

**Joint Utility
Low Income Energy Efficiency Program,
2004 Costs and Bill Savings
Report**

Final Report

Report Date:

April 20, 2005

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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) and have been used and accepted in four prior cost and bill savings reports. This report presents bill savings and costs for the utilities' Program Year (PY) 2002, PY2003, and PY2004 LIEE programs.

The results of this study 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
2002	0.51	0.61	0.44	0.79	0.28
2003	0.46	0.52	0.51	0.89	0.30
2004	0.48	0.57	0.47	0.97	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
2002	\$ 471	\$ 534	\$ 555	\$ 372	\$ 182
2003	\$ 510	\$ 424	\$ 673	\$ 492	\$ 181
2004	\$ 516	\$ 553	\$ 551	\$ 424	\$ 127

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

- **PY2002** variations are due to installation rates of refrigerators, the impacts for those refrigerators, and variation in energy rates.
- **PY2003** reasons for variations are similar to those for PY2002 – refrigerator installation rate, refrigerator impact values and energy rates.
- **PY2004** energy rates played the largest part in the variations among utilities. The significant difference between the bill savings for SoCalGas between PY2003 and PY2004 is due almost entirely to changing the source of the per unit impact values. If the per unit impact values were to remain the same between the two years, then the SoCalGas PY 2003 and PY2004 bill saving would also be almost identical.

Overall, for PY2004, the unadjusted estimates show that similar programs are offered statewide. Even without adjustments for variation in energy rates and implementation, the differences in bill savings to cost ratio and per home bill savings across utilities similar. Adjustments for rates decreased the variation for bill savings to cost ratio but had no effect on per home bill savings.

2 INTRODUCTION

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.

The proposed methodology and the results of the analysis provided in the 2001 Bill Savings Report were adopted for future use under D.01-12-020 dated December 11, 2001. Annual reports have occurred since that time as shown in Exhibit 2-1.

Exhibit 2-1 Past Bill Savings Reports

Report Name*	Report Date	Program Years (PY) Covered in Report	Report Name in this Document
<i>Joint Utility Low Income Energy Efficiency Program Costs and Bill Savings Standardization Report</i>	March 5, 2001	PY1997 PY1998 PY1999 First Half of PY2000	2001 Bill Savings Report
<i>Joint Utility Low Income Energy Efficiency Program 2001 Costs and Bill Savings Standardization Report</i>	May 31, 2002	PY1999 PY2000 PY2001	2002 Bill Savings Report
<i>Joint Utility Low Income Energy Efficiency Program 2002 Costs and Bill Savings Standardization Report</i>	April 23, 2003	PY2000 PY2001 PY2002	2003 Bill Savings Report
<i>Joint Utility Low Income Energy Efficiency Program 2003 Costs and Bill Savings Standardization Report</i>	April 9, 2004	PY2001 PY2002 PY2003	2004 Bill Savings Report

*All reports are available online at www.CALMAC.org. Use the searchable database feature to find the specific report.

This report is the fifth annual such report on the LIEE Bill Savings and covers PY2002, PY2003, and PY2004. The word “standardization” has been removed from the title of this year’s report to avoid confusion with other LIEE standardization efforts.

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."¹ 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 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."²

The report ordered by D.00-07-020 was filed on time with errata filed on March 12, 2001. 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).

¹ Page 70, Decision 00-07-020 July 6, 2000.

² Page 147, Decision 00-07-020 July 6, 2000.

Costs for the LIEE programs are parsed in several ways in Table TA 7.2. There are 18 cost variables along the left side of the table, and each 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 and evaluation impact studies performed after the program was fielded. These studies have generally followed the *Protocols and Procedures for the Verification of Costs, Benefits, and Shareholder Earnings from Demand-Side Management Programs (Protocols)*³ and are filed in the AEAP. The LIEE programs were evaluated as per Protocol Tables 8A and 8B (Residential Direct Assistance Program) in 1995-6⁴. The 2000 and 2001 impact evaluations described below appear to have also followed the Protocols to the degree that they are still applicable.

There are different sources of per-unit energy savings for the PY2004 measures versus the other two years as shown in Exhibit 2-2.

³ D.93-05-063 and revised by subsequent CPUC decisions.

⁴ 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).

**Exhibit 2-2
Energy Sources by Program Year**

Program Year	Energy Impact Source #1	Energy Impact Source #2
PY2002 and PY2003	<i>Impact Evaluation of the 2000 Statewide Low Income Energy Efficiency (LIEE) Program.</i> XENERGY Inc. and Business Economic Analysis & Research. April 2, 2002.	<i>LIEE Measure Cost Effectiveness Preliminary Report.</i> LIEE Standardization Team. September 23, 2002
PY2004	<i>Impact Evaluation of the 2001 Statewide Low Income Energy Efficiency (LIEE) Program.</i> KEMA-XENERGY Inc. and Business Economic Analysis & Research. April 8, 2003.	<i>LIEE Measure Cost Effectiveness Final Report.</i> LIEE Standardization Team. June 2, 2003.

The analysis underlying the *LIEE Measure Cost Effectiveness Final Report* used estimates of impact from the *Impact Evaluation of the 2001 LIEE Program*. This was true also of the preliminary report, which based that earlier analysis on the *Impact Evaluation of the 2000 LIEE Program*. As such, if the appendix of the first source did not have a per-unit impact value, the per-unit impact value was obtained from the second source.

SoCalGas bill savings estimates include the electric savings accrued by SCE that are attributable to the weatherization measures installed under the SoCalGas LIEE program. 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 air conditioning measures in gas heated homes.

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 used for estimating bill savings is presented in Exhibit 2-3.

**Exhibit 2-3
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_{Y,r} = energy rate (\$ per kWh⁵ or therm) for fuel r in year Y
- Impact_m = measure m gross⁶ impact per year (kWh or therm)
- Number_m = number of measure type m installed
- EUL_m = effective useful life⁷ (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 use of this particular value was checked at the beginning of 2005 to see if the ruling had changed. As of the writing of this report, there had been no change. The inflation rate of 3 percent was used to develop the discount rate.⁸ The following specific values were identified as appropriate for these calculations:

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

Development of Energy Rate Escalation

Exhibit 2-3 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 in 2001 about the validity of a model that dramatically decreased rates at a time when rates were increasing. Since the aim of this method was to create bill savings that were comparable between utilities, a constant 3 percent escalation rate was adopted. The 3 percent value was chosen because it is roughly equal to the annual inflation rate.

⁵ Energy rate escalated by 3% each year.

⁶ These are defined as gross savings because they are bill savings.

⁷ EUL values are consistent with the October 25, 2000 ALJ ruling and the September 25, 2000 CALMAC Workshop Report.

⁸ 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. SDG&E and SoCalGas computed average prices (total revenue minus customer charge divided by total kWh or therms) for all LIEE participants with a complete year of use. SCE, after removing master metered accounts, calculated the average \$/kWh based on the LIEE customer rate schedule and tier level. PG&E calculated the average \$/kWh and \$/therm based on rate schedule (i.e., CARE versus Non-CARE).

Energy rates used by each utility are shown in Exhibit 2-4.

**Exhibit 2-4
Energy Rates Used for Bill Savings Calculations**

Year	PG&E		SCE	SDG&E		SoCalGas	
	kWh	Therm	kWh	kWh	Therm	kWh	Therm
2002	0.1124	0.6235	0.1174	0.1365	0.6957	0.1174	0.5311
2003	0.0992	0.7721	0.1118	0.1380	0.8560	0.1118	0.6970
2004	0.0975	0.8138	0.1016	0.1119	0.8399	0.1016	0.8160
All years afterwards	Previous Year * (1+Escalation Rate)						

As shown in Exhibit 2-4, 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 down swings occur, the method can potentially estimate falsely high life cycle bill savings for future years. However, while there may be dramatic differences between two years, the subsequent year can provide a self-correction to this swing.

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.

The EULs were revisited during this reporting period to determine if the California Energy Commission Database for Energy Efficient Resources (DEER) values should be substituted for the values used to date. There are two groups of DEER EULs at this point. Non-weather sensitive measure DEER values have been updated as of 2004 while weather sensitive measures continue to use the DEER values from 1996 (although these are currently undergoing revision). The older weather sensitive DEER (DEER 4.0) EULs were not considered appropriate for use in this analysis for two reasons - the EULs in DEER 4.0 are based on 1992 and 1994 information and the measure EULs vary at times between utilities. The EULs values that evolved from the CALMAC coordination effort in 2000 have subsequently been used for program planning and were incorporated into the CPUC Energy Efficiency Manual. The newer non-weather sensitive DEER measures were researched to assess the source of the EULs included. There were seven measures in the new non-weather sensitive DEER that were also included as LIEE measures. The comparison of the overlapping EULs are shown in Exhibit 2-5.

**Exhibit 2-5
EUL Values**

Measure	Bill Savings EUL (yrs)	New DEER EUL (yrs)	New DEER EUL Source
CFL	8	Varied from 4.45 to 8.2 depending on number of hours of operation	“Measure Savings Algorithms and Cost Assumptions: Technical Reference Manual”, Efficiency Vermont, Jan. 2003
Faucet Aerator	5	9	1995 Integrated Resource Plan by Washington Electric Cooperative
Low Flow Showerhead	10	9	1995 Integrated Resource Plan by Washington Electric Cooperative
Refrigerator Replacement	15	18	DEER 4.0
Water Heater Pipe Wrap	15	10	1995 Integrated Resource Plan by Washington Electric Cooperative
Water Heater Replacement	13	15	DEER 4.0
Water Heater Blanket	5	6	1995 Integrated Resource Plan by Washington Electric Cooperative

Since there is no ability to assign operating hours to the CFL fixtures installed under the LIEE program, the CFL EUL for CFLs from the new DEER cannot be applied. The EUL source for four measures (Faucet Aerator, Low Flow Showerhead, Water Heater Blanket, and Water Heater Pipe Wrap) was considered to be both older than the current EULs source and of inappropriate origin. The last two measures that overlap (Refrigerator Replacement and Water Heater Replacement) are also older than the current measure life and were considered inappropriate.

Based on the investigation into the DEER EULs, the decision was made to use the same EUL used for the previous Bill Savings Reports. The EULs being used in this analysis that are listed in Exhibit 2-6. .

Exhibit 2-6
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 ⁹	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

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

² CALMAC Workshop Report on PY 2001 Energy Efficiency Programs

³ Assumed to have the same EUL as Caulking or Weatherstripping.

⁴ Assumed to have the same EUL as attic insulation

⁵ DSM Measure Life Project, September 23, 1993 (adjusted and non-adjusted)

⁶ Engineering Estimate

⁷ LIEE Measure Cost Effectiveness Preliminary Report. September, 2002.

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

⁹ 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.

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. The next section discusses the analysis of program cost and bill savings data for PY2002 through PY2004.

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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

As discussed in Section 2.2, 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 as TA 7.2 throughout this document). Because each utility's accounting system is different, it was not possible for all utilities to break out the costs in identical fashion. Exhibit 3-1 presents a summary of where each utility reported costs across the three years on analysis in this report. (only 16 cost categories are shown because the other two cost categories are not relevant to the utilities) 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 4-3 to Exhibit 4-11, 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		
	2002	2003	2004	2002	2003	2004	2002	2003	2004	2002	2003	2004
Energy Efficiency												
Gas Appliances	X	X	X				X	X	X	X	X	X
Electric Appliances	X	X	X	X	X	X	X	X	X			
Weatherization Measures	X	X	X	X	X	X	X	X	X	X	X	X
Outreach & Assessment	X	X	X	X	X	X	X			X	X	X
In Home Energy Education	X	X	X	X	X	X	X	X	X		X	X
Education Workshops	X	X					X	X	X	X		
Pilots	X	X	X	X	X		X				X	
Training Center	X	X	X							X	X	X
Inspections	X	X	X	X	X	X	X	X	X	X	X	X
Advertising							X	X	X	X	X	X
M&E Studies	X	X	X	X	X	X			X	X	X	X
Regulatory Compliance	X	X	X	X	X	X	X	X	X	X	X	X
Other Administration	X	X	X			X			X	X		X
Indirect Costs	X	X	X	X	X	X			X	X		X
Oversight Costs												
LIAB PY2002				X	X							
CPUC Energy Division	X	X	X	X	X	X	X	X	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:

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

PY2002 and PY2003 were completely analyzed and reported in the 2004 Bill Savings Report. They are not discussed further in this report.

One might expect that the PY2002 and PY2003 bill savings values in this report should be identical to the values presented in the 2004 Bill Savings Report. However, the methodology for the life cycle bill savings uses actual energy rate data as they become available. Therefore, while the PY2004 energy rates were projected rates for the analysis performed for the 2004 Bill Savings Report, the actual rates were known and used for the analysis in this report. This caused the PY2002 and PY2003 results to change between reports. These changes are reflected in the detailed tables in Section 4.2

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 previous reports, 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
2002	\$ 65,599,305	\$ 33,291,491	0.51	\$ 471
2003	\$ 52,520,409	\$ 24,118,156	0.46	\$ 510
2004	\$ 51,826,340	\$ 25,074,904	0.48	\$ 516

SCE Summary

Program Year	Program Costs	Life Cycle Bill Savings	Bill Savings / Cost Ratio	Per Home Average Life Cycle Bill Savings
2002	\$ 13,971,543	\$ 11,055,007	0.79	\$ 372
2003	\$ 18,664,182	\$ 16,596,630	0.89	\$ 492
2004	\$ 16,264,898	\$ 15,831,079	0.97	\$ 424

SDG&E Summary

Program Year	Program Costs	Life Cycle Bill Savings	Bill Savings / Cost Ratio	Per Home Average Life Cycle Bill Savings
2002	\$ 12,358,189	\$ 7,519,036	0.61	\$ 534
2003	\$ 12,865,219	\$ 6,665,160	0.52	\$ 424
2004	\$ 14,405,365	\$ 8,235,420	0.57	\$ 553

SoCalGas Summary

Program Year	Program Costs	Life Cycle Bill Savings	Bill Savings / Cost Ratio	Per Home Average Life Cycle Bill Savings
2002	\$ 30,666,410	\$ 8,628,899	0.28	\$ 182
2003	\$ 33,998,942	\$ 10,342,708	0.30	\$ 181
2004	\$ 32,595,808	\$ 6,955,642	0.21	\$ 127

**Exhibit 3-3
Results Summary Across Utility**

Program Costs

Program Year	PG&E	SCE	SDG&E	SoCalGas
2002	\$ 65,599,305	\$ 13,971,543	\$ 12,358,189	\$ 30,666,410
2003	\$ 52,520,409	\$ 18,664,182	\$ 12,865,219	\$ 33,998,942
2004	\$ 51,826,340	\$ 16,264,898	\$ 14,405,365	\$ 32,595,808

Life Cycle Bill Savings

Program Year	PG&E	SCE	SDG&E	SoCalGas
2002	\$ 33,291,491	\$ 11,055,007	\$ 7,519,036	\$ 8,628,899
2003	\$ 24,118,156	\$ 16,596,630	\$ 6,665,160	\$ 10,342,708
2004	\$ 25,074,904	\$ 15,831,079	\$ 8,235,420	\$ 6,955,642

Bill Savings to Cost Ratio

Program Year	PG&E	SCE	SDG&E	SoCalGas
2002	0.51	0.79	0.61	0.28
2003	0.46	0.89	0.52	0.30
2004	0.48	0.97	0.57	0.21

Per Home Life Cycle Bill Savings

Program Year	PG&E	SCE	SDG&E	SoCalGas
2002	\$ 471	\$ 372	\$ 534	\$ 182
2003	\$ 510	\$ 492	\$ 424	\$ 181
2004	\$ 516	\$ 424	\$ 553	\$ 127

While the presentation of values by and across utilities allow for some insight into the results of the program, a more detailed analysis and discussion of the various values 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

As stated earlier, the PY2002 and PY2003 programs used one source of per-unit impacts to calculate energy savings, while PY2004 used a later source. The change in per-unit impacts for PY2004 makes a year-to-year comparison difficult. The per-unit values used in PY2004 were smaller than previously used for some measures and larger for other measures. In order to determine the impact of the change in per-unit values, the PY2002/2003 per-unit values were applied to the PY2004 installations numbers. The results are shown in Exhibit 3-4.

**Exhibit 3-4
PY2004 Life Cycle Bill Savings per Home with PY2002/2003 Per-Unit Impact Values**

Utility	PY2004 per-unit impact values	PY2002/2003 per-unit impact values	% Different
PG&E	\$ 516.49	\$ 490.31	5%
SCE	\$ 423.88	\$ 412.78	3%
SDG&E	\$ 552.82	\$ 512.94	7%
SoCalGas	\$ 127.21	\$ 173.89	-37%

For three out of the four utilities, the life cycle bill savings are 3% to 7% larger with the more recent per-unit values than they would have been with the older per-unit values. SoCalGas is the exception, with a relatively large reduction of 37%. Exhibit 3-4 indicates that the primary reason for the lower bill savings for SoCalGas in 2004 is the result of changing the per unit impact values from those supplied in the PY2000 LIEE Impact Evaluation to those supplied the PY2001 LIEE Impact Evaluation.

From 1997 to 2004, the LIEE program has treated almost 1.2 million homes in California (based on the homes treated in the Bill Savings Reports). The number of homes treated each year (Exhibit 3-5) helps explain some of the values in Exhibit 3-2 and Exhibit 3-3.

**Exhibit 3-5
Number of Homes Treated by Year by Utility**

Homes Treated

Program Year	PG&E	SCE	SDG&E	SoCalGas
2002	70,683	29,685	14,089	49,464
2003	47,271	33,732	15,706	57,179
2004	48,549	37,348	14,897	54,677

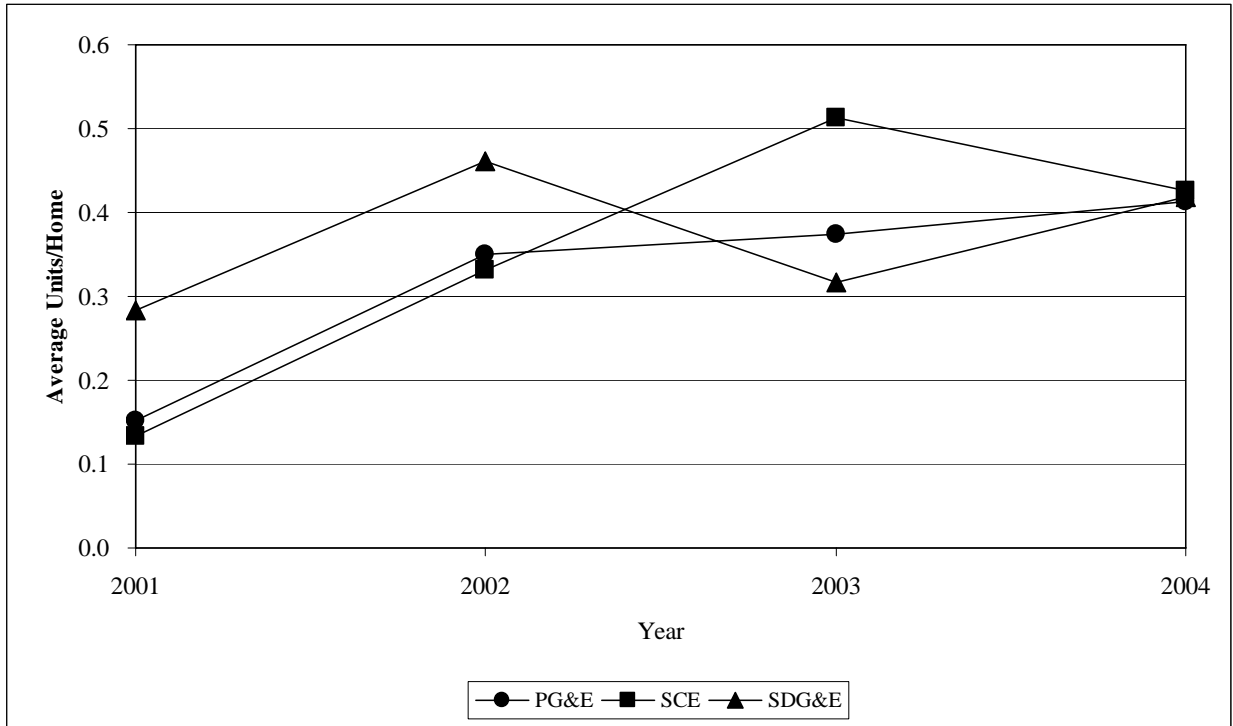
Exhibit 3-5 illustrates that SCE has showed steady small increase over the three year time frame while and PG&E had a one year increase and has since been similar in 2003 and 2004. SDG&E and SoCalGas have fluctuated by 10% to 15% over the three year period.

Exhibit 3-2 summarizes the analysis results, by utility, from 2002 through 2004. There were increased program costs continuing into PY2002 across all utilities due to the influx of SBX-5 money that started in the second quarter of 2001.

Detailed explanations are based on line-by-line examination of the data. Readers wishing to review the accuracy of the conclusions presented here may wish to refer to the detailed cost or bill savings exhibits for the appropriate year, which are presented in Section 4.

Historically, one of the biggest reasons for differences across the years for the three electric utilities has been the variation in the number of installed refrigerators, as shown in Exhibit 3-6. The large variation in savings has been due to the combination of significant fluctuations in units installed and the large per-unit impact and long life of the measure. For PY2004, however, the utilities have almost identical installation rates for refrigerators and the measure does not play a large part in explaining the inter-utility differences for this year.

Exhibit 3-6
Average Number of Installed Refrigerators per Treated Home



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 area 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.⁹ Exhibit 3-7 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 2002 through 2004.

⁹ This is the same assessment protocol as was followed in the previous Bill Savings Reports.

Exhibit 3-7
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
2002	0.51	0.61	0.44	0.79	0.28
2003	0.46	0.52	0.51	0.89	0.30
2004	0.48	0.57	0.47	0.97	0.21

Per Home Life Cycle Bill Savings

Program Year	PG&E	SDG&E	Combined SCE and SoCalGas	SCE	SoCalGas
2002	\$ 471	\$ 534	\$ 555	\$ 372	\$ 182
2003	\$ 510	\$ 424	\$ 673	\$ 492	\$ 181
2004	\$ 516	\$ 553	\$ 551	\$ 424	\$ 127

Exhibit 3-8 and Exhibit 3-9 present plots of the values shown in Exhibit 3-7.

Exhibit 3-8
Graph of Bill Savings to Cost Ratio by Service Area

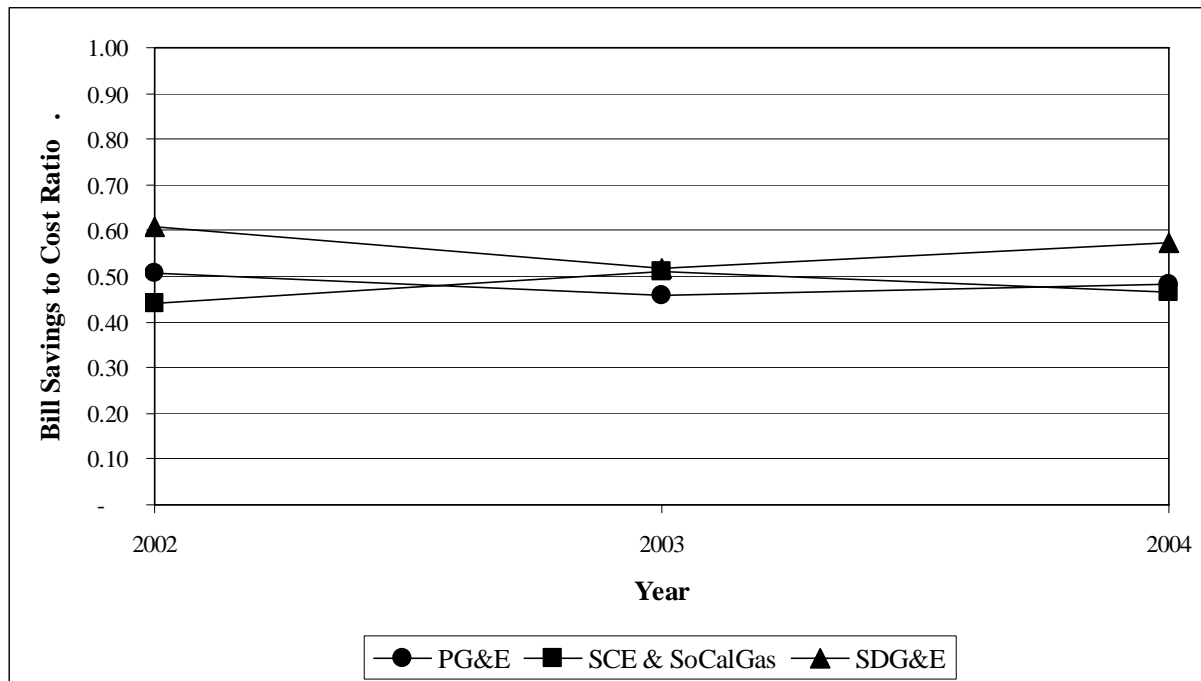
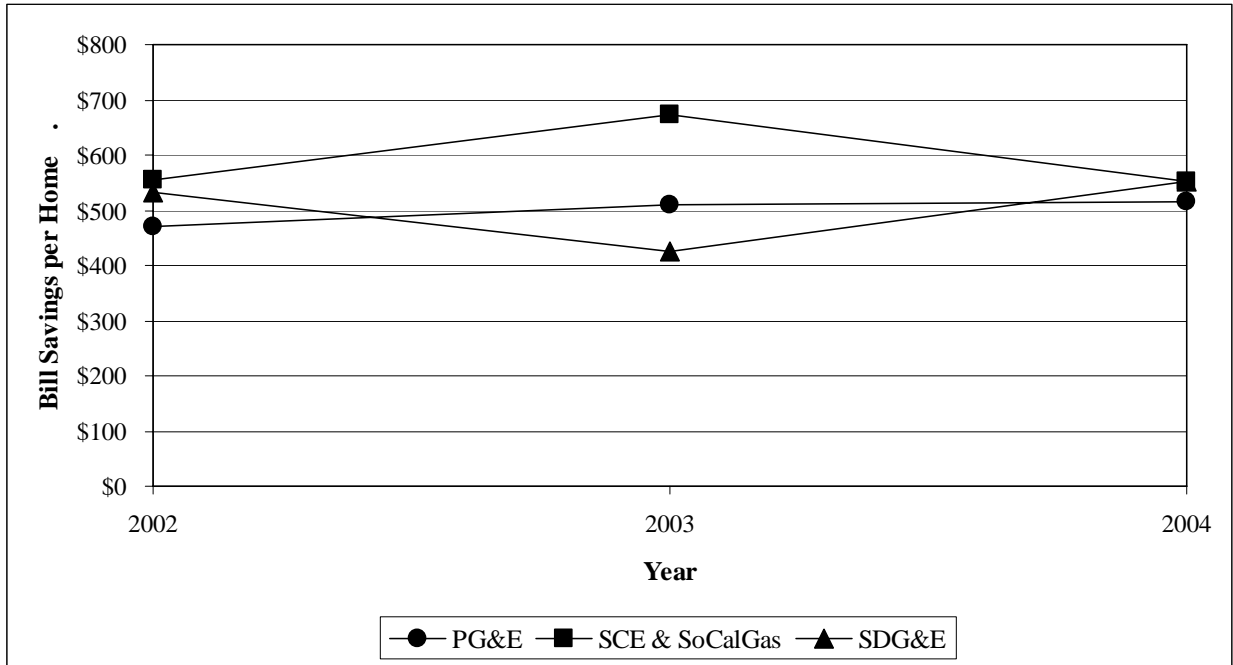


Exhibit 3-9
Graph of Bill Savings per Home by Service Area



In an attempt to identify the reasons for the differences shown above between the service areas in 2004, the costs and benefits were examined in detail. Because PY2002 and PY 2003 were fully analyzed in the 2004 Bill Savings Report, no other comment on the differences between the utilities is presented here for those years.

Utility Rates

Exhibit 3-8 and Exhibit 3-9 indicate that the variation in bill savings to cost ratio among the utilities was slightly more than in PY2003, but had a similar spread to PY2002. A comparison of the effect of the different energy rates was performed to determine how much of the variation was due to differences in rates.

The energy rates were modified by averaging them across utilities and using this modified rate to calculate a modified bill savings to cost ratio for PY2004. As shown in Exhibit 3-10, the bill savings-to-cost ratios were reduced by 30 percent when the averaged rates were applied to all utilities estimates.

Exhibit 3-10
Bill Savings to Cost Ratio with Modified Energy Rates

	PG&E	SCE/SoCalGas	SDG&E
Bill Savings to Cost Ratio	0.48	0.47	0.57
Actual PY2004 Energy Rate	0.0975 kWh 0.8138 Therm	0.1016 kWh 0.8160 Therm	0.119 kWh 0.8399 Therm
Assumed Modified Energy Rate	0.1037 kWh 0.8232 Therm		
Modified Bill Savings to Cost Ratio	0.51	0.47	0.54

Discussion of Bill Savings to Cost Ratio Variations

In PY2004 an effort was made to make the program cost accounting line items more similar than prior years. The utilities moved program costs that had been included in the energy efficiency measures to the “Other Administration” line item. What appears to be a drop in program costs in PY2004 for energy efficiency measures is really just an accounting change.

For PG&E, included in the “Other Admin” costs was \$2.2 million dollars worth of unexpected contractor insurance costs that PG&E picked up in PY2004 and subsequently dropped in PY2005. Without the insurance costs, the ratio moves from 0.48 to 0.53.

The bill savings reductions seen by SoCalGas in PY2004 resulting from the change in per-unit impacts caused the reduction in bill savings to cost ratio for the combined service area (i.e., SoCalGas and SCE). If the older per-unit values are applied to SoCalGas, the combined bill savings to cost ratio increases from 0.47 to 0.52.

When the utility rates, per-unit impact changes for SoCalGas, and the one-time “Other Admin” cost are factored in, the three service areas have bill savings to cost ratios that are very similar.

Bill Savings Per Home Differences

First, it is important to say that the bill savings per home values that emerged from this year’s analysis, using each utilities actual rates, are within 10 percent of each other (Exhibit 3-11 below). This level of agreement is similar to the level of agreement achieved in previous bill savings reports after making adjustments for measures and/or rates. So no further analysis was really necessary. The effects of using the average utility rates from Exhibit 2-4 were tested to see whether they would bring the values even closer. Exhibit 3-11 shows that it reversed the order of the PG&E and SDG&E bill savings per home, but did not decrease the spread. The percentage contribution of each measure type was reviewed to see if trends could be identified, but no obvious reason for the variation could be found.

Exhibit 3-11
Effect of Average Rate on Bill Savings per home

Measure Type	Actual Rates			Average Rates		
	SCE/ SoCalGas	PG&E	SDG&E	SCE/ SoCalGas	PG&E	SDG&E
	Percentage of per home bill savings					
Weatherization	9	15	8	9	15	8
Water Heating	13	9	8	13	9	9
Refrigeration	59	62	69	59	62	68
Other	12	3	4	12	3	5
CFL	8	11	11	8	11	11
	Bill Savings per Home					
Bill Savings/house	\$ 551	\$ 516	\$ 553	\$ 543	\$ 561	\$ 518

3.3 Overall Comment on Bill Savings Comparisons

Previous bill savings reports showed that primary factors controlling per home bill savings were the per-unit cost of energy (i.e., utility rates) and installation rates of the measures. In PY2004, the unadjusted numbers evolving from the analysis were within 10% of each other, which is the same as the levels of agreement achieved in prior bill savings assessment after adjustments. Neither the per-unit cost of energy nor the measure installation rates played major rolls in the utility-to-utility variation. The main effect for PY2004 was the change in per-unit impacts seen by SoCalGas resulting from the updated impact study data. In short, this analysis shows that the PY2004 LIEE program delivered comparable savings to program participants statewide.

4 DETAILED TABLES

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 2002 Last Updated 3/13/03

	Costs Recorded by Cost Element - 2002			
	Labor	Non-Labor	Contract	Total
Energy Efficiency				
Gas Appliances	\$ 10,427	\$ 23,933	\$ 1,378,135	\$ 1,412,495
Electric Appliances ⁶	\$ -	\$ 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
<i>Energy Efficiency TOTAL</i>	\$ 292,133	\$ 968,541	\$ 50,464,386	\$ 51,725,060
Pilots				
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
<i>Total Pilots</i>	\$ 45,189	\$ 34,635	\$ 463,200	\$ 543,024
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 ¹	\$ 443	\$ (360)	\$ 108,172	\$ 108,255
Regulatory Compliance ²	\$ 189,015	\$ 174,328	\$ 311,184	\$ 674,528
Other Administration ³	\$ 697,666	\$ 721,895	\$ 4,320,397	\$ 5,739,957
Indirect Costs ⁴	\$ -	\$ -	\$ 3,329,716	\$ 3,329,716
Oversight Costs				
LIOB Expense	\$ -	\$ -	\$ -	\$ -
CPUC Energy Division	\$ -	\$ -	\$ 39,094	\$ 39,094
<i>Total Oversight Costs</i>	\$ -	\$ -	\$ 39,094	\$ 39,094
Total Costs⁵	\$ 2,505,098	\$ 3,178,913	\$ 59,915,293	\$ 65,599,305

Notes:

- 1 M&E studies include: LIEE Program Evaluations, 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 and prime contractor's management.
- 4 Indirect costs include Combustible Appliances Safety (CAS) Testing, which is not part of the LIEE budget.
- 5 Total costs include CAS Testing, which is not part of the LIEE budget.
- 6 Excludes \$732,876 which was already reported in the 2002 AEAP filing as committed refrigerators and evaporative coolers.

Exhibit 4-2

PG&E Table TA 7.2 – Program Year 2003 Last Updated 3/16/04

	Costs Recorded by Cost Element - 2003			
	Labor	Non-Labor	Contract	Total
Energy Efficiency				
Gas Appliances	\$ -	\$ 45,865	\$ 3,509,010	\$ 3,554,875
Electric Appliances ⁶	\$ -	\$ 220,863	\$ 15,464,689	\$ 15,685,552
Weatherization Measures	\$ -	\$ 198,233	\$ 13,970,482	\$ 14,168,715
Outreach & Assessment	\$ -	\$ 35,988	\$ 2,078,668	\$ 2,114,656
In Home Energy Education	\$ -	\$ 21,982	\$ 1,935,435	\$ 1,957,417
Education Workshops	\$ 522	\$ 601	\$ -	\$ 1,124
Energy Efficiency TOTAL	\$ 522	\$ 523,531	\$ 36,958,285	\$ 37,482,338
Pilots				
Leveraging Pilot	\$ -	\$ 920	\$ 68,709	\$ 69,629
Phase 4 Pilot	\$ 1,818	\$ 3,411	\$ 31,171	\$ 36,401
Total Pilots	\$ 1,818	\$ 4,332	\$ 99,880	\$ 106,030
Training Center	\$ 59,653	\$ 93,157	\$ 47,059	\$ 199,869
Inspections	\$ 1,646,212	\$ 1,771,858	\$ 100,107	\$ 3,518,177
Advertising	\$ -	\$ -	\$ 0	\$ -
M&E Studies ¹	\$ 12,167	\$ 2,204	\$ 405,859	\$ 420,230
Regulatory Compliance ²	\$ 203,619	\$ 206,469	\$ 8,511	\$ 418,600
Other Administration ³	\$ 810,199	\$ 1,167,366	\$ 4,844,188	\$ 6,821,753
Indirect Costs ⁴	\$ 3,507,391	\$ -	\$ -	\$ 3,507,391
Oversight Costs				
LIOB Expense	\$ -	\$ -	\$ -	\$ -
CPUC Energy Division	\$ -	\$ -	\$ 46,021	\$ 46,021
Total Oversight Costs	\$ -	\$ -	\$ 46,021	\$ 46,021
Total Costs⁵	\$ 6,241,583	\$ 3,768,917	\$ 42,509,909	\$ 52,520,409

Notes:

- 1 M&E studies include: Bill Savings, and Cost Effectiveness Testing, Phase 4 Study.
- 2 Regulatory Compliance includes LIEE Standardization, RRM Working Group Report, EPO, Leveraging Report, and Monthly CPUC Reports.
- 3 Includes PG&E's program management and prime contractor's management.
- 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 2004 Last Updated 3/28/05

	Costs Recorded by Cost Element - 2004			
	Labor	Non-Labor	Contract	Total
Energy Efficiency				
Gas Appliances	\$ -	\$ 10,916	\$ 1,963,918	\$ 1,974,834
Electric Appliances ⁶	\$ -	\$ 66,743	\$ 16,599,118	\$ 16,665,861
Weatherization Measures	\$ -	\$ 20,863	\$ 10,251,193	\$ 10,272,056
Outreach & Assessment	\$ -	\$ 30,584	\$ 3,042,146	\$ 3,072,730
In Home Energy Education	\$ -	\$ 31,288	\$ 3,067,252	\$ 3,098,540
Education Workshops	\$ -	\$ -	\$ -	\$ -
Energy Efficiency TOTAL	\$ -	\$ 160,393	\$ 34,923,627	\$ 35,084,020
Pilots				
Leveraging Pilot	\$ -	\$ -	\$ 185,332	\$ 185,332
LIHEAP Leveraging	\$ -	\$ 6,563	\$ 336,270	\$ 342,833
Total Pilots	\$ -	\$ 6,563	\$ 521,602	\$ 528,165
Training Center	\$ 112,414	\$ 120,814	\$ 98,070	\$ 331,298
Inspections	\$ 1,922,141	\$ 1,084,826	\$ 80,703	\$ 3,087,670
Advertising	\$ -	\$ -	\$ -	\$ -
M&E Studies ¹	\$ -	\$ 0	\$ 201,258	\$ 201,258
Regulatory Compliance ²	\$ 214,947	\$ 85,602	\$ 7,830	\$ 308,380
Other Administration ³	\$ 1,093,705	\$ 1,210,199	\$ 8,098,968	\$ 10,402,873
Indirect Costs ⁴	\$ -	\$ 1,858,439	\$ -	\$ 1,858,439
Oversight Costs				
LIOB Expense	\$ -	\$ -	\$ -	\$ -
CPUC Energy Division	\$ -	\$ -	\$ 24,237	\$ 24,237
Total Oversight Costs	\$ -	\$ -	\$ 24,237	\$ 24,237
Total Costs⁵	\$ 3,343,208	\$ 4,526,836	\$ 43,956,296	\$ 51,826,340

Notes:

¹ M&E studies include: Bill Savings, 2001 Program Evaluation, Standardization Phase 4, and 2002 Impact Evaluation

² Regulatory Compliance includes LIEE Standardization, RRM Working Group and all CPUC Reports.

³ Includes PG&E's program management and prime contractor's management.

⁴ Indirect costs include NGAT, which is not part of the LIEE budget.

⁵ Total costs include NGAT, which is not part of the LIEE budget.

Exhibit 4-4

SCE Table TA 7.2 – Program Year 2002 Last Updated 3/17/03

	Costs Recorded by Cost Element - 2002			
	Labor	Non-Labor	Contract	Total
Energy Efficiency				
- 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
Pilots				
- 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
Oversight Costs				
- 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
Total Costs	\$ 1,339,883	\$ 323,431	\$ 12,308,229	\$ 13,971,543

Exhibit 4-5

SCE Table TA 7.2 – Program Year 2003 Last Updated 3/16/04

	Costs Recorded by Cost Element - 2003 ^[1]			
	Labor	Non-Labor	Contract	Total
Energy Efficiency				
- Gas Appliances	\$ -	\$ -	\$ -	\$ -
- Electric Appliances	\$ 845,025	\$ 325,055	\$ 14,446,027	\$ 15,616,106
- Weatherization	\$ 73,772	\$ 713,139	\$ 232,593	\$ 1,019,505
- Outreach & Assessment ^[2]	\$ -	\$ -	\$ 925,689	\$ 925,689
- In Home Energy Education	\$ 20	\$ -	\$ 244,765	\$ 244,785
- Education Workshop	\$ -	\$ -	\$ -	\$ -
<i>Energy Efficiency TOTAL</i>	\$ 918,817	\$ 1,038,194	\$ 15,849,075	\$ 17,806,086
Pilots				
- Pilot (A)				\$ -
- Pilot (Cool Center)		\$ 226	\$ 150,314	\$ 150,541
<i>Total Pilots</i>				\$ 150,541
Training Center	\$ -	\$ -	\$ -	\$ -
Inspections	\$ -	\$ -	\$ 105,160	\$ 105,160
Advertising	\$ -	\$ -	\$ -	\$ -
M&E Studies	\$ 165,453	\$ -	\$ -	\$ 165,453
Regulatory Compliance	\$ 63,126	\$ -	\$ -	\$ 63,126
Other Administration	\$ -	\$ -	\$ -	\$ -
Indirect Costs	\$ 260,305	\$ -	\$ -	\$ 260,305
Oversight Costs				
- LIAB Start-up	\$ -	\$ -	\$ -	\$ -
- LIAB PY 2001	\$ -	\$ -	\$ -	\$ -
- LIAB PY 2002	\$ -	\$ 20,839	\$ -	\$ 20,839
CPUC Energy Division	\$ -	\$ 92,673	\$ -	\$ 92,673
<i>Total Oversight Costs</i>	\$ -	\$ 113,512	\$ -	\$ 113,512
Total Costs	\$ 1,407,700	\$ 1,151,932	\$ 16,104,549	\$ 18,664,182

[1] - PGC & SBX expenses

[2] - Part of Electric Appliance and WX expenses in Rapid Deployment report

Exhibit 4-6

SCE Table TA 7.2 – Program Year 2004 Last Updated 3/28/05

	Costs Recorded by Cost Element - 2004			
	Labor	Non-Labor	Contract	Total
Energy Efficiency				
- Gas Appliances	\$ -	\$ -	\$ -	\$ -
- Electric Appliances	\$ -	\$ -	\$ 12,467,946	\$ 12,467,946
- Weatherization	\$ -	\$ -	\$ 22,225	\$ 22,225
- Outreach & Assessment	\$ -	\$ -	\$ 1,409,106	\$ 1,409,106
- In Home Energy Education	\$ -	\$ -	\$ 206,943	\$ 206,943
- Education Workshop	\$ -	\$ -	\$ -	\$ -
<i>Energy Efficiency TOTAL</i>	\$ -	\$ -	\$ 14,106,220	\$ 14,106,220
Pilots				
- Pilot (A)	\$ -	\$ -	\$ -	\$ -
- Pilot (B)	\$ -	\$ -	\$ -	\$ -
<i>Total Pilots</i>	\$ -	\$ -	\$ -	\$ -
Training Center	\$ -	\$ -	\$ -	\$ -
Inspections	\$ -	\$ -	\$ 173,070	\$ 173,070
Advertising	\$ -	\$ -	\$ -	\$ -
M&E Studies	\$ 300,661	\$ -	\$ -	\$ 300,661
Regulatory Compliance	\$ 67,529	\$ -	\$ -	\$ 67,529
Other Administration	\$ 1,020,821	\$ 296,486	\$ -	\$ 1,317,308
Indirect Costs	\$ 267,233	\$ -	\$ -	\$ 267,233
Oversight Costs				
- LIAB Start-up	\$ -	\$ -	\$ -	\$ -
- LIAB PY 2001	\$ -	\$ -	\$ -	\$ -
- LIAB PY 2002	\$ -	\$ -	\$ -	\$ -
CPUC Energy Division	\$ -	\$ 32,877	\$ -	\$ 32,877
<i>Total Oversight Costs</i>	\$ -	\$ 32,877	\$ -	\$ 32,877
Total Costs	\$ 1,656,244	\$ 329,363	\$ 14,279,290	\$ 16,264,898

Exhibit 4-7

SDG&E Table TA 7.2 – Program Year 2002 Last Updated 4/9/03

	Costs Recorded by Cost Element - 2002			
	Labor	Non-Labor	Contract	TOTAL
Energy Efficiency				
- Gas Appliances	\$ 10,854	\$ 12,337	\$ 1,109,761	\$ 1,132,953
- Electric Appliances	\$ -	\$ 26,684	\$ 5,444,907	\$ 5,471,590
- Weatherization Measures	\$ 151,121	\$ 257,368	\$ 2,829,412	\$ 3,237,900
- Outreach Assessment	\$ 5,648	\$ 13,765	\$ 172,707	\$ 192,120
- In Home Energy Education	\$ 65,699	\$ 84,787	\$ 538,339	\$ 688,825
- Education Workshops	\$ 6,212	\$ 4,802	\$ 192,940	\$ 203,954
<i>Energy Efficiency TOTAL</i>	\$ 239,533	\$ 399,743	\$ 10,288,066	\$ 10,927,342
Pilots				
- Pilot (Cool Zones)	\$ -	\$ 212	\$ 58,031	\$ 58,243
- Pilot (B)	\$ -	\$ -	\$ -	\$ -
<i>Total Pilots</i>	\$ -	\$ 212	\$ 58,031	\$ 58,243
Training Center	\$ -	\$ -	\$ -	\$ -
Inspections	\$ 171,942	\$ 159,722	\$ 279,470	\$ 611,134
Advertising	\$ -	\$ 3,286	\$ 140,405	\$ 143,691
M&E Studies	\$ -	\$ -	\$ -	\$ -
Regulatory Compliance	\$ 125,783	\$ 111,319	\$ 349,045	\$ 586,148
Other Administration	\$ -	\$ -	\$ -	\$ -
Indirect Costs	\$ -	\$ -	\$ -	\$ -
Oversight Costs				
- LIAB Start-Up	\$ -	\$ -	\$ -	\$ -
- LIAB PY Past Year	\$ -	\$ -	\$ -	\$ -
- LIAB PY Present Year	\$ -	\$ -	\$ -	\$ -
- CPUC Energy Division	\$ -	\$ 31,631.92	\$ -	\$ 31,632
<i>Total Oversight Costs</i>	\$ -	\$ 31,632	\$ -	\$ 31,632
Total Costs	\$ 537,259	\$ 705,914	\$ 11,115,017	\$ 12,358,189

Exhibit 4-8

SDG&E Table TA 7.2 – Program Year 2003 Last Updated 3/16/04

	Costs Recorded by Cost Element - 2003			
	Labor	Non-Labor	Contract	TOTAL
Energy Efficiency				
- Gas Appliances	\$ 853	\$ 5,244	\$ 703,253	\$ 709,349
- Electric Appliances	\$ -	\$ 26,844	\$ 3,968,607	\$ 3,995,452
- Weatherization Measures	\$ 202,149	\$ 256,503	\$ 4,751,340	\$ 5,209,992
- Outreach and Marketing	\$ -	\$ -	\$ -	\$ -
- In Home Energy Education	\$ 88,087	\$ 227,109	\$ 951,102	\$ 1,266,298
- Education Workshops	\$ 79,364	\$ 63,656	\$ 204,532	\$ 347,552
<i>Energy Efficiency TOTAL</i>	\$ 370,452	\$ 579,356	\$ 10,578,835	\$ 11,528,643
Pilots				
- Pilot (A)	\$ -	\$ -	\$ -	\$ -
- Pilot (B)	\$ -	\$ -	\$ -	\$ -
<i>Total Pilots</i>	\$ -	\$ -	\$ -	\$ -
Training Center	\$ -	\$ -	\$ -	\$ -
Inspections	\$ 138,327	\$ 143,195	\$ 354,548	\$ 636,071
Advertising	\$ 961	\$ 17,608	\$ 388,997	\$ 407,566
M&E Studies	\$ -	\$ -	\$ -	\$ -
Regulatory Compliance	\$ 108,779	\$ 118,795	\$ 44,993	\$ 272,568
Other Administration	\$ -	\$ -	\$ -	\$ -
Indirect Costs	\$ -	\$ -	\$ -	\$ -
Oversight Costs				
- LIAB Start-Up	\$ -	\$ -	\$ -	\$ -
- LIAB PY Past Year	\$ -	\$ -	\$ -	\$ -
- LIAB PY Present Year	\$ -	\$ -	\$ -	\$ -
- CPUC Energy Division	\$ -	\$ 20,372.10	\$ -	\$ 20,372
<i>Total Oversight Costs</i>	\$ -	\$ 20,372	\$ -	\$ 20,372
Total Costs	\$ 618,520	\$ 879,326	\$ 11,367,373	\$ 12,865,219

Exhibit 4-9

SDG&E Table TA 7.2 – Program Year 2004 Last Updated 3/28/05

	Costs Recorded by Cost Element - 2004			
	Labor	Non-Labor	Contract	TOTAL
Energy Efficiency				
- Gas Appliances	Labor	Non-Labor	\$ 1,178,453	\$ 1,178,453
- Electric Appliances	\$ -	\$ -	\$ 5,021,091	\$ 5,021,091
- Weatherization Measures	\$ -	\$ -	\$ 4,214,964	\$ 4,214,964
- Outreach and Marketing	\$ -	\$ -	\$ -	\$ -
- In Home Energy Education	\$ -	\$ -	\$ 1,412,499	\$ 1,412,499
- Education Workshops	\$ -	\$ -	\$ 64,361	\$ 64,361
<i>Energy Efficiency TOTAL</i>	\$ -	\$ -	\$ 11,891,368	\$ 11,891,368
Pilots				
- Pilot (A)	\$ -	\$ -	\$ -	\$ -
- Pilot (B)	\$ -	\$ -	\$ -	\$ -
<i>Total Pilots</i>	\$ -	\$ -	\$ -	\$ -
Training Center	\$ -	\$ -	\$ -	\$ -
Inspections	\$ 95,455	\$ 15,422	\$ 731	\$ 111,609
Advertising	\$ -	\$ 13,073	\$ 591,645	\$ 604,718
M&E Studies	\$ -	\$ 1,658	\$ 43,557	\$ 45,215
Regulatory Compliance	\$ 113,006	\$ (278,101)	\$ 337,812	\$ 172,717
Other Administration	\$ 736,906	\$ 77,233	\$ 121,263	\$ 935,403
Indirect Costs	\$ -	\$ 627,431	\$ -	\$ 627,431
Oversight Costs				
- LIAB Start-Up	\$ -	\$ -	\$ -	\$ -
- LIAB PY Past Year	\$ -	\$ -	\$ -	\$ -
- LIAB PY Present Year	\$ -	\$ -	\$ -	\$ -
- CPUC Energy Division	\$ -	\$ 12,473.32	\$ 4,430.97	\$ 16,904
<i>Total Oversight Costs</i>	\$ -	\$ 12,473	\$ 4,431	\$ 16,904
Total Costs	\$ 945,368	\$ 469,189	\$ 12,990,808	\$ 14,405,365

Exhibit 4-10

SoCalGas Table TA 7.2 – Program Year 2002 Last Updated 3/13/03

	Costs Recorded by Cost Element			
	Labor	Non-Labor	Contract	Total
Energy Efficiency				
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
Pilots				
<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
Oversight Costs				
LIOB Expenses				\$ -
CPUC Energy Division			\$ 20,123.00	\$ 20,123
<i>Total Oversight Costs</i>				\$ 20,123
Total Program Costs	\$ 1,304,686	\$ -	\$ 29,361,724	\$ 30,666,410

Notes:

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

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

Exhibit 4-11

SoCalGas Table TA 7.2 – Program Year 2003 Last Updated 3/16/04

	Costs Recorded by Cost Element - 2003			
	Labor	Non-Labor	Contract	Total
Energy Efficiency				
Gas Appliances	\$ 610,806	\$ -	\$ 8,997,394	\$ 9,608,199
Electric Appliances	\$ -	\$ -	\$ -	\$ -
Weatherization Measures	\$ 1,155,380	\$ -	\$ 17,019,174	\$ 18,174,554
Outreach & Assessment	\$ 201,426	\$ -	\$ 2,967,080	\$ 3,168,506
In Home Energy Education	\$ 81,201	\$ -	\$ 1,196,114	\$ 1,277,314
Education Workshops	\$ -	\$ -	\$ -	\$ -
<i>Energy Efficiency TOTAL</i>	\$ 2,048,813	\$ -	\$ 30,179,762	\$ 32,228,574
Pilots				
Pilot (NGAT Appliances)	\$ 1,933	\$ -	\$ 28,473	\$ 30,406
Pilot (B)	\$ -	\$ -	\$ -	\$ -
<i>Total Pilots</i>	\$ 1,933	\$ -	\$ 28,473	\$ 30,406
Administration	\$ -	\$ -	\$ -	\$ -
Training Center	\$ 780	\$ -	\$ 11,485	\$ 12,265
Inspections	\$ 79,316	\$ -	\$ 1,168,358	\$ 1,247,674
Advertising	\$ 22,760	\$ -	\$ 335,261	\$ 358,021
M&E Studies	\$ 4,465	\$ -	\$ 65,765	\$ 70,230
Regulatory Compliance	\$ 1,897	\$ -	\$ 27,941	\$ 29,838
Other Administration	\$ -	\$ -	\$ -	\$ -
Indirect Costs			\$ -	\$ -
Oversight Costs				
LIOB Expenses				\$ -
CPUC Energy Division			\$ 21,932.96	\$ 21,933
<i>Total Oversight Costs</i>				\$ 21,933
Total Program Costs	\$ 2,159,963	\$ -	\$ 31,838,979	\$ 33,998,942

Notes:

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

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

Exhibit 4-12

SoCalGas Table TA 7.2 – Program Year 2004 Last Updated 3/28/05

	Costs Recorded by Cost Element - 2004			
	Labor	Non-Labor	Contract	Total
Energy Efficiency				
Gas Appliances	\$ -	\$ -	\$ 6,470,197	\$ 6,470,197
Electric Appliances	\$ -	\$ -	\$ -	\$ -
Weatherization Measures	\$ -	\$ -	\$ 17,416,318	\$ 17,416,318
Outreach & Assessment	\$ -	\$ -	\$ 3,374,540	\$ 3,374,540
In Home Energy Education	\$ -	\$ -	\$ 1,095,303	\$ 1,095,303
Education Workshops	\$ -	\$ -	\$ -	\$ -
<i>Energy Efficiency TOTAL</i>	\$ -	\$ -	\$ 28,356,359	\$ 28,356,359
Pilots				
Pilot (A)	\$ -	\$ -	\$ -	\$ -
Pilot (B)	\$ -	\$ -	\$ -	\$ -
<i>Total Pilots</i>	\$ -	\$ -	\$ -	\$ -
Administration	\$ -	\$ -	\$ -	\$ -
Training Center	\$ 237,427	\$ 15,043	\$ -	\$ 252,471
Inspections	\$ -	\$ -	\$ 1,431,224	\$ 1,431,224
Advertising	\$ -	\$ 149,236	\$ 198,400	\$ 347,637
M&E Studies	\$ -	\$ -	\$ 169,375	\$ 169,375
Regulatory Compliance	\$ 83,394	\$ 9,020	\$ 2,119	\$ 94,534
Other Administration	\$ 1,282,301	\$ 74,517	\$ 34,654	\$ 1,391,472
Indirect Costs	\$ -	\$ 524,780	\$ -	\$ 524,780
Oversight Costs				
LIOB Expenses	\$ -	\$ -	\$ -	\$ -
CPUC Energy Division	\$ -	\$ 27,959	\$ -	\$ 27,959
<i>Total Oversight Costs</i>		\$ 27,959		\$ 27,959
Total Program Costs	\$ 1,603,122	\$ 800,555	\$ 30,192,131	\$ 32,595,808

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 percent escalation rate.

Exhibit 4-13

PG&E Life Cycle Bill Savings– Program Year 2002 Last Updated 3/16/04

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	\$ 317
Attic Access Weatherstripping - MF (Electric)	292	6.10	4.50	0.00	5	\$ 1,062
Attic Access Weatherstripping - MF (Gas)	2,441	0.00	4.50	1.60	5	\$ 13,177
Attic Access Weatherstripping - SF (Electric)	1,096	8.50	8.20	0.00	5	\$ 5,955
Attic Access Weatherstripping - SF (Gas)	9,149	0.00	8.20	3.30	5	\$ 99,976
Attic Insulation - MF (Electric)	63	59.00	70.20	0.00	25	\$ 8,056
Attic Insulation - MF (Gas)	526	0.00	70.20	18.70	25	\$ 113,263
Attic Insulation - SF (Electric)	393	81.60	110.70	0.00	25	\$ 72,819
Attic Insulation - SF (Gas)	3,284	0.00	110.70	34.20	25	\$ 1,257,754
Building Envelope Repair - MH (Electric)	297	29.30	25.10	0.00	10	\$ 9,455
Building Envelope Repair - MH (Gas)	2,481	0.00	25.10	8.80	10	\$ 131,347
Building Envelope Repair - MF (Electric)	1,097	20.80	14.10	0.00	10	\$ 23,393
Building Envelope Repair - MF (Gas)	9,154	0.00	14.10	4.60	10	\$ 256,378
Building Envelope Repair - SF (Electric)	1,695	29.30	25.10	0.00	10	\$ 53,905
Building Envelope Repair - SF (Gas)	14,143	0.00	25.10	8.80	10	\$ 748,840
Caulking - MH (Electric)	388	8.50	8.20	0.00	5	\$ 2,108
Caulking - MH (Gas)	3,239	0.00	8.20	3.30	5	\$ 35,394
Caulking - MF (Electric)	1,414	6.00	4.50	0.00	5	\$ 5,071
Caulking - MF (Gas)	11,798	0.00	4.50	1.60	5	\$ 63,699
Caulking - SF (Electric)	1,687	8.50	8.20	0.00	5	\$ 9,165
Caulking - SF (Gas)	14,082	0.00	8.20	3.30	5	\$ 153,882
Compact Fluorescent Hard Wire Porch Lights	6,665	37.10	0.00	0.00	20	\$ 315,561
Compact Fluorescent Lamp - SF	344,394	22.30	0.00	0.00	8	\$ 5,142,577
Door Weatherstripping - MH (Electric)	365	8.50	8.20	0.00	5	\$ 1,985
Door Weatherstripping - MH (Gas)	3,050	0.00	8.20	3.30	5	\$ 33,325
Door Weatherstripping - MF (Electric)	1,213	6.10	4.50	0.00	5	\$ 4,406
Door Weatherstripping - MF (Gas)	10,122	0.00	4.50	1.60	5	\$ 54,649
Door Weatherstripping - SF (Electric)	1,665	8.50	8.20	0.00	5	\$ 9,043

Measure Description	Number Installed	Per Measure Electric Impact (kWh)		Per Measure Gas Impact	EUL	Total Measure Life Cycle Bill Savings
		SH	AC	Therms	Years	\$
Door Weatherstripping - SF (Gas)	13,893	0.00	8.20	3.30	5	\$ 151,823
Energy Education	56,698	0.00	0.00	0.00	1	\$ -
Evaporative Cooler Covers SF (Electric)	408	24.00	0.00	0.00	3	\$ 2,851
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	\$ 3,749,471
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	\$ 3,398
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	\$ 4,975
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	\$ 8,005
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	\$ 29,308
Outlet/Switch Gaskets SF (Gas)	28,547	0.00	0.12	0.34	15	\$ 67,500
Refrigerator Replacement	24,719	644.70	0.00	0.00	15	\$ 16,981,835
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
<i>Sub-total for Energy Efficiency Measures</i>						\$ 32,120,690
Rapid Deployment Measures						
Air Conditioning Replacement - Central - SF	442	0.00	611.93	0.00	18	\$ 324,041
Duct Sealing and Testing -MF (Gas)	45	0.00	41.94	17.81	25	\$ 8,545
Duct Sealing and Testing - MH/SF (Gas)	244	0.00	43.80	17.74	25	\$ 46,454
Set-back Thermostats MF (Electric)	108	58.88	37.31	0.00	12	\$ 7,332
Set-back Thermostats MF (Gas)	898	0.00	39.32	8.79	12	\$ 59,451
Set-back Thermostats MH (Electric)	109	87.57	35.88	0.00	12	\$ 10,210
Set-back Thermostats MH (Gas)	909	0.00	52.02	18.94	12	\$ 118,156
Set-back Thermostats SF (Electric)	242	77.46	62.19	0.00	12	\$ 22,871
Set-back Thermostats SF (Gas)	2,016	0.00	43.18	18.35	12	\$ 248,298

Measure Description	Number Installed	Per Measure Electric Impact (kWh)		Per Measure Gas Impact	EUL	Total Measure Life Cycle Bill Savings
		SH	AC	Therms	Years	\$
Whole House Fans SF	99	0.00	124.16	0.00	20	\$ 15,687
Evaporative Cooler Maintenance SF	771	0.00	73.61	0.00	4	\$ 21,262
Evaporative Cooler Maintenance MF	350	0.00	49.33	0.00	4	\$ 6,468
Water heater Replacement SF (Gas)	765	0.00	0.00	21.60	13	\$ 101,618
<i>Sub-total for Rapid Deployment Measures</i>						\$ 990,395
Total Bill Savings for All Measures in Program Year						\$ 33,111,085

Total Number of Homes Served by the Program during Program Year 70,683

Life Cycle Bill Savings Per Home \$ 468.44

Exhibit 4-14

PG&E Life Cycle Bill Savings– Program Year 2003 Last Updated 3/16/04

Measure Description	Number Installed	Per Measure Impact		EUL	Total Measure Life Cycle Bill Savings
		kWh	Therms	Years	\$
Energy Efficiency Measures					
Attic Access Weatherstripping - MF (Electric)	100	0.91	0.00	5	\$ 41
Attic Access Weatherstripping - MF (Gas)	1,984	0.27	0.40	5	\$ 2,558
Attic Access Weatherstripping - SF (Electric)	579	2.59	0.00	5	\$ 676
Attic Access Weatherstripping - SF (Gas)	9,578	0.67	0.67	5	\$ 21,628
Attic Insulation - MF (Electric)	48	78.35	0.00	25	\$ 5,520
Attic Insulation - MF (Gas)	487	20.85	18.82	25	\$ 102,009
Attic Insulation - SF (Electric)	159	118.54	0.00	25	\$ 27,665
Attic Insulation - SF (Gas)	2,979	25.75	35.11	25	\$ 1,106,619
Building Envelope Repair - MH (Electric)	173	38.75	0.00	10	\$ 5,391
Building Envelope Repair - MH (Gas)	1,792	9.52	8.55	10	\$ 93,497
Building Envelope Repair - MF (Electric)	1,076	22.80	0.00	10	\$ 19,729
Building Envelope Repair - MF (Gas)	6,489	6.38	4.48	10	\$ 184,661
Building Envelope Repair - SF (Electric)	917	38.05	0.00	10	\$ 28,059
Building Envelope Repair - SF (Gas)	14,060	8.05	8.33	10	\$ 700,848
Caulking - MH (Electric)	201	11.63	0.00	5	\$ 1,054
Caulking - MH (Gas)	2,294	3.27	2.87	5	\$ 22,603
Caulking - MF (Electric)	1,914	6.59	0.00	5	\$ 5,687
Caulking - MF (Gas)	7,200	1.71	1.48	5	\$ 36,661
Caulking - SF (Electric)	1,006	11.43	0.00	5	\$ 5,185
Caulking - SF (Gas)	14,045	2.75	2.81	5	\$ 132,635
Compact Fluorescent Hard Wire Porch Lights MF	1,783	41.70	0.00	20	\$ 96,498
Compact Fluorescent Hard Wire Porch Lights MH/SF	6,767	37.10	0.00	20	\$ 325,838
Compact Fluorescent Lamp - MF	78,250	27.80	0.00	8	\$ 1,464,248
Compact Fluorescent Lamp - MH/SF	114,686	24.80	0.00	8	\$ 1,914,466
Door Weatherstripping - MH (Electric)	190	8.56	0.00	5	\$ 733
Door Weatherstripping - MH (Gas)	2,180	4.75	2.18	5	\$ 18,543
Door Weatherstripping - MF (Electric)	996	5.99	0.00	5	\$ 2,690
Door Weatherstripping - MF (Gas)	6,710	1.61	1.08	5	\$ 26,028

Measure Description	Number Installed	Per Measure Impact		EUL	Total Measure Life Cycle Bill Savings
		kWh	Therms	Years	\$
Door Weatherstripping - SF (Electric)	1,001	8.67	0.00	5	\$ 3,913
Door Weatherstripping - SF (Gas)	14,333	4.25	2.14	5	\$ 117,013
Evaporative Cooler Covers MF (Electric)	23	20.57	0.00	3	\$ 134
Evaporative Cooler Covers MF (Gas)	594	0.00	3.32	3	\$ 3,621
Evaporative Cooler Covers MH/SF (Electric)	228	28.00	0.00	3	\$ 1,811
Evaporative Cooler Covers MH/SF (Gas)	3,690	0.00	5.98	3	\$ 40,521
Evaporative Coolers MF (Portable)	1,526	379.97	0.00	7	\$ 349,420
Evaporative Coolers MH/SF (Portable)	2,389	357.04	0.00	7	\$ 514,016
Faucet Aerators MF (Electric)	1,822	41.20	0.00	5	\$ 33,847
Faucet Aerators MF (Gas)	9,315	0.00	0.90	5	\$ 24,475
Faucet Aerators MH/SF (Electric)	1,250	48.40	0.00	5	\$ 27,279
Faucet Aerators MH/SF (Gas)	18,608	0.00	1.40	5	\$ 76,055
Furnace Filters - MH (Electric)	135	14.61	0.00	5	\$ 889
Furnace Filters - MH (Gas)	3,708	0.00	2.23	5	\$ 24,140
Furnace Filters - MF (Electric)	125	23.72	0.00	5	\$ 1,337
Furnace Filters - MF (Gas)	1,834	0.00	4.76	5	\$ 25,486
Furnace Filters - SF (Electric)	303	19.32	0.00	5	\$ 2,640
Furnace Filters - SF (Gas)	7,918	0.00	4.36	5	\$ 100,786
Furnace Repair MF (Gas)	7	0.00	18.90	10	\$ 689
Furnace Repair MH/SF (Gas)	688	0.00	38.30	10	\$ 137,203
Furnace Replacement MF (Gas)	9	0.00	73.00	22	\$ 5,832
Furnace Replacement MH/SF (Gas)	229	0.00	151.10	22	\$ 307,127
Low Flow Showerhead MF (Electric)	1,345	203.30	0.00	10	\$ 219,893
Low Flow Showerhead MF (Gas)	8,011	0.00	6.10	10	\$ 254,445
Low Flow Showerhead MH/SF (Electric)	932	239.20	0.00	10	\$ 179,279
Low Flow Showerhead MH/SF (Gas)	14,773	0.00	9.10	10	\$ 699,984
Outlet/Switch Gaskets MF (Electric)	1,902	5.49	0.00	15	\$ 11,288
Outlet/Switch Gaskets MF (Gas)	7,105	-0.07	0.24	15	\$ 11,397
Outlet/Switch Gaskets MH/SF (Electric)	1,198	8.03	0.00	15	\$ 10,399
Outlet/Switch Gaskets MH/SF (Gas)	16,153	0.05	0.34	15	\$ 39,313
Refrigerator Replacement	17,695	644.70	0.00	15	\$ 12,331,853
Water Heater Blanket - MF (Electric)	116	163.00	0.00	5	\$ 8,525
Water Heater Blanket - MF (Gas)	1,712	0.00	4.90	5	\$ 24,491

Measure Description	Number Installed	Per Measure Impact		EUL	Total Measure Life Cycle Bill Savings
		kWh	Therms	Years	\$
Water Heater Blanket - MH/SF (Electric)	303	191.80	0.00	5	\$ 26,204
Water Heater Blanket - MH/SF (Gas)	5,068	0.00	7.30	5	\$ 108,008
Water Heater Pipe Wrap- MF (Electric)	94	115.30	0.00	15	\$ 11,716
Water Heater Pipe Wrap- MF (Gas)	210	0.00	1.80	15	\$ 2,646
Water Heater Pipe Wrap- MH/SF (Electric)	463	135.60	0.00	15	\$ 67,867
Water Heater Pipe Wrap- MH/SF (Gas)	384	0.00	2.70	15	\$ 7,257
<i>Sub-total for Energy Efficiency Measures</i>					\$ 22,164,568
Rapid Deployment Measures					
Air Conditioning Replacement - Central - MF	6	563.50	0.00	18	\$ 4,116
Air Conditioning Replacement - Central - MH/SF	267	725.72	0.00	18	\$ 235,894
Air Conditioning Replacement - Room - MF	57	210.00	0.00	15	\$ 12,939
Air Conditioning Replacement - Room - MH/SF	249	300.96	0.00	15	\$ 81,008
Duct Sealing and Testing -MF (Electric)	9	60.60	0.00	25	\$ 801
Duct Sealing and Testing -MF (Gas)	680	21.52	4.23	25	\$ 48,816
Duct Sealing and Testing - MH/SF (Electric)	87	65.59	0.00	25	\$ 8,376
Duct Sealing and Testing - MH/SF (Gas)	5,287	25.76	8.68	25	\$ 636,044
Set-back Thermostats MF (Electric)	15	73.50	0.00	12	\$ 1,018
Set-back Thermostats MF (Gas)	823	11.37	8.70	12	\$ 51,431
Set-back Thermostats MH/SF (Electric)	51	103.95	0.00	12	\$ 4,894
Set-back Thermostats MH/SF (Gas)	2,988	18.10	18.18	12	\$ 374,583
Evaporative Cooler Maintenance MF	25	67.63	0.00	4	\$ 624
Evaporative Cooler Maintenance MH/SF	491	79.91	0.00	4	\$ 14,489
Whole House Fans SF	244	111.78	0.00	20	\$ 35,399
Water heater Replacement MF (Gas)	7	0.00	18.10	13	\$ 803
Water heater Replacement MH/SF (Gas)	313	0.00	21.60	13	\$ 42,824
Water heater Replacement MF (Electric)	2	117.80	0.00	13	\$ 230
Water heater Replacement MH/SF (Electric)	119	117.80	0.00	13	\$ 13,714
<i>Sub-total for Rapid Deployment Measures</i>					\$ 1,568,003
Total Bill Savings for All Measures in Program Year					\$ 23,732,571

Total Number of Homes Served by the Program during Program Year

47,271

Measure Description	Number Installed	Per Measure Impact		EUL	Total Measure Life Cycle Bill Savings
		kWh	Therms	Years	\$
Life Cycle Bill Savings Per Home					\$ 502.05

Exhibit 4-15

PG&E Life Cycle Bill Savings– Program Year 2004 Last Updated 3/30/05

Measure Description	Number Installed			Per Measure Electric Impact (kWh)		Per Measure Gas Impact		EUL	Total Measure Life Cycle Bill Savings
	SH	AC	GH	SH	AC	Therms	Years	\$	
Energy Efficiency Measures									
Attic Insulation MF	17	13	127	297.4	135.5	39.5	25	\$	70,251
Attic Insulation SF	101	548	2,888	303.3	159.5	44.3	25	\$	1,710,513
Caulking MF	3,288	853	7,493	11.5	1.7	1.5	5	\$	58,120
Caulking MH	182	968	3,118	13.1	1.6	1.8	5	\$	22,936
Caulking SF	1,092	3,741	16,874	19.1	5.0	3.8	5	\$	253,564
Central AC MH	0	4	0	0.0	459.4	0.0	18	\$	2,199
Central AC SF	0	11	0	0.0	390.8	0.0	18	\$	5,144
CFL MF	0	12,908	0	0.0	65.6	0.0	8	\$	560,232
CFL MH	0	5,136	0	0.0	65.6	0.0	8	\$	222,912
CFL SF	0	24,656	0	0.0	94.8	0.0	8	\$	1,546,450
Evap Cooler MF	0	42	0	0.0	519.6	0.0	7	\$	12,928
Evap Cooler MH	0	182	0	0.0	319.6	0.0	7	\$	34,453
Evap Cooler SF	0	1,707	0	0.0	379.5	0.0	7	\$	383,664
Evap Cooler Cover MF	6	128	122	6.3	0.0	0.9	3	\$	264
Evap Cooler Cover MH	41	663	590	6.7	0.0	1.0	3	\$	1,410
Evap Cooler Cover SF	79	2,087	1,988	8.7	0.0	3.2	3	\$	14,923
Faucet Aerator MF	0	1,473	9,742	0.0	26.5	2.6	5	\$	111,009
Faucet Aerator MH	0	218	3,619	0.0	26.5	2.6	5	\$	37,372

Measure Description	Number Installed				Per Measure Electric Impact (kWh)			Per Measure Gas Impact	EUL Years	Total Measure Life Cycle Bill Savings \$
		SH	AC	GH	SH	AC	Therms			
Faucet Aerator SF	0	1,052	19,128	0.0	43.4	3.6	5	\$ 274,996		
Furnace Repair MH	0	0	102	0.0	0.0	41.1	10	\$ 27,644		
Furnace Repair SF	0	0	409	0.0	0.0	39.8	10	\$ 107,432		
Furnace Replace MH	0	0	24	0.0	0.0	70.1	22	\$ 18,935		
Furnace Replace SF	0	0	91	0.0	0.0	68.1	22	\$ 69,678		
Gaskets MF	3,123	855	7,391	5.5	-0.2	0.2	15	\$ 33,869		
Gaskets MH	177	956	3,053	8.0	0.1	0.3	15	\$ 10,831		
Gaskets SF	1,084	3,754	16,802	8.0	0.1	0.3	15	\$ 60,351		
Minor Home Repair MF	2,185	702	5,794	33.4	11.0	3.8	10	\$ 208,756		
Minor Home Repair MH	155	850	2,639	33.6	9.1	4.2	10	\$ 82,954		
Minor Home Repair SF	997	3,622	16,216	47.8	14.7	8.3	10	\$ 971,020		
Porchlight CFL SF	0	6,998	0	0.0	35.6	0.0	20	\$ 317,816		
Refrigerator MF	0	4,976	0	0.0	662.0	0.0	15	\$ 3,500,105		
Refrigerator MH	0	2,660	0	0.0	661.6	0.0	15	\$ 1,869,966		
Refrigerator SF	0	12,456	0	0.0	771.1	0.0	15	\$ 10,204,852		
Room AC MF	0	206	0	0.0	188.1	0.0	15	\$ 41,176		
Room AC MH	0	82	0	0.0	196.6	0.0	15	\$ 17,126		
Room AC SF	0	451	0	0.0	213.5	0.0	15	\$ 102,286		
Showerheads MF	0	1,159	8,126	0.0	66.6	7.2	10	\$ 447,070		
Showerheads MH	0	168	2,650	0.0	66.6	7.2	10	\$ 134,742		
Showerheads SF	0	759	15,921	0.0	108.7	8.2	10	\$ 926,654		
Water Heater MH	0	0	12	0.0	0.0	21.6	13	\$ 2,081		
Water Heater SF	0	0	40	0.0	0.0	21.6	13	\$ 6,935		
Water Heater Blanket MF	0	68	626	0.0	88.5	9.2	5	\$ 23,974		
Water Heater Blanket MH	0	20	555	0.0	88.5	9.2	5	\$ 19,675		
Water Heater Blanket SF	0	185	4,664	0.0	145.3	11.3	5	\$ 206,897		
Water Heater Pipe Wrap MF	0	94	32	0.0	35.4	3.6	15	\$ 4,557		

Measure Description	Number Installed			Per Measure Electric Impact (kWh)		Per Measure Gas Impact		EUL Years	Total Measure Life Cycle Bill Savings \$
	SH	AC	GH	SH	AC	Therms	Years		
Water Heater Pipe Wrap MH	0	30	24	0.0	35.4	3.6	15	\$ 1,895	
Water Heater Pipe Wrap SF	0	250	243	0.0	58.1	4.6	15	\$ 25,348	
Weatherstripping Attic Access MF	182	88	754	2.1	0.2	0.6	5	\$ 1,926	
Weatherstripping Attic Access SF	428	2,573	9,154	4.1	1.1	0.9	5	\$ 32,940	
Weatherstripping Door MF	1,740	850	6,615	16.1	1.6	1.7	5	\$ 55,149	
Weatherstripping Door MH	160	888	2,931	15.7	1.2	2.0	5	\$ 23,764	
Weatherstripping Door SF	1,061	3,758	16,861	14.9	3.9	2.9	5	\$ 193,161	
Total Bill Savings for All Measures in Program Year									\$ 25,074,904

Total Number of Homes Served by the Program during Program Year

48,549

Life Cycle Bill Savings Per Home

\$ 516.49

Exhibit 4-16

SCE Life Cycle Bill Savings– Program Year 2002 Last Updated 3/16/04

Measure Description	Number Installed	Per Measure Electric Impact (kWh)		EUL (Yrs)	Total Measure Life Cycle Bill Savings (\$)
		SH	AC		
Energy Efficiency Measures					
Attic Access Weatherstripping ¹	-	0	0	5	\$ -
Attic Insulation MF	-	34.40	-	25	\$ -
Attic Insulation MH/SF	-	50.10	-	25	\$ -
Attic Ventilation ²	-	0	0	25	\$ -
Caulking - MF	1,128	4.7	2.6	5	\$ 3,620
Caulking - MH	4	6.9	0	5	\$ 14
Compact Fluorescents (indoor) MF	25,968	21.60	0	8	\$ 418,137
Compact Fluorescents (indoor) MH/SF	18,491	21.20	0	8	\$ 292,229
Compact Fluorescents (outdoor) MF	5,655	32.40	0	5.3	\$ 92,029
Compact Fluorescents (outdoor) MH/SF	5,894	31.90	0	5.3	\$ 94,438
Cover Plate/Gaskets - MF	1,727	3.38	-0.05	15	\$ 6,890
Cover Plate/Gaskets - MH/SF	234	5.62	0.18	15	\$ 1,600
Duct Repair ²	1	0	0	25	\$ -
Evaporative Cooler Installation - MF	51	0	571.17	15	\$ 34,717
Evaporative Cooler Installation - MH/SF	227	0	426.65	15	\$ 115,428
Evaporative Cooler/AC Covers MF	82	14.4	0	3	\$ 377
Evaporative Cooler/AC Covers MH/SF	91	19.34	0	3	\$ 562
Faucet Aerators - MF	1,142	41.2	0	5	\$ 23,632
Faucet Aerators - MH/SF	475	48.4	0	5	\$ 11,547
Low Flow Showerhead - MF	1,703	203.30	0	10	\$ 307,754
Low Flow Showerhead - MH/SF	242	239.20	0	10	\$ 51,455
Minor Home Repairs - MF	1,624	14.80	5.10	10	\$ 28,727
Minor Home Repairs - MH/SF	185	21.60	-	10	\$ 3,552
Miscellaneous ⁴	267	0	0	0	\$ -
Refrigerator Replacement - MF	5,053	695.4	0	15	\$ 4,187,901
Refrigerator Replacement - MH/SF	4,763	711.60	0	15	\$ 4,039,512
Water Heater Blanket - MF	296	163.00	0	5	\$ 24,234
Water Heater Blanket - SF	19	191.80	0	5	\$ 1,830
Water Heater Pipe Wrap ³	-	0	0	15	\$ -
Weatherstripping - MF	1,763	4.20	1.70	5	\$ 4,698

Measure Description	Number Installed	Per Measure Electric Impact (kWh)		EUL (Yrs)	Total Measure Life Cycle Bill Savings (\$)
		SH	AC		
Weatherstripping - MH/SF	248	6.20	-	5	\$ 772
<i>Sub-total for Energy Efficiency Measures</i>					\$ 9,745,657
Rapid Deployment Measures					
Air Conditioner Replacement - Central - MF	158	0	1962.4	18	\$ 415,826
Air Conditioner Replacement - Central - MH/SF	92	0	565.28	18	\$ 69,746
Air Conditioner Replacement - Room - MF	2,602	0	521.02	15	\$ 1,615,750
Evaporative Cooler Maintenance - MH	538	0	69.55	4	\$ 15,453
Evaporative Cooler Maintenance - MF/SF	2,165	0	110.34	4	\$ 98,655
Dust Testing & Sealing - MF	636	23.19	183.45	25	\$ 212,267
Set-back Thermostats	0	0	177.76	12	\$ -
Water Heater Replacement - MF	266	117.8	0	13	\$ 33,824
<i>Sub-total for Rapid Deployment Measures</i>					\$ 2,461,521
Total Bill Savings for All Measures In Program Year					\$ 12,207,178

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

Life Cycle Bill Savings Per Home \$ 411.22

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 4-17

SCE Life Cycle Bill Savings– Program Year 2003 Last Updated 3/30/04

Measure Description	Number Installed	Per Measure Electric Impact (kWh)		EUL (Yrs)	Total Measure Life Cycle Bill Savings (\$)
		SH	AC		
Energy Efficiency Measures					
Attic Access Weatherstripping ¹	-	0	0	5	\$ -
Attic Insulation MF	-	34.4	-	25	\$ -
Attic Insulation MH/SF	-	50.1	-	25	\$ -
Attic Ventilation ²	-	-	0	25	\$ -
Caulking - MF	180	4.3	5.12	5	\$ 526
Caulking - MH/SF	1	6.6	4.1	5	\$ 4
Compact Fluorescents (indoor) MF	15,033	21.6	0	8	\$ 246,365
Compact Fluorescents (indoor) MH/SF	34,936	21.2	0	8	\$ 561,938
Compact Fluorescents (outdoor) MF	3,829	32.4	0	5.3	\$ 63,052
Compact Fluorescents (outdoor) MH/SF	11,769	31.9	0	5.3	\$ 190,808
Cover Plate/Gaskets - MF	772	3.4	-0.05	15	\$ 3,166
Cover Plate/Gaskets - MH/SF	3	5.6	0.18	15	\$ 21
Duct Repair ²	1	0.0	0.0	25	\$ -
Evaporative Cooler Installation - MF	57	0.0	263.3	15	\$ 18,283
Evaporative Cooler Installation - MH/SF	768	0.0	398.5	15	\$ 372,863
Evaporative Cooler/AC Covers MF	1	14.1	0.0	3	\$ 5
Evaporative Cooler/AC Covers MH/SF	-	19.3	0.0	3	\$ -
Faucet Aerators - MF	1,442	41.2	0.0	5	\$ 30,195
Faucet Aerators - MH/SF	2	48.4	0.0	5	\$ 49
Low Flow Showerhead - MF	872	203.3	0.0	10	\$ 160,694
Low Flow Showerhead - MH/SF	2	239.2	0.0	10	\$ 434
Minor Home Repairs - MF	864	14.6	9.4	10	\$ 18,765
Minor Home Repairs - MH/SF	3	21.6	9.0	10	\$ 83
Refrigerator Replacement - MF	4,735	695.4	0.0	15	\$ 4,012,073
Refrigerator Replacement - MH/SF	12,591	711.6	0.0	15	\$ 10,917,176
Water Heater Blanket - MF	149	163.0	0.0	5	\$ 12,344
Water Heater Blanket - SF	-	191.8	0.0	5	\$ -
Water Heater Pipe Wrap ³	4	0.0	0.0	15	\$ -
Weatherstripping - MF	878	3.8	2.9	5	\$ 2,047

Measure Description	Number Installed	Per Measure Electric Impact (kWh)		EUL (Yrs)	Total Measure Life Cycle Bill Savings (\$)
		SH	AC		
Weatherstripping - MH/SF	3	4.8	2.00	5	\$ 8
<i>Sub-total for Energy Efficiency Measures</i>					\$ 16,610,897
Rapid Deployment Measures					
Air Conditioner Replacement - Central - MF	450	0	1330.8	18	\$ 821,787
Air Conditioner Replacement - Central - MH/SF	866	0	615.6	18	\$ 731,555
Air Conditioner Replacement - Room - MF	2	0	217.0	15	\$ 529
Air Conditioner Replacement - Room - MH/SF	18	0	278.7	15	\$ 6,112
Evaporative Cooler Maintenance - MH	5	0	35.0	4	\$ 73
Evaporative Cooler Maintenance - MF/SF	173	0	78.6	4	\$ 5,659
Duct Testing & Sealing - MF	450	31.7	124.6	25	\$ 116,346
Duct Testing & Sealing - MH/SF	500	56.7	76.7	25	\$ 110,316
Set-back Thermostats - MF	449	31.8	124.9	12	\$ 73,186
Set-back Thermostats - MH/SF	584	59.2	83.8	12	\$ 86,921
Water Heater Replacement - MF	136	117.8	0	13	\$ 17,666
Water Heater Replacement - SF	1	117.8	0	13	\$ 130
<i>Sub-total for Rapid Deployment Measures</i>					\$ 1,970,280
Total Bill Savings for All Measures In Program Year					\$ 18,581,176

Total Number of Homes Served by the Program during Program Year 33,732

Life Cycle Bill Savings Per Home \$ 550.85

1. This measure 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.

Exhibit 4-18
SCE Life Cycle Bill Savings– Program Year 2004 Last Updated 3/28/05

Measure Description	Number Installed		Per Measure Electric Impact (kWh)		EUL (Yrs)	Total Measure Life Cycle Bill Savings (\$)
	SH	AC	SH	AC		
Energy Efficiency Measures						
Attic Insulation MF	-	-	-	-	25	\$ -
Attic Insulation SF	1	1	266	515	25	\$ 1,174
Caulking MF	23	7	7	1	5	\$ 80
Caulking MH	4	3	11	2	5	\$ 24
Caulking SF	21	8	10	2	5	\$ 105
Central AC MF	-	17	-	56	18	\$ 1,188
Central AC MH	-	123	-	416	18	\$ 63,726
Central AC SF	-	317	-	251	18	\$ 99,117
CFL (Indoor) MF	-	21,754	-	16	8	\$ 245,880
CFL (Indoor) MH	-	8,009	-	16	8	\$ 90,524
CFL (Indoor) SF	-	83,459	-	24	8	\$ 1,363,206
CFL (Outdoor) MF	-	710	-	16	8	\$ 8,025
CFL (Outdoor) MH	-	156	-	16	8	\$ 1,763
CFL (Outdoor) SF	-	1,809	-	24	8	\$ 29,548
Duct Sealing MF	5	5	0	18	25	\$ 134
Duct Sealing SF	52	52	11	7	25	\$ 1,419
Evaporative Cooler Cover MF	44	-	9	-	3	\$ 114
Evaporative Cooler Cover SF	2	-	11	-	3	\$ 7
Evaporative Cooler Installation MF	-	23	-	84	15	\$ 2,130
Evaporative Cooler Installation MH	-	190	-	371	15	\$ 77,969
Evaporative Cooler Installation SF	-	1,254	-	311	15	\$ 431,749
Evaporative Cooler Maintenance MF	-	61	-	63	4	\$ 1,444

Measure Description	Number Installed		Per Measure Electric Impact (kWh)		EUL	Total Measure Life Cycle Bill Savings
	SH	AC	SH	AC	(Yrs)	(\$)
Evaporative Cooler Maintenance MH	-	87	-	60	4	\$ 1,963
Evaporative Cooler Maintenance SF	-	129	-	47	4	\$ 2,268
Faucet Aerator MF	-	85	-	27	5	\$ 1,040
Faucet Aerator MH	-	6	-	27	5	\$ 73
Faucet Aerator SF	-	42	-	43	5	\$ 842
Low Flow Showerhead MF	-	57	-	67	10	\$ 3,126
Low Flow Showerhead MH	-	2	-	67	10	\$ 110
Low Flow Showerhead SF	-	36	-	109	10	\$ 3,222
Minor Home Repair MF	26	14	25	10	10	\$ 649
Minor Home Repair SF	19	6	31	12	10	\$ 542
Porch light Fixture MF	-	12	-	24	5.3	\$ 134
Porch light Fixture MH	-	12	-	24	5.3	\$ 134
Porch light Fixture SF	-	183	-	36	5.3	\$ 3,008
Programmable Thermostat MF	13	13	3	3	12	\$ 81
Programmable Thermostat MH	119	119	4	5	12	\$ 1,065
Programmable Thermostat SF	245	245	6	7	12	\$ 2,861
Refrigerator Replacement MF	-	3,254	-	665	15	\$ 2,395,405
Refrigerator Replacement MH	-	1,431	-	665	15	\$ 1,053,419
Refrigerator Replacement SF	-	11,234	-	795	15	\$ 9,882,500
Room AC MF	-	16	-	133	15	\$ 2,360
Room AC MH	-	50	-	338	15	\$ 18,691
Room AC SF	-	136	-	206	15	\$ 30,954
Switch Plate Gasket MF	82	82	3	(0)	15	\$ 302
Switch Plate Gasket MH	5	5	6	0	15	\$ 32
Switch Plate Gasket SF	45	45	6	0	15	\$ 289
Water Heater Blanket MF	-	6	-	89	5	\$ 245

Measure Description	Number Installed		Per Measure Electric Impact (kWh)		EUL	Total Measure Life Cycle Bill Savings
	SH	AC	SH	AC	(Yrs)	(\$)
Water Heater Blanket MH	-	1	-	89	5	\$ 41
Water Heater Blanket SF	-	11	-	145	5	\$ 738
Water Heater Pipe Wrap MF	-	-	-	35	15	\$ -
Water Heater Pipe Wrap MH	-	-	-	35	15	\$ -
Water Heater Pipe Wrap SF	-	5	-	58	15	\$ 322
Water Heater Replacement MF	-	2	-	118	13	\$ 236
Water Heater Replacement MH	-	8	-	193	13	\$ 1,548
Water Heater Replacement SF	-	12	-	193	13	\$ 2,323
Weatherstripping MF	88	59	15	2	5	\$ 679
Weatherstripping MH	6	5	12	3	5	\$ 41
Weatherstripping SF	50	26	19	6	5	\$ 510
Total Bill Savings for All Measures In Program Year						\$ 15,831,079

Total Number of Homes Served by the Program during Program Year 37,348

Life Cycle Bill Savings Per Home \$ 423.88

Exhibit 4-19

SDG&E Life Cycle Bill Savings– Program Year 2002 Last Updated 3/16/04

Measure Description	Number Installed	Per Measure Electric Impact	Per Measure Gas Impact	EUL	Total Measure Life Cycle Bill Savings
		(kWh)	(Therms)	(years)	(\$)
Energy Efficiency Measures					
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	\$ 1,920
Caulking - MF (Gas)	2,965	2.30	2.00	5	\$ 25,770
Caulking - MH/SF (Electric)	583	7.80	0.00	5	\$ 2,781
Caulking - MH/SF (Gas)	3,303	2.70	2.50	5	\$ 35,534
Ceiling Insulation MF (Electric)	2	34.40	0.00	25	\$ 137
Ceiling Insulation MF (Gas)	5	0.00	11.00	25	\$ 669
Ceiling Insulation MH/SF (Electric)	62	93.60	0.00	25	\$ 11,521
Ceiling Insulation MH/SF (Gas)	354	43.50	16.90	25	\$ 103,339
Compact Fluorescent Lights MF	8,579	27.80	0.00	8	\$ 217,452
Compact Fluorescent Lights MH/SF	14,924	24.80	0.00	8	\$ 337,457
Cover Place / Gaskets MF (Electric)	405	2.94	0.00	15	\$ 1,742
Cover Place / Gaskets MF (Gas)	2,296	-0.10	0.13	15	\$ 2,327
Cover Place / Gaskets MH/SF (Electric)	403	5.73	0.00	15	\$ 3,379
Cover Place / Gaskets MH/SF (Gas)	2,285	0.40	0.23	15	\$ 6,025
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	\$ 1,894
Evaporative Cooler Replacement SF	4	246.35	0.00	15	\$ 1,441
Exterior CFL Fixture MF	115	41.70	0.00	20	\$ 8,419
Exterior CFL Fixture MH/SF	226	37.10	0.00	20	\$ 14,721
Faucet Aerators MH	3,237	41.20	0.90	5	\$ 92,176
Faucet Aerators MH/SF	3,693	48.40	1.40	5	\$ 128,149
Furnace repairs MF	153	0.00	16.00	10	\$ 16,164

Measure Description	Number Installed	Per Measure Electric Impact	Per Measure Gas Impact	EUL	Total Measure Life Cycle Bill Savings
		(kWh)	(Therms)	(years)	(\$)
Furnace repairs MH/SF	406	0.00	23.00	10	\$ 61,657
Furnace Replacement SF	367	0.00	84.30	22	\$ 351,177
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	\$ 113,998
Low Flow Showerheads MF (Gas)	2,921	0.00	6.10	10	\$ 117,649
Low Flow Showerheads MH/SF (Electric)	618	239.20	0.00	10	\$ 160,954
Low Flow Showerheads MH/SF (Gas)	3,504	0.00	9.10	10	\$ 210,539
Minor Home Repair Materials MF (Electric)	163	19.90	0.00	10	\$ 3,536
Minor Home Repair Materials MF (Gas)	925	7.00	3.80	10	\$ 30,252
Minor Home Repair Materials MH/SF (Electric)	331	26.10	0.00	10	\$ 9,408
Minor Home Repair Materials MH/SF (Gas)	1,876	8.10	5.50	10	\$ 84,670
Refrigerator Replacement	6,488	644.70	0.00	15	\$ 6,118,309
Water Heater Blankets MF (Electric)	7	163.00	0.00	5	\$ 698
Water Heater Blankets MF (Gas)	39	0.00	4.90	5	\$ 696
Water Heater Blankets MH/SF (Electric)	87	191.80	0.00	5	\$ 10,205
Water Heater Blankets MH/SF (Gas)	494	0.00	7.30	5	\$ 13,136
Water Heater Pipe Wrap MF (Electric)	2	115.30	0.00	15	\$ 379
Water Heater Pipe Wrap MF (Gas)	13	0.00	1.80	15	\$ 205
Water Heater Pipe Wrap MH/SF (Electric)	37	135.60	0.00	15	\$ 7,408
Water Heater Pipe Wrap MH/SF (Gas)	212	0.00	2.70	15	\$ 5,099
Weather stripping (Electric) - MF	548	6.10	0.00	5	\$ 2,044
Weather stripping (Gas) - MF	3,104	2.40	2.00	5	\$ 27,170
Weather stripping (Electric) - SF	550	8.00	0.00	5	\$ 2,691
Weather stripping (Gas) - SF	3,114	2.80	2.70	5	\$ 35,959
<i>Sub-total for Energy Efficiency Measures</i>					\$ 8,380,857
Rapid Deployment Measures					
Air Conditioner Replacement - Central MF	1	828.28	0.00	18	\$ 1,364
Air Conditioner Replacement - Central SF	293	292.85	0.00	18	\$ 141,321
Air Conditioner Replacement - Room MF	310	130.16	0.00	15	\$ 59,020

Measure Description	Number Installed	Per Measure Electric Impact	Per Measure Gas Impact	EUL	Total Measure Life Cycle Bill Savings
		(kWh)	(Therms)	(years)	(\$)
Air Conditioner Replacement - Room SF	14	426.40	0.00	15	\$ 8,732
Duct Sealing & Testing MF (Electric)	1	116.60	0.00	25	\$ 231
Duct Sealing & Testing MF (Gas)	4	47.98	6.24	25	\$ 685
Duct Sealing & Testing SF (Electric)	42	87.15	0.00	25	\$ 7,267
Duct Sealing & Testing SF (Gas)	238	27.39	11.54	25	\$ 46,348
Evap Cooler Maintenance & Repair MH/SF	14	76.43	0.00	4	\$ 536
Set back Thermostat MF (Electric)	1	116.60	0.00	12	\$ 146
Set back Thermostat MF (Gas)	8	77.55	6.78	12	\$ 1,187
Set back Thermostat SF (Electric)	73	149.88	0.00	12	\$ 13,670
Set back Thermostat SF (Gas)	414	95.48	15.00	12	\$ 96,576
Water Heater Replacement MF (Gas)	16	0.00	18.10	13	\$ 2,335
Water Heater Replacement SF (Gas)	577	0.00	21.60	13	\$ 100,474
Whole House Fans SF	0	63.00	0.00	20	\$ -
<i>Sub-total for Rapid Deployment Measures</i>					\$ 479,893
Total Bill Savings for All Measures in Program Year					\$ 8,860,750

Total Number of Homes Served by the Program during Program Year 14,089

Life Cycle Bill Savings Per Home \$ 628.91

*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 2003 Last Updated 3/26/04

Measure Description	Number Installed	Per Measure Electric Impact	Per Measure Gas Impact	EUL	Total Measure Life Cycle Bill Savings
		(kWh)	(Therms)	(years)	(\$)
Energy Efficiency Measures					
Attic Ventilation*	66	0.00	0.00	25	\$ -
Auto Sweep*	32	0.00	0.00	5	\$ -
Caulking - MF (Electric)	804	6.00	0.00	5	\$ 3,026
Caulking - MF (Gas)	4,557	2.30	2.00	5	\$ 42,041
Caulking - MH/SF (Electric)	828	7.80	0.00	5	\$ 4,050
Caulking - MH/SF (Gas)	4,694	2.70	2.50	5	\$ 53,616
Ceiling Insulation MF (Electric)	2	34.40	0.00	25	\$ 126
Ceiling Insulation MF (Gas)	10	0.00	11.00	25	\$ 1,421
Ceiling Insulation MH/SF (Electric)	51	93.60	0.00	25	\$ 9,777
Ceiling Insulation MH/SF (Gas)	290	43.50	16.90	25	\$ 87,801
Compact Fluorescents MF	16,559	27.80	0.00	8	\$ 431,118
Compact Fluorescents SF	15,827	24.80	0.00	8	\$ 367,593
Cover Plate/Gaskets MF (Electric)	697	2.94	0.00	15	\$ 3,081
Cover Plate/Gaskets MF (Gas)	3,948	-0.10	0.13	15	\$ 4,195
Cover Plate/Gaskets MH/SF (Electric)	669	5.73	0.00	15	\$ 5,762
Cover Plate/Gaskets MH/SF (Gas)	3,788	0.40	0.23	15	\$ 10,408
Door Replacement*	2,797	0	0	10	\$ -
Door Threshold*	4,065	0	0	5	\$ -
Duct Register Sealing*	500	0	0	5	\$ -
Evaporative Cooler Covers SF (Electric)	8	15.17	0.00	3	\$ 49
Evaporative Cooler Covers SF (Gas)	47	0.00	3.65	3	\$ 418
Evaporative Cooler Replacement SF	4	246.35	0.00	15	\$ 1,482
Porch lights MF	225	41.70	0.00	20	\$ 16,943
Porch lights SF	803	37.10	0.00	20	\$ 53,796
Faucet Aerators MF (Gas)	4,967	0.00	0.90	5	\$ 17,395
Faucet Aerators MF (Electric)	877	41.20	0.00	5	\$ 22,667
Faucet Aerators MH/SF (Gas)	4,682	0.00	1.40	5	\$ 25,507

Measure Description	Number Installed	Per Measure Electric Impact	Per Measure Gas Impact	EUL	Total Measure Life Cycle Bill Savings
		(kWh)	(Therms)	(years)	(\$)
Faucet Aerators MH/SF (Electric)	826	48.40	0.00	5	\$ 25,080
Furnace repair - Gas MF	398	0.00	16.00	10	\$ 44,196
Furnace repair - Gas MH/SF	664	0.00	23.00	10	\$ 105,992
Furnace Replacement - Gas MF	1	0.00	0.00	22	\$ -
Furnace Replacement - Gas SF	283	0.00	84.30	22	\$ 282,249
Glass Replacement*	1,423	0.00	0.00	10	\$ -
Jamb Replacement*	160	0.00	0.00	5	\$ -
New Central Return*	87	0.00	0.00	18	\$ -
Low Flow Showerhead MF (Electric)	878	203.30	0.00	10	\$ 199,637
Low Flow Showerhead MF (Gas)	4,973	0.00	6.10	10	\$ 210,551
Low Flow Showerhead SF (Electric)	807	239.20	0.00	10	\$ 215,862
Low Flow Showerhead SF (Gas)	4,571	0.00	9.10	10	\$ 288,689
Minor Home Repairs MF (Electric)	359	19.90	0.00	10	\$ 7,996
Minor Home Repairs MF (Gas)	2,035	7.00	3.80	10	\$ 69,604
Minor Home Repairs SF (Electric)	600	26.10	0.00	10	\$ 17,535
Minor Home Repairs SF (Gas)	3,403	8.10	5.50	10	\$ 160,718
Refrigerators	4,948	644.70	0.00	15	\$ 4,797,763
Refrigerators (Co Pay)	12	644.70	0.00	15	\$ 11,636
Water Heater Blanket MF (Electric)	28	163.00	0.00	5	\$ 2,822
Water Heater Blanket MF (Gas)	156	0.00	4.90	5	\$ 2,982
Water Heater Blanket MH/SF (Electric)	147	191.80	0.00	5	\$ 17,742
Water Heater Blanket MH/SF (Gas)	836	0.00	7.30	5	\$ 23,735
Water Heater Pipe Wrap MF (Electric)	8	115.30	0.00	15	\$ 1,301
Water Heater Pipe Wrap MF (Gas)	43	0.00	1.80	15	\$ 714
Water Heater Pipe Wrap MH/SF (Electric)	47	135.60	0.00	15	\$ 9,606
Water Heater Pipe Wrap MH/SF (Gas)	267	0.00	2.70	15	\$ 6,723
Weatherstripping MF (Electric)	846	6.10	0.00	5	\$ 3,239
Weatherstripping MF (Gas)	4,797	2.40	2.00	5	\$ 44,552
Weatherstripping MH/SF (Electric)	823	8.00	0.00	5	\$ 4,132
Weatherstripping MH/SF (Gas)	4,666	2.80	2.70	5	\$ 57,216
<i>Sub-total for Energy Efficiency Measures</i>					\$ 7,774,543

Measure Description	Number Installed	Per Measure Electric Impact	Per Measure Gas Impact	EUL	Total Measure Life Cycle Bill Savings
		(kWh)	(Therms)	(years)	(\$)
Rapid Deployment Measures					
Air Conditioner Replacement - Central MF	0	828.28	0.00	18	\$ -
Air Conditioner Replacement - Central MH/SF	101	292.85	0.00	18	\$ 50,100
Air Conditioner Replacement - Room MF	82	130.16	0.00	15	\$ 16,053
Air Conditioner Replacement - Room MH/SF	8	426.40	0.00	15	\$ 5,130
Duct Sealing & Testing MF (Electric)	0	116.60	0.00	25	\$ 71
Duct Sealing & Testing MF (Gas)	2	47.98	6.24	25	\$ 301
Duct Sealing & Testing MH/SF (Electric)	33	87.15	0.00	25	\$ 5,793
Duct Sealing & Testing MH/SF (Gas)	184	27.39	11.54	25	\$ 37,281
Evaporative Cooler Maintenance SF	86	76.43	0.00	4	\$ 3,377
Set back Thermostat MF (Electric)	0	116.60	0.00	12	\$ -
Set back Thermostat MF (Gas)	0	77.55	6.78	12	\$ -
Set back Thermostat SF (Electric)	0	149.88	0.00	12	\$ -
Set back Thermostat SF (Gas)	0	95.48	15.00	12	\$ -
Water Heater Replacement MF (Gas)	5	0.00	18.10	13	\$ 764
Water Heater Replacement MH/SF (Gas)	334	0.00	21.60	13	\$ 60,911
Whole House Fans SF	0	63.00	0.00	20	\$ -
<i>Sub-total for Rapid Deployment Measures</i>					\$ 179,781
Total Bill Savings for All Measures in Program Year					\$ 7,954,325
Total Number of Homes Served by the Program during Program Year					15,706
Life Cycle Bill Savings Per Home					\$ 506.45
*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 2004 Last Updated 3/28/05

Measure Description	Number Installed			Per Measure Electric Impact (kWh)		Per Measure Gas Impact (Therms)	EUL (years)	Total Measure Life Cycle Bill Savings (\$)
	Elec SH	AC	Gas SH	Elec SH	AC			
Energy Efficiency Measures								
Air Conditioner Replacement (Room AC) MF	0	2	0	0.0	77.8	0.0	15	\$ 190
Air Conditioner Replacement (Room AC) MH	0	2	0	0.0	291.8	0.0	15	\$ 712
Air Conditioner Replacement (Room AC) SF	0	4	0	0.0	97.1	0.0	15	\$ 474
Attic insulation MF	1	4	8	189.9	53.8	22.0	25	\$ 2,465
Attic insulation SF	63	168	358	149.7	45.2	26.3	25	\$ 132,402
Caulking MF	693	1,848	3,928	7.1	1.0	2.0	5	\$ 31,329
Caulking MH	48	128	271	7.3	1.0	4.5	5	\$ 4,800
Caulking SF	830	2,213	4,702	10.3	2.4	4.7	5	\$ 88,454
CFL (including porch lights) MF	0	22,496	0	0.0	16.4	0.0	8	\$ 280,235
CFL (including porch lights) MH	0	1,987	0	0.0	16.4	0.0	8	\$ 24,752
CFL (including porch lights) SF	0	32,029	0	0.0	23.7	0.0	8	\$ 576,588
COPAY Refrigerators MF	0	20	0	0.0	665.1	0.0	15	\$ 16,227
Duct register Sealing MH*	34	90	191	13.4	7.3	1.8	5	\$ 1,680
Duct register Sealing SF*	0	1	2	13.4	7.3	1.8	5	\$ 15
Energy Education	0	0	14,892	0.0	0.0	0.0	0	\$ -
Evaporative Cooler Covers MF	0	0	0	0.0	0.0	0.0	3	\$ -
Evaporative Cooler Covers MH	5	0	26	3.8	0.0	6.8	3	\$ 440
Evaporative Cooler Covers SF	0	0	0	0.0	0.0	0.0	3	\$ -
Faucet Aerators MF	737	0	4,174	26.5	0.0	2.6	5	\$ 42,412

Measure Description	Number Installed			Per Measure Electric Impact (kWh)		Per Measure Gas Impact (Therms)	EUL (years)	Total Measure Life Cycle Bill Savings (\$)
	Elec SH	AC	Gas SH	Elec SH	AC			
Faucet Aerators MH	51	0	291	26.5	0.0	2.6	5	\$ 2,954
Faucet Aerators SF	862	0	4,883	43.4	0.0	3.6	5	\$ 68,698
Low Flow Showerhead MF	735	0	4,165	66.6	0.0	7.2	10	\$ 209,006
Low Flow Showerhead MH	50	0	284	66.6	0.0	7.2	10	\$ 14,247
Low Flow Showerhead SF	897	0	5,082	108.7	0.0	8.2	10	\$ 290,450
Minor Home Repairs MF	287	766	1,627	17.9	5.6	3.6	10	\$ 44,494
Minor Home Repairs MH	31	82	173	18.6	5.8	4.9	10	\$ 6,371
Minor Home Repairs SF	640	1,706	3,624	25.6	7.3	7.0	10	\$ 188,942
Permanent Evaporative Coolers MF	0	0	0	0.0	0.0	0.0	15	\$ -
Permanent Evaporative Coolers MH	0	34	0	0.0	526.1	0.0	15	\$ 21,821
Permanent Evaporative Coolers SF	0	9	0	0.0	535.3	0.0	15	\$ 5,877
Porch lights (fixture replacement or CFBs) MF	0	110	0	0.0	24.2	0.0	5	\$ 1,354
Porch lights (fixture replacement or CFBs) MH	0	55	0	0.0	24.2	0.0	5	\$ 677
Porch lights (fixture replacement or CFBs) SF	0	710	0	0.0	35.6	0.0	5	\$ 12,861
Refrigerators MF	0	2,091	0	0.0	665.1	0.0	15	\$ 1,696,483
Refrigerators MH	0	432	0	0.0	665.1	0.0	15	\$ 350,493
Refrigerators SF	0	3,704	0	0.0	794.8	0.0	15	\$ 3,591,182
Repair MF	0	0	139	0.0	0.0	26.3	10	\$ 24,850
Repair MH	0	0	34	0.0	0.0	26.1	10	\$ 6,051
Repair SF	0	0	809	0.0	0.0	25.0	10	\$ 137,906
Replacement MF	0	0	0	0.0	0.0	0.0	22	\$ -
Replacement MH	0	0	65	0.0	0.0	39.9	22	\$ 30,137

Measure Description	Number Installed			Per Measure Electric Impact (kWh)		Per Measure Gas Impact	EUL	Total Measure Life Cycle Bill Savings
	Elec SH	AC	Gas SH	Elec SH	AC	(Therms)	(years)	(\$)
Replacement SF	0	0	295	0.0	0.0	37.9	22	\$ 129,898
Water Heater Blanket MF	28	0	158	88.5	0.0	9.2	5	\$ 5,684
Water Heater Blanket MH	8	0	43	88.5	0.0	9.2	5	\$ 1,528
Water Heater Blanket SF	155	0	880	145.3	0.0	11.3	5	\$ 38,848
Water Heater Pipe Wrap MF	4	0	24	35.4	0.0	3.6	15	\$ 803
Water Heater Pipe Wrap MH	5	0	29	35.4	0.0	3.6	15	\$ 975
Water Heater Pipe Wrap SF	26	0	145	58.1	0.0	4.6	15	\$ 6,264
Water Heater Replacement MF	0	0	0	0.0	0.0	0.0	13	\$ -
Water Heater Replacement MH	0	0	2	0.0	0.0	19.0	13	\$ 315
Water Heater Replacement SF	0	0	3	0.0	0.0	19.0	13	\$ 472
Weatherstripping MF	742	1,979	4,206	10.8	1.0	2.7	5	\$ 45,462
Weatherstripping MH	33	87	185	11.2	1.0	5.1	5	\$ 3,734
Weatherstripping SF	862	2,298	4,883	10.3	2.4	4.7	5	\$ 93,410
Total Bill Savings for All Measures in Program Year								\$ 8,235,420

Total Number of Homes Served by the Program during Program Year 14,897

Life Cycle Bill Savings Per Home \$ 552.82

*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 2002 Last Updated 3/16/04

Measure Description	Number Installed	Per Measure Electric Impact (kWh)	Per Measure Gas Impact (Therms)	EUL (Yrs)	Total Measure Life Cycle Bill Savings (\$)
Energy Efficiency Measures					
Attic Insulation - SF	1,362	0.0	18.7	25	\$ 251,359
Attic Insulation - MF	383	0.0	9.6	25	\$ 36,287
Caulking - SF/MH	1,571	0.0	1.5	5	\$ 6,906
Caulking - MF	257	0.0	0.7	5	\$ 527
Evaporative Cooler Cover - SF/MH	1,445	0.0	8.1	3	\$ 20,945
Evaporative Cooler Cover - MF	336	0.0	4.1	3	\$ 2,465
Faucet Aerator - SF/MH	21,113	0.0	1.4	5	\$ 86,629
Faucet Aerator - MF	18,852	0.0	0.9	5	\$ 49,726
Furnace Repair	710	0.0	24.4	10	\$ 92,531
Furnace Replacement	4,386	0.0	110.1	22	\$ 4,446,325
Low Flow Showerhead - SF/MH	20,454	0.0	9.1	10	\$ 994,166
Low Flow Showerhead - MF	18,708	0.0	6.1	10	\$ 609,532
Minor Home Repairs - SF/MH	20,165	0.0	4.4	10	\$ 473,904
Minor Home Repairs - MF	18,320	0.0	2.2	10	\$ 215,272
Miscellaneous Measures (Weatherization - Electric)	42,343	9.4	0.0	5	\$ 203,946
Switch/Outlet Gasket - SF/MH	20,088	0.0	0.2	15	\$ 33,404
Switch/Outlet Gasket - MF	15,937	0.0	0.2	15	\$ 17,283
Water Heater Blanket - SF/MH	2,838	0.0	7.3	5	\$ 60,718
Water Heater Blanket - MF	1,864	0.0	4.9	5	\$ 26,769
Water Heater Pipe Wrap - SF/MH	1,271	0.0	2.7	15	\$ 24,811
Water Heater Pipe Wrap - MF	219	0.0	1.8	15	\$ 2,850
Weatherstripping - SF/MH	22,252	0.0	1.4	5	\$ 91,302
Weatherstripping - MF	19,646	0.0	0.7	5	\$ 40,305
<i>Sub-total for Energy Efficiency Measures</i>					\$ 7,787,960
Rapid Deployment Measures					

Measure Description	Number Installed	Per Measure Electric Impact (kWh)	Per Measure Gas Impact (Therms)	EUL (Yrs)	Total Measure Life Cycle Bill Savings (\$)
Duct Sealing and Testing - MF	13	0.0	7.1	25	\$ 906
Duct Sealing and Testing - MH/SF	553	0.0	11.3	25	\$ 61,835
Water Heater Replacement - Gas SF	2,025	0.0	21.6	13	\$ 285,585
<i>Sub-total for Rapid Deployment Measures</i>					\$ 348,325
Total Bill Savings for All Measures in Program Year					\$ 8,136,285

Total Number of Homes Served by the Program during Program Year 49,464

Life Cycle Bill Savings Per Home \$ 164.49

Exhibit 4-23

SoCalGas Life Cycle Bill Savings– Program Year 2003 Last Updated 3/16/04

Measure Description	Number Installed	Per Measure Electric Impact (kWh)	Per Measure Gas Impact (Therms)	EUL (Yrs)	Total Measure Life Cycle Bill Savings (\$)
Energy Efficiency Measures					
Attic Insulation - SF	1,619	0.0	18.7	25	\$ 312,293
Attic Insulation - MF	573	0.0	9.6	25	\$ 56,741
Caulking - SF	1,007	0.0	1.5	5	\$ 4,786
Caulking - MF	637	0.0	0.7	5	\$ 1,413
Evaporative Cooler/Air Cond. Covers - SF	1,735	0.0	8.1	3	\$ 28,010
Evaporative Cooler/Air Cond. Covers - MF	590	0.0	4.1	3	\$ 4,821
Faucet Aerators - SF	21,788	0.0	1.4	5	\$ 96,654
Faucet Aerators - MF	23,046	0.0	0.9	5	\$ 65,723
Furnace Repair - Gas	546	0.0	24.4	10	\$ 75,290
Furnace Replacement - Gas	4,252	0.0	110.1	22	\$ 4,509,998
Low Flow Showerhead - SF	20,961	0.0	9.1	10	\$ 1,077,976
Low Flow Showerhead - MF	22,236	0.0	6.1	10	\$ 766,553
Minor Home Repairs - SF	20,365	0.0	4.4	10	\$ 506,399
Minor Home Repairs - MF	21,917	0.0	2.2	10	\$ 272,496
Miscellaneous Measures (Weatherization - Electric)	47,673	17.4	0.0	5	\$ 422,073
Switch/Outlet Gasket - SF	20,594	0.0	0.2	15	\$ 35,983
Switch/Outlet Gasket - MF	20,771	0.0	0.2	15	\$ 23,669
Water Heater Blanket - SF	3,390	0.0	7.3	5	\$ 78,415
Water Heater Blanket - MF	1,602	0.0	4.9	5	\$ 24,873
Water Heater Pipe Wrap - SF	414	0.0	2.7	15	\$ 8,492
Water Heater Pipe Wrap - MF	74	0.0	1.8	15	\$ 1,012
Door Weatherstripping - SF	22,461	0.0	1.4	5	\$ 99,640
Door Weatherstripping - MF	23,721	0.0	0.7	5	\$ 52,615
<i>Sub-total for Energy Efficiency Measures</i>					\$ 8,525,922
Rapid Deployment Measures					
Duct Sealing and Repair - MF	562	0.0	7.1	25	\$ 40,927
Duct Sealing and Repair - SF	431	0.0	11.3	25	\$ 50,371
Water Heater Replacement - Gas - SF	3,581	0.0	21.6	13	\$ 531,777

Measure Description	Number Installed	Per Measure Electric Impact (kWh)	Per Measure Gas Impact (Therms)	EUL (Yrs)	Total Measure Life Cycle Bill Savings (\$)
Water Heater Replacement - Gas - MF	1,127	0.0	18.1	13	\$ 140,241
<i>Sub-total for Rapid Deployment Measures</i>					\$ 763,316
Total Bill Savings for All Measures in Program Year					\$ 9,289,239

Total Number of Homes Served by the Program during Program Year 57,179

Life Cycle Bill Savings Per Home \$ 162.46

Exhibit 4-24
SoCalGas Life Cycle Bill Savings– Program Year 2004 Last Updated 4/10/05

Measure Description	Number Installed		Per Measure Electric Impact (kWh)	Per Measure Gas Impact (Therms)	EUL	Total Measure Life Cycle Bill Savings (\$)
	AC	Gas Heat				
Energy Efficiency Measures						
Attic Insulation MF	-	543	0.0	17.0	25	\$ 111,381
Attic Insulation SF	-	1,441	0.0	24.4	25	\$ 425,229
Caulking MF	307	768	1.0	0.9	5	\$ 2,649
Caulking MH	88	221	2.6	0.9	5	\$ 849
Caulking SF	398	996	2.5	2.3	5	\$ 9,060
Cover Plate / Gaskets MF	-	17,853	0.0	0.2	15	\$ 23,816
Cover Plate / Gaskets MH	-	2,294	0.0	0.2	15	\$ 4,896
Cover Plate / Gaskets SF	-	18,070	0.0	0.2	15	\$ 38,568
Door Weatherstripping MF	8,611	21,527	1.0	1.1	5	\$ 90,212
Door Weatherstripping MH	893	2,232	1.8	1.3	5	\$ 11,907
Door Weatherstripping SF	8,632	21,579	2.6	2.6	5	\$ 219,933
Duct Sealing and Repair MF	-	-	0.0	0.0	25	\$ -
Duct Sealing and Repair MH	-	-	0.0	0.0	25	\$ -
Duct Sealing and Repair SF	-	-	0.0	0.0	25	\$ -

Measure Description	Number Installed		Per Measure Electric Impact (kWh)	Per Measure Gas Impact (Therms)	EUL	Total Measure Life Cycle Bill Savings (\$)
	AC	Gas Heat				
Evaporative Cooler/Air Cond. Covers MF	-	2,190	0.0	0.4	3	\$ 2,267
Evaporative Cooler/Air Cond. Covers MH	-	300	0.0	0.9	3	\$ 611
Evaporative Cooler/Air Cond. Covers SF	-	1,343	0.0	2.2	3	\$ 6,970
Faucet Aerators MF	-	21,296	0.0	2.6	5	\$ 205,393
Faucet Aerators MH	-	2,306	0.0	2.6	5	\$ 22,241
Faucet Aerators SF	-	21,147	0.0	3.6	5	\$ 282,401
Furnace Repair MF	-	118	0.0	11.0	10	\$ 8,566
Furnace Repair MH	-	183	0.0	22.1	10	\$ 26,698
Furnace Repair SF	-	3,122	0.0	22.5	10	\$ 465,636
Furnace Replacement MF	-	94	0.0	36.9	22	\$ 39,124
Furnace Replacement MH	-	279	0.0	35.1	22	\$ 110,320
Furnace Replacement SF	-	3,362	0.0	36.2	22	\$ 1,371,303
Low Flow Showerhead MF	-	20,609	0.0	7.2	10	\$ 981,711
Low Flow Showerhead MH	-	2,163	0.0	7.2	10	\$ 103,035
Low Flow Showerhead SF	-	20,475	0.0	8.2	10	\$ 1,110,790
Minor Home Repairs MF	7,970	19,926	6.3	1.8	10	\$ 275,374
Minor Home Repairs MH	494	1,236	19.7	2.3	10	\$ 27,027
Minor Home Repairs SF	8,478	21,195	4.5	5.1	10	\$ 747,138
Water Heater Blanket MF	-	1,639	0.0	9.2	5	\$ 55,935
Water Heater Blanket MH	-	207	0.0	9.2	5	\$ 7,064
Water Heater Blanket SF	-	3,763	0.0	11.3	5	\$ 157,735
Water Heater Pipe Wrap MF	-	42	0.0	3.6	15	\$ 1,345
Water Heater Pipe Wrap MH	-	66	0.0	3.6	15	\$ 2,113
Water Heater Pipe Wrap SF	-	131	0.0	4.6	15	\$ 5,359
Water Heater Replacement MF	-	1	0.0	9.5	13	\$ 76
Water Heater Replacement MH	-	6	0.0	19.0	13	\$ 918
Water Heater Replacement SF	-	23	0.0	19.0	13	\$ 3,517

Measure Description	Number Installed		Per Measure Electric Impact (kWh)	Per Measure Gas Impact (Therms)	EUL	Total Measure Life Cycle Bill Savings (\$)
	AC	Gas Heat				
Total Bill Savings for All Measures in Program Year						\$ 6,955,649

Total Number of Homes Served by the Program during Program Year 54,677

Life Cycle Bill Savings Per Home \$ 127.21

APPENDIX A – IMPLEMENTATION RATES

PG&E

Measure	2002	2003	2004
Furnaces			
- Repair - Gas	1%	1%	1%
- Replacement - Gas	0%	1%	0%
- Repair - Electric	0%	0%	0%
- Replacement - Electric	0%	0%	0%
Infiltration & Space Conditioning.			
- Cover Plates/Gaskets	45%	56%	77%
- Evaporative Cooler/Air Cond. Covers	5%	10%	12%
- HVAC Air Filter Replacement	25%	30%	0%
- Duct Repair	0%	0%	0%
Weatherization			
- Attic Insulation	6%	8%	8%
- Water Heater Blanket	10%	15%	13%
- Low Flow Showerhead	43%	53%	59%
- Door Weatherstripping	43%	54%	72%
- Caulking	46%	56%	77%
- Minor Home Repairs	41%	52%	68%
- Attic Access Weatherstripping	18%	26%	27%
Water Heater Savings			
- Water Heater Pipe Wrap	2%	2%	1%
- Faucet Aerators	52%	66%	73%
<i>Miscellaneous Measures</i>	0%	0%	0%
<i>Permanent Evaporative Coolers</i>	0%	0%	0%
<i>Portable Evaporative Coolers</i>	23%	8%	4%
<i>Compact Fluorescents (indoor)</i>	487%	408%	88%
<i>Compact Fluorescents (outdoor)</i>	9%	18%	14%
<i>Refrigerators</i>	35%	37%	41%
Pilots - Rapid Deployment			
- Air Conditioner Replacement - Room	0%	1%	2%
- Air Conditioner Replacement - Central	1%	1%	0%
- Duct Sealing and Repair	0%	13%	0%
- Whole House Fans	0%	1%	0%
- Water Heater Replacement - Gas	1%	1%	0%
- Water Heater Replacement - Electric	0%	0%	0%
- Set-back Thermostats	6%	8%	0%
- Evaporative Cooler Maintenance	2%	1%	0%

The indoor CFL implementation rate appears greatly reduced in PY2004. However, this is simply a function of the unit changing from the number of lamps to number of households. In PY2004, each household is purported to receive 4 lamps. A comparable implementation rate for PY2004 is number of lamps at 170,800 lamps across 48,549 households for an implementation rate of 352 percent.

SCE

Measure	2002	2003	2004
Furnaces			
- Repair - Gas	0%	0%	0%
- Replacement - Gas	0%	0%	0%
- Repair - Electric	0%	0%	0%
- Replacement - Electric	0%	0%	0%
Infiltration & Space Conditioning.			
- Cover Plates/Gaskets	7%	2%	0%
- Evaporative Cooler/Air Cond. Covers	1%	0%	0%
- HVAC Air Filter Replacement	0%	0%	0%
- Duct Repair	0%	0%	0%
Weatherization			
- Attic Insulation	0%	0%	0%
- Water Heater Blanket	1%	0%	0%
- Low Flow Showerhead	7%	3%	0%
- Door Weatherstripping	7%	3%	0%
- Caulking	4%	1%	0%
- Minor Home Repairs	6%	3%	0%
- Attic Access Weatherstripping	0%	0%	0%
Water Heater Savings			
- Water Heater Pipe Wrap	0%	0%	0%
- Faucet Aerators	5%	4%	0%
<i>Miscellaneous Measures</i>	1%	0%	0%
<i>Permanent Evaporative Coolers</i>	1%	2%	4%
<i>Portable Evaporative Coolers</i>	0%	0%	0%
<i>Compact Fluorescents (indoor)</i>	150%	148%	303%
<i>Compact Fluorescents (outdoor)</i>	39%	46%	8%
<i>Refrigerators</i>	33%	51%	43%
Pilots - Rapid Deployment			
- Air Conditioner Replacement - Room	9%	0%	1%
- Air Conditioner Replacement - Central	1%	4%	1%
- Duct Sealing and Repair	2%	3%	0%
- Whole House Fans	0%	0%	0%
- Water Heater Replacement - Gas	0%	0%	0%
- Water Heater Replacement - Electric	1%	0%	0%
- Set-back Thermostats	0%	3%	1%
- Evaporative Cooler Maintenance	9%	1%	1%

SDG&E

Measure	2002	2003	2004
Furnaces			
- Repair - Gas	4%	7%	7%
- Replacement - Gas	3%	2%	2%
- Repair - Electric	0%	0%	0%
- Replacement - Electric	0%	0%	0%
Infiltration & Space Conditioning.			
- Cover Plates/Gaskets	38%	58%	0%
- Evaporative Cooler/Air Cond. Covers	1%	0%	0%
- HVAC Air Filter Replacement	0%	0%	0%
- Duct Repair	0%	0%	0%
Weatherization			
- Attic Insulation	3%	2%	0%
- Water Heater Blanket	4%	7%	9%
- Low Flow Showerhead	54%	71%	75%
- Door Weatherstripping	52%	71%	73%
- Caulking	52%	69%	70%
- Minor Home Repairs	23%	41%	43%
- Attic Access Weatherstripping	0%	0%	0%
Water Heater Savings			
- Water Heater Pipe Wrap	2%	2%	2%
- Faucet Aerators	49%	72%	74%
<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>	167%	213%	379%
<i>Compact Fluorescents (outdoor)</i>	2%	7%	6%
<i>Refrigerators</i>	46%	32%	42%
Pilots - Rapid Deployment			
- Air Conditioner Replacement - Room	2%	1%	0%
- Air Conditioner Replacement - Central	2%	1%	0%
- Duct Sealing and Repair	2%	1%	0%
- Whole House Fans	0%	0%	0%
- Water Heater Replacement - Gas	4%	2%	0%
- Water Heater Replacement - Electric	0%	0%	0%
- Set-back Thermostats	4%	0%	0%
- Evaporative Cooler Maintenance	0%	1%	0%

SoCalGas

Measure	2002	2003	2004
Furnaces			
- Repair - Gas	1%	1%	6%
- Replacement - Gas	9%	7%	7%
- Repair - Electric	0%	0%	0%
- Replacement - Electric	0%	0%	0%
Infiltration & Space Conditioning.			
- Cover Plates/Gaskets	73%	72%	70%
- Evaporative Cooler/Air Cond. Covers	4%	4%	7%
- HVAC Air Filter Replacement	0%	0%	0%
- Duct Repair	0%	0%	0%
Weatherization			
- Attic Insulation	4%	4%	4%
- Water Heater Blanket	10%	9%	10%
- Low Flow Showerhead	79%	76%	79%
- Door Weatherstripping	85%	81%	83%
- Caulking	4%	3%	4%
- Minor Home Repairs	78%	74%	77%
- Attic Access Weatherstripping	0%	0%	0%
Water Heater Savings	0%	0%	0%
- Water Heater Pipe Wrap	3%	1%	0%
- Faucet Aerators	81%	78%	82%
<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%
Pilots - Rapid Deployment			
- Air Conditioner Replacement - Room	0%	0%	0%
- Air Conditioner Replacement - Central	0%	0%	0%
- Duct Sealing and Repair	1%	2%	0%
- Whole House Fans	0%	0%	0%
- Water Heater Replacement - Gas	4%	8%	0%
- 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	2002	2003	2004
Gas Appliances	2.2%	6.8%	3.8%
Electric Appliances	33.9%	29.9%	32.2%
Weatherization Measures	32.1%	27.0%	19.8%
Outreach & Assessment	5.8%	4.0%	5.9%
In Home Energy Education	4.9%	3.7%	6.0%
Education Workshops	0.0%	0.0%	0.0%
<i>Energy Efficiency TOTAL</i>	78.9%	71.4%	67.7%
Pilots	0.0%	0.0%	0.0%
Attic Venting	0.1%		
Landlord Rebates	0.6%		
Phase 4 Pilot	0.1%	0.1%	0.4%
Leveraging Pilot	0.8%	0.1%	0.7%
<i>Total Pilots</i>	0.8%	0.2%	1.0%
Training Center	0.3%	0.4%	0.6%
Inspections	5.0%	6.7%	6.0%
Advertising	0.0%	0.0%	0.0%
M&E Studies	0.2%	0.8%	0.4%
Regulatory Compliance	1.0%	0.8%	0.6%
Other Administration	8.8%	13.0%	20.1%
Indirect Costs	5.1%	6.7%	3.6%
Oversight Costs			
CPUC Energy Division	0.1%	0.1%	0.0%
<i>Total Oversight Costs</i>	0.1%	0.1%	0.0%
Total Costs	100%	100%	100%

SCE

Energy Efficiency	2002	2003	2004
- Gas Appliances	0.0%	0.0%	0.0%
- Electric Appliances	76.2%	83.7%	76.7%
- Weatherization	7.7%	5.5%	0.1%
- Outreach & Assessment	1.6%	5.0%	8.7%
- In Home Energy Education	7.8%	1.3%	1.3%
- Education Workshop	0.0%	0.0%	0.0%
Energy Efficiency TOTAL	93.2%	95.4%	86.7%
Pilots	0.0%	0.0%	0.0%
- Pilot (A)	3.1%	0.0%	0.0%
- Pilot (B)	0.0%	0.8%	0.0%
Total Pilots	0.0%	0.8%	0.0%
Training Center	0.0%	0.0%	0.0%
Inspections	1.0%	0.6%	1.1%
Advertising	0.0%	0.0%	0.0%
M&E Studies	0.2%	0.9%	1.8%
Regulatory Compliance	0.5%	0.3%	0.4%
Other Administration ¹	0.0%	0.0%	8.1%
Indirect Costs	1.8%	1.4%	1.6%
Oversight Costs			
- LIAB PY2002	0.1%	0.1%	0.0%
CPUC Energy Division	0.1%	0.5%	0.2%
Total Oversight Costs	0.2%	0.6%	0.2%
Total Costs	100%	100%	100%

SDG&E

Energy Efficiency	2002	2003	2004
- Gas Appliances	9.2%	5.5%	8.2%
- Electric Appliances	44.3%	31.1%	34.9%
- Weatherization Measures	26.2%	40.5%	29.3%
- Outreach Assessment	1.6%	0.0%	0.0%
- In Home Energy Education	0.0%	0.0%	9.8%
- Education Workshops	1.7%	2.7%	0.4%
Energy Efficiency TOTAL	88.4%	89.6%	82.5%
Pilots	0.0%	0.0%	0.0%
- Pilot (A)	0.5%	0.0%	0.0%
- Pilot (B)	0.0%	0.0%	0.0%
Total Pilots	0.5%	0.0%	0.0%
Training Center	0.0%	0.0%	0.0%
Inspections	4.9%	4.9%	0.8%
Advertising	1.2%	3.2%	4.2%
M&E Studies	0.0%	0.0%	0.3%
Regulatory Compliance	4.7%	2.1%	1.2%
Other Administration	0.0%	0.0%	6.5%
Indirect Costs	0.0%	0.0%	4.4%
Oversight Costs			
- CPUC Energy Division	0.3%	0.2%	0.1%
Total Oversight Costs	0.3%	0.2%	0.1%
Total Costs	100%	100%	100%

SoCalGas

Energy Efficiency	2002	2003	2004
Gas Appliances	24.7%	28.3%	19.8%
Electric Appliances	0.0%	0.0%	0.0%
Weatherization Measures	51.4%	53.5%	53.4%
Outreach & Assessment	8.5%	9.3%	10.4%
In Home Energy Education	0.0%	3.8%	3.4%
Education Workshops	2.6%	0.0%	0.0%
Energy Efficiency TOTAL	87.2%	94.8%	87.0%
Total Pilots	0.0%	0.1%	0.0%
Training Center	0.8%	0.0%	0.8%
Inspections	1.7%	3.7%	4.4%
Advertising	0.6%	1.1%	1.1%
M&E Studies	1.0%	0.2%	0.5%
Regulatory Compliance	1.1%	0.1%	0.3%
Other Administration	7.4%	0.0%	4.3%
Indirect Costs	0.0%	0.0%	1.6%
Oversight Costs		0.0%	1.6%
CPUC Energy Division	0.1%	0.1%	0.1%
Total Oversight Costs	0.1%	0.1%	0.1%
Total Costs	100%	100%	100%

APPENDIX C – MEMO ON PUBLIC WORKSHOPS

April 18, 2005

To: Mary O’Drain, Pacific Gas & Electric Co, Chair of Bill Savings Group

From: Tim Caulfield, Equipoise Consulting Incorporated

Re: Documentation of Bill Savings Workshops, April 2005

Cc: Bill Savings Group

The Bill Savings group held two publicly noticed workshops (see attachment 1) to present the results of the Program Year (PY) 2004 bill savings and cost report. The presentation made at both workshops is presented in attachment 2. The first workshop was held on April 15, 2005 in San Diego California. No public agencies attended to comment, although three students attended as part of a class assignment. The second workshop was held in San Francisco on April 18, 2005. One public agency attended, but they had no comments. The attendance lists for both workshops are presented in attachment 3. Copies of the draft report and the presentation were available at both workshops. Electronic copies of the report and presentation were posted on the Low Income Oversight Board website, so that telephone participants could follow along. Both workshops lasted approximately 30 minutes.

Attachment 1 – Announcement Text

4.2.1 Public Workshop Notice –

4.2.2 Joint Utilities 2004 Low Income Energy Efficiency Program Bill Savings Report

<i>April 15, 2005 1 pm – 3 pm Phone: 800/423-1988 Passcode: 682499#</i>	<u>Southern California</u> <i>San Diego Gas & Electric Company Building 6 8326 Century Park Court San Diego</i>
<i>April 18, 2005 10 am – 12 pm Phone: 800/423-1988 Passcode: 682503#</i>	<u>Northern California</u> <i>Pacific Gas & Electric Company Pacific Energy Center 851 Howard Street San Francisco</i>

Pacific Gas and Electric Company, Southern California Edison Company, Southern California Gas Company, and San Diego Gas and Electric Company (the Joint Utilities) will hold two public workshops to present and discuss the results of The Joint Utilities 2004 Low Income Energy Efficiency Program Bill Savings Report. Workshop participants will have an opportunity to provide input to the Team before the recommendations are finalized and submitted to the CPUC for approval. The team will consider the public input and revise the draft report as appropriate.

A copy of the Draft Bill Savings Report will be posted on the Low-Income Oversight Board's website at <http://www.liob.org>.

Parties who have questions regarding the workshops may contact Mary O'Drain at 415-973-2317 or MJO@pge.com.

Teleconference Information: A number is being provided for individuals who wish to call into the workshops. The call-in number for the April 15 workshop is: 800-423-1988, Passcode: 682499#. The call-in number for the April 18 workshop is: 800-423-1988, Passcode: 682503#.

Attachment 2 – Presentation

Slide 1

Bill Savings

Costs and Bill Saving in the Low Income Energy Efficiency Programs for 2002 to 2004

Bill Savings Public Workshop
April 15, 2005 - San Diego
April 18, 2005 - San Francisco

Slide 2

Introduction

In 2000, D.00-07-020, Ordering Paragraph 7
ordered the utilities to:

- ...jointly develop standardized methods for producing bill savings and expenditures for the Low Income Energy Efficiency (LIEE) program on an overall program and per unit basis, by utility.
- The methods were developed and the report ordered in D.00-07-020 was filed on time with errata filed on March 12, 2001.

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Slide 3

Introduction (cont.)

- This workshop presents the results of applying the accepted methodology for determining costs and bill savings estimates of the LIEE programs from 2002 through 2004.
- A report will be filed that is in compliance with Decision (D) 01-12-020, Ordering Paragraph 4

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Slide 4

Costs

- Each LIEE implementer is required to separate costs into 16 labor, non-labor, and contract expenditure components.

	Costs Recorded by Cost Element											
	PG&E			SCE			SDG&E			SoCalGas		
	2002	2003	2004	2002	2003	2004	2002	2003	2004	2002	2003	2004
Energy Efficiency												
Gas Appliances	X	X	X				X	X	X	X	X	X
Electric Appliances	X	X	X	X	X	X	X	X	X			
Weatherization Measures	X	X	X	X	X	X	X	X	X	X	X	X
Outreach & Assessment	X	X	X	X	X	X	X	X	X	X	X	X
In Home Energy Education	X	X	X	X	X	X	X	X	X	X	X	X
Education Workshops	X	X					X	X	X	X		
Pilots	X	X	X	X	X		X					X
Training Center	X	X	X							X	X	X
Inspections	X	X	X	X	X	X	X	X	X	X	X	X
Advertising							X	X	X	X	X	X
M&E Studies	X	X	X	X	X	X				X	X	X
Regulatory Compliance	X	X	X	X	X	X	X	X	X	X	X	X
Other Administration	X	X	X				X			X	X	X
Indirect Costs	X	X	X	X	X	X				X	X	X
Oversight Costs												
LIAB PY2002				X	X							
CPUC Energy Division	X	X	X	X	X	X	X	X	X	X	X	X

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Slide 5

Bill Savings

- Bill savings are the life cycle net present value saved by the average dwelling due to the measures installed under the LIEE programs.
 - Energy savings are determined from engineering analysis or M&E studies performed after the program was fielded.
 - Per-unit energy savings for PY2004 are from the PY2001 LIEE Impact Report and the Final LIEE Measure Cost Effectiveness Report.
 - Per-unit energy savings for PY2002-03 are from the PY2000 LIEE Impact Report and the Draft LIEE Measure Cost Effectiveness Report.
 - Many Effective Useful Life values for life cycle calculation based on CALMAC values, September, 2000. Use of DEER values was assessed but they were considered inappropriate.

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Slide 6

Bill Savings (cont.)

- The general algorithm for estimating bill savings is:

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

where:

- r = fuel type (gas or electric)
- Y = Year, starting with implementation program year
- m = measure type
- energy rate_{Y,r} = energy rate (\$ per kWh or therm) for fuel r in year Y
- Impact_m = measure m gross impact per year (kWh or therm)
- Number_m = number of measure type m installed
- EUL_m = effective useful life (years) of measure type m
- CP = Costing period, n = number of costing periods

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Slide 7

Energy Rates

Year	PG&E		SCE	SDG&E		SoCalGas	
	kWh	Therm	kWh	kWh	Therm	kWh	Therm
2002	0.1124	0.6235	0.1174	0.1365	0.6957	0.1174	0.5311
2003	0.0992	0.7721	0.1118	0.1380	0.8560	0.1118	0.6970
2004	0.0975	0.8138	0.1016	0.1119	0.8399	0.1016	0.8160
All years afterwards	Previous Year * (1+Escalation Rate)						

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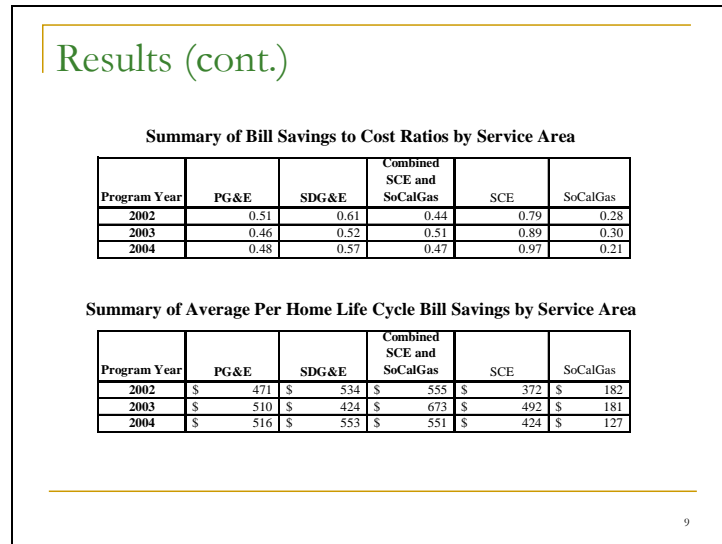
Slide 8

Results

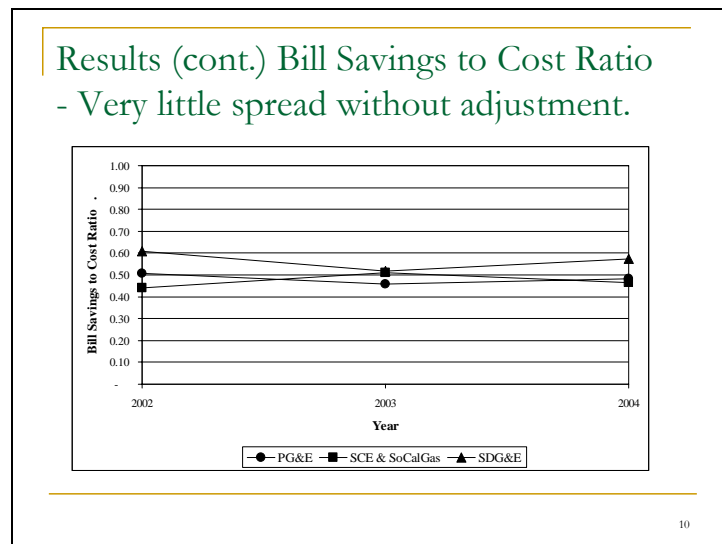
- In order to compare average customer bill savings across the state, it is useful to compare the total service by service area. For the final analysis purposes of this document, the SoCalGas and SCE programs were assessed as a single entity since they serve roughly the same customers.

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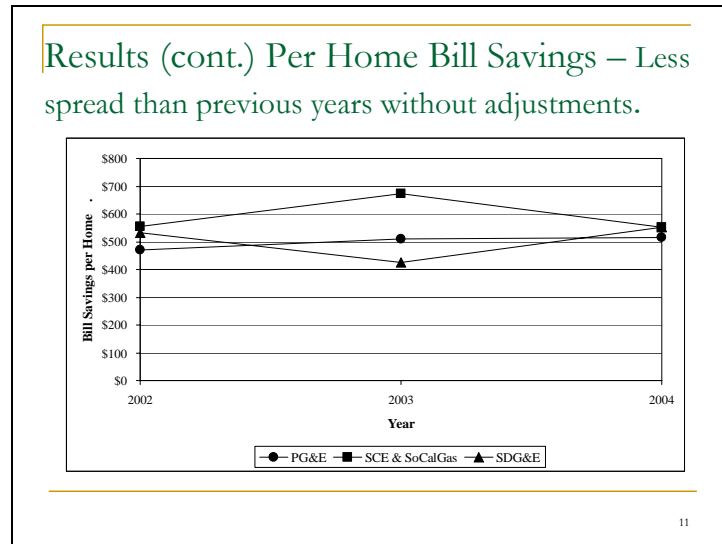
Slide 9



Slide 10



Slide 11



Slide 12

Results (cont.)- Effect of Change in Per Unit Impact on Per Home Bill Savings

Utility	PY2004 per-unit impact values	PY2002/2003 per-unit impact values	% Different
PG&E	\$ 516.49	\$ 490.31	5%
SCE	\$ 423.88	\$ 412.78	3%
SDG&E	\$ 552.82	\$ 512.94	7%
SoCalGas	\$ 127.21	\$ 173.89	-37%

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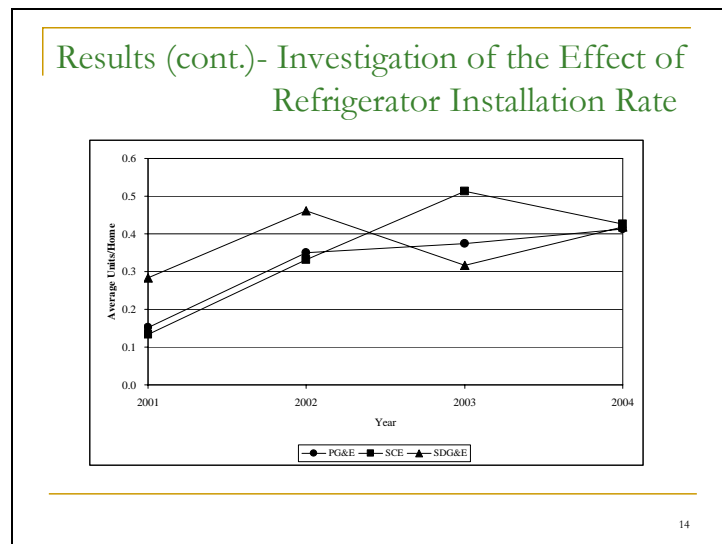
Slide 13

Results (cont.)- Effect of Energy Rate on Bill Savings to cost ratio

	PG&E	SCE/SoCalGas	SDG&E
Bill Savings to Cost Ratio	0.48	0.47	0.57
Actual PY2004 Energy Rate	0.0975 kWh 0.8138 Therm	0.1016 kWh 0.8160 Therm	0.119 kWh 0.8399 Therm
Assumed Modified Energy Rate	0.1037 kWh 0.8232 Therm		
Modified Bill Savings to Cost Ratio	0.51	0.47	0.54

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Slide 14



Slide 15

Reasons for Results

- **PY2002** variations are due to installation rates of refrigerators, the impacts for those refrigerators, and variation in energy rates.
- **PY2003** reasons for variations are similar to those for PY2002 – refrigerator installation rate, refrigerator impact values and energy rates.
- **PY2004** Very little spread in unadjusted values. Energy rate had a marginal effect on bill savings to cost ratio. No other effects.

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Slide 16

Conclusions

- Unadjusted numbers evolving from the analysis were within 10% of each other, which is the same as the levels of agreement achieved in prior bill savings assessment after adjustments .
- Neither the per-unit cost of energy nor the measure installation rates played major roles in the utility-to-utility variation.
- The main effect for PY2004 was the change in per-unit impacts seen by SoCalGas resulting from the updated impact study data.

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Slide 17

Conclusions

- In short, this analysis shows that the PY2004 LIEE program delivered comparable savings to program participants statewide.

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Slide 18

Supplemental Slides

18

Slide 19

Supplemental Slide 1 DEER EUL Values Investigated

Measure	Bill Savings EUL (yrs)	New DEER EUL (yrs)	New DEER EUL Source
CFL	8	Varied from 4.45 to 8.2 depending on number of hours of operation	"Measure Savings Algorithms and Cost Assumptions: Technical Reference Manual". Efficiency Vermont, Jan. 2003
Faucet Aerator	5	9	1995 Integrated Resource Plan by Washington Electric Cooperative
Low Flow Showerhead	10	9	1995 Integrated Resource Plan by Washington Electric Cooperative
Refrigerator Replacement	15	18	DEER 4.0
Water Heater Pipe Wrap	15	10	1995 Integrated Resource Plan by Washington Electric Cooperative
Water Heater Replacement	13	15	DEER 4.0
Water Heater Blanket	5	6	1995 Integrated Resource Plan by Washington Electric Cooperative

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Slide 20

Supplemental Slide 2 - EUL Values Used

Measure	EUL Used	
	year	source
Air Conditioner - Central	18	2
Air Conditioner - Room	15	2
Attic Access Weatherstripping	5	2
Attic Insulation (Ceiling Insulation)	25	2
Attic Venting	25	4
Building Envelope Repair	10	6
Caulking	5	6
Compact Fluorescent Hard Wired Porch Lights ¹	20 ; 5.3	2 ; 7
Compact Fluorescent Lights	8	2
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)	5	5
Evaporative Cooler Maintenance	4	6
Faucet Aerators	5	5
Furnace Filters	5	2
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 Blankets	5	5
Water Heater Pipe Wrap	15	2
Water Heater Replacement	13	2
Weatherstripping	5	6
Whole House Fans	20	5

¹ FHE's Residential Program: 2000-2001 Energy Efficiency Program's Application Attachment 12 Worksheet, p. 12-13.
² CALMAC Workshop Report on FY 2001 Energy Efficiency Program
³ Assumed to have the same EUL as Caulking or Weatherstripping
⁴ Assumed to have the same EUL as attic insulation
⁵ DSM Measure Life Project, September 21, 1993 (adjusted and non-adjusted)
⁶ Engineering Estimate
⁷ LBNL Measure Cost Effectiveness Preliminary Report, September, 2002
⁸ Low Income Energy Efficiency Program Standardization Project Phase 3 Report - Appendix G, July 2004
⁹ The measure tracked here for SCE is one where CFLs in porch lights are installed. The EUL has been appropriately lowered in this case.

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Slide 21

Supplemental Slide 3 – Effect of Average Energy Rate on per Home Bill Savings

Measure Type	Actual Rates			Average Rates		
	SCE/ SoCalGas	PG&E	SDG&E	SCE/ SoCalGas	PG&E	SDG&E
Percentage of per home bill savings						
Weatherization	9	15	8	9	15	8
Water Heating	13	9	8	13	9	9
Refrigeration	59	62	69	59	62	68
Other	12	3	4	12	3	5
CFL	8	11	11	8	11	11
Bill Savings per Home						
Bill Savings/house	\$ 551	\$ 516	\$ 553	\$ 543	\$ 561	\$ 518

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Slide 22

Supplemental Slide 4 – Results by Utility

Program Year	Program Costs	Life Cycle Bill Savings	Bill Savings / Cost Ratio	Per Home Average Life Cycle Bill Savings
2002	\$ 65,599,305	\$ 32,291,491	0.51	\$ 471
2003	\$ 52,520,409	\$ 24,118,156	0.46	\$ 510
2004	\$ 51,826,340	\$ 25,074,904	0.48	\$ 516

Program Year	Program Costs	Life Cycle Bill Savings	Bill Savings / Cost Ratio	Per Home Average Life Cycle Bill Savings
2002	\$ 13,971,543	\$ 11,055,007	0.79	\$ 372
2003	\$ 18,664,182	\$ 16,596,630	0.89	\$ 492
2004	\$ 16,264,898	\$ 15,831,079	0.97	\$ 424

Program Year	Program Costs	Life Cycle Bill Savings	Bill Savings / Cost Ratio	Per Home Average Life Cycle Bill Savings
2002	\$ 12,358,189	\$ 7,519,036	0.61	\$ 534
2003	\$ 12,865,219	\$ 6,665,160	0.52	\$ 424
2004	\$ 14,405,365	\$ 8,235,420	0.57	\$ 553

Program Year	Program Costs	Life Cycle Bill Savings	Bill Savings / Cost Ratio	Per Home Average Life Cycle Bill Savings
2002	\$ 30,666,410	\$ 8,628,899	0.28	\$ 182
2003	\$ 33,998,942	\$ 10,342,708	0.30	\$ 181
2004	\$ 32,595,808	\$ 6,955,642	0.21	\$ 127

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Slide 23

Supplemental
Slide 5 –
Results Across
Utility

Program Costs

Program Year	PG&E	SCE	SDG&E	SoCalGas
2002	\$ 65,599,305	\$ 13,971,543	\$ 12,358,189	\$ 30,666,410
2003	\$ 52,520,409	\$ 18,664,182	\$ 12,865,219	\$ 33,998,942
2004	\$ 51,826,340	\$ 16,264,898	\$ 14,405,365	\$ 32,595,808

Life Cycle Bill Savings

Program Year	PG&E	SCE	SDG&E	SoCalGas
2002	\$ 33,291,491	\$ 11,055,007	\$ 7,519,036	\$ 8,628,899
2003	\$ 24,118,156	\$ 16,596,630	\$ 6,665,160	\$ 10,342,708
2004	\$ 25,074,904	\$ 15,831,079	\$ 8,235,420	\$ 6,955,642

Bill Savings to Cost Ratio

Program Year	PG&E	SCE	SDG&E	SoCalGas
2002	0.51	0.79	0.61	0.28
2003	0.46	0.89	0.52	0.30
2004	0.48	0.97	0.57	0.21

Per Home Life Cycle Bill Savings

Program Year	PG&E	SCE	SDG&E	SoCalGas
2002	\$ 471	\$ 372	\$ 534	\$ 182
2003	\$ 510	\$ 492	\$ 424	\$ 181
2004	\$ 516	\$ 424	\$ 553	\$ 127

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Attachment 3 – Attendance Sheets

Bill Savings Public Workshop April 15, 2005, 1:00 PM
San Diego

Name	Company	Email	Phone
Mary O'Drain	PG&E	mjob@pge.com	415-973-2317
Jose Webb	CPUC	wbb@cpuc.ca.gov	415-703-1966
Francis Thompson	PG&E	flt2@pge.com	415-973-2486
David Timber	National University	David.timber@sdcounty.ca.gov	858-639-3381
Katie Judd	National University		
Osama Alkasabi	National University	Osama.alkasabi@worldnet.att.net	
Henry DeJesus	SDGE	hdejesus@semprautilities.com	858-654-1723
Tim Caulfield	Equipoise Consulting	Tim@EquipoiseConsulting.com	510-531-1080
Mary Sutter (by phone)	Equipoise Consulting	Mary@EquipoiseConsulting.com	510-864-8507
Gilbert Escamilla	CPUC	gil@cpuc.ca.gov	

Bill Savings Public Workshop April 18, 2005, 10 AM
San Francisco

Name	Company	Email	Phone
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Tim Caulfield	Equipoise Consulting	Tim@Equipoise Consulting.com	510-531-1080
Mary Sutter	Equipoise Consulting	Mary@Equipoise Consulting.com	510-864-8507
Kathy Wickware (by phone)	Semrpa Utilities	KWickware@ semprautilities.com	858-654-1769
Greg Redican	CAASM	gradican@ CAASM.org	650-595-1342