across the three years for the three electric utilities has been the number of installed refrigerators, as shown in Exhibit 3.5. These utility-to-utility variations are discussed further below.

### Exhibit 3.5 Installed Refrigerators



*PG&E* – For PG&E, the largest difference between PY2002 and the previous years is the number of refrigerators installed in 2002. As shown in Exhibit 3.5, PG&E increased the number of refrigerators installed by a factor of five between 2001 and 2002. This was because there were two new initiatives in PY2002 that focused on refrigerators. The La Coopertiva initiative enlisted a consortium of community-based organizations (CBO's) to go out to hard-to-reach households and install refrigerators and CFLs. In addition, the Go-Back initiative provided new refrigerators to homes that had been weatherized sometime in the past 10 years but had not had a refrigerator installed at the time of the weatherization. These two initiatives installed 94% of the refrigerators

in the PY2002 program. The remaining 6% were installed through a third party initiative (3%) or from previous program years that were paid in PY2002 (3%).

Other than the refrigerators, there are three other measures with slight increases in installation rate (the number of homes with measures installed divided by the total number of homes served). Installation rate for hard-wired CFL porch lights increased from 0.1% to 0.9% to 9.4% of homes served over the three years. Portable evaporative cooler installations also increased over time (from 5.7% to 9% to 22.6% of homes served). Of the rapid deployment measures, PG&E installed set-back thermostats in a higher percentage of homes served in 2002 than in 2001 (6% in 2002 to 0.5% in 2001). There were whole house fans, evaporative cooler maintenance, and duct sealing and testing that were installed in PY2002 that were not included in the PY2001 program.

*SCE* – In PY2000, the weatherization measures continued to be bundled for calculations, making it difficult to compare to the other two years. However, installation rate of CFLs, both indoor and outdoor, have been decreasing over the three years. Indoor CFLs were installed at an average rate of 3.64 lamps per home served in PY2000, 3.18 lamps per home served in PY2001, and 1.49 lamps per home served in PY2002. Similarly, outdoor CFLs decreased in PY2002 from ~0.68 lamps per home served in both PY2000 and PY2001 to 0.49 lamps per home served in PY2002. While Exhibit 3.5 indicates that a slightly smaller number of refrigerators were installed in PY2002, the actual installation rate increased from 6% to 13% to 33% of homes served over the three years. Installation rates also increased for caulking, cover plate/gaskets, faucet aerators, low flow showerheads, minor home repairs, weatherstripping, and room air conditioners (see Appendix A). These increases in installation rates are counterbalanced by the decrease in number of homes reached in PY2002 over PY2001 (about 30% fewer homes in PY2002), both trends reflecting a refocusing of the SCE program in PY2002 from a program that served a large number of homes that received only CFLs to a program that provided a broader range of measures in each treated home.

Because the PY2002 program focused on increasing the total package to the home, the per-home cost increased over the previous years (more manpower was needed for the increased number of measures installed and the refrigerator measure was more expensive than other measures). This decreased SCE's bill savings to cost ratio for PY2002. The increase in bill savings per home (shown in the right hand column of Exhibit 3.2 for SCE) is driven by the increase in installed refrigerators, which provide a high savings per home, and the decreased number of homes served in PY2002 over previous years, which spreads the savings over few homes.

*SDG&E* – The number of refrigerators installed by SDG&E has increased steadily, as shown in Exhibit 3.5, while the majority of SDG&E's energy efficiency measures have shown a relatively stable installation rate over the three years (Appendix A). A minor decrease was seen in water heater pipe wrap in 2002. It fell from 9% to 5% to 2% of the homes served over the three years. SDG&E has slightly increased the installation rate between 2001 and 2002 (the only two years with these rapid deployment measures) of room air conditioners (from 1% to 4% of the homes served) and gas water heater replacements (from 2% to 4% of the homes served).

SDG&E's life cycle bill savings per home rose dramatically in 2002 due to an increase in the expected per unit impact applied for each installed refrigerator. Previous years used an impact of 402 kWh per refrigerator while PY2002 used the latest impact value of 645 kWh per refrigerator. That increase, in addition to the increased number of refrigerators installed, drove the rise in

SDG&E's overall bill savings estimate. Additionally, while the bill savings increased between 2001 and 2002, the number of homes served decreased by about 5,000 homes (Exhibit 3.4). Therefore, the greater savings were spread out across fewer homes, causing the per-home savings to increase dramatically over previous years.

*SoCalGas* – The PY2002 program reached substantially more homes than in previous years (as shown in Exhibit 3.4) with each home appearing to have received slightly less treatment overall. The installation rates decreased for the weatherization measures of water heater blankets, door weatherstripping, caulking, and, minor home repairs. Installation rates decreased slightly for faucet aerators and water heater pipe wrap as well (Appendix A). However, it should be stressed that these decreases in PY2002 are relative differences over the three years being considered, as SoCalGas installs most of these measures at quite a high rate. The duct sealing and testing rapid deployment measure was provided in PY2002.

The jump in the SoCalGas life cycle bill savings per home is due to the inclusion of an impact for furnace replacement and repair, which were not claimed in prior years. While the rate of these two measures did not change, the latest impact evaluation indicated that there was an impact seen by the homeowner for these measures. Subsequently, while PY2000 and PY2001 have no impacts for these measures, the PY2002 estimate includes a large therm impact for these measures that doubles the total bill savings for the program and increases the savings per home, even though the number of homes served has increased.

### **3.2.2 Year-to-Year Differences Across Service Area**

This section analyzes trends between the utility service areas, by year. In order to compare average customer bill savings across the state, it is useful to compare the total service by service area. For the purposes of this document, the SCE and SoCalGas programs were assessed as a single entity since they serve roughly the same customers.<sup>13</sup> Exhibit 3.6 presents the overall bill savings to cost ratios and per home life cycle bill savings values for each of the three “service areas”, along with the individual values for SCE and SoCalGas, for 2000 through 2002.

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<sup>13</sup> This is the same assessment protocol as was followed in the 2002 Bill Savings Report.

### Exhibit 3.6

#### Analysis by Service Area, Combined SCE and SoCalGas

##### *Bill Savings to Cost Ratio*

Program Year	PG&E	SDG&E	Combined SCE and SoCalGas	SCE	SoCalGas
2000	0.65	0.50	0.62	1.63	0.13
2001	0.53	0.64	0.54	1.01	0.13
2002	0.53	0.71	0.43	0.94	0.21

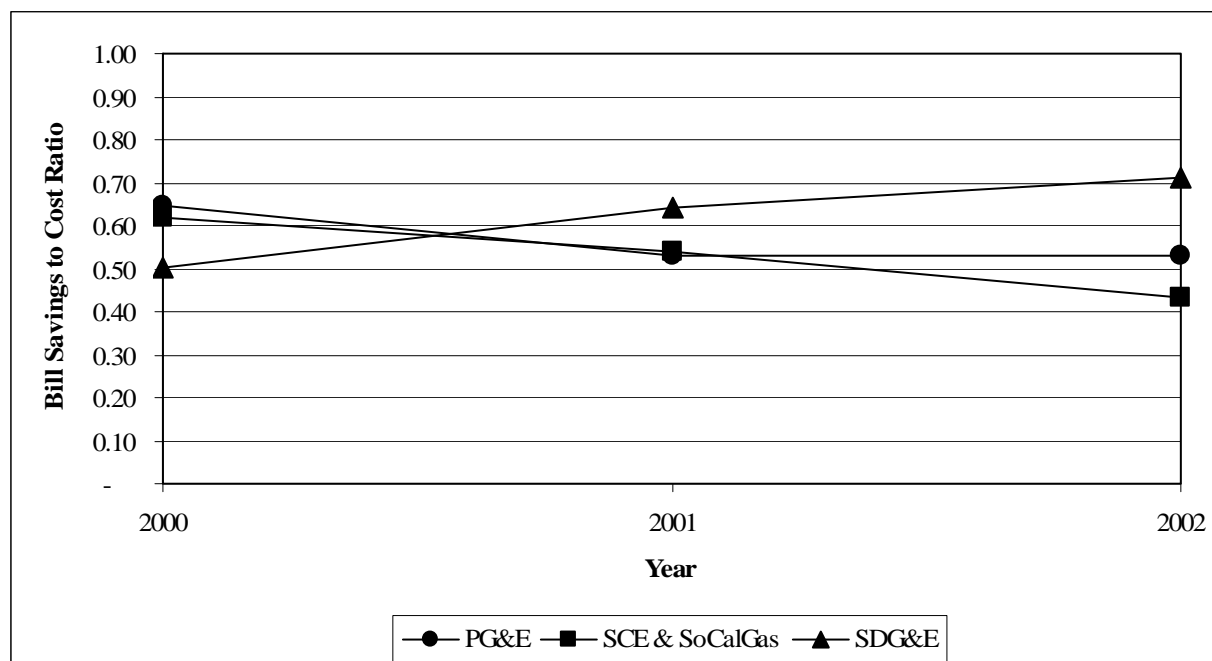
##### *Per Home Life Cycle Bill Savings*

Program Year	PG&E	SDG&E	Combined SCE and SoCalGas	SCE	SoCalGas
2000	\$ 500	\$ 235	\$ 371	\$ 278	\$ 94
2001	\$ 415	\$ 384	\$ 317	\$ 226	\$ 92
2002	\$ 490	\$ 625	\$ 574	\$ 441	\$ 133

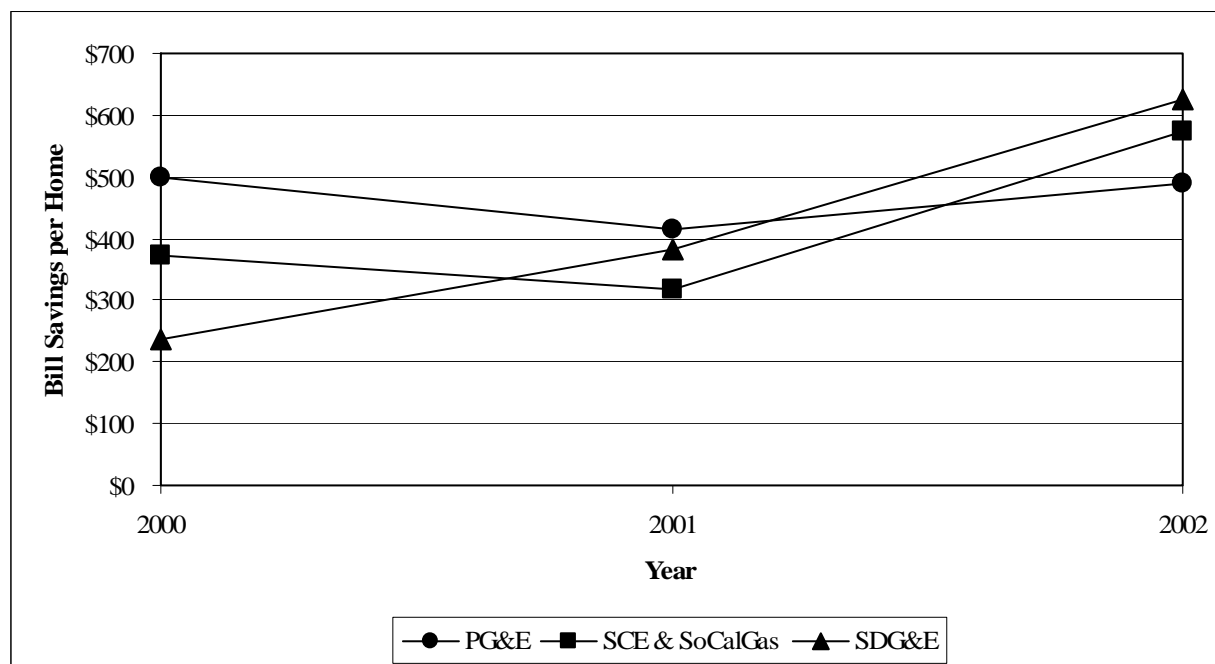
Exhibit 3.7 and Exhibit 3.8 present plots of the values shown in Exhibit 3.6.

### Exhibit 3.7

#### Graph of Bill Savings to Cost Ratio by Service Area



**Exhibit 3.8**  
**Graph of Bill Savings per Home by Service Area**



### 3.2.3 Analysis of Variables Controlling Service Area Differences

In an attempt to identify the reasons for the differences between 2002 and prior years as shown above, the costs and benefits presented in Exhibit 4.1 through Exhibit 4.23 were examined in detail. Because PY2000 and PY 2001 were fully analyzed in the 2002 Bill Savings Report, no other comment on the differences between the utilities is presented here for those years. The following trends help explain variation in the PY2002 values presented in Exhibit 3.6 through Exhibit 3.8.

#### **Utility Rates**

Exhibit 3.7 and Exhibit 3.8 indicate that the per-home savings are increasing over time across all utilities, although the bill savings to cost ratio varies among the utilities. A quick comparison of these two exhibits with similar graphs in the 2002 Bill Savings Report shows differences. These are due to the changed energy rates for 2002 among the utilities. As an example, PG&E's therm rate was quite high in PY2001, which led to high bill savings. In PY2002, those rates were down by over \$0.30 per therm. This decrease was carried through the life cycle analysis for PY2000 and PY2001, effectively decreasing the expected bill savings because of the energy rate change. Similarly, SDG&E's electric rate increased in 2002, leading to an increased expected bill savings from the electric measures installed under the program. If the energy rates are averaged across the three utilities, the bill savings to cost ratio are somewhat closer for PY2002 as shown in Exhibit 3.9

### Exhibit 3.9

#### Bill Savings to Cost Ratio with Modified Energy Rates

	PG&E	SCE/SoCalGas	SDG&E
Bill Savings to Cost Ratio	0.53	0.43	0.71
Actual PY2002 Energy Rate	0.1124 kWh 0.6235 Therm	0.1174 kWh 0.5311 Therm	0.1365 kWh 0.6957 Therm
Assumed Modified Energy Rate	0.1221 kWh 0.6168 Therm		
Modified Bill Savings to Cost Ratio	0.57	0.47	0.64

While Exhibit 3.9 decreases the variation of bill savings to cost ratio, it leaves larger variations than encountered in previous reports, so further explanatory variables were examined.

#### *Cost per Home Treated*

Another way to examine the potential variation among the utilities is to compare the program cost per home treated for the three “service areas”. Exhibit 3.10 provides the program costs per home treated for the three years studied in this report. The combined utility value is a weighted value based on the number of homes treated by each utility. Because the exact overlap was unknown, it was simply analyzed with an assumed 100% overlap of treated homes. While this is known to not be the case, it was felt that this approximation was adequate for the current analysis.

### Exhibit 3.10

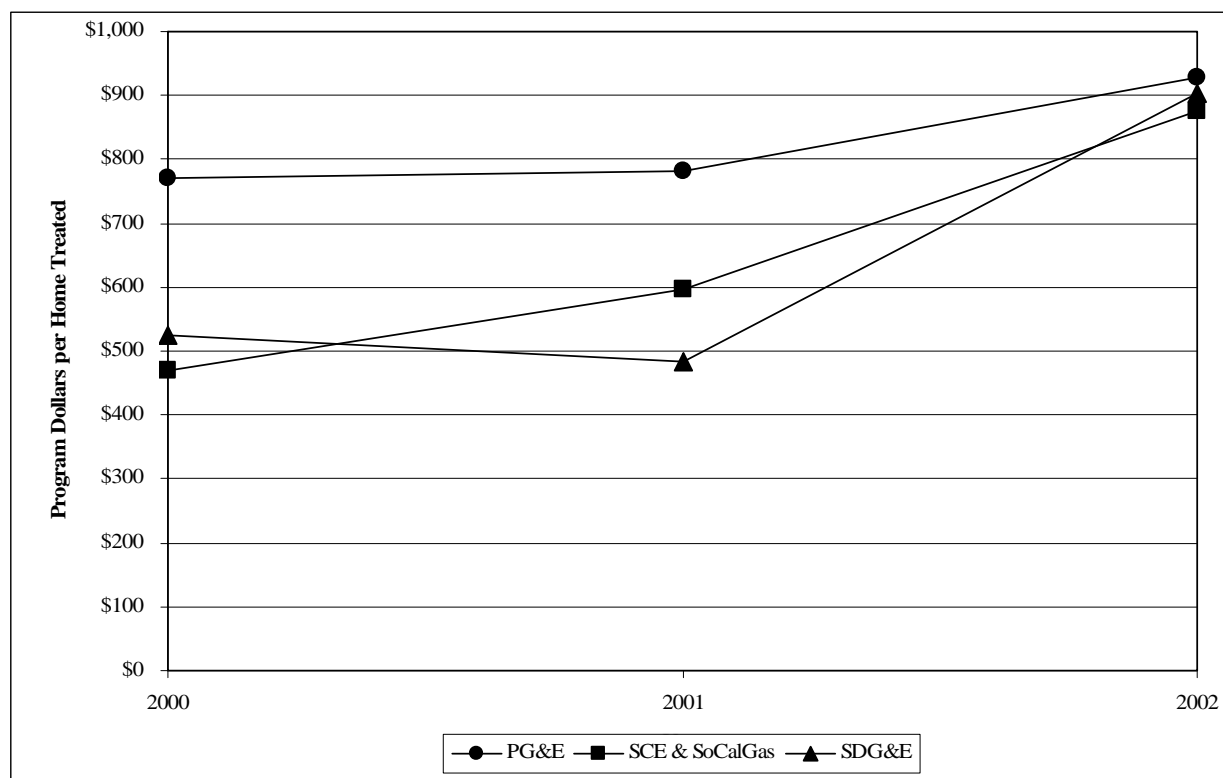
#### Program Costs per Home Treated

Program Year	PG&E	SDG&E	Combined SCE and SoCalGas	SCE	SoCalGas
2000	\$ 770	\$ 470	\$ 524	\$ 170	\$ 726
2001	\$ 781	\$ 596	\$ 483	\$ 223	\$ 684
2002	\$ 928	\$ 877	\$ 902	\$ 471	\$ 620

This information is presented graphically in Exhibit 3.11.



**Exhibit 3.11**  
**Graph of Program Costs per Home Treated**



As Exhibit 3.11 highlights two points, first, that the 2002 costs per home were very similar in PY2002, and second, that the cost per home has increased significantly for all three utilities in PY2002. These points will be discussed separately.

*Similar Cost per Home* – The fact that the cost per home is similar for all three utility service areas in PY2002 indicates that the reason for the relatively low bill savings to cost ratio for the SCE/SoCalGas service territory must be in the numerator, the bill saving value. An examination of Appendix A, which summarizes the percentage implementation of each measure type for PY2002 for each utility, shows that SoCalGas installs gas related measures at substantially higher rates than do PG&E and SDG&E. Since gas savings measures result in lower bill savings values per dollar spent (due to the relatively lower energy rate for gas and the generally higher install cost for gas measures) this directionally explains the lower bill savings to cost ratio for the combined SCE/SoCalGas entity.

*Increase in Cost per Home* – In an attempt to explain the increase in cost per home for all utilities in PY2002, the program costs were analyzed. Appendix B provides tables presenting the percent of the total program for a specific cost for the three years discussed in this report. This analysis indicated that PG&E is spending a greater percentage of total program dollars on energy efficiency measures in PY2002 than in previous years, with an almost 80% increase in electric appliance measures. Given the previously discussed increase in refrigerator installations, it is reasonable to assume that a large portion of these electric appliance measure installations are refrigerators, which have a high cost, resulting in a higher cost per home. SCE shows a higher percent of program dollars being spent on measures other than electric for PY2002. This is in

agreement with the previous statement that SCE is providing more measures to fewer homes in PY2002, thus driving up the cost per home. Further, as discussed earlier, SCE increased the rate of installation of refrigerators per home from 13% in 2001 to 33% in 2002, 150% increase in the percentage of homes served for this measure. Both the increased breadth of measures per home and the increase in the rate of installation of refrigerators help explain SCE's increase in cost per home in PY2002. SoCalGas shows little to no change in where the overall program dollars are flowing in PY2002 over previous years. [NOTE: a comment on SDG&E dollars will be added prior to the final report once the information is provided in early April.]

### **Refrigerator Effect**

As mentioned in the analysis of the utility differences across the years, the main driving force in the PY2002 program appears to be the refrigerator replacement measure. Exhibit 3.12 shows that there is a higher percentage of the homes receiving refrigerators in PY2002 than in prior years and that the impact for this measure has increased compared to PY2001. This led to the increased Bill Savings per home seen in Exhibit 3.8.

**Exhibit 3.12**  
**Critical Refrigerator Values for PY2002**

Measure	PG&E	SCE	SDG&E
Refrigerator Replacement Rate (Units per Home)	0.35	0.33	0.46
PY2000 and PY2001 Impact (kWh per Refrigerator Installed)	542	1,304 (PY2000) 542 (PY2001)	402
PY2002 Impact (kWh per Refrigerator Installed)	645	695 (MF) 711 (SF)	645

To demonstrate the effect of the differences in refrigerator installation rates, the PG&E value for units installed per home was applied to SDG&E. With the new number of installed refrigerators, the Bill Savings per Home and Bill Savings to Cost Ratio are as shown in Exhibit 3.13

**Exhibit 3.13**  
**Modified PY2002 Savings Estimates using PG&E Refrigerator Install Rate**

	PG&E	SCE/SoCalGas	SDG&E
<b>Bill Savings to Cost Ratio</b>	0.53	0.43	<b>0.59*</b>
<b>Bill Savings per Home</b>	\$ 490	\$ 574	<b>\$ 520*</b>

\* Modified savings estimate are in **Bold**, unmodified are not bold

This dampens the high SDG&E Bill Savings to Cost ratio and Bill Savings per Home values, and brings all three utility service areas into the same realm for both values. As discussed earlier, the 0.43 Bill Savings to Cost Ratio for the combined SCE/SoCalGas entity is lower than the other combined gas/electric utilities because the combined SCE/SoCalGas entity implements more gas measures per home than PG&E and SDG&E.

### ***Combined Effect of Refrigerator and Utility Rate Variables***

In an attempt to see if the combination of the adjustment in refrigerator installation rate for SDG&E and use of the average utility rates from Exhibit 3.9 would bring the bill savings to cost ratio and the bill savings per home closer, both adjustments were applied simultaneously in Exhibit 3.14.

#### **Exhibit 3.14**

#### **Modified PY2002 Savings Estimates using PG&E Refrigerator Install Rate and Common Energy Rates**

	<b>PG&amp;E</b>	<b>SCE/SoCalGas</b>	<b>SDG&amp;E</b>
<b>Modified Bill Savings to Cost Ratio</b>	0.57	0.47	0.53
<b>Modified Bill Savings per Home</b>	\$ 525	\$ 613	\$ 464

As can be seen, this combination of adjustments brings the bill savings to cost ratios closer than those presented in Exhibit 3.13 but increases the variation in the bill savings per home measure. This is because SDG&E had both the highest energy rates and the highest refrigerator installation rate per home in PY2002.

Overall, a comparison of Exhibit 3.13 and Exhibit 3.14 with Exhibit 3.6 through Exhibit 3.8 illustrates that when energy rate and measure installation rate variations are accounted for, the bill savings to cost ratios and bill savings per home are in the same range across utilities and are comparable to the values experienced during PY2000 and PY2001.

### ***3.3 Overall Comment on Bill Savings Comparisons***

During the three year period from 2000 to 2002, the three electric utilities have been steadily increasing the rate at which refrigerators are installed. While bringing about more bill savings and more bill savings per home, these higher refrigerator installation rates also increase the cost per home treated and variation between utilities in bill savings to cost ratio. When the refrigerator installation rate and energy rate differences are accounted for, the PY2002 programs resulted in very comparable bill savings to cost ratios across the state. The refrigerator installation rate alone seems to account for most of the variation in the bill savings per home program indicator.

Although the same measures are offered across the state, the primary controlling factor in per home savings is the installation rates of the measures. However, if measure implementation rate and energy rate differences are accounted for, the LIEE programs appear to be continuing to offering similar programs statewide.

## **4 DETAILED TABLES**

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This section present the program costs as broken down in RRM Table TA 7.2 and the life cycle bill savings by measure type, by utility.

### ***4.1 Program Costs***

This section contains the detailed program costs for each utility and each program year.

**Exhibit 4.1**

**PG&E Table TA 7.2 – Program Year 2000**

	Costs Recorded by Cost Element - 2000			
	Labor	Non-Labor	Contract	Total
<b>Energy Efficiency</b>				
Gas Appliances	\$ (29,607)	\$ 2,379	\$ 199,295	\$ 172,067
Electric Appliances	\$ 66,550	\$ 980	\$ 4,646,051	\$ 4,713,581
Weatherization Measures	\$ 150,812	\$ 19,533	\$ 10,270,964	\$ 10,441,309
Outreach & Assessment	\$ -	\$ -	\$ 685,515	\$ 685,515
In Home Energy Education	\$ 148,761	\$ 155,611	\$ 1,602,762	\$ 1,907,135
Education Workshops	\$ 14,212	\$ 15,083	\$ 60,764	\$ 90,059
<i>Energy Efficiency TOTAL</i>	\$ 350,728	\$ 193,586	\$ 17,465,352	\$ 18,009,666
<b>Pilots</b>				
Attic Venting	\$ 4,297	\$ 2,945	\$ 125,493	\$ 132,735
Pilot C	\$ -	\$ -	\$ -	\$ -
<i>Total Pilots</i>	\$ 4,297	\$ 2,945	\$ 125,493	\$ 132,735
Training Center	\$ 72,072	\$ 40,810	\$ 79,810	\$ 192,692
Inspections	\$ 609,174	\$ 421,674	\$ 1,405,034	\$ 2,435,882
Advertising	\$ -	\$ -	\$ -	\$ -
M&E Studies	\$ 12,818	\$ 12,884	\$ 17,878	\$ 43,580
Regulatory Compliance	\$ 129,345	\$ 101,516	\$ 31,108	\$ 261,969
Other Administration	\$ 779,800	\$ 490,583	\$ 1,078,649	\$ 2,349,032
Indirect Costs <sup>1</sup>	\$ 326,133	\$ 273,016	\$ 1,108,294	\$ 1,707,443
<b>Oversight Costs</b>				
LIAB Start-up	\$ -	\$ -	\$ 3,018	\$ 3,018
LIAB PY Past Year	\$ -	\$ -	\$ 27,533	\$ 27,533
LIAB PY Present Year	\$ -	\$ -	\$ 4,555	\$ 4,555
CPUC Energy Division	\$ -	\$ -	\$ 43,039	\$ -
<i>Total Oversight Costs</i>	\$ -	\$ -	\$ 78,145	\$ 78,145
<b>Total Costs<sup>2</sup></b>	<b>\$ 2,284,367</b>	<b>\$ 1,537,015</b>	<b>\$ 21,389,762</b>	<b>\$ 25,211,145</b>

Notes:

1 Indirect costs include Combustable Appliances Safety Testing, which is not part of the LIEE budget.

**Exhibit 4.2**

**PG&E Table TA 7.2 – Program Year 2001**

	Costs Recorded by Cost Element - 2001			
	Labor	Non-Labor	Contract	Total
<b>Energy Efficiency</b>				
Gas Appliances	\$ -	\$ 18,148	\$ 713,718	\$ 731,866
Electric Appliances	\$ -	\$ 52,836	\$ 5,650,304	\$ 5,703,140
Weatherization Measures	\$ -	\$ 92,482	\$ 9,900,486	\$ 9,992,968
Outreach & Assessment	\$ 1,488	\$ 46,470	\$ 1,219,258	\$ 1,267,216
In Home Energy Education	\$ 292,012	\$ 475,822	\$ 1,343,285	\$ 2,111,119
Education Workshops	\$ 23,974	\$ 35,863	\$ 14,055	\$ 73,892
<b>Energy Efficiency TOTAL</b>	<b>\$ 317,474</b>	<b>\$ 721,621</b>	<b>\$ 18,841,107</b>	<b>\$ 19,880,202</b>
<b>Pilots</b>				
Attic Venting	\$ 4,147	\$ 5,187	\$ 388	\$ 9,722
Landlord Rebates	\$ 5,690	\$ 7,892	\$ 194	\$ 13,775
<b>Total Pilots</b>	<b>\$ 9,837</b>	<b>\$ 13,079</b>	<b>\$ 582</b>	<b>\$ 23,497</b>
Training Center	\$ 66,953	\$ 108,651	\$ 62,020	\$ 237,624
Inspections	\$ 460,954	\$ 647,330	\$ 2,144,039	\$ 3,252,323
Advertising	\$ -	\$ -	\$ -	\$ -
M&E Studies <sup>1</sup>	\$ 16,709	\$ 29,918	\$ 186,105	\$ 232,732
Regulatory Compliance <sup>2</sup>	\$ 171,600	\$ 150,116	\$ 238,837	\$ 560,553
Other Administration <sup>3</sup>	\$ 615,866	\$ 809,547	\$ 2,530,390	\$ 3,955,803
Indirect Costs <sup>4</sup>	\$ 82,566	\$ 1,024,683	\$ 339,324	\$ 1,446,573
<b>Oversight Costs</b>			\$ -	
LIAB Start-up	\$ -	\$ -	\$ -	\$ -
LIAB PY Past Year	\$ -	\$ -	\$ -	\$ -
LIAB PY Present Year	\$ -	\$ -	\$ -	\$ -
CPUC Energy Division	\$ -	\$ -	\$ 45,221	\$ 45,221
<b>Total Oversight Costs</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 45,221</b>	<b>\$ 45,221</b>
<b>Total Costs<sup>5</sup></b>	<b>\$ 1,741,959</b>	<b>\$ 3,504,945</b>	<b>\$ 24,387,624</b>	<b>\$ 29,634,528</b>

Notes:

- 1 M&E studies include: Customer Bill of Right, Pay for Measures, Bill Savings, and Cost Effectiveness Testing.
- 2 Regulatory Compliance includes LIEE Standardization, RRM Working Group Report, CBO Access and Leveraging Report, and Monthly CPUC Reports.
- 3 Includes PG&E's program management only. Prime contractor's management is included in the weatherization costs.
- 4 Indirect costs include Combustible Appliances Safety Testing, which is not part of the LIEE budget.
- 5 Total costs include CAS Testing, which is not part of the LIEE budget.

### Exhibit 4.3

### PG&E Table TA 7.2 – Program Year 2002

	Costs Recorded by Cost Element - 2002			
	Labor	Non-Labor	Contract	Total
<b>Energy Efficiency</b>				
Gas Appliances	\$ 10,427	\$ 23,933	\$ 1,378,135	\$ 1,412,495
Electric Appliances <sup>6</sup>	\$ -	\$ 166,002	\$ 22,042,062	\$ 22,208,064
Weatherization Measures	\$ -	\$ 280,709	\$ 20,778,321	\$ 21,059,030
Outreach & Assessment	\$ 4,307	\$ 219,787	\$ 3,594,013	\$ 3,818,107
In Home Energy Education	\$ 273,488	\$ 274,532	\$ 2,671,246	\$ 3,219,266
Education Workshops	\$ 3,910	\$ 3,579	\$ 609	\$ 8,098
<b>Energy Efficiency TOTAL</b>	<b>\$ 292,133</b>	<b>\$ 968,541</b>	<b>\$ 50,464,386</b>	<b>\$ 51,725,060</b>
<b>Pilots</b>				
Attic Venting	\$ 1,847	\$ 1,163	\$ 41,615	\$ 44,624
Landlord Rebates	\$ 4,467	\$ 13,251	\$ 390,630	\$ 408,347
Phase 4 Pilot	\$ 38,875	\$ 20,221	\$ 30,955	\$ 90,052
<b>Total Pilots</b>	<b>\$ 45,189</b>	<b>\$ 34,635</b>	<b>\$ 463,200</b>	<b>\$ 543,024</b>
Training Center	\$ 50,142	\$ 71,289	\$ 69,630	\$ 191,061
Inspections	\$ 1,230,511	\$ 1,208,585	\$ 809,515	\$ 3,248,611
Advertising	\$ -	\$ -	\$ -	\$ -
M&E Studies <sup>1</sup>	\$ 443	\$ (360)	\$ 108,172	\$ 108,255
Regulatory Compliance <sup>2</sup>	\$ 189,015	\$ 174,328	\$ 311,184	\$ 674,528
Other Administration <sup>3</sup>	\$ 697,666	\$ 721,895	\$ 4,320,397	\$ 5,739,957
Indirect Costs <sup>4</sup>	\$ -	\$ -	\$ 3,329,716	\$ 3,329,716
<b>Oversight Costs</b>				
LIOB Expense	\$ -	\$ -	\$ -	\$ -
CPUC Energy Division	\$ -	\$ -	\$ 39,094	\$ 39,094
<b>Total Oversight Costs</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 39,094</b>	<b>\$ 39,094</b>
<b>Total Costs<sup>5</sup></b>	<b>\$ 2,505,098</b>	<b>\$ 3,178,913</b>	<b>\$ 59,915,293</b>	<b>\$ 65,599,305</b>

Notes:

- <sup>1</sup> M&E studies include: LIEE Program Evaluations, Bill Savings, and Cost Effectiveness Testing.
- <sup>2</sup> Regulatory Compliance includes LIEE Standardization, RRM Working Group Report, CBO Access and Leveraging Report, and Monthly CPUC Reports.
- <sup>3</sup> Includes PG&E's program management and prime contractor's management.
- <sup>4</sup> Indirect costs include Combustible Appliances Safety (CAS) Testing, which is not part of the LIEE budget.
- <sup>5</sup> Total costs include CAS Testing, which is not part of the LIEE budget.
- <sup>6</sup> Excludes \$732,876 which was already reported in the 2002 AEAP filing as committed refrigerators and evaporative coolers.

**Exhibit 4.4**

**SCE Table TA 7.2 – Program Year 2000**

	Costs Recorded by Cost Element - 2000			
	Labor	Non-Labor	Contract	Total
<b>Energy Efficiency</b>				
- Gas Appliances	\$ -	\$ -	\$ -	\$ -
- Electric Appliances	\$ 87,001	\$ 36,633	\$ 3,329,945	\$ 3,453,579
- Weatherization	\$ 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	\$ -	\$ -	\$ -	\$ -
<i>Energy Efficiency TOTAL</i>	\$ 254,103	\$ 249,089	\$ 6,982,853	\$ 7,486,045
<b>Pilots</b>				
- Pilot (A)	\$ -	\$ -	\$ -	\$ -
- Pilot (B)	\$ -	\$ -	\$ -	\$ -
<i>Total Pilots</i>	\$ -	\$ -	\$ -	\$ -
Training Center	\$ -	\$ -	\$ -	\$ -
Inspections	\$ 45,425	\$ 4,143	\$ 32,826	\$ 82,394
Advertising	\$ -	\$ -	\$ -	\$ -
M&E Studies	\$ 13,000	\$ -	\$ -	\$ 13,000
Regulatory Compliance	\$ 125,000	\$ -	\$ -	\$ 125,000
Other Administration <sup>1</sup>	\$ -	\$ -	\$ -	\$ -
Indirect Costs	\$ 167,736	\$ -	\$ -	\$ 167,736
<b>Oversight Costs</b>				
- LIAB Start-up	\$ -	\$ -	\$ -	\$ -
- LIAB PY Past Year	\$ -	\$ -	\$ 314	\$ 314
- LIAB PY Present Year	\$ -	\$ -	\$ 8,917	\$ 8,917
CPUC Energy Division	\$ -	\$ -	\$ 2,137	\$ 2,137
<i>Total Oversight Costs</i>	\$ -	\$ -	\$ 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>

<sup>1</sup> These costs not included within SCE's LIEE budget. They were included within departmental budgets outside of LIEE.



**Exhibit 4.5**

**SCE Table TA 7.2 – Program Year 2001**

	Costs Recorded by Cost Element - 2001			
	Labor	Non-Labor	Contract	Total
<b>Energy Efficiency</b>				
- Gas Appliances	\$ -	\$ -	\$ -	\$ -
- Electric Appliances <sup>1</sup>	\$ 319,849	\$ 417,652	\$ 15,440,280	\$ 16,177,781
- 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
<i>Energy Efficiency TOTAL</i>	\$ 405,424	\$ 900,239	\$ 17,231,926	\$ 18,537,589
<b>Pilots</b>				
- Pilot (A)	\$ -	\$ -	\$ -	\$ -
- Pilot (B)	\$ 11,338	\$ 734	\$ 398,457	\$ 410,529
<i>Total Pilots</i>	\$ 11,338	\$ 734	\$ 398,457	\$ 410,529
Training Center	\$ -	\$ -	\$ -	\$ -
Inspections	\$ -	\$ -	\$ 103,523	\$ 103,523
Advertising	\$ -	\$ -	\$ -	\$ -
M&E Studies	\$ 25,000	\$ -	\$ -	\$ 25,000
Regulatory Compliance	\$ 65,000	\$ -	\$ -	\$ 65,000
Other Administration	\$ -	\$ -	\$ -	\$ -
Indirect Costs <sup>2</sup>	\$ -	\$ 222,645	\$ -	\$ 222,645
<b>Oversight Costs</b>				
- LIAB Start-up	\$ -	\$ -	\$ -	\$ -
- LIAB PY Past Year	\$ -	\$ -		\$ -
- LIAB PY Present Year	\$ -	\$ -	\$ -	\$ -
CPUC Energy Division	\$ -	\$ 38,143	\$ -	\$ 38,143
<i>Total Oversight Costs</i>	\$ -	\$ 38,143	\$ -	\$ 38,143
<b>Total Costs</b>	<b>\$ 506,762</b>	<b>\$ 1,161,761</b>	<b>\$ 17,733,906</b>	<b>\$ 19,402,429</b>

1 Devices cost associated with 2001 installations are included (AEAP filing)

2 Program costs that are not part of the LIEE budget

**Exhibit 4.6**

**SCE Table TA 7.2 – Program Year 2002**

	Costs Recorded by Cost Element - 2002			
	Labor	Non-Labor	Contract	Total
<b>Energy Efficiency</b>				
- Gas Appliances	\$ -	\$ -	\$ -	\$ -
- Electric Appliances	801,645	139,150	9,710,842	\$ 10,651,637
- Weatherization	152,719	140,116	780,141	\$ 1,072,976
- Outreach & Assessment	-	-	219,046	\$ 219,046
- In Home Energy Education	9,070	8,156	1,066,711	\$ 1,083,937
- Education Workshop	\$ -	\$ -	\$ -	\$ -
<i>Energy Efficiency TOTAL</i>	\$ 963,435	\$ 287,422	\$ 11,776,739	\$ 13,027,596
<b>Pilots</b>				
- Pilot (Cool Center)	34,312	2,770	398,537	\$ 435,619
- Pilot (B)				\$ -
<i>Total Pilots</i>				\$ 435,619
Training Center				\$ -
Inspections			132,953	\$ 132,953
Advertising				\$ -
M&E Studies	25,044			\$ 25,044
Regulatory Compliance	65,004			\$ 65,004
Other Administration				\$ -
Indirect Costs	252,088			\$ 252,088
<b>Oversight Costs</b>				
- LIAB Start-up	\$ -	\$ -	\$ -	\$ -
- LIAB PY Past Year	\$ -	\$ -		\$ -
- LIAB PY 2002	\$ -	14,460	\$ -	\$ 14,460
CPUC Energy Division	\$ -	18,779	\$ -	\$ 18,779
<i>Total Oversight Costs</i>	\$ -	\$ 33,239	\$ -	\$ 33,239
<b>Total Costs</b>	<b>\$ 1,339,883</b>	<b>\$ 323,431</b>	<b>\$ 12,308,229</b>	<b>\$ 13,971,543</b>

**Exhibit 4.7**

**SDG&E Table TA 7.2 – Program Year 2000**

	Costs Recorded by Cost Element - 2000			
	Labor	Non-Labor	Contract	TOTAL
<b>Energy Efficiency</b>				
- Gas Appliances	\$ 9,124	\$ 6,954	\$ 601,748	\$ 617,826
- Electric Appliances	\$ 19,677	\$ 9,583	\$ 915,546	\$ 944,806
- Weatherization Measures	\$ 188,191	\$ 140,697	\$ 3,220,409	\$ 3,549,298
- Outreach Assessment/In Home Energy Education	\$ 4,562	\$ 3,477	\$ 676,884	\$ 684,923
- Education Workshops	\$ 15,452	\$ 7,059	\$ 181,178	\$ 203,690
<i>Energy Efficiency TOTAL</i>	\$ 237,008	\$ 167,771	\$ 5,595,765	\$ 6,000,543
<b>Pilots</b>				
- Pilot (A)	\$ -	\$ -	\$ 1,277	\$ 1,277
- Pilot (B)	\$ -	\$ -	\$ -	\$ -
<i>Total Pilots</i>	\$ -	\$ -	\$ 1,277	\$ 1,277
Training Center	\$ -	\$ -	\$ -	\$ -
Inspections	\$ 189,268	\$ 40,748	\$ 15,961	\$ 245,978
Advertising	\$ -	\$ -	\$ -	\$ -
M&E Studies	\$ -	\$ -	\$ -	\$ -
Regulatory Compliance	\$ -	\$ -	\$ -	\$ -
Other Administration	\$ 18,951	\$ 24,662	\$ 68,901	\$ 112,513
Indirect Costs		\$ -	\$ -	\$ -
<b>Oversight Costs</b>				
- LIAB Start-Up	\$ -	\$ -	\$ -	\$ -
- LIAB PY Past Year	\$ -	\$ -	\$ -	\$ -
- LIAB PY Present Year	\$ -	\$ -	\$ 37,566	\$ 37,566
- CPUC Energy Division	\$ -	\$ -	\$ 16,393	\$ 16,393
<i>Total Oversight Costs</i>				\$ 53,958
<b>Total Costs</b>	<b>\$ 445,227</b>	<b>\$ 233,181</b>	<b>\$ 5,735,863</b>	<b>\$ 6,414,270</b>

**Exhibit 4.8**

**SDG&E Table TA 7.2 – Program Year 2001**

	Costs Recorded by Cost Element - 2001			
	Labor	Non-Labor	Contract	TOTAL
<b>Energy Efficiency</b>				
- Gas Appliances	\$ 9,998	\$ 12,859	\$ 1,017,848	\$ 1,040,704
- Electric Appliances	\$ 2,199	\$ 27,783	\$ 4,563,897	\$ 4,593,879
- Weatherization Measures	\$ 114,837	\$ 207,635	\$ 3,478,746	\$ 3,801,217
- Outreach Assessment	\$ -	\$ 4,251	\$ 212,716	\$ 216,967
- In Home Energy Education	\$ 18,398	\$ 41,019	\$ 749,329	\$ 808,746
- Education Workshops	\$ 12,524	\$ 9,465	\$ 260,547	\$ 282,536
<i>Energy Efficiency TOTAL</i>	\$ 157,956	\$ 303,012	\$ 10,283,083	\$ 10,744,050
<b>Pilots</b>				
- Pilot (A)	\$ -	\$ -	\$ -	\$ -
- Pilot (B)	\$ -	\$ -	\$ -	\$ -
<i>Total Pilots</i>	\$ -	\$ -	\$ -	\$ -
Training Center	\$ -	\$ -	\$ -	\$ -
Inspections	\$ 71,625	\$ 75,738	\$ 257,412	\$ 404,775
Advertising	\$ -	\$ -	\$ -	\$ -
M&E Studies	\$ -	\$ -	\$ -	\$ -
Regulatory Compliance	\$ 126,456	\$ 107,387	\$ 116,092	\$ 349,936
Other Administration	\$ -	\$ -	\$ -	\$ -
Indirect Costs	\$ -	\$ -	\$ -	\$ -
<b>Oversight Costs</b>				
- LIAB Start-Up	\$ -	\$ -	\$ -	\$ -
- LIAB PY Past Year	\$ -	\$ -	\$ -	\$ -
- LIAB PY Present Year	\$ -	\$ 162	\$ -	\$ 162
- CPUC Energy Division	\$ -	\$ 16,385	\$ -	\$ 16,385
<i>Total Oversight Costs</i>	\$ -	\$ 16,547	\$ -	\$ 16,547
<i>Total Costs</i>	\$ 356,038	\$ 502,684	\$ 10,656,586	\$ 11,515,307

**Exhibit 4.9**

**SDG&E Table TA 7.2 – Program Year 2002**

This table will be provided by SDG&E in early April, 2003.

**Exhibit 4.10**

**SoCalGas Table TA 7.2 – Program Year 2000**

	Costs Recorded by Cost Element			
	Labor	Non-Labor	Contract	Total
<b>Energy Efficiency</b>				
Gas Appliances	\$ 234,877	\$ 6,621	\$ 3,195,231	\$ 3,436,729
Weatherization Measures	\$ -	\$ -	\$ 10,700,419	\$ 10,700,419
Outreach & Assessment / In Home Energy Education	\$ -	\$ -	\$ -	\$ -
Education Workshops	\$ 34,530	\$ -	\$ 617,702	\$ 652,232
<i>Energy Efficiency TOTAL</i>	\$ 269,407	\$ 6,621	\$ 14,513,352	\$ 14,789,380
<i>Total Pilots</i>	\$ -	\$ -	\$ -	\$ -
Training Center	\$ 164,611	\$ 11,487	\$ -	\$ 176,098
Inspections	\$ -	\$ -	\$ -	\$ -
Advertising	\$ -	\$ -	\$ -	\$ -
M&E Studies	\$ -	\$ 28,050	\$ -	\$ 28,050
Regulatory Compliance	\$ -	\$ -	\$ -	\$ -
Other Administration	\$ 628,269	\$ 425,430	\$ 326,984	\$ 1,380,683
Indirect Costs	\$ -	\$ -	\$ -	\$ -
<b>Oversight Costs</b>				
LIAB Start-up	\$ -	\$ -	\$ -	\$ -
LIAB PY Past Year	\$ -	\$ 8,284	\$ -	\$ 8,284
LIAB PY Present Year	\$ -	\$ -	\$ -	\$ -
CPUC Energy Division	\$ -	\$ 29,121	\$ -	\$ 29,121
<i>Total Oversight Costs</i>	\$ -	\$ -	\$ -	\$ -
<i>Total Program Costs</i>	\$ 1,062,287	\$ 508,993	\$ 14,840,336	\$ 16,411,616

**Exhibit 4.11**

**SoCalGas Table TA 7.2 – Program Year 2001**

	Costs Recorded by Cost Element			
	Labor	Non-Labor	Contract	Total
<b>Energy Efficiency</b>				
Gas Appliances	\$ 248,952	\$ -	\$ 5,311,819	\$ 5,560,771
Electric Appliances	\$ -	\$ -	\$ -	\$ -
Weatherization Measures	\$ -	\$ -	\$ 11,508,939	\$ 11,508,939
Outreach & Assessment	\$ -	\$ -	\$ 1,716,929	\$ 1,716,929
In Home Energy Education	\$ -	\$ -	\$ 730,604	\$ 730,604
Education Workshops	\$ -	\$ -	\$ -	\$ -
<i>Energy Efficiency TOTAL</i>	\$ 248,952	\$ -	\$ 19,268,291	\$ 19,517,243
<b>Pilots</b>				
Attic Venting	\$ -	\$ -	\$ -	\$ -
<i>Total Pilots</i>	\$ -	\$ -	\$ -	\$ -
Administration	\$ -	\$ -	\$ -	\$ -
Training Center	\$ 173,617	\$ -	\$ 33,600	\$ 207,217
Inspections	\$ -	\$ -	\$ 434,453	\$ 434,453
Advertising	\$ -	\$ -	\$ 124,708	\$ 124,708
M&E Studies	\$ -	\$ -	\$ 182,752	\$ 182,752
Regulatory Compliance	\$ 246,785	\$ -	\$ 117,416	\$ 364,201
Other Administration	\$ 479,371	\$ -	\$ 1,214,670	\$ 1,694,041
Indirect Costs	\$ -	\$ -	\$ 44,185	\$ 44,185
<b>Oversight Costs</b>				
LIOB Expenses	\$ -	\$ -	\$ -	\$ -
CPUC Energy Division	\$ -	\$ -	\$ 28,060	\$ 28,060
<i>Total Oversight Costs</i>	\$ -	\$ -	\$ 28,060	\$ 28,060
<b>Total Program Costs</b>	<b>\$ 1,148,724</b>	<b>\$ -</b>	<b>\$ 21,448,136</b>	<b>\$ 22,596,860</b>

**Exhibit 4.12**

**SoCalGas Table TA 7.2 – Program Year 2002**

	Costs Recorded by Cost Element			
	Labor	Non-Labor	Contract	Total
<b>Energy Efficiency</b>				
Gas Appliances	\$ 203,973.67	\$ -	\$ 7,357,564.33	\$ 7,561,538
Electric Appliances	\$ -	\$ -	\$ -	\$ -
Weatherization Measures	\$ -	\$ -	\$ 15,771,168.00	\$ 15,771,168
Outreach & Assessment	\$ -	\$ -	\$ 2,604,628.00	\$ 2,604,628
In Home Energy Education	\$ -	\$ -		\$ -
Education Workshops	\$ -		\$ 803,703.00	\$ 803,703
<i>Energy Efficiency TOTAL</i>	\$ 203,974	\$ -	\$ 26,537,063	\$ 26,741,037
<b>Pilots</b>				
<i>Total Pilots</i>	\$ -	\$ -	\$ -	\$ -
Administration	\$ -	\$ -	\$ -	\$ -
Training Center	\$ 233,184.88		\$ 16,578.12	\$ 249,763
Inspections	\$ -		\$ 524,047.00	\$ 524,047
Advertising	\$ -		\$ 194,500.00	\$ 194,500
M&E Studies	\$ -		\$ 310,049.00	\$ 310,049
Regulatory Compliance	\$ -		\$ 352,628.00	\$ 352,628
Other Administration	\$ 867,527.46		\$ 1,404,695.54	\$ 2,272,223
Indirect Costs			\$ 2,040.00	\$ 2,040
<b>Oversight Costs</b>				
LIOB Expenses				\$ -
CPUC Energy Division			\$ 20,123.00	\$ 20,123
<i>Total Oversight Costs</i>				\$ 20,123
<b>Total Program Costs</b>	<b>\$ 1,304,686</b>	<b>\$ -</b>	<b>\$ 29,361,724</b>	<b>\$ 30,666,410</b>

Notes:

SoCalGas SAP Accounting System records costs by Labor and Contract only.

In-Home Energy Education & EE Workshops shown as combined total.

## ***4.2 Detailed Life Cycle Bill Savings***

This section contains the detailed life cycle bill savings for each utility and each program year. The values are for a 3% escalation rate.



**Exhibit 4.13**

**PG&E Life Cycle Bill Savings– Program Year 2000**

Measure Description	Number Installed	Per Measure Electric Impact (kWh)		Per Measure Gas Impact (Therms)	EUL	Total Measure Life Cycle Bill Savings (\$)
		SH	AC			
Attic Access Weatherstripping - (98 & 99)	1,541	2.97		1.26	5	\$ 8,221
Attic Access Weatherstripping - sf	8,407	13.60	6.50	1.43	5	\$ 47,633
Attic Access Weatherstripping - mf	797	12.30	5.10	0.07	5	\$ 1,042
Attic Access Weatherstripping - mh	6	6.80	3.25	1.51	5	\$ 30
Attic Insulation - Gas	807	59.90		26.18	25	\$ 268,541
Attic Insulation - sf	3,657	271.70	129.90	29.00	25	\$ 1,265,042
Attic Insulation - mf	211	266.10	102.00	2.90	25	\$ 20,298
Caulking (98 & 99)	4,068	2.08		0.75	5	\$ 13,550
Caulking - sf	16,281	10.20	4.88	1.08	5	\$ 69,247
Caulking - mf	7,034	9.23	3.83	0.10	5	\$ 7,813
Caulking - mh	1,504	10.20	4.88	1.08	5	\$ 6,141
Compact Fluorescent Hard Wired Porch Light	48	70.00	0.00	0.00	20	\$ 4,713
Compact Fluorescent Lights	158,025	57.80	0.00	0.00	8	\$ 6,715,180
Door Weatherstripping - (98 & 99)	3,839	6.30		2.35	5	\$ 39,652
Door Weatherstripping - sf	15,806	30.60	14.63	3.23	5	\$ 201,681
Door Weatherstripping - mf	5,832	27.68	11.48	0.30	5	\$ 19,433
Door Weatherstripping - mh	1,430	30.60	14.63	3.23	5	\$ 17,518
Faucet Aerators	31,882	0.00	0.00	3.50	5	\$ 341,528
Furnace Filters - (98 & 99)	1,751	2.13		0.85	5	\$ 6,412
Furnace Filters - sf	8,420	10.20	4.88	1.08	5	\$ 35,813
Furnace Filters - mf	2,101	9.23	3.83	0.10	5	\$ 2,334
Furnace Filters - mh	1,103	10.20	4.88	1.08	5	\$ 4,504
Low Flow Showerhead	29,356	247.20	0.00	16.40	10	\$ 2,558,724
Minor Home Repair - gas	3,550	14.18		5.43	10	\$ 143,408
Minor Home Repair - sf	16,245	67.90	32.50	7.20	10	\$ 787,305
Minor Home Repair - mf	5,141	66.50	25.50	0.70	10	\$ 68,149
Minor Home Repair - mh	1,307	67.90	32.50	7.20	10	\$ 60,741
Outlet Gaskets	28,270	0.00	0.00	0.80	15	\$ 153,657
Portable Evaporative Coolers	1,860	353.60	0.00	0.00	7	\$ 434,015
Permanant Evaporative Cooler Covers	3,437	0.00	0.00	2.60	3	\$ 18,493
Refrigerator	4,317	542.00	0.00	0.00	15	\$ 2,739,649
Water Heater Blanket	5,219	3.95	0.00	12.93	5	\$ 216,800
Water Heater Pipe Wrap	2,594	1.06	0.00	3.92	15	\$ 72,306
<b>Total Bill Savings for All Measures in Program Year</b>						<b>\$ 16,349,572</b>

Total Number of Homes Served by the Program during Program Year

32,730

Life Cycle Bill Savings Per Home

\$ 499.53

**Exhibit 4.14**

**PG&E Life Cycle Bill Savings-- Program Year 2001**

Measure Description	Number Installed	Per Measure Electric Impact (kWh)		Per Measure Gas Impact (Therms)	EUL	Total Measure Life Cycle Bill Savings (\$)
		SH	AC			
Energy Efficiency Measures						
Attic Access Weatherstripping - mobile (Gas)	10	0.00	2.41	1.44	5	\$ 57
Attic Access Weatherstripping - mult fam (Electric)	46	12.31	1.90	0.00	5	\$ 329
Attic Access Weatherstripping - mult fam (Gas)	528	0.00	1.90	0.13	5	\$ 717
Attic Access Weatherstripping - sing fam (Electric)	211	13.60	2.41	0.00	5	\$ 1,699
Attic Access Weatherstripping - sing fam (Gas)	5,569	0.00	2.41	1.44	5	\$ 31,618
Attic Insulation - mult fam (Electric)	2	266.10	37.90	0.00	25	\$ 986
Attic Insulation - mult fam (Gas)	61	0.00	37.90	2.90	25	\$ 5,396
Attic Insulation - sing fam (Electric)	41	271.70	48.30	0.00	25	\$ 21,276
Attic Insulation - sing fam (Gas)	1,922	0.00	48.30	29.00	25	\$ 669,325
Attic Venting - mult fam (Electric)	1	12.30	2.10	0.00	25	\$ 23
Attic Venting - mult fam (Gas)	13	0.00	2.10	0.07	25	\$ 53
Attic Venting - sing fam (Electric)	9	13.60	2.40	0.00	25	\$ 234
Attic Venting - sing fam (Gas)	573	0.00	2.40	0.72	25	\$ 6,070
Building Envelope Repair - mobile (Electric)	61	67.90	12.10	0.00	10	\$ 4,351
Building Envelope Repair - mobile (Gas)	1,639	0.00	12.10	7.20	10	\$ 79,721
Building Envelope Repair - mult fam (Electric)	513	66.50	9.50	0.00	10	\$ 34,759
Building Envelope Repair - mult fam (Gas)	2,696	0.00	9.50	0.70	10	\$ 32,756
Building Envelope Repair - sing fam (Electric)	507	67.90	12.10	0.00	10	\$ 36,161
Building Envelope Repair - sing fam (Gas)	9,638	0.00	12.10	7.20	10	\$ 468,791
Caulking - mobile (Electric)	83	10.20	1.80	0.00	5	\$ 501
Caulking - mobile (Gas)	2,021	0.00	1.80	1.08	5	\$ 8,598
Caulking - mult fam (Electric)	1,037	9.20	1.40	0.00	5	\$ 5,527
Caulking - mult fam (Gas)	3,174	0.00	1.40	0.10	5	\$ 3,219
Caulking - sing fam (Electric)	576	10.20	1.80	0.00	5	\$ 3,476
Caulking - sing fam (Gas)	10,066	0.00	1.80	1.08	5	\$ 42,824
Compact Fluorescent Hard Wire Porch Lights	356	70.00	0.00	0.00	20	\$ 35,753
Compact Fluorescent Lamp	169,269	57.80	0.00	0.00	8	\$ 7,311,738
Door Weatherstripping - mobile (Electric)	80	30.60	5.40	0.00	5	\$ 1,448
Door Weatherstripping - mobile (Gas)	1,946	0.00	5.40	3.23	5	\$ 24,776
Door Weatherstripping - mult fam (Electric)	578	27.70	4.30	0.00	5	\$ 9,301
Door Weatherstripping - mult fam (Gas)	2,956	0.00	4.30	0.30	5	\$ 9,142
Door Weatherstripping - sing fam (Electric)	559	30.60	5.40	0.00	5	\$ 10,119
Door Weatherstripping - sing fam (Gas)	9,872	0.00	5.40	3.23	5	\$ 125,690
Duct Sealing and Repair -mult (Gas)	8	0.00	57.80	33.20	25	\$ 3,222
Duct Sealing and Repair - sing (Gas)	55	0.00	197.00	89.90	25	\$ 63,592
Energy Education (Electric)	1,960	0.00	0.00	0.00	1	\$ -
Energy Education (Gas)	19,446	0.00	0.00	0.00	1	\$ -
Evaporative Cooler Covers	2,187	1.02	0.00	2.60	3	\$ 12,539
Evaporative Coolers (Portable)	3,425	353.60	0.00	0.00	7	\$ 811,158
Faucet Aerators (Gas)	18,758	0.00	0.00	3.50	5	\$ 203,597
Furnace Filters - mobile (Electric)	50	10.20	1.82	0.00	5	\$ 302
Furnace Filters - mobile (Gas)	1,571	0.00	1.82	1.08	5	\$ 6,699
Furnace Filters - mult fam (Electric)	104	9.20	1.41	0.00	5	\$ 555
Furnace Filters - mult fam (Gas)	2,112	0.00	1.41	0.10	5	\$ 2,152
Furnace Filters - sing fam (Electric)	183	10.20	1.82	0.00	5	\$ 1,106
Furnace Filters - sing fam (Gas)	5,418	0.00	1.82	1.08	5	\$ 23,104
Furnace Repair (Gas)	453	0.00	0.00	0.00	10	\$ -
Furnace Replacement (Gas)	555	0.00	0.00	0.00	22	\$ -
Low Flow Showerhead (Gas)	15,918	0.00	0.00	16.40	10	\$ 1,372,432
Outlet/Switch Gaskets (Electric)	1,639	18.76	3.70	0.00	15	\$ 44,030
Outlet/Switch Gaskets (Gas)	14,908	0.00	3.70	0.80	15	\$ 148,824
Refrigerator Replacement	5,767	542.00	0.00	0.00	15	\$ 3,738,639
Water Heater Blanket - mobile (Gas)	378	0.00	0.00	13.20	5	\$ 15,473
Water Heater Blanket - mult fam (Gas)	376	0.00	0.00	13.20	5	\$ 15,391
Water Heater Blanket - sing fam (Gas)	2,322	0.00	0.00	13.20	5	\$ 95,050
Water Heater Pipe Wrap (Gas)	952	0.00	0.00	4.00	15	\$ 26,453
Sub-total for Energy Efficiency Measures						\$ 15,570,751
Rapid Deployment Measures						
Air Conditioning Replacement - Central	35	0.00	1393.35	0.00	18	\$ 65,650
Set-back Thermostats	179	0.00	8.28	49.30	12	\$ 54,312
Water heater Replacement	396	0.00	0.00	18.36	13	\$ 45,955
Sub-total for Rapid Deployment Measures						\$ 165,917
Total Bill Savings for All Measures in Program Year						\$ 15,736,668

# Exhibit 4.15

## PG&E Life Cycle Bill Savings– Program Year 2002

Measure Description	Number Installed	Per Measure Electric Impact (kWh)		Per Measure Gas Impact	EUL	Total Measure Life Cycle Bill Savings
		SH	AC	Therms	Years	\$
Energy Efficiency Measures						
Attic Access Weatherstripping - MH (Gas)	29	0.00	8.20	3.30	5	\$ 323
Attic Access Weatherstripping - MF (Electric)	292	6.10	4.50	0.00	5	\$ 1,196
Attic Access Weatherstripping - MF (Gas)	2,441	0.00	4.50	1.60	5	\$ 13,442
Attic Access Weatherstripping - SF (Electric)	1,096	8.50	8.20	0.00	5	\$ 6,704
Attic Access Weatherstripping - SF (Gas)	9,149	0.00	8.20	3.30	5	\$ 101,788
Attic Insulation - MF (Electric)	63	59.00	70.20	0.00	25	\$ 9,298
Attic Insulation - MF (Gas)	526	0.00	70.20	18.70	25	\$ 116,734
Attic Insulation - SF (Electric)	393	81.60	110.70	0.00	25	\$ 84,046
Attic Insulation - SF (Gas)	3,284	0.00	110.70	34.20	25	\$ 1,291,920
Building Envelope Repair - MH (Electric)	297	29.30	25.10	0.00	10	\$ 10,813
Building Envelope Repair - MH (Gas)	2,481	0.00	25.10	8.80	10	\$ 134,362
Building Envelope Repair - MF (Electric)	1,097	20.80	14.10	0.00	10	\$ 26,753
Building Envelope Repair - MF (Gas)	9,154	0.00	14.10	4.60	10	\$ 262,627
Building Envelope Repair - SF (Electric)	1,695	29.30	25.10	0.00	10	\$ 61,648
Building Envelope Repair - SF (Gas)	14,143	0.00	25.10	8.80	10	\$ 766,028
Caulking - MH (Electric)	388	8.50	8.20	0.00	5	\$ 2,373
Caulking - MH (Gas)	3,239	0.00	8.20	3.30	5	\$ 36,036
Caulking - MF (Electric)	1,414	6.00	4.50	0.00	5	\$ 5,709
Caulking - MF (Gas)	11,798	0.00	4.50	1.60	5	\$ 64,981
Caulking - SF (Electric)	1,687	8.50	8.20	0.00	5	\$ 10,319
Caulking - SF (Gas)	14,082	0.00	8.20	3.30	5	\$ 156,671
Compact Fluorescent Hard Wire Porch Lights	6,665	37.10	0.00	0.00	20	\$ 363,684
Compact Fluorescent Lamp - SF	344,394	22.30	0.00	0.00	8	\$ 5,858,204
Door Weatherstripping - MH (Electric)	365	8.50	8.20	0.00	5	\$ 2,235
Door Weatherstripping - MH (Gas)	3,050	0.00	8.20	3.30	5	\$ 33,929
Door Weatherstripping - MF (Electric)	1,213	6.10	4.50	0.00	5	\$ 4,960
Door Weatherstripping - MF (Gas)	10,122	0.00	4.50	1.60	5	\$ 55,749
Door Weatherstripping - SF (Electric)	1,665	8.50	8.20	0.00	5	\$ 10,181
Door Weatherstripping - SF (Gas)	13,893	0.00	8.20	3.30	5	\$ 154,575
Energy Education	56,698	0.00	0.00	0.00	1	\$ -
Evaporative Cooler Covers SF (Electric)	408	24.00	0.00	0.00	3	\$ 3,144
Evaporative Cooler Covers SF (Gas)	3,401	0.00	0.00	7.20	3	\$ 43,662
Evaporative Coolers SF (Portable)	15,968	0.00	390.59	0.00	7	\$ 1,801,665
Faucet Aerators SF (Gas)	36,939	0.00	0.00	1.40	5	\$ 146,580
Furnace Filters - MH (Electric)	310	24.16	0.00	0.00	5	\$ 3,825
Furnace Filters - MH (Gas)	2,586	0.00	0.00	4.92	5	\$ 36,064
Furnace Filters - MF (Electric)	626	17.51	0.00	0.00	5	\$ 5,600
Furnace Filters - MF (Gas)	5,224	0.00	0.00	2.33	5	\$ 34,500
Furnace Filters - SF (Electric)	974	18.10	0.00	0.00	5	\$ 9,012
Furnace Filters - SF (Gas)	8,133	0.00	0.00	4.26	5	\$ 98,197
Furnace Repair (Gas)	632	0.00	0.00	42.90	10	\$ 137,061
Furnace Replacement (Gas)	330	0.00	0.00	147.20	22	\$ 418,603
Low Flow Showerhead SF (Gas)	30,603	0.00	0.00	9.10	10	\$ 1,407,816
Outlet/Switch Gaskets SF (Electric)	3,421	7.99	0.12	0.00	15	\$ 33,693
Outlet/Switch Gaskets SF (Gas)	28,547	0.00	0.12	0.34	15	\$ 67,731
Refrigerator Replacement	24,719	644.70	0.00	0.00	15	\$ 19,522,131
Water Heater Blanket - MH (Gas)	0	0.00	0.00	7.30	5	\$ -
Water Heater Blanket - MF (Gas)	0	0.00	0.00	4.90	5	\$ -
Water Heater Blanket - SF (Gas)	7,137	0.00	0.00	7.30	5	\$ 147,673
Water Heater Pipe Wrap- SF (Gas)	1,352	0.00	0.00	2.70	15	\$ 24,806
Sub-total for Energy Efficiency Measures						\$ 33,589,051
Rapid Deployment Measures						
Air Conditioning Replacement - Central - SF	442	0.00	611.93	0.00	18	\$ 373,146
Duct Sealing and Testing -MF (Gas)	45	0.00	41.94	17.81	25	\$ 8,723
Duct Sealing and Testing - MH/SF (Gas)	244	0.00	43.80	17.74	25	\$ 47,459
Set-back Thermostats MF (Electric)	108	58.88	37.31	0.00	12	\$ 8,407
Set-back Thermostats MF (Gas)	898	0.00	39.32	8.79	12	\$ 61,450
Set-back Thermostats MH (Electric)	109	87.57	35.88	0.00	12	\$ 11,707
Set-back Thermostats MH (Gas)	909	0.00	52.02	18.94	12	\$ 120,832
Set-back Thermostats SF (Electric)	242	77.46	62.19	0.00	12	\$ 26,225
Set-back Thermostats SF (Gas)	2,016	0.00	43.18	18.35	12	\$ 253,225
Whole House Fans SF	99	0.00	124.16	0.00	20	\$ 18,079
Evaporative Cooler Maintenance SF	771	0.00	73.61	0.00	4	\$ 23,751
Evaporative Cooler Maintenance MF	350	0.00	49.33	0.00	4	\$ 7,225
Water heater Replacement SF (Gas)	765	0.00	0.00	21.60	13	\$ 101,618
Sub-total for Rapid Deployment Measures						\$ 1,061,847
Total Bill Savings for All Measures in Program Year						\$ 34,650,898
Total Number of Homes Served by the Program during Program Year						70,683
Life Cycle Bill Savings Per Home						\$ 490.23

**Exhibit 4.16**

**SCE Life Cycle Bill Savings– Program Year 2000**

Measure Description	Number Installed	Per Measure Electric Impact <sup>1</sup>	EUL	Total Measure Life Cycle Bill Savings - From Algorithm
		(kWh)	(Yrs)	(\$)
Evaporative Cooler Installation	2,083	675.0	15	\$ 1,698,949
Porch Light <sup>2</sup>	31,485	204.1	2	\$ 1,403,596
Refrigerator Replacement <sup>3</sup>	2,613	1,304.0	15	\$ 4,117,221
CFB-Relamping	168,856	45.7	6	\$ 4,569,075
Weatherization	1,347	550.6	20	\$ 1,075,622
<b>Total Bill Savings for All Measures In Program Year</b>				<b>\$ 12,864,463</b>

**Total Number of Homes Served by the Program during Program Year<sup>4</sup>** 46,341

**Life Cycle Bill Savings Per Home** \$ 277.60

This calculation is based on LIEE data through 6/30/00 of which 40% of participants are also on the CARE rate.

1. kWh savings claims based 2/19/97 Load Impact Evaluation of the 1995 Direct Assistance Program for Evaporative Cooler Installation (weighted average), Relamping and Weatherization (weighted average).

2. Engineering estimate.

3. Edison replaces the older refrigerators, at least 10 years old, with super efficiency units (30% over the standard). The way the savings are measured is based on usage differential between the new and the old units. Overall, we calculate a weighted average based on the number of the different types of refrigerators replaced.

4. Porch light and refrigerator replacement are not part of this home served count.

# Exhibit 4.17

## SCE Life Cycle Bill Savings– Program Year 2001

Measure Description	Number Installed	Per Measure Electric Impact (kWh)		EUL	Total Measure Life Cycle Bill Savings - From Algorithm
		SH	AC	(Yrs)	(\$)
Energy Efficiency Measures					
Attic Access Weatherstripping <sup>1</sup>	34	0	0	5	\$ -
Attic Insulation	13	310.10	213.30	25	\$ 11,543
Attic Ventilation <sup>2</sup>	277	0	0	25	\$ -
Caulking <sup>1</sup>	-	0	0	5	\$ -
Compact Fluorescents (indoor)	276,126	26.50	0	6	\$ 4,516,442
Compact Fluorescents (outdoor)	59,991	204.10	0	2	\$ 2,844,749
Cover Plate/Gaskets <sup>2</sup>	1,441	0	0	15	\$ -
Duct Repair <sup>2</sup>	50	0	0	25	\$ -
Evaporative Cooler Installation	3,962	0	319.20	15	\$ 1,583,299
Evaporative Cooler/AC Covers <sup>3</sup>	4	0	0	3	\$ -
Faucet Aerators <sup>2</sup>	1,126	0	0	5	\$ -
Low Flow Showerhead	1,323	271.90	0	10	\$ 335,937
Minor Home Repairs	1,586	56.10	53.00	10	\$ 125,311
Miscellaneous <sup>4</sup>	208	0	0	0	\$ -
Refrigerator Recycle	8,829	0	0	6	\$ -
Refrigerator Replacement	11,574	542.00	0	15	\$ 7,853,590
Water Heater Blanket	134	212.70	0	5	\$ 15,047
Water Heater Pipe Wrap <sup>3</sup>	113	0	0	15	\$ -
Weatherstripping	1,580	32.40	31.80	5	\$ 41,396
Sub-total for Energy Efficiency Measures					\$ 17,327,313
Rapid Deployment Measures					
Air Conditioner Replacement - Central	538	0	2785.88	18	\$ 2,111,370
Air Conditioner Replacement - Room	254	0	436.8	11	\$ 111,373
Evaporative Cooler Maintenance	4,556	0	20.1	4	\$ 39,759
Set-back Thermostats	40	0	475	12	\$ 20,339
Water Heater Replacement <sup>3</sup>	114	0	0	13	\$ -
Sub-total for Rapid Deployment Measures					\$ 2,282,841
Total Bill Savings for All Measures In Program Year					\$ 19,610,154

**Total Number of Homes Served by the Program during Program Year** 86,903

**Life Cycle Bill Savings Per Home** \$ 225.66

1. This measures have 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. Zero savings are claimed for this measure, which includes sunscreens, shower arm, shower diverter, and other.

**Exhibit 4.18**  
**SCE Life Cycle Bill Savings– Program Year 2002**

Measure Description	Number Installed	Per Measure Electric Impact (kWh)		EUL	Total Measure Life Cycle Bill Savings - From Algorithm
		SH	AC	(Yrs)	(\$)
Energy Efficiency Measures					
Attic Access Weatherstripping <sup>1</sup>	-	0	0	5	\$ -
Attic Insulation MF	-	34.40	-	25	\$ -
Attic Insulation MH/SF	-	50.10	-	25	\$ -
Attic Ventilation <sup>2</sup>	-	0	0	25	\$ -
Caulking - MF	1,128	4.7	2.6	5	\$ 3,846
Caulking - MH	4	6.9	0	5	\$ 15
Compact Fluorescents (indoor) MF	25,968	21.60	0	8	\$ 446,848
Compact Fluorescents (indoor) MH/SF	18,491	21.20	0	8	\$ 312,294
Compact Fluorescents (outdoor) MF	5,655	32.40	0	5.3	\$ 97,776
Compact Fluorescents (outdoor) MH/SF	5,894	31.90	0	5.3	\$ 100,336
Cover Plate/Gaskets - MF	1,727	3.38	-0.05	15	\$ 7,396
Cover Plate/Gaskets - MH/SF	234	5.62	0.18	15	\$ 1,718
Duct Repair <sup>2</sup>	1	0	0	25	\$ -
Evaporative Cooler Installation - MF	51	0	571.17	15	\$ 37,268
Evaporative Cooler Installation - MH/SF	227	0	426.65	15	\$ 123,908
Evaporative Cooler/AC Covers MF	82	14.4	0	3	\$ 396
Evaporative Cooler/AC Covers MH/SF	91	19.34	0	3	\$ 591
Faucet Aerators - MF	1,142	41.2	0	5	\$ 25,108
Faucet Aerators - MH/SF	475	48.4	0	5	\$ 12,269
Low Flow Showerhead - MF	1,703	203.30	0	10	\$ 329,523
Low Flow Showerhead - MH/SF	242	239.20	0	10	\$ 55,095
Minor Home Repairs - MF	1,624	14.80	5.10	10	\$ 30,759
Minor Home Repairs - MH/SF	185	21.60	-	10	\$ 3,803
Miscellaneous <sup>4</sup>	267	0	0	0	\$ -
Refrigerator Replacement - MF	5,053	695.4	0	15	\$ 4,495,586
Refrigerator Replacement - MH/SF	4,763	711.60	0	15	\$ 4,336,296
Water Heater Blanket - MF	296	163.00	0	5	\$ 25,747
Water Heater Blanket - SF	19	191.80	0	5	\$ 1,945
Water Heater Pipe Wrap <sup>3</sup>	-	0	0	15	\$ -
Weatherstripping - MF	1,763	4.20	1.70	5	\$ 4,991
Weatherstripping - MH/SF	248	6.20	-	5	\$ 821
Sub-total for Energy Efficiency Measures					\$ 10,454,336
Rapid Deployment Measures					
Air Conditioner Replacement - Central - MF	158	0	1962.4	18	\$ 446,748
Air Conditioner Replacement - Central - MH/SF	92	0	565.28	18	\$ 74,932
Air Conditioner Replacement - Room - MF	2,602	0	521.02	15	\$ 1,734,459
Evaporative Cooler Maintenance - MH	538	0	69.55	4	\$ 16,354
Evaporative Cooler Maintenance - MF/SF	2,165	0	110.34	4	\$ 104,410
Dust Testing & Sealing - MF	636	23.19	183.45	25	\$ 228,309
Set-back Thermostats	0	0	177.76	12	\$ -
Water Heater Replacement - MF	266	117.8	0	13	\$ 36,281
Sub-total for Rapid Deployment Measures					\$ 2,641,494
Total Bill Savings for All Measures In Program Year					\$ 13,095,830

**Total Number of Homes Served by the Program during Program Year** 29,685

**Life Cycle Bill Savings Per Home** \$ 441.16

1. This measures have 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. Zero savings are claimed for this measure, which includes sunscreens, shower arm, shower diverter, and other.

**Exhibit 4.19**  
**SDG&E Life Cycle Bill Savings– Program Year 2000**

Measure Description	Number Installed	Per Measure Electric Impact (kWh)	Per Measure Gas Impact (Therms)	EUL (years)	Total Measure Life Cycle Bill Savings (\$)
Attic Venting - MF Electric*	18	\$ -	\$ -	25	\$ -
Attic Venting - MF Gas*	68	\$ -	\$ -	25	\$ -
Auto Sweep*	25	\$ -	\$ -	5	\$ -
Caulking - MF	3470	0	1	5	\$ 14,710
Caulking - MH	5350	0	3	5	\$ 51,839
Caulking - SF	688	0	3	5	\$ 6,666
Ceiling Insulation - Electric	17	34	0	25	\$ 1,112
Ceiling Insulation - Gas	99	0	21	25	\$ 20,191
Compact Fluorescent Lights	27413	68.62	0	9	\$ 1,759,751
Door Replacement*	587	\$ -	\$ -	10	\$ -
Door Threshold - Electric*	275	\$ -	\$ -	5	\$ -
Door Threshold - Gas*	1,036	\$ -	\$ -	5	\$ -
Energy Education	13660	47	0	1	\$ 75,694
Evaporative Cooler Replacement	21	130	0	15	\$ 3,761
Exaporative Cooler Cover	603	0	26	3	\$ 30,134
Exterior CFL Fixture	59	68.62	0	20	\$ 6,716
Faucet Aerators - Electric	1153	0	0	5	\$ -
Faucet Aerators - Gas	6533	0	8	5	\$ 160,632
Furnace Repair	507	0	1	10	\$ 3,481
Furnace Replacement	262	0	1	22	\$ 3,055
Glass Replacement*	621	\$ -	\$ -	10	\$ -
Jamb Replacement*	38	\$ -	\$ -	5	\$ -
Low Flow Showerheads - Electric	1173	174	0	10	\$ 207,919
Low Flow Showerheads - Gas	6649	0	7	10	\$ 256,766
Minor Home Repair Materials - Electric	448	5	0	10	\$ 2,280
Minor Home Repair Materials - Gas	2537	0	8	10	\$ 108,873
Outlet/Switch Gaskets - Electric*	18,081	\$ -	\$ -	15	\$ -
Outlet/Switch Gaskets - Gas*	68,020	\$ -	\$ -	15	\$ -
Refrigerator Replacement	714	402.15	0	15	\$ 395,534
Water Heater Blankets - Electric	165	138	0	5	\$ 12,731
Water Heater Blankets - Gas	933	0	6	5	\$ 16,391
Water Heater Pipe Wrap - Electric	174	0	0	15	\$ -
Water Heater Pipe Wrap - Gas	989	0	8	15	\$ 56,892
Weather stripping - MF, Elec	524	5	0	5	\$ 1,469
Weather stripping - MF, Gas	2972	0	1	5	\$ 12,597
Weather stripping - SF, Elec	104	5	0	5	\$ 292
Weather stripping - SF, Gas	591	0	3	5	\$ 5,724
<b>Total Bill Savings for All Measures in Program Year</b>					<b>\$ 3,215,210</b>

**Total Number of Homes Served by the Program during Program Year** 13,660

**Life Cycle Bill Savings Per Home** \$ 235.37

\*SDG&E has no studies supporting savings for this measure. No impacts taken during this year.

**Exhibit 4.20**  
**SDG&E Life Cycle Bill Savings– Program Year 2001**

Measure Description	Number Installed	Per Measure Electric Impact (kWh)	Per Measure Gas Impact (Therms)	EUL (years)	Total Measure Life Cycle Bill Savings (\$)
<b>Energy Efficiency Measures</b>					
Attic Ventilation*	135	0	0	25	\$ -
Auto Sweep*	195	0	0	5	\$ -
Caulking - MF	3625	0	1.4	5	\$ 16,187
Caulking - SF	6316	0	3.2	5	\$ 64,465
Ceiling Insulation R-11 (Electric)	12	34	0	25	\$ 794
Ceiling Insulation R-11 (Gas)	68	0	21	25	\$ 14,444
Ceiling Insulation R-19 (Electric)	29	34	0	25	\$ 1,945
Ceiling Insulation R-19 (Gas)	167	0	21	25	\$ 35,387
Compact Fluorescent Lights	36240	68.62	0	9	\$ 2,421,965
Cover Plates/Gaskets*	7003	0	0	15	\$ -
Door Replacement*	1719	0	0	10	\$ -
Door Threshold*	1783	0	0	5	\$ -
Glass Replacement*	743	0	0	10	\$ -
Evaporative Cooler Cover	439	0	26	3	\$ 23,403
Evaporative Cooler Replacement	2	130	0	15	\$ 372
Exterior CFL Fixture	20	68.62	0	20	\$ 2,359
Faucet Aerators	9280	0	8	5	\$ 240,345
Furnace repairs	685	0	1	10	\$ 4,906
Furnace Replacement	410	0	1	22	\$ 4,962
Glass Replacement*	743	0	0	10	\$ -
In Home Energy Education	14839	47	0	1	\$ 81,879
Jamb Replacement*	129	0	0	5	\$ -
Low Flow Showerheads (Electric)	1308	174	0	10	\$ 241,046
Low Flow Showerheads (Gas)	7410	0	7	10	\$ 298,537
Minor Home Repair Materials	3399	5	8	10	\$ 170,154
Refrigerator Replacement	5484	402.15	0	15	\$ 3,151,967
Water Heater Blankets (Electric)	143	138	0	5	\$ 11,586
Water Heater Blankets (Gas)	810	0	6	5	\$ 14,986
Water Heater Pipe Wrap	908	0	8	15	\$ 54,338
Weather stripping (Electric) - MF	601	5	0	5	\$ 1,765
Weather stripping (Electric) - SF	702	5	0	5	\$ 2,061
Weather stripping (Gas) - MF	3406	0	1	5	\$ 15,209
Weather stripping (Gas) - SF	3976	0	3	5	\$ 40,585
<i>Sub-total for Energy Efficiency Measures</i>					\$ 6,915,644
<b>Rapid Deployment Measures</b>					
Air Conditioner Replacement - Central	195	781	0	18	\$ 245,421
Air Conditioner Replacement - Room	184	339	0	11	\$ 71,153
Duct Sealing & Repair (Electric Heat)	9	425	0	25	\$ 7,692
Duct Sealing & Repair (Gas Heat)	53	237	27	25	\$ 38,698
Set back Thermostat (Electric Heat)	50	88	0	15	\$ 6,301
Set back Thermostat (Gas Heat)	284	9	30	15	\$ 67,362
Water Heater Replacement - Gas	423	0	21	13	\$ 60,236
Whole House Fans	1	223	0	20	\$ 383
<i>Sub-total for Rapid Deployment Measures</i>					\$ 497,248
<b>Total Bill Savings for All Measures in Program Year</b>					<b>\$ 7,412,892</b>

**Total Number of Homes Served by the Program during Program Year** 19,315

**Life Cycle Bill Savings Per Home** \$ 383.79

\*SDG&E has no studies supporting savings for this measure. No impacts taken during this year.



# Exhibit 4.21

## SDG&E Life Cycle Bill Savings– Program Year 2002

Measure Description	Number Installed	Per Measure Electric Impact (kWh)	Per Measure Gas Impact (Therms)	EUL (years)	Total Measure Life Cycle Bill Savings (\$)
<b>Energy Efficiency Measures</b>					
Attic Ventilation*	124	0.00	0.00	25	\$ -
Auto Sweep*	177	0.00	0.00	5	\$ -
Caulking - MF (Electric)	523	6.00	0.00	5	\$ 1,948
Caulking - MF (Gas)	2,965	2.30	2.00	5	\$ 22,984
Caulking - MH/SF (Electric)	583	7.80	0.00	5	\$ 2,821
Caulking - MH/SF (Gas)	3,303	2.70	2.50	5	\$ 31,650
Ceiling Insulation MF (Electric)	2	34.40	0.00	25	\$ 139
Ceiling Insulation MF (Gas)	5	0.00	11.00	25	\$ 566
Ceiling Insulation MH/SF (Electric)	62	93.60	0.00	25	\$ 11,723
Ceiling Insulation MH/SF (Gas)	354	43.50	16.90	25	\$ 92,700
Compact Fluorescent Lights MF	8,579	27.80	0.00	8	\$ 220,929
Compact Fluorescent Lights MH/SF	14,924	24.80	0.00	8	\$ 342,853
Cover Place / Gaskets MF (Electric)	405	2.94	0.00	15	\$ 1,772
Cover Place / Gaskets MF (Gas)	2,296	-0.10	0.13	15	\$ 1,921
Cover Place / Gaskets MH/SF (Electric)	403	5.73	0.00	15	\$ 3,437
Cover Place / Gaskets MH/SF (Gas)	2,285	0.40	0.23	15	\$ 5,344
Door Replacement*	1535	0	0	10	\$ -
Door Threshold*	2410	0	0	5	\$ -
Duct Register Sealing*	688	0	0	5	\$ -
Evaporative Cooler Cover SF	135	15.17	3.65	3	\$ 1,780
Evaporative Cooler Replacement SF	4	246.35	0.00	15	\$ 1,466
Exterior CFL Fixture MF	115	41.70	0.00	20	\$ 8,565
Exterior CFL Fixture MH/SF	226	37.10	0.00	20	\$ 14,976
Faucet Aerators MF	3,237	41.20	0.90	5	\$ 91,969
Faucet Aerators MH/SF	3,693	48.40	1.40	5	\$ 127,264
Furnace repairs MF	153	0.00	16.00	10	\$ 13,808
Furnace repairs MH/SF	406	0.00	23.00	10	\$ 52,672
Furnace Replacement SF	367	0.00	84.30	22	\$ 297,481
Glass Replacement*	959	0.00	0.00	10	\$ -
Jamb Replacement*	113	0.00	0.00	5	\$ -
In Home Energy Education	10,506	0.00	0.00	1	\$ -
Low Flow Showerheads MF (Electric)	515	203.30	0.00	10	\$ 115,873
Low Flow Showerheads MF (Gas)	2,921	0.00	6.10	10	\$ 100,505
Low Flow Showerheads MH/SF (Electric)	618	239.20	0.00	10	\$ 163,601
Low Flow Showerheads MH/SF (Gas)	3,504	0.00	9.10	10	\$ 179,839
Minor Home Repair Materials MF (Electric)	163	19.90	0.00	10	\$ 3,594
Minor Home Repair Materials MF (Gas)	925	7.00	3.80	10	\$ 26,987
Minor Home Repair Materials MH/SF	331	26.10	0.00	10	\$ 9,562
Minor Home Repair Materials MH/SF (Gas)	1,876	8.10	5.50	10	\$ 75,015
Refrigerator Replacement	6,488	644.70	0.00	15	\$ 6,222,623
Water Heater Blankets MF (Electric)	7	163.00	0.00	5	\$ 708
Water Heater Blankets MF (Gas)	39	0.00	4.90	5	\$ 604
Water Heater Blankets MH/SF (Electric)	87	191.80	0.00	5	\$ 10,354
Water Heater Blankets MH/SF (Gas)	494	0.00	7.30	5	\$ 11,405
Water Heater Pipe Wrap MF (Electric)	2	115.30	0.00	15	\$ 386
Water Heater Pipe Wrap MF (Gas)	13	0.00	1.80	15	\$ 174
Water Heater Pipe Wrap MH/SF (Electric)	37	135.60	0.00	15	\$ 7,535
Water Heater Pipe Wrap MH/SF (Gas)	212	0.00	2.70	15	\$ 4,333
Weather stripping (Electric) - MF	548	6.10	0.00	5	\$ 2,074
Weather stripping (Gas) - MF	3,104	2.40	2.00	5	\$ 24,256
Weather stripping (Electric) - SF	550	8.00	0.00	5	\$ 2,730
Weather stripping (Gas) - SF	3,114	2.80	2.70	5	\$ 32,001
<i>Sub-total for Energy Efficiency Measures</i>					\$ 8,344,950
<b>Rapid Deployment Measures</b>					
Air Conditioner Replacement - Central MF	1	828.28	0.00	18	\$ 1,388
Air Conditioner Replacement - Central SF	293	292.85	0.00	18	\$ 143,759
Air Conditioner Replacement - Room MF	310	130.16	0.00	15	\$ 60,027
Air Conditioner Replacement - Room SF	14	426.40	0.00	15	\$ 8,881
Duct Sealing & Testing MF (Electric)	1	116.60	0.00	25	\$ 236
Duct Sealing & Testing MF (Gas)	4	47.98	6.24	25	\$ 645
Duct Sealing & Testing SF (Electric)	42	87.15	0.00	25	\$ 7,394
Duct Sealing & Testing SF (Gas)	238	27.39	11.54	25	\$ 41,445
Evap Cooler Maintenance & Repair MH/SF	14	76.43	0.00	4	\$ 544
Set back Thermostat MF (Electric)	1	116.60	0.00	12	\$ 148
Set back Thermostat MF (Gas)	8	77.55	6.78	12	\$ 1,139
Set back Thermostat SF (Electric)	73	149.88	0.00	12	\$ 13,899
Set back Thermostat SF (Gas)	414	95.48	15.00	12	\$ 90,421
Water Heater Replacement MF (Gas)	16	0.00	18.10	13	\$ 1,987
Water Heater Replacement SF (Gas)	577	0.00	21.60	13	\$ 85,521
Whole House Fans SF	0	63.00	0.00	20	\$ -
<i>Sub-total for Rapid Deployment Measures</i>					\$ 457,431
<b>Total Bill Savings for All Measures in Program Year</b>					<b>\$ 8,802,381</b>
<b>Total Number of Homes Served by the Program during Program Year</b>					14,089
<b>Life Cycle Bill Savings Per Home</b>					\$ 624.77

\*SDG&E has no studies supporting savings for this measure. No impacts taken during this year.

**Exhibit 4.22**

**SoCalGas Life Cycle Bill Savings– Program Year 2000**

Measure Description	Number Installed	Per Measure Electric Impact (kWh)	Per Measure Gas Impact (Therms)	EUL	Total Measure Life Cycle Bill Savings (\$)
Low Flow Showerhead	17,945	-	9	10	\$ 690,384
Ceiling Insulation SF	1,493	-	21.2	25	\$ 241,326
Ceiling Insulation MF	862	-	14.9	25	\$ 97,927
BER SF	13,006	-	3.6	10	\$ 200,148
BER MF	7,580	-	3.6	10	\$ 116,648
BER MH	652	-	5.0	10	\$ 13,935
Caulking SF	9,635	-	3.3	5	\$ 79,216
Caulking MF	6,510	-	2.4	5	\$ 38,926
Caulking MH	1,133	-	3.3	5	\$ 9,315
Energy Education	22,293	-	0	1	\$ -
Caulking and Weatherstripping	1,250	-	0	5	\$ -
Water Heater Blanket SF	2,256	-	7.2	5	\$ 40,469
Water Heater Blanket MF	1,223	-	6.8	5	\$ 20,720
Water Heater Blanket MH	117	-	7.2	5	\$ 2,099
Faucet Aerator	20,896	-	3.6	5	\$ 187,420
Water Heater Pipe Wrap (Gas)	2,670	-	2.6	15	\$ 39,374
Register Seal	2	-	0.4	5	\$ 2
Evaporative Cooler Cover	505	-	2.8	3	\$ 2,329
Switch/Outlet Gaskets	18,130	-	0.9	15	\$ 92,549
Exhaust Dampers	1	-	1.7	3	\$ 3
Furnace Replacement	2,613	-	0	22	\$ -
Furnace Repair SF	383	-	0.0	10	\$ -
Weatherstripping MF	7,779	-	0.0	5	\$ -
Weatherstripping SF	13,419	-	0.0	5	\$ -
Weatherization - Electric	13,419	12.0	0.0	20	\$ 250,631
<b>Total Bill Savings for All Measures in Program Year</b>					<b>\$ 2,123,421</b>

**Total Number of Homes Served by the Program during Program Year** 22,617

**Life Cycle Bill Savings Per Home** \$ 93.89

**Exhibit 4.23**

**SoCalGas Life Cycle Bill Savings– Program Year 2001**

Measure Description	Number Installed	Per Measure Electric Impact (kWh)	Per Measure Gas Impact (Therms)	EUL	Total Measure Life Cycle Bill Savings (\$)
<b>Energy Efficiency Measures</b>					
Attic Insulation - SF	172	0.0	24.6	25	\$ 32,770
Attic Insulation - MF	53	0.0	20.0	25	\$ 8,210
Caulking - SF/MH	2,415	0.0	0.9	5	\$ 5,342
Caulking - MF	998	0.0	0.7	5	\$ 1,717
Door Weatherstripping - SF/MH	16,395	0.0	2.7	5	\$ 108,803
Door Weatherstripping - MF	16,335	0.0	2.3	5	\$ 92,345
Evaporative Cooler Cover	1,197	0.0	2.6	3	\$ 4,943
Faucet Aerator	31,544	0.0	3.5	5	\$ 271,362
Furnace Repair	397	0.0	0.0	10	\$ -
Furnace Replacement	2,962	0.0	0.0	22	\$ -
Low Flow Showerhead	29,934	0.0	9.4	10	\$ 1,208,427
Minor Home Repairs - SF/MH	14,129	0.0	6.1	10	\$ 370,143
Minor Home Repairs - MF	15,162	0.0	5.0	10	\$ 325,578
Miscellaneous Measures ( Weatherization - Electric)	33,046	12.0	0.0	5	\$ 223,160
Switch/Outlet Gasket	28,597	0.0	0.8	15	\$ 131,175
Water Heater Blanket - SF/MH	2,609	0.0	7.6	5	\$ 48,736
Water Heater Blanket - MF	1,687	0.0	7.4	5	\$ 30,684
Water Heater Pipe Wrap	2,371	0.0	2.6	15	\$ 35,347
<i>Sub-total for Energy Efficiency Measures</i>					\$ 2,898,741
<b>Rapid Deployment Measures</b>					
Water Heater Replacement - Gas	1,549	0.0	16.0	13	\$ 128,874
<i>Sub-total for Rapid Deployment Measures</i>					\$ 128,874
<b>Total Bill Savings for All Measures in Program Year</b>					\$ 3,027,615

Total Number of Homes Served by the Program during Program Year 33,046

Life Cycle Bill Savings Per Home \$ 91.62

# Exhibit 4.24

## SoCalGas Life Cycle Bill Savings– Program Year 2002

Measure Description	Number Installed	Per Measure Electric Impact (kWh)	Per Measure Gas Impact (Therms)	EUL	Total Measure Life Cycle Bill Savings (\$)
<b>Energy Efficiency Measures</b>					
Attic Insulation - SF	1,362	0.0	18.7	25	\$ 200,193
Attic Insulation - MF	383	0.0	9.6	25	\$ 28,900
Caulking - SF/MH	1,571	0.0	1.5	5	\$ 5,690
Caulking - MF	257	0.0	0.7	5	\$ 434
Evaporative Cooler Cover - SF/MH	1,445	0.0	8.1	3	\$ 17,776
Evaporative Cooler Cover - MF	336	0.0	4.1	3	\$ 2,092
Faucet Aerator - SF/MH	21,113	0.0	1.4	5	\$ 71,369
Faucet Aerator - MF	18,852	0.0	0.9	5	\$ 40,967
Furnace Repair	710	0.0	24.4	10	\$ 74,604
Furnace Replacement	4,386	0.0	110.1	22	\$ 3,544,943
Low Flow Showerhead - SF/MH	20,454	0.0	9.1	10	\$ 801,554
Low Flow Showerhead - MF	18,708	0.0	6.1	10	\$ 491,440
Minor Home Repairs - SF/MH	20,165	0.0	4.4	10	\$ 382,089
Minor Home Repairs - MF	18,320	0.0	2.2	10	\$ 173,565
Miscellaneous Measures ( Weatherization - Electric)	42,343	12.0	0.0	5	\$ 287,830
Switch/Outlet Gasket - SF/MH	20,088	0.0	0.2	15	\$ 26,745
Switch/Outlet Gasket - MF	15,937	0.0	0.2	15	\$ 13,838
Water Heater Blanket - SF/MH	2,838	0.0	7.3	5	\$ 50,023
Water Heater Blanket - MF	1,864	0.0	4.9	5	\$ 22,053
Water Heater Pipe Wrap - SF/MH	1,271	0.0	2.7	15	\$ 19,865
Water Heater Pipe Wrap - MF	219	0.0	1.8	15	\$ 2,282
Weatherstripping - SF/MH	22,252	0.0	1.4	5	\$ 75,220
Weatherstripping - MF	19,646	0.0	0.7	5	\$ 33,205
<i>Sub-total for Energy Efficiency Measures</i>					\$ 6,366,678
<b>Rapid Deployment Measures</b>					
Duct Sealing and Testing - MF	13	0.0	7.1	25	\$ 721
Duct Sealing and Testing - MH/SF	553	0.0	11.3	25	\$ 49,248
Water Heater Replacement - Gas SF	2,025	0.0	21.6	13	\$ 229,144
<i>Sub-total for Rapid Deployment Measures</i>					\$ 279,113
<b>Total Bill Savings for All Measures in Program Year</b>					\$ 6,645,790

Total Number of Homes Served by the Program during Program Year

49,464

Life Cycle Bill Savings Per Home

\$ 134.36

## APPENDIX A – IMPLEMENTATION RATES

### PG&E

Measure	2000	2001	2002
<b>Furnaces</b>			
- Repair - Gas	0%	1%	1%
- Replacement - Gas	0%	1%	0%
- Repair - Electric	0%	0%	0%
- Replacement - Electric	0%	0%	0%
<b>Infiltration &amp; Space Conditioning.</b>			
- Cover Plates/Gaskets*	86%	44%	45%
- Evaporative Cooler/Air Cond. Covers	11%	6%	5%
- HVAC Air Filter Replacement	41%	25%	25%
- Duct Repair	0%	0%	0%
<b>Weatherization</b>			
- Attic Insulation	14%	5%	6%
- Water Heater Blanket	16%	8%	10%
- Low Flow Showerhead *	90%	42%	43%
- Door Weatherstripping *	82%	42%	43%
- Caulking*	88%	45%	46%
- Minor Home Repairs	80%	40%	41%
- Attic Access Weatherstripping*	33%	17%	18%
<b>Water Heater Savings</b>			
- Water Heater Pipe Wrap	8%	3%	2%
- Faucet Aerators*	97%	49%	52%
<i>Miscellaneous Measures</i>	0%	0%	0%
<i>Permanent Evaporative Coolers</i>	0%	0%	0%
<i>Portable Evaporative Coolers</i>	6%	9%	23%
<i>Compact Fluorescents (indoor)</i>	483%	446%	487%
<i>Compact Fluorescents (outdoor)</i>	0%	1%	9%
<i>Refrigerators</i>	13%	15%	35%
<b>Pilots - Rapid Deployment</b>			
- Air Conditioner Replacement - Room	0%	0%	0%
- Air Conditioner Replacement - Central	0%	0%	1%
- Duct Sealing and Repair	0%	0%	0%
- Whole House Fans	0%	0%	0%
- Water Heater Replacement - Gas	0%	1%	1%
- Water Heater Replacement - Electric	0%	0%	0%
- Set-back Thermostats	0%	0%	12%
- Evaporative Cooler Maintenance	0%	0%	2%

\*PY2000 used number of measures installed, while PY2001 and PY2002 used number of homes with the measure. Therefore, the implementation rate for PY2000 is substantially different than subsequent years.

SCE

Measure	2000	2001	2002
<b>Furnaces</b>			
- Repair - Gas	0%	0%	0%
- Replacement - Gas	0%	0%	0%
- Repair - Electric	0%	0%	0%
- Replacement - Electric	0%	0%	0%
<b>Infiltration &amp; Space Conditioning.</b>			
- Cover Plates/Gaskets	0%	2%	7%
- Evaporative Cooler/Air Cond. Covers	0%	0%	1%
- HVAC Air Filter Replacement	0%	0%	0%
- Duct Repair	0%	0%	0%
<b>Weatherization</b>			
- Attic Insulation	0%	0%	0%
- Water Heater Blanket	0%	0%	1%
- Low Flow Showerhead	0%	2%	7%
- Door Weatherstripping	0%	2%	7%
- Caulking	0%	0%	4%
- Minor Home Repairs	0%	2%	6%
- Attic Access Weatherstripping	0%	0%	0%
<b>Water Heater Savings</b>			
- Water Heater Pipe Wrap	0%	0%	0%
- Faucet Aerators	0%	1%	5%
<i>Miscellaneous Measures</i>	0%	0%	1%
<i>Permanent Evaporative Coolers</i>	5%	5%	1%
<i>Portable Evaporative Coolers</i>	0%	0%	0%
<i>Compact Fluorescents (indoor)</i>	379%	318%	150%
<i>Compact Fluorescents (outdoor)</i>	48%	69%	39%
<i>Refrigerators</i>	1%	13%	33%
<b>Pilots - Rapid Deployment</b>			
- Air Conditioner Replacement - Room	0%	0%	9%
- Air Conditioner Replacement - Central	0%	1%	1%
- Duct Sealing and Repair	0%	0%	2%
- Whole House Fans	0%	0%	0%
- Water Heater Replacement - Gas	0%	0%	0%
- Water Heater Replacement - Electric	0%	0%	1%
- Set-back Thermostats	0%	0%	0%
- Evaporative Cooler Maintenance	4%	5%	9%

**SDG&E**

Measure	2000	2001	2002
<b>Furnaces</b>			
- Repair - Gas	4%	4%	4%
- Replacement - Gas	2%	2%	3%
- Repair - Electric	0%	0%	0%
- Replacement - Electric	0%	0%	0%
<b>Infiltration &amp; Space Conditioning.</b>			
- Cover Plates/Gaskets*	630%	36%	38%
- Evaporative Cooler/Air Cond. Covers	4%	2%	1%
- HVAC Air Filter Replacement	0%	0%	0%
- Duct Repair	0%	0%	0%
<b>Weatherization</b>			
- Attic Insulation	1%	1%	3%
- Water Heater Blanket	8%	5%	4%
- Low Flow Showerhead	57%	45%	54%
- Door Weatherstripping	31%	45%	52%
- Caulking	70%	51%	52%
- Minor Home Repairs	22%	18%	23%
- Attic Access Weatherstripping	0%	0%	0%
<b>Water Heater Savings</b>			
- Water Heater Pipe Wrap	9%	5%	2%
- Faucet Aerators	56%	48%	49%
<i>Miscellaneous Measures</i>	0%	0%	0%
<i>Permanent Evaporative Coolers</i>	0%	0%	0%
<i>Portable Evaporative Coolers</i>	0%	0%	0%
<i>Compact Fluorescents (indoor)</i>	201%	188%	167%
<i>Compact Fluorescents (outdoor)</i>	0%	0%	2%
<i>Refrigerators</i>	5%	28%	46%
<b>Pilots - Rapid Deployment</b>			
- Air Conditioner Replacement - Room	0%	1%	2%
- Air Conditioner Replacement - Central	0%	1%	2%
- Duct Sealing and Repair	0%	0%	2%
- Whole House Fans	0%	0%	0%
- Water Heater Replacement - Gas	0%	0%	0%
- Water Heater Replacement - Electric	0%	0%	4%
- Set-back Thermostats	0%	0%	4%
- Evaporative Cooler Maintenance	0%	0%	0%

\*PY2000 used number of measures installed, while PY2001 and PY2002 used number of homes with the measure. Therefore, the implementation rate for PY2000 is substantially different than subsequent years.

SoCalGas

Measure	2000	2001	2002
<b>Furnaces</b>			
- Repair - Gas	2%	1%	1%
- Replacement - Gas	12%	9%	9%
- Repair - Electric	0%	0%	0%
- Replacement - Electric	0%	0%	0%
<b>Infiltration &amp; Space Conditioning.</b>			
- Cover Plates/Gaskets	80%	87%	73%
- Evaporative Cooler/Air Cond. Covers	2%	4%	4%
- HVAC Air Filter Replacement	0%	0%	0%
- Duct Repair	0%	0%	0%
<b>Weatherization</b>			
- Attic Insulation	10%	1%	4%
- Water Heater Blanket	16%	13%	10%
- Low Flow Showerhead	79%	91%	79%
- Door Weatherstripping	153%	99%	85%
- Caulking	76%	10%	4%
- Minor Home Repairs	94%	89%	78%
- Attic Access Weatherstripping	0%	0%	0%
<b>Water Heater Savings</b>	0%	0%	0%
- Water Heater Pipe Wrap	12%	7%	3%
- Faucet Aerators	92%	95%	81%
<i>Miscellaneous Measures</i>	0%	0%	0%
<i>Permanent Evaporative Coolers</i>	0%	0%	0%
<i>Portable Evaporative Coolers</i>	0%	0%	0%
<i>Compact Fluorescents (indoor)</i>	0%	0%	0%
<i>Compact Fluorescents (outdoor)</i>	0%	0%	0%
<i>Refrigerators</i>	0%	0%	0%
<b>Pilots - Rapid Deployment</b>			
- Air Conditioner Replacement - Room	0%	0%	0%
- Air Conditioner Replacement - Central	0%	0%	0%
- Duct Sealing and Repair	0%	0%	1%
- Whole House Fans	0%	0%	0%
- Water Heater Replacement - Gas	0%	5%	4%
- Water Heater Replacement - Electric	0%	0%	0%
- Set-back Thermostats	0%	0%	0%
- Evaporative Cooler Maintenance	0%	0%	0%



## APPENDIX B – PROGRAM COST PERCENTS

### PG&E

Energy Efficiency		2000	2001	2002
	Gas Appliances	1%	2%	2%
	Electric Appliances	19%	19%	34%
	Weatherization Measures	41%	34%	32%
	Outreach & Assessment	3%	4%	6%
	In Home Energy Education	8%	7%	5%
	Education Workshops	0%	0%	0%
<i>Energy Efficiency TOTAL</i>		71%	67%	79%
<b>Pilots</b>		0%	0%	0%
	Attic Venting	1%	0%	0%
	Landlord Rebates	0%	0%	1%
	Phase 4 Pilot			0%
<i>Total Pilots</i>		1%	0%	1%
Training Center		1%	1%	0%
Inspections		10%	11%	5%
Advertising		0%	0%	0%
M&E Studies		0%	1%	0%
Regulatory Compliance		1%	2%	1%
Other Administration		9%	13%	9%
Indirect Costs		7%	5%	5%
<b>Oversight Costs</b>				
	LIAB Start-up	0%	0%	
	LIAB PY Past Year	0%	0%	
	LIAB PY Present Year	0%	0%	
	LIOB Expense			0%
	CPUC Energy Division	0%	0%	0%
<i>Total Oversight Costs</i>		0%	0%	0%
<b>Total Costs</b>		100%	100%	100%

**SCE**

<b>Energy Efficiency</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>
- Gas Appliances	0%	0%	0%
- Electric Appliances	44%	83%	76%
- Weatherization	43%	2%	8%
- Outreach & Assessment	0%	1%	2%
- In Home Energy Education	8%	9%	8%
- Education Workshop	0%	0%	0%
<i>Energy Efficiency TOTAL</i>	95%	96%	93%
<b>Pilots</b>	0%	0%	0%
- Pilot (A)	0%	0%	3%
- Pilot (B)	0%	2%	0%
<i>Total Pilots</i>	0%	2%	3%
Training Center	0%	0%	0%
Inspections	1%	1%	1%
Advertising	0%	0%	0%
M&E Studies	0%	0%	0%
Regulatory Compliance	2%	0%	0%
Other Administration <sup>1</sup>	0%	0%	0%
Indirect Costs	2%	1%	2%
<b>Oversight Costs</b>			
- LIAB Start-up	0%	0%	0%
- LIAB PY Past Year	0%	0%	0%
- LIAB PY Present Year	0%	0%	0%
CPUC Energy Division	0%	0%	0%
<i>Total Oversight Costs</i>	0%	0%	0%
<b>Total Costs</b>	100%	100%	100%

**SDG&E**

<b>Energy Efficiency</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>
- Gas Appliances	10%	9%	0%
- Electric Appliances	15%	40%	0%
- Weatherization Measures	55%	33%	0%
- Outreach Assessment	11%	2%	0%
- In Home Energy Education		7%	0%
- Education Workshops	3%	2%	0%
<i>Energy Efficiency TOTAL</i>	94%	93%	0%
<b>Pilots</b>	0%	0%	0%
- Pilot (A)	0%	0%	0%
- Pilot (B)	0%	0%	0%
<i>Total Pilots</i>	0%	0%	0%
Training Center	0%	0%	0%
Inspections	4%	4%	0%
Advertising	0%	0%	0%
M&E Studies	0%	0%	0%
Regulatory Compliance	0%	3%	0%
Other Administration	2%	0%	0%
Indirect Costs	0%	0%	0%
<b>Oversight Costs</b>			
- LIAB Start-Up	0%	0%	0%
- LIAB PY Past Year	0%	0%	0%
- LIAB PY Present Year	1%	0%	0%
- CPUC Energy Division	0%	0%	0%
<i>Total Oversight Costs</i>	1%	0%	0%
<b>Total Costs</b>	100%	100%	100%

**SoCalGas**

<b>Energy Efficiency</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>
Gas Appliances	21%	25%	25%
Electric Appliances	0	0%	0%
Weatherization Measures	65%	51%	51%
Outreach & Assessment	0%	8%	8%
In Home Energy Education	0%	3%	0%
Education Workshops	4%	0%	3%
<i>Energy Efficiency TOTAL</i>	90%	86%	87%
<i>Total Pilots</i>	0%	0%	0%
Training Center	1%	1%	1%
Inspections	0%	2%	2%
Advertising	0%	1%	1%
M&E Studies	0%	1%	1%
Regulatory Compliance	0%	2%	1%
Other Administration	8%	7%	7%
Indirect Costs	0%	0%	0%
<b>Oversight Costs</b>			
LIAB Start-up	0%		
LIAB PY Past Year	0%		
LIAB PY Present Year	0%		
LIOB Costs		0%	0%
CPUC Energy Division	0%	0%	0%
<i>Total Oversight Costs</i>	0%	0%	0%
<b>Total Program Costs</b>	100%	100%	100%