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February 1, 2006

Advice No. 3588
(U 904 G)

Public Utilities Commission of the State of California

**Subject: SoCalGas' 2006-2008 Energy Efficiency Compliance Filing**

In compliance with Ordering Paragraph (OP) 7 of Decision (D.) 05-09-043, Southern California Gas Company (SoCalGas) hereby submits for filing its 2006-2008 Energy Efficiency Program Plans. These final program plans, along with all necessary supporting documentation, are incorporated herein as Attachments 1 through 6.

## Purpose

This filing complies with the California Public Utilities Commission's (Commission) directive to submit SoCalGas' final 2006-2008 energy efficiency program plans in accordance with D.05-09-043.

## BACKGROUND

In D.05-09-043, the Commission adopted SoCalGas' 2006-2008 energy efficiency program plans, effective January 1, 2006, on an interim basis, until the Commission approves SoCalGas' final program plans which are to be submitted through a compliance filing and after SoCalGas completes its competitive program bid solicitation process. SoCalGas has successfully completed its program solicitation and has developed its final 2006-2008 energy efficiency program plans. This advice letter serves as SoCalGas' compliance filing required by D.05-09-043.

The final program plans attached hereto comport with all applicable Commission directives regarding this 2006-2008 energy efficiency compliance filing. The filing includes the information requested in D.05-09-043, OP 7, including all details of the bid process, the scenario analyses, the statewide coordination plans, and updated bill impact calculations. Also attached is SoCalGas' Peer Review Group's assessment report of SoCalGas' third party solicitation efforts. Attachments are referenced as Attachment 1 through 6.

No cost information is required for this advice filing.

This advice filing will not increase any rate or charge, cause the withdrawal of service, or conflict with any other schedule or rule.

Administrative Law Judge Gottstein granted SoCalGas an extension to February 1, 2006 to submit this compliance advice letter.

**Protest**

Anyone may protest this Advice Letter to the Commission. The protest must state the grounds upon which it is based, including such items as financial and service impact, and should be submitted expeditiously. The protest must be made in writing and received within 20 days of the date of this Advice Letter. There is no restriction on who may file a protest. The address for mailing or delivering a protest to the Commission is:

CPUC Energy Division
Attention: Tariff Unit
505 Van Ness Avenue
San Francisco, CA 94102

Copies of the protest should also be sent via e-mail to the attention of both Jerry Royer (jjr@cpuc.ca.gov) and Honesto Gatchalian (jnj@cpuc.ca.gov) of the Energy Division. A copy of the protest shall also be sent via both e-mail and facsimile to the address shown below on the same date it is mailed or delivered to the Commission.

Attn: Sid Newsom
Tariff Manager - GT14D6
555 West Fifth Street
Los Angeles, CA 90013-1011
Facsimile No. (213) 244-4957
E-Mail: snewsom@semprautilities.com

**Effective Date**

SoCalGas believes that this filing is subject to Energy Division disposition and therefore respectfully requests that this advice letter become effective March 3, 2006, which is 30 calendar days after the date filed.

**Notice**

A copy of this advice letter is being sent to the parties listed on Attachment A, which includes the service list in A.05-06-011. Because of its large size, Attachments 1 through 6 are only being provided to the Commission Staff. All other parties may obtain these attachments on SoCalGas' website under pending advice letters at www.socalgas.com/regulatory/tariffs or by contacting (213) 244-3387.

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Attachments

# CALIFORNIA PUBLIC UTILITIES COMMISSION

ADVICE LETTER FILING SUMMARY
ENERGY UTILITY

MUST BE COMPLETED BY UTILITY (Attach additional pages as needed)

Company name/CPUC Utility No. **SOUTHERN CALIFORNIA GAS COMPANY/ U 904 G**

Utility type:
☐ ELC ☒ GAS
☐ PLC ☐ HEAT ☐ WATER

Contact Person: Nena Maralit
Phone #: (213) 244-2822
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EXPLANATION OF UTILITY TYPE
ELC = Electric GAS = Gas
PLC = Pipeline HEAT = Heat WATER = Water

(Date Filed/ Received Stamp by CPUC)

Advice Letter (AL) #: 3588

Subject of AL: 2006-2008 Energy Efficiency Program Plans

Keywords (choose from CPUC listing): Energy Efficiency; Compliance

AL filing type: ☐ Monthly ☐ Quarterly ☐ Annual ☒ One-Time ☐ Other _____

If AL filed in compliance with a Commission order, indicate relevant Decision/Resolution #:
D.05-09-043

Does AL replace a withdrawn or rejected AL? If so, identify the prior AL _____

Summarize differences between the AL and the prior withdrawn or rejected AL[1]: _____

Resolution Required? ☐ Yes ☒ No

Requested effective date: 3/3/06 No. of tariff sheets: 0

Estimated system annual revenue effect: (%): _____

Estimated system average rate effect (%): _____

When rates are affected by AL, include attachment in AL showing average rate effects on customer classes (residential, small commercial, large C/I, agricultural, lighting).

Tariff schedules affected: _____

Service affected and changes proposed[1]: _____

Pending advice letters that revise the same tariff sheets: _____

**Protests and all other correspondence regarding this AL are due no later than 20 days after the date of this filing, unless otherwise authorized by the Commission, and shall be sent to:**

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**jjr@cpuc.ca.gov and jnj@cpuc.ca.gov**

**Southern California Gas Company**
**Attention: Sid Newsom**
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[1] Discuss in AL if more space is needed.

**ATTACHMENT A**

**Advice No. 3588**

**(See Attached Service Lists)**

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**ATTACHMENTS 1 THROUGH 6**

**Advice No. 3588**

**Because of the large size, Attachments 1 through 6 are only being provided to the Commission Staff. All other parties may obtain these attachments on SoCalGas' website under pending advice letters at www.socalgas.com/regulatory/tariffs or by contacting (213) 244-3387.**

# Attachment 1

# Southern California Gas Company

# Overview

**ATTACHMENT 1**
**SOUTHERN CALIFORNIA GAS COMPANY**
**2006 – 2008 REVISED ENERGY EFFICIENCY PROGRAM PORTFOLIO**

## I. Overview

Southern California Gas Company ("SoCalGas") submitted its proposed 2006—2008 Energy Efficiency program portfolio (A.05-06-011) in June 2005. Decision ("D.") 05-09-043 approved SoCalGas' portfolio plans and funding levels, approved the utility proposed programs and partnerships that comprise 80 percent of its program budget and the competitive bid selection criteria. Additionally, the Decision directed that (1) the utilities conduct their competitive bid selection using the approved selection criteria; and (2) certain updates be made to the avoided costs, DEER inputs, E3 calculator, approved codes and standards program savings. These updates, together with the third party programs selected through the competitive bid process, resulted in changes to the original SoCalGas portfolio of Energy Efficiency programs. SoCalGas' updated 2006-2008 portfolio presented in this Advice Letter continues to comply with the Energy Efficiency Policy Rules adopted D.05-04-051 as did its original June 2005 Application (A.05-06-016) approved in D.05-09-043.

This Advice Letter presents the revised SoCalGas 2006—2008 Energy Efficiency program portfolio including the proposed selected third party programs. This Advice Letter also addresses the various compliance items that the Commission required be completed for this compliance filing. SoCalGas' forecasted portfolio results are presented in Table I.1.

**Table I.1: Program Year 2006-2008 Budget & Net Savings**

| Program Name | Budget | Therms |
|---|---|---|
| SoCalGas Administered Programs | $135,137,306 | 58,078,840 |
| Third Party Programs | $33,784,327 | 7,234,138 |
| LIEE Programs | | 2,792,000 |
| Evaluation Measurement & Verification* | $13,441,029 | |
| **Totals** | $182,362,662 | 68,104,979 |
| **CPUC GOALS** | | 57,300,000 |

* EM&V budget approved in D.05-11-011.

SoCalGas' portfolio is designed to meet or exceed the Commission's goals established in D.04-09-060.

## II. 2006—2008 Program Modifications

SoCalGas continues to make enhancement to its program offerings based on input from the statewide Program Advisory Group ("PAG"), Peer Review Group ("PRG") and coordination with Pacific Gas & Electric ("PG&E"), Southern California Edison ("SCE"), and San Diego Gas & Electric Company ("SDG&E") and reevaluation of measures offered in the various programs. The program changes from the June 2005 application are summarized in Table II.1.

**Table II.1: Program Changes from June 2005 Filing**

| PROGRAM NAME | Program changes/guidelines that were not filed in June 2005 but have been added to the February 1, Compliance Filing | New measures added since the June 2005 Filing | Measures filed on June 2005 that will be deleted in the February 1, 2006 filing |
|---|---|---|---|
| RESIDENTIAL PROGRAMS | | | |
| Home Energy Efficiency Survey | None | None | None |
| Single Family Home Energy Efficiency Retrofit Program | Adjustments to the overall energy savings were made to match DEER study published after the June filing | Dishwasher Tier I and Dishwasher Tier II | Whole-house Fans and Energy Star Dishwashers |
| Multifamily Rebate Program | None | None | None |
| NONRESIDENTIAL PROGRAMS | | | |
| Statewide Nonresidential Express Efficiency Program | Greenhouse heat curtains were originally filed with a measure cap of $25,000 per account for the 06-08 filing, matching the PY2005 measure cap. SCG will maintain a measure cap on greenhouse heat curtains, but wishes to remain flexible with the cap to examine the programmatic impacts the cap will have on the overall program. SCG may increase or decrease the cap based on market needs. SCG will implement a $50,000 measure cap for PY2006, and adjust if necessary. | 1.) Steam Traps, 2.) Residential Clothes Washers used in a business (Not coin-op) Level 1(CEE Tier 2 and 3A), 3.)Residential Clothes Washers used in a business (Not coin-op) Level 2 (CEE Tier 3B) | None |
| Local Business Energy Efficiency Program (BEEP) | 1.) High Efficient Unit' and 'High Efficient Tier I per MBTUH' have been combined into one measure, 2.) Cabinet Steamer Tier I' and 'Cabinet Steamer Tier II' have been changes to 'Commercial Pressure-less Steamer' | Commercial Combination Oven | 1.)Steam Traps, 2.) High Efficient Tier I per MBTUH, 3.)Cabinet Steamer Tier II |

| PROGRAM NAME | Program changes/guidelines that were not filed in June 2005 but have been added to the February 1, Compliance Filing | New measures added since the June 2005 Filing | Measures filed on June 2005 that will be deleted in the February 1, 2006 filing |
|---|---|---|---|
| CROSSCUTTING PROGRAMS | | | |
| Statewide Crosscutting Codes and Standards | 1.Codes and Standards will transition from an information-only program to a resource acquisition oriented program 2. Energy savings and demand reductions are currently under development in accordance with D. 05-09-043 "The final protocols for estimating … savings shall be established during the EM&V phase. " Energy and demand savings projections will be updated in annual reports as soon as protocols are developed and key milestones are completed. | | |

SoCalGas' final 2006-2008 portfolio is designed to meet or exceed the Commission's energy savings targets adopted in D.04-09-060. The following tables provide the individual program budget and forecasted energy savings for years 2006, 2007, and 2008.

**Table II.2: Program Year 2006 Budget & Net Forecasted Energy Savings**

| Program Name | Budget | Therms |
|---|---|---|
| Home Efficiency Rebate Program | $4,500,000 | 1,584,371 |
| Home Energy Efficiency Survey | $600,000 | 0 |
| Multi-Family Rebate Program | $2,500,000 | 1,293,009 |
| Advanced Home Program | $2,250,000 | 73,441 |
| CA Department of Corrections Partnership | $210,000 | 58,400 |
| California Urban Water Conservation Council | $434,000 | 847,303 |
| Express Efficiency Rebate Program | $5,308,050 | 2,734,192 |
| IOU/Community College Partnership | $666,000 | 186,400 |
| IOU/UC/CSU Partnership | $1,020,000 | 285,600 |
| Local Business Energy Efficiency Program | $6,137,264 | 4,339,845 |
| Los Angeles County Partnership | $500,000 | 120,000 |
| RCx Partnership with SCE | $50,000 | 24,000 |
| Savings By Design SCG Muni Program | $1,000,000 | 1,005,550 |
| Savings By Design SCG SCE Program | $1,500,000 | 884,834 |
| Sustainable Communities Demo/City of Santa Monica | $300,000 | 0 |
| Bakersfield Kern Partnership | $250,000 | 24,000 |
| Codes & Standards Program | $300,000 | 1,500,000 |
| Education & Training Program | $1,800,000 | 325,000 |
| Emerging Tech Program | $1,000,000 | 0 |
| Energy Coalition - Direct Install | $152,000 | 20,000 |
| Energy Coalition - Peak | $458,000 | 0 |
| Energy Efficiency Delivery Channel Innovation Prog | $1,000,000 | 0 |
| On-Bill Financing for Energy Efficiency Equipment | $1,250,000 | 0 |
| South Bay Partnership | $120,000 | 0 |
| Statewide Marketing & Outreach | $2,013,043 | 0 |
| Ventura County Partnership | $140,000 | 0 |
| **Subtotal - IOU Administered Programs** | **$35,458,357** | **15,305,946** |
| 3P Alliance Partners Program | $1,040,000 | 0 |
| 3P Constant Volume Retrofit Program (CVRP) | $380,000 | 39,936 |
| 3P Gas Cooling Upgrade Program | $355,063 | 205,800 |
| 3P Laundry Coin-Op Program | $1,820,089 | 853,257 |
| 3P Portfolio of the Future | $1,040,000 | 0 |
| 3P VeSM Advantage Plus | $535,500 | 298,920 |
| 3P Chinese Language Efficiency Outreach Program | $151,727 | 0 |
| 3P Comprehensive Manufactured/Mobile Home Program | $1,525,001 | 226,643 |
| 3P Designed for Comfort | $306,806 | 8,195 |
| 3P Energy Efficiency Kiosk Pilot Program | $510,000 | 0 |
| 3P PACE Energy Efficient Ethnic Outreach Program | $950,000 | 0 |

| Program Name | Budget | Therms |
|---|---|---|
| 3P School Targeted LivingWise | $226,665 | 128,141 |
| 3P Upstream/Midstream Gas Heat | $1,798,449 | 113,847 |
| 3PZ Third Party Program Balance | -$1,774,711 | 0 |
| **Subtotal - 3P Administered Programs*** | **$8,864,589** | **1,874,740** |
| LIEE Programs | | 946,000 |
| Evaluation Measurement & Verification | $3,317,327 | |
| **Totals** | **$47,640,273** | **18,126,686** |
| **CPUC GOALS** | | **14,700,000** |

* These are the official names provided in the selected third party proposals.

**Table II.3: Program Year 2007 Budget & Net Forecasted Energy Savings**

| Program Name | Budget | Therms |
|---|---|---|
| Home Efficiency Rebate Program | $6,000,000 | 1,446,704 |
| Home Energy Efficiency Survey | $600,000 | 0 |
| Multi-Family Rebate Program | $3,000,000 | 1,801,256 |
| Advanced Home Program | $3,000,000 | 89,249 |
| CA Department of Corrections Partnership | $210,000 | 58,400 |
| California Urban Water Conservation Council | $433,000 | 847,303 |
| Express Efficiency Rebate Program | $7,678,996 | 3,934,342 |
| IOU/Community College Partnership | $667,000 | 186,400 |
| IOU/UC/CSU Partnership | $1,020,000 | 285,600 |
| Local Business Energy Efficiency Program | $9,324,108 | 6,234,811 |
| Los Angeles County Partnership | $500,000 | 168,000 |
| RCx Partnership with SCE | $50,000 | 24,000 |
| Savings By Design SCG Muni Program | $1,000,000 | 1,005,550 |
| Savings By Design SCG SCE Program | $2,500,000 | 1,759,714 |
| Sustainable Communities Demo/City of Santa Monica | $300,000 | 202,038 |
| Bakersfield Kern Partnership | $250,000 | 48,000 |
| Codes & Standards Program | $300,000 | 1,330,000 |
| Education & Training Program | $2,300,000 | 360,000 |
| Emerging Tech Program | $1,000,000 | 0 |
| Energy Coalition - Direct Install | $152,000 | 24,000 |
| Energy Coalition - Peak | $458,000 | 0 |
| Energy Efficiency Delivery Channel Innovation Prog | $1,000,000 | 0 |
| On-Bill Financing for Energy Efficiency Equipment | $1,250,000 | 0 |
| South Bay Partnership | $120,000 | 0 |
| Statewide Marketing & Outreach | $2,013,043 | 0 |
| Ventura County Partnership | $140,000 | 0 |
| **Subtotal - IOU Administered Programs** | **$45,266,147** | **19,805,369** |
| 3P Alliance Partners Program | $1,100,000 | 0 |
| 3P Constant Volume Retrofit Program (CVRP) | $605,000 | 79,872 |
| 3P Gas Cooling Upgrade Program | $292,675 | 246,960 |
| 3P Laundry Coin-Op Program | $2,887,431 | 1,288,800 |
| 3P Portfolio of the Future | $940,000 | 0 |

| Program Name | Budget | Therms |
|---|---|---|
| 3P VeSM Advantage Plus | $645,300 | 398,560 |
| 3P Chinese Language Efficiency Outreach Program | $151,727 | 0 |
| 3P Comprehensive Manufactured/Mobile Home Program | $1,525,001 | 226,643 |
| 3P Designed for Comfort | $377,537 | 11,773 |
| 3P Energy Efficiency Kiosk Pilot Program | $215,000 | 0 |
| 3P PACE Energy Efficient Ethnic Outreach Program | $971,660 | 0 |
| 3P School Targeted LivingWise | $315,360 | 178,284 |
| 3P Upstream/Midstream Gas Heat | $2,107,198 | 146,375 |
| 3PZ Third Party Program Balance | -$817,352 | 0 |
| **Subtotal - 3P Administered Programs*** | **$11,316,537** | **2,577,266** |
| LIEE Programs | | 923,000 |
| Evaluation Measurement & Verification | $4,358,318 | |
| **Totals** | **$60,941,002** | **23,305,635** |
| **CPUC GOALS** | | **19,300,000** |

* These are the official names provided in the selected third party proposals.

**Table II.4: Program Year 2008 Budget & Net Forecasted Energy Savings**

| Program Name | Budget | Therms |
|---|---|---|
| Home Efficiency Rebate Program | $9,000,000 | 1,658,239 |
| Home Energy Efficiency Survey | $700,000 | 0 |
| Multi-Family Rebate Program | $4,000,000 | 2,056,377 |
| Advanced Home Program | $3,500,000 | 57,799 |
| CA Department of Corrections Partnership | $211,000 | 58,400 |
| California Urban Water Conservation Council | $432,000 | 847,303 |
| Express Efficiency Rebate Program | $9,114,191 | 4,740,588 |
| IOU/Community College Partnership | $667,000 | 186,400 |
| IOU/UC/CSU Partnership | $1,020,000 | 285,600 |
| Local Business Energy Efficiency Program | $11,385,568 | 7,506,342 |
| Los Angeles County Partnership | $500,000 | 168,000 |
| RCx Partnership with SCE | $50,000 | 24,000 |
| Savings By Design SCG Muni Program | $1,000,000 | 1,005,550 |
| Savings By Design SCG SCE Program | $3,500,000 | 2,646,926 |
| Sustainable Communities Demo/City of Santa Monica | $300,000 | 0 |
| Bakersfield Kern Partnership | $250,000 | 72,000 |
| Codes & Standards Program | $300,000 | 1,170,000 |
| Education & Training Program | $2,350,000 | 460,000 |
| Emerging Tech Program | $1,000,000 | 0 |
| Energy Coalition - Direct Install | $152,000 | 24,000 |
| Energy Coalition - Peak | $458,000 | 0 |
| Energy Efficiency Delivery Channel Innovation Prog | $1,000,000 | 0 |
| On-Bill Financing for Energy Efficiency Equipment | $1,250,000 | 0 |
| South Bay Partnership | $120,000 | 0 |

| | | |
|---|---|---|
| Statewide Marketing & Outreach | $2,013,043 | 0 |
| Ventura County Partnership | $140,000 | 0 |
| **Subtotal - IOU Administered Programs** | **$54,412,802** | **22,967,526** |
| 3P Alliance Partners Program | $1,130,000 | 0 |
| 3P Constant Volume Retrofit Program (CVRP) | $305,000 | 39,936 |
| 3P Gas Cooling Upgrade Program | $296,844 | 308,700 |
| 3P Laundry Coin-Op Program | $2,999,536 | 1,297,600 |
| 3P Portfolio of the Future | $925,000 | 0 |
| 3P VeSM Advantage Plus | $754,200 | 498,200 |
| 3P Chinese Language Efficiency Outreach Program | $151,727 | 0 |
| 3P Comprehensive Manufactured/Mobile Home Program | $1,521,998 | 226,643 |
| 3P Designed for Comfort | $438,790 | 13,967 |
| 3P Energy Efficiency Kiosk Pilot Program | $175,000 | 0 |
| 3P PACE Energy Efficient Ethnic Outreach Program | $993,969 | 0 |
| 3P School Targeted LivingWise | $443,475 | 250,711 |
| 3P Upstream/Midstream Gas Heat | $2,113,542 | 146,375 |
| 3PZ Third Party Program Balance | $1,354,120 | 0 |
| **Subtotal - 3P Administered Programs*** | **$13,603,201** | **2,782,132** |
| LIEE Programs | | 923,000 |
| Evaluation Measurement & Verification | $5,765,384 | |
| **Totals** | **$73,781,387** | **26,672,658** |
| **CPUC GOALS** | | **23,300,000** |

* These are the official names provided in the selected third party proposals.

***Local Government Partnerships***

SoCalGas in its June 2005 application (A.05-06-011) stated that it had set aside $4 million in annual funding for its partnerships, some of which are with local governmental agencies but that details of the partnerships would be finalized once the third party programs had been selected to ensure any overlap of programs is avoided and that the partnerships compliment the portfolio. Below are summaries of the local government partnerships. Program details may be found in Attachment 5.

**The South Bay Partnership** is an alliance between the South Bay Cities Council of Governments ("SBCCOG"), SCE, and SoCalGas. The Partners propose to build on the current successful partnership program that established the South Bay Energy Savings Center ("SBESC") in 2004 to become a more comprehensive source of energy information and expanding its efforts to deliver significant energy savings through project facilitation. The SBESC will be instrumental to SoCalGas in identifying natural gas equipment retrofit opportunities in South Bay municipal buildings, distributing

comprehensive energy information on natural gas energy efficiency programs, as well as providing support for South Bay cities as they transition their communities to the new energy codes.

**The Ventura County Partnership** is an alliance between the Ventura County Regional Energy Alliance ("VCREA"), SCE and SoCalGas. A key feature of the Partnership for SoCalGas will be the deployment of local and statewide natural gas energy efficiency programs, with a vigorous and focused local effort. The VCREA will be instrumental to SoCalGas in identifying retrofit opportunities in Ventura County, and member city municipal buildings. The program will also assist in tracking potential IOU program funds for specific projects to enable cities to incorporate natural gas incentives into their budgets for these projects.

**The Bakersfield and Kern County Energy Watch Partnership** is an alliance between Kern County, the City of Bakersfield, Pacific Gas and Electric Company ("PG&E"), SCE and SoCalGas. The Bakersfield and Kern County Energy Watch Partnership will build on the success of the 2004-2005 program. SoCalGas has natural gas energy savings goals with the Kern County Energy Watch Partnership Program of 144,000 therms over the course of the three years. The therm savings will come from municipal building retro commissioning, as well as direct install measures in small business, residential customers. These measures may include pipe insulation, low flow showerheads, faucet aerators, and pre rinse spray nozzles during 2006. Kern County Energy Watch will also support SoCalGas by providing short and long-term energy savings for partner organizations and the communities they serve. Partners, especially Jurisdictions, will leverage their local infrastructure to "spread the word" about energy efficiency and deepen the reach of the SoCalGas portfolio of programs and services.

**The Community Energy Partnership** is an alliance between the Energy Coalition, SCE and SoCalGas. The Community Energy Partnership brings value to the SoCalGas programs through an effective "non-resource" and "resource" savings program design. Non-resource benefits come from raising awareness and educating the community regarding responsible and effective natural gas energy efficiency actions. The resource savings will account for 68,000 therms over the three years, and comes

through delivering product distributions and direct household and small business efficiency installations. The natural gas measures may include pipe insulation, low flow showerheads, faucet aerators, and pre rinse spray nozzles during 2006.

**County of Los Angeles IOU Energy Efficiency Partnership** is an alliance between the County of Los Angeles Internal Services Department, SCE and SoCalGas. The partnership will build on the lessons learned from the previous program cycle. The current partnership consists of several elements such as Retrofit, Retro-commissioning, Technology Transfer/Feasibility Study and Public Housing Metering. In the PY06-08 Partnership the therm savings goal for SoCalGas is to reduce natural gas usage by 456,000 therms in LA County facilities. This goal will be accomplished by focusing mainly on Retro-commissioning activities for natural gas applications in County of LA facilities. In addition the program will continue the Public Agency Collaboration study and will explore opportunities to expand the partnership to include retrofit and retro-commissioning activities in other County affiliated agencies. These agencies may include the Los Angeles County Office of Education ("LACOE"), the Los Angeles Unified School District ("LAUSD"), and the Metropolitan Transit Authority ("MTA"). The implementation of projects into these other agency facilities will be contingent on the availability of additional program funding during the PY06-08 program cycle.

**California Urban Water Conservation Council Partnership** is an alliance between SoCalGas, and California Urban Water Conservation Council. The Pre-rinse Spray Valve Installation Program is a direct-install program that replaces high natural gas energy and water use pre-rinse spray valves with more efficient models. The primary goal of the program strategy for SoCalGas is to procure natural gas energy savings through early replacement of spray valves at no cost to customers; thereby, accelerating the energy savings by reducing gas usage from hot water usage by an average of 317.58 therms per unit. This program will bring natural gas savings of 2,541,909 net therms through a direct-install incentive-based program at food service facilities: restaurants, cafeterias, institutional kitchens and food preparation companies. Because of the direct installation format, the Spray Valve Installation program significantly increases the

natural attrition rate of high flow spray valves. This methodology overcomes a great number of traditional barriers, results in over a 50% response rate and ensures installation with minimal free-ridership.

## III. Competitive Bid Process

### *A. Introduction*

SoCalGas successfully implemented an energy efficiency program competitive bid process to solicit program proposals and new, innovative approaches to enhance its existing energy efficiency portfolio. This was done in conjunction with the bid evaluation criteria adopted by the Commission to select winning bidders in D.05-09-043 Attachment 6.

Significant effort was made to reach out to entities in both the energy efficiency industry and in the regional community at large. SoCalGas believes the solicitations and proposal submittals it received are representative of the expertise, skill, and innovation available in the marketplace. Therefore, the contribution to SoCalGas' portfolio is an enhanced, cost-effective energy efficiency programs menu that achieves the objectives set forth by the Commission, such as pursuit of cost-effective energy efficiency opportunities over both the short- and long-term and focus on programs that serve as alternatives to more costly supply-side resource options ("resource programs").

SoCalGas' competitive bid selection process is fully compliant with D.05-09-043 directions (at pages 17-18) regarding this process.

(1) SoCalGas conducted its competitive bid selection process using the selection criteria adopted for SoCalGas in D.05-09-043 Attachment 6.

(2) SoCalGas worked closely with its PRG in evaluating both its selection criteria and selection. SoCalGas addressed all PRG concerns and reached a consensus on its final selection. This consensus is one of the criteria for allowing SoCalGas to submit its compliance filing as an advice letter instead of an application.

(3) SoCalGas' final 2006-2008 portfolio consisting of both its own programs and partnerships and these proposed selected third party programs is cost effective and will meet or exceed the Commission's established energy savings goals.

### *B. Competitive Bid Results*

As a starting point, SoCalGas allocated 20% of the 2006-2008 Energy Efficiency Program Funds and CPUC Savings Goals to be contracted with third parties (Table III.1). This resulted in three-year cumulative goals of a budget of $33,784,327, and energy savings of 11,460,000 therms for SoCalGas' competitive bid programs.

SoCalGas selected a total of 13 programs equaling $35 million in funding for the 2006-2008 program cycle. SoCalGas initially assigned approximately 85 percent, or $28.7 million to be allocated toward Resource programs. Fifteen percent or $7.7 million was allocated to Non-resource programs. Table III.1 shows the selected third party programs did not meet the original energy savings that SoCalGas assigned to this portion of its portfolio. However, as seen in Table I.1, SoCalGas' total 2006-2008 portfolio will meet or exceed the Commission's goals. It should also be noted that as of this filing the current SoCalGas third party program total budget exceeds its current budget allocation by $1.2 million. However, SoCalGas expects that there should be administrative cost savings from programs that have also been selected by SCE and would be operating in their joint service territories. Therefore, SoCalGas' final budget will be within the approved Commission total portfolio budget of $182,362,662. SoCalGas' PRG concurs with SoCalGas' assessment. No contracts will be executed until the Commission renders its approval of SoCalGas' Advice Letter filing.

**Table III.1: 3-year Cumulative Goals for Proposed Third Party Programs**

| | Budget | Therms |
|---|---|---|
| SoCalGas Allocation (A.05-06-016) | $33,784,327 | 11,460,000 |
| Total Proposed Selected: Resource | $24,576,460 | 7,234,138 |
| Total Proposed Selected: Non-Resource | $10,445,810 | NA |
| Difference | ($1,237,943) | 4,25,862 |

### *C. Peer Review Group Participation*

Representatives of SoCalGas' Peer Review Group (PRG) were designated to monitor the bid evaluation process, as described in D.05-01-055. The PRG participated in an independent assessment of the bid solicitation process and subsequent program

selections and prepared an independent assessment report. The PRG report is attached to this filing as Attachment 6.

The PRG was in general agreement with SoCalGas' competitive bid solicitation process. They reviewed and offered numerous recommendations regarding the Request for Proposal ("RFP") wording, bid scoring protocols, and portfolio review. SoCalGas incorporated PRG recommendations into its bid process and will continue to seek PRG input subsequent to this filing and periodically during program implementation and administration.

### *D. Targeted Solicitations*

In its Application A.05-06-011, SoCalGas identified 14 targeted Resource and Non-Resource areas it believed it would yield innovative and cost-effective programs through the competitive bid process. These were areas considered underserved through the existing utility portfolio. SoCalGas sought targeted Resource proposals for incentive, retrofit, recycling, HVAC programs, and in the more recent energy efficiency field of building commissioning and retro-commissioning. Non-resource solicitations focused in the areas of ethnic outreach, information kiosks at financial institutions, and other concepts that help SoCalGas to analyze market and technologies from different focal points.

### *E. Innovative Program Solicitations*

SoCalGas also demonstrated its willingness to explore new and innovative program designs through solicitation of innovative program proposals. SoCalGas patterned this portion of the competitive bid after SCE's IDEEA program to seek program designs that could include commercialization/demonstration projects for emerging technologies with the potential for cost effective energy savings. The objective was to pursue the feasibility of emerging technologies and different market approaches that may not hold short-term cost effective energy savings but over time have the potential for long-term savings.

### *F. Bid Process*

The competitive bid process involved multiple steps with several review loops by SoCalGas that allowed for process checks and to ensure the solicitation process moved forward and for best portfolio fit that meets SoCalGas' long term energy efficiency plan. The following summarizes the program solicitation implemented by SoCalGas.

### *G. Pre-Notification*

The SoCalGas bid process was initiated with a pre-notification process to various audiences utilizing several channels. Parties included in the pre-notification were those on the SoCalGas energy efficiency programs service list for R.01-08-028, external energy efficiency service providers, and Diverse Business Enterprises (DBE) suppliers, which include Minority, Women, and Service-Disabled Veteran Business Enterprise vendors. The channels utilized in the solicitations included SoCalGas web site, and Public Affairs staff. The notification directed interested participants to the SoCalGas web site to register to receive a Request for Proposal ("RFP"). The web site also provided a direct link on our home page to a general notification of the upcoming scheduled solicitation and a link to register to receive the RFP. In addition, press releases were made to local news outlets throughout SoCalGas' service territory.

### *H. Solicitation*

The beginning of the sealed bid process started with an official notification. The two-stage process included an abstract submission (Stage 1) and a full proposal submission (Stage 2). This process allowed SoCalGas as part of Stage 1 to solicit and receive as many program abstracts or concept papers from potential bidders without having to burden them with the preparation of a full proposal.

The solicitation list was derived from the original pre-notification and additions to that list as a result of the mass notification. An announcement and registration to be included in the sealed bid process was available at http://www.socalgas.com/eecontracting/. Prospective bidders were required to register and receive a confirmation e-mail from SoCalGas in order to receive access to the RFP. As an official sealed bid process, non-registered RFP respondents were required to register first or be rejected if the deadline for registration was missed.

## *I. Abstract Submission (Stage 1)*

The Request for Proposal (RFP) for Stage 1 was released on September 1, 2005. Bidders were permitted to register on SoCalGas' web site beginning August 5, 2005, through September 19, 2005, identifying their company, contact name, and contact e-mail address. As a result, 138 bidders were invited to submit Stage 1 bids to SoCalGas.

Abstract submittals were due initially on September 20, 2005. However, due to a technical glitch in the supply management software used to notify registered bidders of the availability of the RFP, the deadline for the Stage 1 submittals was extended by seven days to September 27, 2005, to ensure that all parties had adequate time to prepare their responses.

Stage 1 required bidders to complete a request for information (RFI), submit a program abstract, and provide the projected budget and net energy savings over the three years 2006 through 2008. The RFI requested information such as key personnel in the bidder organization, number of years in business, number of employees, geographic coverage, energy industry references, annual revenue, and quality control mechanisms. Bidders were also provided with SoCalGas' general terms and conditions and asked whether they accepted them or to identify any exceptions.

The abstract portion of the RFP required bidders to submit a concise (less than 200 words, single-spaced, single-side, 10-point font or larger), informative statement of how the bidder proposed to encourage specific types of customers to reduce their electric and natural gas usage. The abstract was to include the program's purpose, scope, target market, goals, and implementation plan. Bidders were to clearly identify their plan to recruit customers and how they intended to follow through to ensure energy savings are achieved and maintained. In essence, the abstract was to be a very brief Executive Summary on how the bidder would perform the scope of work.

### 1. Questions and Answers

During the Stage 1 solicitation process, bidders were asked to submit any questions about the RFP and/or the process by September 7, 2005. SoCalGas posted responses to bidders' questions on September 9, 2005. At that time, SoCalGas responded

to a total of 87 questions. The nature of the questions ranged from bid process timelines to clarification on specific bid program requirements.

### 2. E3 Calculator Workshop

In addition, bidders were given the opportunity to participate in an E3 Calculator workshop sponsored by SoCalGas. The purpose of the workshop was to familiarize bidders with limited or no experience with the E3 Calculator on how the tool works and the inputs required. The workshop was held via a web conference on September 15, 2005, and facilitated by a co-developer of E3 Calculator. There were 45 participants from the SoCalGas and SoCalGas competitive bid process.

Prior to review of the abstracts, a Pass/Fail assessment was made to determine the completeness of the proposals submitted. The abstracts of complete submittals were forwarded to SoCalGas review teams for evaluation. Each abstract was evaluated by at least three team members that included program management staff. The teams were comprised of:

- Energy Efficiency Segment Managers
- Energy Efficiency Program Managers
- Energy Efficiency Program Supervisors
- Energy Efficiency Policy Advisors
- Energy Efficiency Programs Customer Contact Supervisor
- Engineers (Market Segment and RD&D)
- Analysts
- Supply Management

Reviewers assessed how bidders' responses addressed the criteria related to program concept and innovation, which included program strategy, how the proposal complements the IOU portfolio, whether the proposals were based on sound logic/theory, and consistency with CPUC Objectives. A thorough engineering assessment of projected energy savings and reasonable cost per unit was deferred to Stage 2. Supply management evaluated the RFI and terms and conditions responses.

Each review team member assigned to review specific proposal(s) did so individually and entered their scores into an electronic scoring tool. Reviewers were not aware of actual total scores at the time of their evaluations (either their own or those of fellow team members), or the pass/fail threshold pre-established for Stage 1. After all of

the individual scores were collected, the teams were brought together for group team meetings. At that time, the teams discussed proposals failed by all team members, proposals failed by one or more but less than all team members, consensus reached on each non-passing proposal and final team scores validated and comments recorded.

### 3. Stage 1 Evaluation Criteria

The evaluation criteria for the entire bid process were established in SoCalGas' June 2, 2005, filing and approved by the Commission in D.05-09-043. The criteria were as follows:

**Table III.2: Resource Programs: Targeted and Innovative Residential, Non-Residential, Cross-Cutting**

| Criteria | Weights |
|---|---|
| Proposal Responsiveness | Pass/Fail |
| Projected Energy Savings | 40% |
| Program Concept | 35% |
| Program Innovation | 25% |

**Table III. 3: Non-Resource Programs: Targeted and Innovative Residential, Non-Residential, Cross-Cutting**

| Criteria | Weights |
|---|---|
| Proposal Responsiveness | Pass/Fail |
| Program Strategy | 60% |
| Program Innovation | 40% |

**Table III.4: Results of Stage 1**

| | | | Resource Program Proposals Submitted | | | Non-Resource Program Proposals Submitted | | |
|---|---|---|---|---|---|---|---|---|
| No. of Invitations Issued Stage 1 | No. of Proposals Indicated as Submitted | No. of Proposals Actually Submitted for Stage 1 | Targeted | Innovative | Total Resource Program Proposals | Targeted | Innovative | Total Non-Resource Program Proposals |
| 138 | 92 | **76** | 23 | 22 | **42** | 9 | 22 | **31** |

### 4. Peer Review Group Input

The PRG met with SoCalGas on October 14, 2005, to review Stage 1 results. SoCalGas presented the final scores and rankings from the Stage 1 bid review process. Prior to the meeting SoCalGas discovered that a number of bidders were initially tallied as having submitted proposals but, in fact, not all had actually provided bids. SoCalGas was able to explain to the PRG that the count was based on bidders that mistakenly indicated they were submitting proposals in all the possible categories available in the web-based application but, in fact, only intended to file a subset of those categories and did not attach any electronic files of the bid documents for the other categories in the web-based tool. This skewed the bid results and misrepresented the actual number of bids received. Once adjusted by removing the erroneous bids from the count, the actual number of proposals received is shown in Table 4 above.

SoCalGas had established a passing threshold for proposals of 40% of the overall weighted score. The PRG was in agreement with this threshold and 73 proposals passed for invitation to Stage 2.

**Table III.5: Results of Stage 1 Bid Selection**

| | Resource Program Proposals Passed Stage 1 | | | Non-Resource Program Proposals Passed Stage 1 | | |
|---|---|---|---|---|---|---|
| Total No. of Proposals Passed Stage 1 | Targeted | Innovative | Total Resource Program Proposals | Targeted | Innovative | Total Non-Resource Program Proposals |
| **73** | 20 | 22 | 42 | 9 | 22 | 31 |

### *J. Proposal Submission (Stage 2)*

Invitations to Stage 2 were released beginning October 17, 2005. Seventy-three (73) bidders were invited to submit program proposals via the web-based tool employed for Stage 1. No hard copies of the proposals were required. The web-based supply management application enabled SoCalGas to centrally archive and retrieve bidder notifications and submittals.

Proposals were due initially on October 31, 2005. Due to the aggressive schedule to meet a December 9, 2005, compliance filing, and with the agreement of the PRG, an extension was requested. It was determined that the broad scope of work to be conducted at Stage 2, on the part of both the bidders and SoCalGas, would require more time than the time initially allotted. The bidders were expected to provide SoCalGas with fully-developed program proposals, along with the necessary documentation to substantiate proposed energy savings (E3 Calculators, DEER-related materials, and/or workpapers). At the same time, SoCalGas would have to perform a thorough review of a substantial number of proposals, validate engineering metrics for the projected energy savings, cost effectiveness, and levelized costs. SoCalGas would also need sufficient time for portfolio integration. On October 27, 2005, SoCalGas requested an extension of its compliance filing from December 9, 2005, to January 20, 2006. Administrative Law Judge Meg Gottstein granted the extension, and bidders were given an additional two weeks, to November 14, 2005, to provide Stage 2 proposals. This also enabled SoCalGas an additional two weeks for its review and portfolio analysis.

Bidders were required to provide in their Stage 2 proposals their program implementation plan, addressing program strategy, portfolio fit, and track record. Bidders were also asked to demonstrate program innovation and how their proposals would minimize lost opportunities. In addition, Resource program proposals required completion of the E3 Calculator and DEER and/or other credible energy savings documentation. More refined budget information was requested to reflect the cost of administration, direct implementation, marketing, and outreach activities.

### 1. Questions and Answers

To further assist bidders with the bid process, SoCalGas allowed them to submit questions by October 21, 2005, with responses provided to the bidders on October 26, 2005. Since many of the bidders were submitting proposals in both SoCalGas and SDG&E service territories, the questions and responses were consolidated. Both utilities fielded a total of 86 bidder inquiries.

As in Stage 1, submittals were reviewed for completeness and were not advanced to proposal review if all bid components were not provided. Proposals were then distributed to SoCalGas staff review teams for evaluation. Projected energy savings and cost effectiveness documentation was sent to a team of engineers and analysts for review. Composition of the teams was the same as those in Stage 1.

The review process was similar to that conducted in Stage 1, with individual team member reviews, scores and comments entered into an electronic scoring tool, and individual and overall team scores masked. Team members were also unaware of the pre-established threshold for pass or fail, nor were they aware of the portfolio review protocols.

### 2. Stage 2 Evaluation Criteria

The evaluation criteria for Stage 2 were established as follows:

**Table III.6: Resource Programs Targeted Residential, Non-Residential, Cross-Cutting**

| Criteria | Weights |
|---|---|
| Proposal Responsiveness | pass/fail |
| Projected Energy Savings | 30% |

| Criteria | Weights |
|---|---|
| Cost Effectiveness (Levelized Costs, TRC/PAC Test) | 25% |
| Program Implementation and Feasibility | 25% |
| Program Innovation | 15% |
| Minimizing Lost Opportunities | 5% |

**Table III.7: Non-Resource Programs Targeted Residential, Non-Residential, Cross-Cutting**

| Criteria | Weights |
|---|---|
| Proposal Responsiveness | pass/fail |
| Cost Efficiencies | 30% |
| Program Implementation and Feasibility | 35% |
| Program Innovation | 25% |
| Minimizing Lost Opportunities | 10% |

**Table III.8: Resource Programs Innovative Solicitation**

| Criteria | Weights |
|---|---|
| Proposal Responsiveness | pass/fail |
| Projected Energy Savings | 20% |
| Cost Effectiveness (Levelized Costs, TRC/PAC Tests) | 20% |
| Program Implementation and Feasibility | 20% |
| Program Innovation | 35% |
| Minimizing Lost Opportunities | 5% |

**Table III.9: Non-Resource Programs Innovative Program Idea Solicitation**

| Criteria | Weights |
|---|---|
| Proposal Responsiveness | pass/fail |
| Cost Efficiencies | 25% |
| Program Implementation and Feasibility | 25% |
| Program Innovation | 45% |
| Minimizing Lost Opportunities | 5% |

**Table III.10: Emerging Technology Commercialization Resource Programs**

| Criteria | Weights |
|---|---|
| Proposal Responsiveness | pass/fail |
| Projected Energy Savings | 20% |
| Cost Effectiveness (Levelized Costs, TRC/PAC Tests) | 20% |
| Program Implementation and Feasibility | 20% |

| | |
|---|---|
| Program Innovation | 35% |
| Minimizing Lost Opportunities | 5% |

The following table reflects the number of proposals received for Stage 2.

**Table III.11: Stage 2 Responses**

| | | **Resource Program Proposals Submitted** | | | **Non-Resource Program Proposals Submitted** | | |
|---|---|---|---|---|---|---|---|
| **No. of Invitations Issued for Stage 2** | **No. of Proposals Received for Stage 2** | **Targeted** | **Innovative** | **Total Resource Program Proposals** | **Targeted** | **Innovative** | **Total Non-Resource Program Proposals** |
| 73 | 58 | 21 | 10 | **31** | 15 | 12 | **27** |

The initial review for proposal completeness resulted in 82 bids that passed the Proposal Responsiveness criteria. One bidder withdrew from Stage 2 prior to submitting a proposal.

### 3. Portfolio Review

Energy efficiency program managers from the mass markets and new construction residential and commercial/industrial conducted the portfolio reviews. Pre-established review protocols were used to ensure an unbiased assessment of the results of the proposal evaluations and to set in place what and how programs would be subsumed into the portfolio. The protocols evaluated and ranked proposals based on program design, projected energy savings, budgets, end use implementation and complementary utility portfolio elements. Proposals were also evaluated based on their score, SoCalGas' portfolio needs, CPUC goals, and cost-effectiveness.

Portfolio managers assessed proposals ranked high to low and applied this methodology to both targeted and innovative bid results. A formula and criteria were established to determine total or partial replacement for existing SoCalGas programs. The primary objective was to integrate complimentary competitive bid programs into the existing portfolio and avoid overlap. Budget protocols were established with a minimum

distribution of 85% for resource proposals. However, due to a lack of viable, qualified Resource program proposals, SoCalGas deviated from this 85% distribution.

### 4. Peer Review Group Input

The final Stage 2 bid results and portfolio selections were presented to the SoCalGas PRG on December 16, 2005. After review and discussion regarding the scoring protocols for energy savings and cost effectiveness, the PRG recommended that the protocols be modified. Recommended changes were intended to better reflect the scoring metrics impacted by TRC and PAC results and how cost effectiveness was determined. The scores were adjusted and resulted in the following 13 proposal selections.

**Table III.12: Final Selection Results**

| Resource Program Proposals Selected Stage 2 | | | Non-Resource Program Proposals Selected Stage 2 | | |
|---|---|---|---|---|---|
| Targeted | Innovative | Total Resource Proposals Selected | Targeted | Innovative | Total Non-Resource Proposals Selected |
| 6 | 2 | 8 | 4 | 1 | 5 |

Included in these selections are nine proposals that SoCalGas is intending to coordinate with SCE as these programs will operate in their joint service territories. The PRG encouraged collaboration with SCE and concurred with the inclusion of these proposals toward creating synergies between the utilities and to contribute toward the objective for statewide competitive bid programs.

## IV. Demonstration of SoCalGas' Compliance with D.05-09-043

SoCalGas' Advice Letter and its attachments are in compliance with all applicable Commission's directives regarding the design and implementation of the 2006-2008 energy efficiency programs. SoCalGas' addresses below the various Ordering Paragraphs ("OP") in D.05-06-043 required in this compliance filing.

### *A. Ordering Paragraph 7 (a): Inclusion of results of the competitive bid solicitation and the final program plans*

SoCalGas' final program selection through the competitive bid process and its final program plans are contained in Attachment 5 of this Advice Letter filing. These proposed third party and utility programs were discussed with its PRG.

### *B. Ordering Paragraph 7 (b): Re-calculation of portfolio cost-effectiveness and scenario analysis*

SoCalGas updated its calculation of its portfolio cost effectiveness based on its final programs and is shown in Attachment 4. SoCalGas also developed the scenario analysis together with SCE, SoCalGas and PG&E and their respective PRGs. SoCalGas' scenario analysis is shown in Attachment 3.

### *C. Ordering Paragraph 7 (c): Projections of energy savings and demand reductions to be achieved by the final portfolio including scenario analysis.*

SoCalGas provided the summaries of the program energy savings by year in Tables I.2, I.3 and I.4 with the detailed assumptions in Attachment 5. The scenario analysis is in Attachment 3.

### *D. Ordering Paragraph 7 (d): Additional program detail to reflect the statewide coordination plans.*

SoCalGas, together with the other utilities, conducted two statewide PAG meetings[1] to discuss statewide coordination and consistency among the utilities' implementation of the programs and rebate levels, in addition to various statewide subcommittee meetings, e.g., residential lighting, water heating, and statewide marketing. SoCalGas has implemented the various statewide rebate and incentive levels that were presented at the August PAG meetings. In addition, SoCalGas is committed to statewide PAG discussions to continue to enhance statewide coordination efforts.

### *E. Ordering Paragraph 7 (e): Overall bill estimates expected from the 2006-2008 program portfolio.*

SoCalGas' projected overall bill impacts by its gas and electric customer classes are included in Attachment 2.

[1] Statewide PAG meetings were conducted on August 2 & 3, 2005 and November 8 & 9, 2005.

### *F. Ordering Paragraph 7 (f): PRG Assessment*

SoCalGas' PRG assessment is included in this Advice Letter as Attachment 6.

### *G. Ordering Paragraph 8: Use of the adopted evaluation criteria presented in Attachment 6.*

SoCalGas implemented the decision's Attachment 6 adopted evaluation criteria in its recently completed competitive selection. SoCalGas was worked closely with its PRG in evaluating its selection.

### *H. Ordering Paragraphs 9and 10: Conduct workshop to address issues regarding avoided costs and cost effectiveness calculator details used to estimate peak demand reductions and submittal of workshop report by November 1, 2005.*

The utilities conducted a 2-day public workshop on October 3 and 4, 2005 with the E3 consultants leading the discussions regarding calculations of peak demand reduction assumptions, availability of load shapes to utilize the 8760 hours of avoided costs. Comments were solicited for the draft workshop report with the final workshop report submitted on November 1, 2005.

### *I. Ordering Paragraph 12: Incorporate updated DEER estimated useful lives ("EUL").*

SoCalGas incorporated changes to all applicable measures offered in the portfolio that are impacted by the updated DEER EULs. See Attachment 5 for program assumptions.

### *J. Ordering Paragraph 14: Incorporation of savings attributable to the pre-2006 codes and standards work as described OP 14 and complete sensitivity analysis to asses whether the 2006-2008 portfolio are expected to meet the savings goals.*

SoCalGas' portfolio includes the applicable savings attributable to the pre-2006 codes and standards efforts. This can be seen in Tables I.2, I.3 and I.4. The sensitivity analysis in Attachment 3 includes the scenarios "with and without" codes and standards savings. SoCalGas' portfolio is expected to meet its goals under the "without" scenario.

### *K. Governor's Green Building Executive Order*

SoCalGas' portfolio includes opportunities for State agencies and departments, and other entities impacted by the Governor's Green Building Executive Order. The

utilities are also working with the CEC on various initiatives, e.g. benchmarking, that will facilitate the achievement of the goals established in this Executive Order.

# Attachment 2

# Southern California Gas Company

# Bill Impact Analysis

## Attachment 2 - Table 1: SoCalGas Energy Efficiency Program Class Average Bill Impacts

| | | (1) Annual | | | | | | |
|---|---|---|---|---|---|---|---|---|
| (2) | **Total Avg Annual Bill Excl EE Program** | **Consumption** | **2006** | **2007** | **2008** | **2009** | **2010** | **2011** |
| | Residential | 540 | $713 | $694 | $693 | $678 | $666 | $668 |
| | Core C&I | 4,200 | $4,818 | $4,672 | $4,666 | $4,546 | $4,457 | $4,467 |
| | Noncore C&I | 1,250,000 | $1,182,379 | $1,138,991 | $1,137,144 | $1,101,541 | $1,075,150 | $1,077,978 |
| (3) | **Total Avg Bill Including EE Cost/Benefits** | | | | | | | |
| | Residential | 540 | $715 | $696 | $695 | $673 | $662 | $663 |
| | Core C&I | 4,200 | $4,891 | $4,735 | $4,711 | $4,432 | $4,347 | $4,356 |
| | Noncore C&I | 1,250,000 | $1,184,416 | $1,140,760 | $1,138,416 | $1,098,379 | $1,072,072 | $1,074,891 |
| | **Difference in Avg Bills with EE Program** | | | | | | | |
| | Residential | 540 | $3 | $2 | $2 | ($4) | ($4) | ($4) |
| | Core C&I | 4,200 | $73 | $64 | $46 | ($114) | ($111) | ($111) |
| | Noncore C&I | 1,250,000 | $2,037 | $1,769 | $1,272 | ($3,163) | ($3,078) | ($3,087) |

Assumptions;

(1) Annual Consumption (in therms) is the approximate class average consumption per customer for residential, core C&I, and noncore C&I customer classes.

(2) Total average bill excluding an energy efficiency program is calculated as the sum of transportation rates, PPP rates excluding energy efficiency expenses, and the commodity rate assumed in the average annual avoided cost calculation multiplied by the annual class average consumption per customer.

(3) Total average bill including the costs and benefits associated with an energy efficiency program is calculated as the annual bill excluding an energy efficiency program plus the annual net cost or net benefit associated with the energy efficiency program.

The net annual benefits are distributed to the customer classes according to the percentage allocation adopted in the 2006-2008 EE decision. This allocation represents the relative share of program expenses that are expected to be directly spent on each customer class over the three year program period. The allocation for SoCalGas is approximately 40% for residental, 52% for core C&I and 8% for noncore C&I gas customers.

**Attachment 2 - Table 1: SoCalGas Energy Efficiency Program Class Average Bill Impacts**

| 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|
| $670 | $672 | $691 | $711 | $727 | $744 | $768 | $794 | $819 |
| $4,483 | $4,503 | $4,648 | $4,805 | $4,926 | $5,061 | $5,249 | $5,450 | $5,643 |
| $1,082,906 | $1,088,829 | $1,131,828 | $1,178,634 | $1,214,768 | $1,254,934 | $1,310,794 | $1,370,502 | $1,427,980 |
| | | | | | | | | |
| $665 | $668 | $686 | $706 | $723 | $742 | $768 | $794 | $819 |
| $4,372 | $4,391 | $4,530 | $4,682 | $4,833 | $5,009 | $5,249 | $5,450 | $5,643 |
| $1,079,803 | $1,085,707 | $1,128,568 | $1,175,223 | $1,212,168 | $1,253,492 | $1,310,794 | $1,370,502 | $1,427,980 |
| | | | | | | | | |
| ($4) | ($4) | ($4) | ($5) | ($4) | ($2) | $0 | $0 | $0 |
| ($112) | ($112) | ($117) | ($123) | ($94) | ($52) | $0 | $0 | $0 |
| ($3,103) | ($3,122) | ($3,260) | ($3,411) | ($2,600) | ($1,442) | $0 | $0 | $0 |

Assumptions:

Annual Consumption (in therms) is the approximate class average consumption per customer for residential, core C&I, and noncore C&I customer classes.

Total average bill excluding an energy efficiency program is calculated as the sum of transportation rates, PPP rates excluding energy efficiency expenses, and the commodity rate assumed in the average annual avoided cost calculation multiplied by the annual class average consumption per customer.

Total average bill including the costs and benefits associated with an energy efficiency program is calculated as the annual bill excluding an energy efficiency program plus the annual net cost or net benefit associated with the energy efficiency program.

The net annual benefits are distributed to the customer classes according to the percentage allocation adopted in the 2006-2008 EE decision. This allocation represents the relative share of program expenses that are expected to be directly spent on each customer class over the three year program period. The allocation for SoCalGas is approximately 40% for residental, 52% for core C&I and 8% for noncore C&I gas customers.

Attachment 2 - Table 2: SoCalGas 2006-2008 Energy Efficiency Program Plans Bill Impacts - Detail

| | | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|---|---|---|---|---|---|---|---|---|---|---|
| E-3 AVERAGE ANNUAL AVOIDED COSTS | | | | | | | | | | |
| | $/therm | $0.85 | $0.82 | $0.81 | $0.79 | $0.76 | $0.77 | $0.77 | $0.78 | $0.81 |
| PROGRAM COSTS **(PC)** | | $ 47,640,273 | $ 60,941,002 | $ 73,781,387 | | | | | | |
| Annual Net Energy Savings (therms) [SCG A.05-06-011 Tables1, 2, 3] | | | | | | | | | | |
| | 2006 | 17,180,686 | 17,180,686 | 17,180,686 | 17,180,686 | 17,180,686 | 17,180,686 | 17,180,686 | 17,180,686 | 17,180,686 |
| | 2007 | | 22,382,635 | 22,382,635 | 22,382,635 | 22,382,635 | 22,382,635 | 22,382,635 | 22,382,635 | 22,382,635 |
| | 2008 | | | 25,749,658 | 25,749,658 | 25,749,658 | 25,749,658 | 25,749,658 | 25,749,658 | 25,749,658 |
| | Total | 17,180,686 | 39,563,321 | 65,312,979 | 65,312,979 | 65,312,979 | 65,312,979 | 65,312,979 | 65,312,979 | 65,312,979 |
| Average Useful Life of Measures in Portfolio (yrs): | | 10 | | | | | | | | |
| AVOIDED COSTS **(AC)** | | $14,604,356 | $32,257,361 | $53,155,418 | $51,295,170 | $49,916,219 | $50,063,971 | $50,321,455 | $50,630,953 | $52,877,660 |
| Net Benefits | | $ 33,035,917 | $ 28,683,641 | $ 20,625,969 | $ (51,295,170) | $ (49,916,219) | $ (50,063,971) | $ (50,321,455) | $ (50,630,953) | $ (52,877,660) |
| Number of Customers **(NC)** | | 5,458,799 | 5,535,851 | 5,613,842 | 5,691,251 | 5,768,243 | 5,845,832 | 5,924,435 | 6,003,686 | 6,083,628 |

Attachment 2 - Table 2: SoCalGas 2006-2008 Energy Efficiency Program Plans Bill Impacts - Detail

| | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|
| E-3 AVERAGE ANNUAL AVOIDED COSTS | $0.85 | $0.88 | $0.91 | $0.95 | $1.00 | $1.05 |
| PROGRAM COSTS **(PC)** | | | | | | |
| Annual Net Energy Savings (therms) [SCG A.05-06-011 Tables1, 2, | | | | | | |
| | 17,180,686 | 0 | 0 | 0 | 0 | 0 |
| | 22,382,635 | 22,382,635 | 0 | 0 | 0 | 0 |
| | 25,749,658 | 25,749,658 | 25,749,658 | 0 | 0 | 0 |
| | 65,312,979 | 48,132,293 | 25,749,658 | 0 | 0 | 0 |
| Average Useful Life of Measures in Portfolio (yrs): | | | | | | |
| AVOIDED COSTS **(AC)** | $55,323,316 | $42,161,777 | $23,382,981 | $0 | $0 | $0 |
| Net Benefits | $ (55,323,316) | $ (42,161,777) | $ (23,382,981) | $ - | $ - | $ - |
| Number of Customers **(NC)** | 6,163,840 | 6,243,359 | 6,323,196 | 6,403,399 | 6,483,798 | 6,564,699 |

# Attachment 3

# Southern California Gas Company

# Sensitivity Analysis

## Attachment 3 - Sesitivity Study Tables

**Attachment 3 - Table 1: List of Scenarios**

| Scenarios | | |
|---|---|---|
| ***Scenario #*** | ***Scenario Name*** | ***Description*** |
| **Scenario 1:** | **Base Case** | **As Filed in Compliance Filing** |
| **Scenario 2:** | 75% of Current NTG Ratios | Impact on Cost Effectiveness, Energy Savings, and Demand Reductions due to a reduction in the NTG Ratios to 75' of forecasted. |
| **Scenario 3:** | 50% of Current NTG Case | Impact on Cost Effectiveness, Energy Savings, and Demand Reductions due to a reduction in the NTG Ratios to 75' of forecasted. |
| **Scenario 4:** | Breakeven NTG Case | % Reduction in NTG Ratios at which Both TRC and PAC are both 1.0 or greater, and Therm goals are Achieved. |
| **Scenario 5:** | Partnerships & Third Party Programs 75% Impacts | Impact on Cost Effectiveness and Energy Savings due to a reduction in the Impact Forecasts of Partnerships & Third Party Programs to 75% of forecasted. Assumes underused funds not shifted to other programs. |
| **Scenario 6:** | Partnerships & Third Party Programs 50% Impacts | Impact on Cost Effectiveness and Energy Savings due to a reduction in the Impact Forecasts of Partnerships & Third Party Programs to 50% of forecasted. Assumes underused funds not shifted to other programs. |
| **Scenario 7:** | Breakeven Partnerships & Third Party Programs Impacts | % Reduction in Impact Forecasts of Partnerships & Third Party Programs at which Costs = Benefits, Therm Achieve = Therm Goal. Assumes underused funds not shifted to other programs. |
| **Scenario 8:** | Codes and Standards Case | Impact on Energy Savings and Demand Reduction Including 50% of 2006-2008 C&S Pgms ex ante impacts. Not Applicable to Cost Effectiveness Scenarios per D.05-09-043. |

**Attachment 3 - Table 2: Cost Effectiveness Scenarios**

| Scenario Results - Cost-Effectiveness | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ***Portfolio Resource Benefits (RBn)*** | ***Portfolio TRC Costs*** | ***Portfolio TRC Net Benefits*** | ***TRC*** | ***Portfolio PAC Costs*** | ***Portfolio PAC Net Benefits*** | ***PAC*** | ***Change in Current NTG Ratios*** | ***Change in Impact Forecasts*** |
| ***Scenario #*** | ***Scenario Name*** | **($ millions)** | **($ millions)** | **($ millions)** | **Ratio** | **($ millions)** | **($ millions)** | **Ratio** | **(%)** | **(%)** |
| | | ***(a)*** | ***(b)*** | ***(c) = (a) - (b)*** | ***(d) = (a) / (b)*** | ***(e)*** | ***(f) = (a) - (e)*** | ***(g) = (a) / (e)*** | | |
| **Scenario 1:** | **Base Case** | **$385** | **$276** | **$109** | **1.39** | $173 | **$213** | **2.23** | **Not Applicable** | **Not Applicable** |
| **Scenario 2:** | 75% of Current NTG Ratios | $289 | $235 | $54 | 1.23 | $173 | $116 | 1.67 | 75% | Not Applicable |
| **Scenario 3:** | 50% of Current NTG Case | $193 | $194 | ($1) | 0.99 | $173 | $20 | 1.12 | 50% | Not Applicable |
| **Scenario 4:** | Breakeven NTG Case | $193 | $194 | ($1) | 1.00 | $173 | **$21** | **1.12** | 50% | Not Applicable |
| **Scenario 5:** | Partnerships & Third Party Programs 75% Impacts | $363 | $276 | $86 | 1.31 | $173 | $190 | 2.10 | Not Applicable | 75% |
| **Scenario 6:** | Partnerships & Third Party Programs 50% Impacts | $340 | $276 | $63 | 1.23 | $173 | $167 | 1.97 | Not Applicable | 50% |
| **Scenario 7:** | Breakeven Partnerships & Third Party Programs Impacts | $363 | $276 | **$86** | **1.31** | $173 | **$190** | **2.10** | Not Applicable | **0%** |
| **Scenario 8:** | Codes and Standards Case | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |

**Attachment 3 - Table 3: Program Impact Scenarios**

| Scenario Results - Program Impacts | | | | | | |
|---|---|---|---|---|---|---|
| | | ***Portfolio Gas Savings Through 2008*** | ***Portfolio Gas Savings Cumulative Goal*** | ***% of Portfolio Energy Savings Goal*** | ***Change in Current NTG Ratios*** | ***Change in Impact Forecasts*** |
| ***Scenario #*** | ***Scenario Name*** | **(MTherm)** | **(MTherm)** | **(%)** | **(%)** | **(%)** |
| | | ***(a)*** | ***(b)*** | ***(c) = (a)/(b)*** | | |
| **Scenario 1:** | **Base Case [1]** | **61,198** | **57,300** | **107%** | **Not Applicable** | **Not Applicable** |
| **Scenario 2:** | 75% of Current NTG Ratios | 45,898 | 57,300 | 80% | 75% | Not Applicable |
| **Scenario 3:** | 50% of Current NTG Case | 30,599 | 57,300 | 53% | 50% | Not Applicable |
| **Scenario 4:** | Breakeven NTG Case | **30,721** | **57,300** | **54%** | 99% | Not Applicable |
| **Scenario 5:** | Partnerships & Third Party Programs 75% Impacts | 57,395 | 57,300 | 100% | Not Applicable | 75% |
| **Scenario 6:** | Partnerships & Third Party Programs 50% Impacts | 53,592 | 57,300 | 94% | Not Applicable | 50% |
| **Scenario 7:** | Breakeven Partnerships & Third Party Programs Impacts | **57,395** | **57,300** | **100%** | Not Applicable | **75%** |
| **Scenario 8:** | Codes and Standards Case | 65,198 | 57,300 | 114% | Not Applicable | Not Applicable |

[1] Does not include the impacts of Codes and Standards programs or Pre-2006 programs.

# Attachment 4

# Southern California Gas Company

# Energy Division Workbook
# Attachments I & II

# Attachment I. Summary Table for Executive Summary

## Projected Program Impacts By Year

| | 2006 | | 2007 | | 2008 | |
|---|---|---|---|---|---|---|
| | Total | % of 2006 Goal | Total | % of 2007 Goal | Total | % of 2008 Goal |
| **Energy Savings – Electricity** | | | | | | |
| Annual Net Electricity Savings (GWh/yr) | 6 | #DIV/0! | 9 | #DIV/0! | 8 | #DIV/0! |
| *CPUC Electricity Target (GWh/yr)* | 0 | 0% | 0 | 0% | 0 | 0% |
| Annual Net Peak Demand Savings (MW) | 4 | #DIV/0! | 4 | #DIV/0! | 4 | #DIV/0! |
| *CPUC Peak Demand Target (MW)* | 0 | 0% | 0 | 0% | 0 | 0% |
| Annual Net Therm Savings (MTh/yr) | 18,127 | 123% | 23,306 | 121% | 26,673 | 114% |
| *CPUC Therm Target (MTh/yr)* | 14,700 | 0% | 19,300 | 0% | 23,300 | 0% |

## Portfolio Cost Effectiveness

| **Costs and Benefits*** | |
|---|---|
| Total costs to billpayers (TRC) | $ 276,497,157 |
| Total savings to billpayers (TRC) | $ 385,412,289 |
| Net benefits to billpayers (TRC) | $ 108,915,131 |
| TRC Ratio | 1.39 |
| PAC Ratio | 2.22 |
| Cost per kWh saved (cents / kWh) (PAC) | 0.01736 |
| Cost per therm saved ($ / therm) (PAC) | 0.26040 |

* Note: Does not include costs or benefits associated with the low-income energy efficiency programs.

| **Environmental Benefits** | | | | | | |
|---|---|---|---|---|---|---|
| Lifecycle CO2 Emission Reductions (tons) | 1,429,125 | | 1,921,763 | | 2,195,999 | |
| Lifecycle NOx Emission Reductions (tons) | 1,744 | | 2,322 | | 2,679 | |
| Lifecycle SO2 Emission Reductions (tons) | n/a | | n/a | | n/a | |

*Note: Energy savings include savings from the low-income energy efficiency programs, whereas the costs and benefits are only for the standard energy efficiency programs.

## Attachment II

**Table 1: Projected Program Impacts By Year**

| | 2006 | | 2007 | | 2008 | |
|---|---|---|---|---|---|---|
| | Total | % of 2006 Goal | Total | % of 2007 Goal | Total | % of 2008 Goal |
| **Energy Savings – Electricity** | | | | | | |
| Annual Net Electricity Savings (GWh/yr) | 6 | #DIV/0! | 9 | #DIV/0! | 8 | #DIV/0! |
| LIEE (GWh/yr) | 0 | | 0 | | 0 | |
| EE (GWh/yr) | 6 | | 9 | | 8 | |
| *Annual Net Electricity Goal (GWh/yr)* | 0 | | 0 | | 0 | |
| | | | | | | |
| Lifecycle Net Electricity Savings (GWh) | 101 | | 139 | | 122 | |
| LIEE (GWh) | 0 | | 0 | | 0 | |
| EE (GWh) | 101 | | 139 | | 122 | |
| | | | | | | |
| Cumulative Net Electricity Savings (GWh/yr) | 6 | #DIV/0! | 16 | #DIV/0! | 23 | #DIV/0! |
| LIEE (GWh/yr) | 0 | | 0 | | 0 | |
| EE (GWh/yr) | 6 | | 16 | | 23 | |
| *Cumulative Net Electricity Goal (GWh/yr)* | 0 | | 0 | | 0 | |
| | | | | | | |
| Annual Net Peak Demand Savings (MW) | 4 | #DIV/0! | 4 | #DIV/0! | 4 | #DIV/0! |
| LIEE (MW) | 0 | | 0 | | 0 | |
| EE (MW) | 4 | | 4 | | 4 | |
| *Annual Net Peak Demand Goal (MW)* | 0 | | 0 | | 0 | |
| | | | | | | |
| Cumulative Net Peak Savings (MW) | 4 | #DIV/0! | 8 | #DIV/0! | 12 | #DIV/0! |
| LIEE (MW) | 0 | | 0 | | 0 | |
| EE (MW) | 4 | | 8 | | 12 | |
| *Cumulative Net Peak Goal (MW)* | 0 | | 0 | | 0 | |
| **Energy Savings – Natural Gas** | | | | | | |
| Annual Net Therm Savings (MTh/yr) | 18,127 | 123% | 23,306 | 121% | 26,673 | 114% |
| LIEE (MTh/yr) | 946 | | 923 | | 923 | |
| EE (MTh/yr) | 17,180.69 | | 22,382.64 | | 25,749.66 | |
| *Annual Net Therm Goal (MTh/yr)* | 14,700 | | 19,300 | | 23,300 | |
| | | | | | | |
| Lifecycle Net Therm Savings (MTh) | 246,378 | | 327,971 | | 377,081 | |
| LIEE (MTh) | 9,777 | | 9,548 | | 9,548 | |
| EE (MTh) | 236,601 | | 318,423 | | 367,533 | |
| | | | | | | |
| Cumulative Net Therm Savings (MTh/yr) | 18,127 | 123% | 41,433 | 122% | 68,106 | 119% |
| LIEE (MTh/yr) | 946 | | 1,869 | | 2,793 | |
| EE (MTh/yr) | 17,181 | | 39,563 | | 65,313 | |
| *Cumulative Net Therm Goal (MTh/yr)* | 14,700 | | 34,000 | | 57,300 | |
| **Environmental Benefits** | | | | | | |
| Annual CO2 Emission Reductions (tons) | 103,248 | | 134,778 | | 153,279 | |
| Lifecycle CO2 Emission Reductions (tons) | 1,429,125 | | 1,921,763 | | 2,195,999 | |
| Annual NOx Emission Reductions (tons) | 127 | | 164 | | 188 | |
| Lifecycle NOx Emission Reductions (tons) | 1,744 | | 2,322 | | 2,679 | |
| Annual SO2 Emission Reductions (tons) | n/a | | n/a | | n/a | |
| Lifecycle SO2 Emission Reductions (tons) | n/a | | n/a | | n/a | |

# Attachment II

**Table 2: Projected Funding By Year**

| | 2006 | | 2007 | | 2008 | | Total |
|---|---|---|---|---|---|---|---|
| | Total | % of Total | Total | % of Total | Total | % of Total | |
| **Total EE Program budget*** | **$47,640,273** | **26%** | **$60,941,002** | **33.42%** | **$73,781,387** | **40%** | **$182,362,662** |
| PGC Budget | $47,640,273 | | $60,941,002 | | $73,781,387 | | $182,362,662 |
| Procurement Budget | $0 | | $0 | | $0 | | $0 |

**Table 3: Portfolio Cost Effectiveness**

| **Costs and Benefits*** | |
|---|---|
| Total costs to billpayers (TRC) | $ 276,497,157 |
| Total savings to billpayers (TRC) | $ 385,412,289 |
| Net benefits to billpayers (TRC) | $ 108,915,131 |
| TRC Ratio | 1.39 |
| PAC Ratio | 2.22 |
| Cost per kWh saved (cents / kWh) (PAC) | $0.0174 |
| Cost per therm saved ($ / therm) (PAC) | $0.2604 |

* Note: Does not include costs or benefits associated with the low-income energy efficiency programs.

# Attachment II

**Table 4: Projected Funding and Energy Savings by Sector**

| | Funding | % of Total | Savings (Net kWh) | % of Total | Savings (Net Therms) | % of Total |
|---|---|---|---|---|---|---|
| Residential | $ 47,870,632 | 26% | 5,663,018 | 24% | 11,517,553 | 18% |
| Residential New Construction | $ 8,750,000 | 5% | 5,634,516 | 24% | 220,489 | 0% |
| Non-Residential | $ 75,639,815 | 41% | 12,058,400 | 52% | 39,707,772 | 61% |
| Non-Residential New Construction | $ 11,400,000 | 6% | 7,313 | 0% | 8,510,164 | 13% |
| Other | $ 38,702,215 | 21% | 0 | 0% | 5,357,000 | 8% |
| **Total Funding** | **$ 182,362,662** | | **23,363,247** | | **65,312,979** | |

**Table 5: Projected Funding and Energy Savings by Implementer**

| | Funding | % of Total | Savings (Net kWh) | % of Total | Savings (Net Therms) | % of Total |
|---|---|---|---|---|---|---|
| Utility | $ 126,639,206 | 69% | 8,997,995 | 39% | 49,987,041 | 77% |
| Partnership | $ 15,900,000 | 9% | 7,313 | 0% | 8,091,800 | 12% |
| Third Party | $ 39,823,456 | 22% | 14,357,939 | 61% | 7,234,138 | 11% |
| **Total Funding** | **$ 182,362,662** | | **23,363,247** | | **65,312,979** | |

**Table 6: Projected Funding and Savings by Geographical Scope**

| | Funding | % of Total | Savings (Net kWh) | % of Total | Savings (Net Therms) | % of Total |
|---|---|---|---|---|---|---|
| Statewide | $ 114,056,451 | 63% | 18,156,767 | 78% | 37,739,509 | 58% |
| Local | $ 68,306,211 | 37% | 5206479.938 | 22% | 27,573,470 | 42% |
| **Total Funding** | **$ 182,362,662** | | **23,363,247** | | **65,312,979** | |

# Attachment II

## Table 7: Projected Savings by End-use

| | MW | % of Total | GWh | % of Total | MTh | % of Total |
|---|---|---|---|---|---|---|
| **Total** | 11.54 | | 23.36 | | 65,312.98 | |
| Space Cooling/Heating | 9.77 | 85% | 10.91 | 47% | 23,285.25 | 36% |
| Lighting | 0 | 0% | 0 | 0% | 0 | 0% |
| Refrigeration | 0 | 0% | 0 | 0% | 0 | 0% |
| Water Heating | 0.23 | 2% | 7.33 | 31% | 22,565.78 | 35% |
| Other | 1.54 | 13% | 5.12 | 22% | 19,461.94 | 30% |
| **Residential** | 4.63308508 | 40% | 5.663018413 | 24% | 11517.55294 | 18% |
| Space Cooling/Heating | 3.58438108 | 31% | 5.263851453 | 23% | 2908.03309 | 4% |
| Lighting | | 0% | | 0% | | 0% |
| Refrigeration | | 0% | | 0% | | 0% |
| Water Heating | 0.23252 | 2% | 0.07633624 | 0% | 8023.672374 | 12% |
| Other | 0.816184 | 7% | 0.32283072 | 1% | 585.84748 | 1% |
| **Nonresidential** | 0.72 | 6% | 12.0584 | 52% | 45064.77248 | 69% |
| Space Cooling/Heating | | 0% | | 0% | 11663.4069 | 18% |
| Lighting | | 0% | | 0% | | 0% |
| Refrigeration | | 0% | | 0% | | 0% |
| Water Heating | | 0% | 7.2584 | 31% | 14525.26842 | 22% |
| Other | 0.72 | 6% | 4.8 | 21% | 18876.09716 | 29% |
| **Residential New Construction** | 6.17669237 | 54% | 5.63451604 | 24% | 220.48932 | 0% |
| Space Cooling/Heating | 6.17669237 | 54% | 5.63451604 | 24% | 203.64532 | 0% |
| Lighting | | 0% | | 0% | | 0% |
| Refrigeration | | 0% | | 0% | | 0% |
| Water Heating | | 0% | | 0% | 16.844 | 0% |
| Other | | 0% | | 0% | | 0% |
| **Nonresdential New Construction** | 0.010117956 | 0% | 0.007312978 | 0% | 8510.163906 | 13% |
| Space Cooling/Heating | 0.010117956 | 0% | 0.007312978 | 0% | 8510.163906 | 13% |
| Lighting | | 0% | | 0% | | 0% |
| Refrigeration | | 0% | | 0% | | 0% |
| Water Heating | | 0% | | 0% | | 0% |
| Other | | 0% | | 0% | | 0% |

# Attachment II

**Table 8: Other End-use Projected Savings Breakdown**

| | MW | GWh | MTh |
|---|---|---|---|
| Cooking | - | - | 1,679.32 |
| Process Optimization | | | 1,195.68 |
| Equip Modernization/Replacement | - | - | 7,850.23 |
| Third Party Program | 1.54 | 5.12 | 745.59 |
| Partnership | - | - | 2,331.20 |
| Other | - | - | 5,659.92 |
| **Total** | 1.54 | 5.12 | 19,461.94 |

# Attachment 5

# Southern California Gas Company

# Program Concept Papers

# Southern California Gas Company

# 2006-2008 Energy Efficiency Programs

# Program Concept Papers

**February 1, 2006**

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# RESIDENTIAL PROGRAMS

# 2006-2008 Energy Efficiency Programs Concept Paper
# Single Family Home Energy Efficiency Retrofit Program

## 1. Projected Program Budget

| | 2006 | 2007 | 2008 |
|---|---|---|---|
| Administration | | | |
| Administrative Overheads | $ 214,286 | $ 285,713 | $ 428,574 |
| Administrative Other | $ 313,740 | $ 326,920 | $ 391,003 |
| Marketing & Outreach | $ 348,004 | $ 495,351 | $ 1,498,084 |
| Direct Implementation | | | |
| Incentives | $ 2,610,000 | $ 3,702,500 | $ 5,125,000 |
| Activity | $ 903,970 | $ 1,024,516 | $ 1,287,339 |
| Installation | $ - | $ - | $ - |
| Hardware & Materials | $ 10,000 | $ 15,000 | $ 20,000 |
| Rebate Processing & Inspection | $ 100,000 | $ 150,000 | $ 250,000 |
| EM&V | $ - | $ - | $ - |
| *Total* | *$ 4,500,000* | *$ 6,000,000* | *$ 9,000,000* |

## 2. Projected Program Impacts

| 2006 | | | 2007 | | | 2008 | | |
|---|---|---|---|---|---|---|---|---|
| Net kWh | Net kW | Net Therms | Net kWh | Net kW | Net Therms | Net kWh | Net kW | Net Therms |
| 944,364 | 487 | 1,584,371 | 1,060,456 | 558 | 1,446,704 | 1,317,198 | 685 | 1,658,239 |

## 3. Program Cost Effectiveness

Attached

## 4. Program Descriptors

The Single Family Energy Efficiency Retrofit (SF) program is an existing statewide program designed to assist Southern California Gas Company (SoCalGas) residential customers reduce their natural gas energy usage with rebates for replacing less efficient gas-fired equipment with new energy-efficient equipment and weatherization. The program contains elements such as customer incentives, customer information and education and marketing and outreach, using trade allies, manufacturers, retailers and distributors to deliver information, measures and rebates. Each component is essential to enhancing the understanding of, and demand for, energy efficient products in the residential retrofit and renovation market. The program is designed for flexibility. It offers agreed upon statewide measures with coordinated implementation, and is designed to be able to segregate, and add new measures for tailoring to a specific market opportunity that emerges in the SoCalGas local service area.

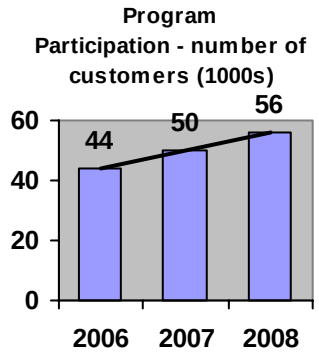
## 5. Program Statement

The SF program will implement an integrated approach of combining customer incentives, customer information and education to reach a greater number of single family homeowners who have not installed energy efficient measures. The SoCalGas program will emphasize point-of-sale rebates, online applications and targeted promotional campaigns and to become more effective in reaching a greater

share of the market, specifically customers who have not upgraded to more energy efficient equipment promoted through this program, and other energy efficiency programs.

## 6. Program Rationale

The rationale for the proposed program design is to promote energy efficiency to a set of customer segments through multiple delivery channels with the flexibility to further adjust the statewide structure and financial resources to maximize achievable energy savings. Having the flexibility to pursue new program ideas, develop and implement less-structured targeted market campaigns, or include new market vendors through a framework that further encourages market transformation and acceptance for energy efficiency initiatives, is the intent of continuing this program. SoCalGas has chosen an implementation strategy that initially uses a single program approach, instead of separate local programs, to sustain statewide consistency and leverage overall portfolio dollars, and internal and external resources.




SoCalGas believes the statewide SF program is a framework for incorporating new measures and targeted program campaigns into the market to effectively react to market and technology breakthroughs. SoCalGas has proposed a concept for its Single Family retrofit market that takes a marketing and delivery model that does not abandon statewide consistency and objectives, but provides flexibility to deviate and focus on strategies offering improved performance as the market dictates and demands, in order to achieve energy savings targets over the next several years and attain a cost effective program that continues to offer customers new options.

## 7. Program Outcomes

The SF program design is proposed to bring a portfolio of measures, rebates and incentives to customers through retailer discounts, online applications and market vendors to increase customer participation in energy efficiency initiatives. The program is designed to provide valuable information so customers can save energy

and money, and make their homes more comfortable and bring a portfolio of measures and rebates through retailer discounts and incentives directly to the customer. The SF program should be able to simplify the process by which customers can participate, reduce direct implementation costs over time to allow more dollars for rebates and incentives to increase program offerings..

## 8. Program Strategy

The Single Family Energy Efficiency Retrofit Program will utilize the following strategies in implementation:

- Residential Downstream Deemed Rebates
- Residential Midstream Rebates
- Residential Targeted Marketing
- Mass Marketing

### 8.1.1. Program Strategy Description

The SoCalGas Single Family Energy Efficiency Retrofit Program will offer Residential Downstream Deemed Rebates to customers for the installation of energy efficient products that meet or exceed predetermined specifications. The program will expand existing delivery strategies and will incorporate new strategies for reaching more single family homes. Instead of creating a large portfolio of new programs, the proposed concept framework is intended to expand that availability and installation of existing energy efficient natural gas products, while new technologies, next generation and innovative natural gas products become commercially available and affordable.

The program will incorporate Residential Midstream Rebates directly through retailers, contractors and market agents who provide and deliver energy efficient equipment to the market for installation in the residential market segment

SoCalGas may also incorporate Residential Targeted Marketing strategy by utilizing subcontractor liaisons to provide outreach and coordination with key market agents to develop relationships that increase the cost effectiveness and success for the SoCalGas program campaigns. SoCalGas proposes a program design that offers flexibility in the rebate structure such that a common rebate for statewide consistency can be maintained; however, a separate implemenation approach may be established for attaining greater cost effectiveness and efficiencies by targeting local customer and geographic segments.

SoCalGas will promote the statewide Single Family Home Energy Efficiency Retrofit program and offer rebates through its own Mass Marketing channels and other common statewide marketing channels.

In each case above, there will be strategic cross marketing of various resources, such as financing, audits and surveys available to customers to assist with energy efficient upgrades. The concept strategy is intended to expand the availability of

information and rebates, as well as expand access for customers. This strategy also supports the gradual introduction of next generation emerging natural gas technologies and a framework for introducing these measures to market easily.

SoCalGas will initially allocate its Single Family budget between seven program campaign elements:

- Statewide rebate promotion
- Online application processing promotion
- In-store point-of-purchase campaign
- High consumption campaign
- Older home campaign
- Home remodeling campaign
- Welcome outreach campaign

SoCalGas will promote the statewide home rebate program and rebates through its own mass market channels and other common statewide marketing channels.

SoCalGas plans to offer an online application for the Single Family program and promote usage thorough its own mass market channels and other common marketing channels.

SoCalGas plans to expand its point-of-purchase efforts with local and regional retailers to include more appliances.

SoCalGas will promote program offerings to comparatively higher-than-average consumers using its market outreach resources, market vendors and community agencies and organizations.

SoCalGas will promote program offerings to homeowners of pre-1970 homes, again using its internal outreach resources, market vendors and community agencies and organizations to reduce energy use in older homes.

SoCalGas will promote program offerings to general contractors through permit departments and architects intended to get customer and contractors to consider upgrading the existing structure (untouched via remodel) with energy efficiency offerings.

SoCalGas will promote program offerings to new utility customers in selected rural regions to quickly reach potentially underserved communities to increase awareness for energy efficiency offerings and rebates.

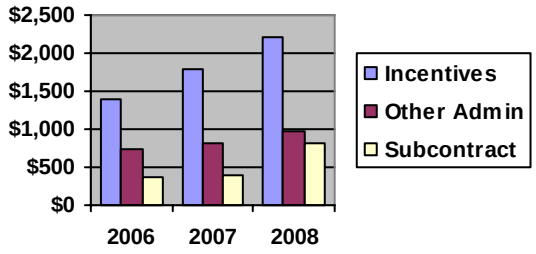
### 8.1.2. Program Indicators

High Efficiency Qualified Clothes Washers
High Efficiency Qualified Dishwashers (seasonal)
Attic Insulation
Wall Insulation
Natural Gas Storage Water Heaters
Energy Star Central Natural Gas Furnaces
Aerators

## 9. Program Implementation

SoCalGas proposes a portfolio of measures that will be offered to customers through a variety of Single Family program campaigns. Using a single pool of funds, SoCalGas will simultaneously implement multiple program campaigns: statewide rebates, in-store instant discounts, online application, (high) consumption download incentives and rebates, and vintage (old) home upgrade incentives and rebates, remodel upscale rebates and new customer outreach. The pool of funds will not be allocated in any specific proportion, but gradually exhausted and directed to each of the program campaigns based on monitored energy savings achievement.

**Planned Budget Allocation**




Each of the programs will leverage the marketing, educational and information resources of other Investor-owned Utility programs, partnership relationships and third-party programs. The statewide program will involve the traditional application process for customers purchasing product(s) from non-participating instant discount retailers or customers not targeted through a tailored campaign. The instant rebate campaign may be an entirely statewide program, or include local retailer participation and limited measure involvement by one or more of the utilities. Either way, customers will be provided a discount at the register with the purchase of an energy efficient qualifying measure(s). SoCalGas will offer incentives, as necessary to market agents, to provide audits, inspections and related services to customers targeted specifically by the 'Consumption Download' and 'Vintage Home Upgrade' program campaigns. SoCalGas will present information on rebates to customers targeted by the 'Remodel Upscale' and Welcome Outreach' program campaigns, and develop appropriate incentives, as needed to capture distribution of energy efficient installations through the 'Remodel Upscale'. In each

of these cases, SoCalGas will target the audience and solicit interest from the customers or market agents, then direct them to an appropriate resource. Rebates paid through retailers or market agents in this program should result in reduced rebate processing, since each retailer or market agent would be providing a single invoice, supported by transaction data, as opposed to separate customer applications.

The program will make applications available to customers both on-line and mail. Home improvement, home survey and general energy efficiency information will be made available to customers through this program and will direct customers to rebate and incentive sources. The number of applications submitted and needing internal processing should decline with implementation of instant rebate and targeted program campaigns. In addition, SoCalGas will explore the opportunity of online rebates for implementation in 2007 to provide customers with an alternative option for requesting a rebate and to enable customers to check status online.

**10. Customer Description**

Residential homeowners are the primary audience for the program, but to reach this customer segment and other similarly defined customers, the program will leverage relationships with resellers, retailers, general contractors, real estate professionals, home inspectors, energy auditors, community based organizations, resale home buyers and new SoCalGas utility customers.

SoCalGas service area encompasses 23,000 square miles of diverse terrain throughout most of Central and Southern California, from Visalia to the Mexican border. As the nation's largest natural gas distribution utility, it serves 18 million through 5 million gas meters in more than 530 communities.

## 11. Customer Interface

The Residential Energy Efficiency Retrofit Program will offer rebates for installation of energy efficient products that meet or exceed predetermined specifications and incentives to market agents assisting in the distribution or installation of energy efficiency natural gas measures. The program will continue to use existing channels to market its rebate offerings, but will adopt and incorporate alternative market or service strategies, such as online applications and instant rebates, to increase the reach of its program offering, and installation of its portfolio of measures. SoCalGas proposes a program design that offers flexibility in the rebate or incentive structure such that a common rebate for statewide consistency can be maintained, but a separate rebate level established for targeted program campaigns.

## 12. Energy Measures and Program Activities

### 12.1. Prescriptive Measures.

See SoCalGas February 1, 2006 Filing Workbook.

### 12.2. kWh Level Data

See SoCalGas February 1, 2006 Filing Workbook.

### 12.3. Non-energy Activities

#### 12.3.1. Activity Description

#### 12.3.2. Quantitative Activity Goals

#### 12.3.3. Assigned attributes of the activity (market sector, end use)

## 13. Subcontractor Activities

SoCalGas will consider subcontractors to assist with inspection verification, midstream program implementation, upstream program opportunities, retailer management and coordination, direct marketing campaign support - research, material design, printing and distribution and other outreach and customer support services that can be subcontracted

## 14. Quality Assurance and Evaluation Activities

SoCalGas expects to inspect at 5% of all applications submitted for internal processing.

An evaluation plan will be developed in accordance with the soon to be developed EM&V Protocols. The CPUC Energy Division will be holding meetings,

workshops and possibly hearings throughout the summer to develop these Protocols. SCG looks forward to participating and commenting on those activities and plans to file EM&V plans for all programs on October 1, 2005 in conjunction with the ED, CEC, and the other IOUs

**15. Marketing Activities**

SoCalGas will provide information directly to their customers using a variety of methods including, SoCalGas web site, SoCalGas phone centers, bill inserts, direct mail and e-mail. SoCalGas will also coordinate with manufacturers, retailers, distributors, contractors, community based organizations (CBOs) and other interested parties in increasing awareness of the utility rebate program, other related opportunities, and encouraging customers to purchase qualifying products. Marketing and outreach efforts may include:

The utilities will explore options for providing alternative strategies to marketing the programs in constrained areas. One such approach may be a neighborhood-based marketing campaign targeting older master-planned communities to promote energy efficiency. Through this effort, local contractors would independently market and install cost-effective measures such as duct testing and sealing and other measures to help reduce energy loss in the home and increase overall efficiency. By dealing in volume, this effort would offer low-cost measures that are proven energy savers to a large number of program participants. In addition to delivering energy savings, this approach would support the advancement of local community and city goals related to energy efficiency, as well as benefiting many neighborhood and socio-economic groups.

For energy efficiency to achieve full effectiveness throughout the state there must be a coordination of the many messages and resources available to participants. SoCalGas is uniquely positioned to serve in the role of providing unifying guidance to each of the many organizations chartered to deliver energy efficiency. SoCalGas intends to do likewise with the agencies that directly market energy efficiency throughout California, Flex Your Power and others yet to be designated by the State of California. When energy efficiency messages are properly timed and coordinated, their effectiveness is multiplied. The messages will be dovetailed with the product seasonality already established by retailers and manufacturers.

Other promotional strategies may include increased media coverage in minority-focused publications, telemarketing, and coordination with community-based organizations on group workshops/seminars.
SoCalGas' web site will provide supplemental information, including current updates regarding available funding levels and printable forms. Forms that can be completed on-line are being considered for development. Customers requiring in-depth information can also call their utility program manager to receive assistance, and detailed program information. Fortunately, based upon 20 plus years of energy efficiency experience, the utility companies understand the many barriers that

customers face, and will continue to reach out to them in a variety of ways in an effort to overcome those barriers.

**16. CPUC Objectives**

The Single Family Home Energy Efficiency Retrofit Program will contribute to reducing energy use per capita in California while helping to achieve both the objectives of the State's Energy Action Plan and the emphases of the CPUC. It accomplishes this by affecting a greatly increased level of participation in energy efficiency practices.

The program expands the proportion of installed energy efficient equipment in homes wider and faster than would take place otherwise. The installation of energy efficient end-uses in the home saves money for customers, improves the economy, and reduces greenhouse gas emissions to the environment. It also defrays the cost of power plants, electricity purchases, and utility infrastructure in accordance with the CPUC's effort to meet 55% to 59% of the incremental electric energy needs between 2004 and 2013 through energy efficiency.

(1) cost-effective energy efficiency should be first in the "loading order" of resources used by the utilities to meet their customers' energy service needs
(2) pursue all cost-effective energy efficiency opportunities over both the short- and long-term
(3) focus on programs that serve as alternatives to more costly supply-side resource options
(4) energy efficiency options which offer long-lived, cost-effective savings and exploited simultaneously with other low cost energy efficiency measures
(5) pursuing the most cost-effective energy efficiency resource programs first, while minimizing lost opportunities
(6) convey a consistent statewide message to energy consumers in all sectors
(7) deployment of new and improved energy efficiency products and applications
(8) PGC funds spent in the service territory from which the funds were collected and fund natural gas energy efficiency programs.

| | SCG3517 SFR4-Home Efficiency Rebate Program | |
|---|---|---|
| **BUDGET** | | |
| | | |
| **Administrative Costs** | **$** | **1,960,236** |
| Overhead and G&A | $ | 928,573 |
| Other Administrative Costs | $ | 1,031,663 |
| **Marketing/Outreach** | **$** | **2,341,439** |
| **Direct Implementation** | **$** | **15,198,325** |
| Total Incentives and Rebates | | |
| User Input Incentive | $ | - |
| Direct Install Rebate | $ | 11,437,500 |
| Direct Install Labor | $ | - |
| Direct Install Materials | $ | - |
| Activity | $ | 3,215,825 |
| Installation | $ | - |
| Hardware & Materials | $ | 45,000 |
| Rebate Processing & Inspection | $ | 500,000 |
| **EM&V Costs** | **$** | - |
| **Budget** | **$** | **19,500,000** |
| **Costs recovered from other sources** | **$** | - |
| **Budget** (plus other costs) | **$** | **19,500,000** |
| | | |
| **PROGRAM IMPACTS** | | |
| **Program Reductions for Measures installed through 2008** | | |
| User Entered kW (kW) | | 1,731 |
| Net Jul-Sept Peak (kW) | | 1,731 |
| Net Dec-Feb Peak (kW) | | 157 |
| Net NCP (kW) | | 1,388 |
| Net CEC (kW) | | 721 |
| Annual Net kWh | | 3,322,018 |
| Lifecycle Net kWh | | 66,440,354 |
| Annual Net Therms | | 4,689,314 |
| Lifecycle Net Therms | | 64,045,748 |
| | | |
| **Cost Effectiveness** | | |
| **TRC** | | |
| Costs | $ | 70,528,882 |
| Electric Benefits | $ | 3,954,947 |
| Gas Benefits | $ | 28,874,951 |
| Net Benefits (NPV) | $ | (37,698,983) |
| BC Ratio | | 0.47 |
| | | |
| **PAC** | | |
| Costs | $ | 18,056,154 |
| Electric Benefits | $ | 3,954,947 |
| Gas Benefits | $ | 28,874,951 |
| Net Benefits (NPV) | $ | 14,773,745 |
| BC Ratio | | 1.82 |
| | | |
| **Levelized Cost** | | |
| **Levelized Cost TRC ($/kWh )** | | |
| Discounted kWh | | 32,090,325 |
| Cost | $ | 0.1728 |
| Benefits | $ | 0.1232 |
| Benefit-Cost | $ | (0.0495) |
| **Levelized Cost PAC ($/kWh)** | | |
| Discounted kWh | | 32,090,325 |
| Cost | $ | 0.0563 |
| Benefits | $ | 0.1232 |
| Benefit-Cost | $ | 0.0669 |
| **Levelized Cost TRC ($/therm)** | | |
| Discounted Therms | | 36,375,909 |
| Cost | $ | 1.7865 |
| Benefits | $ | 0.7938 |
| Benefit-Cost | $ | (0.9927) |
| **Levelized Cost PAC ($/therm)** | | |
| Discounted Therms | | 36,375,909 |
| Cost | $ | 0.4467 |
| Benefits | $ | 0.7938 |
| Benefit-Cost | $ | 0.3471 |

## Home Efficiency Rebate Program

| Year | Total Budget | Total Incentives | Admin Budget | Net kWh | Net Therms | Net kW |
|---|---|---|---|---|---|---|
| 2006 | $ 4,500,000 | $ 2,610,000 | $ 1,890,000 | 944,364 | 1,584,371 | 487 |
| 2007 | $ 6,000,000 | $ 3,702,500 | $ 2,297,500 | 1,060,456 | 1,446,704 | 558 |
| 2008 | $ 9,000,000 | $ 5,125,000 | $ 3,875,000 | 1,317,198 | 1,658,239 | 685 |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 315001 | Programmable Thermostat | 169 | 92 | - | 0.89 | Unit | 11 | - | $ - | $ 58.00 | - | - | - |
| 2006 | 315002 | Gas Storage Water Heater (EF>= 0.62) | - | 11 | - | 0.89 | Hot Water Tank | 13 | 5,000 | $ 30.00 | $ 175.30 | - | 49,938 | - |
| 2006 | 315003 | Central Gas Furnace 90% AFUE | - | 35 | - | 0.89 | 72 kBtuh unit | 18 | 3,000 | $ 100.00 | $ 479.52 | - | 92,275 | - |
| 2006 | 315004 | Attic Insulation | 0 | 0 | 0.00 | 0.89 | sqft | 20 | 2,700,000 | $ 0.15 | $ 0.76 | 391,811 | 75,291 | 240 |
| 2006 | 315005 | Wall Insulation | 0 | 0 | 0.00 | 0.89 | sqft | 20 | 1,500,000 | $ 0.15 | $ 1.32 | 552,552 | 132,533 | 247 |
| 2006 | 315006 | Energy Star Labeled Dishwasher Tier I EF=0.62 | - | 5 | - | 0.8 | Dishwasher | 13 | - | $ 30.00 | $ 183.64 | - | - | - |
| 2006 | 315008 | Clothes Washer Tier I | - | 20 | - | 0.8 | Clothes Washer, CWasher | 14 | 15,000 | $ 35.00 | $ 246.14 | - | 235,800 | - |
| 2006 | 315009 | Clothes Washer Tier II | - | 22 | - | 0.89 | Clothes Washer, CWasher | 14 | - | $ - | $ 853.00 | - | - | - |
| 2006 | 315010 | Clothes Washer Tier I | - | 20 | - | 0.8 | Clothes Washer, CWasher | 14 | 15,000 | $ 20.00 | $ 246.14 | - | 235,800 | - |
| 2006 | 315011 | Clothes Washer Tier II | - | 22 | - | 0.8 | Clothes Washer, CWasher | 14 | - | $ - | $ 853.00 | - | - | - |
| 2006 | 315012 | Clothes Washer Tier I | - | 20 | - | 0.8 | Clothes Washer, CWasher | 14 | - | $ 15.00 | $ 246.14 | - | - | - |
| 2006 | 315013 | Clothes Washer Tier II | - | 22 | - | 0.8 | Clothes Washer, CWasher | 14 | - | $ - | $ 853.00 | - | - | - |
| 2006 | 315014 | Central Gas Furnace 92% AFUE | - | 40 | - | 0.89 | 72 kBtuh unit | 18 | 1,500 | $ 200.00 | $ 549.36 | - | 53,635 | - |
| 2006 | 315015 | Gas Storage Water Heater (EF>= 0.62) | 0 | 11.222 | 0 | 0.89 | Tank, WtrHtr | 13 | 5000 | $ 15.00 | $ 175.30 | - | 49,938 | - |
| 2006 | 315016 | Faucet Aerators | 0 | 6.733 | 0 | 0.89 | Household | 9 | 110000 | $ 3.00 | $ 7.12 | - | 659,161 | - |
| 2006 | 315017 | Low Flow Showerhead | 0 | 8.978 | 0 | 0.89 | Showerhead | 10 | 0 | | $ 22.95 | - | - | - |
| 2006 | 315021 | Energy Star Dish Washer Tier II EF=0.68+ | 0 | 6.6 | 0 | 0.8 | Dishwasher, DWasher | 13 | 0 | $ 50.00 | $ 383.64 | - | - | - |
| 2006 | 315022 | Tankless Water Heater | 0 | 33.667 | 0 | 0.89 | Tank, WtrHtr | 20 | 0 | | $ 370.64 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 315023 | Energy Star Clothes Washer Tier III | 0 | 25.0399738 | 0 | 0.8 | Clothes Washer, CWasher | 14 | 0 | $ - | $ 764.92 | - | - | - |
| 2007 | 315001 | Programmable Thermostat | 168.8 | 92.3 | 0 | 0.89 | Unit | 11 | 0 | $ - | $ 58.00 | - | - | - |
| 2007 | 315002 | Gas Storage Water Heater (EF>= 0.62) | 0 | 11.222 | 0 | 0.89 | Hot Water Tank | 13 | 11500 | $ 30.00 | $ 175.30 | - | 114,857 | - |
| 2007 | 315003 | Central Gas Furnace 90% AFUE | 0 | 34.56 | 0 | 0.89 | 72 kBtuh unit | 18 | 4000 | $ 100.00 | $ 479.52 | - | 123,034 | - |
| 2007 | 315004 | Attic Insulation | 0.1630509 | 0.03133215 | 9.9821E-05 | 0.89 | sqft | 20 | 3500000 | $ 0.15 | $ 0.76 | 507,904 | 97,600 | 311 |
| 2007 | 315005 | Wall Insulation | 0.413897 | 0.0992756 | 0.00018525 | 0.89 | sqft | 20 | 1500000 | $ 0.15 | $ 1.32 | 552,552 | 132,533 | 247 |
| 2007 | 315006 | Energy Star Labeled Dishwasher Tier I EF=0.62 | 0 | 5.3 | 0 | 0.8 | Dishwasher | 13 | 9500 | $ 30.00 | $ 183.64 | - | 40,280 | - |
| 2007 | 315008 | Clothes Washer Tier I | 0 | 19.65001334 | 0 | 0.8 | Clothes Washer, CWasher | 14 | 0 | $ - | $ 246.14 | - | - | - |
| 2007 | 315009 | Clothes Washer Tier II | 0 | 4.42 | 0 | 0.8 | Clothes Washer, CWasher | 14 | 10000 | $ 35.00 | $ 606.86 | - | 35,360 | - |
| 2007 | 315010 | Clothes Washer Tier I | 0 | 19.65001334 | 0 | 0.8 | Clothes Washer, CWasher | 14 | 0 | $ - | $ 246.14 | - | - | - |
| 2007 | 315011 | Clothes Washer Tier II | 0 | 4.42 | 0 | 0.8 | Clothes Washer, CWasher | 14 | 10000 | $ 20.00 | $ 606.86 | - | 35,360 | - |
| 2007 | 315012 | Clothes Washer Tier I | 0 | 19.65001334 | 0 | 0.8 | Clothes Washer, CWasher | 14 | 0 | $ - | $ 246.14 | - | - | - |
| 2007 | 315013 | Clothes Washer Tier II | - | $ 4.42 | $ - | 0.8 | Clothes Washer, CWasher | 14 | 0 | $ 15.00 | $ 606.86 | - | - | - |
| 2007 | 315014 | Central Gas Furnace 92% AFUE | - | $ 40.18 | $ - | 0.89 | 72 kBtuh unit | 18 | 4000 | $ 200.00 | $ 549.36 | - | 143,027 | - |
| 2007 | 315015 | Gas Storage Water Heater (EF>= 0.62) | - | $ 11.22 | $ - | 0.89 | Tank, WtrHtr | 13 | 11500 | $ 15.00 | $ 175.30 | - | 114,857 | - |
| 2007 | 315016 | Faucet Aerators | - | $ 6.73 | $ - | 0.89 | Household | 9 | 100000 | $ 3.00 | $ 7.12 | - | 599,237 | - |
| 2007 | 315017 | Low Flow Showerhead | - | $ 8.98 | $ - | 0.89 | Showerhead | 10 | 0 | $ - | $ 22.95 | - | - | - |
| 2007 | 315021 | Energy Star Dish Washer Tier II EF=0.68+ | - | $ 6.60 | $ - | 0.8 | Dishwasher, DWasher | 13 | 2000 | $ 50.00 | $ 383.64 | - | 10,560 | - |
| 2007 | 315022 | Tankless Water Heater | - | $ 33.67 | $ - | 0.89 | Tank, WtrHtr | 20 | 0 | | $ 370.64 | - | - | - |
| 2007 | 315023 | Energy Star Clothes Washer Tier III | - | $ 7.60 | $ - | 0.8 | Clothes Washer, CWasher | 14 | 0 | $ - | $ 518.78 | - | - | - |
| 2008 | 315001 | Programmable Thermostat | 169 | $ 92.30 | $ - | 0.89 | Unit | 11 | 0 | $ - | $ 58.00 | - | - | - |
| 2008 | 315002 | Gas Storage Water Heater (EF>= 0.62) | - | $ 11.22 | $ - | 0.89 | Hot Water Tank | 13 | 15000 | $ 30.00 | $ 175.30 | - | 149,814 | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2008 | 315003 | Central Gas Furnace 90% AFUE | - | $ 34.56 | $ - | 0.89 | 72 kBtuh unit | 18 | 8000 | $ 100.00 | $ 479.52 | - | 246,067 | - |
| 2008 | 315004 | Attic Insulation | 0 | $ 0.03 | $ 0.00 | 0.89 | sqft | 20 | 4000000 | $ 0.15 | $ 0.76 | 580,461 | 111,542 | 355 |
| 2008 | 315005 | Wall Insulation | 0 | $ 0.10 | $ 0.00 | 0.89 | sqft | 20 | 2000000 | $ 0.15 | $ 1.32 | 736,737 | 176,711 | 330 |
| 2008 | 315006 | Energy Star Labeled Dishwasher Tier I EF=0.62 | - | $ 5.30 | $ - | 0.8 | Dishwasher | 13 | 15000 | $ 30.00 | $ 183.64 | - | 63,600 | - |
| 2008 | 315008 | Clothes Washer Tier I | - | $ 19.65 | $ - | 0.8 | Clothes Washer, CWasher | 14 | 0 | $ - | $ 246.14 | - | - | - |
| 2008 | 315009 | Clothes Washer Tier II | - | $ 4.42 | $ - | 0.8 | Clothes Washer, CWasher | 14 | 15000 | $ 35.00 | $ 606.86 | - | 53,040 | - |
| 2008 | 315010 | Clothes Washer Tier I | - | $ 19.65 | $ - | 0.8 | Clothes Washer, CWasher | 14 | 0 | $ - | $ 246.14 | - | - | - |
| 2008 | 315011 | Clothes Washer Tier II | - | $ 4.42 | $ - | 0.8 | Clothes Washer, CWasher | 14 | 15000 | $ 20.00 | $ 606.86 | - | 53,040 | - |
| 2008 | 315012 | Clothes Washer Tier I | - | $ 19.65 | $ - | 0.8 | Clothes Washer, CWasher | 14 | 0 | $ - | $ 246.14 | - | - | - |
| 2008 | 315013 | Clothes Washer Tier II | - | $ 4.42 | $ - | 0.8 | Clothes Washer, CWasher | 14 | 0 | $ 15.00 | $ 606.86 | - | - | - |
| 2008 | 315014 | Central Gas Furnace 92% AFUE | - | $ 40.18 | $ - | 0.89 | 72 kBtuh unit | 18 | 5000 | $ 200.00 | $ 549.36 | - | 178,783 | - |
| 2008 | 315015 | Gas Storage Water Heater (EF>= 0.62) | - | $ 11.22 | $ - | 0.89 | Tank, WtrHtr | 13 | 15000 | $ 15.00 | $ 175.30 | - | 149,814 | - |
| 2008 | 315016 | Faucet Aerators | - | $ 6.73 | $ - | 0.89 | Household | 9 | 75000 | $ 3.00 | $ 7.12 | - | 449,428 | - |
| 2008 | 315017 | Low Flow Showerhead | - | $ 8.98 | $ - | 0.89 | Showerhead | 10 | 0 | | $ 22.95 | - | - | - |
| 2008 | 315021 | Energy Star Dish Washer Tier II EF=0.68+ | - | $ 6.60 | $ - | 0.8 | Dishwasher, DWasher | 13 | 5000 | $ 50.00 | $ 383.64 | - | 26,400 | - |
| 2008 | 315022 | Tankless Water Heater | - | $ 33.67 | $ - | 0.89 | Tank, WtrHtr | 20 | 0 | | $ 370.64 | - | - | - |
| 2008 | 315023 | Energy Star Clothes Washer Tier III | - | $ 7.60 | $ - | 0.8 | Clothes Washer, CWasher | 14 | 0 | $ 75.00 | $ 518.78 | - | - | - |

# 2006-2008
# Multi Family Energy Efficiency Retrofit Program
# Concept Paper

## 1. Projected Program Budget

| | 2006 | 2007 | 2008 |
|---|---|---|---|
| Administration | | | |
| Administrative Overheads | $ 118,571 | $ 142,857 | $ 190,476 |
| Administrative Other | $ 229,118 | $ 218,661 | $ 307,716 |
| Marketing & Outreach | $ 339,632 | $ 333,163 | $ 672,152 |
| Direct Implementation | | | |
| Incentives | $ 1,479,000 | $ 1,960,250 | $ 2,354,250 |
| Activity | $ 27,827 | $ 28,662 | $ 34,442 |
| Installation | $ - | $ - | $ - |
| Hardware & Materials | $ - | $ - | $ - |
| Rebate Processing & Inspection | $ 305,852 | $ 316,407 | $ 440,964 |
| EM&V | $ - | $ - | $ - |
| *Total* | *$ 2,500,000* | *$ 3,000,000* | *$ 4,000,000* |

## 2. Projected Program Impacts

| 2006 | | | 2007 | | | 2008 | | |
|---|---|---|---|---|---|---|---|---|
| Net kWh | Net kW | Net Therms | Net kWh | Net kW | Net Therms | Net kWh | Net kW | Net Therms |
| 11,332 | 8 | 1,293,009 | 12,198 | 9 | 1,801,256 | 17,931 | 14 | 2,056,377 |

## 3. Program Cost Effectiveness

Attached

## 4. Program Descriptors

The Multi Family Energy Efficiency Retrofit (MFEER) Program is a statewide program that targets property owners and managers of multifamily residential dwellings, homeowners associations and mobile home park associations. The program encourages property owners and managers to install qualifying energy efficiency products in common areas for residential apartments, mobile home parks and condominium complexes. The program is designed for flexibility; it offers agreed upon statewide measures for coordinated implementation, but is designed to easily adapt to market changes, including adding new measures that may emerge as cost effective opportunities in the SoCalGas local service area.

## 5. Program Statement

Historically, the multifamily market segment has been considered hard-to-reach, a market segment that did not actively participate in energy efficiency programs prior to 2002. This segment continues to be posed with significant market barriers compared to other residential segments. Specifically, there is the "split incentive" divide between property owner and tenant. Multifamily residents typically pay their own energy bill. Since the property owner, manager, or homeowners associations are only responsible for facility improvements, many times they do not pursue the energy savings or financial benefits from installation of energy efficiency measures

in individual multifamily dwelling. It is a constant challenge to identify new approaches to motivate an owner to pay for incremental capital energy efficient improvements when there is no immediate or direct benefit to a property owner.

The MFEER Program uses an integrated approach of combining information, education, energy management recommendations, including targeted marketing and customer incentives to encourage property owners/managers to install energy efficient measures. This multi-faceted approach has proven successful in the 2004 - 2005 program, and will be utilized during implementation of the program during 2006- 2008, as well.

Despite the obstacles, this program has been successful in reaching this underserved residential market segment. To continue to build knowledge and understanding of the value of energy efficiency alternatives to the multifamily residential market segment, it is critical to maintain program stability, continuity and momentum. Over the next three years, the program would like to reach a greater diversity of customers; small investor groups holding multiple apartment sites, tenant dwellings of large property managers, and a greater number of community and home owner associations through targeted campaigns and the possible use of upstream vendors.

**6. Program Rationale**

The rationale for the proposed program design is to continue to promote energy efficiency to the multifamily market segment, as implemented in the 2004-2005 PY, and structure it with the flexibility to easily adjust financial resources to maximize achievable energy savings. Secondly, the California Investor-owned utility programs have demonstrated success over the years for achieving energy savings, as well as managing customer expectation and trust. Having the flexibility to quickly develop new program campaigns, and easily expand or include new market vendors is a formula for furthering market transformation and acceptance of energy efficiency. SoCalGas has chosen an implementation strategy that uses its single program approach, instead of separate local programs, to better leverage overall portfolio dollars and internal and external resources to penetrate the market, than might be possible having several separate and disparate multifamily targeted programs.

The CPUC energy savings targets for SoCalGas are significantly higher than in past years. SoCalGas believes the statewide MFEE Retrofit program is a great framework for incorporating new measures and targeted program campaigns to swiftly react to market and technology breakthroughs. SoCalGas has proposed a concept for its multifamily retrofit program that uses a market and delivery model that does not abandon statewide consistency and objectives, but provides flexibility to deviate from less than successful market strategies and focus on strategies offering improved performance as the market dictates in order to achieve energy savings targets over the next several years.

## 7. Program Outcomes

The MFEE Retrofit program is designed to attain long-term energy savings through the installation of energy efficient products in primarily the common areas of multifamily complexes, including the common areas of condominium complexes and mobile home parks. The concept is proposed to bring a portfolio of measures and rebates to customers via market vendors, manufacturers and installers to increase customer participation in energy efficiency initiatives. The program is designed to provide valuable information so customers can save energy and money, and make their properties perhaps more safe and energy efficient. The MFEE Retrofit program should be able to achieve energy savings that exceed the target allocated to residential segment, simplify the process by which customers can participate, reduce direct implementation costs over time. Dollars will be shifted toward effective rebates and other incremental program offerings derived from third-parties, partnerships and new technologies. An additional desired outcome is to heighten energy efficiency awareness and knowledge of both the multifamily property owner/managers and their tenants. Multifamily property owners/managers can greatly influence their tenants' opinions and behaviors about energy efficient by the attitude and environment created by the property owner. This attitude carries over to homeownership. Once these tenants purchase a home, the energy efficient mindset has already been established and is carried forward by replacing inefficient equipment in those older, previously owned homes, and making their new home energy efficient.

## 8. Program Strategy

The Multifamily Energy Efficiency Retrofit Program will utilize the following strategies in implementation:

- Residential Downstream Deemed Rebates
- Residential Midstream Rebates
- Residential Targeted Marketing
- Residential Downstream Training
- Mass Marketing
- Residential Financing

### 8.1.1. Program Strategy Description

The SoCalGas Multifamily Energy Efficiency Retrofit Program will offer Residential Downstream Deemed Rebates to customers for installation of energy efficient products that meet or exceed predetermined specifications. The program will expand existing delivery strategies and will incorporate new strategies for reaching more multifamily properties and community associations. Instead of creating a large portfolio of new programs, the proposed concept framework is intended to expand that availability and installation of existing energy efficient

natural gas products, while new technologies, next generation and innovative natural gas products become commercially available and affordable.

The SoCalGas program will incorporate the existing multifamily statewide element, but add several new program campaign elements to maximize the reach and effectiveness of the program to this hard-to-reach market segment. The program will target multifamily residential dwellings served by SoCalGas, as well as market agents serving this market segment. SoCalGas plans to provide rebates directly to customers, through resellers, installers and contractors. The Program will also offer Residential Midstream Rebates directly to, contractors and market agents who provide and deliver energy efficient equipment to the market for installation in this residential market segment.

SoCalGas may also incorporate Residential Targeted Marketing strategy by utilizing an internal staff liaison ~~will~~ to provide outreach and coordination with key market agents to develop relationships that promote success for the SoCalGas program campaigns. SoCalGas proposes a program design that offers flexibility in the rebate structure such that a common rebate for statewide consistency can be maintained; however, a separate rebate level may be established for targeted local program campaigns.

SoCalGas will utilize Residential Downstream Training by offering a Multifamily Seminar and Expo specifically targeted to address hot water solutions for the multifamily customer.

SoCalGas will promote the statewide Multifamily rebate program and offer rebates through its own Mass Marketing channels and other common statewide marketing channels.

SoCalGas will initially allocate its Multifamily budget between four program campaign elements:

- Statewide rebate program campaign
- Small Multifamily Investor program campaign
- Large Property Management Specialists program campaign
- Property Owner recognition & publicity search campaign

SoCalGas will promote common area measures such as water heating and space heating boilers, controls and insulation to partnerships and individual investors/owners of multifamily properties through a ‘Small Multifamily Investor’

program campaign leveraging public sources, and outreach resources both in and outside of the company.

SoCalGas will promote program offerings to Property Management Specialists through a 'Clean Sweep' program campaign, using its internal outreach resources and relationships with market agents, housing authorities and key contacts in large Property Management Companies to encourage early replacement of tenant-dwelling dishwashers.

In each case above, there will be strategic cross marketing of various resources and services, including financing, that are available to customers to assist with energy efficient upgrades. This concept is intended to expand the availability of information and rebates, as well as expand access for customers. This strategy also supports gradual introduction of next generation emerging natural gas technologies and a framework for introducing these measures to market easily.

### 8.1.2. Program Indicators

The primary goal of the Multifamily Energy Efficiency Retrofit program is to encourage SoCalGas customers to replace existing inefficient gas measures with current Energy Efficient measures as noted below:

Expected Measure Installations:
Large Natural Gas Central Water Heater
Natural Gas Storage Water Heater
Central Gas Furnace
Boiler – Space and Water Heating
Boiler – Water Heating only
Boiler Controls
Energy Star Dishwasher
Energy Star Clothes Washer (in Apartment and Common Area)
Attic Insulation
Wall Insulation
Pipe Wrap

## 9. Program Implementation

SoCalGas proposes a portfolio of measures that will be offered to customers through a variety of multifamily program campaigns. Using a single pool of funds, SoCalGas will simultaneously implement multiple program campaigns; statewide rebates, property management rebates and small multifamily investor rebates. The pool of funds will not be allocated in any specific proportion, but gradually exhausted and directed to each of the program campaigns based on monitored energy savings achievement.

Each of the programs will leverage the marketing, educational and information resources of other Investor-owned Utility programs, partnership relationships and third-party programs. The MFEE Retrofit program will also increase awareness of exceptional program participants by generating publicity and recognition for upgrades that demonstrate advanced technology, design and energy savings.

**10. Customer Description**

Residential Multifamily Property Owners of two or more dwelling units, Home Owner Associations, Mobile Home Park Associations and other similarly defined housing served by SoCalGas are the primary audience for the program; however to reach this market segment and various types of similar multifamily properties, the program will leverage relationships with product resellers, contractors, distributors, property managers, real estate professionals, housing agencies and community based organizations.

SoCalGas service area encompasses 23,000 square miles of diverse terrain throughout most of Central and Southern California, from Visalia to the Mexican border. As the nation's largest natural gas distribution utility, it serves 18 million customers through 5 million gas meters in more than 530 communities.


**11. Customer Interface**

The program will be presented to customers through various outreach and marketing channels. The customer will obtain program information and program assistance from SoCalGas employees who work directly with these targeted customers, as well as trade organizations. These employees include, but are not limited to Energy Program Advisors, Outreach Liaison, Public Affairs Managers, and specially trained Residential Marketing Service Representatives in SoCalGas' Customer Contact

Center.

Informational pieces will be provided through multiple channels to inform customers of the amount of rebates available for specific energy efficient measures.

SoCalGas will work closely with manufacturers, vendors, distributors, installers, third-party program providers and trade organizations to train them to assist their customers in program utilization and value.

SoCalGas will promote the statewide multifamily rebate program and rebates through its own mass- market channels and other common statewide marketing channels.

SoCalGas will promote selected program offerings through upstream channels using market vendors to capture a greater breadth of energy efficient products being installed throughout its service area.

SoCalGas will promote program offerings to real-estate investment partnerships and individual investors/owners of multifamily properties using subcontractor sources and its own outreach resources to attract customers.

SoCalGas will promote program offerings to Property Management Specialists using its internal outreach resources and relationships with market vendors, housing authorities and key contacts in large management companies to encourage early replacement of selected tenant-dwelling measures.

SoCalGas will seek out and recognize multifamily properties and property owners using energy efficient measures, for not only helping to reduce energy usage, but who look to transform and enhance communities through such innovative actions.

In each case above, there will be strategic cross marketing of various resources and services, including the possibility of an on-bill financing option for eligible customers who participate in this rebate program. Once qualified under the OBF Option (see OBF Program proposal for details), the participating customer would receive a reduced rebate and finance the balance of the cost of a qualified energy efficiency package through the utility. Demand response measures may also qualify for financing where included as part of the energy efficiency upgrade. Monthly payment on a term loan would be billed as part of the participating customer's monthly utility bill.

## 12. Energy Measures and Program Activities

### 12.1. Prescriptive Measures.

See SoCalGas February 1, 2006 Filing Workbook.

### 12.2. kWh Level Data

See SoCalGas February 1, 2006 Filing Workbook.

### 12.3. Non-energy Activities

#### 12.3.1. Activity Description

#### 12.3.2. Quantitative Activity Goals

#### 12.3.3. Assigned attributes of the activity (market sector, end use)

## 13. Subcontractor Activities

SoCalGas will consider subcontractors to assist with inspection verification, program implementation, retailer management and coordination, direct marketing campaign support - research, material design, printing and distribution and other outreach and customer support services that can be subcontracted

## 14. Quality Assurance and Evaluation Activities

SoCalGas expects to inspect 50% of all applications submitted for internal processing.
An evaluation plan will be developed in accordance with the EM&V Protocols.

## 15. Marketing Activities

Encouraging customers to invest in energy efficiency requires a multi-faceted and innovative marketing approach. This approach involves the use of a combination of mail-outs, personal, and CBO-coordinated efforts. The marketing plan's primary objective is to provide the hard-to-reach customer with equitable access to the program. SoCalGas' approach will include, but not be limited to:

- Direct mail pieces will target economic development areas, rural areas and those areas defined as Hard to Reach
- Informational pieces to inform customers of the amount of rebate available for specific energy efficient measures.

| One-to-one Contact | Promotional Vehicles | Delivery Vehicles | Tools |
|---|---|---|---|
| Site Visits | Trade/Association Journals | Bill inserts | Web site information |
| IOU Call Centers | Chamber Newsletters | Bill messages | Energy Resource Center |
| Project Specialists | Organization Newsletters | Direct mail | Professional contacts |
| Customer Service Representatives | Local Newspapers | Conferences | CBOs |
| Field Account Representatives | Trade Magazines / brochures | Energy audits | Printed applications |
| Phone Account Representatives | Special promotions | Vendor and trade allies | Business Improvement Districts, Economic Development groups |
| Customer-convenient Seminars | E-mail marketing | Website on-line forms | Chambers of Commerce |
| Trade organizations | Local Governments | | |

- The utilities may also assist local small businesses that sell energy efficient equipment to develop informational pieces for distribution to their own customers.

- Other promotional strategies may include increased media coverage in minority-focused publications, telemarketing, and coordination with community-based organizations to work on group workshops/seminars.

- 'SoCalGas' Web site will provide supplemental information, including current updates regarding available funding levels and printable forms. Forms that can be completed on-line are being considered for development. Customers requiring in-depth information can also call their utility program manager to receive assistance, and detailed program information and to make fund reservations. Fortunately, based upon 20 plus years of energy efficiency experience, the utility companies understand the many barriers that customers face, and will continue to reach out to them in a variety of ways in an effort to overcome those barriers.

**16. CPUC Objective**

The Multi Family Energy Efficiency Retrofit Program will contribute to reducing energy use per capita in California while helping to achieve both the objectives of the State's Energy Action Plan and the emphases of the CPUC. It accomplishes this by affecting a greatly increased level of participation in energy efficiency practices.

(1) Cost-effective energy efficiency should be first in the "loading order" of resources used by the utilities to meet their customers' energy service needs
(2) Pursue all cost-effective energy efficiency opportunities over both the short- and long-term
(3) Focus on programs that serve as alternatives to more costly supply-side resource options
(4) Energy efficiency options which offer long-lived, cost-effective savings and exploited simultaneously with other low cost energy efficiency measures
(5) Pursuing the most cost-effective energy efficiency resource programs first, while minimizing lost opportunities
(6) Convey a consistent statewide message to energy consumers in all sectors
(7) Deployment of new and improved energy efficiency products and applications
(8) PGC funds spent in the service territory from which the funds were collected and fund natural gas energy efficiency programs.

| | SCG3510 MFR4-Multi-Family Rebate Program | |
|---|---|---|
| **BUDGET** | | |
| | | |
| **Administrative Costs** | **$** | **1,207,399** |
| Overhead and G&A | $ | 451,904 |
| Other Administrative Costs | $ | 755,495 |
| **Marketing/Outreach** | **$** | **1,344,947** |
| **Direct Implementation** | **$** | **6,947,654** |
| Total Incentives and Rebates | | |
| User Input Incentive | $ | - |
| Direct Install Rebate | $ | 5,793,500 |
| Direct Install Labor | $ | - |
| Direct Install Materials | $ | - |
| Activity | $ | 90,931 |
| Installation | $ | - |
| Hardware & Materials | $ | - |
| Rebate Processing & Inspection | $ | 1,063,223 |
| **EM&V Costs** | **$** | - |
| **Budget** | **$** | **9,500,000** |
| **Costs recovered from other sources** | **$** | - |
| **Budget** (plus other costs) | **$** | **9,500,000** |
| | | |
| **PROGRAM IMPACTS** | | |
| **Program Reductions for Measures installed through 2008** | | |
| User Entered kW (kW) | | 32 |
| Net Jul-Sept Peak (kW) | | 32 |
| Net Dec-Feb Peak (kW) | | 3 |
| Net NCP (kW) | | 24 |
| Net CEC (kW) | | 9 |
| Annual Net kWh | | 41,461 |
| Lifecycle Net kWh | | 829,225 |
| Annual Net Therms | | 5,150,642 |
| Lifecycle Net Therms | | 65,380,917 |
| | | |
| **Cost Effectiveness** | | |
| **TRC** | | |
| Costs | $ | 12,722,519 |
| Electric Benefits | $ | 53,861 |
| Gas Benefits | $ | 28,450,142 |
| Net Benefits (NPV) | $ | 15,781,485 |
| BC Ratio | | 2.24 |
| | | |
| **PAC** | | |
| Costs | $ | 8,794,688 |
| Electric Benefits | $ | 53,861 |
| Gas Benefits | $ | 28,450,142 |
| Net Benefits (NPV) | $ | 19,709,316 |
| BC Ratio | | 3.24 |
| | | |
| **Levelized Cost** | | |
| **Levelized Cost TRC ($/kWh )** | | |
| Discounted kWh | | 399,133 |
| Cost | $ | 0.1927 |
| Benefits | $ | 0.1349 |
| Benefit-Cost | $ | (0.0577) |
| **Levelized Cost PAC ($/kWh)** | | |
| Discounted kWh | | 399,133 |
| Cost | $ | 0.0506 |
| Benefits | $ | 0.1349 |
| Benefit-Cost | $ | 0.0843 |
| **Levelized Cost TRC ($/therm)** | | |
| Discounted Therms | | 37,813,560 |
| Cost | $ | 0.3344 |
| Benefits | $ | 0.7524 |
| Benefit-Cost | $ | 0.4180 |
| **Levelized Cost PAC ($/therm)** | | |
| Discounted Therms | | 37,813,560 |
| Cost | $ | 0.2320 |
| Benefits | $ | 0.7524 |
| Benefit-Cost | $ | 0.5203 |

## Multi-Family Rebate Program

| Year | Total Budget | Total Incentives | Admin Budget | Net kWh | Net Therms | Net kW |
|---|---|---|---|---|---|---|
| 2006 | $ 2,500,000 | $ 1,479,000 | $ 1,021,000 | 11,332 | 1,293,009 | 8 |
| 2007 | $ 3,000,000 | $ 1,960,250 | $ 1,039,750 | 12,198 | 1,801,256 | 9 |
| 2008 | $ 4,000,000 | $ 2,354,250 | $ 1,645,750 | 17,931 | 2,056,377 | 14 |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 312001 | Programmable Thermostat | 382 | 33 | - | 0.89 | Unit | 12 | - | $ 50.00 | $ 58.00 | - | - | - |
| 2006 | 312002 | Natural Gas Storage Water Heater (EF>= 0.63) | - | 10 | - | 0.89 | Hot Water Tank | 13 | 100 | $ 30.00 | $ 175.30 | - | 897 | - |
| 2006 | 312003 | Central Gas Furnace 90% AFUE | - | 22 | - | 0.89 | per 38 kBtuh Unit | 18 | - | $ 200.00 | $ 253.08 | - | - | - |
| 2006 | 312004 | Attic Insulation | 0 | 0 | 0.00 | 0.89 | 1000 sqft roof, 1000 SqFt | 20 | 60,000 | $ 0.15 | $ 0.76 | 9,599 | 2,416 | 5 |
| 2006 | 312005 | Wall Insulation | 0 | 0 | 0.00 | 0.89 | sqft | 20 | 20,000 | $ 0.15 | $ 1.32 | 1,733 | 1,087 | 3 |
| 2006 | 312006 | Faucet Aerator | - | 6 | - | 0.89 | Household | 9 | | $ 1.00 | $ 7.12 | - | - | - |
| 2006 | 312007 | Low-Flow Showerhead | - | 8 | - | 0.89 | Showerhead | 10 | - | $ 1.00 | $ 37.95 | - | - | - |
| 2006 | 312008 | Central System Natural Gas Water Heater | - | 257 | - | 0.89 | Unit | 15 | 150 | $ 500.00 | $ 1,701.00 | - | 34,310 | - |
| 2006 | 312009 | Central System Gas Boiler: Water Heating Only | - | 750 | - | 0.89 | Unit | 20 | 325 | $ 1,500.00 | $ 4,060.00 | - | 216,938 | - |
| 2006 | 312010 | Central System Gas Boiler: Space and Water Heating | - | 1,900 | - | 0.89 | Unit | 20 | 75 | $ 1,500.00 | $ 4,060.00 | - | 126,825 | - |
| 2006 | 312011 | Energy Star Dishwasher (EF=.58) | - | 3 | - | 0.8 | Dishwasher | 13 | | $ 15.00 | $ 133.64 | - | - | - |
| 2006 | 312012 | Gas Wtr Htr Controller (<30 units) Pre 1970 | - | 1,125 | - | 0.89 | Unit | 10 | 125 | $ 750.00 | $ 1,400.00 | - | 125,156 | - |
| 2006 | 312014 | Gas Wtr Htr Controller (>= 30 units) Pre 1970 | - | 2,250 | - | 0.89 | Unit | 10 | 175 | $ 1,500.00 | $ 1,550.00 | - | 350,438 | - |
| 2006 | 312015 | Gas Wtr Htr Controller (<30 units) Post 1970 | 0 | 850 | 0 | 0.89 | Unit | 10 | 125 | $ 750.00 | $ 1,400.00 | - | 94,563 | - |
| 2006 | 312016 | Clothes Washer Energy Star Tier I MEF = 1.42 (In Coin-Op Laundry Area) | 0 | 91.48 | 0 | 0.8 | Clothes Washer, CWasher | 10 | 0 | $ 35.00 | $ 659.00 | - | - | - |
| 2006 | 312017 | Clothes Washer Energy Star Tier II MEF = 1.60 (In Coin-Op Laundry Area) | 0 | 101.77 | 0 | 0.8 | Clothes Washer, CWasher | 10 | 0 | $ 50.00 | $ 853.00 | - | - | - |
| 2006 | 312018 | Clothes Washer Tier I (Located In Apartment Unit) MEF=1.42 | 0 | 14.89666238 | 0 | 0.8 | Clothes Washer, CWasher | 14 | 0 | $ 35.00 | $ 180.78 | - | - | - |
| 2006 | 312019 | Clothes Washer Tier II (Located In Apartment Unit) MEF=1.60 | 0 | 16.55184709 | 0 | 0.8 | Clothes Washer, CWasher | 14 | 0 | $ 50.00 | $ 548.99 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 312020 | Clothes Washer Tier III (Located In Apartment Unit) MEF=1.80 | 0 | 18.9709632 | 0 | 0.8 | Clothes Washer, CWasher | 14 | 0 | | $ 592.77 | - | - | - |
| 2006 | 312021 | Energy Star Dishwasher Tier I (EF=.62) | 0 | 3.9 | 0 | 0.8 | Dishwasher, DWasher | 13 | 50 | $ 30.00 | $ 183.64 | - | 156 | - |
| 2006 | 312022 | Energy Star Dishwasher Tier II (EF=.68+) | 0 | 4.9 | 0 | 0.8 | Dishwasher, DWasher | 13 | 0 | $ 50.00 | $ 383.64 | - | - | - |
| 2006 | 312023 | Central gas Furnace 92% AFUE | 0 | 25.992 | 0 | 0.89 | 38 kBtuh unit | 18 | 0 | | $ 289.94 | - | - | - |
| 2006 | 312024 | Central Gas Furnace 94% AFUE | 0 | 29.488 | 0 | 0.89 | 38 kBtuh unit | 18 | 0 | | $ 326.80 | - | - | - |
| 2006 | 312025 | Tankless Water Heater | 0 | 30.235 | 0 | 0.89 | Tank, WtrHtr | 20 | 0 | | $ 370.64 | - | - | - |
| 2006 | 312026 | Clothes Washer Energy Star Tier III MEF = 1.80 (In Coin-Op Laundry Area) | 0 | 116.58 | 0 | 0.8 | Clothes Washer, CWasher | 10 | 0 | | $ 764.92 | - | - | - |
| 2006 | 312027 | Gas Wtr Htr Controller (>=30 units) Post 1970 | | 1699 | | 0.89 | Unit | 10 | 225 | $ 1,500.00 | $ 1,550.00 | - | 340,225 | - |
| 2006 | 312028 | Pipe Wrap | 0 | 7.502 | 0 | 0.89 | Household | 15 | 0 | | $ 2.81 | - | - | - |
| 2007 | 312001 | Programmable Thermostat | 381.8 | 33.2 | 0 | 0.89 | Unit | 12 | 0 | $ 50.00 | $ 58.00 | - | - | - |
| 2007 | 312002 | Natural Gas Storage Water Heater (EF>= 0.63) | 0 | 10.078 | 0 | 0.89 | Hot Water Tank | 13 | 150 | $ 30.00 | $ 175.30 | - | 1,345 | - |
| 2007 | 312003 | Central Gas Furnace 90% AFUE | 0 | 22.382 | 0 | 0.89 | per 38 kBtuh Unit | 18 | 10 | $ 200.00 | $ 253.08 | - | 199 | - |
| 2007 | 312004 | Attic Insulation | 0 | $ 0.05 | $ 0.00 | 0.89 | 1000 sqft roof, 1000 SqFt | 20 | 60000 | $ 0.15 | $ 0.76 | 9,599 | 2,416 | 5 |
| 2007 | 312005 | Wall Insulation | 0 | $ 0.06 | $ 0.00 | 0.89 | sqft | 20 | 30000 | $ 0.15 | $ 1.32 | 2,600 | 1,631 | 4 |
| 2007 | 312006 | Faucet Aerator | - | $ 6.05 | $ - | 0.89 | Household | 9 | 0 | $ 1.00 | $ 7.12 | - | - | - |
| 2007 | 312007 | Low-Flow Showerhead | - | $ 8.06 | $ - | 0.89 | Showerhead | 10 | 0 | $ 1.00 | $ 37.95 | - | - | - |
| 2007 | 312008 | Central System Natural Gas Water Heater | - | $ 257.00 | $ - | 0.89 | Unit | 15 | 150 | $ 500.00 | $ 1,701.00 | - | 34,310 | - |
| 2007 | 312009 | Central System Gas Boiler: Water Heating Only | - | $ 750.00 | $ - | 0.89 | Unit | 20 | 400 | $ 1,500.00 | $ 4,060.00 | - | 267,000 | - |
| 2007 | 312010 | Central System Gas Boiler: Space and Water Heating | - | $ 1,900.00 | $ - | 0.89 | Unit | 20 | 100 | $ 1,500.00 | $ 4,060.00 | - | 169,100 | - |
| 2007 | 312011 | Energy Star Dishwasher (EF=.58) | - | $ 3.20 | $ - | 0.8 | Dishwasher | 13 | 0 | $ 15.00 | $ 133.64 | - | - | - |
| 2007 | 312012 | Gas Wtr Htr Controller (<30 units) Pre 1970 | - | $ 1,125.00 | $ - | 0.89 | Unit | 10 | 225 | $ 750.00 | $ 1,400.00 | - | 225,281 | - |
| 2007 | 312014 | Gas Wtr Htr Controller (>= 30 units) Pre 1970 | - | $ 2,250.00 | $ - | 0.89 | Unit | 10 | 300 | $ 1,500.00 | $ 1,550.00 | - | 600,750 | - |
| 2007 | 312015 | Gas Wtr Htr Controller (<30 units) Post 1970 | - | $ 850.00 | $ - | 0.89 | Unit | 10 | 160 | $ 750.00 | $ 1,400.00 | - | 121,040 | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2007 | 312017 | Clothes Washer Energy Star Tier II MEF = 1.60 (In Coin-Op Laundry Area) | - | $ 20.60 | $ - | 0.8 | Clothes Washer, CWasher | 10 | 0 | $ 50.00 | $ 606.86 | - | - | - |
| 2007 | 312018 | Clothes Washer Tier I (Located In Apartment Unit) MEF=1.42 | - | $ 3.33 | $ - | 0.8 | Clothes Washer, CWasher | 14 | | $ 35.00 | $ 368.21 | - | - | - |
| 2007 | 312019 | Clothes Washer Tier II (Located In Apartment Unit) MEF=1.60 | - | $ 5.75 | $ - | 0.8 | Clothes Washer, CWasher | 14 | 0 | $ 50.00 | $ 411.99 | - | - | - |
| 2007 | 312021 | Energy Star Dishwasher Tier I (EF=.62) | - | $ 3.90 | $ - | 0.8 | Dishwasher, DWasher | 13 | 50 | $ 30.00 | $ 183.64 | - | 156 | - |
| 2007 | 312022 | Energy Star Dishwasher Tier II (EF=.68+) | - | $ 4.90 | $ - | 0.8 | Dishwasher, DWasher | 13 | 0 | $ 50.00 | $ 383.64 | - | - | - |
| 2007 | 312023 | Central gas Furnace 92% AFUE | - | $ 25.99 | $ - | 0.89 | 38 kBtuh unit | 18 | 0 | | $ 289.94 | - | - | - |
| 2007 | 312024 | Central Gas Furnace 94% AFUE | - | $ 29.49 | $ - | 0.89 | 38 kBtuh unit | 18 | 0 | | $ 326.80 | - | - | - |
| 2007 | 312025 | Tankless Water Heater | - | $ 30.24 | $ - | 0.89 | Tank, WtrHtr | 20 | 0 | | $ 370.64 | - | - | - |
| 2007 | 312026 | Clothes Washer Energy Star Tier III MEF = 1.80 (In Coin-Op Laundry Area) | - | $ 35.40 | $ - | 0.8 | Clothes Washer, CWasher | 10 | 0 | | $ 518.78 | - | - | - |
| 2007 | 312027 | Gas Wtr Htr Controller (>=30 units) Post 1970 | | $ 1,699.00 | | 0.89 | Unit | 10 | 250 | $ 1,500.00 | $ 1,550.00 | - | 378,028 | - |
| 2007 | 312028 | Pipe Wrap | - | $ 7.50 | $ - | 0.89 | Household | 15 | 0 | | $ 2.81 | - | - | - |
| 2008 | 312001 | Programmable Thermostat | 382 | $ 33.20 | $ - | 0.89 | Unit | 12 | 0 | $ 50.00 | $ 58.00 | - | - | - |
| 2008 | 312002 | Natural Gas Storage Water Heater (EF>= 0.63) | - | $ 10.08 | $ - | 0.89 | Hot Water Tank | 13 | 200 | $ 30.00 | $ 175.30 | - | 1,794 | - |
| 2008 | 312003 | Central Gas Furnace 90% AFUE | - | $ 22.38 | $ - | 0.89 | per 38 kBtuh Unit | 18 | 35 | $ 200.00 | $ 253.08 | - | 697 | - |
| 2008 | 312004 | Attic Insulation | 0 | $ 0.05 | $ 0.00 | 0.89 | 1000 sqft roof, 1000 SqFt | 20 | 85000 | $ 0.15 | $ 0.76 | 13,598 | 3,423 | 8 |
| 2008 | 312005 | Wall Insulation | 0 | $ 0.06 | $ 0.00 | 0.89 | sqft | 20 | 50000 | $ 0.15 | $ 1.32 | 4,333 | 2,718 | 6 |
| 2008 | 312006 | Faucet Aerator | - | $ 6.05 | $ - | 0.89 | Household | 9 | 0 | $ 1.00 | $ 7.12 | - | - | - |
| 2008 | 312007 | Low-Flow Showerhead | - | $ 8.06 | $ - | 0.89 | Showerhead | 10 | 0 | $ 1.00 | $ 37.95 | - | - | - |
| 2008 | 312008 | Central System Natural Gas Water Heater | - | $ 257.00 | $ - | 0.89 | Unit | 15 | 400 | $ 500.00 | $ 1,701.00 | - | 91,492 | - |
| 2008 | 312009 | Central System Gas Boiler: Water Heating Only | - | $ 750.00 | $ - | 0.89 | Unit | 20 | 450 | $ 1,500.00 | $ 4,060.00 | - | 300,375 | - |
| 2008 | 312010 | Central System Gas Boiler: Space and Water Heating | - | $ 1,900.00 | $ - | 0.89 | Unit | 20 | 125 | $ 1,500.00 | $ 4,060.00 | - | 211,375 | - |
| 2008 | 312011 | Energy Star Dishwasher (EF=.58) | - | $ 3.20 | $ - | 0.8 | Dishwasher | 13 | 0 | $ 15.00 | $ 133.64 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2008 | 312012 | Gas Wtr Htr Controller (<30 units) Pre 1970 | - | $ 1,125.00 | $ - | 0.89 | Unit | 10 | 225 | $ 750.00 | $ 1,400.00 | - | 225,281 | - |
| 2008 | 312014 | Gas Wtr Htr Controller (>= 30 units) Pre 1970 | - | $ 2,250.00 | $ - | 0.89 | Unit | 10 | 250 | $ 1,500.00 | $ 1,550.00 | - | 500,625 | - |
| 2008 | 312015 | Gas Wtr Htr Controller (<30 units) Post 1970 | - | $ 850.00 | $ - | 0.89 | Unit | 10 | 250 | $ 750.00 | $ 1,400.00 | - | 189,125 | - |
| 2008 | 312017 | Clothes Washer Energy Star Tier II MEF = 1.60 (In Coin-Op Laundry Area) | - | $ 20.60 | $ - | 0.8 | Clothes Washer, CWasher | 10 | 0 | $ 50.00 | $ 606.86 | - | - | - |
| 2008 | 312018 | Clothes Washer Tier I (Located In Apartment Unit) MEF=1.42 | - | $ 3.33 | $ - | 0.8 | Clothes Washer, CWasher | 14 | 0 | $ 35.00 | $ 368.21 | - | - | - |
| 2008 | 312019 | Clothes Washer Tier II (Located In Apartment Unit) MEF=1.60 | - | $ 5.75 | $ - | 0.8 | Clothes Washer, CWasher | 14 | 0 | $ 50.00 | $ 411.99 | - | - | - |

# 2006-2008 Energy Efficiency Programs
# Home Energy Efficiency Survey Concept Paper

## 1. Projected Program Budget

| | 2006 | 2007 | 2008 |
|---|---|---|---|
| Administration | | | |
| Administrative Overheads | $ 28,571 | $ 28,571 | $ 33,333 |
| Administrative Other | $ 106,054 | $ 108,951 | $ 111,934 |
| Marketing & Outreach | $ 53,310 | $ 50,051 | $ 61,933 |
| Direct Implementation | | | |
| Incentives | $ - | $ - | $ - |
| Activity | $ 400,000 | $ 400,000 | $ 480,000 |
| Installation | $ - | $ - | $ - |
| Hardware & Materials | $ - | $ - | $ - |
| Rebate Processing & Inspection | $ 12,065 | $ 12,427 | $ 12,800 |
| EM&V | $ - | $ - | $ - |
| *Total* | *$ 600,000* | *$ 600,000* | *$ 700,000* |

## 2. Projected Program Impacts

| 2006 | | | 2007 | | | 2008 | | |
|---|---|---|---|---|---|---|---|---|
| Net kWh | Net kW | Net Therms | Net kWh | Net kW | Net Therms | Net kWh | Net kW | Net Therms |
| - | - | - | - | - | - | - | - | - |

## 3. Program Cost Effectiveness

N/A

## 4. Program Descriptors

The Home Energy Efficiency Survey (HEES) program is a statewide residential audit program that provides residential customers the opportunity to participate in a mail-in, online, over-the-phone, and in-home energy analysis of their home. The primary intent of the program is to increase customer awareness of energy efficiency opportunities and prompt participation and greater crossover with the energy efficiency rebate programs.

## 5. Program Statement

There is a gap between information about energy efficiency programs and steps for customers to take in order to obtain measurable energy benefits in their homes. The HEES program provides specific energy-efficiency recommendations about each household equipment and offers comprehensive information that assist customers to understand, manage, and reduce their use of energy. The Home Energy Efficiency Survey is an effective tool to attract customers to rebate programs and to the idea of energy efficiency - two considerations that make the program so important.

## 6. Program Rationale

The HEES program provides customers with timely information at no charge which assists them with understanding, managing, and reducing energy use in their homes. The program provides guidelines for helping customers to adopt energy efficiency products and to making informed purchase decisions.

The statewide HEES program is a comprehensive multilingual-focused program designed to reach a wide range of customers by offering four types of energy survey options: mail-in, online, over-the-phone, and in-home analysis. HEES provides practical information that customers can use to better understand energy use in their home and to empower them to make educated decisions related to energy efficiency and equipment upgrades. This multi-faceted approach recognizes that customers have distinct needs that may make one type of delivery channel more appealing than another. As a result, the HEES program is positioned to reach the largest number of customers possible by providing multiple options for customer's participation, including hard-to-reach customers who typically have less access to program alternatives. All delivery channels help customers understand how their behavior can affect energy costs, how to improve their homes' energy efficiency, and what additional resources and programs are available to help reduce energy use.

Enhancements to the mail-in and online surveys include tracking customer's adoption of energy efficiency recommendations, and communications to keep customers engaged in saving energy and money. The enhancements are intended to create a stronger link to energy efficiency rebate programs and other offerings.

## 7. Program Outcomes

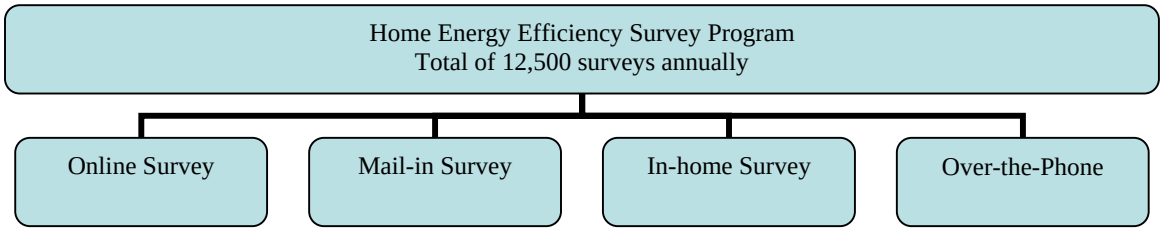
The program is designed to provide valuable information so customers can:

- Save energy and money;
- Make their home more comfortable;
- Discover additional resources and programs that are available to help reduce energy use; and
- Explore mechanisms for capturing and claiming confirmed energy savings for projects that install but do not require a financial incentive or rebate through any of the energy efficiency programs

The statewide HEES program provides customers with information at no charge to help them become familiar with ways to control and reduce energy usage in their home. SoCalGas and the participating statewide utility companies will continue to expand efforts to reach customers who have yet to take advantage of the many utility company programs and energy efficiency services. SoCalGas and participating statewide utility companies will continue to focus on improving the current program by increasing participation, ensuring customer equity, and providing innovative approaches to program participation and by coordinating with other existing programs to maximize program efficiency.

## 8. Program Strategy

The program provides comprehensive, multilingual mail-in, online, over-the phone, and in-home energy efficiency surveys to SoCalGas residential customers with energy efficiency information to help them reduce their energy bills. Customers receive customized energy recommendations and information on incentive and rebate programs via internet, mail, or in the home.




The marketing plan will include targeted direct mail campaigns that take into consideration a greater set of criteria and customer behavior than the predecessor program. The program will initiate online marketing and coordination with statewide marketing agencies and new outreach channels. SoCalGas will also explore opportunities to coordinate with community-based organizations (CBO) and faith-based organizations (FBO) to directly deliver program services.

### 8.1.1. Program Strategy Description

Online Interactive

The interactive online survey is easily accessible via the SoCalGas and joint utility companies' websites. The feature allows customers to obtain immediate results by answering specific questions regarding their home energy appliances and usage patterns. This online home energy survey offers two options to the customers. It is available in the short and extended versions. It only takes a few minutes to complete and provides an analysis of energy use in their home as well as energy-saving recommendations. The on-line tool, along with the other survey options, provides customers the opportunity to change input variables and provide updates on energy efficiency improvements to the home for a follow up analysis. In addition, promotions may be offered to increase customer participation.

Mail-In

Participating customers receive a survey either through direct mail, from SoCalGas and joint utility company's statewide contractor, or by printing a hardcopy from either Utility's website. Customers will mail completed surveys to a statewide mail-in survey contractor for processing. Once received, surveys are

analyzed against customer billing data to produce an energy analysis report containing customized results. SoCalGas and the joint utility company will provide integrated customer billing data which will include natural gas and electric energy savings recommendations to improve the effectiveness of the reporting. Reports include 1) an end-use breakdown of natural gas and electricity, 2) monthly usage trend graph, and 3) a set of recommendations, with corresponding estimated savings that are appropriate for each customer based on Utility input and customer survey responses. Additionally, reports include information on energy efficiency products and services, rebate programs, and other energy-related information to encourage adoption of energy efficiency measures identified through the energy survey.

In-Home Survey

Customers in SoCalGas service territory may participate in this program component by contacting the statewide contractor. This approach provides customers, particularly hard-to-reach customers who do not respond to Internet and mail-in survey options, with a more personalized, face-to-face energy survey option. A specially trained energy auditor inspects the home and can provide the customer with immediate answers to basic questions, as well as specific recommendations on how customers can save energy and manage cost based on their home and lifestyle. In addition, promotions may be offered to increase customer participation, such as, the replacement of low-flow showerheads and aerators to help reduce both natural gas and water consumption.

Over-the-phone Survey

This program component is primarily targeted to customers who are inclined to participate in the In-home survey, but prefer it to be done without a contractor entering the home. A specially trained energy auditor will talk with the customer via telephone about each utility appliance in the residence. During the call, energy usage data is gathered and provided to the customer with can include immediate answers to basic questions. In addition, a final in-depth analysis report is mailed to the customer.

### 8.1.2. Program Indicators

Program success will be evaluated on the basis of number of audits/surveys achieved relative to stated target, for each of the four delivery channels. Program effectiveness will also be based on participation in other programs (i.e. Single Family Home Energy Efficiency Retrofit Program and Multi-Family Energy Efficiency Retrofit Program) as a result of initial contact with HEES. The program effectiveness in educating customers will be measured either by pre- and post-program questionnaires to measure energy-efficiency knowledge differences, or by a post-program survey comparing the knowledge levels of participants to non-participants. Program effectiveness will also be measured by customer satisfaction with the program processes.

## 9. Program Implementation

Utility companies participating in the statewide HEES program may provide incentives to residential customers who complete the surveys online in order to increase customer's response rate to solicitation materials. In addition, the utility companies will increase program visibility and accessibility through leveraging of existing rebate programs with marketing partnerships. Details on any pilot marketing promotion will be reported in each utility's quarterly reports to the Commission.

The program will continue to work closely with statewide programs to maximize program efficiency. Its current design incorporates cross marketing of other information, service and rebate programs to include statewide marketing and outreach programs.

Because of its comprehensive approach, the HEES program can effectively target customers while communicating and cross-selling other energy efficiency programs and services. All four surveys will be coordinated with the other residential energy efficiency programs offered by the utility companies participating in the statewide program. Customized messages on energy efficiency programs, rebates, promotional webpage, and links will be added to specific energy efficiency recommendations in the mail-in and online surveys. Once customers complete the surveys, reports sent back to the customers include information on the customers' home energy use, available energy efficiency products, services and information on rebate programs offered by the IOUs.

SoCalGas will work in partnership with SCE to offer common customers a single in-home survey, covering both natural gas and electric energy savings information.

## 10. Customer Description

HEES online, mail-in, over-the-phone, and in-home surveys are available to most residential customers in the Southern California Gas Company service area.

**11. Customer Interface**

The program targets residential customers in three distinct market segments: 1) customers with frequent internet access, at home and work, 2) customers with limited online access, and 3) hard-to-reach customers with limited or no online access who prefer a more personalized face-to-face in-home survey option.

*Customers with frequent internet access, at home and work* - The interactive online survey provides customers who frequently access the internet with an interactive feature easily accessible on utility websites, which allows customers to obtain immediate results by answering specific questions regarding their home energy use online. This online home energy analysis only takes few minutes to complete, and provides an analysis of energy use in their home as well as energy-saving recommendations.

*Customers with limited online access* - The written version of the survey is currently available in English, Spanish, Chinese, Vietnamese and Korean. This mail-in survey version allows customers with limited or no online access the flexibility of an easy-to-complete mail-back format.

The in-home and over-the –phone survey provides customers, particularly hard-to-reach customers who may not respond to online and mail-in survey options, with a more personalized survey alternative. Residential customers residing in the SoCalGas service area may participate in this program component by contacting the Utility's statewide survey contractor.

**12. Energy Measure and Program Activities**

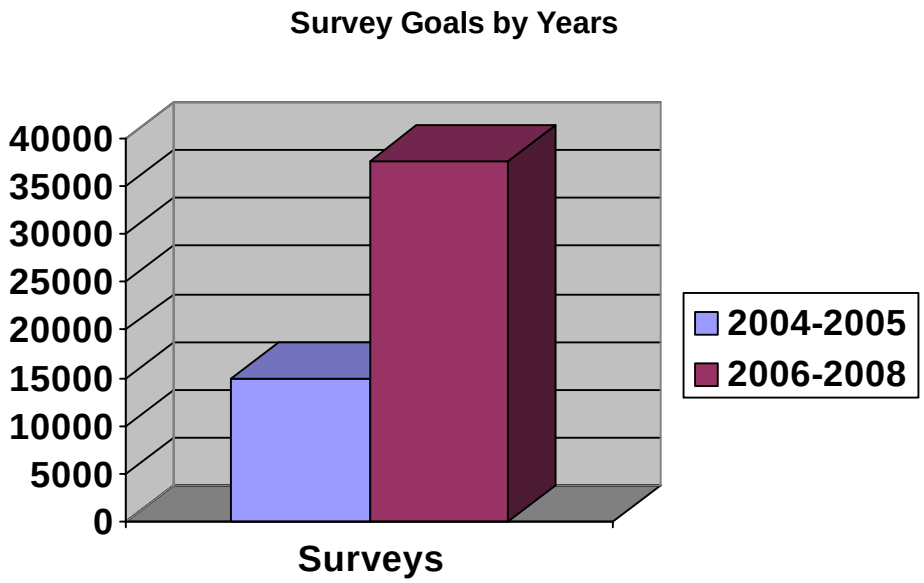
**12.1. Prescriptive Measures**

Not applicable.

**12.2. kWh Level Data**

Not applicable.

**12.3. Non-energy Activities** (Audits, Trainings, etc.)



**14. Subcontractor Activities**

Statewide Mail-In Survey Subcontractor - SoCalGas is currently planning to team with SCE to gain synergies resulting from the selection of a single subcontractor to provide on-line and mail-in surveys and reports to customers located within the combined SoCalGas and SCE service area.

In-Home Survey subcontractor - SoCalGas is currently planning to team with SCE to contract with a subcontractor to provide in-home and over-the-phone survey/audits to customers located within the combined SoCalGas and SCE service area.

Online Survey Subcontractor - SoCalGas is currently planning to team with SCE to contract with a subcontractor to provide web and software support to provide online surveys to customers located within the combined SoCalGas and SCE service area.

**15. Quality Assurance and Evaluation Activities**

An evaluation plan will be developed in accordance with the soon-to-be developed EM&V Protocols. The CPUC Energy Division will be holding meetings, workshops, and possibly hearings throughout the summer to develop these Protocols. SoCalGas looks forward to participating and commenting on those activities and plans to file EM&V plans for all programs on October 1, 2005 in conjunction with the ED, CEC, and the other IOUs

**16. Marketing Activities**

The program will incorporate a variety of marketing approaches to promote its availability and increase outreach. Because utility service areas and customer segments are unique, marketing efforts may be tailored by each utility to obtain maximum effectiveness and the highest response rate. Where practical, utilities will jointly launch marketing efforts, and will explore opportunities to coordinate with CBO and FBO in outreach and provide services to traditionally hard-to-reach areas. These CBO and FBO may include churches, community centers, adult schools and senior centers. Similarly, the utility will continue to coordinate closely with the statewide marketing and outreach campaign.

**17. CPUC Objective**

SoCalGas satisfies CPUC D.04-09-050 in that HEES coordinates and supports the Single Family Home Energy Efficiency Retrofit Program and Multi-Family Energy Efficiency Retrofit Program to maximize the energy efficiency savings.

SoCalGas satisfies CPUC Decision (D.) 04-09-060 by teaming with other IOUs to implement one cohesive, comprehensive, complimentary, and cost-effective statewide HEES program.

# 2006-2008 Energy Efficiency Programs
# Home Energy Efficiency Survey Concept Paper

SoCalGas satisfies CPUC D.05-01-055 by considering innovative programs to meet savings and cost effective energy efficiency goals. The HEES program will provide relevant information and education to over 100,000 customers over the course of three (3) years of the program.

(1) pursue all cost-effective energy efficiency opportunities over both the short- and long-term
(2) focus on programs that serve as alternatives to more costly supply-side resource options
(3) pursuing the most cost-effective energy efficiency resource programs first, while minimizing lost opportunities
(4) convey a consistent statewide message to energy consumers in all sectors
(5) PGC funds spent in the service territory from which the funds were collected and fund natural gas energy efficiency programs.

| | SCG3509 HES4-Home Energy Efficiency Survey | |
|---|---|---|
| **BUDGET** | | |
| | | |
| **Administrative Costs** | **$** | **417,416** |
| Overhead and G&A | $ | 90,476 |
| Other Administrative Costs | $ | 326,939 |
| **Marketing/Outreach** | **$** | **165,293** |
| **Direct Implementation** | **$** | **1,317,291** |
| Total Incentives and Rebates | $ | - |
| User Input Incentive | $ | - |
| Direct Install Rebate | $ | - |
| Direct Install Labor | $ | - |
| Direct Install Materials | $ | - |
| Activity | $ | 1,280,000 |
| Installation | $ | - |
| Hardware & Materials | $ | - |
| Rebate Processing & Inspection | $ | 37,291 |
| **EM&V Costs** | **$** | - |
| **Budget** | **$** | **1,900,000** |
| **Costs recovered from other sources** | **$** | - |
| **Budget** (plus other costs) | **$** | **1,900,000** |
| | | |
| **PROGRAM IMPACTS** | | |
| **Program Reductions for Measures installed through 2008** | | |
| User Entered kW (kW) | | - |
| Net Jul-Sept Peak (kW) | | - |
| Net Dec-Feb Peak (kW) | | |
| Net NCP (kW) | | |
| Net CEC (kW) | | - |
| Annual Net kWh | | - |
| Lifecycle Net kWh | | - |
| Annual Net Therms | | - |
| Lifecycle Net Therms | | - |
| | | |
| **Cost Effectiveness** | | |
| **TRC** | | |
| Costs | $ | 1,900,000 |
| Electric Benefits | $ | - |
| Gas Benefits | $ | - |
| Net Benefits (NPV) | $ | (1,900,000) |
| BC Ratio | | - |
| | | |
| **PAC** | | |
| Costs | $ | 1,900,000 |
| Electric Benefits | $ | - |
| Gas Benefits | $ | - |
| Net Benefits (NPV) | $ | (1,900,000) |
| BC Ratio | | - |
| | | |
| **Levelized Cost** | | |
| **Levelized Cost TRC ($/kWh )** | | |
| Discounted kWh | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |
| **Levelized Cost PAC ($/kWh)** | | |
| Discounted kWh | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |
| **Levelized Cost TRC ($/therm)** | | |
| Discounted Therms | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |
| **Levelized Cost PAC ($/therm)** | | |
| Discounted Therms | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |

# NONRESIDENTIAL PROGRAMS

## 1. Projected Program Budget

| | 2006 | 2007 | 2008 |
|---|---|---|---|
| Administration | | | |
| Administrative Overheads | $ 252,764 | $ 365,666 | $ 434,009 |
| Administrative Other | $ 782,332 | $ 1,016,352 | $ 1,144,021 |
| Marketing & Outreach | $ 1,155,588 | $ 1,698,072 | $ 2,017,343 |
| Direct Implementation | | | |
| Incentives | $ 2,098,419 | $ 3,301,277 | $ 3,910,285 |
| Activity | $ 597,206 | $ 799,537 | $ 1,058,628 |
| Installation | $ - | $ - | $ - |
| Hardware & Materials | $ 375,000 | $ 450,000 | $ 500,000 |
| Rebate Processing & Inspection | $ 46,741 | $ 48,092 | $ 49,905 |
| EM&V | $ - | $ - | $ - |
| *Total* | *$ 5,308,050* | *$ 7,678,996* | *$ 9,114,191* |

## 2. Projected Program Impacts

| 2006 | | | 2007 | | | 2008 | | |
|---|---|---|---|---|---|---|---|---|
| Net kWh | Net kW | Net Therms | Net kWh | Net kW | Net Therms | Net kWh | Net kW | Net Therms |
| - | - | 2,734,192 | - | - | 3,934,342 | - | - | 4,740,588 |

## 3. Program Cost Effectiveness

Attached

## 4. Program Descriptors

Express Efficiency is an existing statewide rebate program targeting all nonresidential customers encouraging the adoption of selected energy-efficient technologies. SoCalGas' program focuses on replacing existing energy efficient natural gas equipment, and encouraging customers to move up to higher than standard efficiency models when purchasing additional equipment for their established business.

New components in the 2006-2008 program will expand the opportunity to obtain energy savings SoCalGas will expand the outreach of this rebate program to remote rural small business communities by deploying a grass-roots outreach team who will offer on-site audits as well as assisting customers with rebate application process. . SoCalGas will also offer their DSM programs to the non-core market for the first time in 2006-2008. An on-line energy audit tool, in multiple languages is available at the SoCalGas' website, offering 24/7 convenience to business customers

## 5. Program Statement

Express Efficiency is an existing statewide rebate program targeting nonresidential customers. These commercial and industrial business owners are facing increasing energy costs and higher production demands. Business customers are not always aware of which product models are the most energy efficient or how choosing the

higher efficient models can lower their energy bills. Many business owners are reluctant to move from the standard efficiency models to the higher efficiency models because of the increased incremental cost of the high efficiency models.

**6. Program Rationale**

Express Efficiency is designed to encourage nonresidential customers to replace their inefficient equipment with high efficient models that exceed established efficiency standards, lowering their energy costs while increasing or at least stabilizing production with lower bills and less energy demands on the statewide natural gas supply. The program will integrate information and financial incentives to assist commercial and industrial customers adopt energy efficiency practices.

The customers are provided rebates to help offset the incremental cost increase of moving to higher efficient models when retrofitting current equipment, or purchasing additional equipment for long term production increases. The program design prescribes what measures may be installed in a very straightforward and customer-friendly design that helps ensure that all size customers have a hassle-free, reliable means to decrease their energy usage and make their business more energy efficient.

The latest energy efficiency potential studies indicate that there are substantial cost effective savings available within California. Past studies of Express Efficiency indicate a high customer satisfaction with the program and substantial energy savings from the installed measures. These two combine to show that the program provides an effective avenue to help meet the State's energy efficiency potential. The previously standalone "Statewide Non Residential Audit program" has been merged with this program to achieve closer coordination between audits results and rebate applications. The audits offer help for customers to assess energy efficiency opportunities and directly link them to energy efficiency rebate and incentive programs. The "Remote Small Business Outreach" component will expand the reach of this rebate program to very hard-to-reach rural small business customers by offering immediate energy efficiency recommendations at the time of the audit.

Express Efficiency has had many successes over the years:

- The program has produced enormous energy savings at a reasonable cost per therm;
- The measures offered are always in evolution to ensure that the most energy efficient equipment is included in the program;
- The program has further evolved to welcome other entities into the program delivery. Outreach has and will be expanded to include coordination with community-based organizations (CBOs), and faith-based organizations (FBOs), trade associations, and other stakeholders.

The proof of the demand for and success of the Express Efficiency program is apparent. Other parties continue to emulate its design in their local programs. The Express Efficiency program will continue to coordinate efforts with other entities,

while it guarantees that all customers, statewide, have equitable access to energy efficiency alternatives, regardless of their geographic location, business size or primary language.

Equity for smaller customers is also very important for the Express Efficiency program. The needs and desires of smaller customers influence the program design and the selection of measures. The prescriptive approach was selected because it considers the needs of smaller customers, by eliminating the barrier of product selection. All aspects of planning take into regard how best to serve all customers.

As successful as the program has been, SoCalGas is always looking to improve its energy efficiency programs based on the feedback and the results of previous years' efforts. Statewide energy potential forecasts indicate that a significant untapped savings potential still exists for this program to capture. Consequently, the Express Efficiency program has created two-tier pipe and tank insulation measures: 1" and 2" insulations. With the introduction of 1" insulation, customers whose pipes and tanks could not take advantage of 2" insulation offered in the 2004-2005 program due to space constrains can now insulate and save energy.

A separate measure cap for Greenhouse Heat Curtains only, was instated in 2005 by SoCalGas, and will continue in 2006-2008. This measure cap will allow more Greenhouse/Agricultural customers to participate in the program without depleting the Express Efficiency incentive budget, thereby allowing more businesses to participate in the program.

The program is popular with customers and vendors alike due to its familiar, user-friendly design, as well as the fact that it generates substantial cost-effective energy savings that result in lower energy bills. Over the years, participants have used the program to increase energy efficiency and reduce energy costs within their facilities. Vendors have also consistently used the program to sell energy efficient equipment. In many cases, the customer's assurance of receiving a rebate actually makes the sale, and the rebate frequently serves as the down payment on the energy-related project.

Innovation within Express Efficiency has taken many forms. It has included redesign of applications making them easier to complete, on-line availability of program updates and rebate forms, an e-mail newsletter for program information, inclusion of new state-of-the-art measures every year, energy seminars, CBO presentations, and the option to reserve funds. The program embraces change and is committed to meeting customers' needs. In 2006, Express Efficiency will actively recruit local communities to provide an innovative means of program delivery. For example, with SoCalGas assistance, CBOs will have the opportunity to provide input on local needs and market the program to their community through special events or tailored mail-outs.

The program design makes customer participation easy and hassle-free, because:

- The program lists specific energy saving measures, so the customer does not need to take time to search out energy efficient technologies;
- The program Terms and Conditions clearly state the eligible product specifications and rebate levels;
- The customer purchases the product from whomever they choose and have it installed at their account address;
- The customer simply sends in the rebate form along with the itemized paid invoice. Shortly thereafter, the customer receives a rebate check.

SoCalGas offers rebate measures that are organized into the following end uses.

- Space Heating
- Water Heating/Steam Generation
- Agricultural
- Pipe and Tank Insulation
- Residential Equipment used in Commercial business.

As new energy efficient measures are identified, measure costs change or marketing opportunities / failures are identified, the Statewide Express Efficiency Program Managers will make adjustments to the measures list or rebate amounts. This continuous updating will ensure that the program remains robust, opportunities to reach and exceed program goals are not missed, and customers benefit from a nimble program design. To stay abreast of new, yet proven technologies, and to better meet the needs of all nonresidential customers, Express Efficiency will continue to solicit information from industry experts, vendors and customers to provide input as to new innovative measures that might be added, or how the program could be improved.

**7. Program Outcomes**

The main objective of this program is to achieve cost effective therm savings, by encouraging commercial and industrial business owners to upgrade their current and any additional inefficient equipment they might purchase to higher efficiency models, thereby lowering their energy consumption, while reducing the demand for energy across the state. SoCalGas' therm goals are shown above in #2 - Projected Program Impacts.

**8. Program Strategy**

The Program will use multiple participation channels with minimum work required on the part of the customer to increase participation. These delivery channels will primarily include:

- Nonresidential Downstream Deemed Rebates
- Nonresidential Audits
- Nonresidential Midstream Channel delivery

New measures will be assessed and added if cost effective. Additionally, terms & conditions of the Program will be evaluated and changes made to open up areas that have the opportunity to create energy savings. The on-line energy audit tool, available through the SoCalGas' website in multiple languages, offers 24/7 convenience to all business customers. In addition, SoCalGas will significantly increase its offering of on-site audit services in 2006-2008. In many cases, this will lead to adoption of higher efficiency choices.

### 8.1.1. Program Strategy Description

Nonresidential Downstream Deemed Rebates: The customer will be able to obtain program information and technical program assistance from SoCalGas employees who work directly with these targeted customers, as well as Community Based Organizations (CBOs). These employees include, but are not limited to:

- Account Executives
- Commercial & Industrial Service Techs
- Public Affairs Managers
- Energy Program Advisors
- Specially trained C&I Call Center Customer Service Reps
- Specially trained Multi-Lingual Call Center - Customer Service Reps

Nonresidential Audit: The Express Efficiency program intends to coordinate its marketing effort with a long-standing customer favorite, the audit program. Although it is not mandatory that an audit be completed prior to an application for a rebate, the audit program will provide a roadmap to show customers how to participate in Express Efficiency.

Nonresidential Midstream Channel delivery: Coordination with vendors, particularly local ones, has been a key driver in past program successes. The vendors bring eligible products directly to the customer and make energy efficient equipment purchases convenient.

### 8.1.2. Program Indicators

The Primary objective of this program is procure cost effective energy therm savings by encouraging commercial and industrial business owners to upgrade their current and future additional equipment to higher efficiency models thereby lowering their energy consumption, while reducing the demand for energy across the state.

## 9. Program Objectives

SoCalGas' therm goals are shown above in #2 - Projected Program Impacts.

The primary objective of the Express Efficiency program is to offer cost-offsetting rebates to help customers with the installation cost of the new energy efficient equipment, which ensures customers:

- Decrease their utility bills;
- Reduce statewide gas and electric demand; and
- Save energy.

The Express Efficiency program at SoCalGas includes an Energy Audit program element. Customers who have received an Energy Audit are referred to the Express Efficiency Program as appropriate to learn about and obtain applicable rebates. This referral will assist the customers in assessing opportunities to replace old equipment with high-efficient models. Express Efficiency customers, who have not recently participated in an audit, may elect to do so to discover additional benefits of the program that they may participate in. This process will make Energy Efficiency Programs more accessible to customers, more cost effective, and increase the awareness of energy efficiency benefits. The Express Program will also provide referrals to Emerging Tech Program for potential innovative and new gas technologies.

**10. Program Implementation**

This program provides prescriptive rebates to customers for selected energy-efficient natural gas technologies. New components in the 2006-2008 program including (1) residential equipment for commercial use; (2) additional new equipment installation that falls outside of the Savings By Design program; (3) Building Owner's Rebates which allows building owner to participate in the rebate program to overcome the landlord/tenant split incentive market barrier; (4) Bulk purchasing to encourage customers who procure equipment in large quantities to consider energy efficient options; (5) Onsite audits will be offered to new turn-on business customers in high potential energy savings market segments to help them best achieve energy efficiency of their new facilities; and (6) Collaborating with Southern California Edison to provide fuel neutral on-site audits for selected customers. The expanded audit information should help increase the customers overall energy efficiency and increase both utilities overall cost effectiveness

On-line energy audit software in multiple languages will be available through SoCalGas' website to provide business customers with ready access to a user-friendly tool to assess the energy usage of their facilities and receive instant recommendations on how to improve energy efficiency of their facilities. On-site audits will provide customers instant recommendations to reduce energy usage with access to program knowledgeable representatives. Both types of audits provide customers a guide to energy efficient technology and are often requested by customers. SoCalGas' Express Efficiency Program and Business Energy Efficiency Program (BEEP) will be closely coordinated to ensure that audited customers who have implemented therm saving recommendations without design or financial

assistance will be recognized for their efforts through SoCalGas' Recognition Program where the energy savings will be captured.

The rebate and information program processes are designed to be straightforward and customer-friendly to help ensure that all customers have a hassle-free, reliable means to make their business more energy efficient and increase their profitability and competitive edge through lowered operating costs.

The SoCalGas workforce is diligently pursuing key vendors, manufacturers, distributors and sales personnel to promote the program. SoCalGas is providing all necessary paperwork to streamline the application process and get the lead information from the vendors. In addition, our call center is capturing all potential DSM participants and channeling customers to a designated person/phone number. At SoCalGas, a reservation hotline has been implemented within the SoCalGas Call Center for Chinese, Korean, Spanish and Vietnamese speaking customers.

Coordination with other entities remains a commitment of the Express Efficiency program. All entities will be required to maximize their coordination efforts. By so doing, Express Efficiency program has ensured that all customers have equitable access to energy efficiency opportunities. Now, more than at any other time, close coordination and cooperation among all stakeholders is crucial to the success of achieving energy efficiency in California.

**Third Party Bid Coordination**

Express Efficiency will examine third party programs in the SoCalGas portfolio to determine any possible link to measures offered in the Express Efficiency program and will actively coordinate with third party programs which emphasize outreach to nonresidential customers through varying modes of delivery systems, assist with vendor coordination, or offer a unique deliver mechanism that may fit well into the overall Express Efficiency concept of innovative program delivery.

**Vendor Coordination**

Coordination with vendors, particularly local ones, has been a key driver in past program successes. The vendors bring eligible products directly to the customer and make energy efficient equipment purchases convenient. Vendors know and rely on Express Efficiency to educate and assist customers with the purchase of time-proven energy efficient products. Were it not for Express Efficiency program rebates, many customers would not upgrade their less efficient equipment. IOUs value the role of vendors and will continue to work with them to serve customers well. Seminars will be given to educate vendors on new measures related to their sales specialties and to help them increase their product lines to better meet the needs of business customers.

**Local Government Coordination**

SoCalGas has always felt that working with local government agencies is crucial to meeting the needs of each unique community. SoCalGas will continue to actively work with their respective local governments to explore opportunities to increase program outreach at the local level. The coordination between utilities and local governments' programs will increase each entity's program delivery cost-effectiveness and the programs' penetration while providing better focus on the individual needs, opportunities and overcoming the barriers that prevent participation within each community.

SoCalGas will continue to work with existing Energy Efficiency Community Collaborations, and proposed community energy programs throughout its service territory. These collaborations perform as an additional Express Efficiency delivery mechanism. Their outreach components will promote and utilize measures within the Express Efficiency framework to increase the energy efficiency of the businesses within the communities they serve. Currently, the following community energy programs contain outreach components; The Energy Coalition; South Bay Cities Energy Efficiency Center; Ventura Community Regional Energy Center; and Bakersfield/Kern County Energy Watch.

**Local Program Entities Coordination**

In addition, SoCalGas representatives will actively collaborate with local program entities, networks of community based organizations (CBOs), faith based organizations (FBOs), ethnic business organizations, chambers of commerce, and customer trade associations within their respective service areas to coordinate increased program outreach efforts at the local level. This cooperative effort will result in leveraging the individual strengths of each of the entities and build upon potential synergies to overcome barriers to participation, such as language and rural geography. This approach should increase the breadth and reach of the program, while increasing program delivery efficiencies.

To ensure that customers have access to all available programs, SoCalGas will continue to identify and work with all stakeholders. Opportunities with other stakeholders exist to jointly focus on sector marketing, coordinate information dissemination, and share one-on-one customer educational opportunities. Since SoCalGas has a global view of the energy efficiency market, it will continue to direct customers to the most beneficial and appropriate resources, including those programs run by other entities. This capability to deliver quality service is why customers trust their utility as their preferred energy efficiency programs provider.

**Energy Audit Coordination**

As an integral part of the implementation plan, the Express Efficiency program intends to coordinate its marketing effort with a long-standing customer favorite, the audit program. Although it is not mandatory that an audit be completed prior to an application for a rebate, the audit program will provide a roadmap to show customers how to participate in Express Efficiency. Customers trust SoCalGas' experience, and unbiased, in-depth knowledge of all facets of energy efficiency.

Based upon the recommendations in the audit, customers will know what to install and have greater confidence in their choice to invest in Express Efficiency measures.

This natural, symbiotic relationship between the Energy Audit and Rebate programs will increase Express Efficiency participation and serve our customers' needs well. Additionally, an on-line energy audit tool, available through SoCalGas' website in multiple languages, offers 24/7 convenience to all business customers. SoCalGas will review audit delivery methods and adjust according to customer needs.

**SoCalGas Employee Program Coordination and Promotion**

Express Efficiency will coordinate its efforts with the utility Account Executives and Commercial and Industrial Service Technicians (C&I Service Techs). SoCalGas Account Executives usually have an engineering background and have been tasked to meet the needs of their assigned customers with a focus on promoting rebate programs and educate customers on energy efficiency matters. They know their customers and are well positioned to assist them to identify opportunities and overcome market barriers to achieving their full energy efficiency potential. The C&I Service Techs work closely with the customers, providing equipment service, adjustment, and safety inspections. The C&I Service Techs are fully trained in the Express Efficiency program and are alert for opportunities to assist customers in upgrading their energy inefficient equipment to high efficiency equipment through the Express Efficiency program.

SoCalGas will include a "Business Services Guide", along with other energy savings program information to new business customers as part of a "Welcome Package" concept.

**Market Barriers**

Express Efficiency is designed to overcome barriers that prevent customers, such as hard-to-reach customers from having equal access to energy efficiency alternatives. More specifically:

1. Lack of information about energy efficiency measures is mitigated by the prescriptive design of Express Efficiency. Customers and vendors are provided with specific measure descriptions to make product selection easier.
2. Energy efficiency products also become more available because vendors and manufacturers know exactly which products to stock by following the program's measure specifications.
3. Higher start up expense for high-efficiency measures is a major barrier for small and medium customers. Express Efficiency rebates help offset these costs.
4. *On-Bill Financing Option*: A customer eligible to participate in the Express Efficiency rebate program may also be eligible to take advantage of the on-bill financing option. Once qualified under the OBF Option (see OBF Program proposal for details), the participating customer would receive a reduced

rebate and finance the balance of the cost of a qualified energy efficiency package through the utility. Monthly payment on a term loan would be billed as part of the participating customer's monthly utility bill.

5. The program is designed to overcome the "split incentives" barrier. Based upon the energy efficiency project agreement, either the customer or building owner can receive the rebate.
6. The "Remote Small Business Outreach" component is designed specifically to address hard-to-reach customers and their untapped energy savings potential

The SoCalGas representative's local community involvement approach will also ensure program equity in regard to program access and will help overcome market barriers such as language, geographic location, business size, and opportunity to invest in new energy efficient equipment. The Express Efficiency program will also provide training, educational materials and technical support targeted specifically to meet the needs of the hard-to-reach customer groups.

Capital constraint is another major market barrier to upgrades to high energy efficiency equipment among small business customers. A customer eligible to participate in the Express Efficiency rebate program may also be eligible to take advantage of the on-bill financing option. Once qualified under the OBF Option (see OBF Program proposal for details), the participating customer would receive a reduced rebate and finance the balance of the cost of a qualified energy efficiency package through the utility. Monthly payment on a term loan would be billed as part of the participating customer's monthly utility bill.

SoCalGas has found the lack of technology information to be a substantial market barrier. Fortunately, based upon years of energy efficiency experience, SoCalGas understands customers' needs in this area and will continue to reach out to them in a variety of ways to provide helpful technology information.

**11. Customer Description**

To ensure equitable access to energy efficiency opportunities, Express Efficiency targets all nonresidential customers of California's four IOUs.

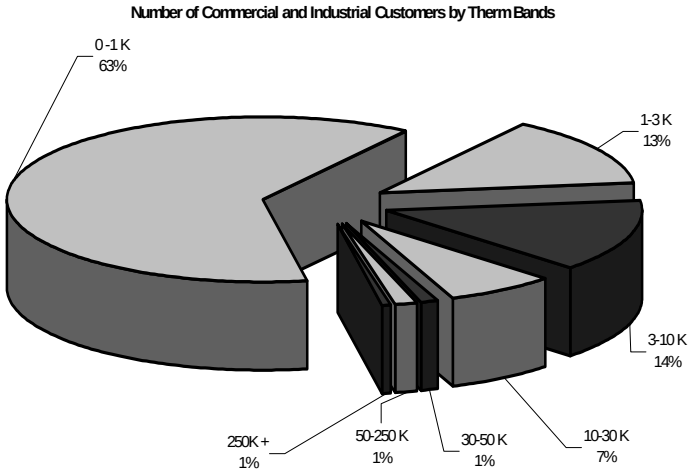
A significant number of program participants are hard to reach customers. This clearly validates the IOUs' successful efforts to identify and equitably serve this customer sector. Express will expand the outreach by means of geographically and rate targeted mailers, seminars and media announcements. The program will also coordinate its efforts with local governments, other program implementers and CBOs, FBOs, and through a grass roots outreach program

Eligible participants are all nonresidential gas customers. Customers that receive an incentive or rebate from another state or local public goods charge funded program are ineligible to receive an Express Efficiency rebate for the same measure(s).

**SoCalGas Service Territory**

SoCalGas service area encompasses 23,000 square miles of diverse terrain throughout most of Central and Southern California, from Visalia to the Mexican border. As the nation's largest natural gas distribution utility, it serves 19 million customers through 5.4 million gas meters in more than 530 communities.


**SoCalGas Non-Residential Customer Segments by Therm Band**




| | 0 -1K | 1-3 K | 3-10 K | 10-30 K | 30-50 K | 50-250 K | 250K+ | Grand Total |
|---|---|---|---|---|---|---|---|---|
| Therms (000) | 33,858 | 50,164 | 168,891 | 242,012 | 99,904 | 282,448 | 6,210,581 | 7,087,858 |
| Meters | 130,417 | 28,122 | 29,579 | 14,543 | 2,645 | 2,790 | 1,156 | 209,252 |

**12. Customer Interface**

The program will be presented to the customer through various outreach and marketing channels. The customer will be able to get program information and technical program assistance from SoCalGas employees who work directly with these targeted customers, as well as Community Based Organizations (CBOs). These employees include, but are not limited to Account Executives, C&I Service Techs, Public Affairs Managers, Energy Program Advisors, and specially trained C&I Call Center Service Reps in SoCalGas' C&I call center (GAS-2000) and its Multi-Lingual Call center.

Multilingual Express Efficiency applications and marketing materials, technical resources in English, Spanish, Korean, Chinese and Vietnamese as appropriate to the IOU's customer make-up, will also be available to ensure that the program will meet the needs of a wide variety of SoCalGas' customers.

Direct mail pieces will target economic development areas, rural areas and those areas defined as transmission constrained.

Informational pieces will also be provided through multiple channels to inform small and medium customers as to the amount of rebate available for specific energy efficient equipment.

SoCalGas also works closely with manufacturers, vendors, distributors, and trade organizations to train them to assist their customers and constituents in program utilization and value. Many of these training sessions are coordinated through SoCalGas' Energy Resource Center in Downey, CA.

**Customer Enrollment**

A rebate form must be completed and returned to the customer's local utility, within the program timeline, in order to be eligible to receive a rebate. No other type of customer enrollment is required for this program. If, however, a customer wishes to reserve a rebate in advance of their equipment purchase, they may do so by calling the SoCalGas reservation phone number.

The representatives at the toll-free number are well versed in the Express Efficiency program and can assist customers through the process of completing the rebate form.

**Materials**

Customers are solely responsible for the selection, purchase, and ownership of qualifying equipment. Customers may choose to work with a vendor to purchase and install qualifying equipment. All equipment must be new. Used or rebuilt equipment are not eligible for this program.

Customers can install qualifying measures themselves or they can hire a vendor to do the installation. In some cases, however, measures will require installation by a licensed contractor. In all cases, the customer is responsible for complying with local codes, standards, regulations and permits. The equipment must be installed pursuant to the manufacturer's specifications.

Quality installation of materials and equipment is considered to be as critical to efficiency performance as the inherent efficiency of the device itself.

**Payment of Incentives**

Equipment must be purchased and installed prior to submitting a program rebate form. An acceptable proof-of-purchase in the form of an original or copy of a paid receipt, paid vendor invoice, or equipment lease must be submitted with the completed rebate form. In addition to requesting a hard copy from the utility, customers have the option to download the appropriate Express Efficiency form from the SoCalGas' Web site. The completed rebate form and required attachments are then sent to the IOU. The rebate forms list all qualifying measures and the fixed rebate amount for each measure. Having this information available as part of the form, allows the customer to know the exact amount of their rebate payment prior to submitting the request.

Upon receipt, the rebate form is reviewed to make sure the form was completed correctly and that the submittal package includes all necessary documentation. The package must be complete before it is approved for payment. If the package is found to be incomplete, the processing center will contact the customer and make every effort to assist them in completing the paperwork. The intent is to ensure the customer has a positive experience, and will want to participate in future programs. A customer may authorize the rebate payment to be released to a vendor or other third party payee, enabling it to be used as their equipment down payment. The third party payee option often acts as a further incentive to purchase of the energy efficient equipment.

## 13. Energy Measures and Program Activities

### 13.1. Prescriptive Measures.

See SoCalGas February 1, 2006 Filing Workbook.

### 13.2. kWh Level Data

See SoCalGas February 1, 2006 Filing Workbook.

### 13.3. Non-energy Activities

#### 13.3.1. Activity Description

#### 13.3.2. Quantitative Activity Goals

#### 13.3.3. Assigned attributes of the activity (market sector, end use)

**14. Subcontractor Activities**

Subcontractor activities are expected to include:

- Online Audit Software
- On-site Audit Software

**15. Quality Assurance and Evaluation Activities**

An evaluation plan will be developed in accordance with the soon to be developed EM&V Protocols. The CPUC Energy Division will be holding meetings, workshops and possibly hearings throughout the summer to develop these Protocols. SoCalGas looks forward to participating and commenting on those activities and plans to file EM&V plans for all programs on October 1, 2005 in conjunction with the ED, CEC, and the other IOUs.

The SoCalGas Account Executives and Service Technicians also perform site inspections as part of their job responsibilities. In addition to site inspections by the SoCalGas AE's and Technicians, an inspector is expected to also inspect 5% of the applications to add additional independent verification.

**16. Marketing Activities**

Persuading customers to invest in energy efficiency requires a multi-faceted and innovative marketing approach. This approach involves the use of a combination of mail-outs, personal, and CBO-coordinated efforts. The marketing plan's primary objective is to provide all customers with equitable access to the program. SoCalGas' approach will include, but not be limited to:

- Multilingual marketing materials and technical resources in English, Spanish, Korean, Chinese and Vietnamese as appropriate to the IOU's customer make-up.
- Direct mail pieces will target economic development areas, rural areas and those areas defined as transmission constrained;
- Informational pieces to inform small customers as to the amount of rebate available for specific energy efficient equipment.
- Face-to-face contacts with customers

| One-to-one Contact | Promotional Vehicles | Delivery Vehicles | Tools |
|---|---|---|---|
| Site Visits | Trade/Association Journals | Bill inserts | Web site information |
| IOU Call Centers | Chamber Newsletters | Bill messages | Foodservice centers |
| Project Specialists | Organization Newsletters | Direct mail | Professional contacts |
| Customer Service Representatives | Local Newspapers | Conferences | CBOs |
| Account Executives | Multilingual applications/ brochures | Customized audits | FBOs |
| Phone Account Representatives | Special promotions | Vendor and trade allies | Business Improvement Districts, Economic Development groups |
| Customer-convenient Seminars | E-mail marketing | Website on-line forms | Chambers of Commerce |

| One-to-one Contact | Promotional Vehicles | Delivery Vehicles | Tools |
|---|---|---|---|
| | | | |
| Commercial and Industrial Service Reps | Targeted telemarketing | | Local Governments |
| | Contractors<br>Mobile Business Energy Clinic | Printed applications | Trade organizations |

SoCalGas may also assist local small businesses that sell energy efficient equipment to develop informational pieces for distribution to their own customers.

Other promotional strategies may include increased media coverage in minority focused publications, telemarketing, coordination with community events, FBOs and CBOs, and group workshops/seminars.

The SoCalGas Express Efficiency Web sites will provide supplemental information, including current updates of measure availability and printable forms. Forms that can be completed on-line and electronic databases of qualifying equipment are under development. Customers requiring in-depth information can also call the SoCalGas toll-free numbers to receive technical assistance, detailed program information and to make fund reservations.

**Marketing Material 2006**

| Marketing Material | Method of Distribution |
|---|---|
| Program Applications | Direct Contact, Mail, Tradeshows, Chamber Events, Website |
| Program Summary Fact Sheet | Direct Contact, Mail, Tradeshows, Chamber Events, Website |
| Vendor Guidelines/ Participation Agreement | Website |
| Advertisements | Business Journals, Newspapers |
| Customer Mailers | Direct Mail Pieces Announcing Program and/or Advertising Selected Measures |
| Trade Shows /Seminars | Community Based Organizations, Vendor Seminars |
| Electronic Mailers | E-mails & Website Advertising Program |

**17. CPUC Objective**

The SoCalGas Statewide Express Efficiency Program will :

1. Reduce the environmental impact (including the greenhouse gas emissions) associated with the state's energy consumption, to protect the public's

health and safety by promoting more efficient gas burning equipment, which will use less natural gas, releasing less emissions into the atmosphere.

2. Pursue all cost-effective energy efficiency opportunities over the short- and long-term so that they will meet or exceed the annual and cumulative savings goals by promoting proven energy saving equipment and technologies.

3. Keep energy resource procurement costs as low as possible through the deployment of a cost-effective portfolio of resource programs, and by utilizing many in-house resources to promote and meet the overall program goals.

4. Minimize "Lost opportunities" by combining other low cost energy efficiency measures or in tandem with other load-reduction technologies, such as utilizing the audit tool to uncover all potential energy saving opportunities, and by promoting the combination of measures to create a comprehensive package of energy saving options. An example would be promoting not only boiler upgrades, but also the installation of both tank and pipe insulation as well as additional measures that pertain to that customer.

5. Continue to ensure Program Administrators manage their portfolio of energy efficiency programs to meet or exceed the short- and long-term savings goals established by the Commission by pursuing the most cost-effective energy efficiency resource programs first, while minimizing lost opportunities.

| | SCG3507 EXP4-Express Efficiency Rebate Program | |
|---|---|---|
| **BUDGET** | | |
| | | |
| **Administrative Costs** | **$** | **3,995,144** |
| Overhead and G&A | $ | 1,052,439 |
| Other Administrative Costs | $ | 2,942,705 |
| **Marketing/Outreach** | **$** | **4,871,003** |
| **Direct Implementation** | **$** | **13,235,090** |
| Total Incentives and Rebates | | |
| User Input Incentive | $ | - |
| Direct Install Rebate | $ | 9,309,982 |
| Direct Install Labor | $ | - |
| Direct Install Materials | $ | - |
| Activity | $ | 2,455,371 |
| Installation | $ | - |
| Hardware & Materials | $ | 1,325,000 |
| Rebate Processing & Inspection | $ | 144,737 |
| **EM&V Costs** | **$** | - |
| **Budget** | **$** | **22,101,237** |
| **Costs recovered from other sources** | **$** | - |
| **Budget** (plus other costs) | **$** | **22,101,237** |
| | | |
| **PROGRAM IMPACTS** | | |
| **Program Reductions for Measures installed through 2008** | | |
| User Entered kW (kW) | | - |
| Net Jul-Sept Peak (kW) | | - |
| Net Dec-Feb Peak (kW) | | - |
| Net NCP (kW) | | - |
| Net CEC (kW) | | - |
| Annual Net kWh | | - |
| Lifecycle Net kWh | | - |
| Annual Net Therms | | 11,409,123 |
| Lifecycle Net Therms | | 141,261,155 |
| | | |
| **Cost Effectiveness** | | |
| **TRC** | | |
| Costs | $ | 25,379,477 |
| Electric Benefits | $ | - |
| Gas Benefits | $ | 56,043,034 |
| Net Benefits (NPV) | $ | 30,663,556 |
| BC Ratio | | 2.21 |
| | | |
| **PAC** | | |
| Costs | $ | 20,940,758 |
| Electric Benefits | $ | - |
| Gas Benefits | $ | 56,043,034 |
| Net Benefits (NPV) | $ | 35,102,276 |
| BC Ratio | | 2.68 |
| | | |
| **Levelized Cost** | | |
| **Levelized Cost TRC ($/kWh )** | | |
| Discounted kWh | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |
| **Levelized Cost PAC ($/kWh)** | | |
| Discounted kWh | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |
| **Levelized Cost TRC ($/therm)** | | |
| Discounted Therms | | 76,772,208 |
| Cost | $ | 0.3306 |
| Benefits | $ | 0.7300 |
| Benefit-Cost | $ | 0.3994 |
| **Levelized Cost PAC ($/therm)** | | |
| Discounted Therms | | 76,772,208 |
| Cost | $ | 0.2728 |
| Benefits | $ | 0.7300 |
| Benefit-Cost | $ | 0.4572 |

## Express Efficiency Rebate Program

| Year | Total Budget | Total Incentives | Admin Budget | Net kWh | Net Therms | Net kW |
|---|---|---|---|---|---|---|
| 2006 | $ 5,308,050 | $ 2,098,419 | $ 3,209,631 | - | 2,734,192 | - |
| 2007 | $ 7,678,996 | $ 3,301,277 | $ 4,377,719 | - | 3,934,342 | - |
| 2008 | $ 9,114,191 | $ 3,910,285 | $ 5,203,906 | - | 4,740,588 | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 311002 | Greenhouse Heat Curtain | - | 0 | - | 0.96 | Sqft | 5 | 2,217,783 | $ 0.20 | $ 0.49 | - | 830,338 | - |
| 2006 | 311005 | Storage Water Heaters (LRG >75 MBTUH) | - | 2 | - | 0.96 | MBtuh | 15 | 30,000 | $ 2.00 | $ 6.78 | - | 50,486 | - |
| 2006 | 311006 | Storage Water Heaters (SML <= 75 MBTUH) | - | 1 | - | 0.96 | MBtuh | 15 | 30,000 | $ 2.00 | $ 2.69 | - | 19,008 | - |
| 2006 | 311007 | Instantaneous Water Heaters (>= 200 MBTUH) | - | 1 | - | 0.96 | MBtuh | 15 | 10,000 | $ 2.00 | $ (1.32) | - | 13,536 | - |
| 2006 | 311008 | Instantaneous Water Heaters (< 200 MBTUH) | - | 1 | - | 0.96 | MBtuh | 15 | 90,000 | $ 2.00 | $ (7.77) | - | 121,824 | - |
| 2006 | 311009 | Programmable Thermostat | 327 | 1,095 | - | 0.96 | Unit | 11 | - | $ 54.00 | $ 58.00 | - | - | - |
| 2006 | 311010 | Infrared Film for Greenhouses | - | 0 | - | 0.96 | Sqft | 5 | 1,199,595 | $ 0.03 | $ 0.03 | - | 56,429 | - |
| 2006 | 311011 | Low-Flow Pre-Rinse Spray Valve | - | 570 | - | 0.96 | Unit | 5 | - | $ 30.00 | $ 60.00 | - | - | - |
| 2006 | 311012 | Space Heating Boiler - Steam | - | 1 | - | 0.96 | MBtuh | 20 | 100,000 | $ 1.00 | $ 3.57 | - | 103,229 | - |
| 2006 | 311013 | Space Heating Boilers - Small Water | - | 1 | - | 0.96 | MBtuh | 20 | 75,000 | $ 1.00 | $ 3.57 | - | 77,422 | - |
| 2006 | 311014 | Space Heating Boilers - Large Water | - | 1 | - | 0.96 | MBtuh | 20 | 75,000 | $ 1.00 | $ 3.57 | - | 77,422 | - |
| 2006 | 311015 | Commercial Boiler (Non-Space Heat, Non-Process) | - | 1 | - | 0.96 | MBtuh | 20 | 75,000 | $ 1.50 | $ 3.57 | - | 103,536 | - |
| 2006 | 311016 | Process Boiler - Steam | - | 1 | - | 0.96 | MBtuh | 20 | 63,000 | $ 2.00 | $ 3.57 | - | 62,899 | - |
| 2006 | 311017 | Water Heating -Commercial Pool Heater | 0 | 2.41 | 0 | 0.96 | Mbtuh | 5 | 200000 | $ 2.00 | $ 2.00 | - | 462,720 | - |
| 2006 | 311018 | Process Boiler - Water | 0 | 1.04 | 0 | 0.96 | MBtuh | 20 | 63000 | $ 2.00 | $ 3.57 | - | 62,899 | - |
| 2006 | 311019 | Direct Contact Water Heater | | 2.29 | | 0.96 | MBtuh | 20 | 20000 | $ 2.00 | $ 2.17 | - | 43,968 | - |
| 2006 | 311020 | Programmable Thermostat - Hotel Room | 0 | 13.8 | 0 | 0.96 | Unit | 11 | 0 | $ 54.00 | $ 58.00 | - | - | - |
| 2006 | 311021 | Programmable Thermostat - Classroom | 0 | 231 | 0 | 0.96 | Unit | 11 | 0 | $ 54.00 | $ 58.00 | - | - | - |
| 2006 | 311022 | Tank Insulation - Low Temperature Applic. (LF) 2 in | | 3.7 | | 0.96 | SquareFT | 20 | 5000 | $ 3.00 | $ 3.41 | - | 17,760 | - |
| 2006 | 311023 | Tank Insulation - High Temperature Applic. (LF) 2 in | | 10.4 | | 0.96 | SquareFT | 20 | 6000 | $ 4.00 | $ 3.41 | - | 59,904 | - |
| 2006 | 311024 | Pipe Insulation - Hot Water Applic. (sq ft) 2 in | | 2.9 | | 0.96 | LinearFt | 20 | 8000 | $ 3.00 | $ 9.22 | - | 22,272 | - |
| 2006 | 311025 | Pipe Insulation - Low Pressure Steam Applic. (LF) 2 in | | 14.3 | | 0.96 | LinearFT | 20 | 8000 | $ 4.00 | $ 9.22 | - | 109,824 | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 311026 | Tank Insulation - Low Temperature Applic. (LF) 1 in | | 3.4 | | 0.96 | SquareFT | 20 | 10000 | $ 2.00 | $ 2.58 | - | 32,640 | - |
| 2006 | 311027 | Tank Insulation - High Temperature Applic. (LF) 1 in | | 9.7 | | 0.96 | SquareFT | 20 | 9000 | $ 3.00 | $ 2.58 | - | 83,808 | - |
| 2006 | 311028 | Pipe Insulation - Hot Water Applic. (sq ft) 1 in | | 2.6 | | 0.96 | LinearFt | 20 | 20000 | $ 2.00 | $ 5.67 | - | 49,920 | - |
| 2006 | 311029 | Pipe Insulation - Low Pressure Steam Applic. (LF) 1 in | | 13.4 | | 0.96 | LinearFt | 20 | 12000 | $ 3.00 | $ 5.67 | - | 154,368 | - |
| 2006 | 311030 | Energy Star Clothes Washer - 3.5 cf Tier I MEF=1.42 | 0 | 54.73 | 0 | 0.96 | Clothes Washer, CWasher | 10 | 0 | | $ 246.14 | - | - | - |
| 2006 | 311031 | Energy Star Clothes Washer - 3.5 cf Tier II MEF=1.6 | 0 | 60.9 | 0 | 0.96 | Clothes Washer, CWasher | 10 | 50 | $ 35.00 | $ 853.00 | - | 2,923 | - |
| 2006 | 311032 | Energy Star Clothes Washer - 3.5 cf Tier III MEF=1.8 | 0 | 69.75 | 0 | 0.96 | Clothes Washer, CWasher | 10 | 95 | $ 75.00 | $ 764.92 | - | 6,361 | - |
| 2006 | 311033 | Steam Trap Replacement | 0 | 647 | 0 | 0.96 | Unit | 15 | 175 | $ 100.00 | $ 122.00 | - | 108,696 | - |
| 2007 | 311002 | Greenhouse Heat Curtain | - | $ 0.39 | $ - | 0.96 | Sqft | 5 | 2564712 | $ 0.20 | $ 0.49 | - | 960,228 | - |
| 2007 | 311005 | Storage Water Heaters (LRG >75 MBTUH) | - | $ 1.75 | $ - | 0.96 | MBtuh | 15 | 67500 | $ 2.00 | $ 6.78 | - | 113,594 | - |
| 2007 | 311006 | Storage Water Heaters (SML <= 75 MBTUH) | - | $ 0.66 | $ - | 0.96 | MBtuh | 15 | 12000 | $ 2.00 | $ 2.69 | - | 7,603 | - |
| 2007 | 311007 | Instantaneous Water Heaters (>= 200 MBTUH) | - | $ 1.41 | $ - | 0.96 | MBtuh | 15 | 21500 | $ 2.00 | $ (1.32) | - | 29,102 | - |
| 2007 | 311008 | Instantaneous Water Heaters (< 200 MBTUH) | - | $ 1.41 | $ - | 0.96 | MBtuh | 15 | 100000 | $ 2.00 | $ (7.77) | - | 135,360 | - |
| 2007 | 311009 | Programmable Thermostat | 327 | $ 1,095.00 | $ - | 0.96 | Unit | 11 | 0 | $ 54.00 | $ 58.00 | - | - | - |
| 2007 | 311010 | Infrared Film for Greenhouses | - | $ 0.05 | $ - | 0.96 | Sqft | 5 | 1632000 | $ 0.03 | $ 0.03 | - | 76,769 | - |
| 2007 | 311011 | Low-Flow Pre-Rinse Spray Valve | - | $ 570.00 | $ - | 0.96 | Unit | 5 | 0 | $ 3.00 | $ 60.00 | - | - | - |
| 2007 | 311012 | Space Heating Boiler - Steam | - | $ 1.08 | $ - | 0.96 | MBtuh | 20 | 100000 | $ 1.00 | $ 3.57 | - | 103,229 | - |
| 2007 | 311013 | Space Heating Boilers - Small Water | - | $ 1.08 | $ - | 0.96 | MBtuh | 20 | 100000 | $ 1.00 | $ 3.57 | - | 103,229 | - |
| 2007 | 311014 | Space Heating Boilers - Large Water | - | $ 1.08 | $ - | 0.96 | MBtuh | 20 | 200000 | $ 1.00 | $ 3.57 | - | 206,458 | - |
| 2007 | 311015 | Commercial Boiler (Non-Space Heat, Non-Process) | - | $ 1.44 | $ - | 0.96 | MBtuh | 20 | 175000 | $ 1.50 | $ 3.57 | - | 241,584 | - |
| 2007 | 311016 | Process Boiler - Steam | - | $ 1.04 | $ - | 0.96 | MBtuh | 20 | 200000 | $ 2.00 | $ 3.57 | - | 199,680 | - |
| 2007 | 311017 | Water Heating -Commercial Pool Heater | - | $ 2.41 | $ - | 0.96 | Mbtuh | 5 | 275000 | $ 2.00 | $ 2.00 | - | 636,240 | - |
| 2007 | 311018 | Process Boiler - Water | - | $ 1.04 | $ - | 0.96 | MBtuh | 20 | 175000 | $ 2.00 | $ 3.57 | - | 174,720 | - |
| 2007 | 311019 | Direct Contact Water Heater | | $ 2.29 | | 0.96 | MBtuh | 20 | 10000 | $ 2.00 | $ 2.17 | - | 21,984 | - |
| 2007 | 311020 | Programmable Thermostat - Hotel Room | - | $ 13.80 | $ - | 0.96 | Unit | 11 | 0 | $ 54.00 | $ 58.00 | - | - | - |
| 2007 | 311021 | Programmable Thermostat - Classroom | - | $ 231.00 | $ - | 0.96 | Unit | 11 | 0 | $ 54.00 | $ 58.00 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2007 | 311022 | Tank Insulation - Low Temperature Applic. (LF) 2 in | | $ 3.70 | | 0.96 | SquareFT | 20 | 12000 | $ 3.00 | $ 3.41 | - | 42,624 | - |
| 2007 | 311023 | Tank Insulation - High Temperature Applic. (LF) 2 in | | $ 10.40 | | 0.96 | SquareFT | 20 | 20750 | $ 4.00 | $ 3.41 | - | 207,168 | - |
| 2007 | 311024 | Pipe Insulation - Hot Water Applic. (sq ft) 2 in | | $ 2.90 | | 0.96 | LinearFt | 20 | 9000 | $ 3.00 | $ 9.22 | - | 25,056 | - |
| 2007 | 311025 | Pipe Insulation - Low Pressure Steam Applic. (LF) 2 in | | $ 14.30 | | 0.96 | LinearFT | 20 | 10000 | $ 4.00 | $ 9.22 | - | 137,280 | - |
| 2007 | 311026 | Tank Insulation - Low Temperature Applic. (LF) 1 in | | $ 3.40 | | 0.96 | SquareFT | 20 | 13500 | $ 2.00 | $ 2.58 | - | 44,064 | - |
| 2007 | 311027 | Tank Insulation - High Temperature Applic. (LF) 1 in | | $ 9.70 | | 0.96 | SquareFT | 20 | 20000 | $ 3.00 | $ 2.58 | - | 186,240 | - |
| 2007 | 311028 | Pipe Insulation - Hot Water Applic. (sq ft) 1 in | | $ 2.60 | | 0.96 | LinearFt | 20 | 10000 | $ 2.00 | $ 5.67 | - | 24,960 | - |
| 2007 | 311029 | Pipe Insulation - Low Pressure Steam Applic. (LF) 1 in | | $ 13.40 | | 0.96 | LinearFt | 20 | 15000 | $ 3.00 | $ 5.67 | - | 192,960 | - |
| 2007 | 311030 | Energy Star Clothes Washer - 3.5 cf Tier I MEF=1.42 | - | $ 12.32 | $ - | 0.96 | Clothes Washer, CWasher | 10 | 100 | $ 35.00 | $ 606.86 | - | 1,183 | - |
| 2007 | 311031 | Energy Star Clothes Washer - 3.5 cf Tier II MEF=1.6 | - | $ 21.18 | $ - | 0.96 | Clothes Washer, CWasher | 10 | 45 | $ 75.00 | $ 518.78 | - | 915 | - |
| 2007 | 311033 | Steam Trap Replacement | - | $ 647.00 | $ - | 0.96 | Unit | 15 | 100 | $ 100.00 | $ 122.00 | - | 62,112 | - |
| 2008 | 311002 | Greenhouse Heat Curtain | - | $ 0.39 | $ - | 0.96 | Sqft | 5 | 2405174 | $ 0.20 | $ 0.49 | - | 900,497 | - |
| 2008 | 311005 | Storage Water Heaters (LRG >75 MBTUH) | - | $ 1.75 | $ - | 0.96 | MBtuh | 15 | 40000 | $ 2.00 | $ 6.78 | - | 67,315 | - |
| 2008 | 311006 | Storage Water Heaters (SML <= 75 MBTUH) | - | $ 0.66 | $ - | 0.96 | MBtuh | 15 | 15000 | $ 2.00 | $ 2.69 | - | 9,504 | - |
| 2008 | 311007 | Instantaneous Water Heaters (>= 200 MBTUH) | - | $ 1.41 | $ - | 0.96 | MBtuh | 15 | 50000 | $ 2.00 | $ (1.32) | - | 67,680 | - |
| 2008 | 311008 | Instantaneous Water Heaters (< 200 MBTUH) | - | $ 1.41 | $ - | 0.96 | MBtuh | 15 | 50000 | $ 2.00 | $ (7.77) | - | 67,680 | - |
| 2008 | 311009 | Programmable Thermostat | 327 | $ 1,095.00 | $ - | 0.96 | Unit | 11 | 0 | $ 54.00 | $ 58.00 | - | - | - |
| 2008 | 311010 | Infrared Film for Greenhouses | - | $ 0.05 | $ - | 0.96 | Sqft | 5 | 875000 | $ 0.03 | $ 0.03 | - | 41,160 | - |
| 2008 | 311011 | Low-Flow Pre-Rinse Spray Valve | - | $ 570.00 | $ - | 0.96 | Unit | 5 | 0 | $ 30.00 | $ 60.00 | - | - | - |
| 2008 | 311012 | Space Heating Boiler - Steam | - | $ 1.08 | $ - | 0.96 | MBtuh | 20 | 160000 | $ 1.00 | $ 3.57 | - | 165,166 | - |
| 2008 | 311013 | Space Heating Boilers - Small Water | - | $ 1.08 | $ - | 0.96 | MBtuh | 20 | 60000 | $ 1.00 | $ 3.57 | - | 61,937 | - |
| 2008 | 311014 | Space Heating Boilers - Large Water | - | $ 1.08 | $ - | 0.96 | MBtuh | 20 | 60000 | $ 1.00 | $ 3.57 | - | 61,937 | - |
| 2008 | 311015 | Commercial Boiler (Non-Space Heat, Non-Process) | - | $ 1.44 | $ - | 0.96 | MBtuh | 20 | 145000 | $ 1.50 | $ 3.57 | - | 200,170 | - |
| 2008 | 311016 | Process Boiler - Steam | - | $ 1.04 | $ - | 0.96 | MBtuh | 20 | 130000 | $ 2.00 | $ 3.57 | - | 129,792 | - |
| 2008 | 311017 | Water Heating -Commercial Pool Heater | - | $ 2.41 | $ - | 0.96 | Mbtuh | 5 | 639000 | $ 2.00 | $ 2.00 | - | ####### | - |
| 2008 | 311018 | Process Boiler - Water | - | $ 1.04 | $ - | 0.96 | MBtuh | 20 | 230000 | $ 2.00 | $ 3.57 | - | 229,632 | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2008 | 311019 | Direct Contact Water Heater | | $ 2.29 | | 0.96 | MBtuh | 20 | 100000 | $ 2.00 | $ 2.17 | - | 219,840 | - |
| 2008 | 311020 | Programmable Thermostat - Hotel Room | - | $ 13.80 | $ - | 0.96 | Unit | 11 | 0 | $ 54.00 | $ 58.00 | - | - | - |
| 2008 | 311021 | Programmable Thermostat - Classroom | - | $ 231.00 | $ - | 0.96 | Unit | 11 | 0 | $ 54.00 | $ 58.00 | - | - | - |
| 2008 | 311022 | Tank Insulation - Low Temperature Applic. (LF) 2 in | | $ 3.70 | | 0.96 | SquareFT | 20 | 13500 | $ 3.00 | $ 3.41 | - | 47,952 | - |
| 2008 | 311023 | Tank Insulation - High Temperature Applic. (LF) 2 in | | $ 10.40 | | 0.96 | SquareFT | 20 | 18000 | $ 4.00 | $ 3.41 | - | 179,712 | - |
| 2008 | 311024 | Pipe Insulation - Hot Water Applic. (sq ft) 2 in | | $ 2.90 | | 0.96 | LinearFt | 20 | 16000 | $ 3.00 | $ 9.22 | - | 44,544 | - |
| 2008 | 311025 | Pipe Insulation - Low Pressure Steam Applic. (LF) 2 in | | $ 14.30 | | 0.96 | LinearFT | 20 | 13000 | $ 4.00 | $ 9.22 | - | 178,464 | - |
| 2008 | 311026 | Tank Insulation - Low Temperature Applic. (LF) 1 in | | $ 3.40 | | 0.96 | SquareFT | 20 | 16000 | $ 2.00 | $ 2.58 | - | 52,224 | - |
| 2008 | 311027 | Tank Insulation - High Temperature Applic. (LF) 1 in | | $ 9.70 | | 0.96 | SquareFT | 20 | 13250 | $ 3.00 | $ 2.58 | - | 123,384 | - |
| 2008 | 311028 | Pipe Insulation - Hot Water Applic. (sq ft) 1 in | | $ 2.60 | | 0.96 | LinearFt | 20 | 15000 | $ 2.00 | $ 5.67 | - | 37,440 | - |
| 2008 | 311029 | Pipe Insulation - Low Pressure Steam Applic. (LF) 1 in | | $ 13.40 | | 0.96 | LinearFt | 20 | 17000 | $ 3.00 | $ 5.67 | - | 218,688 | - |

# 2006-2008 Energy Efficiency Programs
# Local Business Energy Efficiency Program (BEEP)
# Concept Paper

## 1. Projected Program Budget

| | 2006 | 2007 | 2008 |
|---|---|---|---|
| Administration | | | |
| Administrative Overheads | $ 292,251 | $ 444,005 | $ 542,170 |
| Administrative Other | $ 666,668 | $ 920,897 | $ 1,007,273 |
| Marketing & Outreach | $ 221,529 | $ 634,888 | $ 867,673 |
| Direct Implementation | | | |
| Incentives | $ 3,243,924 | $ 4,941,265 | $ 6,243,313 |
| Activity | $ 1,503,164 | $ 1,703,054 | $ 1,913,604 |
| Installation | $ - | $ - | $ - |
| Hardware & Materials | $ 147,500 | $ 460,000 | $ 551,535 |
| Rebate Processing & Inspection | $ 62,228 | $ 220,000 | $ 260,000 |
| EM&V | $ - | $ - | $ - |
| *Total* | *$ 6,137,264* | *$ 9,324,108* | *$ 11,385,568* |

## 2. Projected Program Impacts

| 2006 | | | 2007 | | | 2008 | | |
|---|---|---|---|---|---|---|---|---|
| Net kWh | Net kW | Net Therms | Net kWh | Net kW | Net Therms | Net kWh | Net kW | Net Therms |
| - | - | 4,339,845 | - | - | 6,234,811 | - | - | 7,506,342 |

## 3. Program Cost Effectiveness

Attached

## 4. Program Descriptors

Southern California Gas Company's (SoCalGas) Local Business Energy Efficiency Program (BEEP) targets all nonresidential customers, including commercial, industrial and agricultural customers within the SoCalGas service territory.

This program consists of five program elements:

- Prescriptive **"Efficient Equipment Rebates".**
  - Most of the eligible equipment will be a "kind-for-kind" replacement, but may also include new construction that falls outside the scope of the Savings By Design program.
- **"Process Equipment Replacement"** Incentives
  - Will provide incentives for installation of new high efficiency commercial or industrial end-use gas-fired technology.
- **"Custom Process Improvement"** Incentives
  - Will provide qualified customers with a financial incentive to implement comprehensive energy efficient processes.
- The **"Grant Program"**

  - Will encourage large nonresidential customers to develop and submit innovative and varied strategies to reduce therm usage at their facilities.
- The **"Recognition Program"**
  - Will provide a non-monetary recognition award to nonresidential customers who increase their natural gas efficiency based on energy audit recommendations or knowledge gained through energy efficiency seminars and consultations.

The Business Energy Efficiency Program has been designed with multiple program elements to enable the creation of customized energy efficiency solutions for a wide range of customers. Combining the five elements into one program also minimizes administrative costs and increases cross element coordination since the same implementation staff delivers the individual elements of this program.

**5. Program Statement**

**Efficient Equipment Rebate:** Customers within the commercial food service industry work with tight profit margins and will often cut costs by purchasing inefficient used equipment. These customers are often responsible for all aspects of their day-to-day operations with little time and patience to participate in financial assistance programs that are cumbersome and difficult to navigate.

**Process Equipment Replacement and Customer Process Improvement:** Many small- to medium-sized customers do not have energy efficiency managers and become so involved in their operation they have little time to evaluate and identify energy efficiency measures. More often than not, measures are identified due to equipment failure.

**Energy Efficiency Grant:** Very large natural gas customers, such as refineries and industrial giants, will likely to be unmotivated by the financial support available through SoCalGas' Process Equipment Replacement and Customer Process Improvement program elements when compared to the capital intensive improvements made at such facilities.

**Equipment Replacement and Efficient Improvement Recognitions:** Some customers are more likely to be motivated to take energy efficiency actions through public recognitions than traditional incentives offered by the utility due to a variety of reasons (e.g. sense of fulfillment from being recognized as community leaders is highly motivating).

**6. Program Rationale**

This Program's approach has seen high customer participation due to SoCalGas' flexibility in customizing appropriate energy efficiency solutions for the various participants through multiple program elements. Customers can participate across a

multitude of element combinations without having to involve themselves in other programs, saving time and alleviating the need for additional paperwork and measurements. Due to the combination of elements within this program, SoCalGas is able to address many energy efficiency needs a customer may have at one time. In this way, SoCalGas plans to mitigate lost efficiency measure opportunities.

**Efficient Equipment Rebate:** The tried-and-true Efficient Equipment Rebate measure offers simple and easy-to-understand rebate tables, ease of completion, and immediate capital savings on new efficient equipment, all of which foster rebate participation, especially for small hard-to-reach customers who are typically short on both time and capital. Customers have the option of downloading the appropriate Efficient Equipment Rebate application from the SoCalGas web site. The rebates will be offered in multiple languages to target hard-to-reach customers.

**Process Equipment Replacement and Customer Process Improvement:** The historic success of Process Equipment Replacement and Customer Process Improvement measures are due to the customized education of the customer regarding energy efficiency pertaining to their specific industry by SoCalGas representatives. Alongside the customer, the SoCalGas representative identifies the right measure match for the customer's needs and operations. By having representative involvement, the customer is able to improve efficiencies prior to equipment failure.

**Energy Efficiency Grant:** The new Energy Efficiency Grant Program is designed to encourage the very large nonresidential customers to develop and submit innovative and varied strategies to reduce therm usage at their facilities. The program provides financial incentives for qualifying projects with new, high-efficiency equipment and/or systems. A measurement and validation approach is used to determine the energy savings and applicable incentive. The program requires a minimum of 250,000 therms savings per and a cap of $300,000 per project. This higher incentive cap and minimum savings floor, compared to other incentive elements, encourage large nonresidential customers to participate.

**Equipment replacement and Efficiency Improvement Recognitions:** Some customers will not likely be motivated to take energy efficiency actions by traditional financial incentives offered through traditional rebate/incentive programs, leaving a gap between these financial incentive programs and customers uninterested in financial incentives. The new innovative Recognition Program proposes to bridge this gap by providing non-monetary incentives. The program will offer non-monetary assistance through various means including, but not limited to: consultations, seminars, and on-site audits. This will provide customers with the information needed to identify and complete energy efficiency upgrades. Furthermore, to recognize and further motivate these customers to continually take energy efficiency actions, this program will provide promotional advertisements, plaques, or publicized recognition events for these customers.

Offered in concert under the Business Energy Efficiency Program, these five program elements provide a cost-effective system that is easy to use and offers a large number of measure combination possibilities that provides comprehensive assistance to a vast span of SoCalGas' customers' energy efficiency needs.

**7. Program Outcomes**

The main objective of this program is to achieve cost effective therm savings and sustainable growth through participant buy-in. Through successful participation in each element, the customer is educated and rewarded for completing an efficiency measure. If a measure is not completed, the customer still remains educated regarding either the utility's programs, efficiency measures applicable to their process, or both.

The education and participation, either alone or in tandem, creates a group of individuals aware of energy efficiency. By maintaining contact with these individuals through various communication channels, the program will grow an energy-efficiency-aware population that will carry these concerns with them as they progress within their respective organizations. An important outcome of this program is to create, for those companies who participated in the program, company-wide awareness of energy efficiency so that energy efficiency actions will be considered continuously or at least when any major capital improvement is planned.

As this population grows, so does the program's cost effectiveness. This is achieved through the energy efficiency aware population's ability to continually identify and adapt efficiency measures alongside the utility's efforts to assist them.

By design, the program further supports sustainable growth of customer participation and increases cost effective therm savings by encouraging customers to take advantage of multiple program elements. For example, a customer may choose to upgrade kitchen cooking equipment through the Efficient Equipment Rebate; replace major industrial equipment through the Process Equipment Replacement or Grant elements; and establish proper maintenance procedures to keep equipment operating at optimum efficiency through the Recognition elements.

**8. Program Strategy**

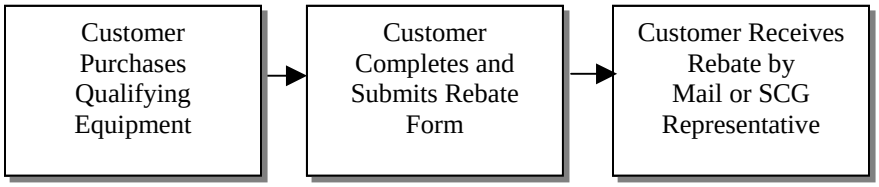
- Nonresidential Downstream Deemed Rebates:
  - 'Efficient Equipment Rebate Element'

- Nonresidential Process Calculated Rebates:
  - 'Process Equipment Replacement Element'
  - 'Custom Process Improvement Element'
  - 'Energy Efficiency Grant Element'

- ‘Recognition Elements’

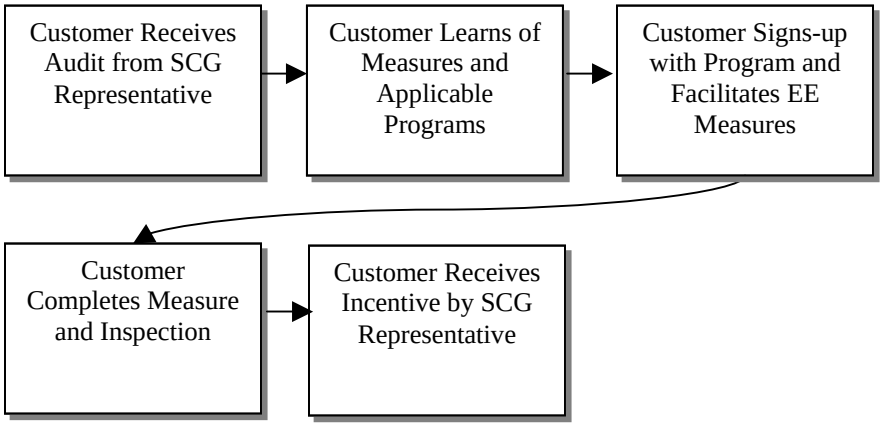
### 8.1.1. Program Strategy Description

**In the Efficient Equipment Rebate element,** the customer is directed to purchase qualifying equipment, complete and submit the rebate application along with required documentation including, but not limited to, invoices and specification sheets. Once the application is processed by SoCalGas, the customer receives the rebate.



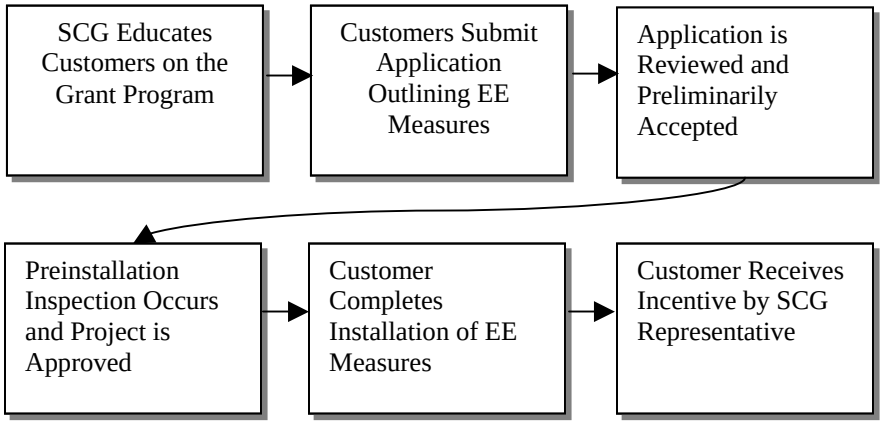

This is an element that has been offered in the past and is expected to continue to begin at 2005 levels of participation. SoCalGas will expand the outreach of this rebate program element to remote rural small business communities by deploying a grass-roots outreach team who will offer on-site audits as well as assisting customers with rebate application process. SoCalGas is continually working to identify and add measures to this element (e.g. Steam Traps). As the rebate element is expanded and as the marketing effort continues throughout the three-year program cycle, it is forecasted that participation and energy savings will increase.

**The Process Equipment Replacement and Custom Process Improvement** elements are designed to incent customers to move to more efficient equipments and processes. Prior to the customer purchasing equipment, a Company representative contacts the customer to educate them on the program, discuss applicable energy efficiency measures and to ascertain the correct program elements. Once the appropriate measures are determined, the Company representative identifies the energy savings and incentive amount through custom engineering calculations. If the customer agrees to the program’s terms and conditions and the financial incentives, they may proceed with completing the efficiency measure by purchasing the measure-required equipment and services. Once the measure is completed within the prescribed time frame, the customer submits the final paid invoice to the Company representative who then visually verifies the completion and creates an incentive request. The customer then receives the incentive.

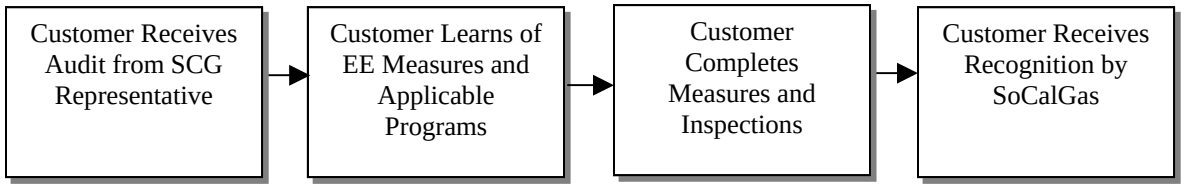



The Process Equipment Replacement and Custom Process Improvement elements are continually evolving to meet customer process advancement needs. These elements have also been offered in the past with increasing success that was primarily due to the elements' abilities to adapt and through continuing creation of an energy efficiency aware customer populace.

The **Energy Efficiency Grant program** (EEGP) is a new program element offering for the 2006-2008 program cycle. Due to the large nature of the projects expected to participate in this program, a long program cycle is necessary for this program. Educating our customers is essential to the program's success. This will begin through various channels during the fourth quarter of 2005. Once the program is launched, Customers may submit an EEGP application to SoCalGas. The application describes the Project, lists measurable savings, and states the incentive amount requested. SoCalGas reviews the application and provides a non-binding preliminary approval to qualifying applications. Contractual approval will be developed after SoCalGas conducts a pre-installation site(s) inspection. Once the site(s) pass the pre-installation inspection the proposal can be approved. Incentive funding for the Project is reserved and the Customer and SoCalGas enter into an EEGP Agreement that defines the energy savings and maximum incentive payment amount. Once both parties sign the agreement and any needed baseline measurements are completed, installation may begin. Program payments are provided based on proved energy saving as measured by the projects' approved M&V plan.




The **Recognition Program** elements are also new offerings for the 2006-2008 program cycle. Educating our customers is essential to the program's success. This will begin through various channels during the fourth quarter of 2005. SoCalGas will educate customers through consultations, seminars, and on-site audits. These methods will provide customers with the information needed to identify and complete energy efficiency measures. Once the appropriate measures are determined, a Company representative identifies the energy savings through custom engineering calculations. After the measure is completed, the Company representative visually verifies the completion and creates recognition request.




Recognition typically takes the form of promotional advertisements, plaques, or publicized recognition events for these customers. The Recognition elements are expected to ramp up moderately within the first year with increasing participation in successive years.

### 8.1.2. Program Indicators

Program indicators include results from the tracking of therm savings, customer incentives, audit participation, and energy efficiency education.

## 9. Program Objectives

The program's objective is to encourage and facilitate therm savings and create sustainable energy efficiency growth by facilitating repeated customer involvement through tools that are designed to encourage customer engagement. Examples of these tools may include: audits, energy efficiency training and education seminars, the Energy Resource Center, Account Executives, and commercial/industrial service

technicians. By offering these tools through BEEP, SOCALGAS is better able to customize a set of energy efficiency solutions for participants.

The Business Energy Efficiency Program includes an Energy Audit program element that will refer participating customers to various SoCalGas energy efficiency programs. This referral will assist the customers in assessing opportunities to replace old inefficient equipment with new high-efficient equipment. The Business Energy Efficiency Program will also provide referrals to the Emerging Tech Program for potential innovative and new gas technology measures as well as other customer support programs.

BEEP aims to be flexible through its ability to educate and customize appropriate energy efficiency solutions for customers through multiple program elements. The education of these customers will create an energy efficiency aware population that will carry these concerns with them as they progress within their respective organizations. The program is also designed to offer a robust combination of elements. The five main elements provide a comprehensive program offering energy efficiency solutions to all classes of nonresidential customers: from schools and small business to government and large industrial customers.

**10. Program Implementation**

The BEEP program provides equipment rebates, incentives, or recognition that match the customer's needs and operations. Close coordination with other program managers will ensure no project overlaps. Participants are guided into the program through multiple channels such as audits, energy efficiency training and education seminars, the commercial support center, Account Executives, and commercial/industrial service technicians. New measures will be assessed and added if cost effective. Additionally, terms & conditions of the Program will be evaluated and changes made to open up areas that have the opportunity to create energy savings.

**The Efficient Equipment Rebate** element offers a variety of rebates on food service and commercial/industrial equipment. In order to qualify for a rebate, customers must purchase and install their qualifying equipment before they submit their rebate applications. Equipment must meet technical requirements specified on the rebate form and must be installed according to local building codes and ordinances and/or manufacturer's requirements. Maximum incentive available is $25,000 per program, per account, per year. This element provides streamlined rebates to those customers who install one or more energy efficiency products from a prescribed list that may include the following equipment:

| Equipment Type | |
|---|---|
| Convection Oven | High Efficiency Fryer |
| Combination Oven | Pressureless Steamers |

| | |
|---|---|
| Griddle | |

A customer eligible to participate in this rebate program may also be eligible to take advantage of the on-bill financing (OBF) option. Once qualified under the OBF Option (see OBF Program proposal for details), the participating customer would receive a reduced rebate and finance the balance of the cost of a qualified energy efficiency package through the utility. Monthly payment on a term loan would be billed as part of the participating customer's monthly utility bill.

**Process Equipment Replacement and Customer Process Improvement** elements give the customer a wide range of custom efficiency measures designed to reduce energy consumption. Efficiency measures may include but are not limited to replacement or improvements to:

| **Measure Type** | |
|---|---|
| Furnace Replacement | Misc. Process Equip. Replacement |
| Kiln Replacement | Equip. Modernization and Conservation |
| Oven Replacement | Engine Rebuild/Replacement |
| Heat Recovery | Pump Rebuild/Replacement |

In order to qualify for these incentives, customers are required to contact SoCalGas or their Account Executive prior to purchasing and installing their qualifying gas equipment. The maximum incentive available is $25,000 per program, per account, per year.

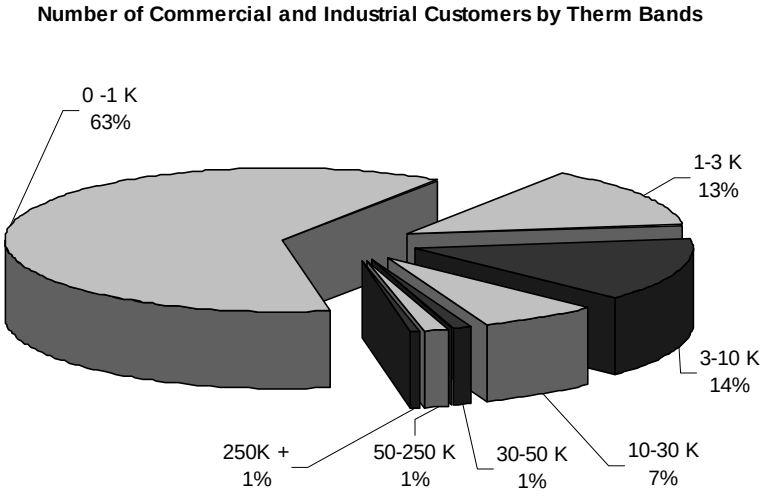
**The Energy Efficiency Grant Program** provides financial incentives for qualifying projects with new, high-efficiency equipment and/or systems. A measurement and validation approach is used to determine the energy savings and applicable incentive. Applicants are eligible to receive 50 percent of the equipment cost or $0.50 per therm saved, whichever is lower with a maximum of $300,000 per customer. Projects must save a minimum of 250,000 therms from their Southern California Gas Company gas usage. There are no pre-determined measures for the Grant Program. The program is designed to encourage the very largest nonresidential customers to develop and submit innovative and varied strategies to reduce therm usage. They will be provided financial incentives based on therm savings of implemented projects. It is expected that the type of applications to be received by the Grant program will likely involve equipment and measures similar to those included in the Process Equipment Replacement element and the Custom Process Improvement element.

**The Recognition Programs** have been developed to recognize SoCalGas' business customers who implement SoCalGas-suggested energy efficiency measures not

captured within the utility's rebate/financial incentive programs. They will be provided non-financial incentives, such as promotional advertisements, plaques, or publicized recognition events for these customers, based on therm savings of implemented projects. There are no pre-determined measures for the Process Improvement Recognition Program. It is expected that the type of projects to be recognized by this program will likely involve equipment and measures similar to those included in the Process Equipment Replacement program element and the Custom Process Improvement program element. SoCalGas' Business Energy Efficiency Program (BEEP) and Express Efficiency Program and will be closely coordinated to ensure that audited customers who have implemented therm saving recommendations without design or financial assistance will be recognized for their efforts through SoCalGas' Recognition Program where the energy savings will be captured.

**11. Customer Description**

BEEP is a local program available to customers within SoCalGas' service areas which encompasses 23,000 square miles of diverse terrain throughout most of Central and Southern California, from Visalia to the Mexican border. The local BEEP program targets all nonresidential customers including commercial, industrial and agricultural customers. The following chart shows customer breakdown by number of meters and therms:




| | 0 -1K | 1-3 K | 3-10 K | 10-30 K | 30-50 K | 50-250 K | 250K+ | Grand Total |
|---|---|---|---|---|---|---|---|---|
| Therms (000) | 33,858 | 50,164 | 168,891 | 242,012 | 99,904 | 282,448 | 6,210,581 | 7,087,858 |
| Meters | 130,417 | 28,122 | 29,579 | 14,543 | 2,645 | 2,790 | 1,156 | 209,252 |

The program elements have been designed to address differences in customer segments and to offer the most opportunities for cost effective energy savings. While not explicitly excluding customers from any of the individual elements within the BEEP program, SoCalGas expects to see the following customer participation:

| **Efficient Equipment Rebate** | |
|---|---|
| Typical customer size: | 1,000 – 100,000 Therms per year |
| Typical industries: | Schools<br>Hotels<br>Food service<br>Non-Profits Organizations |
| **Process Equipment Replacement and Custom Process Improvement** | |
| Typical customer size: | 40,000 – 500,000 Therms per year |
| Typical industries: | Food Processing<br>Commercial Services<br>Small- and Medium-Sized Manufacturing |
| **Grant Program** | |
| Typical customer size: | >1,000,000 Therms per year |
| Typical industries: | Agriculture<br>Large Manufacturing<br>Large Food Processing |
| **Recognition Program** | |
| Typical customer size: | All Sizes |
| Typical industries: | All Eligible Nonresidential Customers |

**12. Customer Interface**

The program will be presented to the customer through various outreach and marketing channels. Direct promotion by SoCalGas representatives is the most effective means of promoting the five BEEP program elements. SoCalGas will provide BEEP program materials and handout packets at all customer presentations, and continue to work with small-, medium- and large-sized nonresidential customers to guide them to the specific element within the BEEP program that is most appropriate for their needs based upon their operations and desired outcomes.

The BEEP program will also be marketed through direct promotion by interested third parties such as vendors; manufacturers; cities, state and federal agencies; community-based organizations and other entities. SoCalGas may also advertise the program in regional nonresidential trade and business journals, multilingual brochures, and group workshops/seminars, technology profiles and the Company website.

Direct mail pieces will be targeted to economic development areas, rural areas and other hard-to-reach business customers. Informational pieces will educate customers as to the amount of the rebate, financial incentive, or non-financial incentive available for specific efficiency measures and how to qualify and calculate the financial incentive. SoCalGas may also assist businesses groups in developing and tailoring energy efficiency information to disseminate to their own constituents and stakeholders.

SoCalGas will continue to work with third parties and local vendors to help promote high-efficiency equipment replacement, retrofit and modernization. Throughout the years, both proved instrumental in identifying potential customers and leveraging BEEP rebates or incentives to capture those opportunities.

SoCalGas' Energy Efficiency website will provide supplemental information, including current updates as to available funding levels for the local BEEP program: http://www.socalgas.com/business/. Customers requiring in-depth information can call toll-free to 1-800-GAS-2000, for assistance and program information.

## 13. Energy Measures and Program Activities

### 13.1. Prescriptive Measures.

See SoCalGas February 1, 2006 Filing Workbook.

### 13.2. Therm Level Data

See SoCalGas February 1, 2006 Filing Workbook.

### 13.3. Non-energy Activities

#### 13.3.1. Activity Description

#### 13.3.2. Quantitative Activity Goals

#### 13.3.3. Assigned attributes of the activity (market sector, end use)

## 14. Subcontractor Activities

| | |
|---|---|
| On-site Audit Software Development | $150,000 |
| EM&V for Grant Program applications | $50,000 |
| Subcontractor/Consultant | $75,000 |

Additional subcontractor activities will be determined as the need develops.

## 15. Quality Assurance and Evaluation Activities

SoCalGas' PY2004-2005 local incentive program will be evaluated in 2005/2006. SoCalGas will use the results of that evaluation and work with the Measurement & Evaluation at Sempra to determine the evaluation needs of this program for 2006-

2008. The Grant Program element is new and should have a process evaluation performed once there are a reasonable number of participants to assure that all aspects of this element are working well or give guidance to the program manager on where changes may be needed. A small impact evaluation should take place in mid-2007 to assure that the estimated savings and actual savings are relatively close. If not, mid-program changes can take place. A full impact evaluation should occur at the end of the program.

SoCalGas revised their inspection process between 2002 and 2003, and SOCALGAS added an additional component to their process. In April 2003 the SOCALGAS program management met with their regulatory department to discuss inspections and quality control. At that time SoCalGas utilized their Account Executives (assigned customers >50,000 therms) and Service Technicians (unassigned customers, < 50,000 therms) to inspect all their customer applications and hand deliver the rebates after installation. It was decided that in addition to these visits, an inspector would also inspect 5% of the applications to add additional independent verification.

SoCalGas Account Executives usually have an engineering background and have been tasked to meet the needs of their assigned customers with a focus on promoting rebate programs and educate customers on energy efficiency matters. Inspection of installed energy efficiency equipment is a part of their jobs. The SoCalGas Service Technicians are trained to identify inefficient gas equipment, recommend energy efficiency measures, in addition to inspecting rebated or incented equipment.

**16. Marketing Activities**

The program will be presented to the customer through various outreach and marketing channels. Direct promotion by SoCalGas representatives is the most effective means of promoting the five BEEP program elements. SoCalGas will provide BEEP program materials and handout packets at all customer presentations, and continue to work with small-, medium- and large-sized nonresidential customers to guide them to the specific element within the BEEP program that is most appropriate for their needs based upon their operations and desired outcomes.

The BEEP program will also be marketed through direct promotion by interested third parties such as vendors; manufacturers; cities, state and federal agencies; community-based organizations and other entities. SoCalGas may also advertise the program in regional nonresidential trade and business journals, multilingual brochures, and group workshops/seminars, technology profiles and the Company website, though on a far more limited basis.

SoCalGas will continue to work with third parties and local vendors to help promote high-efficiency equipment replacement, retrofit and modernization. Throughout the

years, both proved helpful in identifying potential customers and leveraging BEEP rebates or incentives to capture those opportunities.

A large number of other programs within the SoCalGas system and third party programs will be able to help promote the BEEP program. Those other programs and services include:

- The Foodservice Center - providing foodservice demonstration, opportunities and technical support
- Commercial Service Technicians- providing equipment operation and preventive maintenance scheduling support
- Commercial Support Center - access to 24 hour toll free Southern California based customer service hot line.
- SoCalGas also provides customer support in the form of Industrial Service Technicians who are trained to clean, adjust and improve the combustion efficiency of a wide variety of nonresidential foodservice, HVAC and industrial process equipment.
- Audits - to provide experts and resources to the small customer who has limited access to energy management services to identify opportunities for energy savings.
- Opportunities exist to coordinate information, marketing, and education efforts with outside organizations. SoCalGas' BEEP program will focus on state and federal program cooperation and collaborative opportunities; including but not limited to the California Manufacturers and Technology Association, Association of Energy Engineers, California Association of Non-Profits, California Energy Commission and the U.S. Department of Energy. The objective is to offer joint information delivery mechanisms and streamline respective process energy efficiency improvements.

Market barriers that may impede access or take full advantage of the BEEP program include language, geographic location and ethnicity. The utilities will provide training, educational materials and technical support targeted specifically to meet the needs of these customer groups. SoCalGas representatives will actively collaborate with local program administrators, local governments, networks of community based organizations, faith based organizations, ethnic business organizations, chambers of commerce, and other customer trade associations within their respective service area to increase SoCalGas' local BEEP program outreach at the local level. Local collaborative efforts will help achieve greater energy savings through the synergies created by leveraging the combined strengths of all participants.

SoCalGas will also actively work with respective local governments to explore opportunities to increase program outreach at the local level. Local governments have extensive knowledge, contact, and influence with the local community that can enhance local participation with minimal incremental effort. SoCalGas can utilize

that collaborative relationship to provide training, educational materials and technical support targeted specifically at the given community's unique needs.

Direct mail pieces will be targeted to economic development areas, rural areas and other hard-to-reach customers in addition to our small-, medium- and large-sized customers. Informational pieces will educate customers as to the amount of the rebate, financial incentive, or non-financial incentive recognitions available for specific efficiency measures and how to qualify and calculate the financial incentives. SoCalGas may also assist businesses groups in developing and tailoring energy efficiency information to disseminate to their own constituents and stakeholders.

SoCalGas' Energy Efficiency website will provide supplemental information, including current updates as to available funding levels, for the local BEEP program: http://www.socalgas.com/business/. Customers requiring in-depth information can call toll-free to 1-800-GAS-2000, for technical assistance and detailed program information.

**17. CPUC Objective**

The Local Business Energy Efficiency Program:

- Reduces the environmental impact (including the greenhouse gas emissions) associated with the state's energy consumption, to protect the public's health and safety.

- Pursues all cost-effective energy efficiency opportunities over both the short- and long-term so that they will meet or exceed the annual and cumulative savings goals.

- Keeps energy resource procurement costs as low as possible through the deployment of cost-effective portfolio of resource programs.

- Minimizes "Lost opportunities" by combining other low cost energy efficiency measures through the five BEEP program elements.

| | SCG3513 NRF4-Local Business Energy Efficiency Program | |
|---|---|---|
| **BUDGET** | | |
| | | |
| **Administrative Costs** | **$** | **3,873,264** |
| Overhead and G&A | $ | 1,278,426 |
| Other Administrative Costs | $ | 2,594,838 |
| **Marketing/Outreach** | **$** | **1,724,090** |
| **Direct Implementation** | **$** | **21,249,586** |
| Total Incentives and Rebates | | |
| User Input Incentive | $ | - |
| Direct Install Rebate | $ | 14,428,501 |
| Direct Install Labor | $ | - |
| Direct Install Materials | $ | - |
| Activity | $ | 5,119,822 |
| Installation | $ | - |
| Hardware & Materials | $ | 1,159,035 |
| Rebate Processing & Inspection | $ | 542,228 |
| **EM&V Costs** | **$** | - |
| **Budget** | **$** | **26,846,940** |
| **Costs recovered from other sources** | **$** | - |
| **Budget** (plus other costs) | **$** | **26,846,940** |
| | | |
| **PROGRAM IMPACTS** | | |
| **Program Reductions for Measures installed through 2008** | | |
| User Entered kW (kW) | | - |
| Net Jul-Sept Peak (kW) | | - |
| Net Dec-Feb Peak (kW) | | - |
| Net NCP (kW) | | - |
| Net CEC (kW) | | - |
| Annual Net kWh | | - |
| Lifecycle Net kWh | | - |
| Annual Net Therms | | 18,080,999 |
| Lifecycle Net Therms | | 317,260,511 |
| | | |
| **Cost Effectiveness** | | |
| **TRC** | | |
| Costs | $ | 53,733,090 |
| Electric Benefits | $ | - |
| Gas Benefits | $ | 122,598,908 |
| Net Benefits (NPV) | $ | 68,865,818 |
| BC Ratio | | 2.28 |
| | | |
| **PAC** | | |
| Costs | $ | 25,036,267 |
| Electric Benefits | $ | - |
| Gas Benefits | $ | 122,598,908 |
| Net Benefits (NPV) | $ | 97,562,641 |
| BC Ratio | | 4.90 |
| | | |
| **Levelized Cost** | | |
| **Levelized Cost TRC ($/kWh )** | | |
| Discounted kWh | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |
| **Levelized Cost PAC ($/kWh)** | | |
| Discounted kWh | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |
| **Levelized Cost TRC ($/therm)** | | |
| Discounted Therms | | 160,914,353 |
| Cost | $ | 0.3339 |
| Benefits | $ | 0.7619 |
| Benefit-Cost | $ | 0.4280 |
| **Levelized Cost PAC ($/therm)** | | |
| Discounted Therms | | 160,914,353 |
| Cost | $ | 0.1556 |
| Benefits | $ | 0.7619 |
| Benefit-Cost | $ | 0.6063 |

## Local Business Energy Efficiency Program

| Year | Total Budget | Total Incentives | Admin Budget | Net kWh | Net Therms | Net kW |
|---|---|---|---|---|---|---|
| 2006 | $ 6,137,264 | $ 3,243,924 | $ 2,893,340 | - | 4,339,845 | - |
| 2007 | $ 9,324,108 | $ 4,941,265 | $ 4,382,844 | - | 6,234,811 | - |
| 2008 | $ 11,385,568 | $ 6,243,313 | $ 5,142,255 | - | 7,506,342 | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 314001 | EER Convection Oven | - | 323 | - | 1 | Unit | 12 | 248 | $ 500.00 | $ 3,144.00 | - | 80,104 | - |
| 2006 | 314002 | EER Under-fired broiler | - | 6 | - | 1 | MBtuh | 12 | - | $ 4.00 | $ 2.59 | - | - | - |
| 2006 | 314003 | EER Griddle | - | 88 | - | 1 | Unit | 12 | 88 | $ 125.00 | $ 4,575.00 | - | 7,744 | - |
| 2006 | 314004 | EER Rotating Rack Oven | - | 11 | - | 1 | MBtuh | 12 | - | $ 10.00 | $ 10.14 | - | - | - |
| 2006 | 314005 | Misc. Cooking Equip. | - | 5 | - | 1 | MBtuh | 12 | - | $ 4.00 | $ 11.12 | - | - | - |
| 2006 | 314006 | EER Fryer - High Effic. Unit | - | 505 | - | 1 | Unit | 12 | 138 | $ 500.00 | $ 3,796.00 | - | 69,690 | - |
| 2006 | 314007 | EER Fryer - Unit with Electr. Ignition | - | 2 | - | 1 | MBtuh | 12 | - | $ 200.00 | $ 3.59 | - | - | - |
| 2006 | 314008 | PER Furnace Replacement | - | 1 | - | 0.8 | Therm | 20 | 200,000 | $ 0.60 | $ 4.79 | - | 160,000 | - |
| 2006 | 314009 | PER Kiln Replacement | - | 1 | - | 0.8 | Therm | 20 | 95,000 | $ 0.60 | $ 0.53 | - | 76,000 | - |
| 2006 | 314010 | PER Oven Replacement | - | 1 | - | 0.8 | Therm | 20 | 250,000 | $ 0.65 | $ 2.50 | - | 200,000 | - |
| 2006 | 314011 | CPI Heat Recovery | - | 1 | - | 0.8 | Therm | 20 | 252,900 | $ 0.60 | $ 1.84 | - | 202,320 | - |
| 2006 | 314012 | PER Misc. Process Equip. Replacement | - | 1 | - | 0.8 | Therm | 20 | 1,221,586 | $ 0.65 | $ 3.64 | - | 977,269 | - |
| 2006 | 314013 | CPI Equip. Modernization | - | 1 | - | 0.8 | Therm | 20 | 1,440,620 | $ 0.65 | $ 1.15 | - | 1,152,496 | - |
| 2006 | 314014 | PER Engine Rebuild/Replacement | 0 | 1 | 0 | 0.8 | Therm | 15 | 100000 | $ 0.60 | $ 4.16 | - | 80,000 | - |
| 2006 | 314015 | PER Pump Rebuild/Replacement | 0 | 1 | 0 | 0.8 | Therm | 15 | 80000 | $ 0.60 | $ 1.63 | - | 64,000 | - |
| 2006 | 314016 | EER Combination Oven | 0 | 403 | 0 | 1 | Unit | 12 | 27 | $ 750.00 | $ 21,797.00 | - | 10,881 | - |
| 2006 | 314017 | EER Deck Oven | 0 | 3.620320856 | 0 | 1 | MBtuh | 12 | 0 | $ 3.00 | $ 9.11 | - | - | - |
| 2006 | 314018 | EER Over-Fired Charbroiler | 0 | 9.417777778 | 0 | 1 | MBtuh | 12 | 0 | $ 4.00 | $ 12.51 | - | - | - |
| 2006 | 314019 | EER Cheesemelter | 0 | 10.95578231 | 0 | 1 | MBtuh | 12 | 0 | $ 4.00 | $ 8.38 | - | - | - |
| 2006 | 314020 | EER Salamander | 0 | 7.901960784 | 0 | 1 | MBtuh | 12 | 0 | $ 4.00 | $ 9.79 | - | - | - |
| 2006 | 314021 | EER Steam Kettle | 0 | 15.46744186 | 0 | 1 | MBtuh | 12 | 0 | $ 6.00 | $ 21.17 | - | - | - |
| 2006 | 314022 | EER Braising Pan | 0 | 5.328616352 | 0 | 1 | MBtuh | 12 | 0 | $ 4.00 | $ 14.53 | - | - | - |
| 2006 | 314023 | EER Cabinet Steamer Tier I | 0 | 2084 | 0 | 1 | Unit | 12 | 20 | $ 750.00 | $ 6,221.00 | - | 41,680 | - |
| 2006 | 314024 | EER Fryer - High Effic. Unit with Electr. Ignition | 0 | 0 | 0 | 1 | MBtuh | 12 | 0 | $ 5.00 | $ 28.39 | - | - | - |
| 2006 | 314025 | EER Fryer - High Effic. Tier I per MBtuH | 0 | 2.53 | 0 | 1 | MBtuh | 9 | 0 | $ 5.00 | $ 5.61 | - | - | - |
| 2006 | 314026 | EER Conveyor Oven | 0 | 5.04 | 0 | 1 | MBtuh | 9 | 0 | $ 7.00 | $ 16.08 | - | - | - |
| 2006 | 314027 | EER Rotisserie Oven | 0 | 7.8 | 0 | 1 | MBtuh | 9 | 0 | $ 7.00 | $ 21.51 | - | - | - |
| 2006 | 314028 | EER ENERGY STAR Fryer | | | | 1 | MBtuh | | 0 | $ 5.00 | $ - | - | - | - |
| 2006 | 314029 | EER ENERGY STAR Fryer with Electric Ignition | | | | 1 | MBtuh | | 0 | $ 5.00 | $ - | - | - | - |
| 2006 | 314030 | EER ENERGY STAR Fryer with Electric Ignition | | | | 1 | Unit | | 0 | $ 200.00 | $ - | - | - | - |
| 2006 | 314031 | EER High Efficiency Fryer | | | | 1 | MBtuh | | 0 | $ 3.00 | $ - | - | - | - |
| 2006 | 314032 | EER High Efficiency Fryer with Electronic Ignition | | | | 1 | MBtuh | | 0 | $ 3.00 | $ - | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 314033 | EER High Efficiency Fryer with Electronic Ignition | | | | 1 | Unit | | 0 | $ 200.00 | $ - | - | - | - |
| 2006 | 314034 | EER Standard Efficiency Fryer with Electronic Ignition | | | | 1 | Unit | | 0 | $ 200.00 | $ - | - | - | - |
| 2006 | 314035 | Steam Trap Replacement | - | $ 647.00 | $ - | 0.8 | Unit | 15 | 0 | $ 100.00 | $ 122.00 | - | - | - |
| 2006 | 314036 | Upstream Water Heater Incentive NEW | | | | 1 | unit | 15 | 0 | $ 1.00 | $ - | - | - | - |
| 2006 | 314042 | Grant (SPC Equivalent Measure) | - | $ 1.00 | $ - | 0.8 | Therm | 15 | 1350000 | $ 0.50 | $ 1.80 | - | 1,080,000 | - |
| 2006 | 314044 | Efficiency Improvement Recognition | - | $ 1.00 | $ - | 0.8 | Therm | 2 | 74262.5 | $ - | $ 0.52 | - | 59,410 | - |
| 2006 | 314045 | Equipment Replacement Recognition (SPC Equivalent Measure) | - | $ 1.00 | $ - | 0.8 | Therm | 15 | 97814 | $ - | $ 1.80 | - | 78,251 | - |
| 2006 | 314046 | EER Cabinet Steamer Tier II | - | $ 8.67 | $ - | 1 | unit | 12 | | $ 4.00 | $ 11.11 | - | - | - |
| 2007 | 314001 | EER Convection Oven | - | $ 323.00 | $ - | 1 | Unit | 12 | 300 | $ 500.00 | $ 3,144.00 | - | 96,900 | - |
| 2007 | 314002 | EER Under-fired broiler | - | $ 5.58 | $ - | 1 | MBtuh | 12 | 0 | $ 4.00 | $ 2.59 | - | - | - |
| 2007 | 314003 | EER Griddle | - | $ 88.00 | $ - | 1 | Unit | 12 | 100 | $ 125.00 | $ 4,575.00 | - | 8,800 | - |
| 2007 | 314004 | EER Rotating Rack Oven | - | $ 11.43 | $ - | 1 | MBtuh | 12 | 0 | $ 10.00 | $ 10.14 | - | - | - |
| 2007 | 314005 | Misc. Cooking Equip. | - | $ 4.62 | $ - | 1 | MBtuh | 12 | 0 | $ 4.00 | $ 11.12 | - | - | - |
| 2007 | 314006 | EER Fryer - High Effic. Unit | - | $ 505.00 | $ - | 1 | Unit | 12 | 150 | $ 500.00 | $ 3,796.00 | - | 75,750 | - |
| 2007 | 314007 | EER Fryer - Unit with Electr. Ignition | - | $ 2.19 | $ - | 1 | MBtuh | 12 | 0 | $ 200.00 | $ 3.59 | - | - | - |
| 2007 | 314008 | PER Furnace Replacement | - | $ 1.00 | $ - | 0.8 | Therm | 20 | 375000 | $ 0.70 | $ 4.79 | - | 300,000 | - |
| 2007 | 314009 | PER Kiln Replacement | - | $ 1.00 | $ - | 0.8 | Therm | 20 | 142500 | $ 0.70 | $ 0.53 | - | 114,000 | - |
| 2007 | 314010 | PER Oven Replacement | - | $ 1.00 | $ - | 0.8 | Therm | 20 | 375000 | $ 0.75 | $ 2.50 | - | 300,000 | - |
| 2007 | 314011 | CPI Heat Recovery | - | $ 1.00 | $ - | 0.8 | Therm | 20 | 375000 | $ 0.70 | $ 1.84 | - | 300,000 | - |
| 2007 | 314012 | PER Misc. Process Equip. Replacement | - | $ 1.00 | $ - | 0.8 | Therm | 20 | 1458100 | $ 0.75 | $ 3.64 | - | 1,166,480 | - |
| 2007 | 314013 | CPI Equip. Modernization | - | $ 1.00 | $ - | 0.8 | Therm | 20 | 1719555 | $ 0.75 | $ 1.15 | - | 1,375,644 | - |
| 2007 | 314014 | PER Engine Rebuild/Replacement | - | $ 1.00 | $ - | 0.8 | Therm | 15 | 100000 | $ 0.70 | $ 4.16 | - | 80,000 | - |
| 2007 | 314015 | PER Pump Rebuild/Replacement | - | $ 1.00 | $ - | 0.8 | Therm | 15 | 80000 | $ 0.70 | $ 1.63 | - | 64,000 | - |
| 2007 | 314016 | EER Combination Oven | - | $ 403.00 | $ - | 1 | Unit | 12 | 40 | $ 750.00 | $ 21,797.00 | - | 16,120 | - |
| 2007 | 314017 | EER Deck Oven | - | $ 3.62 | $ - | 1 | MBtuh | 12 | 0 | $ 3.00 | $ 9.11 | - | - | - |
| 2007 | 314018 | EER Over-Fired Charbroiler | - | $ 9.42 | $ - | 1 | MBtuh | 12 | 0 | $ 4.00 | $ 12.51 | - | - | - |
| 2007 | 314019 | EER Cheesemelter | - | $ 10.96 | $ - | 1 | MBtuh | 12 | 0 | $ 4.00 | $ 8.38 | - | - | - |
| 2007 | 314020 | EER Salamander | - | $ 7.90 | $ - | 1 | MBtuh | 12 | 0 | $ 4.00 | $ 9.79 | - | - | - |
| 2007 | 314021 | EER Steam Kettle | - | $ 15.47 | $ - | 1 | MBtuh | 12 | 0 | $ 6.00 | $ 21.17 | - | - | - |
| 2007 | 314022 | EER Braising Pan | - | $ 5.33 | $ - | 1 | MBtuh | 12 | 0 | $ 4.00 | $ 14.53 | - | - | - |
| 2007 | 314023 | EER Cabinet Steamer Tier I | - | $ 2,084.00 | $ - | 1 | Unit | 12 | 30 | $ 750.00 | $ 6,221.00 | - | 62,520 | - |
| 2007 | 314024 | EER Fryer - High Effic. Unit with Electr. Ignition | - | $ - | $ - | 1 | MBtuh | 12 | 0 | $ 5.00 | $ 28.39 | - | - | - |
| 2007 | 314025 | EER Fryer - High Effic. Tier I per MBtuH | - | $ 2.53 | $ - | 1 | MBtuh | 9 | 0 | $ 5.00 | $ 5.61 | - | - | - |
| 2007 | 314026 | EER Conveyor Oven | - | $ 5.04 | $ - | 1 | MBtuh | 9 | 0 | $ 7.00 | $ 16.08 | - | - | - |
| 2007 | 314027 | EER Rotisserie Oven | - | $ 7.80 | $ - | 1 | MBtuh | 9 | 0 | $ 7.00 | $ 21.51 | - | - | - |
| 2007 | 314028 | EER ENERGY STAR Fryer | | | | 1 | MBtuh | | 0 | $ 5.00 | $ - | - | - | - |
| 2007 | 314029 | EER ENERGY STAR Fryer with Electric Ignition | | | | 1 | MBtuh | | 0 | $ 5.00 | $ - | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2007 | 314030 | EER ENERGY STAR Fryer with Electric Ignition | | | | 1 | Unit | | 0 | $ 200.00 | $ - | - | - | - |
| 2007 | 314031 | EER High Efficiency Fryer | | | | 1 | MBtuh | | 0 | $ 3.00 | $ - | - | - | - |
| 2007 | 314032 | EER High Efficiency Fryer with Electronic Ignition | | | | 1 | MBtuh | | 0 | $ 3.00 | $ - | - | - | - |
| 2007 | 314033 | EER High Efficiency Fryer with Electronic Ignition | | | | 1 | Unit | | 0 | $ 200.00 | $ - | - | - | - |
| 2007 | 314034 | EER Standard Efficiency Fryer with Electronic Ignition | | | | 1 | Unit | | 0 | $ 200.00 | $ - | - | - | - |
| 2007 | 314035 | Steam Trap Replacement | - | $ 647.00 | $ - | 0.8 | Unit | 15 | 0 | $ 100.00 | $ 122.00 | - | - | - |
| 2007 | 314036 | Upstream Water Heater Incentive NEW | | | | 1 | unit | 15 | 0 | $ 1.00 | $ - | - | - | - |
| 2007 | 314042 | Grant (SPC Equivalent Measure) | - | $ 1.00 | $ - | 0.8 | Therm | 15 | 2472046.5 | $ 0.50 | $ 1.80 | - | 1,977,637 | - |
| 2007 | 314044 | Efficiency Improvement Recognition | - | $ 1.00 | $ - | 0.8 | Therm | 2 | 197675 | $ - | $ 0.52 | - | 158,140 | - |
| 2007 | 314045 | Equipment Replacement Recognition (SPC Equivalent Measure) | - | $ 1.00 | $ - | 0.8 | Therm | 15 | 173525 | $ - | $ 1.80 | - | 138,820 | - |
| 2007 | 314046 | EER Cabinet Steamer Tier II | - | $ 8.67 | $ - | 1 | unit | 12 | 0 | $ 4.00 | $ 11.11 | - | - | - |
| 2008 | 314001 | EER Convection Oven | - | $ 323.00 | $ - | 1 | Unit | 12 | 350 | $ 500.00 | $ 3,144.00 | - | 113,050 | - |
| 2008 | 314002 | EER Under-fired broiler | - | $ 5.58 | $ - | 1 | MBtuh | 12 | 0 | $ 4.00 | $ 2.59 | - | - | - |
| 2008 | 314003 | EER Griddle | - | $ 88.00 | $ - | 1 | Unit | 12 | 150 | $ 125.00 | $ 4,575.00 | - | 13,200 | - |
| 2008 | 314004 | EER Rotating Rack Oven | - | $ 11.43 | $ - | 1 | MBtuh | 12 | 0 | $ 10.00 | $ 10.14 | - | - | - |
| 2008 | 314005 | Misc. Cooking Equip. | - | $ 4.62 | $ - | 1 | MBtuh | 12 | 0 | $ 4.00 | $ 11.12 | - | - | - |
| 2008 | 314006 | EER Fryer - High Effic. Unit | - | $ 505.00 | $ - | 1 | Unit | 12 | 200 | $ 500.00 | $ 3,796.00 | - | 101,000 | - |
| 2008 | 314007 | EER Fryer - Unit with Electr. Ignition | - | $ 2.19 | $ - | 1 | MBtuh | 12 | 0 | $ 200.00 | $ 3.59 | - | - | - |
| 2008 | 314008 | PER Furnace Replacement | - | $ 1.00 | $ - | 0.8 | Therm | 20 | 468750 | $ 0.75 | $ 4.79 | - | 375,000 | - |
| 2008 | 314009 | PER Kiln Replacement | - | $ 1.00 | $ - | 0.8 | Therm | 20 | 177500 | $ 0.75 | $ 0.53 | - | 142,000 | - |
| 2008 | 314010 | PER Oven Replacement | - | $ 1.00 | $ - | 0.8 | Therm | 20 | 446916 | $ 0.80 | $ 2.50 | - | 357,533 | - |
| 2008 | 314011 | CPI Heat Recovery | - | $ 1.00 | $ - | 0.8 | Therm | 20 | 447000 | $ 0.75 | $ 1.84 | - | 357,600 | - |
| 2008 | 314012 | PER Misc. Process Equip. Replacement | - | $ 1.00 | $ - | 0.8 | Therm | 20 | 1825000 | $ 0.80 | $ 3.64 | - | 1,460,000 | - |
| 2008 | 314013 | CPI Equip. Modernization | - | $ 1.00 | $ - | 0.8 | Therm | 20 | 2147928 | $ 0.80 | $ 1.15 | - | 1,718,342 | - |
| 2008 | 314014 | PER Engine Rebuild/Replacement | - | $ 1.00 | $ - | 0.8 | Therm | 15 | 125000 | $ 0.75 | $ 4.16 | - | 100,000 | - |
| 2008 | 314015 | PER Pump Rebuild/Replacement | - | $ 1.00 | $ - | 0.8 | Therm | 15 | 100000 | $ 0.75 | $ 1.63 | - | 80,000 | - |
| 2008 | 314016 | EER Combination Oven | - | $ 403.00 | $ - | 1 | Unit | 12 | 50 | $ 750.00 | $ 21,797.00 | - | 20,150 | - |
| 2008 | 314017 | EER Deck Oven | - | $ 3.62 | $ - | 1 | MBtuh | 12 | 0 | $ 3.00 | $ 9.11 | - | - | - |
| 2008 | 314018 | EER Over-Fired Charbroiler | - | $ 9.42 | $ - | 1 | MBtuh | 12 | 0 | $ 4.00 | $ 12.51 | - | - | - |
| 2008 | 314019 | EER Cheesemelter | - | $ 10.96 | $ - | 1 | MBtuh | 12 | 0 | $ 4.00 | $ 8.38 | - | - | - |
| 2008 | 314020 | EER Salamander | - | $ 7.90 | $ - | 1 | MBtuh | 12 | 0 | $ 4.00 | $ 9.79 | - | - | - |
| 2008 | 314021 | EER Steam Kettle | - | $ 15.47 | $ - | 1 | MBtuh | 12 | 0 | $ 6.00 | $ 21.17 | - | - | - |
| 2008 | 314022 | EER Braising Pan | - | $ 5.33 | $ - | 1 | MBtuh | 12 | 0 | $ 4.00 | $ 14.53 | - | - | - |
| 2008 | 314023 | EER Cabinet Steamer Tier I | - | $ 2,084.00 | $ - | 1 | Unit | 12 | 50 | $ 750.00 | $ 6,221.00 | - | 104,200 | - |
| 2008 | 314024 | EER Fryer - High Effic. Unit with Electr. Ignition | - | $ - | $ - | 1 | MBtuh | 12 | 0 | $ 5.00 | $ 28.39 | - | - | - |
| 2008 | 314025 | EER Fryer - High Effic. Tier I per MBtuH | - | $ 2.53 | $ - | 1 | MBtuh | 9 | 0 | $ 5.00 | $ 5.61 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2008 | 314026 | EER Conveyor Oven | - | $ 5.04 | $ - | 1 | MBtuh | 9 | 0 | $ 7.00 | $ 16.08 | - | - | - |
| 2008 | 314027 | EER Rotisserie Oven | - | $ 7.80 | $ - | 1 | MBtuh | 9 | 0 | $ 7.00 | $ 21.51 | - | - | - |
| 2008 | 314028 | EER ENERGY STAR Fryer | | | | 1 | MBtuh | | 0 | $ 5.00 | $ - | - | - | - |
| 2008 | 314029 | EER ENERGY STAR Fryer with Electric Ignition | | | | 1 | MBtuh | | 0 | $ 5.00 | $ - | - | - | - |
| 2008 | 314030 | EER ENERGY STAR Fryer with Electric Ignition | | | | 1 | Unit | | 0 | $ 200.00 | $ - | - | - | - |
| 2008 | 314031 | EER High Efficiency Fryer | | | | 1 | MBtuh | | 0 | $ 3.00 | $ - | - | - | - |
| 2008 | 314032 | EER High Efficiency Fryer with Electronic Ignition | | | | 1 | MBtuh | | 0 | $ 3.00 | $ - | - | - | - |
| 2008 | 314033 | EER High Efficiency Fryer with Electronic Ignition | | | | 1 | Unit | | 0 | $ 200.00 | $ - | - | - | - |
| 2008 | 314034 | EER Standard Efficiency Fryer with Electronic Ignition | | | | 1 | Unit | | 0 | $ 200.00 | $ - | - | - | - |
| 2008 | 314035 | Steam Trap Replacement | - | $ 647.00 | $ - | 0.8 | Unit | 15 | 0 | $ 100.00 | $ 122.00 | - | - | - |
| 2008 | 314036 | Upstream Water Heater Incentive NEW | | | | 1 | unit | 15 | 0 | $ 1.00 | $ - | - | - | - |
| 2008 | 314042 | Grant (SPC Equivalent Measure) | - | $ 1.00 | $ - | 0.8 | Therm | 15 | 2700000 | $ 0.50 | $ 1.80 | - | 2,160,000 | - |
| 2008 | 314044 | Efficiency Improvement Recognition | - | $ 1.00 | $ - | 0.8 | Therm | 2 | 224458.75 | $ - | $ 0.52 | - | 179,567 | - |
| 2008 | 314045 | Equipment Replacement Recognition (SPC Equivalent Measure) | - | $ 1.00 | $ - | 0.8 | Therm | 15 | 280875 | $ - | $ 1.80 | - | 224,700 | - |
| 2008 | 314046 | EER Cabinet Steamer Tier II | - | $ 8.67 | $ - | 1 | unit | 12 | 0 | $ 4.00 | $ 11.11 | - | - | - |

# NEW CONSTRUCTION PROGRAMS

# 2006-2008 Energy Efficiency Programs
# SoCalGas/SCE Joint Savings By Design Concept Paper

## 1. Projected Program Budget

| | 2006 | 2007 | 2008 |
|---|---|---|---|
| Administration | | | |
| Administrative Overheads | $ 71,429 | $ 119,048 | $ 166,667 |
| Administrative Other | $ 348,016 | $ 192,654 | $ 195,289 |
| Marketing & Outreach | $ 235,232 | $ 554,029 | $ 600,907 |
| Direct Implementation | | | |
| Incentives | $ 527,970 | $ 1,050,000 | $ 1,514,924 |
| Activity | $ 312,040 | $ 567,627 | $ 995,492 |
| Installation | $ - | $ - | $ - |
| Hardware & Materials | $ - | $ - | $ - |
| Rebate Processing & Inspection | $ 5,313 | $ 16,642 | $ 26,722 |
| EM&V | $ - | $ - | $ - |
| *Total* | *$ 1,500,000* | *$ 2,500,000* | *$ 3,500,000* |

## 2. Projected Program Impacts

| 2006 | | | 2007 | | | 2008 | | |
|---|---|---|---|---|---|---|---|---|
| Net kWh | Net kW | Net Therms | Net kWh | Net kW | Net Therms | Net kWh | Net kW | Net Therms |
| - | - | 884,834 | - | - | 1,759,714 | - | - | 2,646,926 |

## 3. Program Cost Effectiveness

Attached

## 4. Program Descriptors

Nonresidential new construction market sector; available statewide with common rules and criteria; a modification of the existing Savings By Design program. Through this joint program SoCalGas will offer incentives for gas energy savings, while SCE will provide incentives for electric energy savings.

Savings By Design (SBD) has been an energy efficiency program for the nonresidential new construction industry, developed and delivered by the investor-owned utilities (IOUs) since 1999, to provide statewide consistency, program stability, and savings persistence to the nonresidential new construction market. The 2006 nonresidential new construction program builds on the best elements of successful new construction programs run by the investor owned utilities since the early 1990's. The program promotes integrated design and emphasizes early design involvement by offering building owners and their design teams a wide range of services including education, design assistance, and owner incentives, as well as design team incentives.

## 5. Program Statement

The Savings By Design program will continue to provide the nonresidential new construction industry with a broad palette of technical and financial resources to aid

them in designing new facilities to the most cost-effective energy efficiency standards. The program is targeted to owners/developers/tenants who are planning new buildings, including expansions, additions, and major remodels, as well as their selected design professionals who are providing building plans and specialty consulting regarding energy or environmental quality. Integrated design is the program's top goal, which is exemplified by all building disciplines working together in the early design phases, to plan and construct a high performance project.

Though the concept of high performance building has continued to gain prominence over the last several years, still many design teams are only familiar with basic energy efficiency concepts and are often reluctant to incorporate innovative energy-efficient technologies into a particular project due to perceived higher upfront capital costs or the fear that doing so will result in unnecessary project delays. This lack of awareness and reluctance is addressed in the program's design by working with owner/developers and design teams from the ground up, early in the planning process, educating them by offering hands-on training and no-cost analysis resources, guiding them through the participation process with Account Executives who are dedicated program-specialists, and the strategic use of incentives. This joint SBD program with SCE will continue to improve upon established successful approaches to overcome these market barriers, avoid lost opportunities, and assure that the best in energy efficiency and energy-related technologies are incorporated in each project.

## 6. Program Rationale

This program delivers cost-effective, permanent, and verifiable energy savings and peak demand reductions with long-term energy savings of between 15 to 20 years. SoCalGas' modified new construction program will play an increased role in reducing the gas energy needs of new and expanding facilities. By providing the technical and financial means to influence the basic design of commercial and industrial projects, the program assures that these projects are constructed correctly the first time. Nonresidential new construction interventions preclude demand from ever impacting electrical and gas supply and provide fundamental, if invisible, savings. Further, the program is able to influence decision makers and demonstrate energy savings potential at the time when achieving those savings is most cost effective for the building owner, thereby avoiding lost opportunities. With specific enhancements intended to help the market address the new Title 24 energy code changes being applied in 2006, the program will continue to serve the needs of project owners and design teams.

Since 1999 the statewide Savings By Design (SBD) program has involved thousands of participants and projects and has worked with scores of design teams. The program's innovative educational elements and implementation strategies target market barriers and failures that inhibit adoption of cost-effective energy efficiency measures while providing lead sources for future project involvement. The Savings

By Design program has consistently met the California Public Utilities Commission's (CPUC) goals and objectives for energy efficiency programs and will continue to benefit the nonresidential new construction market in 2006 and beyond.

The program relies on three basic elements to avoid lost opportunities across all customer sizes: the Whole Building Approach, the Systems Approach and education and outreach. The core strategy centers on an integrated design approach to optimize energy efficiency, known as the Whole Building Approach, which is appropriate for larger, more complex buildings and for those sophisticated customers with the ability to undertake such an approach. This approach has a tiered incentive structure to help pull projects towards high levels of energy efficiency and keep designers pushing the envelope. For those participants who would not normally consider or cannot use a fully integrated design approach, the Systems Approach provides a simplified, performance-based calculation method that moves owners and design teams far beyond simple prescriptive approaches and minimum code compliance. Delivery strategies utilizing training, education, and outreach, are integral to program design and also crosscut all program elements in order to reach the broadest possible audience. Intervention strategies mix information, technical assistance, and training with financial incentives to increase supply of, and demand for, high-performance buildings, high efficiency equipment and materials, to the broadest possible audience.

## 7. Program Outcomes

By using indicators such as energy simulation modeling, life cycle cost analysis and long term operating cost reduction goals, the program will educate, demonstrate, and encourage energy efficiency and demand reduction above and beyond California's Energy Code (Title 24). Early involvement with design decision-makers presents the best opportunity to provide influential information and enhance the energy performance of nonresidential new construction buildings with quantified financial incentive offers so that loads are reduced through right-sized equipment, leading to reduced capacity affecting the grid. The program is designed to have interactions with other programs influencing energy codes and education and training for nonresidential design professionals.

SoCalGas will work to incorporate other existing offerings, internal and external to the utilities, to assist in realizing a project that reflects a cohesive sense of sustainability that may go beyond the traditional aspects of energy efficiency. Such offerings may include LEED (Leadership in Energy and Environmental Design) Green Building Rating System® certification, ENERGY STAR® rating, demand response and self-generation programs, and other programs, as applicable.

Savings By Design will:

- Collaborate with the statewide Savings By Design teams to share best practices and other successful tools and resources.

- Motivate customers and the design industry to integrate energy use and efficiency strategies early in the design process.
- Support and work in concert with the Sustainable Communities program goals and initiatives.
- Collaborate with the residential new construction Advanced Home Program to jointly solicit mixed-use projects.
- Introduce and support the time-dependent valuation of energy used as the basis of the new Title 24 energy standards.
- Move customers to design their facilities with the goal being long-term energy and cost savings, not just compliance with regulations.

Promote available resources to market players regarding Title 24 Code changes and how to exceed them cost-effectively and manage the efficient use of on-site training resources.

## 8. Program Strategy

Nonresidential New Construction
Nonresidential Building Design Assistance
Nonresidential Building Calculated Incentives

### 8.1.1. Program Strategy Description

The program targets key "influencers" in the new construction market segment including: architects and designers, property developers and building owners, industry and trade associations (American Institute of Architects - AIA, American Society of Heating, Refrigeration, and Air-conditioning Engineers - ASHRAE, Building Owners and Managers Association - BOMA, Illuminating Engineers Society - IES, United States Green Building Council - USGBC, etc.), energy consultants and service providers, engineers, building-system contractors, building department inspectors and plan checkers. The program emphasizes intervention with no-cost design assistance and analysis early in the planning and design process and offers a wide range of customized services including education, building calculated owner incentives and design team incentives.

The SoCalGas/SCE joint SBD program will be offered in the areas where the SoCalGas and SCE service territories overlap. SoCalGas will fund the natural gas incentives SCE will fund the electric incentives. SCE will generally represent the program to owners and design teams with SoCalGas providing technical support on the gas efficiency technologies. If a project has only gas savings potential then SoCalGas may take the lead with the building owner. The joint program will also include Pacific Gas and Electric (PG&E) where the PG&E and SoCalGas service territories overlap.

The program influences nonresidential building market actors such as owners, tenants and design teams to exceed current Title 24 energy efficiency standards (or established standards for industrial and specialty processes) by a significant percentage better than code for their new construction or renovation/remodeling projects. It leverages resources from industry relationships, strategic alliances and other public purpose programs to accomplish the goals of energy savings, peak demand reductions and long-term market change. Such sustained intervention within the nonresidential new construction market impacts market practice and flattens projected procurement demand, allows for the continuing strengthening of codes and standards, while continuing to nurture commercial and industrial project development.

1. Nonresidential New Construction
    - Initial program launch will involve utility program personnel working with innovative midstream design professionals and owners of nonresidential buildings who have successfully participated in the Savings By Design program previously to provide feedback about program enhancements.
    - Utility personnel will build on relationships to announce the updates to the Savings By Design program, which has been successful and influential in this market since 1999.
    - Utility and statewide representatives offering Savings By Design, will design, develop, and provide marketing and outreach materials to the midstream and downstream market actors to inform them about the program and attract expanded interest.
    - Market actors will demonstrate their interest in the program by taking action through program outreach channels, including websites, trade ally outreach, and personal contact by utility representatives.
    - Utility representatives will then facilitate program participation by offering no-cost design assistance and specialized analysis to gain access to project decision makers. Design assistance and analysis is provided at no cost and targeted to early design intervention to increase building energy performance when it is least costly to make changes. This assistance identifies opportunities for energy efficiency enhancements beyond code compliance, early in the design phase, and is presented to the owner and design team to help convince them to pursue high performance building, well beyond state energy code requirements for new construction.
    - Decision makers, facilitated by utility representatives, will consider different program options and be advised regarding the best program approach suited to their project, benefits of energy efficiency enhancements, and financial incentives available to help make energy efficiency investments. Once the program

approach is selected and agreed upon, information is gathered to progress towards a formal commitment.

- Utility representatives prepare the energy efficiency commitment that identifies the targeted enhanced performance of the project, estimates the financial incentive offered through the program, and specifies a combination of energy efficiency strategies that are to be included in the constructed project to achieve this level of performance.
- Owners and design team members sign agreements offered by utility representatives to pursue high performance buildings and proceed through the phases of their project.
- Utility representatives monitor the project and when notified that construction is complete, verify that the energy efficiency strategies are installed in the completed building. Financial incentives and energy savings are quantified and appropriate checks are processed for the owner and qualifying design teams.
- The enhanced building, with better-than-code-required energy performance, is constructed and continues to save energy compared to a code-compliant building.

2. Nonresidential Building Design Assistance
   - Design assistance matched to the needs of the project and custom analysis at no-cost are provided by utility representatives. This assistance identifies opportunities for energy efficiency enhancements beyond code compliance, early in the design phase, and promotes integrated analysis that avoids lost opportunities. Results of design analysis and the benefits of energy efficiency enhancements are presented to the owner and design team to help convince them to pursue high performance strategies, well beyond state energy code requirements for new construction.
   - Decision makers, facilitated by utility representatives, will consider different program options and be advised regarding the best program approach suited to their project, benefits of energy efficiency enhancements, and financial incentives available to help make energy efficiency investments all associated with the design assistance results. Once the program approach and preferred package of energy efficiency options is selected and agreed upon, information is gathered to progress towards a formal commitment.

3. Nonresidential Building Calculated Incentives
   - Utility representatives, using computer simulation modeling software, estimate an eligible building's performance and energy savings in comparison to California's energy code requirements for nonresidential new construction projects (or industry's

standard practice baseline for other processes or systems not addressed by code) to offer Savings By Design's building calculated incentives. Calculated savings are used to estimate potential financial incentives available through the program, using the Whole Building or Systems approach (which mirror the performance or prescriptive approach to code compliance).

- Design teams who perform computer simulation modeling, consider various combinations of energy efficiency enhancements, achieve significantly increased performance over code requirements following the Whole Building Approach, and help educate and convince their clients to make energy efficiency investments, become eligible to receive incentives based on the building's calculated energy savings.
- Owners of nonresidential new construction projects, who commit to construct their projects with the modeled energy efficiency enhancements, receive building calculated incentives following the Whole Building or the Systems approach.
- Utility representatives use building calculated incentives to raise decision maker's awareness regarding the benefits of integrated design, avoid lost opportunities and cream-skimming due to limited capitol budgets, overcome perceived first-cost and bounded rational barriers, and to cost-effectively motivate decisions makers to construct high performance buildings. The outcome is energy efficiency investment along with quantifiable and verifiable long-term operating savings and energy efficiency.

### 8.1.2. Program Indicators

The primary goal of the program's strategies is to procure energy savings and demand reduction in nonresidential new construction projects through early invention and design assistance and then following through construction and verification, to quantify energy efficiency savings and pay incentives following program commitments.

## 9. Program Implementation

A coordinated array of intervention strategies is necessary to overcome the market barriers standing in the way of sizable net benefits available from integrated, comprehensive building design. Program representatives will contact customers who are building new buildings, and utilize relationships with design professionals working in the region, to inform decision makers about program opportunities and benefits. The nonresidential new construction program's approach targets the primary decision makers in new construction projects with an emphasis on customized design assistance offered through dedicated program representatives at the Utility. Design assistance and incentives target owners, architects, and engineers, with information and financial stimulus to encourage maximum effort in pursuit of comprehensive long-term savings.

The Savings By Design program will continue to build on the two successful components that are delivered to the industry via program representatives – the Whole Building Approach and the Systems Approach:

- The Whole Building Approach is the preferred method of estimating energy savings within SBD because it enables a design team to consider integrated, optimized energy efficiency solutions. This approach provides and requires a high level of energy analysis and interactive feedback, which leads to more efficient design decisions. It also includes a progressive, tiered incentive structure to pull projects to perform significantly better than code requirements.

- The Systems Approach is a simplified, performance-based method, utilizing a calculation tool to optimize efficiency choices. It is straightforward and participants may find it the best available option for certain types of projects. The Systems Approach makes it easy for designers to look at the interaction of systems within their project, rather than individual equipment or measures.

- SBD also offers Design Team Incentives to support the extra effort for integrated energy design and to provide a reward for exceptional design accomplishments within the context of the Whole Building Approach. The program will introduce new opportunities to receive incentives in a phased-manner – bringing payment closer in proximity to when designer's complete their services - to better address this important decision maker's needs.

Delivery strategies utilizing program representatives including training, education, and outreach are integral to program design as are alliances with organizations promoting energy efficiency and integrated design for the nonresidential new construction industry. In pursuit of these ends, the program will align itself with numerous organizations and agencies including, but not limited to, the American Institute of Architects, California Council (AIACC); the Collaborative for High Performance Schools (CHPS); the California Commissioning Collaborative (CCC); the Coalition for Adequate Schools Housing (CASH); the American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE); the California Energy Commission (CEC); and the Department of the State Architect (DSA), among others.

A core component of the program's mission is to seek continuous improvement from the new construction industry and keep them aware of the on-going changes to Title 24 energy code. As such, the program will collaborate with the California Energy Commission on educational and program implementation strategies that

prepare market actors for successive code changes in advance of code adoption within regularly scheduled update cycles.

**10. Customer Description**

The program targets distinct links in the new construction decision-making chain, reflecting differences in design activities and priorities between large and small buildings and various occupancies. The program offers services and incentives to owners, developers, design teams, and contractors. All end-uses in buildings are included within program offerings, as are all end uses found in commercial, governmental, institutional, and industrial or agricultural processes. .

**11. Customer Interface**

Both the Whole Building Approach and the System Approach follow the same implementation process. The process begins with an initial contact between the customer (and/or the customer's design team) and a Savings By Design representative. These program representatives are dedicated to program implementation and trained to understand the dynamics and language of the design and construction industry, focused only on the delivery of the Savings By Design program. Program representatives actively seek out customers with potential new construction projects and generate project leads from diverse sources.

Once the program representative has helped the customer complete the brief Letter of Interest that documents the owner's interest in participating and receiving program benefits, further specifics are gathered regarding the project, such as design team members and construction timeline.

Initial meetings, between all members of the design team, the program representative, and appropriate technical staff, are held to discuss the parameters of the project and determine the best approach for the project. Design assistance, matched to the needs and scope of the project, is offered with the goal of identifying and validating energy savings strategies appropriate to the facility under design.

The program representative and supporting technical staff continue to provide recommendations, feedback, consulting, and energy use analysis, as needed, to the owner and design team as the project proceeds through the various design phases. Such activity can vary in duration from months to years. Culmination of this phase of the process will result in a list of agreed-upon energy efficiency strategies to be incorporated into the constructed project.

At this point, an Incentive Agreement between the owner and SoCalGas is executed. The execution of the Agreement generally takes place before the construction of the new building is begun. When applicable, an Incentive Agreement between the design team leader and SoCalGas is executed after the Owner Agreement has been finalized.

When the building's construction has been completed, SoCalGas will make an on-site visit to each participating project to confirm compliance with the terms of the Agreement. Once the inclusion of all measures/strategies has been confirmed, the owner is paid the agreed-upon incentive amount and energy savings reported. Should the completed construction vary from the Agreement, the available incentive will be recalculated to reflect the modeled energy-efficiency performance of the building as constructed.

For nonresidential new construction projects, the utility representatives will work closely with the owner and their design team to obtain the documents necessary to assess the project's performance, propose customized enhancements, offer financial incentives for quantify energy savings, and follow-through upon construction completion to verify installed energy-efficient systems. In addition, the design team may qualify for partial payment of incentive upon design analysis submission and acceptance, by working closely with the program representative.

## 12. Energy Measures and Program Activities

### 12.1. Prescriptive Measures.

See SoCalGas February 1, 2006 Filing Workbook.

### 12.2. kWh Level Data

See SoCalGas February 1, 2006 Filing Workbook.

### 12.3. Non-energy Activities

- Outreach/marketing activities, including an annual energy efficiency recognition awards (co-sponsored with trade allies, to raise awareness regarding energy-efficient design and construction, within the new construction industry).

Training and resource enhancements targeted to the nonresidential new construction market and professionals.

#### 12.3.1. Activity Description

#### 12.3.2. Quantitative Activity Goals

#### 12.3.3. Assigned attributes of the activity (market sector, end use)

## 13. Subcontractor Activities

- Project-specific, energy simulation design assistance and consulting
- Integrated energy design support
- Pilot program delivery in defined industry niches. A Request for Qualifications process will be used to select uniquely qualified contractors to address targeted industrial market segments to assess

and implement a limited offering to these specialized segments. Selected contractors will have demonstrated, unique new construction design expertise, and will be tasked with influencing specified segments of the nonresidential new construction market, in an effort to better serve customers designing these types of projects.

**14. Quality Assurance and Evaluation Activities**

The program will conduct inspections on 100% of the projects that complete construction during the program period.

An evaluation plan will be developed in accordance with the soon to be developed EM&V Protocols. The CPUC Energy Division will be holding meetings, workshops and possibly hearings throughout the summer to develop these Protocols. SoCalGas looks forward to participating and commenting on those activities and plans to file EM&V plans for all programs on October 1, 2005 in conjunction with the ED, CEC, and the other IOUs.

**15. Marketing Activities**

The primary marketing agent for Savings By Design is the group of program-dedicated Account Executives working to leverage long-standing relationships and continually expand outreach to design professionals, allied organizations, and all customers. Additionally, individual memberships in pertinent local industry organizations such as AIA, ASHRAE, IES, USGBC, and others, are utilized to build a presence in, and an informational/educational resource for members of, these organizations. In addition, the program will:

- develop and distribute program brochures, informational inserts, industry-specific marketing pieces, informational articles, and design guidelines.
- offer technical assistance and project-specific design assistance to building owners, developers, architects, engineers and contractors, to identify and analyze efficiency opportunities, and perform integrated design.
- present market segment-appropriate training and continuing education in integrated design practice (e.g., integrated design best practices, energy simulation modeling and analysis, commissioning, high efficiency lighting systems, daylighting strategies, outperforming energy codes and standards).
- tailor targeted information and design incentives to architects, engineers, and/or building owners/developers to encourage energy efficiency, financial analyses, and building simulation modeling.
- continue expansion of Energy Design Resources, including energy simulation tools, financial analysis tools, and web-based resources, and case studies promoting high performance demonstration projects.
- support allied organizations such as CHPS, CCC, CASH, AIACC, ASHRAE, the CEC, and others, at their meetings, programs, conferences, and activities that promote energy efficiency and integrated

design for nonresidential buildings to owners, design professionals, and energy professionals, as well as government agencies, cities, and counties.

- co-sponsor events, trade shows, and publications with the San Diego chapters of allied organizations.
- offer training opportunities, including scheduled sessions and on-site/upon request presentations at architects and engineers offices.

## 16. CPUC Objective

1. Make Energy Efficiency the Utilities Highest Priority:
Savings By Design compliments SoCalGas' portfolio of resource-acquisition energy efficiency programs by concentrating on delivering compelling information to the market that leads to energy efficiency investment in the most cost-effective manner. In nonresidential new construction projects, this is done by promoting integrated analysis, and thereby avoiding lost opportunities in the design phase of a project, because this is the time when the financial cost of energy efficiency enhancements is much lower, when compared to other options such as changes after design completion or retrofitting existing buildings.

2. Pursue All Cost-effective Energy Efficiency Opportunities (over both the short- and long-term):
Savings By Design contributes towards achievement of the energy savings targets set for both the electric and natural gas savings categories, and assures the most valued long-term savings, as designing a building efficiently leads to less capacity ever affecting the grid, that is not easily re-introduced without significant construction. As one example, the program promotes mechanical system down-sizing to reflect efficient lighting system's reduced loads and other interactive effects between systems that can be optimized when a building is considered as an interactive whole during the design phase.

3. Focus on programs that serve as alternatives to more costly supply-side resource options:
Savings By Design has demonstrated its cost effectiveness through the results of its TRC and PAC tests over the 2006-08 program cycle.

4. Avoid "lost opportunities" and "cream skimming":
Savings By Design is an innovative program that was designed to avoid lost opportunities by focusing on the advantages of integrated design analysis and early intervention in the design process to demonstrate the benefits of energy efficiency optimization through computer simulation modeling. Its financial incentive structure clearly disadvantages limited scope, system-based energy analysis.

5. Increase overall capacity utilization and lower peak loads:
Savings By Design is effective at lowering peak loads by using the California energy code as a baseline, with its new Time Dependent Valuation methodology,

and analyzing nonresidential new construction projects in comparison to code to develop a margin of compliance (or percentage better than code). In addition, Savings By Design offers an incentive rate structure that escalates as this percentage increases pulling the market to investigate higher performance and reduced loads.

6. Include…information and education programs, support for codes and standards, and continue to build upon the success of existing program:
Savings By Design is an existing statewide program that is being expanded and offered by more of California's utilities – including municipal utilities – and supports the distribution of energy efficiency information and educational training opportunities through its statewide website and educational effort known as Energy Design Resources. In addition, the program promotes codes and standards awareness and understanding by using the code as a benchmark, and by keeping the market updated about the current California energy code and supporting the evolution and tightening of codes over time through demonstration of technologies and strategies that are not standard in the current code.

8. Expand the Emerging Technologies programs and other PIER projects… with emphasis on commercialization within 6 years: Savings By Design works closely with the Emerging Technologies program to find innovative design professionals who are interested in demonstrating technologies that have not achieved market acceptance in new construction projects. This cooperation optimizes the opportunity to target emerging technologies and focus market attention on demonstration projects that will serve as case studies and break down market resistance.

10. PGC funds must be spent in service territories collected; gas PGC collections must fund gas efficiency programs and electric PGC funds must fund electric efficiency programs:
Savings By Design is a dual-fuel program (addressing electric and gas savings), implemented in SoCalGas' service territory, while effectively reaching across utility boundaries as more of California municipal utilities show interest in offering the program in their service territories.

| | SCG3511 NEW4-Savings By Design SCG SCE Program | |
|---|---|---|
| **BUDGET** | | |
| | | |
| **Administrative Costs** | **$** | **1,093,103** |
| Overhead and G&A | $ | 357,143 |
| Other Administrative Costs | $ | 735,960 |
| **Marketing/Outreach** | **$** | **1,390,168** |
| **Direct Implementation** | **$** | **5,016,729** |
| Total Incentives and Rebates | | |
| User Input Incentive | $ | - |
| Direct Install Rebate | $ | 3,092,893 |
| Direct Install Labor | $ | - |
| Direct Install Materials | $ | - |
| Activity | $ | 1,875,159 |
| Installation | $ | - |
| Hardware & Materials | $ | - |
| Rebate Processing & Inspection | $ | 48,677 |
| **EM&V Costs** | **$** | - |
| **Budget** | **$** | **7,500,000** |
| **Costs recovered from other sources** | **$** | - |
| **Budget** (plus other costs) | **$** | **7,500,000** |
| | | |
| **PROGRAM IMPACTS** | | |
| **Program Reductions for Measures installed through 2008** | | |
| User Entered kW (kW) | | - |
| Net Jul-Sept Peak (kW) | | - |
| Net Dec-Feb Peak (kW) | | - |
| Net NCP (kW) | | - |
| Net CEC (kW) | | - |
| Annual Net kWh | | - |
| Lifecycle Net kWh | | - |
| Annual Net Therms | | 5,291,474 |
| Lifecycle Net Therms | | 79,372,117 |
| | | |
| **Cost Effectiveness** | | |
| **TRC** | | |
| Costs | $ | 16,967,886 |
| Electric Benefits | $ | - |
| Gas Benefits | $ | 36,706,127 |
| Net Benefits (NPV) | $ | 19,738,240 |
| BC Ratio | | 2.16 |
| | | |
| **PAC** | | |
| Costs | $ | 7,089,234 |
| Electric Benefits | $ | - |
| Gas Benefits | $ | 36,706,127 |
| Net Benefits (NPV) | $ | 29,616,893 |
| BC Ratio | | 5.18 |
| | | |
| **Levelized Cost** | | |
| **Levelized Cost TRC ($/kWh )** | | |
| Discounted kWh | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |
| **Levelized Cost PAC ($/kWh)** | | |
| Discounted kWh | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |
| **Levelized Cost TRC ($/therm)** | | |
| Discounted Therms | | 43,520,877 |
| Cost | $ | 0.3899 |
| Benefits | $ | 0.8434 |
| Benefit-Cost | $ | 0.4535 |
| **Levelized Cost PAC ($/therm)** | | |
| Discounted Therms | | 43,520,877 |
| Cost | $ | 0.1629 |
| Benefits | $ | 0.8434 |
| Benefit-Cost | $ | 0.6805 |

## Savings By Design SCG SCE Program

| Year | Total Budget | Total Incentives | Admin Budget | Net kWh | Net Therms | Net kW |
|---|---|---|---|---|---|---|
| 2006 | $ 1,500,000 | $ 527,970 | $ 972,030 | - | 884,834 | - |
| 2007 | $ 2,500,000 | $ 1,050,000 | $ 1,450,000 | - | 1,759,714 | - |
| 2008 | $ 3,500,000 | $ 1,514,924 | $ 1,985,076 | - | 2,646,926 | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 313001 | Day Lighting (per kWh) | 1 | - | 0.00 | 0.8212 | kWh | 15 | - | $ 0.04 | $ 0.15 | - | - | - |
| 2006 | 313002 | HVAC (per kWh) | 1 | - | 0.00 | 0.8212 | kWh | 15 | - | $ 0.04 | $ 0.21 | - | - | - |
| 2006 | 313003 | Lighting (per kWh) | 1 | - | 0.00 | 0.8212 | kWh | 15 | - | $ 0.11 | $ 0.16 | - | - | - |
| 2006 | 313004 | Misc (per kWh) | 1 | - | 0.00 | 0.8212 | kWh | 15 | - | $ 0.11 | $ 0.22 | - | - | - |
| 2006 | 313005 | Misc (per Therm) | - | 1 | - | 0.8212 | Therm | 15 | 648,918 | $ 0.49 | $ 2.53 | - | 532,891 | - |
| 2006 | 313006 | Service Hot Water (per Therm) | 1 | - | - | 0.8212 | Therm | 15 | - | $ 0.06 | $ - | - | - | - |
| 2006 | 313007 | Space Heat/Boiler (per Therm) | 1 | - | - | 0.8212 | Therm | 15 | - | $ 0.03 | $ - | - | - | - |
| 2006 | 313008 | Refrigeration (per kWh) | 1 | - | 0.00 | 0.8212 | kWh | 15 | - | $ 0.03 | $ 0.16 | - | - | - |
| 2006 | 313009 | Whole Bldg (per kWh) | 1 | - | 0.00 | 0.8212 | kWh | 15 | - | $ 0.16 | $ 0.10 | - | - | - |
| 2006 | 313010 | Whole Bldg (per Therm) | - | 1 | - | 0.8212 | Therm | 15 | 428,571 | $ 0.49 | $ 2.97 | - | 351,943 | - |
| 2007 | 313001 | Day Lighting (per kWh) | 1 | - | 0.00 | 0.8212 | kWh | 15 | - | $ 0.04 | $ 0.15 | - | - | - |
| 2007 | 313002 | HVAC (per kWh) | 1 | - | 0.00 | 0.8212 | kWh | 15 | - | $ 0.04 | $ 0.21 | - | - | - |
| 2007 | 313003 | Lighting (per kWh) | 1 | - | 0.00 | 0.8212 | kWh | 15 | - | $ 0.11 | $ 0.16 | - | - | - |
| 2007 | 313004 | Misc (per kWh) | 1 | 0 | 8.6935E-05 | 0.8212 | kWh | 15 | 0 | $ 0.11 | $ 0.22 | - | - | - |
| 2007 | 313005 | Misc (per Therm) | 0 | 1 | 0 | 0.8212 | Therm | 15 | 1392857 | $ 0.49 | $ 2.53 | - | 1,143,814 | - |
| 2007 | 313006 | Service Hot Water (per Therm) | 1 | 0 | 0 | 0.8212 | Therm | 15 | 0 | $ 0.06 | $ - | - | - | - |
| 2007 | 313007 | Space Heat/Boiler (per Therm) | 1 | 0 | 0 | 0.8212 | Therm | 15 | 0 | $ 0.03 | $ - | - | - | - |
| 2007 | 313008 | Refrigeration (per kWh) | 1 | 0 | 0.0001415 | 0.8212 | kWh | 15 | 0 | $ 0.03 | $ 0.16 | - | - | - |
| 2007 | 313009 | Whole Bldg (per kWh) | 1 | 0 | 0.00022049 | 0.8212 | kWh | 15 | 0 | $ 0.16 | $ 0.10 | - | - | - |
| 2007 | 313010 | Whole Bldg (per Therm) | 0 | 1 | 0 | 0.8212 | Therm | 15 | 750000 | $ 0.49 | $ 2.97 | - | 615,900 | - |
| 2008 | 313001 | Day Lighting (per kWh) | 1 | 0 | 0.00025225 | 0.8212 | kWh | 15 | 0 | $ 0.04 | $ 0.15 | - | - | - |
| 2008 | 313002 | HVAC (per kWh) | 1 | 0 | 0.00024161 | 0.8212 | kWh | 15 | 0 | $ 0.04 | $ 0.21 | - | - | - |
| 2008 | 313003 | Lighting (per kWh) | 1 | 0 | 0.00028532 | 0.8212 | kWh | 15 | 0 | $ 0.11 | $ 0.16 | - | - | - |
| 2008 | 313004 | Misc (per kWh) | 1 | 0 | 8.6935E-05 | 0.8212 | kWh | 15 | 0 | $ 0.11 | $ 0.22 | - | - | - |
| 2008 | 313005 | Misc (per Therm) | 0 | 1 | 0 | 0.8212 | Therm | 15 | 1289296 | $ 0.47 | $ 2.53 | - | 1,058,770 | - |
| 2008 | 313006 | Service Hot Water (per Therm) | 1 | 0 | 0 | 0.8212 | Therm | 15 | 0 | $ 0.06 | $ - | - | - | - |
| 2008 | 313007 | Space Heat/Boiler (per Therm) | 1 | 0 | 0 | 0.8212 | Therm | 15 | 0 | $ 0.03 | $ - | - | - | - |
| 2008 | 313008 | Refrigeration (per kWh) | 1 | 0 | 0.0001415 | 0.8212 | kWh | 15 | 0 | $ 0.03 | $ 0.16 | - | - | - |
| 2008 | 313009 | Whole Bldg (per kWh) | 1 | 0 | 0.00022049 | 0.8212 | kWh | 15 | 0 | $ 0.16 | $ 0.10 | - | - | - |
| 2008 | 313010 | Whole Bldg (per Therm) | 0 | 1 | 0 | 0.8212 | Therm | 15 | 1933946 | $ 0.47 | $ 2.97 | - | 1,588,156 | - |

# 2006-2008 Energy Efficiency Programs
# SoCalGas/Municipal Electric Utility Savings By Design Concept Paper

## 1. Projected Program Budget

| | 2006 | 2007 | 2008 |
|---|---|---|---|
| Administration | | | |
| Administrative Overheads | $ 47,619 | $ 47,619 | $ 47,619 |
| Administrative Other | $ 73,288 | $ 84,963 | $ 87,301 |
| Marketing & Outreach | $ 113,398 | $ 128,483 | $ 131,782 |
| Direct Implementation | | | |
| Incentives | $ 600,000 | $ 600,000 | $ 600,000 |
| Activity | $ 161,982 | $ 110,016 | $ 103,585 |
| Installation | $ - | $ - | $ - |
| Hardware & Materials | $ - | $ - | $ - |
| Rebate Processing & Inspection | $ 3,713 | $ 28,921 | $ 29,713 |
| EM&V | $ - | $ - | $ - |
| *Total* | *$ 1,000,000* | *$ 1,000,000* | *$ 1,000,000* |

## 2. Projected Program Impacts

| 2006 | | | 2007 | | | 2008 | | |
|---|---|---|---|---|---|---|---|---|
| Net kWh | Net kW | Net Therms | Net kWh | Net kW | Net Therms | Net kWh | Net kW | Net Therms |
| - | - | 1,005,550 | - | - | 1,005,550 | - | - | 1,005,550 |

## 3. Program Cost Effectiveness

Attached

## 4. Program Descriptors

Nonresidential new construction market sector; available statewide with common rules and criteria; a modification of the existing Savings By Design program. Through this joint program SoCalGas will offer incentives for gas energy savings, while collaborative electric utility will provide incentives for electric energy savings.

Savings By Design (SBD) has been an energy efficiency program for the nonresidential new construction industry, developed and delivered by the investor-owned utilities (IOUs) since 1999, to provide statewide consistency, program stability, and savings persistence to the nonresidential new construction market. The 2006 nonresidential new construction program builds on the best elements of successful new construction programs run by the investor owned utilities since the early 1990's. The program promotes integrated design and emphasizes early design involvement by offering building owners and their design teams a wide range of services including education, design assistance, and owner incentives, as well as design team incentives.

**5. Program Statement**

The Savings By Design program will continue to provide the nonresidential new construction industry with a broad palette of technical and financial resources to aid them in designing new facilities to the most cost-effective energy efficiency standards. The program is targeted to owners/developers/tenants who are planning new buildings, including expansions, additions, and major remodels, as well as their selected design professionals who are providing building plans and specialty consulting regarding energy or environmental quality. Integrated design is the program's top goal, which is exemplified by all building disciplines working together in the early design phases, to plan and construct a high performance project.

Though the concept of high performance building has continued to gain prominence over the last several years, still many design teams are only familiar with basic energy efficiency concepts and are often reluctant to incorporate innovative energy-efficient technologies into a particular project due to perceived higher upfront capital costs or the fear that doing so will result in unnecessary project delays. This lack of awareness and reluctance is addressed in the program's design by working with owner/developers and design teams from the ground up, early in the planning process, educating them by offering hands-on training and no-cost analysis resources, guiding them through the participation process with Account Executives who are dedicated program-specialists, and the strategic use of incentives. This joint SBD program with municipal electric utilities will continue to improve upon established successful approaches to overcome these market barriers, avoid lost opportunities, and assure that the best in energy efficiency and energy-related technologies are incorporated in each project.

**6. Program Rationale**

This program delivers cost-effective, permanent, and verifiable energy savings and peak demand reductions with long-term energy savings of between 15 to 20 years. SoCalGas' modified new construction program will play an increased role in reducing the gas energy needs of new and expanding facilities. By providing the technical and financial means to influence the basic design of commercial and industrial projects, the program assures that these projects are constructed correctly the first time. Nonresidential new construction interventions preclude demand from ever impacting electrical and gas supply and provide fundamental, if invisible, savings. Further, the program is able to influence decision makers and demonstrate energy savings potential at the time when achieving those savings is most cost effective for the building owner, thereby avoiding lost opportunities. With specific enhancements intended to help the market address the new Title 24 energy code changes being applied in 2006, the program will continue to serve the needs of project owners and design teams.

Since 1999 the statewide Savings By Design (SBD) program has involved thousands of participants and projects and has worked with scores of design teams. The program's innovative educational elements and implementation strategies target market barriers and failures that inhibit adoption of cost-effective energy efficiency measures while providing lead sources for future project involvement. The Savings By Design program has consistently met the California Public Utilities Commission's (CPUC) goals and objectives for energy efficiency programs and will continue to benefit the nonresidential new construction market in 2006 and beyond.

The program relies on three basic elements to avoid lost opportunities across all customer sizes: the Whole Building Approach, the Systems Approach and education and outreach. The core strategy centers on an integrated design approach to optimize energy efficiency, known as the Whole Building Approach, which is appropriate for larger, more complex buildings and for those sophisticated customers with the ability to undertake such an approach. This approach has a tiered incentive structure to help pull projects towards high levels of energy efficiency and keep designers pushing the envelope. For those participants who would not normally consider or cannot use a fully integrated design approach, the Systems Approach provides a simplified, performance-based calculation method that moves owners and design teams far beyond simple prescriptive approaches and minimum code compliance. Delivery strategies utilizing training, education, and outreach, are integral to program design and also crosscut all program elements in order to reach the broadest possible audience. Intervention strategies mix information, technical assistance, and training with financial incentives to increase supply of, and demand for, high-performance buildings, high efficiency equipment and materials, to the broadest possible audience.

## 7. Program Outcomes

By using indicators such as energy simulation modeling, life cycle cost analysis and long term operating cost reduction goals, the program will educate, demonstrate, and encourage energy efficiency and demand reduction above and beyond California's Energy Code (Title 24). Early involvement with design decision-makers presents the best opportunity to provide influential information and enhance the energy performance of nonresidential new construction buildings with quantified financial incentive offers so that loads are reduced through right-sized equipment, leading to reduced capacity affecting the grid. The program is designed to have interactions with other programs influencing energy codes and education and training for nonresidential design professionals.

SoCalGas will work to incorporate other existing offerings, internal and external to the utilities, to assist in realizing a project that reflects a cohesive sense of sustainability that may go beyond the traditional aspects of energy efficiency. Such offerings may include LEED (Leadership in Energy and Environmental Design) Green Building Rating System® certification, ENERGY STAR® rating, demand response and self-generation programs, and other programs, as applicable.

Savings By Design will:

- Collaborate with the statewide Savings By Design teams to share best practices and other successful tools and resources.
- Motivate customers and the design industry to integrate energy use and efficiency strategies early in the design process.
- Support and work in concert with the Sustainable Communities program goals and initiatives.
- Collaborate with the residential new construction Advanced Home Program to jointly solicit mixed-use projects.
- Introduce and support the time-dependent valuation of energy used as the basis of the new Title 24 energy standards.
- Move customers to design their facilities with the goal being long-term energy and cost savings, not just compliance with regulations.

Promote available resources to market players regarding Title 24 Code changes and how to exceed them cost-effectively and manage the efficient use of on-site training resources.

**8. Program Strategy**

Nonresidential New Construction
Nonresidential Building Design Assistance
Nonresidential Building Calculated Incentives

**8.1.1. Program Strategy Description**

The program targets key "influencers" in the new construction market segment including: architects and designers, property developers and building owners, industry and trade associations (American Institute of Architects - AIA, American Society of Heating, Refrigeration, and Air-conditioning Engineers - ASHRAE, Building Owners and Managers Association - BOMA, Illuminating Engineers Society - IES, United States Green Building Council - USGBC, etc.), energy consultants and service providers, engineers, building-system contractors, building department inspectors and plan checkers. The program emphasizes intervention with no-cost design assistance and analysis early in the planning and design process and offers a wide range of customized services including education, building calculated owner incentives and design team incentives.

The SoCalGas/Municipal Electric Utility SBD program will be offered in the SoCalGas service territory with municipal electric utilities that are willing to cooperate in a collaborative effort to offer energy efficiency incentives. SoCalGas will only fund gas incentives and the municipal electric utility will only fund the electric incentives.

SoCalGas would provide the complete SBD program, subject to electric incentive funding by the municipal electric utility. In some cases, the municipal electric utility may elect to support and enhance the SBE program.

A partial list of potential municipal electric company participants include, but are not limited to: Los Angeles Department of Water and Power, Pasadena Water and Power, Burbank Water and Power, Riverside Public Utilities, Imperial Irrigation District, Glendale Water and Power, and Anaheim Public Utilities.

The program influences nonresidential building market actors such as owners, tenants and design teams to exceed current Title 24 energy efficiency standards (or established standards for industrial and specialty processes) by a significant percentage better than code for their new construction or renovation/remodeling projects. It leverages resources from industry relationships, strategic alliances and other public purpose programs to accomplish the goals of energy savings, peak demand reductions and long-term market change. Such sustained intervention within the nonresidential new construction market impacts market practice and flattens projected procurement demand, allows for the continuing strengthening of codes and standards, while continuing to nurture commercial and industrial project development.

1. Nonresidential New Construction
    - Initial program launch will involve utility program personnel working with innovative midstream design professionals and owners of nonresidential buildings who have successfully participated in the Savings By Design program previously to provide feedback about program enhancements.
    - Utility personnel will build on relationships to announce the updates to the Savings By Design program, which has been successful and influential in this market since 1999.
    - Utility and statewide representatives offering Savings By Design, will design, develop, and provide marketing and outreach materials to the midstream and downstream market actors to inform them about the program and attract expanded interest.
    - Market actors will demonstrate their interest in the program by taking action through program outreach channels, including websites, trade ally outreach, and personal contact by utility representatives.
    - Utility representatives will then facilitate program participation by offering no-cost design assistance and specialized analysis to gain access to project decision makers. Design assistance and analysis is provided at no cost and targeted to early design intervention to increase building energy performance when it is least costly to

make changes. This assistance identifies opportunities for energy efficiency enhancements beyond code compliance, early in the design phase, and is presented to the owner and design team to help convince them to pursue high performance building, well beyond state energy code requirements for new construction.

- Decision makers, facilitated by utility representatives, will consider different program options and be advised regarding the best program approach suited to their project, benefits of energy efficiency enhancements, and financial incentives available to help make energy efficiency investments. Once the program approach is selected and agreed upon, information is gathered to progress towards a formal commitment.
- Utility representatives prepare the energy efficiency commitment that identifies the targeted enhanced performance of the project, estimates the financial incentive offered through the program, and specifies a combination of energy efficiency strategies that are to be included in the constructed project to achieve this level of performance.
- Owners and design team members sign agreements offered by utility representatives to pursue high performance buildings and proceed through the phases of their project.
- Utility representatives monitor the project and when notified that construction is complete, verify that the energy efficiency strategies are installed in the completed building. Financial incentives and energy savings are quantified and appropriate checks are processed for the owner and qualifying design teams.
- The enhanced building, with better-than-code-required energy performance, is constructed and continues to save energy compared to a code-compliant building.

2. Nonresidential Building Design Assistance
   - Design assistance matched to the needs of the project and custom analysis at no-cost are provided by utility representatives. This assistance identifies opportunities for energy efficiency enhancements beyond code compliance, early in the design phase, and promotes integrated analysis that avoids lost opportunities. Results of design analysis and the benefits of energy efficiency enhancements are presented to the owner and design team to help convince them to pursue high performance strategies, well beyond state energy code requirements for new construction.
   - Decision makers, facilitated by utility representatives, will consider different program options and be advised regarding the best program approach suited to their project, benefits of energy efficiency enhancements, and financial incentives available to help make energy efficiency investments all associated with the design assistance results. Once the program approach and

preferred package of energy efficiency options is selected and agreed upon, information is gathered to progress towards a formal commitment.

3. Nonresidential Building Calculated Incentives
   - Utility representatives, using computer simulation modeling software, estimate an eligible building's performance and energy savings in comparison to California's energy code requirements for nonresidential new construction projects (or industry's standard practice baseline for other processes or systems not addressed by code) to offer Savings By Design's building calculated incentives. Calculated savings are used to estimate potential financial incentives available through the program, using the Whole Building or Systems approach (which mirror the performance or prescriptive approach to code compliance).
   - Design teams who perform computer simulation modeling, consider various combinations of energy efficiency enhancements, achieve significantly increased performance over code requirements following the Whole Building Approach, and help educate and convince their clients to make energy efficiency investments, become eligible to receive incentives based on the building's calculated energy savings.
   - Owners of nonresidential new construction projects, who commit to construct their projects with the modeled energy efficiency enhancements, receive building calculated incentives following the Whole Building or the Systems approach.
   - Utility representatives use building calculated incentives to raise decision maker's awareness regarding the benefits of integrated design, avoid lost opportunities and cream-skimming due to limited capitol budgets, overcome perceived first-cost and bounded rational barriers, and to cost-effectively motivate decisions makers to construct high performance buildings. The outcome is energy efficiency investment along with quantifiable and verifiable long-term operating savings and energy efficiency.

### 8.1.2. Program Indicators

The primary goal of the program's strategies is to procure energy savings and demand reduction in nonresidential new construction projects through early invention and design assistance and then following through construction and verification, to quantify energy efficiency savings and pay incentives following program commitments.

## 9. Program Implementation

A coordinated array of intervention strategies is necessary to overcome the market barriers standing in the way of sizable net benefits available from integrated,

comprehensive building design. Program representatives will contact customers who are building new buildings, and utilize relationships with design professionals working in the region, to inform decision makers about program opportunities and benefits. The nonresidential new construction program's approach targets the primary decision makers in new construction projects with an emphasis on customized design assistance offered through dedicated program representatives at the Utility. Design assistance and incentives target owners, architects, and engineers, with information and financial stimulus to encourage maximum effort in pursuit of comprehensive long-term savings.

The Savings By Design program will continue to build on the two successful components that are delivered to the industry via program representatives – the Whole Building Approach and the Systems Approach:

- The Whole Building Approach is the preferred method of estimating energy savings within SBD because it enables a design team to consider integrated, optimized energy efficiency solutions. This approach provides and requires a high level of energy analysis and interactive feedback, which leads to more efficient design decisions. It also includes a progressive, tiered incentive structure to pull projects to perform significantly better than code requirements.

- The Systems Approach is a simplified, performance-based method, utilizing a calculation tool to optimize efficiency choices. It is straightforward and participants may find it the best available option for certain types of projects. The Systems Approach makes it easy for designers to look at the interaction of systems within their project, rather than individual equipment or measures.

- SBD also offers Design Team Incentives to support the extra effort for integrated energy design and to provide a reward for exceptional design accomplishments within the context of the Whole Building Approach. The program will introduce new opportunities to receive incentives in a phased-manner – bringing payment closer in proximity to when designer's complete their services - to better address this important decision maker's needs.

Delivery strategies utilizing program representatives including training, education, and outreach are integral to program design as are alliances with organizations promoting energy efficiency and integrated design for the nonresidential new construction industry. In pursuit of these ends, the program will align itself with numerous organizations and agencies including, but not limited to, the American Institute of Architects, California Council (AIACC); the Collaborative for High Performance Schools (CHPS); the California Commissioning Collaborative (CCC); the Coalition for Adequate Schools Housing (CASH); the American Society of

Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE); the California Energy Commission (CEC); and the Department of the State Architect (DSA), among others.

A core component of the program's mission is to seek continuous improvement from the new construction industry and keep them aware of the on-going changes to Title 24 energy code. As such, the program will collaborate with the California Energy Commission on educational and program implementation strategies that prepare market actors for successive code changes in advance of code adoption within regularly scheduled update cycles.

**10. Customer Description**

The program targets distinct links in the new construction decision-making chain, reflecting differences in design activities and priorities between large and small buildings and various occupancies. The program offers services and incentives to owners, developers, design teams, and contractors. All end-uses in buildings are included within program offerings, as are all end uses found in commercial, governmental, institutional, and industrial or agricultural processes. .

**11. Customer Interface**

Both the Whole Building Approach and the System Approach follow the same implementation process. The process begins with an initial contact between the customer (and/or the customer's design team) and a Savings By Design representative. These program representatives are dedicated to program implementation and trained to understand the dynamics and language of the design and construction industry, focused only on the delivery of the Savings By Design program. Program representatives actively seek out customers with potential new construction projects and generate project leads from diverse sources.

Once the program representative has helped the customer complete the brief Letter of Interest that documents the owner's interest in participating and receiving program benefits, further specifics are gathered regarding the project, such as design team members and construction timeline.

Initial meetings, between all members of the design team, the program representative, and appropriate technical staff, are held to discuss the parameters of the project and determine the best approach for the project. Design assistance, matched to the needs and scope of the project, is offered with the goal of identifying and validating energy savings strategies appropriate to the facility under design.

The program representative and supporting technical staff continue to provide recommendations, feedback, consulting, and energy use analysis, as needed, to the owner and design team as the project proceeds through the various design phases. Such activity can vary in duration from months to years. Culmination of this phase of the process will result in a list of agreed-upon energy efficiency strategies to be incorporated into the constructed project.

At this point, an Incentive Agreement between the owner and SoCalGas is executed. The execution of the Agreement generally takes place before the construction of the new building is begun. When applicable, an Incentive Agreement between the design team leader and SoCalGas is executed after the Owner Agreement has been finalized.

When the building's construction has been completed, SoCalGas will make an on-site visit to each participating project to confirm compliance with the terms of the Agreement. Once the inclusion of all measures/strategies has been confirmed, the owner is paid the agreed-upon incentive amount and energy savings reported. Should the completed construction vary from the Agreement, the available incentive will be recalculated to reflect the modeled energy-efficiency performance of the building as constructed.

For nonresidential new construction projects, the utility representatives will work closely with the owner and their design team to obtain the documents necessary to assess the project's performance, propose customized enhancements, offer financial incentives for quantify energy savings, and follow-through upon construction completion to verify installed energy-efficient systems. In addition, the design team may qualify for partial payment of incentive upon design analysis submission and acceptance, by working closely with the program representative.

## 12. Energy Measures and Program Activities

### 12.1. Prescriptive Measures.

See SoCalGas February 1, 2006 Filing Workbook.

### 12.2. kWh Level Data

See SoCalGas February 1, 2006 Filing Workbook.

### 12.3. Non-energy Activities

- Outreach/marketing activities, including an annual energy efficiency recognition awards (co-sponsored with trade allies, to raise awareness regarding energy-efficient design and construction, within the new construction industry).

Training and resource enhancements targeted to the nonresidential new construction market and professionals.

#### 12.3.1. Activity Description

#### 12.3.2. Quantitative Activity Goals

#### 12.3.3. Assigned attributes of the activity (market sector, end use)

**13. Subcontractor Activities**

- Project-specific, energy simulation design assistance and consulting
- Integrated energy design support
- Pilot program delivery in defined industry niches. A Request for Qualifications process will be used to select uniquely qualified contractors to address targeted industrial market segments to assess and implement a limited offering to these specialized segments. Selected contractors will have demonstrated, unique new construction design expertise, and will be tasked with influencing specified segments of the nonresidential new construction market, in an effort to better serve customers designing these types of projects.

**14. Quality Assurance and Evaluation Activities**

The program will conduct inspections on 100% of the projects that complete construction during the program period.

An evaluation plan will be developed in accordance with the soon to be developed EM&V Protocols. The CPUC Energy Division will be holding meetings, workshops and possibly hearings throughout the summer to develop these Protocols. SoCalGas looks forward to participating and commenting on those activities and plans to file EM&V plans for all programs on October 1, 2005 in conjunction with the ED, CEC, and the other IOUs.

**15. Marketing Activities**

The primary marketing agent for Savings By Design is the group of program-dedicated Account Executives working to leverage long-standing relationships and continually expand outreach to design professionals, allied organizations, and all customers. Additionally, individual memberships in pertinent local industry organizations such as AIA, ASHRAE, IES, USGBC, and others, are utilized to build a presence in, and an informational/educational resource for members of, these organizations. In addition, the program will:

- develop and distribute program brochures, informational inserts, industry-specific marketing pieces, informational articles, and design guidelines.
- offer technical assistance and project-specific design assistance to building owners, developers, architects, engineers and contractors, to identify and analyze efficiency opportunities, and perform integrated design.
- present market segment-appropriate training and continuing education in integrated design practice (e.g., integrated design best practices, energy simulation modeling and analysis, commissioning, high efficiency lighting systems, daylighting strategies, outperforming energy codes and standards).

- tailor targeted information and design incentives to architects, engineers, and/or building owners/developers to encourage energy efficiency, financial analyses, and building simulation modeling.
- continue expansion of Energy Design Resources, including energy simulation tools, financial analysis tools, and web-based resources, and case studies promoting high performance demonstration projects.
- support allied organizations such as CHPS, CCC, CASH, AIACC, ASHRAE, the CEC, and others, at their meetings, programs, conferences, and activities that promote energy efficiency and integrated design for nonresidential buildings to owners, design professionals, and energy professionals, as well as government agencies, cities, and counties.
- co-sponsor events, trade shows, and publications with the San Diego chapters of allied organizations.
- offer training opportunities, including scheduled sessions and on-site/upon request presentations at architects and engineers offices.

**16. CPUC Objective**

1. Make Energy Efficiency the Utilities Highest Priority:
Savings By Design compliments SoCalGas' portfolio of resource-acquisition energy efficiency programs by concentrating on delivering compelling information to the market that leads to energy efficiency investment in the most cost-effective manner. In nonresidential new construction projects, this is done by promoting integrated analysis, and thereby avoiding lost opportunities in the design phase of a project, because this is the time when the financial cost of energy efficiency enhancements is much lower, when compared to other options such as changes after design completion or retrofitting existing buildings.

2. Pursue All Cost-effective Energy Efficiency Opportunities (over both the short- and long-term):
Savings By Design contributes towards achievement of the energy savings targets set for both the electric and natural gas savings categories, and assures the most valued long-term savings, as designing a building efficiently leads to less capacity ever affecting the grid, that is not easily re-introduced without significant construction. As one example, the program promotes mechanical system down-sizing to reflect efficient lighting system's reduced loads and other interactive effects between systems that can be optimized when a building is considered as an interactive whole during the design phase.

3. Focus on programs that serve as alternatives to more costly supply-side resource options:
Savings By Design has demonstrated its cost effectiveness through the results of its TRC and PAC tests over the 2006-08 program cycle.

4. Avoid "lost opportunities"

Savings By Design is an innovative program that was designed to avoid lost opportunities by focusing on the advantages of integrated design analysis and early intervention in the design process to demonstrate the benefits of energy efficiency optimization through computer simulation modeling. It's financial incentive structure clearly disadvantages limited scope, system-based energy analysis.

5. Increase overall capacity utilization and lower peak loads:
Savings By Design is effective at lowering peak loads by using the California energy code as a baseline, with its new Time Dependent Valuation methodology, and analyzing nonresidential new construction projects in comparison to code to develop a margin of compliance (or percentage better than code). In addition, Savings By Design offers an incentive rate structure that escalates as this percentage increases pulling the market to investigate higher performance and reduced loads.

6. Include…information and education programs, support for codes and standards, and continue to build upon the success of existing program:
Savings By Design is an existing statewide program that is being expanded and offered by more of California's utilities – including municipal utilities – and supports the distribution of energy efficiency information and educational training opportunities through its statewide website and educational effort known as Energy Design Resources. In addition, the program promotes codes and standards awareness and understanding by using the code as a benchmark, and by keeping the market updated about the current California energy code and supporting the evolution and tightening of codes over time through demonstration of technologies and strategies that are not standard in the current code.

8. Expand the Emerging Technologies programs and other PIER projects… with emphasis on commercialization within 6 years: Savings By Design works closely with the Emerging Technologies program to find innovative design professionals who are interested in demonstrating technologies that have not achieved market acceptance in new construction projects. This cooperation optimizes the opportunity to target emerging technologies and focus market attention on demonstration projects that will serve as case studies and break down market resistance.

10. PGC funds must be spent in service territories collected; gas PGC collections must fund gas efficiency programs and electric PGC funds must fund electric efficiency programs:
Savings By Design is a dual-fuel program (addressing electric and gas savings), implemented in SoCalGas' service territory, while effectively reaching across utility boundaries as more of California municipal utilities show interest in offering the program in their service territories.

| | SCG3512 NEW5-Savings By Design SCG Muni Program | |
|---|---|---|
| **BUDGET** | | |
| | | |
| **Administrative Costs** | **$** | **388,409** |
| Overhead and G&A | $ | 142,857 |
| Other Administrative Costs | $ | 245,552 |
| **Marketing/Outreach** | **$** | **373,663** |
| **Direct Implementation** | **$** | **2,237,928** |
| Total Incentives and Rebates | | |
| User Input Incentive | $ | - |
| Direct Install Rebate | $ | 1,799,999 |
| Direct Install Labor | $ | - |
| Direct Install Materials | $ | - |
| Activity | $ | 375,583 |
| Installation | $ | - |
| Hardware & Materials | $ | - |
| Rebate Processing & Inspection | $ | 62,347 |
| **EM&V Costs** | **$** | - |
| **Budget** | **$** | **3,000,000** |
| **Costs recovered from other sources** | **$** | - |
| **Budget** (plus other costs) | **$** | **3,000,000** |
| | | |
| **PROGRAM IMPACTS** | | |
| **Program Reductions for Measures installed through 2008** | | |
| User Entered kW (kW) | | - |
| Net Jul-Sept Peak (kW) | | - |
| Net Dec-Feb Peak (kW) | | - |
| Net NCP (kW) | | - |
| Net CEC (kW) | | - |
| Annual Net kWh | | - |
| Lifecycle Net kWh | | - |
| Annual Net Therms | | 3,016,651 |
| Lifecycle Net Therms | | 45,249,767 |
| | | |
| **Cost Effectiveness** | | |
| **TRC** | | |
| Costs | $ | 8,391,634 |
| Electric Benefits | $ | - |
| Gas Benefits | $ | 21,334,491 |
| Net Benefits (NPV) | $ | 12,942,857 |
| BC Ratio | | 2.54 |
| | | |
| **PAC** | | |
| Costs | $ | 2,798,794 |
| Electric Benefits | $ | - |
| Gas Benefits | $ | 21,334,491 |
| Net Benefits (NPV) | $ | 18,535,698 |
| BC Ratio | | 7.62 |
| | | |
| **Levelized Cost** | | |
| **Levelized Cost TRC ($/kWh )** | | |
| Discounted kWh | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |
| **Levelized Cost PAC ($/kWh)** | | |
| Discounted kWh | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |
| **Levelized Cost TRC ($/therm)** | | |
| Discounted Therms | | 25,439,108 |
| Cost | $ | 0.3299 |
| Benefits | $ | 0.8386 |
| Benefit-Cost | $ | 0.5088 |
| **Levelized Cost PAC ($/therm)** | | |
| Discounted Therms | | 25,439,108 |
| Cost | $ | 0.1100 |
| Benefits | $ | 0.8386 |
| Benefit-Cost | $ | 0.7286 |

## Savings By Design SCG Muni Program

| Year | Total Budget | Total Incentives | Admin Budget | Net kWh | Net Therms | Net kW |
|---|---|---|---|---|---|---|
| 2006 | $ 1,000,000 | $ 600,000 | $ 400,000 | - | 1,005,550 | - |
| 2007 | $ 1,000,000 | $ 600,000 | $ 400,000 | - | 1,005,550 | - |
| 2008 | $ 1,000,000 | $ 600,000 | $ 400,000 | - | 1,005,550 | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 317001 | Lighting (per kWh) | 1 | - | 1.00 | 0.8212 | kwh | 15 | - | $ - | $ - | - | - | - |
| 2006 | 317002 | Misc (per kWh) | 1 | - | | 0.8212 | | 15 | - | $ - | $ - | - | - | - |
| 2006 | 317003 | Misc (per Therm) | - | 1 | | 0.8212 | Building | 15 | 795,918 | $ 0.49 | $ 2.53 | - | 653,608 | - |
| 2006 | 317004 | Space Heat/Boiler (per Therm) | 1 | - | | 0.8212 | | 15 | - | $ 0.49 | | - | - | - |
| 2006 | 317005 | Refrigeration (per kWh) | 1 | - | | 0.8212 | | 15 | - | $ - | | - | - | - |
| 2006 | 317006 | Whole Bldg (per kWh) | 1 | - | | 0.8212 | | 15 | - | $ - | | - | - | - |
| 2006 | 317007 | Whole Bldg (per Therm) | - | 1 | | 0.8212 | Building | 15 | 428,571 | $ 0.49 | $ 2.97 | - | 351,943 | - |
| 2007 | 317001 | Lighting (per kWh) | 1 | - | 1.00 | 0.8212 | kwh | 15 | - | $ - | $ - | - | - | - |
| 2007 | 317002 | Misc (per kWh) | 1 | - | | 0.8212 | | 15 | - | $ - | $ - | - | - | - |
| 2007 | 317003 | Misc (per Therm) | - | 1 | | 0.8212 | Building | 15 | 795,918 | $ 0.49 | $ 2.53 | - | 653,608 | - |
| 2007 | 317004 | Space Heat/Boiler (per Therm) | 1 | - | | 0.8212 | | 15 | - | $ 0.49 | | - | - | - |
| 2007 | 317005 | Refrigeration (per kWh) | 1 | - | | 0.8212 | | 15 | - | $ - | | - | - | - |
| 2007 | 317006 | Whole Bldg (per kWh) | 1 | - | | 0.8212 | | 15 | - | $ - | | - | - | - |
| 2007 | 317007 | Whole Bldg (per Therm) | 0 | 1 | | 0.8212 | Building | 15 | 428571 | $ 0.49 | $ 2.97 | - | 351,943 | - |
| 2008 | 317001 | Lighting (per kWh) | 1 | 0 | 1 | 0.8212 | kwh | 15 | 0 | $ - | $ - | - | - | - |
| 2008 | 317002 | Misc (per kWh) | 1 | 0 | | 0.8212 | | 15 | 0 | $ - | $ - | - | - | - |
| 2008 | 317003 | Misc (per Therm) | 0 | 1 | | 0.8212 | Building | 15 | 795918 | $ 0.49 | $ 2.53 | - | 653,608 | - |
| 2008 | 317004 | Space Heat/Boiler (per Therm) | 1 | 0 | | 0.8212 | | 15 | 0 | $ 0.49 | | - | - | - |
| 2008 | 317005 | Refrigeration (per kWh) | 1 | 0 | | 0.8212 | | 15 | 0 | $ - | | - | - | - |
| 2008 | 317006 | Whole Bldg (per kWh) | 1 | 0 | | 0.8212 | | 15 | 0 | $ - | | - | - | - |
| 2008 | 317007 | Whole Bldg (per Therm) | 0 | 1 | | 0.8212 | Building | 15 | 428571 | $ 0.49 | $ 2.97 | - | 351,943 | - |

# 2006-2008 Energy Efficiency Concept Paper
# Sustainable Communities-Santa Monica Demonstration Program

## 1. Projected Program Budget

| | 2006 | 2007 | 2008 |
|---|---|---|---|
| Administration | | | |
| Administrative Overheads | $ 14,286 | $ 14,286 | $ 14,286 |
| Administrative Other | $ 60,477 | $ 58,033 | $ 70,396 |
| Marketing & Outreach | $ 131,602 | $ 29,292 | $ 120,153 |
| Direct Implementation | | | |
| Incentives | $ - | $ 130,000 | $ - |
| Activity | $ 93,635 | $ 65,889 | $ 95,166 |
| Installation | $ - | $ - | $ - |
| Hardware & Materials | $ - | $ - | $ - |
| Rebate Processing & Inspection | $ - | $ 2,500 | $ - |
| EM&V | $ - | $ - | $ - |
| *Total* | *$ 300,000* | *$ 300,000* | *$ 300,000* |

- Funding for electric incentives for the SCP City of Santa Monica Demonstration Project will be requested by SCE.
- Additional SoCalGas funding, from other than energy efficiency funding, will be secured to install a 250kw fuel cell.

## 2. Projected Program Impacts

| 2006 | | | 2007 | | | 2008 | | |
|---|---|---|---|---|---|---|---|---|
| Net kWh | Net kW | Net Therms | Net kWh | Net kW | Net Therms | Net kWh | Net kW | Net Therms |
| - | - | - | 7,313 | 10 | 202,038 | - | - | - |

## 3. Program Cost Effectiveness

Attached

## 4. Program Descriptors

Sustainable Communities Program (SCP) is a local program designed to promote sustainable development, showcase energy-efficient design and building practices, and encourage local developers to incorporate clean on-site energy generation systems in their multifamily and commercial new construction projects. This program was successfully launched by SDG&E in 2004 and the concept is being expanded to the SCG service territory. For the initial project, SCG has entered into discussions with the Energy Coalition and the City of Santa Monica regarding a mixed-use (primarily Multifamily) project at the Civic Center. The demonstration project will be implemented in conjunction with Southern California Edison (SCE) and will incorporate high performance energy efficiency and demand reduction technologies, along with clean on-site generation, water conservation, transportation efficiencies and waste reduction strategies.

## 5. Program Statement

Although interest continues to grow, sustainable design is still in the infancy stage. Further emphasis is needed to encourage energy efficiency within sustainable building projects through good design practices beyond the current statewide program limitations.

Momentum can be achieved by demonstrating success on local projects representing good sustainable design and construction practices. This program is expected to be a valuable showcase of how cities can implement sustainable building practices.

**6. Program Rationale**

The program responds to the growing interest in sustainable design practices. It emphasizes LEED (Leadership in Energy and Environmental Design) Green Building Rating System® due its significant impact on energy and more holistic approach to building design, construction, performance and site development than the EPA's ENERGY STAR® rating system for buildings. LEED, created by the US Green Building Council (USGBC), has emerged as the recognized national standard for green building practices. It provides a complete framework for assessing building performance and meeting sustainability goals. LEED emphasizes state-of-the-art strategies for sustainable site development, water savings, energy efficiency, materials selection and indoor environmental quality. It recognizes achievements and promotes expertise in green building through a comprehensive system offering project certification, professional accreditation, training and practical resources.

**7. Program Outcomes**

The goal of the Demonstration Project is to show how the SCP generates sustainable energy and demand savings.

The long-term goal is to help mainstream new energy efficient technologies and sustainable design practices for cities by documenting the benefits and lifecycle cost savings achieved by these projects.

**8. Program Strategy**

This local program is a natural extension of the statewide **Residential New Construction** and **Nonresidential New Construction** programs that offers a higher tier incentive for sustainable building projects that greatly exceed the state's Energy Code.

8.1.1 Program Description

The City of Santa Monica Demonstration Project will incorporate high performance energy efficiency and demand reduction technologies, along with clean on-site generation, water conservation, transportation efficiencies and waste reduction strategies. The program will offer higher tier incentives for sustainable building projects that greatly exceed the state's Energy Code. The program will leverage existing relationships, methodologies, and resources from the statewide new construction programs. A SoCalGas representative will participate in design team meetings to provide expertise in sustainable design and ensure program requirements are met. Case studies and fact sheets will be developed and distributed on completed projects to the target market to increase the sustainable building knowledge base locally.

8.1.2 Program Indicators

The primary goal of the program is to demonstrate sustainable building design strategies. The project will showcase and provide community examples for developing and adopting sustainable building policies.

**9. Program Implementation**

Program Process and Requirements

- SoCalGas in collaboration with SCE and the Energy Coalition will work with the City of Santa Monica to determine how the project can best achieve sustainable energy performance requirements.
- Participant will agree to commit to building and system designs that will improve building or system performance, not apply for or receive any other incentive offered by the statewide SBD or ENERGY STAR programs, and allow SoCalGas to create a case study.
- SoCalGas will assign a project manager to oversee the project and coordinate interactions with the utility and other entities.
- Upon commissioning, participant will provide required documentation, including selected construction documents, energy compliance documentation, integrated design analysis reports, manufacturer specifications, equipment cut sheets, and incremental cost verification, as requested.
- SoCalGas will complete on-site installation verification.
- Funds will be provided upon successful building commissioning and verification.
  - Electric incentives for the SCP City of Santa Monica Demonstration Project will be funded by SCE.
  - SoCalGas will fund gas incentives. Additional SoCalGas funding, from other than energy efficiency funding, will be secured to install a “clean” distributed generation system (e.g., 250kw fuel cell).

LEED Certification

- The project will be registered and certified with the USGBC as a LEED project before funds will be reserved.
- Participant will provide proof of certification for LEED projects.

On-Site Generation

- The project manager will review with participant to consider on-site generation.
- Project manager will review with participant the funding options of other existing programs and technology options
- Participant will decide if on-site generation is a viable option for the project.

Program Term

SoCalGas will execute an Agreement with the City of Santa Monica.

Program Availability

Construction must be substantially complete and the City of Santa Monica must submit all required documentation to SoCalGas within 48 months from the date of SoCalGas’ execution of the Agreement. If the project’s completion is delayed beyond the final date,

the Agreement is voided, but the project may be eligible under the program guidelines in effect at that time. Subsequent eligibility will be considered on a case-by-case basis and will require SoCalGas approval and execution of a new Agreement.

**10. Customer Description**

The educational component of SCP will seek to raise awareness of the benefits of sustainable design. The target audience will include building owners, building contractors, architects, engineering firms, municipalities, land developers, new construction public buildings, schools, office buildings, retail, and multi-family housing.

**11. Customer Interface**

From early in the process, SoCalGas, in collaboration with SCE, the Energy Coalition and the City of Santa Monica, will determine the best strategies to achieve energy performance requirements. A project manager will oversee the project and coordinate interactions with the utility and other entities.

**12. Energy Measures and Program Activities**

12.1. **Prescriptive Measures.**
See SoCalGas February 1, 2006 Filing Workbook.

12.2. **kWh Level Data**
See SoCalGas February 1, 2006 Filing Workbook.

12.3. **Non-energy Activities**

**13. Subcontractor Activities**

When appropriate subcontractors shall be determined by an open bid process.

**14. Quality Assurance and Evaluation Activities**

All projects will be inspected for verification of installed measures.

An evaluation plan will be developed in accordance with the soon to be developed EM&V Protocols. The CPUC Energy Division will be holding meetings, workshops and possibly hearings throughout the summer to develop these Protocols. SoCalGas looks forward to participating and commenting on those activities and plans to file EM&V plans for all programs on October 1, 2005 in conjunction with the ED, CEC, and the other IOUs.

**15. Marketing Activities**.

Marketing efforts include but are not limited to: the development and distribution of program website, brochures, informational inserts, and design guidelines. SCP will market to architects, engineers, energy design professionals, building owners, professional and industry associations, and contractors.

**16. CPUC Objective**

The Sustainable Communities program supports state and local objectives to increase energy efficiency and encourage local renewable generation. It provides a holistic

approach to building design and construction with a long-term goal to create sustainable communities through the adoption of new policies and increased market acceptance. This program will help create sustainable energy efficiency savings. The program will achieve significant success by leveraging existing resources, collaborating with region stakeholders, and conducting creative marketing activities.

| | SCG3516 SCD4-Sustainable Communities Demo/City of Santa Monica | |
|---|---|---|
| **BUDGET** | | |
| | | |
| **Administrative Costs** | **$** | **231,763** |
| Overhead and G&A | $ | 42,857 |
| Other Administrative Costs | $ | 188,906 |
| **Marketing/Outreach** | **$** | **281,047** |
| **Direct Implementation** | **$** | **387,190** |
| Total Incentives and Rebates | | |
| User Input Incentive | $ | - |
| Direct Install Rebate | $ | 130,000 |
| Direct Install Labor | $ | - |
| Direct Install Materials | $ | - |
| Activity | $ | 254,690 |
| Installation | $ | - |
| Hardware & Materials | $ | - |
| Rebate Processing & Inspection | $ | 2,500 |
| **EM&V Costs** | **$** | - |
| **Budget** | **$** | **900,000** |
| **Costs recovered from other sources** | **$** | - |
| **Budget** (plus other costs) | **$** | **900,000** |
| | | |
| **PROGRAM IMPACTS** | | |
| **Program Reductions for Measures installed through 2008** | | |
| User Entered kW (kW) | | 10 |
| Net Jul-Sept Peak (kW) | | 10 |
| Net Dec-Feb Peak (kW) | | 1 |
| Net NCP (kW) | | 10 |
| Net CEC (kW) | | 2 |
| Annual Net kWh | | 7,313 |
| Lifecycle Net kWh | | 131,634 |
| Annual Net Therms | | 202,038 |
| Lifecycle Net Therms | | 3,032,354 |
| | | |
| **Cost Effectiveness** | | |
| **TRC** | | |
| Costs | $ | 1,390,225 |
| Electric Benefits | $ | 10,916 |
| Gas Benefits | $ | 1,425,925 |
| Net Benefits (NPV) | $ | 46,616 |
| BC Ratio | | 1.03 |
| | | |
| **PAC** | | |
| Costs | $ | 885,257 |
| Electric Benefits | $ | 10,916 |
| Gas Benefits | $ | 1,425,925 |
| Net Benefits (NPV) | $ | 551,584 |
| BC Ratio | | 1.62 |
| | | |
| **Levelized Cost** | | |
| **Levelized Cost TRC ($/kWh )** | | |
| Discounted kWh | | 67,691 |
| Cost | $ | 0.1906 |
| Benefits | $ | 0.1613 |
| Benefit-Cost | $ | (0.0293) |
| **Levelized Cost PAC ($/kWh)** | | |
| Discounted kWh | | 67,691 |
| Cost | $ | 0.1750 |
| Benefits | $ | 0.1613 |
| Benefit-Cost | $ | (0.0137) |
| **Levelized Cost TRC ($/therm)** | | |
| Discounted Therms | | 1,701,143 |
| Cost | $ | 0.8096 |
| Benefits | $ | 0.8382 |
| Benefit-Cost | $ | 0.0286 |
| **Levelized Cost PAC ($/therm)** | | |
| Discounted Therms | | 1,701,143 |
| Cost | $ | 0.5134 |
| Benefits | $ | 0.8382 |
| Benefit-Cost | $ | 0.3248 |

## Sustainable Communities Demo/City of Santa Monica

| Year | Total Budget | Total Incentives | Admin Budget | Net kWh | Net Therms | Net kW |
|---|---|---|---|---|---|---|
| 2006 | $ 300,000 | $ - | $ 300,000 | - | - | - |
| 2007 | $ 300,000 | $ 130,000 | $ 170,000 | 7,313 | 202,038 | 10 |
| 2008 | $ 300,000 | $ - | $ 300,000 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 321001 | Multifamily All Zones 15% Above AB970 | 187 | 15 | 0.26 | 0.8 | Home | 18 | - | $ 200.00 | $ 294.01 | - | - | - |
| 2006 | 321002 | Whole Bldg - Th | - | 1 | - | 0.8212 | Therm | 15 | - | $ 1.23 | $ 3.42 | - | - | - |
| 2006 | 321003 | Whole Bldg - Elec | 1 | - | 0.00 | 0.8212 | kWh | 15 | - | $ 0.34 | $ 0.12 | - | - | - |
| 2007 | 321001 | Multifamily All Zones 15% Above AB970 | 187 | 15 | 0.26 | 0.8 | Home | 18 | 49 | $ 200.00 | $ 294.01 | 7,313 | 593 | 10 |
| 2007 | 321002 | Whole Bldg - Th | - | 1 | - | 0.8212 | Therm | 15 | 245,306 | $ 0.49 | $ 3.42 | - | 201,445 | - |
| 2007 | 321003 | Whole Bldg - Elec | 1 | - | 0.00 | 0.8212 | kWh | 15 | - | $ - | $ 0.12 | - | - | - |
| 2008 | 321001 | Multifamily All Zones 15% Above AB970 | 187 | 15 | 0.26 | 0.8 | Home | 18 | - | $ 200.00 | $ 294.01 | - | - | - |
| 2008 | 321002 | Whole Bldg - Th | - | 1 | - | 0.8212 | Therm | 15 | - | $ 1.23 | $ 3.42 | - | - | - |
| 2008 | 321003 | Whole Bldg - Elec | 1 | - | 0.00 | 0.8212 | kWh | 15 | - | $ 0.34 | $ 0.12 | - | - | - |

# 2006-2008 Energy Efficiency Programs
# Advanced Home Concept Paper

## 1. Projected Program Budget

| | 2006 | 2007 | 2008 |
|---|---|---|---|
| Administration | | | |
| Administrative Overheads | $ 107,143 | $ 142,857 | $ 166,667 |
| Administrative Other | $ 161,336 | $ 165,997 | $ 170,796 |
| Marketing & Outreach | $ 126,400 | $ 141,400 | $ 111,400 |
| Direct Implementation | | | |
| Incentives | $ 615,000 | $ 768,750 | $ 510,500 |
| Activity | $ 1,003,886 | $ 1,034,003 | $ 1,065,023 |
| Installation | $ - | $ - | $ - |
| Hardware & Materials | $ 39,822 | $ 397,689 | $ 1,173,330 |
| Rebate Processing & Inspection | $ 196,413 | $ 349,305 | $ 302,284 |
| EM&V | $ - | $ - | $ - |
| *Total* | *$ 2,250,000* | *$ 3,000,001* | *$ 3,500,000* |

## 2. Projected Program Impacts

| 2006 | | | 2007 | | | 2008 | | |
|---|---|---|---|---|---|---|---|---|
| **Net kWh** | **Net kW** | **Net Therms** | **Net kWh** | **Net kW** | **Net Therms** | **Net kWh** | **Net kW** | **Net Therms** |
| 1,842,839 | 2,020 | 73,441 | 2,323,297 | 2,547 | 89,249 | 1,468,380 | 1,610 | 57,799 |

## 3. Program Cost Effectiveness

Attached

## 4. Program Descriptors

The Advanced Home program of San Diego Gas and Electric promotes a comprehensive residential new construction concept with a cross-cutting focus on sustainable design and construction, green building practices and emerging technologies. Through a combination of education, design assistance and financial support, the program works with the building and related industries to exceed compliance with the California Building Energy Efficiency Standards (Standards), to prepare builders for future changes in the Standards, and to create future pathways to go beyond compliance and traditional energy savings objectives. This will be accomplished through demonstration projects, building performance and specific measures.

The program will review energy saving technologies to be incorporated in numerous demonstration projects. These projects will incorporate emerging energy savings technologies and low-impact construction practices. This innovative program will coordinate a variety of market opportunities and explore potentials from other programs to support the program concepts. The program will interact on a statewide basis to share best practices but will be implemented locally by the utility.

To provide continuity, the program will continue to promote the successful statewide **California Energy Star® New Homes Program** through a performance-based element. During 2004-2005 the statewide program was able to impact 15% of the residential new construction market.

The program encourages efficient heating, cooling, water heating system and building envelope design and installation through the support of specific prescriptive measures.

**5. Program Statement**

Residential new construction has been recognized as a rich ground for the promotion of new technologies, experimentation and analysis and has been the spawning ground for numerous technologies now considered mainstream in the vast retrofit market, such as high performance low-e windows, high performance water heaters and heating, ventilation and air conditioning (HVAC) systems. Many builders would like to explore further these and other technologies and innovations in their building designs, but require guidance and assistance to prevent lost opportunities. For effective use and maximum performance of many of these technologies, such as photovoltaic and alternative water and space heating applications, energy efficiency of the dwelling unit must be taken to a higher level requiring building design and construction to incorporate the efficiency measures promoted by the program.

The program will engage and partner with other programs inside and outside of the utility to help bring emerging technologies to the market place in the most cost effective way to overcome some of the economic barriers associated with pushing the technical envelope in residential new construction. With a multitude of elements available for evaluation, both envelope and mechanical, there are many approaches available for implementation. Once explored, incorporated and exhibited, these elements will demonstrate the potential to become utilized in residential construction.

The program will continue the successful California Energy Star® New Homes Program on a statewide basis. This program has gained tremendous momentum over the last four years, supporting the building industry through design assistance, training and incentives to increasing the overall performance of residential new construction.

Significant changes have recently taken place in the Standards. New credits for HVAC systems, insulation and revisions to the water heating methodologies offer opportunities to explore with the building industry inclusions of these measures in their project's designs.

**6. Program Rationale**

There is a need for comprehensive programs that address residential construction by incorporating the best practices of existing new construction programs, mainstream and emerging technologies and construction techniques. Such programs should place importance on conservation, a high quality urban and suburban life and the enhancement of natural areas. Further, the search for reducing grid and source energy consumption must lead to new approaches in demand side management,

such as the coordination with demand response programs, water conservation efforts and the use of construction materials and practices.

The Advanced Home program will address these needs and the needs of the builder for guidance in the incorporation of technology through training and design assistance. Further, through the use of financial support the builder will be able to explore technologies often avoided due to any cost barriers. By incorporating products and practices, such as photovoltaic, into single and multi-family new home design, opportunities for product suppliers, architects, designers, builders, contractors and others will surface to increase product awareness, utilization and as a result, lower costs. This more targeted approach to specific design solutions offers an opportunity to focus on technological solutions that are often ignored in performance based programs. Addressing more specific measures allows the builder to focus their attention on systems that may otherwise be ignored. The program implementation period also aligns with the Standard revisions and allows for the opportunity to prepare builders for the next cycle of changes.

Continuing the California Energy Star Homes® Program affords builders the opportunity to increase the overall energy efficiency of their products. With the changes that have taken place in the Standards, the challenge of reaching the new margin has increased significantly. To support the industry and the Environmental Protection Agency's Energy Star® Homes program offers a significant opportunity to increase energy efficiency.

The prescriptive measures proposed offer an opportunity to support the California Energy Commission in implementation of new credits, increase the energy efficiency and provide participation opportunities to all sectors of residential new construction.

**7. Program Outcomes**

The program will focus on four major activities: demonstration projects, support for the Energy Star Homes label through building design that exceeds minimum compliance with the Standards, prescriptive measures that increase the performance and industry education. The demonstration projects will focus on emerging technologies some of which will be identified through the statewide Emerging Technologies program. The California Energy Star® New Homes Program will continue to promote increased overall building performance to the 15% minimum threshold. The prescriptive measures will address HVAC design, installation and verification, proper insulation installation and water heating. Industry education will support the changes to the Standards and the program technologies.

**8. Program Strategy**

Residential New Construction

### 8.1.1. Program Strategy Description

The program will target single and multifamily builders whose projects will maximize energy savings and generate significant industry and homebuyer interest. The program will bring a renewed focus to emerging technologies and their incorporation into design and practice in residential new construction. Through site demonstration projects, the program will explore the evaluation and incorporation of these elements:

- Sustainable project sites
- Energy efficiency: efficient thermal envelopes, efficient space cooling, heating and water heating systems, alternatives to central air conditioning such as night ventilation, cool roofs, lighting and appliances
- Increased levels of energy performance above the minimum Standards
  Water efficiency
- Materials and resource, waste reduction and efficient use of materials
- Renewable energy such as photovoltaic systems
- Indoor environmental quality
- Operations and maintenance.

The Utility will act as program advisor and provide technical assistance to the design team for their projects. Through direct contact with the market actors, architects, energy analysts and the building industry, the program works to incorporate emerging and innovative technologies in the early stages of product design.

The program will continue to offer a performance-based program through the California Energy Star® New Homes Program. The program will provide support to encourage high performance single family and multi-family building design that exceed the 2005 Standards in an overall performance design of 15% or greater. Additionally, the Program will incorporate the Quality Insulation Installation Protocol and Thermal Bypass Checklist as a requirement for participation. Projects will be submitted for design review and recommendations. Once the builder commits to meeting the program guidelines the project will be reviewed. Following verification of all elements the incentives will be paid to the builder.

The program will also address the heating, cooling and water heating design and installation in residential construction. Through direct contact with the building industry and the market actors, greater efficiency in HVAC design and operation will be achieved through the incorporation of the following practices in construction:

- Maximum Cooling Capacity
  The program will require that air conditioners are sized according to the Alternative Calculation Method (ACM) methodology and the requirements for the combination of adequate air flow, duct sealing and improved refrigerant charge or TXV are met. Participation is open when the Maximum Cooling Capacity credit was not taken for minimum compliance with the Standards.

- Verified Ducting System
  The program will require that duct systems are sealed and diagnostic testing is performed to verify that leakage is less than the specified criteria. Participation is open when the Verified Ducting System credit was not taken for minimum compliance with the Standards.

- Insulation Quality Installation
  Insulation installation has been an area of concern and is currently addressed in the 2005 Standards. To support the California Energy Commission, the building industry and the installation trades the program will offer assistance to improve the overall quality of the insulation installation and meet the California Energy Commission protocols for installation and field verification. Participation is open when the Insulation Quality Installation credit was not taken for minimum compliance with the Standards.

- High Efficiency Water Heaters
  Increased efficiency of water heaters can have a significant impact on energy savings and water usage. Participating projects will be required to install water heaters with a Recovery Efficiency greater than or equal to 0.80. Tankless water heaters are an emerging technology that currently has been underutilized in the marketplace. To support this technology, the program will encourage its incorporation in residential new construction when the efficiency is greater than or equal to 0.80. Participation is open in either case when high efficiency water heaters were not taken for minimum compliance with the Standards.

Specific measures to be installed will be driven by the product type, design progress and appropriateness of measures to be incorporated. To allow flexibility in program design and implementation, program measures may be added or removed as changes take place in the industry, new technologies become available or market place demand warrants.

### 8.1.2. Program Indicators

Program management will track the participation of dwelling units in the California Energy Star® New Homes Program and the associated energy savings through its Database. Prescriptive measure participation will be

tracked in a similar fashion. The program will direct its efforts towards the greatest energy savings potential that is appropriate for each project.

To eventually report energy savings on a uniform basis, program management will also begin to track the source energy conserved by each unit or system on a kBtu/unit platform.

The Advanced Home Demonstration Project objectives are to increase the energy efficiency of residential new construction and offer additional opportunities for builders to explore new solutions to creating an energy efficient building. The goals of the program are to examine a portfolio of energy saving technologies and low-impact construction practices to be incorporated in various demonstration projects. Optimized energy performance above the prerequisite Standards will be incorporated in the building design to reduce environmental impacts associated with excessive energy use. The program energy savings will be evaluated from the diversity of measures utilized by the building industry and the overall energy performance.

This innovative program is intended to coordinate a variety of market opportunities in an extensive venture to make the next leap into residential energy efficiency in new construction. The concept for this program is for the utility to lead builders through a myriad of utility and governmental programs to bring added funding and support to expanding energy efficiency in single and multifamily new home construction in California. The utility plans to request funding for this program well beyond this proceeding. Anticipated additional sources of funding outside of this residential new construction program include:

- One Million Solar Roof Initiative
- California Energy Commission's Zero Energy New Homes Program
- Department of Energy Programs
- Utility Demand Response Programs
- Utility Self Generation Programs

The California Energy Star® New Homes Program will continue to promote increased overall building performance to the 15% minimum threshold. The prescriptive measures will address HVAC design, installation and verification, proper insulation installation and water heating. Industry education will support the changes to the Standards and the program technologies.

**9. Program Implementation**

The program is implemented through direct contact with the market actors, architects, mechanical engineers, energy analysts, home energy rating system (HERS) providers, HERS raters and the building industry. The program provides design assistance, education and training to these actors on the changes to the Standards, HVAC system design and methods to meet program requirements. Through design assistance and coordination with the builder and their consultants

and contractors, projects will be evaluated for the most suitable approach to increasing energy savings.

The program will seek to collaborate with the California Energy Commission and other agencies in support of statewide goals such as the increased installation of photovoltaic and HVAC quality installation and verification and locally with agencies such as water departments, municipalities, and others to promote water conservation and energy efficiency. To assist the builder in achieving these goals, design assistance, technical and field support and financial support will be offered.

Joining utility program partners, such as Emerging Technology, Codes and Standards and building industry partners, the program will work with the building community to identify potential projects and locations for the incorporation of the program philosophy to create demonstration projects highlighting diverse technologies, not widely accepted or employed. Through the United States Green Building Council (USGBC) the utility will interact to promote the LEED (Leadership in Energy and Environmental Design) Green Building Rating System® concept. The USGBC has developed a LEED for Homes program that is currently in the demonstration pilot phase. The utility will work with USGBC to incorporate the LEED concepts into the demonstration projects.

Residential new construction program management has extensive experience in designing and implementing successful offerings to the building industry as has been demonstrated with the 2002-2004 California Energy Star® New Homes Programs. Recognized as an outstanding energy efficiency resource, this team has the ability to successfully work closely with other local, regional, statewide and national stakeholders to insure the widest opportunities for potential program participants.

**10. Customer Description**

The program will target the residential design and construction team; architects, energy analysts, HERS raters, trade contractors, and builders. The market segment is low-rise and high-rise residential new construction with participation is open to all residential new construction including custom homes, single-family production housing, condominiums, town homes and rental apartments

**11. Customer Interface**

Program participants will be developed through a team of customer representatives, who, working with the builder and his design team, will evaluate each project and its design for participation. Additional customer base will be developed through attendance at conferences, presentations at conferences and to targeted audiences and related activities.

**12. Energy Measures and Program Activities**

**12.1. Prescriptive Measures.**

See SoCalGas February 1, 2006 Filing Workbook.

**12.2. kWh Level Data**

See SoCalGas February 1, 2006 Filing Workbook.

**12.3. Non-energy Activities**

Education and Training

**12.3.1. Activity Description**

Education and training courses will support the program concepts and will cover a number of construction and design issues, such as the 2005 Energy Efficiency Standards, Proper HVAC sizing, Ducting System Design, Uniform Mechanical Code, and Standards compliance modeling.

**12.3.2. Quantitative Activity Goals**

The current education and training classes have proven extremely successful and well received with attendance increasing each year. The program will continue this offering with an expanded curriculum focusing on emerging technologies and HVAC systems.

**12.3.3. Assigned attributes of the activity (market sector, end use)**

The education and training classes are offered free of charge to all interested parties. The target market sector is architects and designers, builders, energy consultants, engineers, HVAC contractors and building department inspectors and plan reviewers.

**13. Subcontractor Activities**

The program will coordinate many of the program activities with subcontractors. The education and training courses will be prepared under the utility supervision and presented by key figures in energy efficiency, HVAC systems and Energy Standards implementation. HERS Raters will be engaged by the utility to provide field verification of measure installation.

**14. Quality Assurance and Evaluation Activities**

Projects receive a detailed review to insure that the as-designed structure is consistent with the program requirements. Field verification will be conducted during the construction process to insure that the as-built corresponds to the as-designed. All field verification procedures will conform to the California Energy Commission protocols as detailed in the Alternative Calculation Method (ACM) Approval Manual.

**15. Marketing Activities**

The program will be marketed directly to the building industry and the related market actors. Additional marketing activities will be explored through conference presentations, building and other industry meetings.

**16. CPUC Objective**

The following CPUC Energy Efficiency Policy Objectives and Program Funding Guidelines are met by the Advanced Home Program

The program will reduce energy consumption by increasing the efficiency of the product or system depending upon participation. Improving the HVAC systems insures that pollutants are not included in the ducting system.

Continuing support to the residential new construction market will afford the opportunity to explore new technologies and include the most cost effective elements during construction. This is much more effective than retrofitting homes after construction.

Residential new construction has long been recognized as a rich ground for the incorporation of energy efficiency. Without promoting the increased levels of performance through the Advanced Home Program the opportunity for them would be lost until the need for replacement takes place.

The Advanced Home Program is dedicated exclusively to the residential new construction market sector. This market includes single family production housing, low-rise multifamily, high-rise multifamily and affordable housing. The program also focuses on the “Hard to Reach” market by directing significant efforts to rental and low income projects.

The Advanced Home Demonstration Project will focus on emerging technologies and sustainable building elements to evaluate the new generation of technologies. Through the prescriptive measures new energy efficient elements available in the Standards will also be offered. Providing support to the building industry at this early stage will insure that they are incorporated properly.

| | SCG3502 EED4-Advanced Home Program | |
|---|---|---|
| **BUDGET** | | |
| | | |
| **Administrative Costs** | **$** | **914,796** |
| Overhead and G&A | $ | 416,667 |
| Other Administrative Costs | $ | 498,129 |
| **Marketing/Outreach** | **$** | **379,200** |
| **Direct Implementation** | **$** | **7,456,005** |
| Total Incentives and Rebates | | |
| User Input Incentive | $ | - |
| Direct Install Rebate | $ | 1,894,250 |
| Direct Install Labor | $ | - |
| Direct Install Materials | $ | - |
| Activity | $ | 3,102,912 |
| Installation | $ | - |
| Hardware & Materials | $ | 1,610,841 |
| Rebate Processing & Inspection | $ | 848,002 |
| **EM&V Costs** | **$** | - |
| **Budget** | **$** | **8,750,001** |
| **Costs recovered from other sources** | **$** | - |
| **Budget** (plus other costs) | **$** | **8,750,001** |
| | | |
| **PROGRAM IMPACTS** | | |
| **Program Reductions for Measures installed through 2008** | | |
| User Entered kW (kW) | | 6,177 |
| Net Jul-Sept Peak (kW) | | 6,177 |
| Net Dec-Feb Peak (kW) | | 562 |
| Net NCP (kW) | | 5,372 |
| Net CEC (kW) | | 1,223 |
| Annual Net kWh | | 5,634,516 |
| Lifecycle Net kWh | | 95,480,420 |
| Annual Net Therms | | 220,489 |
| Lifecycle Net Therms | | 3,924,775 |
| | | |
| **Cost Effectiveness** | | |
| **TRC** | | |
| Costs | $ | 8,947,621 |
| Electric Benefits | $ | 7,410,775 |
| Gas Benefits | $ | 1,763,666 |
| Net Benefits (NPV) | $ | 226,819 |
| BC Ratio | | 1.03 |
| | | |
| **PAC** | | |
| Costs | $ | 8,544,805 |
| Electric Benefits | $ | 7,410,775 |
| Gas Benefits | $ | 1,763,666 |
| Net Benefits (NPV) | $ | 629,635 |
| BC Ratio | | 1.07 |
| | | |
| **Levelized Cost** | | |
| **Levelized Cost TRC ($/kWh )** | | |
| Discounted kWh | | 50,690,408 |
| Cost | $ | 0.1392 |
| Benefits | $ | 0.1462 |
| Benefit-Cost | $ | 0.0070 |
| **Levelized Cost PAC ($/kWh)** | | |
| Discounted kWh | | 50,690,408 |
| Cost | $ | 0.1335 |
| Benefits | $ | 0.1462 |
| Benefit-Cost | $ | 0.0127 |
| **Levelized Cost TRC ($/therm)** | | |
| Discounted Therms | | 2,035,055 |
| Cost | $ | 0.9290 |
| Benefits | $ | 0.8666 |
| Benefit-Cost | $ | (0.0624) |
| **Levelized Cost PAC ($/therm)** | | |
| Discounted Therms | | 2,035,055 |
| Cost | $ | 0.8737 |
| Benefits | $ | 0.8666 |
| Benefit-Cost | $ | (0.0070) |

## Advanced Home Program

| Year | Total Budget | Total Incentives | Admin Budget | Net kWh | Net Therms | Net kW |
|---|---|---|---|---|---|---|
| 2006 | $ 2,250,000 | $ 615,000 | $ 1,635,000 | 1,842,839 | 73,441 | 2,020 |
| 2007 | $ 3,000,000 | $ 768,750 | $ 2,231,250 | 2,323,297 | 89,249 | 2,547 |
| 2008 | $ 3,500,000 | $ 510,500 | $ 2,989,500 | 1,468,380 | 57,799 | 1,610 |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 316003 | Single Family, Maximum Cooling Capacity, CZ 4 | 98 | 35 | 0.11 | 0.8 | Dwelling Unit | 15 | - | $ 150.00 | $ 225.00 | - | - | - |
| 2006 | 316004 | Single Family, Maximum Cooling Capacity, CZ 5 | 40 | 35 | 0.04 | 0.8 | Dwelling Unit | 15 | - | $ 150.00 | $ 225.00 | - | - | - |
| 2006 | 316005 | Single Family, Maximum Cooling Capacity, CZ 6 | 29 | 14 | 0.03 | 0.8 | Dwelling Unit | 15 | - | $ 150.00 | $ 225.00 | - | - | - |
| 2006 | 316006 | Single Family, Maximum Cooling Capacity, CZ 7 | 59 | 11 | 0.06 | 0.8 | Dwelling Unit | 15 | - | $ 150.00 | $ 225.00 | - | - | - |
| 2006 | 316007 | Single Family, Maximum Cooling Capacity, CZ 8 | 246 | 13 | 0.27 | 0.8 | Dwelling Unit | 15 | 400 | $ 150.00 | $ 225.00 | 78,766 | 4,285 | 86 |
| 2006 | 316008 | Single Family, Maximum Cooling Capacity, CZ 9 | 499 | 15 | 0.55 | 0.8 | Dwelling Unit | 15 | - | $ 150.00 | $ 225.00 | - | - | - |
| 2006 | 316009 | Single Family, Maximum Cooling Capacity, CZ 10 | 938 | 21 | 1.03 | 0.8 | Dwelling Unit | 15 | 500 | $ 150.00 | $ 225.00 | 375,244 | 8,246 | 411 |
| 2006 | 316010 | Single Family, Maximum Cooling Capacity, CZ 13 | 1,386 | 37 | 1.52 | 0.8 | Dwelling Unit | 15 | - | $ 150.00 | $ 225.00 | - | - | - |
| 2006 | 316011 | Single Family, Maximum Cooling Capacity, CZ 14 | 1,694 | 61 | 1.86 | 0.8 | Dwelling Unit | 15 | - | $ 150.00 | $ 225.00 | - | - | - |
| 2006 | 316012 | Single Family, Maximum Cooling Capacity, CZ 15 | 4,364 | 10 | 4.78 | 0.8 | Dwelling Unit | 15 | 100 | $ 150.00 | $ 225.00 | 349,080 | 789 | 383 |
| 2006 | 316013 | Single Family, Verified Ducting System, CZ 4 | 43 | 35 | 0.05 | 0.8 | Dwelling Unit | 18 | - | $ 100.00 | $ 125.00 | - | - | - |
| 2006 | 316014 | Single Family, Verified Ducting System, CZ 5 | 19 | 35 | 0.02 | 0.8 | Dwelling Unit | 18 | - | $ 100.00 | $ 125.00 | - | - | - |
| 2006 | 316015 | Single Family, Verified Ducting System, CZ 6 | 12 | 14 | 0.01 | 0.8 | Dwelling Unit | 18 | - | $ 100.00 | $ 125.00 | - | - | - |
| 2006 | 316016 | Single Family, Verified Ducting System, CZ 7 | 22.375 | 10.9 | 0.02452801 | 0.8 | Dwelling Unit | 18 | 0 | $ 100.00 | $ 125.00 | - | - | - |
| 2006 | 316017 | Single Family, Verified Ducting System, CZ 8 | 111.885 | 13.39 | 0.12265104 | 0.8 | Dwelling Unit | 18 | 750 | $ 100.00 | $ 125.00 | 67,131 | 8,034 | 74 |
| 2006 | 316018 | Single Family, Verified Ducting System, CZ 9 | 271.965 | 14.975 | 0.29813459 | 0.8 | Dwelling Unit | 18 | 0 | $ 100.00 | $ 125.00 | - | - | - |
| 2006 | 316019 | Single Family, Verified Ducting System, CZ 10 | 543.93 | 20.615 | 0.59626918 | 0.8 | Dwelling Unit | 18 | 500 | $ 100.00 | $ 125.00 | 217,572 | 8,246 | 239 |
| 2006 | 316020 | Single Family, Verified Ducting System, CZ 13 | 824.505 | 37.18 | 0.90384227 | 0.8 | Dwelling Unit | 15 | 0 | $ 100.00 | $ 125.00 | - | - | - |
| 2006 | 316021 | Single Family, Verified Ducting System, CZ 14 | 1096.47 | 60.965 | 1.20197686 | 0.8 | Dwelling Unit | 15 | 0 | $ 100.00 | $ 125.00 | - | - | - |
| 2006 | 316022 | Single Family, Verified Ducting System, CZ 15 | 2874.58 | 9.865 | 3.15118392 | 0.8 | Dwelling Unit | 18 | 0 | $ 100.00 | $ 125.00 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 316023 | Single Family, Quality Insulation Installation, CZ 4 | 96.39 | 52.51 | 0.10566504 | 0.8 | Dwelling Unit | 20 | 0 | $ 175.00 | $ 300.00 | - | - | - |
| 2006 | 316024 | Single Family, Quality Insulation Installation, CZ 5 | 37.87 | 57.09 | 0.04151401 | 0.8 | Dwelling Unit | 20 | 0 | $ 175.00 | $ 300.00 | - | - | - |
| 2006 | 316025 | Single Family, Quality Insulation Installation, CZ 6 | 24.1 | 29.95 | 0.026419 | 0.8 | Dwelling Unit | 20 | 0 | $ 175.00 | $ 300.00 | - | - | - |
| 2006 | 316026 | Single Family, Quality Insulation Installation, CZ 7 | 65.41 | 25.73 | 0.07170402 | 0.8 | Dwelling Unit | 20 | 0 | $ 175.00 | $ 300.00 | - | - | - |
| 2006 | 316027 | Single Family, Quality Insulation Installation, CZ 8 | 182.46 | 27.84 | 0.20001705 | 0.8 | Dwelling Unit | 20 | 300 | $ 175.00 | $ 300.00 | 43,790 | 6,682 | 48 |
| 2006 | 316028 | Single Family, Quality Insulation Installation, CZ 9 | 254.75 | 14.45 | 0.27926309 | 0.8 | Dwelling Unit | 20 | 0 | $ 175.00 | $ 300.00 | - | - | - |
| 2006 | 316029 | Single Family, Quality Insulation Installation, CZ 10 | 468.19 | 38.41 | 0.51324117 | 0.8 | Dwelling Unit | 20 | 500 | $ 175.00 | $ 300.00 | 187,276 | 15,364 | 205 |
| 2006 | 316030 | Single Family, Quality Insulation Installation, CZ 13 | 547.37 | 52.16 | 0.60004019 | 0.8 | Dwelling Unit | 20 | 0 | $ 175.00 | $ 300.00 | - | - | - |
| 2006 | 316031 | Single Family, Quality Insulation Installation, CZ 14 | 647.21 | 73.65 | 0.70948721 | 0.8 | Dwelling Unit | 20 | 0 | $ 175.00 | $ 300.00 | - | - | - |
| 2006 | 316032 | Single Family, Quality Insulation Installation, CZ 15 | 1270.32 | 20.79 | 1.39255542 | 0.8 | Dwelling Unit | 20 | 200 | $ 175.00 | $ 300.00 | 203,251 | 3,326 | 223 |
| 2006 | 316033 | Single Family, Tank Less Water Heater, CZ 4 | - | $ 79.99 | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 325.00 | - | - | - |
| 2006 | 316034 | Single Family, Tank Less Water Heater, CZ 5 | - | $ 81.05 | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 325.00 | - | - | - |
| 2006 | 316035 | Single Family, Tank Less Water Heater, CZ 6 | - | $ 85.63 | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 325.00 | - | - | - |
| 2006 | 316036 | Single Family, Tank Less Water Heater, CZ 7 | - | $ 85.28 | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 325.00 | - | - | - |
| 2006 | 316037 | Single Family, Tank Less Water Heater, CZ 8 | - | $ 84.22 | $ - | 0.8 | Dwelling Unit | 15 | 100 | $ 200.00 | $ 325.00 | - | 6,738 | - |
| 2006 | 316038 | Single Family, Tank Less Water Heater, CZ 9 | - | $ 83.52 | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 325.00 | - | - | - |
| 2006 | 316039 | Single Family, Tank Less Water Heater, CZ 10 | - | $ 83.52 | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 325.00 | - | - | - |
| 2006 | 316040 | Single Family, Tank Less Water Heater, CZ 13 | - | $ 75.41 | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 325.00 | - | - | - |
| 2006 | 316041 | Single Family, Tank Less Water Heater, CZ 14 | - | $ 85.63 | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 325.00 | - | - | - |
| 2006 | 316042 | Single Family, Tank Less Water Heater, CZ 15 | - | $ 73.65 | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 325.00 | - | - | - |
| 2006 | 316043 | Single Family, Air Conditioner EER, CZ 4 | 22 | $ - | $ 0.06 | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |
| 2006 | 316044 | Single Family, Air Conditioner EER, CZ 5 | 2 | $ - | $ 0.00 | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |
| 2006 | 316045 | Single Family, Air Conditioner EER, CZ 6 | - | $ - | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |
| 2006 | 316046 | Single Family, Air Conditioner EER, CZ 7 | 3 | $ - | $ 0.01 | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |
| 2006 | 316047 | Single Family, Air Conditioner EER, CZ 8 | 74 | $ - | $ 0.19 | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 316048 | Single Family, Air Conditioner EER, CZ 9 | 198 | $ - | $ 0.50 | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |
| 2006 | 316049 | Single Family, Air Conditioner EER, CZ 10 | 460 | $ - | $ 1.16 | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |
| 2006 | 316050 | Single Family, Air Conditioner EER, CZ 13 | 790 | $ - | $ 1.99 | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |
| 2006 | 316051 | Single Family, Air Conditioner EER, CZ 14 | 878 | $ - | $ 2.21 | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |
| 2006 | 316052 | Single Family, Air Conditioner EER, CZ 15 | 2,405 | $ - | $ 6.03 | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |
| 2006 | 316053 | Multi-family, Maximum Cooling Capacity, CZ 4 | 44 | $ 13.43 | $ 0.05 | 0.8 | Dwelling Unit | 15 | 0 | $ 100.00 | $ 150.00 | - | - | - |
| 2006 | 316054 | Multi-family, Maximum Cooling Capacity, CZ 5 | 10 | $ 13.73 | $ 0.01 | 0.8 | Dwelling Unit | 15 | 0 | $ 100.00 | $ 150.00 | - | - | - |
| 2006 | 316055 | Multi-family, Maximum Cooling Capacity, CZ 6 | 10 | $ 5.68 | $ 0.01 | 0.8 | Dwelling Unit | 15 | 0 | $ 100.00 | $ 150.00 | - | - | - |
| 2006 | 316056 | Multi-family, Maximum Cooling Capacity, CZ 7 | 29 | $ 4.53 | $ 0.03 | 0.8 | Dwelling Unit | 15 | 0 | $ 100.00 | $ 150.00 | - | - | - |
| 2006 | 316057 | Multi-family, Maximum Cooling Capacity, CZ 8 | 123 | $ 5.52 | $ 0.13 | 0.8 | Dwelling Unit | 15 | 250 | $ 100.00 | $ 150.00 | 24,582 | 1,104 | 27 |
| 2006 | 316058 | Multi-family, Maximum Cooling Capacity, CZ 9 | 243 | $ 6.14 | $ 0.27 | 0.8 | Dwelling Unit | 15 | 100 | $ 100.00 | $ 150.00 | 19,426 | 491 | 21 |
| 2006 | 316059 | Multi-family, Maximum Cooling Capacity, CZ 10 | 437 | $ 8.75 | $ 0.48 | 0.8 | Dwelling Unit | 15 | 345 | $ 100.00 | $ 150.00 | 120,593 | 2,415 | 132 |
| 2006 | 316060 | Multi-family, Maximum Cooling Capacity, CZ 13 | 606 | $ 14.58 | $ 0.66 | 0.8 | Dwelling Unit | 15 | 0 | $ 100.00 | $ 150.00 | - | - | - |
| 2006 | 316061 | Multi-family, Maximum Cooling Capacity, CZ 14 | 745 | $ 24.63 | $ 0.82 | 0.8 | Dwelling Unit | 15 | 0 | $ 100.00 | $ 150.00 | - | - | - |
| 2006 | 316062 | Multi-family, Maximum Cooling Capacity, CZ 15 | 1,791 | $ 4.30 | $ 1.96 | 0.8 | Dwelling Unit | 15 | 0 | $ 100.00 | $ 150.00 | - | - | - |
| 2006 | 316063 | Multi-family, Verified Ducting System, CZ 4 | 21 | $ 13.43 | $ 0.02 | 0.8 | Dwelling Unit | 18 | 0 | $ 60.00 | $ 100.00 | - | - | - |
| 2006 | 316064 | Multi-family, Verified Ducting System, CZ 5 | 5 | $ 13.73 | $ 0.00 | 0.8 | Dwelling Unit | 18 | 0 | $ 60.00 | $ 100.00 | - | - | - |
| 2006 | 316065 | Multi-family, Verified Ducting System, CZ 6 | 5 | $ 5.68 | $ 0.00 | 0.8 | Dwelling Unit | 18 | 0 | $ 60.00 | $ 100.00 | - | - | - |
| 2006 | 316066 | Multi-family, Verified Ducting System, CZ 7 | 13 | $ 4.53 | $ 0.01 | 0.8 | Dwelling Unit | 18 | 0 | $ 60.00 | $ 100.00 | - | - | - |
| 2006 | 316067 | Multi-family, Verified Ducting System, CZ 8 | 60 | $ 5.52 | $ 0.07 | 0.8 | Dwelling Unit | 18 | 200 | $ 60.00 | $ 100.00 | 9,594 | 883 | 11 |
| 2006 | 316068 | Multi-family, Verified Ducting System, CZ 9 | 137 | $ 6.14 | $ 0.15 | 0.8 | Dwelling Unit | 18 | 200 | $ 60.00 | $ 100.00 | 21,944 | 982 | 24 |
| 2006 | 316069 | Multi-family, Verified Ducting System, CZ 10 | 259 | $ 8.75 | $ 0.28 | 0.8 | Dwelling Unit | 18 | 400 | $ 60.00 | $ 100.00 | 82,979 | 2,800 | 91 |
| 2006 | 316070 | Multi-family, Verified Ducting System, CZ 13 | 360 | $ 14.58 | $ 0.40 | 0.8 | Dwelling Unit | 18 | 0 | $ 60.00 | $ 100.00 | - | - | - |
| 2006 | 316071 | Multi-family, Verified Ducting System, CZ 14 | 483 | $ 24.63 | $ 0.53 | 0.8 | Dwelling Unit | 18 | 0 | $ 60.00 | $ 100.00 | - | - | - |
| 2006 | 316072 | Multi-family, Verified Ducting System, CZ 15 | 1,164 | $ 4.30 | $ 1.28 | 0.8 | Dwelling Unit | 18 | 0 | $ 60.00 | $ 100.00 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 316073 | Multi-family, High Quality Insulation Installation, CZ 4 | 34 | $ 11.12 | $ 0.04 | 0.8 | Dwelling Unit | 20 | 0 | $ 50.00 | $ 100.00 | - | - | - |
| 2006 | 316074 | Multi-family, High Quality Insulation Installation, CZ 5 | 12 | $ 11.89 | $ 0.01 | 0.8 | Dwelling Unit | 20 | 0 | $ 50.00 | $ 100.00 | - | - | - |
| 2006 | 316075 | Multi-family, High Quality Insulation Installation, CZ 6 | 10 | $ 5.91 | $ 0.01 | 0.8 | Dwelling Unit | 20 | 0 | $ 50.00 | $ 100.00 | - | - | - |
| 2006 | 316076 | Multi-family, High Quality Insulation Installation, CZ 7 | 22 | $ 5.14 | $ 0.02 | 0.8 | Dwelling Unit | 20 | 0 | $ 50.00 | $ 100.00 | - | - | - |
| 2006 | 316077 | Multi-family, High Quality Insulation Installation, CZ 8 | 57 | $ 5.52 | $ 0.06 | 0.8 | Dwelling Unit | 20 | 250 | $ 50.00 | $ 100.00 | 11,392 | 1,104 | 12 |
| 2006 | 316078 | Multi-family, High Quality Insulation Installation, CZ 9 | 95 | $ 6.06 | $ 0.10 | 0.8 | Dwelling Unit | 20 | 0 | $ 50.00 | $ 100.00 | - | - | - |
| 2006 | 316079 | Multi-family, High Quality Insulation Installation, CZ 10 | 126 | $ 8.13 | $ 0.14 | 0.8 | Dwelling Unit | 20 | 300 | $ 50.00 | $ 100.00 | 30,218 | 1,951 | 33 |
| 2006 | 316080 | Multi-family, High Quality Insulation Installation, CZ 13 | 140 | $ 11.20 | $ 0.15 | 0.8 | Dwelling Unit | 20 | 0 | $ 50.00 | $ 100.00 | - | - | - |
| 2006 | 316081 | Multi-family, High Quality Insulation Installation, CZ 14 | 160 | $ 15.57 | $ 0.17 | 0.8 | Dwelling Unit | 20 | 0 | $ 50.00 | $ 100.00 | - | - | - |
| 2006 | 316082 | Multi-family, High Quality Insulation Installation, CZ 15 | 304 | $ 4.22 | $ 0.33 | 0.8 | Dwelling Unit | 20 | 0 | $ 50.00 | $ 100.00 | - | - | - |
| 2006 | 316083 | Multi-family, Tank Less Water Heater, CZ 4 | - | $ 13.89 | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 325.00 | - | - | - |
| 2006 | 316084 | Multi-family, Tank Less Water Heater, CZ 5 | - | $ 13.96 | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 325.00 | - | - | - |
| 2006 | 316085 | Multi-family, Tank Less Water Heater, CZ 6 | - | $ 15.34 | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 325.00 | - | - | - |
| 2006 | 316086 | Multi-family, Tank Less Water Heater, CZ 7 | - | $ 15.50 | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 325.00 | - | - | - |
| 2006 | 316087 | Multi-family, Tank Less Water Heater, CZ 8 | - | $ 15.34 | $ - | 0.8 | Dwelling Unit | 13 | 0 | $ 200.00 | $ 325.00 | - | - | - |
| 2006 | 316088 | Multi-family, Tank Less Water Heater, CZ 9 | - | $ 15.27 | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 325.00 | - | - | - |
| 2006 | 316089 | Multi-family, Tank Less Water Heater, CZ 10 | - | $ 15.34 | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 325.00 | - | - | - |
| 2006 | 316090 | Multi-family, Tank Less Water Heater, CZ 13 | - | $ 13.81 | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 325.00 | - | - | - |
| 2006 | 316091 | Multi-family, Tank Less Water Heater, CZ 14 | - | $ 15.34 | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 325.00 | - | - | - |
| 2006 | 316092 | Multi-family, Tank Less Water Heater, CZ 15 | - | $ 14.81 | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 325.00 | - | - | - |
| 2006 | 316093 | Multi-family, Air Conditioner EER, CZ 4 | 10 | $ - | $ 0.01 | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |
| 2006 | 316094 | Multi-family, Air Conditioner EER, CZ 5 | 1 | $ - | $ 0.00 | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |
| 2006 | 316095 | Multi-family, Air Conditioner EER, CZ 6 | - | $ - | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |
| 2006 | 316096 | Multi-family, Air Conditioner EER, CZ 7 | 2 | $ - | $ 0.00 | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |
| 2006 | 316097 | Multi-family, Air Conditioner EER, CZ 8 | 42 | $ - | $ 0.05 | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 316098 | Multi-family, Air Conditioner EER, CZ 9 | 109 | $ - | $ 0.14 | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |
| 2006 | 316099 | Multi-family, Air Conditioner EER, CZ 10 | 233 | $ - | $ 0.29 | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |
| 2006 | 316100 | Multi-family, Air Conditioner EER, CZ 13 | 363 | $ - | $ 0.46 | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |
| 2006 | 316101 | Multi-family, Air Conditioner EER, CZ 14 | 406 | $ - | $ 0.51 | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |
| 2006 | 316102 | Multi-family, Air Conditioner EER, CZ 15 | 1,036 | $ - | $ 1.30 | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |
| 2007 | 316003 | Single Family, Maximum Cooling Capacity, CZ 4 | 98 | $ 34.54 | $ 0.11 | 0.8 | Dwelling Unit | 15 | 0 | $ 150.00 | $ 225.00 | - | - | - |
| 2007 | 316004 | Single Family, Maximum Cooling Capacity, CZ 5 | 40 | $ 34.54 | $ 0.04 | 0.8 | Dwelling Unit | 15 | 0 | $ 150.00 | $ 225.00 | - | - | - |
| 2007 | 316005 | Single Family, Maximum Cooling Capacity, CZ 6 | 29 | $ 13.57 | $ 0.03 | 0.8 | Dwelling Unit | 15 | 0 | $ 150.00 | $ 225.00 | - | - | - |
| 2007 | 316006 | Single Family, Maximum Cooling Capacity, CZ 7 | 59 | $ 10.93 | $ 0.06 | 0.8 | Dwelling Unit | 15 | 0 | $ 150.00 | $ 225.00 | - | - | - |
| 2007 | 316007 | Single Family, Maximum Cooling Capacity, CZ 8 | 246 | $ 13.39 | $ 0.27 | 0.8 | Dwelling Unit | 15 | 500 | $ 150.00 | $ 225.00 | 98,458 | 5,356 | 108 |
| 2007 | 316008 | Single Family, Maximum Cooling Capacity, CZ 9 | 499 | $ 14.98 | $ 0.55 | 0.8 | Dwelling Unit | 15 | 0 | $ 150.00 | $ 225.00 | - | - | - |
| 2007 | 316009 | Single Family, Maximum Cooling Capacity, CZ 10 | 938 | $ 20.62 | $ 1.03 | 0.8 | Dwelling Unit | 15 | 600 | $ 150.00 | $ 225.00 | 450,293 | 9,895 | 494 |
| 2007 | 316010 | Single Family, Maximum Cooling Capacity, CZ 13 | 1,386 | $ 37.18 | $ 1.52 | 0.8 | Dwelling Unit | 15 | 0 | $ 150.00 | $ 225.00 | - | - | - |
| 2007 | 316011 | Single Family, Maximum Cooling Capacity, CZ 14 | 1,694 | $ 60.97 | $ 1.86 | 0.8 | Dwelling Unit | 15 | 0 | $ 150.00 | $ 225.00 | - | - | - |
| 2007 | 316012 | Single Family, Maximum Cooling Capacity, CZ 15 | 4,364 | $ 9.87 | $ 4.78 | 0.8 | Dwelling Unit | 15 | 150 | $ 150.00 | $ 225.00 | 523,621 | 1,184 | 574 |
| 2007 | 316013 | Single Family, Verified Ducting System, CZ 4 | 43 | $ 34.54 | $ 0.05 | 0.8 | Dwelling Unit | 18 | 0 | $ 100.00 | $ 125.00 | - | - | - |
| 2007 | 316014 | Single Family, Verified Ducting System, CZ 5 | 19 | $ 34.54 | $ 0.02 | 0.8 | Dwelling Unit | 18 | 0 | $ 100.00 | $ 125.00 | - | - | - |
| 2007 | 316015 | Single Family, Verified Ducting System, CZ 6 | 12 | $ 13.57 | $ 0.01 | 0.8 | Dwelling Unit | 18 | 0 | $ 100.00 | $ 125.00 | - | - | - |
| 2007 | 316016 | Single Family, Verified Ducting System, CZ 7 | 22 | $ 10.90 | $ 0.02 | 0.8 | Dwelling Unit | 18 | 0 | $ 100.00 | $ 125.00 | - | - | - |
| 2007 | 316017 | Single Family, Verified Ducting System, CZ 8 | 112 | $ 13.39 | $ 0.12 | 0.8 | Dwelling Unit | 18 | 1000 | $ 100.00 | $ 125.00 | 89,508 | 10,712 | 98 |
| 2007 | 316018 | Single Family, Verified Ducting System, CZ 9 | 272 | $ 14.98 | $ 0.30 | 0.8 | Dwelling Unit | 18 | 100 | $ 100.00 | $ 125.00 | 21,757 | 1,198 | 24 |
| 2007 | 316019 | Single Family, Verified Ducting System, CZ 10 | 544 | $ 20.62 | $ 0.60 | 0.8 | Dwelling Unit | 18 | 600 | $ 100.00 | $ 125.00 | 261,086 | 9,895 | 286 |
| 2007 | 316020 | Single Family, Verified Ducting System, CZ 13 | 825 | $ 37.18 | $ 0.90 | 0.8 | Dwelling Unit | 15 | 0 | $ 100.00 | $ 125.00 | - | - | - |
| 2007 | 316021 | Single Family, Verified Ducting System, CZ 14 | 1,096 | $ 60.97 | $ 1.20 | 0.8 | Dwelling Unit | 15 | 0 | $ 100.00 | $ 125.00 | - | - | - |
| 2007 | 316022 | Single Family, Verified Ducting System, CZ 15 | 2,875 | $ 9.87 | $ 3.15 | 0.8 | Dwelling Unit | 18 | 0 | $ 100.00 | $ 125.00 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2007 | 316023 | Single Family, Quality Insulation Installation, CZ 4 | 96 | $ 52.51 | $ 0.11 | 0.8 | Dwelling Unit | 20 | 0 | $ 175.00 | $ 300.00 | - | - | - |
| 2007 | 316024 | Single Family, Quality Insulation Installation, CZ 5 | 38 | $ 57.09 | $ 0.04 | 0.8 | Dwelling Unit | 20 | 0 | $ 175.00 | $ 300.00 | - | - | - |
| 2007 | 316025 | Single Family, Quality Insulation Installation, CZ 6 | 24 | $ 29.95 | $ 0.03 | 0.8 | Dwelling Unit | 20 | 0 | $ 175.00 | $ 300.00 | - | - | - |
| 2007 | 316026 | Single Family, Quality Insulation Installation, CZ 7 | 65 | $ 25.73 | $ 0.07 | 0.8 | Dwelling Unit | 20 | 0 | $ 175.00 | $ 300.00 | - | - | - |
| 2007 | 316027 | Single Family, Quality Insulation Installation, CZ 8 | 182 | $ 27.84 | $ 0.20 | 0.8 | Dwelling Unit | 20 | 400 | $ 175.00 | $ 300.00 | 58,387 | 8,909 | 64 |
| 2007 | 316028 | Single Family, Quality Insulation Installation, CZ 9 | 255 | $ 14.45 | $ 0.28 | 0.8 | Dwelling Unit | 20 | 0 | $ 175.00 | $ 300.00 | - | - | - |
| 2007 | 316029 | Single Family, Quality Insulation Installation, CZ 10 | 468 | $ 38.41 | $ 0.51 | 0.8 | Dwelling Unit | 20 | 500 | $ 175.00 | $ 300.00 | 187,276 | 15,364 | 205 |
| 2007 | 316030 | Single Family, Quality Insulation Installation, CZ 13 | 547 | $ 52.16 | $ 0.60 | 0.8 | Dwelling Unit | 20 | 0 | $ 175.00 | $ 300.00 | - | - | - |
| 2007 | 316031 | Single Family, Quality Insulation Installation, CZ 14 | 647 | $ 73.65 | $ 0.71 | 0.8 | Dwelling Unit | 20 | 0 | $ 175.00 | $ 300.00 | - | - | - |
| 2007 | 316032 | Single Family, Quality Insulation Installation, CZ 15 | 1,270 | $ 20.79 | $ 1.39 | 0.8 | Dwelling Unit | 20 | 200 | $ 175.00 | $ 300.00 | 203,251 | 3,326 | 223 |
| 2007 | 316033 | Single Family, Tank Less Water Heater, CZ 4 | - | $ 79.99 | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 325.00 | - | - | - |
| 2007 | 316034 | Single Family, Tank Less Water Heater, CZ 5 | - | $ 81.05 | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 325.00 | - | - | - |
| 2007 | 316035 | Single Family, Tank Less Water Heater, CZ 6 | - | $ 85.63 | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 325.00 | - | - | - |
| 2007 | 316036 | Single Family, Tank Less Water Heater, CZ 7 | - | $ 85.28 | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 325.00 | - | - | - |
| 2007 | 316037 | Single Family, Tank Less Water Heater, CZ 8 | - | $ 84.22 | $ - | 0.8 | Dwelling Unit | 15 | 100 | $ 200.00 | $ 325.00 | - | 6,738 | - |
| 2007 | 316038 | Single Family, Tank Less Water Heater, CZ 9 | - | $ 83.52 | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 325.00 | - | - | - |
| 2007 | 316039 | Single Family, Tank Less Water Heater, CZ 10 | - | $ 83.52 | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 325.00 | - | - | - |
| 2007 | 316040 | Single Family, Tank Less Water Heater, CZ 13 | - | $ 75.41 | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 325.00 | - | - | - |
| 2007 | 316041 | Single Family, Tank Less Water Heater, CZ 14 | - | $ 85.63 | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 325.00 | - | - | - |
| 2007 | 316042 | Single Family, Tank Less Water Heater, CZ 15 | - | $ 73.65 | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 325.00 | - | - | - |
| 2007 | 316043 | Single Family, Air Conditioner EER, CZ 4 | 22 | $ - | $ 0.06 | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |
| 2007 | 316044 | Single Family, Air Conditioner EER, CZ 5 | 2 | $ - | $ 0.00 | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |
| 2007 | 316045 | Single Family, Air Conditioner EER, CZ 6 | - | $ - | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |
| 2007 | 316046 | Single Family, Air Conditioner EER, CZ 7 | 3 | $ - | $ 0.01 | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |
| 2007 | 316047 | Single Family, Air Conditioner EER, CZ 8 | 74 | $ - | $ 0.19 | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2007 | 316048 | Single Family, Air Conditioner EER, CZ 9 | 198 | $ - | $ 0.50 | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |
| 2007 | 316049 | Single Family, Air Conditioner EER, CZ 10 | 460 | $ - | $ 1.16 | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |
| 2007 | 316050 | Single Family, Air Conditioner EER, CZ 13 | 790 | $ - | $ 1.99 | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |
| 2007 | 316051 | Single Family, Air Conditioner EER, CZ 14 | 878 | $ - | $ 2.21 | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |
| 2007 | 316052 | Single Family, Air Conditioner EER, CZ 15 | 2,405 | $ - | $ 6.03 | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |
| 2007 | 316053 | Multi-family, Maximum Cooling Capacity, CZ 4 | 44 | $ 13.43 | $ 0.05 | 0.8 | Dwelling Unit | 15 | 0 | $ 100.00 | $ 150.00 | - | - | - |
| 2007 | 316054 | Multi-family, Maximum Cooling Capacity, CZ 5 | 10 | $ 13.73 | $ 0.01 | 0.8 | Dwelling Unit | 15 | 0 | $ 100.00 | $ 150.00 | - | - | - |
| 2007 | 316055 | Multi-family, Maximum Cooling Capacity, CZ 6 | 10 | $ 5.68 | $ 0.01 | 0.8 | Dwelling Unit | 15 | 0 | $ 100.00 | $ 150.00 | - | - | - |
| 2007 | 316056 | Multi-family, Maximum Cooling Capacity, CZ 7 | 29 | $ 4.53 | $ 0.03 | 0.8 | Dwelling Unit | 15 | 0 | $ 100.00 | $ 150.00 | - | - | - |
| 2007 | 316057 | Multi-family, Maximum Cooling Capacity, CZ 8 | 123 | $ 5.52 | $ 0.13 | 0.8 | Dwelling Unit | 15 | 250 | $ 100.00 | $ 150.00 | 24,582 | 1,104 | 27 |
| 2007 | 316058 | Multi-family, Maximum Cooling Capacity, CZ 9 | 243 | $ 6.14 | $ 0.27 | 0.8 | Dwelling Unit | 15 | 100 | $ 100.00 | $ 150.00 | 19,426 | 491 | 21 |
| 2007 | 316059 | Multi-family, Maximum Cooling Capacity, CZ 10 | 437 | $ 8.75 | $ 0.48 | 0.8 | Dwelling Unit | 15 | 400 | $ 100.00 | $ 150.00 | 139,818 | 2,800 | 153 |
| 2007 | 316060 | Multi-family, Maximum Cooling Capacity, CZ 13 | 606 | $ 14.58 | $ 0.66 | 0.8 | Dwelling Unit | 15 | 0 | $ 100.00 | $ 150.00 | - | - | - |
| 2007 | 316061 | Multi-family, Maximum Cooling Capacity, CZ 14 | 745 | $ 24.63 | $ 0.82 | 0.8 | Dwelling Unit | 15 | 0 | $ 100.00 | $ 150.00 | - | - | - |
| 2007 | 316062 | Multi-family, Maximum Cooling Capacity, CZ 15 | 1,791 | $ 4.30 | $ 1.96 | 0.8 | Dwelling Unit | 15 | 0 | $ 100.00 | $ 150.00 | - | - | - |
| 2007 | 316063 | Multi-family, Verified Ducting System, CZ 4 | 21 | $ 13.43 | $ 0.02 | 0.8 | Dwelling Unit | 18 | 0 | $ 60.00 | $ 100.00 | - | - | - |
| 2007 | 316064 | Multi-family, Verified Ducting System, CZ 5 | 5 | $ 13.73 | $ 0.00 | 0.8 | Dwelling Unit | 18 | 0 | $ 60.00 | $ 100.00 | - | - | - |
| 2007 | 316065 | Multi-family, Verified Ducting System, CZ 6 | 5 | $ 5.68 | $ 0.00 | 0.8 | Dwelling Unit | 18 | 0 | $ 60.00 | $ 100.00 | - | - | - |
| 2007 | 316066 | Multi-family, Verified Ducting System, CZ 7 | 13 | $ 4.53 | $ 0.01 | 0.8 | Dwelling Unit | 18 | 0 | $ 60.00 | $ 100.00 | - | - | - |
| 2007 | 316067 | Multi-family, Verified Ducting System, CZ 8 | 60 | $ 5.52 | $ 0.07 | 0.8 | Dwelling Unit | 18 | 400 | $ 60.00 | $ 100.00 | 19,187 | 1,766 | 21 |
| 2007 | 316068 | Multi-family, Verified Ducting System, CZ 9 | 137 | $ 6.14 | $ 0.15 | 0.8 | Dwelling Unit | 18 | 400 | $ 60.00 | $ 100.00 | 43,888 | 1,965 | 48 |
| 2007 | 316069 | Multi-family, Verified Ducting System, CZ 10 | 259 | $ 8.75 | $ 0.28 | 0.8 | Dwelling Unit | 18 | 600 | $ 60.00 | $ 100.00 | 124,469 | 4,200 | 136 |
| 2007 | 316070 | Multi-family, Verified Ducting System, CZ 13 | 360 | $ 14.58 | $ 0.40 | 0.8 | Dwelling Unit | 18 | 0 | $ 60.00 | $ 100.00 | - | - | - |
| 2007 | 316071 | Multi-family, Verified Ducting System, CZ 14 | 483 | $ 24.63 | $ 0.53 | 0.8 | Dwelling Unit | 18 | 0 | $ 60.00 | $ 100.00 | - | - | - |
| 2007 | 316072 | Multi-family, Verified Ducting System, CZ 15 | 1,164 | $ 4.30 | $ 1.28 | 0.8 | Dwelling Unit | 18 | 0 | $ 60.00 | $ 100.00 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2007 | 316073 | Multi-family, High Quality Insulation Installation, CZ 4 | 34 | $ 11.12 | $ 0.04 | 0.8 | Dwelling Unit | 20 | 0 | $ 50.00 | $ 100.00 | - | - | - |
| 2007 | 316074 | Multi-family, High Quality Insulation Installation, CZ 5 | 12 | $ 11.89 | $ 0.01 | 0.8 | Dwelling Unit | 20 | 0 | $ 50.00 | $ 100.00 | - | - | - |
| 2007 | 316075 | Multi-family, High Quality Insulation Installation, CZ 6 | 10 | $ 5.91 | $ 0.01 | 0.8 | Dwelling Unit | 20 | 0 | $ 50.00 | $ 100.00 | - | - | - |
| 2007 | 316076 | Multi-family, High Quality Insulation Installation, CZ 7 | 22 | $ 5.14 | $ 0.02 | 0.8 | Dwelling Unit | 20 | 0 | $ 50.00 | $ 100.00 | - | - | - |
| 2007 | 316077 | Multi-family, High Quality Insulation Installation, CZ 8 | 57 | $ 5.52 | $ 0.06 | 0.8 | Dwelling Unit | 20 | 395 | $ 50.00 | $ 100.00 | 17,999 | 1,744 | 20 |
| 2007 | 316078 | Multi-family, High Quality Insulation Installation, CZ 9 | 95 | $ 6.06 | $ 0.10 | 0.8 | Dwelling Unit | 20 | 0 | $ 50.00 | $ 100.00 | - | - | - |
| 2007 | 316079 | Multi-family, High Quality Insulation Installation, CZ 10 | 126 | $ 8.13 | $ 0.14 | 0.8 | Dwelling Unit | 20 | 400 | $ 50.00 | $ 100.00 | 40,291 | 2,602 | 44 |
| 2007 | 316080 | Multi-family, High Quality Insulation Installation, CZ 13 | 140 | $ 11.20 | $ 0.15 | 0.8 | Dwelling Unit | 20 | 0 | $ 50.00 | $ 100.00 | - | - | - |
| 2007 | 316081 | Multi-family, High Quality Insulation Installation, CZ 14 | 160 | $ 15.57 | $ 0.17 | 0.8 | Dwelling Unit | 20 | 0 | $ 50.00 | $ 100.00 | - | - | - |
| 2007 | 316082 | Multi-family, High Quality Insulation Installation, CZ 15 | 304 | $ 4.22 | $ 0.33 | 0.8 | Dwelling Unit | 20 | 0 | $ 50.00 | $ 100.00 | - | - | - |
| 2007 | 316083 | Multi-family, Tank Less Water Heater, CZ 4 | - | $ 13.89 | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 325.00 | - | - | - |
| 2007 | 316084 | Multi-family, Tank Less Water Heater, CZ 5 | - | $ 13.96 | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 325.00 | - | - | - |
| 2007 | 316085 | Multi-family, Tank Less Water Heater, CZ 6 | - | $ 15.34 | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 325.00 | - | - | - |
| 2007 | 316086 | Multi-family, Tank Less Water Heater, CZ 7 | - | $ 15.50 | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 325.00 | - | - | - |
| 2007 | 316087 | Multi-family, Tank Less Water Heater, CZ 8 | - | $ 15.34 | $ - | 0.8 | Dwelling Unit | 13 | 0 | $ 200.00 | $ 325.00 | - | - | - |
| 2007 | 316088 | Multi-family, Tank Less Water Heater, CZ 9 | - | $ 15.27 | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 325.00 | - | - | - |
| 2007 | 316089 | Multi-family, Tank Less Water Heater, CZ 10 | - | $ 15.34 | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 325.00 | - | - | - |
| 2007 | 316090 | Multi-family, Tank Less Water Heater, CZ 13 | - | $ 13.81 | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 325.00 | - | - | - |
| 2007 | 316091 | Multi-family, Tank Less Water Heater, CZ 14 | - | $ 15.34 | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 325.00 | - | - | - |
| 2007 | 316092 | Multi-family, Tank Less Water Heater, CZ 15 | - | $ 14.81 | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 325.00 | - | - | - |
| 2007 | 316093 | Multi-family, Air Conditioner EER, CZ 4 | 10 | $ - | $ 0.01 | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |
| 2007 | 316094 | Multi-family, Air Conditioner EER, CZ 5 | 1 | $ - | $ 0.00 | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |
| 2007 | 316095 | Multi-family, Air Conditioner EER, CZ 6 | - | $ - | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |
| 2007 | 316096 | Multi-family, Air Conditioner EER, CZ 7 | 2 | $ - | $ 0.00 | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |
| 2007 | 316097 | Multi-family, Air Conditioner EER, CZ 8 | 42 | $ - | $ 0.05 | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2007 | 316098 | Multi-family, Air Conditioner EER, CZ 9 | 109 | $ - | $ 0.14 | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |
| 2007 | 316099 | Multi-family, Air Conditioner EER, CZ 10 | 233 | $ - | $ 0.29 | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |
| 2007 | 316100 | Multi-family, Air Conditioner EER, CZ 13 | 363 | $ - | $ 0.46 | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |
| 2007 | 316101 | Multi-family, Air Conditioner EER, CZ 14 | 406 | $ - | $ 0.51 | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |
| 2007 | 316102 | Multi-family, Air Conditioner EER, CZ 15 | 1,036 | $ - | $ 1.30 | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |
| 2008 | 316003 | Single Family, Maximum Cooling Capacity, CZ 4 | 98 | $ 34.54 | $ 0.11 | 0.8 | Dwelling Unit | 15 | 0 | $ 150.00 | $ 225.00 | - | - | - |
| 2008 | 316004 | Single Family, Maximum Cooling Capacity, CZ 5 | 40 | $ 34.54 | $ 0.04 | 0.8 | Dwelling Unit | 15 | 0 | $ 150.00 | $ 225.00 | - | - | - |
| 2008 | 316005 | Single Family, Maximum Cooling Capacity, CZ 6 | 29 | $ 13.57 | $ 0.03 | 0.8 | Dwelling Unit | 15 | 0 | $ 150.00 | $ 225.00 | - | - | - |
| 2008 | 316006 | Single Family, Maximum Cooling Capacity, CZ 7 | 59 | $ 10.93 | $ 0.06 | 0.8 | Dwelling Unit | 15 | 0 | $ 150.00 | $ 225.00 | - | - | - |
| 2008 | 316007 | Single Family, Maximum Cooling Capacity, CZ 8 | 246 | $ 13.39 | $ 0.27 | 0.8 | Dwelling Unit | 15 | 250 | $ 150.00 | $ 225.00 | 49,229 | 2,678 | 54 |
| 2008 | 316008 | Single Family, Maximum Cooling Capacity, CZ 9 | 499 | $ 14.98 | $ 0.55 | 0.8 | Dwelling Unit | 15 | 0 | $ 150.00 | $ 225.00 | - | - | - |
| 2008 | 316009 | Single Family, Maximum Cooling Capacity, CZ 10 | 938 | $ 20.62 | $ 1.03 | 0.8 | Dwelling Unit | 15 | 400 | $ 150.00 | $ 225.00 | 300,195 | 6,597 | 329 |
| 2008 | 316010 | Single Family, Maximum Cooling Capacity, CZ 13 | 1,386 | $ 37.18 | $ 1.52 | 0.8 | Dwelling Unit | 15 | 0 | $ 150.00 | $ 225.00 | - | - | - |
| 2008 | 316011 | Single Family, Maximum Cooling Capacity, CZ 14 | 1,694 | $ 60.97 | $ 1.86 | 0.8 | Dwelling Unit | 15 | 0 | $ 150.00 | $ 225.00 | - | - | - |
| 2008 | 316012 | Single Family, Maximum Cooling Capacity, CZ 15 | 4,364 | $ 9.87 | $ 4.78 | 0.8 | Dwelling Unit | 15 | 50 | $ 150.00 | $ 225.00 | 174,540 | 395 | 191 |
| 2008 | 316013 | Single Family, Verified Ducting System, CZ 4 | 43 | $ 34.54 | $ 0.05 | 0.8 | Dwelling Unit | 18 | 0 | $ 100.00 | $ 125.00 | - | - | - |
| 2008 | 316014 | Single Family, Verified Ducting System, CZ 5 | 19 | $ 34.54 | $ 0.02 | 0.8 | Dwelling Unit | 18 | 0 | $ 100.00 | $ 125.00 | - | - | - |
| 2008 | 316015 | Single Family, Verified Ducting System, CZ 6 | 12 | $ 13.57 | $ 0.01 | 0.8 | Dwelling Unit | 18 | 0 | $ 100.00 | $ 125.00 | - | - | - |
| 2008 | 316016 | Single Family, Verified Ducting System, CZ 7 | 22 | $ 10.90 | $ 0.02 | 0.8 | Dwelling Unit | 18 | 0 | $ 100.00 | $ 125.00 | - | - | - |
| 2008 | 316017 | Single Family, Verified Ducting System, CZ 8 | 112 | $ 13.39 | $ 0.12 | 0.8 | Dwelling Unit | 18 | 600 | $ 100.00 | $ 125.00 | 53,705 | 6,427 | 59 |
| 2008 | 316018 | Single Family, Verified Ducting System, CZ 9 | 272 | $ 14.98 | $ 0.30 | 0.8 | Dwelling Unit | 18 | 100 | $ 100.00 | $ 125.00 | 21,757 | 1,198 | 24 |
| 2008 | 316019 | Single Family, Verified Ducting System, CZ 10 | 544 | $ 20.62 | $ 0.60 | 0.8 | Dwelling Unit | 18 | 400 | $ 100.00 | $ 125.00 | 174,058 | 6,597 | 191 |
| 2008 | 316020 | Single Family, Verified Ducting System, CZ 13 | 825 | $ 37.18 | $ 0.90 | 0.8 | Dwelling Unit | 15 | 0 | $ 100.00 | $ 125.00 | - | - | - |
| 2008 | 316021 | Single Family, Verified Ducting System, CZ 14 | 1,096 | $ 60.97 | $ 1.20 | 0.8 | Dwelling Unit | 15 | 0 | $ 100.00 | $ 125.00 | - | - | - |
| 2008 | 316022 | Single Family, Verified Ducting System, CZ 15 | 2,875 | $ 9.87 | $ 3.15 | 0.8 | Dwelling Unit | 18 | 0 | $ 100.00 | $ 125.00 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2008 | 316023 | Single Family, Quality Insulation Installation, CZ 4 | 96 | $ 52.51 | $ 0.11 | 0.8 | Dwelling Unit | 20 | 0 | $ 175.00 | $ 300.00 | - | - | - |
| 2008 | 316024 | Single Family, Quality Insulation Installation, CZ 5 | 38 | $ 57.09 | $ 0.04 | 0.8 | Dwelling Unit | 20 | 0 | $ 175.00 | $ 300.00 | - | - | - |
| 2008 | 316025 | Single Family, Quality Insulation Installation, CZ 6 | 24 | $ 29.95 | $ 0.03 | 0.8 | Dwelling Unit | 20 | 0 | $ 175.00 | $ 300.00 | - | - | - |
| 2008 | 316026 | Single Family, Quality Insulation Installation, CZ 7 | 65 | $ 25.73 | $ 0.07 | 0.8 | Dwelling Unit | 20 | 0 | $ 175.00 | $ 300.00 | - | - | - |
| 2008 | 316027 | Single Family, Quality Insulation Installation, CZ 8 | 182 | $ 27.84 | $ 0.20 | 0.8 | Dwelling Unit | 20 | 200 | $ 175.00 | $ 300.00 | 29,194 | 4,454 | 32 |
| 2008 | 316028 | Single Family, Quality Insulation Installation, CZ 9 | 255 | $ 14.45 | $ 0.28 | 0.8 | Dwelling Unit | 20 | 0 | $ 175.00 | $ 300.00 | - | - | - |
| 2008 | 316029 | Single Family, Quality Insulation Installation, CZ 10 | 468 | $ 38.41 | $ 0.51 | 0.8 | Dwelling Unit | 20 | 300 | $ 175.00 | $ 300.00 | 112,366 | 9,218 | 123 |
| 2008 | 316030 | Single Family, Quality Insulation Installation, CZ 13 | 547 | $ 52.16 | $ 0.60 | 0.8 | Dwelling Unit | 20 | 0 | $ 175.00 | $ 300.00 | - | - | - |
| 2008 | 316031 | Single Family, Quality Insulation Installation, CZ 14 | 647 | $ 73.65 | $ 0.71 | 0.8 | Dwelling Unit | 20 | 0 | $ 175.00 | $ 300.00 | - | - | - |
| 2008 | 316032 | Single Family, Quality Insulation Installation, CZ 15 | 1,270 | $ 20.79 | $ 1.39 | 0.8 | Dwelling Unit | 20 | 200 | $ 175.00 | $ 300.00 | 203,251 | 3,326 | 223 |
| 2008 | 316033 | Single Family, Tank Less Water Heater, CZ 4 | - | $ 79.99 | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 325.00 | - | - | - |
| 2008 | 316034 | Single Family, Tank Less Water Heater, CZ 5 | - | $ 81.05 | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 325.00 | - | - | - |
| 2008 | 316035 | Single Family, Tank Less Water Heater, CZ 6 | - | $ 85.63 | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 325.00 | - | - | - |
| 2008 | 316036 | Single Family, Tank Less Water Heater, CZ 7 | - | $ 85.28 | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 325.00 | - | - | - |
| 2008 | 316037 | Single Family, Tank Less Water Heater, CZ 8 | - | $ 84.22 | $ - | 0.8 | Dwelling Unit | 15 | 50 | $ 200.00 | $ 325.00 | - | 3,369 | - |
| 2008 | 316038 | Single Family, Tank Less Water Heater, CZ 9 | - | $ 83.52 | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 325.00 | - | - | - |
| 2008 | 316039 | Single Family, Tank Less Water Heater, CZ 10 | - | $ 83.52 | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 325.00 | - | - | - |
| 2008 | 316040 | Single Family, Tank Less Water Heater, CZ 13 | - | $ 75.41 | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 325.00 | - | - | - |
| 2008 | 316041 | Single Family, Tank Less Water Heater, CZ 14 | - | $ 85.63 | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 325.00 | - | - | - |
| 2008 | 316042 | Single Family, Tank Less Water Heater, CZ 15 | - | $ 73.65 | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 325.00 | - | - | - |
| 2008 | 316043 | Single Family, Air Conditioner EER, CZ 4 | 22 | $ - | $ 0.06 | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |
| 2008 | 316044 | Single Family, Air Conditioner EER, CZ 5 | 2 | $ - | $ 0.00 | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |
| 2008 | 316045 | Single Family, Air Conditioner EER, CZ 6 | - | $ - | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |
| 2008 | 316046 | Single Family, Air Conditioner EER, CZ 7 | 3 | $ - | $ 0.01 | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |
| 2008 | 316047 | Single Family, Air Conditioner EER, CZ 8 | 74 | $ - | $ 0.19 | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2008 | 316048 | Single Family, Air Conditioner EER, CZ 9 | 198 | $ - | $ 0.50 | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |
| 2008 | 316049 | Single Family, Air Conditioner EER, CZ 10 | 460 | $ - | $ 1.16 | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |
| 2008 | 316050 | Single Family, Air Conditioner EER, CZ 13 | 790 | $ - | $ 1.99 | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |
| 2008 | 316051 | Single Family, Air Conditioner EER, CZ 14 | 878 | $ - | $ 2.21 | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |
| 2008 | 316052 | Single Family, Air Conditioner EER, CZ 15 | 2,405 | $ - | $ 6.03 | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |
| 2008 | 316053 | Multi-family, Maximum Cooling Capacity, CZ 4 | 44 | $ 13.43 | $ 0.05 | 0.8 | Dwelling Unit | 15 | 0 | $ 100.00 | $ 150.00 | - | - | - |
| 2008 | 316054 | Multi-family, Maximum Cooling Capacity, CZ 5 | 10 | $ 13.73 | $ 0.01 | 0.8 | Dwelling Unit | 15 | 0 | $ 100.00 | $ 150.00 | - | - | - |
| 2008 | 316055 | Multi-family, Maximum Cooling Capacity, CZ 6 | 10 | $ 5.68 | $ 0.01 | 0.8 | Dwelling Unit | 15 | 0 | $ 100.00 | $ 150.00 | - | - | - |
| 2008 | 316056 | Multi-family, Maximum Cooling Capacity, CZ 7 | 29 | $ 4.53 | $ 0.03 | 0.8 | Dwelling Unit | 15 | 0 | $ 100.00 | $ 150.00 | - | - | - |
| 2008 | 316057 | Multi-family, Maximum Cooling Capacity, CZ 8 | 123 | $ 5.52 | $ 0.13 | 0.8 | Dwelling Unit | 15 | 200 | $ 100.00 | $ 150.00 | 19,666 | 883 | 22 |
| 2008 | 316058 | Multi-family, Maximum Cooling Capacity, CZ 9 | 243 | $ 6.14 | $ 0.27 | 0.8 | Dwelling Unit | 15 | 100 | $ 100.00 | $ 150.00 | 19,426 | 491 | 21 |
| 2008 | 316059 | Multi-family, Maximum Cooling Capacity, CZ 10 | 437 | $ 8.75 | $ 0.48 | 0.8 | Dwelling Unit | 15 | 300 | $ 100.00 | $ 150.00 | 104,863 | 2,100 | 115 |
| 2008 | 316060 | Multi-family, Maximum Cooling Capacity, CZ 13 | 606 | $ 14.58 | $ 0.66 | 0.8 | Dwelling Unit | 15 | 0 | $ 100.00 | $ 150.00 | - | - | - |
| 2008 | 316061 | Multi-family, Maximum Cooling Capacity, CZ 14 | 745 | $ 24.63 | $ 0.82 | 0.8 | Dwelling Unit | 15 | 0 | $ 100.00 | $ 150.00 | - | - | - |
| 2008 | 316062 | Multi-family, Maximum Cooling Capacity, CZ 15 | 1,791 | $ 4.30 | $ 1.96 | 0.8 | Dwelling Unit | 15 | 0 | $ 100.00 | $ 150.00 | - | - | - |
| 2008 | 316063 | Multi-family, Verified Ducting System, CZ 4 | 21 | $ 13.43 | $ 0.02 | 0.8 | Dwelling Unit | 18 | 0 | $ 60.00 | $ 100.00 | - | - | - |
| 2008 | 316064 | Multi-family, Verified Ducting System, CZ 5 | 5 | $ 13.73 | $ 0.00 | 0.8 | Dwelling Unit | 18 | 0 | $ 60.00 | $ 100.00 | - | - | - |
| 2008 | 316065 | Multi-family, Verified Ducting System, CZ 6 | 5 | $ 5.68 | $ 0.00 | 0.8 | Dwelling Unit | 18 | 0 | $ 60.00 | $ 100.00 | - | - | - |
| 2008 | 316066 | Multi-family, Verified Ducting System, CZ 7 | 13 | $ 4.53 | $ 0.01 | 0.8 | Dwelling Unit | 18 | 0 | $ 60.00 | $ 100.00 | - | - | - |
| 2008 | 316067 | Multi-family, Verified Ducting System, CZ 8 | 60 | $ 5.52 | $ 0.07 | 0.8 | Dwelling Unit | 18 | 400 | $ 60.00 | $ 100.00 | 19,187 | 1,766 | 21 |
| 2008 | 316068 | Multi-family, Verified Ducting System, CZ 9 | 137 | $ 6.14 | $ 0.15 | 0.8 | Dwelling Unit | 18 | 400 | $ 60.00 | $ 100.00 | 43,888 | 1,965 | 48 |
| 2008 | 316069 | Multi-family, Verified Ducting System, CZ 10 | 259 | $ 8.75 | $ 0.28 | 0.8 | Dwelling Unit | 18 | 500 | $ 60.00 | $ 100.00 | 103,724 | 3,500 | 114 |
| 2008 | 316070 | Multi-family, Verified Ducting System, CZ 13 | 360 | $ 14.58 | $ 0.40 | 0.8 | Dwelling Unit | 18 | 0 | $ 60.00 | $ 100.00 | - | - | - |
| 2008 | 316071 | Multi-family, Verified Ducting System, CZ 14 | 483 | $ 24.63 | $ 0.53 | 0.8 | Dwelling Unit | 18 | 0 | $ 60.00 | $ 100.00 | - | - | - |
| 2008 | 316072 | Multi-family, Verified Ducting System, CZ 15 | 1,164 | $ 4.30 | $ 1.28 | 0.8 | Dwelling Unit | 18 | 0 | $ 60.00 | $ 100.00 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2008 | 316073 | Multi-family, High Quality Insulation Installation, CZ 4 | 34 | $ 11.12 | $ 0.04 | 0.8 | Dwelling Unit | 20 | 0 | $ 50.00 | $ 100.00 | - | - | - |
| 2008 | 316074 | Multi-family, High Quality Insulation Installation, CZ 5 | 12 | $ 11.89 | $ 0.01 | 0.8 | Dwelling Unit | 20 | 0 | $ 50.00 | $ 100.00 | - | - | - |
| 2008 | 316075 | Multi-family, High Quality Insulation Installation, CZ 6 | 10 | $ 5.91 | $ 0.01 | 0.8 | Dwelling Unit | 20 | 0 | $ 50.00 | $ 100.00 | - | - | - |
| 2008 | 316076 | Multi-family, High Quality Insulation Installation, CZ 7 | 22 | $ 5.14 | $ 0.02 | 0.8 | Dwelling Unit | 20 | 0 | $ 50.00 | $ 100.00 | - | - | - |
| 2008 | 316077 | Multi-family, High Quality Insulation Installation, CZ 8 | 57 | $ 5.52 | $ 0.06 | 0.8 | Dwelling Unit | 20 | 200 | $ 50.00 | $ 100.00 | 9,114 | 883 | 10 |
| 2008 | 316078 | Multi-family, High Quality Insulation Installation, CZ 9 | 95 | $ 6.06 | $ 0.10 | 0.8 | Dwelling Unit | 20 | 0 | $ 50.00 | $ 100.00 | - | - | - |
| 2008 | 316079 | Multi-family, High Quality Insulation Installation, CZ 10 | 126 | $ 8.13 | $ 0.14 | 0.8 | Dwelling Unit | 20 | 300 | $ 50.00 | $ 100.00 | 30,218 | 1,951 | 33 |
| 2008 | 316080 | Multi-family, High Quality Insulation Installation, CZ 13 | 140 | $ 11.20 | $ 0.15 | 0.8 | Dwelling Unit | 20 | 0 | $ 50.00 | $ 100.00 | - | - | - |
| 2008 | 316081 | Multi-family, High Quality Insulation Installation, CZ 14 | 160 | $ 15.57 | $ 0.17 | 0.8 | Dwelling Unit | 20 | 0 | $ 50.00 | $ 100.00 | - | - | - |
| 2008 | 316082 | Multi-family, High Quality Insulation Installation, CZ 15 | 304 | $ 4.22 | $ 0.33 | 0.8 | Dwelling Unit | 20 | 0 | $ 50.00 | $ 100.00 | - | - | - |
| 2008 | 316083 | Multi-family, Tank Less Water Heater, CZ 4 | - | $ 13.89 | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 325.00 | - | - | - |
| 2008 | 316084 | Multi-family, Tank Less Water Heater, CZ 5 | - | $ 13.96 | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 325.00 | - | - | - |
| 2008 | 316085 | Multi-family, Tank Less Water Heater, CZ 6 | - | $ 15.34 | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 325.00 | - | - | - |
| 2008 | 316086 | Multi-family, Tank Less Water Heater, CZ 7 | - | $ 15.50 | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 325.00 | - | - | - |
| 2008 | 316087 | Multi-family, Tank Less Water Heater, CZ 8 | - | $ 15.34 | $ - | 0.8 | Dwelling Unit | 13 | 0 | $ 200.00 | $ 325.00 | - | - | - |
| 2008 | 316088 | Multi-family, Tank Less Water Heater, CZ 9 | - | $ 15.27 | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 325.00 | - | - | - |
| 2008 | 316089 | Multi-family, Tank Less Water Heater, CZ 10 | - | $ 15.34 | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 325.00 | - | - | - |
| 2008 | 316090 | Multi-family, Tank Less Water Heater, CZ 13 | - | $ 13.81 | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 325.00 | - | - | - |
| 2008 | 316091 | Multi-family, Tank Less Water Heater, CZ 14 | - | $ 15.34 | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 325.00 | - | - | - |
| 2008 | 316092 | Multi-family, Tank Less Water Heater, CZ 15 | - | $ 14.81 | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 325.00 | - | - | - |
| 2008 | 316093 | Multi-family, Air Conditioner EER, CZ 4 | 10 | $ - | $ 0.01 | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |
| 2008 | 316094 | Multi-family, Air Conditioner EER, CZ 5 | 1 | $ - | $ 0.00 | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |
| 2008 | 316095 | Multi-family, Air Conditioner EER, CZ 6 | - | $ - | $ - | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |
| 2008 | 316096 | Multi-family, Air Conditioner EER, CZ 7 | 2 | $ - | $ 0.00 | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |
| 2008 | 316097 | Multi-family, Air Conditioner EER, CZ 8 | 42 | $ - | $ 0.05 | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2008 | 316098 | Multi-family, Air Conditioner EER, CZ 9 | 109 | $ - | $ 0.14 | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |
| 2008 | 316099 | Multi-family, Air Conditioner EER, CZ 10 | 233 | $ - | $ 0.29 | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |
| 2008 | 316100 | Multi-family, Air Conditioner EER, CZ 13 | 363 | $ - | $ 0.46 | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |
| 2008 | 316101 | Multi-family, Air Conditioner EER, CZ 14 | 406 | $ - | $ 0.51 | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |
| 2008 | 316102 | Multi-family, Air Conditioner EER, CZ 15 | 1,036 | $ - | $ 1.30 | 0.8 | Dwelling Unit | 15 | 0 | $ 200.00 | $ 225.00 | - | - | - |

# CROSSCUTTING PROGRAMS

# 2006-2008 Energy Efficiency Concept Paper
# Statewide Crosscutting Codes and Standards

## 1. Projected Program Budget

| | | 2006 | 2007 | 2008 |
|---|---|---|---|---|
| Administration | | | | |
| | Administrative Overheads | $ 14,286 | $ 14,286 | $ 14,286 |
| | Administrative Other | $ 106,500 | $ 106,500 | $ 106,500 |
| Marketing & Outreach | | $ 6,000 | $ 6,000 | $ 6,000 |
| Direct Implementation | | | | |
| | Activity | $ - | $ 95,000 | $ 95,000 |
| | Installation | $ - | $ - | $ - |
| | Hardware & Materials | $ 173,214 | $ 78,214 | $ 78,214 |
| | Procurement | $ - | $ - | $ - |
| | Incentives | $ - | $ - | $ - |
| EM&V | | $ - | $ - | $ - |
| *Total* | | *$ 300,000* | *$ 300,000* | *$ 300,000* |

## 2. Projected Program Impacts

| 2006 | | | 2007 | | | 2008 | | |
|---|---|---|---|---|---|---|---|---|
| **Net kWh** | **Net kW** | **Net Therms** | **Net kWh** | **Net kW** | **Net Therms** | **Net kWh** | **Net kW** | **Net Therms** |
| - | - | 1,500,000 | - | - | 1,330,000 | - | - | 1,170,000 |

## 3. Program Cost Effectiveness

Attached

## 4. Program Descriptors

Codes and Standards (C&S) is an existing statewide program that promotes upgrades and enhancements in energy efficiency standards and codes. Codes and Standards Enhancement (CASE) studies are performed for promising design practices and technologies. The studies' results are presented to standards and code-setting bodies to encourage adoption of energy efficiency measures. In addition, C&S develops and conducts training seminars to inform the building community regarding applicable codes and prepare them for upcoming code changes.

## 5. Program Statement

The Codes & Standards (C&S) program directs initiatives that will enhance building and appliance standards to codify cost effective, reliable and verifiable demand side measures in support of maximizing portfolio energy and demand savings. The statewide Codes and Standards (C&S) program is in the process of transitioning from an information-only program to a resource acquisitioning oriented program that advocates upgrades and enhancements in energy efficiency standards and codes. Program activities are conducted over long-term code upgrade cycles. Support of building code cycles, for example, may require four years of continuous support. Codes and Standards Enhancement (CASE) studies for energy efficiency improvements are performed for promising design practices and technologies and are presented to standards and code-setting bodies. The Codes and Standards program offers the state expert testimony to promote standards that

approach best practices in energy efficiency, which becomes critically important as stakeholders voice opposition to improvements to building and appliance standards throughout the public workshops and hearings process. Additionally, the program supports implementation of energy efficiency standards through strategic initiatives and/or training. The program targets all market segments.

**6. Program Rationale**

Saving energy and capturing resource and societal benefits from California's diverse energy efficiency program are the primary reasons behind the Codes and Standards program. These advancements are achieved by assisting the state in modifying existing standards or setting new codes into law. Enhancements to codes and standards lead to significant gas energy demand savings by advancing the identification and early adoption of innovative technologies. Following this progression, Codes and Standards activities create synergies with other programs, such as Emerging Technologies, IOU energy efficiency equipment rebates, and energy audits.

**7. Program Outcomes**

The Codes and Standards program is designed to enhance state and federal appliance and building energy efficiency codes, standards and guidelines. In 2006 through 2008, the Codes and Standards program will specifically support implementation of the California Energy Commission's Title 24 Building Energy Efficiency Standards and revisions to Title 20 Appliance Efficiency Standards. CASE initiatives may target enhancements to Title 24 Building Energy Efficiency Standards rulemaking. Additionally, the Southern California Gas Company has looked beyond Title 24 and Title 20 to urge those industries that are not currently regulated by this code to embrace "baseline" technologies and best management practices until they are formalized into industry-accepted standards.

**8. Program Strategy**

- Codes and Standards Advocacy, Training, and Enforcement

**8.1.1. Program Strategy Description** Program staff will assess technologies that present the strongest opportunities to direct and influence code enhancements with significant energy savings. Codes & Standards activities create synergies with other programs, such as Emerging Technologies, energy efficiency equipment rebates and energy audits. Codes and Standards program staff will work with the statewide Emerging Technologies program, as they provide comprehensive analysis of a technology's market potential, market barriers, incremental cost, adoptability, life expectancy, and life cycle costs – all of which determine at which point the technology could drive future code modifications. Implementation activities may include:

- Scoping studies addressing retrofit residential and nonresidential building code opportunities, or advanced energy codes

- CASE studies developed through contracts with consultants managed by utility staff
- Providing expert testimony to promote standards that approach best practices in energy efficiency
- Conducting informal workshops to solicit concepts, reconcile divergent opinions, and solve problems
- Compliance improvement training
- Participation in standards and ratings organizations
- Development of compliance options
- Development surveys to obtain information necessary to address knowledge gaps that constrain future building and appliance code enhancement proposals

### 8.1.2. Program Indicators

Progress will be measured through the following metric:

- **SoCalGas will initiate twelve (12) CASE studies.** The completion and presentation of a CASE study may take up to four years.
- Additionally, a report will be completed that summarizes the status of each active CASE study active during the year. Reports on presentations to the CEC will be available through transcripts of CEC standards workshops, typically posted on the CEC web site after public hearings. The transcripts include comments made by the IOUs, stakeholders and advocates.

## 9. Program Implementation

Codes and Standards program managers will work closely with California Energy Commission (CEC) staff, and other codes and standards advocates, since advocacy efforts within the public rulemaking process are more effective if carried out in a coordinated manner. Prioritization of C&S activities will consider the applicable rulemaking proceedings; measure cost effectiveness, potential long-term energy savings, and demand savings of the enhancements. The IOU's Codes and Standards program staffs will meet throughout each year to coordinate inter-utility activities so that the limited program funding is leveraged efficiently through all of the IOU codes and standards efforts. Activities will also be coordinated with other IOU programs, as needed.

Pacific Gas & Electric Company (PG&E), Southern California Edison Company (SCE), San Diego Gas & Electric Company (SDG&E), and Southern California Gas Company (SoCalGas) will collectively consider CASE initiatives on various cost effective building and appliance energy efficiency measures. Implementation activities may include CASE studies, targeted training, or other strategic efforts. Additionally, projects such as scoping studies addressing retrofit residential and

nonresidential building code opportunities, or advanced energy codes, may be included.

To insure transparency and up to date status of the nature and focus of the IOU's CASE study activities, the IOUs will provide an annual report that briefly summarizes activities in core program areas during the year including, but not limited to: CASE study development, market and information surveys, and compliance support. The summary will provide a detailed list of technologies or market areas identified for CASE study development. The annual report will be posted on a central website at the end of each year, and energy savings will be provided as available.

Initial energy savings projections for the next cycle of building and appliance standards will be based on the level of effort relative to residential building standards, nonresidential building standards, and appliance standards. Energy savings will be updated after reaching key milestones, including: completion of draft CASE studies, selection of CASE studies by the CEC, and adoption.

**10. Customer Description**

Through the statewide Codes and Standards program, expert testimony is provided to promote standards that approach best practices in energy efficiency. Key stakeholders impacted by these regulatory changes include equipment manufacturers, standards enforcement agencies, government institutions, agencies responsible for standard enforcement such as building departments, architects, engineers, designers, and building industry associations, among others.

**11. Customer Interface**

Interface with key stakeholders impacted by regulatory changes include manufacturers, government institutions, standard enforcement agencies of various jurisdictions, architects, engineers, and manufacturing/building associations, among other interested parties. This program is intended to inform the process of modifying existing or developing new energy efficiency measures for utility EE Programs or 3rd party efforts.

**12. Energy Measures and Program Activities**

The 2006-2008 program will focus on new opportunities to address retrofit residential and nonresidential building codes or advanced energy codes. Projects will share the objectives of informing state and federal agencies, verifying and enhancing the CEC's appliance energy efficiency and building code standards, and, in some cases, enhancing manufacturers' specifications and developing new statewide measures.

12.1. **Prescriptive Measures**

See SoCalGas February 1, 2006 Filing Workbook.

12.2. **Energy Savings and Demand Reduction Level Data**

Energy savings and demand reductions are currently under development in accordance with D. 05-09-043 "The final protocols for estimating … savings shall be established during the EM&V phase.[1]" Energy and demand savings projections will be updated in annual reports as soon as protocols are developed and key milestones are completed.

12.3. **Non-energy Activities (Audits, trainings, etc.)**
As indicated above, one of the goals of the Codes and Standards program is to conduct relevant training and/ or seminars to help in the dissemination of code changes and enhancements. The target audience is code officials, builders, developers, engineers and equipment specifiers. Trainings are performed by internal labor and subcontracted labor.

**13. Subcontractor Activities**

Although subcontractors may be employed, none are specifically planned at this time.

**14. Quality Assurance and Evaluation Activities**

In accordance with D. 05-09-043, the protocols for estimating and verifying savings from this program shall be established during the EM&V phase of this proceeding[2].

**15. Marketing Activities**

As an information-only program, Codes and Standards' marketing efforts are those conducted for information dissemination and training. SoCalGas will deliver studies and reports to code-making bodies or organizations that would benefit from technology information as it relates to the code-making process. As seminars or training are conducted as a part of a Codes and Standards program, marketing materials promote the events through e-mail, web site access, newspaper and trade association advertisements and flyers mailings to the appropriate target audiences.

**16. CPUC Objective**

With reference to the EE Policy Manual (V#3;II, 1-10) the following can be said about the Statewide Crosscutting Codes and Standards Program:

- The program seeks to discover and promote new cost-effective energy saving options in alignment with the Energy Action Plan. (#1)
- The program will support the Commission's short-term and long-term energy efficiency goals.(#6)

**17. Conclusion**

The statewide C&S program is an information-only program that advocates upgrades and enhancements in energy efficiency standards and codes. Program activities are conducted over long-term code upgrade cycles. Support of building

[1] D. 05-09-043, Interim Opinion: Energy Efficiency Portfolio Plans and Programs Funding Levels for 2006-2008 – Phase 1 Issues, September 22, 2005,Ordering paragraph 14, (e),
[2] Ibid

code cycles, for example, may require four years of continuous support. Codes and Standards Enhancement (CASE) studies for energy efficiency improvements are performed for promising design practices and technologies and are presented to standards and code-setting bodies. The ultimate result of the Codes and Standards program is the actual codification of a variety of energy efficiency measures. These codified energy efficiency programs result in long term, sustainable energy savings written in the law and are applicable to all market segments.

| | SCG3501 CS4-Codes & Standards Program | |
|---|---|---|
| **BUDGET** | | |
| | | |
| **Administrative Costs** | **$** | **362,357** |
| Overhead and G&A | $ | 42,857 |
| Other Administrative Costs | $ | 319,500 |
| **Marketing/Outreach** | **$** | **18,000** |
| **Direct Implementation** | **$** | **519,642** |
| Total Incentives and Rebates | | |
| User Input Incentive | $ | - |
| Direct Install Rebate | $ | - |
| Direct Install Labor | $ | - |
| Direct Install Materials | $ | - |
| Activity | $ | 190,000 |
| Installation | $ | - |
| Hardware & Materials | $ | 329,642 |
| Rebate Processing & Inspection | $ | - |
| **EM&V Costs** | **$** | - |
| **Budget** | **$** | **900,000** |
| **Costs recovered from other sources** | **$** | - |
| **Budget** (plus other costs) | **$** | **900,000** |
| | | |
| **PROGRAM IMPACTS** | | |
| **Program Reductions for Measures installed through 2008** | | |
| User Entered kW (kW) | | - |
| Net Jul-Sept Peak (kW) | | - |
| Net Dec-Feb Peak (kW) | | - |
| Net NCP (kW) | | - |
| Net CEC (kW) | | - |
| Annual Net kWh | | - |
| Lifecycle Net kWh | | - |
| Annual Net Therms | | 4,000,000 |
| Lifecycle Net Therms | | 40,000,000 |
| | | |
| **Cost Effectiveness** | | |
| **TRC** | | |
| Costs | $ | 900,000 |
| Electric Benefits | $ | - |
| Gas Benefits | $ | - |
| Net Benefits (NPV) | $ | (900,000) |
| BC Ratio | | - |
| | | |
| **PAC** | | |
| Costs | $ | 900,000 |
| Electric Benefits | $ | - |
| Gas Benefits | $ | - |
| Net Benefits (NPV) | $ | (900,000) |
| BC Ratio | | - |
| | | |
| **Levelized Cost** | | |
| **Levelized Cost TRC ($/kWh )** | | |
| Discounted kWh | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |
| **Levelized Cost PAC ($/kWh)** | | |
| Discounted kWh | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |
| **Levelized Cost TRC ($/therm)** | | |
| Discounted Therms | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |
| **Levelized Cost PAC ($/therm)** | | |
| Discounted Therms | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |

## Codes & Standards Program

| Year | Total Budget | Total Incentives | Admin Budget | Net kWh | Net Therms | Net kW |
|---|---|---|---|---|---|---|
| 2006 | $ 300,000 | $ - | $ 300,000 | - | 1,500,000 | - |
| 2007 | $ 300,000 | $ - | $ 300,000 | - | 1,330,000 | - |
| 2008 | $ 300,000 | $ - | $ 300,000 | - | 1,170,000 | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 322001 | C&S from Mahone Report - Therms | | 1 | | 0.5 | | 10 | 3,000,000 | | $ - | - | 1,500,000 | - |
| 2007 | 322001 | C&S from Mahone Report - Therms | | 1 | | 0.5 | | 10 | 2,660,000 | | $ - | - | 1,330,000 | - |
| 2008 | 322001 | C&S from Mahone Report - Therms | | 1 | | 0.5 | | 10 | 2,340,000 | | $ - | - | 1,170,000 | - |

# 2006-2008 Energy Efficiency Programs
# Statewide Emerging Technologies Concept Paper

## 1. Projected Program Budget

| | 2006 | 2007 | 2008 |
|---|---|---|---|
| Administration | | | |
| Administrative Overheads | $ 47,619 | $ 47,619 | $ 47,619 |
| Administrative Other | $ 284,360 | $ 284,360 | $ 284,360 |
| Marketing & Outreach | $ 80,000 | $ 80,000 | $ 80,000 |
| Direct Implementation | | | |
| Incentives | $ - | $ - | $ - |
| Activity | $ 586,021 | $ 586,021 | $ 586,021 |
| Installation | $ - | $ - | $ - |
| Hardware & Materials | $ 2,000 | $ 2,000 | $ 2,000 |
| Rebate Processing & Inspection | $ - | $ - | $ - |
| EM&V | $ - | $ - | $ - |
| *Total* | *$ 1,000,000* | *$ 1,000,000* | *$ 1,000,000* |

## 2. Projected Program Impacts

| 2006 | | | 2007 | | | 2008 | | |
|---|---|---|---|---|---|---|---|---|
| Net kWh | Net kW | Net Therms | Net kWh | Net kW | Net Therms | Net kWh | Net kW | Net Therms |
| - | - | - | - | - | - | - | - | - |

## 3. Program Cost Effectiveness

N/A

## 4. Program Descriptors

The Statewide Emerging Technologies (ET) program is a new product/process evaluation activity best grouped with information-only programs that seeks to accelerate the commercial introduction of novel energy-efficient technologies, applications, and analytical tools that are not widely adopted in California.

## 5. Program Statement

The statewide ET program is an information-only program that seeks to accelerate the introduction of innovative energy efficient technologies, applications and analytical tools that are not widely adopted in California. Emerging technologies may include hardware, software, design tools, strategies and services. There are a daunting amount of market barriers that must be overcome for a new energy efficient product to gain acceptance. As the typical product life cycle in Figure 1 illustrates, during initial marketing efforts, products accepted by "innovators" may fail to gain wider acceptance with more risk-adverse customers, and the product's adoption rate may fall off into "the chasm." The ET program intends to help accelerate a product's market acceptance through a variety of approaches, but mainly by reducing the performance uncertainties associated with new products and applications. The program targets all market segments. In addition, the program managers may investigate opportunities with industry, the California

Energy Commission and others to develop new, innovative and cost effective energy efficient technology enhancements to existing products.

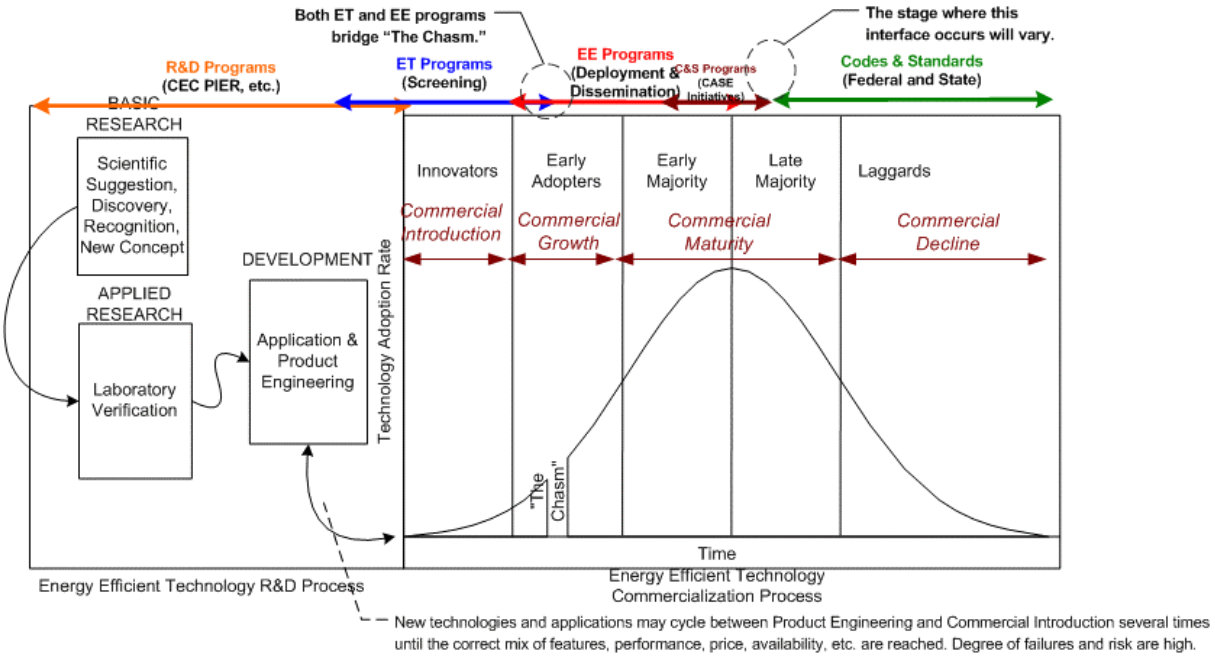



Figure 1. Energy Efficient Technology Commercialization Process

## 6. Program Rationale

The Energy Efficiency portfolio cannot remain static in the face of ever tightening energy markets and changing regulations. As the next generation of energy efficient technologies and applications emerge, they face market hurdles that may either delay their introduction or even consign them to failure. The ET program is a statewide Investor Owned Utility (IOU) effort that seeks to clarify and overcome many of those market barriers, and to raise the customer acceptance of innovative energy efficiency options that are not widely adopted in California. As shown in Figure 1, the program forms an important link between new energy efficient technologies and applications emerging from the Research & Development (R&D) cycle and their introduction into the broader marketplace. It also shows the relationship of the Emerging Technology Program, the Energy Efficiency Program, and the Codes and Standards Program over the product life of the technology.

The proposed 2006-2008 statewide ET program will be slightly different from the 2004 and 2005 program. In 2004 and 2005, the IOUs and the California Energy Commission's (CEC) Public Interest Energy Research (PIER) staff met to discuss and coordinate statewide activities through the Emerging Technologies Coordinating Council (ETCC). Through PIER, the CEC helps to develop, test and demonstrate products up to the end of the R&D cycle. During the 2004-05 meetings, the PIER program managers and contractors reviewed with the IOUs those projects and technologies that have advanced enough to warrant utility ET

program consideration. At SCG, work is in progress on several ET assessment projects based on PIER technologies that are in their final development stages. In addition, ET program staff briefed and prepared materials for the energy efficiency program planners regarding emerging technology applications that may be considered ready for the 2006 - 2008 energy efficiency programs. The synergy between R&D programs, like PIER, and the utilities ET programs is working well and should continue. However, the overall objective for the Energy Efficiency Programs is to verify the performance of new innovations for the integrated utility portfolio for resource acquisition programs. The success of the Energy Efficiency Program will depend on the types of technologies that can achieve the greatest cost effective demand reduction and energy savings. A modified selection criterion was developed to meet the more challenging Energy Efficiency Program objectives. It is also important that a balance of new innovations for various market segments, including residential, commercial, industrial and agricultural, be achieved.

## 7. Program Outcomes

The aim of the ET program is to develop all the necessary information required for the Energy Efficiency Program segment manager to employ the technology to achieve their energy savings goal. That information includes verified energy savings and demand reductions, market potential and market barriers, incremental cost, and the technology's life expectancy.

The outcome of each individual energy technology is very difficult to predict especially for high-risk projects. It is expected that some assessment projects may not turn out to be successful. Even unsuccessful assessments may provide insight so that improvement can be made in the future. The evaluations are critical to inform other EE program measure development and refined estimates and expectations of future energy savings.

## 8. Program Strategy

- Residential Technology Commercialization
- Non-residential Technology Commercialization

### 8.1.1. Program Strategy Description

The utilities will deliver the program aligned with those strategies through custom demonstration projects, working with targeted "innovators" and coordinated efforts such as the ETCC ET database. Information transfer efforts disseminate project results through many different outlets, such as the Energy Centers, utility personnel and community organizations and the ETCC web site. These Information transfer activities leverage the utilities' overall energy efficiency communication efforts to disseminate information resources such as reports, fact sheets, design methods and tools developed through the demonstration projects.

Some key activities include:

- Identification of new energy saving equipment and process improvements and screening them for gross potential

- Hunting for identifying qualifying and negotiating with early adopter candidates
- Managing an assessment study through construction/installation, startup and commissioning, data collection and performance evaluation to conclusion
- Reporting and communication of results
- Close-out activities

### 8.1.2. Program Indicators

The ET program will initiate a variety of new Emerging Technology Application Assessments during 2006 - 2008. New technologies will be developed depending upon the market potential of the innovation, market barriers, incremental cost, life expectancy of the technology, the cost of the assessment, and the time required for the assessment. Since the Energy Efficiency Program managers are the recipients of those technologies, they will be involved in the project selection process. In order to guarantee a truly integrated portfolio, it is necessary to assess and evaluate technologies for all market segments although some of them may seem to offer less savings than others.

Assessments initiated in prior program years will continue until completion. Project results and information will be made available to targeted markets and the utilities' energy efficiency program planners will be briefed on emerging technology applications that may be considered ready for future efficiency program efforts. Once an assessment project concludes and the results are understood, many of the demonstrated applications become part of the portfolios of mainstream energy efficiency programs, form the basis of future energy-related codes and standards, or are adopted as standard design practice in the marketplace and with industry.

The ET program performs assessments of emerging technologies. The number of emerging technology assessments initiated each year will be reported to the CPUC and can be verified. Some of those assessments may include performance of field demonstrations at customer sites. These field demonstrations may take as long as four years to complete, especially at new customer sites. The progress of the project will be reported throughout the funding cycle.

The Statewide Emerging Technologies Program progress will be measured through the following three annual metrics:

- SCG will target the initiation of 18 new technology assessments over the course of the 3-year period from January 2006 through December 2008.

- SCG will collaborate with the other participating utilities to create and maintain a new and more useful database for reporting and transferring information connected with ET program activities. It will succeed that which is currently available on the ETCC website (www.ca-etcc.com ) and each IOU as well as the CEC will be responsible for providing the project information to the contractor who will incorporate it into the new database.
- SCG will continue to be a working member of the Emerging Technologies Coordinating Council and target participation in 4 quarterly meetings per year to ensure adequate inter-utility communication and cooperation. The ETCC will assess whether energy efficient emerging technology applications have reached a sufficient stage of maturity for the utilities to consider them in the statewide program efforts. In addition, to better monitor PIER progress, utility program staff members will attend PIER project meetings as often as possible. This will allow the utilities to remain current of PIER project changes and developments.

After the emerging technologies are assessed, it is important to have the information transferred to the energy efficiency program managers as well as the customers. Information Transfer efforts disseminate project results through many different outlets, including the Energy Centers, utility personnel, community organizations and other entities. These information transfer activities leverage the utilities' overall energy efficiency communication efforts to disseminate information resources such as reports, fact sheets, design methods and tools developed through the demonstration projects.

**9. Program Implementation**

The Emerging Technologies program consists of two parts: Assessment and Information Transfer, and the ETCC. Assessment and Information Transfer focuses on analysis of promising, early prototypes or commercially available technologies which have not yet obtained adequate penetration or acceptance in the marketplace. Emerging technologies may include hardware, software, design tools, strategies and services. Part of the assessment may include field demonstrations, conducted at either customer sites or in controlled environments, which provide design and performance information, and verify novel energy efficient systems. Verification helps to reduce market barriers inhibiting wider acceptance of a technology. Demonstration projects help to measure, verify, analyze, and quantify the potential demand and energy savings. Small scale market potential studies will aid in understanding and document customer acceptance of specific applications in different market segments better informing the process to create and prioritize a new energy efficiency measure. Information transfer disseminates the results of emerging technology application assessment projects in a way that is customized to reach the most appropriate target markets as we work with the market segment program planners.

# 2006-2008 Energy Efficiency Programs
# Statewide Emerging Technologies Concept Paper

The ETCC is a statewide information exchange and coordination effort among Southern California Gas (SCG), Pacific Gas & Electric (PG&E), Southern California Edison (SCE), and San Diego Gas & Electric (SDG&E), and the CEC PIER programs. The Public Interest Energy Research (PIER) programs, like other public and private R&D efforts, develops, tests, and demonstrates prototype products. The utilities ET efforts form an important link in the commercialization of emerging energy efficient natural gas and electric technologies and their applications. Program efforts to select technology applications for assessment projects include working with the CEC PIER program, members of the research and design communities, manufacturers, energy efficiency advocates, and public entities such as Electric Power Research Institute (EPRI), Gas Technology Institute (GTI), universities, E-Source, California Institute for Energy Efficiency (CIEE), The Air-Conditioning and Refrigeration Institute (ARI), American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE), Illuminating Engineering Society (IES), Institute of Electrical and Electronics Engineers (IEEE), national laboratories, Department of Energy (DOE), Environmental Protection Agency (EPA), NASA, engineering firms, industry and trade groups and customers. Contacts with these groups through both the individual utilities and the CEC PIER program constitute a large part of the public input the ETCC receives concerning energy efficient emerging technologies.

The ETCC will hold quarterly meetings to coordinate project activities, exchange information about specific customer projects and technologies, and discuss ways to enhance the utilities' Statewide ET Program efforts and collaboration with the CEC PIER, the ETCC website and the ET database. During ETCC business meetings, discussions concerning ongoing and/or proposed projects at times involve privileged customer information, business strategic and operational details, or privileged manufacturer product details that are too sensitive to discuss in an open forum. These exchanges are necessary to ensure truly effective coordination and collaboration effort between the utilities and the CEC PIER. For this reason, ETCC business meetings will not be open to the general public. At times, the ETCC may invite speakers to a portion of a work meeting to present advances in energy efficient emerging technologies that fit within the context and interests of the existing Statewide Emerging Technology program.

Each utility's program consists of activities that may be coordinated with other utilities' approved emerging technology programs and the CEC, and activities that are unique to each utility service territory and customer base. The efforts that each utility undertakes, as part of the statewide ET program, will be guided and prioritized based on the following criteria: customer needs, coordinated ETCC activities, technology opportunity and readiness, potential cost effective energy and demand savings, potential market size and likely adoption rate estimate, approved program funding levels, and other relevant objectives.

The program will focus on new energy efficient emerging technology assessment projects in 2006 through 2008. The ET program efforts form an important link between ongoing R&D efforts on energy efficient technology applications and their commercialization. Applications mature out of the R&D cycle at different times and are not always available for consideration during initial program planning efforts. Thus, program staff works to remain informed on a broad range of emerging technology applications from many information sources, and any of the technologies may prove to be a viable project candidate. Currently, some of the technology areas that SCG may assess through the program and coordinate through the ETCC, include, but are not limited to:

- Intelligent controls for boilers and industrial equipment
- Building system diagnostics that advance toward 'continuous' commissioning
- Advanced alternatives for professional garment care
- New infrared and low emission burner systems for boilers, process heaters, furnaces and commercial hot water and cooking equipment
- New water heating products and advanced distribution systems
- Emerging technologies connected with cost effective thermal solar energy options
- Ultra-clean prime mover technologies for new distributed generation and combined heat & power systems
- Collaborative demonstrations of cool roof technologies

It is important to note that the less mature a technology is, the higher the risk that the technology may fail in an application. The identified risks are among the many factors that the utilities use to select technology applications for demonstration projects and to establish project contingency requirements. Starting in 2006, SCG may direct some resources toward market research to achieve a better initial understanding of a technology's market potential in order to improve the overall selection process. The significant increase in budget requested for program years 2006 through 2008 will be used to improve the ETCC website and ET database, increase assessment goals and information transfer activities, comply with added program tracking requirements and increased risks due to working with less mature products emerging from research. In past program years, the estimated specific costs of projects undertaken are reported in quarterly workbooks once the projects are committed. These costs will continue to be reported as required in the reporting workbooks. Likewise, narratives discussing initiated assessment projects and their progress are provided in past quarterly narrative reports. These narratives will be expanded to include projects initiated in previous program years. As assessment projects are concluded, their results will be summarized in the annual report narratives including which associated products have since been incorporated into the utilities' energy efficiency program efforts.

**10. Customer Description**

Customers from all markets segments are eligible to host emerging technology application demonstration projects. In general, the information the program generates through its demonstration activities benefits all customers. One of the aims of an ET program is to explore the extent an application of a new technology has in various market segments, in order to characterize the widest possible deployment. Thus, the utilities seek opportunities to host appropriate demonstration projects at hard-to-reach customer sites.

The IOUs implement the program through custom demonstration projects. For projects that require a customer demonstration site, the program works with customers that are willing to accept the potential risks and expenses associated with relatively new energy efficient technology applications. Residential and non-residential customers from all market segments are potential participants. Figure 2 illustrates the general project and customer selection process. Customer site demonstration projects may come about in one of two ways:

- *Customer "Pull."* A utility account representative may approach the program staff on behalf of a customer interested in pursuing energy efficiency. The ET program staff will help the account representative address the customer's needs, and at the same time, consider a range of potential energy efficient emerging technology applications.

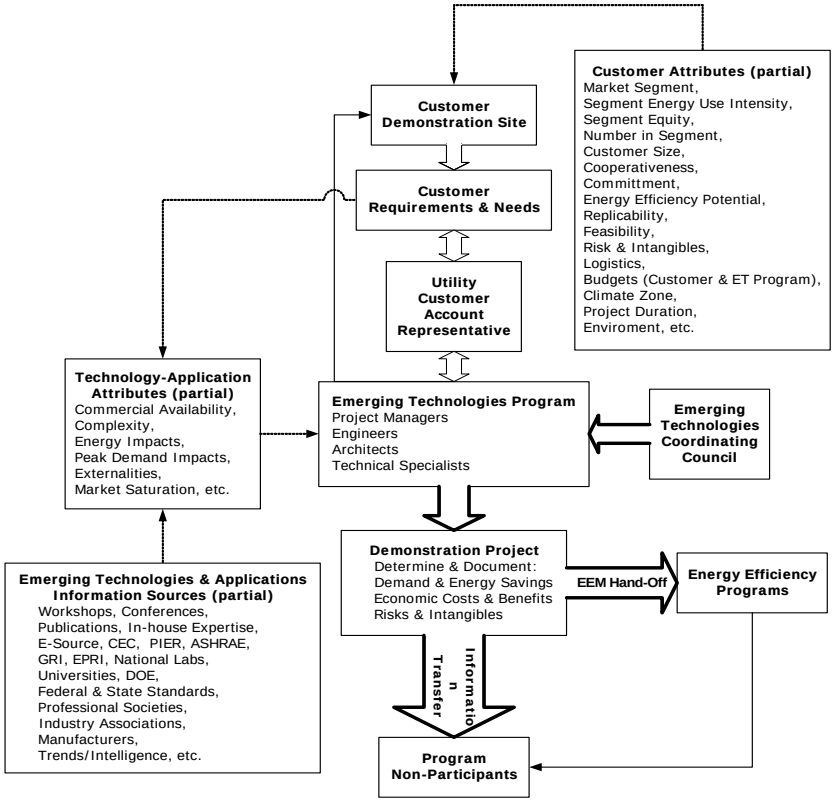



**Figure 2. General Emerging Technologies Program Process**

- *Technology "Push."* The second manner that a project may come about is when a significant new technology application emerges. ET program staff then approach the utility account representatives for a particular market segment, inform them about the new technology application, and ask them to help identify a potential demonstration site from among their customers. The program follows a targeted marketing approach to work with "innovators." These "innovators" may further influence other customers. Note that the utility's customer account representative plays an important role in the overall process. For those projects that do not require a field demonstration at a customer site, the program staff seeks to frame the project targeting customer's needs and requirements. This helps ensure that project objectives are aligned with customer needs and expectations.

Before a customer site demonstration project can take place, a legal agreement acceptable to both the customer and the utility is developed, negotiated, and signed. These agreements specify the terms of the projects, maximum duration, dispute resolution methods, termination provisions, general liability, etc. It is important to note that some demonstration projects may require up to four years to complete, commencing on the date an agreement is signed with a customer. The time required to complete a project will vary due to how complex a new technology application is,

construction schedules, building and process commissioning, logistics, etc. ***Speed to market will be emphasized in this program wherever possible.***

**11. Customer Interface**

Interaction with customers is unique to this program and typically results from the discovery from researchers, or utility staff that a customer is willing to take a higher level of risk and serve as a test bed for a new or improved product or process control scheme.

Other customers will benefit at a later stage through the different channels for information dissemination (e.g. workshops, training seminars, visits to the demonstrations, literature, etc.). Predominantly, this program is meant to inform the process of modifying existing or developing new energy efficiency measures for utility energy efficiency program. It is usually by this method that the successes of the ETP will be made known to the residential commercial and industrial energy customers.

**12. Energy Measures and Program Activities**

**12.1. Prescriptive Measures.**

**12.2. kWh Level Data**

**12.3. Non-energy Activities**

**12.3.1. Activity Description**

**12.3.2. Quantitative Activity Goals**

**12.3.3. Assigned attributes of the activity (market sector, end use)**

**13. Subcontractor Activities**

The ET program staff is ultimately responsible for all aspects of the program. Subcontractors may be used to perform the actual direct implementation tasks such as construction and installation of the equipment and hardware at customers' demonstration sites. They may also be employed to help develop market potential data. All subcontractor activities will be reported in the monthly workbook.

**14. Quality Assurance and Evaluation Activities**

An evaluation plan will be developed in accordance with the soon to be developed EM&V Protocols. The CPUC Energy Division will be holding meetings, workshops and possibly hearings throughout the summer to develop these Protocols. SoCalGas looks forward to participating and commenting on those activities and plans to file EM&V plans for all programs on October 1, 2005 in conjunction with the ED, CEC, and the other IOUs.

**15. Marketing Activities**

ET will be marketed primarily through custom demonstration projects, working with targeted "innovators," and coordinated efforts like the ETCC ET database. Information Transfer efforts disseminate project results through many different outlets, including the Energy Centers, utility personnel, community organizations, etc. These Information Transfer activities are typically specific to the utility and the circumstances of the product, manufacturer, market and potential. We leverage the utilities' overall energy efficiency communication efforts to disseminate information resources such as reports, fact sheets, design methods and tools developed through the demonstration projects.

**16. CPUC Objective**

With a consideration of the EE Policy Manual (V#3;II, 1-10) the following can be said about the Emerging Technologies Programs:

- The program seeks to discover and promote new cost-effective energy saving options in alignment with the Energy Action Plan. (#1,3)
- It strives to achieve a cross-cutting market approach and to balance resources with short- and long-term opportunities. It also seeks to discover combinations of solutions that will minimize lost opportunities. (#2,5)
- The program seeks to deploy and conduct evaluations of new generations of technologies as they emerge as marketed options from CEC/PIER programs and other research pipelines (e.g. DOE, universities, manufacturers, etc.) (#8)

| | SCG3506 ETP4-Emerging Tech Program | |
|---|---|---|
| **BUDGET** | | |
| | | |
| **Administrative Costs** | **$** | **995,937** |
| Overhead and G&A | $ | 142,857 |
| Other Administrative Costs | $ | 853,080 |
| **Marketing/Outreach** | **$** | **240,000** |
| **Direct Implementation** | **$** | **1,764,063** |
| Total Incentives and Rebates | $ | - |
| User Input Incentive | $ | - |
| Direct Install Rebate | $ | - |
| Direct Install Labor | $ | - |
| Direct Install Materials | $ | - |
| Activity | $ | 1,758,063 |
| Installation | $ | - |
| Hardware & Materials | $ | 6,000 |
| Rebate Processing & Inspection | $ | - |
| **EM&V Costs** | **$** | - |
| **Budget** | **$** | **3,000,000** |
| **Costs recovered from other sources** | **$** | - |
| **Budget** (plus other costs) | **$** | **3,000,000** |
| | | |
| **PROGRAM IMPACTS** | | |
| **Program Reductions for Measures installed through 2008** | | |
| User Entered kW (kW) | | - |
| Net Jul-Sept Peak (kW) | | - |
| Net Dec-Feb Peak (kW) | | |
| Net NCP (kW) | | |
| Net CEC (kW) | | - |
| Annual Net kWh | | - |
| Lifecycle Net kWh | | - |
| Annual Net Therms | | - |
| Lifecycle Net Therms | | - |
| | | |
| **Cost Effectiveness** | | |
| **TRC** | | |
| Costs | $ | 3,000,000 |
| Electric Benefits | $ | - |
| Gas Benefits | $ | - |
| Net Benefits (NPV) | $ | (3,000,000) |
| BC Ratio | | - |
| | | |
| **PAC** | | |
| Costs | $ | 3,000,000 |
| Electric Benefits | $ | - |
| Gas Benefits | $ | - |
| Net Benefits (NPV) | $ | (3,000,000) |
| BC Ratio | | - |
| | | |
| **Levelized Cost** | | |
| **Levelized Cost TRC ($/kWh )** | | |
| Discounted kWh | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |
| **Levelized Cost PAC ($/kWh)** | | |
| Discounted kWh | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |
| **Levelized Cost TRC ($/therm)** | | |
| Discounted Therms | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |
| **Levelized Cost PAC ($/therm)** | | |
| Discounted Therms | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |

# 2006-2008 Energy Efficiency Programs
# SoCalGas Energy Efficiency Delivery Channel Innovation Program
# Concept Paper

## 1. Projected Program Budget

| | 2006 | 2007 | 2008 |
|---|---|---|---|
| Administration | | | |
| Administrative Overheads | $ 47,619 | $ 47,619 | $ 47,619 |
| Administrative Other | $ 21,121 | $ 20,719 | $ 21,340 |
| Marketing & Outreach | $ 931,260 | $ 931,662 | $ 931,040 |
| Direct Implementation | | | |
| Activity | $ - | $ - | $ - |
| Installation | $ - | $ - | $ - |
| Hardware & Materials | $ - | $ - | $ - |
| Procurement | $ - | $ - | $ - |
| Incentives | $ - | $ - | $ - |
| EM&V | $ - | $ - | $ - |
| *Total* | *$ 1,000,000* | *$ 1,000,000* | *$ 1,000,000* |

Other energy efficiency program marketing budgets cover costs (such as bill inserts, direct mail letters, seminars, brochures, forms/applications, point-of-purchase signage, etc.) that are directly related to each individual program or their statewide components. The marketing budget for SoCalGas' Energy Efficiency Delivery Channel Innovation Program is incremental to the marketing costs of the individual energy efficiency programs within SoCalGas' portfolio.

## 2. Projected Program Impacts

| 2006 | | | 2007 | | | 2008 | | |
|---|---|---|---|---|---|---|---|---|
| **kW** | **kWh** | **Therms** | **kW** | **kWh** | **Therms** | **kW** | **kWh** | **Therms** |
| - | - | - | - | - | - | - | - | - |

As this program supports the SoCalGas energy efficiency portfolio, energy-savings measures and practices will not be claimed under this program.

## 3. Program Cost Effectiveness

N/A

## 4. Program Descriptors

Energy Efficiency Delivery Channel Innovation is a new, local cross-cutting program that covers all market sectors: Residential, Non-Residential, New Construction, Collaborations, and Third-Party Programs. The Energy Efficiency Delivery Channel Innovation Program was created to increase customer understanding of the SoCalGas energy efficiency portfolio and make adoption of energy efficiency measures and practices easier. This will be accomplished by strengthening the delivery channels of information by providing relevant natural gas-related energy efficiency information and offers, reaching target audiences in key decision-making phases. It will maintain a continuous flow of innovative

communications to help increase awareness of these offerings to the target audience throughout its lifecycle.

## 5. Program Statement

**What's New for 2006-08?**

- Innovation
  - Offers greater frequency & relevancy to target markets.
  - Utilizes email, direct contact and other mass-market approaches to keep energy efficiency top-of-mind.
  - Takes a customer lifecycle approach.
  - Employs feedback mechanisms for quicker program improvement and increased customer satisfaction.
  - Allows for outreach personnel to be in the field.
- Integration
  - Integrates and explains the full SCG portfolio (including third-party programs) for greater customer understanding.
  - Improves coordination with other energy efficiency entities.
- Other Program Improvements
  - Taps into outside expertise delivered through proposed third-party Ethnic Outreach program concept.

This program addresses the following challenges:

**Increasing Demand on Limited Energy Resources** - California's population continues to grow, placing greater demands on energy infrastructure and supplies. New energy infrastructure is costly and takes time to bring online. Energy efficiency and conservation efforts can help reduce demand.

**Low Awareness & Low Interest Category** - Consumers lead increasingly hectic lives. Energy Efficiency is not top-of-mind with consumers and other market actors unless there is an energy crisis or utility bills are high. Also, consumers should become more aware of energy efficiency benefits beyond lower energy bills. These benefits include increased comfort, environment preservation, and reduced need for additional energy infrastructure.

**Cost vs. Benefit** - Energy-efficient appliances and measures often require a greater upfront investment. Energy-efficient appliances usually cost more. And, it takes additional time to find out about energy efficiency programs, research the details and complete rebate applications. Making energy efficiency improvements and practicing conservation become higher priorities when consumers can see a payback in their investment (time & money). For some, the amount of money that could be saved is not worth the hassle. So, it is important to make targets aware of other benefits besides cost savings.

**Lack of Continuity in Programs/Measures –** Consumers and other upstream/midstream actors want greater continuity in programs, promotions and program details. Collaborators need greater continuity in order to tie-in with

their planning needs. Additionally, on-going communications can keep the energy efficiency message more top-of-mind, up-to-date, and build momentum that attracts participation.

**Emphasis on Electricity Issues Overshadows Natural Gas –** The energy crisis, on-going concerns about summer blackouts, and the continuing increase in use of electronic devices have made electricity demand reduction a higher priority than natural gas. Leadership and innovation in natural gas efficiency still need to occur.

**Marketing of Programs Together Maximizes Relevancy and Economies –** "The whole is greater than the sum of its parts." Energy efficiency programs can be more relevant and cost-effective if properly packaged to consumers.

**It's Counterintuitive That a Company Would Promote Using Less of Its Product –**Consumers are used to companies trying to sell more of its product, not less. Many do not understand or are suspect that SoCalGas wants customers to use less natural gas. Communication can be used to clarify.

**Measurement & Valuation Challenges –** Instant rebates make the process easier for customers, but it has been difficult to identify consumers for Measurement & Valuation (M&V) follow-up. With instant rebates, consumers often do not provide their contact information. Retailers are not interested in having their cashiers/staff take on additional responsibility. Therefore, reporting can be spotty. Increased outreach efforts and incentives can be utilized to improve M&V.

## 6. Program Rationale

The program design will:

- Target CEO's with information about energy efficiency,
- Leverage the California Climate Registry to identify organizations interested in energy efficiency,
- Work closely with retailers to develop such things as kiosks offering simplified simulation modeling and other information, expanded instant rebates for measures, connecting survey results to measure point-of-purchase,
- Develop email communications about energy use patterns,
- Develop new "Welcome Packages" at time of service establishment, and
- Leveraging community and faith based organizations efforts to increase energy efficiency awareness.

The program presents the portfolio in an integrated manner for greater synergies and customer awareness on a local level. Through such outreach and the creation of on-going email dialogues and other communications tactics with targeted audiences,

this program keeps energy efficiency top-of-mind and maximizes the adoption of energy efficiency measures and practices.

Through an innovative, coordinated approach, we will maximize outreach opportunities and boost individual program effectiveness and efficiency by leveraging the full portfolio of offerings, giving it context and encouraging adoption/implementation and improving tracking/reporting.

SoCalGas' Energy Efficiency Delivery Channel Innovation Program is designed to increase understanding of the SoCalGas portfolio of programs and make the adoption of energy efficiency measures and practices easier for our consumers. The program will accomplish this goal by strengthening the delivery channels of energy efficiency information and providing relevant natural gas-related energy efficiency information and offers, reaching target audiences in key decision-making phases. It will maintain a continuous line of innovative communications to help increase awareness of these offerings to the target audience throughout the lifecycle.

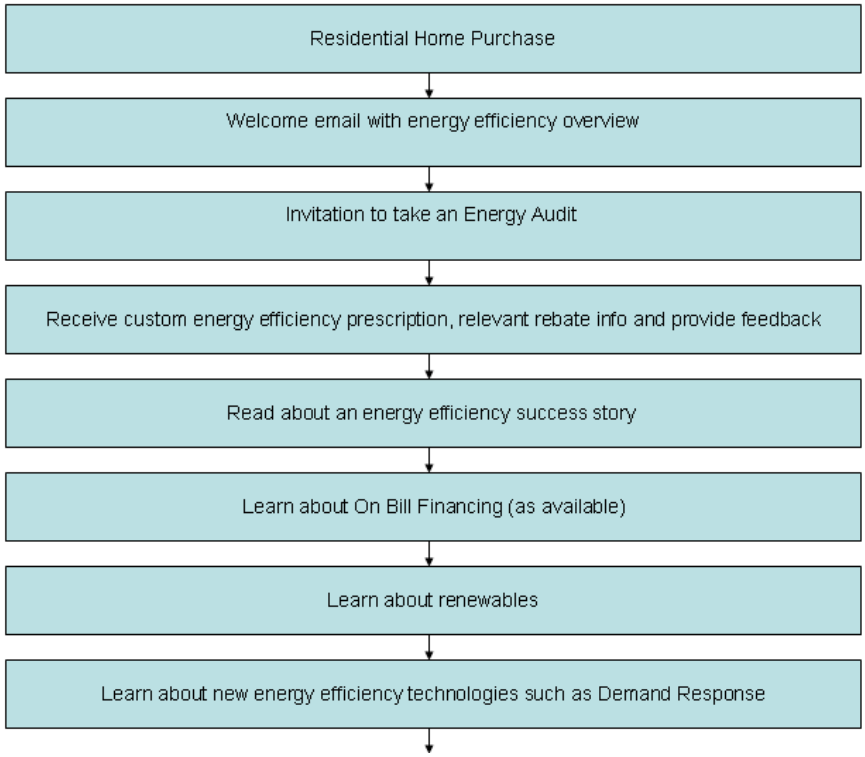
This new program is made up of four key components.

**Leveraging Point-of-Sale Activities** – Home improvement retailers represent the opportunity to reach the residential and small business customer at the point of purchase. Retailers provide a gathering place for imparting face-to-face energy efficiency information when the customer is at a key decision-making point. For example, SoCalGas personnel will work with retailers to develop point-of-purchase materials, such as information kiosks that could offer simplified simulation models indicating which measure provides "the most bang for the buck" or simply offer general information on measures in the store. The staff will also be responsible for breaking down the barrier of retailer reluctance to incorporate more instant rebate measures. Outreach teams will also test various incentives such as "spiffs", contests and other rewards that can improve effectiveness in collecting data for M&V follow-up The staff will also be responsible for in-store demonstrations of products and any other merchandising techniques that retail managers feel would be effective.

**On-going Online Outreach –** As energy can be a low interest category for our busy targets, online communication efforts will push energy efficiency messages and opportunities out to targets. Taking a lifecycle approach, we can create regular, on-going communications with targets by matching communication timing to logical usage and adoption patterns. [Example for Residential segment: purchase a home; receive a welcome email; take an energy efficiency Audit; learn which measures and practices fit your situation; learn about best practices and success stories; take advantage of a rebate; sign up for On Bill Financing; participate in a survey to provide feedback on the process; dig deeper (learn about whole systems, renewables or future energy efficiency technologies…Direct Response); consider making additional energy efficiency improvements; take advantage of a different rebate; etc.] See flowchart below.

Similar lifecycle approaches will be developed for all viable segments and sub segments (e.g. remodelers). This component allows communication with targets to be more interactive and measurable. Information such as Open Rates, Click-Throughs, Opt-Outs and Polls can be tracked to monitor interest. With feedback mechanisms, program adjustments can be made more quickly, as needed, to ensure that energy efficiency measures get adopted and goals are achieved. By creating a dialog, new energy efficiency program ideas can be solicited from non-traditional sources, evaluated, tested and added.

Sample Email Campaign Diagram for New Residential Customers:




**Grassroots Outreach -** Outreach efforts will include personnel in the field across our 23,000 square mile territory to communicate the energy efficiency programs to hard-to-reach targets. We will participate in events; coordinate with Community Based Organizations (CBOs), Faith Based Organizations (FBOs), and upstream/downstream actors to facilitate energy efficiency adoption and measurement. Additionally, we will coordinate with the implementer of the proposed third-party Ethnic Outreach concept in activities to increase participation in energy efficiency programs and facilitate measurement.

**Umbrella Awareness Campaign –** To reach our mass audiences, this program will include an awareness campaign to be executed during winter when natural gas cost is top-of-mind with SoCalGas' customers. The entire energy efficiency portfolio will be marketed under an integrated campaign with a consistent

design and messaging platform. This foundation allows for broader/mass awareness, understanding and offers the customer context for why energy efficiency is important at this critical time and relevant on an on-going basis. It explains how energy efficiency measures and practices not only help the customer manage costs and stay comfortable, but also helps defer the need for new costly infrastructure and additional supply-side resources.

Our vision and support for a more energy-efficient future, particularly as it relates to natural gas, creates a foundation for greater awareness, interest, adoption and measurement. SoCalGas will be positioned as a place to turn to for natural gas energy efficiency information, services, rebates, etc. Programs within the SoCalGas portfolio will be packaged to best fit consumer needs, make it clear how to take action, and facilitate the adoption of measures and practices.

Previous marketing and outreach efforts, including those executed by other parties, show that increased awareness and education efforts can improve energy efficiency implementation. Increased education and awareness of energy efficiency measures and conservation practices have proven to reduce energy use (In 2001, Flex Your Power (FYP) awareness campaign resulted in 14% reduction of peak energy demand by Californians). Without targeted and on-going efforts, the gap between the number of times energy efficiency measures are recommended and the frequency of people adopting the recommended measures will widen even more. (The 2002 EM&V Study indicated that there is a need to fill the gap between awareness and adoption of measures.) Additionally, businesses that would like to adopt energy efficiency measures or support energy efficiency efforts in other ways are asking for more continuity, greater public awareness and better coordination in order to tie-in with their planning needs.

Studies by SoCalGas show that mass communications improve recall of energy efficiency messages (e.g. 2004-5 Winter DSM aided awareness was 50%). Mass communication programs such as the State's Flex Your Power (FYP) campaign draw attention to the importance of energy efficiency. This program component employs a foundation of "tried and true" mass media, but delivers focused *Natural Gas* Energy Efficiency messages in ways that are not already being communicated through other efforts such as FYP. Moreover, it will take place at a time of year when customer's focus on natural gas is high and measure adoption will be more likely.

FYP messages and resources are focused on electric and (more recently) water issues, as electricity supply problems have been higher profile and a priority for the State to resolve. SoCalGas' Energy Efficiency Delivery Channel Innovation Program will address local audience needs. The umbrella awareness component of this program will complement FYP and avoids redundancy. SoCalGas' Energy Efficiency Delivery Channel Innovation Program prioritizes local

audiences and provides a strong, credible voice for natural gas efficiency to our 5 million + customers. SoCalGas' expertise in natural gas appliances and measures are also important to leverage as gas savings opportunities become more difficult to create. The success of Title 24 and the availability of highly efficient gas appliances provide an exciting challenge. We look forward to taking a leadership role with natural gas energy efficiency by focusing resources toward this effort, so that we lay a foundation for increased target interest and innovation that is nurtured and grows as we look toward 2008 and beyond to the year 2013.

## 7. Program Outcomes

The Energy Efficiency Delivery Channel Innovation Program will work toward achieving the following Vision, Program Results, and Desired Customer Response.

**SoCalGas' Vision:** *To provide customers with a portfolio of useful and innovative energy efficiency programs that address growing customer needs and help manage demand.*

**Desired Program Results:**

- Increase awareness of SoCalGas' program portfolio, understanding and interest in energy efficiency particularly in the winter months,
- Improve connectivity to targets, more often and in more relevant ways,
- Attain high customer satisfaction as it relates to the ease of finding out about energy efficiency programs and implementing measures, and
- Assist in meeting or exceeding portfolio goals.

**Desired Consumer Response:** *"It's important to take action to save energy because it saves money. It also has other benefits (environment, increased comfort, productivity, etc.) SoCalGas lets me know how I can be more energy efficient and makes it really easy. In fact, I've made some energy efficiency improvements that are making a difference."*

## 8. Program Strategy

Mass Marketing as well as targeted Residential and Business marketing will be employed.

### 8.1.1. Program Strategy Description

Limited mass marketing will be utilized to supplement any critical natural gas energy efficiency messages not covered by the Statewide Marketing & Outreach campaign. This will help create deeper awareness of natural gas energy efficiency benefits and actions SCG customers should take. Targeted marketing will also be utilized to reach our best residential and business prospects.

**Targeted Retail Outreach:** Efforts will focus on promoting energy efficiency at the point-of-purchase to help convince the customer to choose the energy-efficient model/measure. The program will dramatically increase in-store efforts, working

with the retailers, to help increase the awareness and understanding of energy efficient products, and to improve the instant rebate process and reporting. Activities targeting upstream and downstream actors will include training, M&V reporting process improvements, incentives, recognition, etc.

**Targeted On-going Online Outreach:** Efforts will focus on keeping energy efficiency top-of-mind on an on-going basis. SoCalGas will build or acquire email databases for key target audiences. E-Newsletters will push relevant energy efficiency messages to customers. Content can include rebate information, energy efficiency benefits, best practices, success stories, polls/feedback mechanisms, options to forward newsletters to a friend or colleague, information on upcoming energy efficiency events or training, etc. We will employ a consumer lifecycle approach and adjust activities based on feedback.

**Targeted Grassroots Outreach:** Outreach efforts will help move consumers beyond the information-gathering phase toward implementation and use of energy efficiency measures. SoCalGas outreach personnel will build relationships with community-based organizations (CBOs), faith-based organizations (FBOs), and other hard-to-reach organizations to directly deliver energy efficiency communications and measures and provide to additional measurement opportunities. This program will also coordinate efforts with the 3rd party Ethnic Outreach program (a separate program which will be put to bid in order to tap into external resources with knowledge of cultural barriers and unique marketing approaches to promoting SoCalGas' portfolio). Finally, the program will establish relationships with SoCalGas senior managers and executives at key customer facilities to provide insight and reasoning for participation in the energy efficiency programs described in the portfolio.

**Mass Market Umbrella Awareness/Integrated Energy Efficiency Communications Platform:** A consistent message and design platform will be created to communicate a different way of thinking about energy efficiency for benefits today and in the future. This foundational message will be communicated via an integrated mix of cost-effective channels such as the Web, in-bill messaging, PR, community relations, events, and collateral. Mass market advertising (e.g. a few weeks of concentrated media at the beginning of the winter months per year) and target direct marketing campaigns may be utilized to create awareness. Hard-to-reach markets will be included.

### 8.1.2. Program Indicators

Program success can be evaluated through both quantitative and qualitative methods. Success metrics can be based on increasing awareness and understanding of energy efficiency, increasing the frequency of energy efficiency messages to defined levels, providing content that is relevant/actionable to consumers, making energy efficiency easier for all parties, increasing customer satisfaction, etc. Pre-(benchmark) and post-program questionnaires can help to measure effectiveness.

On-going feedback can be monitored and programs or tactics can be adjusted as needed. Focus groups can be employed to identify communication gaps and adoption hurdles. Metrics examples:

- **Awareness**:
  - Increase awareness and understanding of SoCalGas' energy efficiency programs among targets.
- **Effectiveness:**
  - Test content for clarity and relevancy among targets.
  - Measure whether targets agree that Marketing & Outreach efforts caused them to take action.
  - Determine whether targets agree that SoCalGas' programs made energy efficiency easy to implement.
- **M&V:**
  - Support programs within the SoCalGas portfolio in their effort to capture customer information from 100% of participants for M&V purposes.

**9. Program Objectives**

**Targeted Retail Outreach:**

- Execute an energy efficiency promotion and/or kiosks with retailers to help customers to choose energy-efficient models/measures.

**Targeted On-going Online Outreach:**

- Incorporate energy efficiency messages into quarterly E-Newsletters and on our website. Push this content out to key prospects on an ongoing basis and tie-in consumption data wherever possible.
- Develop new "Welcome Packages" at time of service establishment.
- Package energy efficiency content as a tool for trade associations, chambers and other organizations to easily incorporate into their online and other communication channels (following CAN-SPAM laws).
- Showcase residential and small customers on our website who have done a good job in managing their energy bills and or investing in energy efficiency.

**Targeted Grassroots Outreach:**

- Conduct executive breakfasts with SoCalGas senior managers and executives at key customer facilities to provide insight and reasoning for participation in the energy efficiency programs described in the portfolio.
- Participate in key consumer events across our service territory.
- Work with community-based organizations (CBOs), faith-based organizations (FBOs), and other organizations to directly deliver energy efficiency communications.

**Mass Market Umbrella Awareness/Integrated Energy Efficiency Communications Platform:**

- Plan 2-4 weeks of advertising, particularly in preparation for and during winter months.
- Tie-in cost-effective channels such as the Web, in-bill messaging, PR, community relations, events, collateral and target direct marketing efforts.

**10. Program Implementation**

**Retail Outreach**: Key retailers will be identified and outreach staff will be deployed to determine levels of support for in-store marketing then implement agreed-upon tactics.

**On-going Online Outreach** – A database of key targets will be acquired or created. Lifecycles of key targets will be analyzed. E-newsletters or email will be tested and deployed on a regular basis to keep targets abreast of new and relevant offerings. Open rates, opt-outs, click-throughs, feedback and other key data will be analyzed and future communications adjusted, accordingly.

**Grassroots Outreach –** Outreach staff will meet with target audiences on a regular basis, particularly those that are identified as "Hard-to-Reach". Staff will build relationships with Community-Based and Faith-Based Organizations, as well as other targets to better understand communication gaps and hurdles. Staff will promote integrated programs and collect feedback.

**Umbrella Awareness Campaign** – SoCalGas' Energy Efficiency Delivery Channel Innovation Program manager will work with individual program managers to identify key targets and develop umbrella platform to maximize relevancy and economies of scale during the winter campaign. Winter mass market advertising will strive to achieve over 50% reach and minimum frequency levels between 3-6 times per media flight.

For each of these activities, research, measurement and valuation will take place annually. Portfolio and individual program achievements will be monitored regularly in order to determine if outreach efforts need to be adjusted.

Sample Integrated Campaign:

| Activity | Frequency | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---|---|---|---|---|---|
| Bill Newsletter Articles | 6-12x/yr | X | X | X | X |
| Residential Email | Quarterly | X | X | X | X |
| Multi-Family Email | Quarterly | X | X | X | X |
| Business Email | Quarterly | X | X | X | X |

| Activity | Frequency | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---|---|---|---|---|---|
| Upstream/Midstream Email | 2 times/yr | X | | X | |
| Web | On-going | X | X | X | X |
| Events | On-going | X | X | X | X |
| Community Outreach | On-going | X | X | X | X |
| Advertising | 2-4 Weeks | X | | | |

**11. Customer Description**

This program will target consumers and upstream/midstream actors in the Residential, Non-residential, New Construction, and Partnerships/Collaborations segments. This includes Hard-to-Reach audiences. See individual programs within the portfolio for further details on targets. Mass communications, Online, and Outreach efforts will be deployed against various targets, as appropriate.

**12. Customer Interface**

The program includes a communications platform which engages target audiences and helps them understand why energy efficiency is important on an on-going basis, not just when gas bills are high or when supplies are low. This platform will explain the overarching benefits of energy efficiency and SoCalGas' role as a local facilitator. The integrated communications tactics will act as an umbrella for SoCalGas' portfolio, providing greater synergies and continuity to help increase awareness and deepen customer understanding of specific SoCalGas energy efficiency offerings. This platform will coordinate with the State's Flex Your Power campaign, but will support local needs with an emphasis on facilitating gas measures implementation.

As the Energy Efficiency Delivery Channel Innovation Program supports the entire SoCalGas energy efficiency portfolio, the program must be flexible, allowing us to work closely with our program managers to identify areas that need greater attention. If market circumstances change, we can shift resources and implement alternative marketing and outreach activities to ensure we achieve our 2006-2008 energy efficiency goals. Programs within the portfolio will be packaged to maximize relevancy and economies – and programs may be cross-promoted where applicable.

There will be an emphasis on the development of email databases, Web content, banner ads, search engine optimization, e-newsletters and webinars/webcasts for improved relevancy, speed, convenience, efficiency and measurability. Online communications are important for pushing content out to consumers, keeping energy efficiency top-of-mind on an on-going basis, and sharing energy efficiency success stories/best practices that show consumers how they too can easily implement energy efficiency measures. Email and Web hits are measurable and can

quickly provide information on what topics are resonating with audiences. In these efforts, we'll continue to comply with Customer Privacy, Anti-Spam and other applicable rules. Where appropriate, we'll link to relevant content on websites of "sister" organizations (CPUC, Flex Your Power, UTEEM, CEE, Energy Star, Edison, Municipalities, Water Companies, etc.) and highlight innovations (such as emerging technologies).

SoCalGas outreach personnel will coordinate with retailers, community-based organizations (CBOs) and faith-based organizations (FBOs) to directly deliver program services and provide additional measurement opportunities. SoCalGas will also coordinate with other outreach organizations (CPUC, Flex Your Power, UTEEM, CEE, Energy Star, Edison, Municipalities, Water Companies, etc.) to leverage efforts. We will look at sponsoring events that promote a comprehensive approach to energy efficiency (e.g. whole house).

Outreach staff will also monitor point-of-purchase signage so we can make sure customers are taking full advantage of instant rebate opportunities. Outreach staff will build relationships with upstream and midstream targets. Outreach staff will monitor point-of-sale activity and implement promotions as needed. These can include such activities as providing incentives to distributors, contractors, retail stores, etc. to improve M&V reporting.

## 13. Energy Measures and Program Activities

### 13.1. Prescriptive Measures

Not applicable.

### 13.2. kWh Level Data

Not applicable.

### 13.3. Non-energy Activities

Sample Activities – Energy Efficiency Delivery Channel Innovation Program:

| **Energy Efficiency Delivery Channel Innovation Program Activities** |
|---|
| |
| Point of purchase: information/kiosks |
| Residential Email (lifecycle approach, portfolio-oriented) |
| Multi-Family Email (lifecycle approach, portfolio-oriented) |
| Business Email (lifecycle approach, portfolio-oriented) |
| Upstream/Midstream |

| **Energy Efficiency Delivery Channel Innovation Program Activities** |
|---|
| Email (dialogue approach, portfolio-oriented) |
| Web |
| Community Outreach and Events |
| Business Community Outreach (including executive level outreach) |
| Public Relations |
| Winter mass market communications |

**13.3.1. Activity Description -** See sections 6, 8, 10 and 12.

**13.3.2. Quantitative Activity Goals –** See section 9.

**13.3.3. Assigned attributes of the activity (market sector, end use) -** See sections 6, 8, 10 and 12.

**14. Subcontractor Activities**

Of the total Marketing & Outreach budget, over 85% will be subcontracted. Contractors have not yet been selected.

The following activities will be subcontracted to maximize cost-effectiveness and quality:

- Media Planning, Creative Development, Photography, Video, Web casts, Production, Printing, Translations, Promotions, Audits, Demonstrations, Training, and Outreach.
- Where needed, we'll look for diverse suppliers that reflect our customer base and especially those that can help boost creativity and cost-effectiveness.
- We'll coordinate closely with the third-party implementing the proposed Ethnic Outreach concept component of SoCalGas' portfolio. For ethnic targets, third-party implementers may assist with such areas as database acquisition, promotions, training, etc.

**15. Quality Assurance and Evaluation Activities**

An evaluation plan will be developed in accordance with EM&V Protocols.

**16. Marketing Activities**

See sections 6, 8, 10 and 12.

**17. CPUC Objective**

SoCalGas' Energy Efficiency Delivery Channel Innovation Program meets the CPUC's following objectives:

- Cost-effective energy efficiency over both the short- and long-term – By targeting best prospects for the greatest therm savings impact and considering short and long term impacts.
- Reduce the environmental impact (including the greenhouse gas emissions) – By helping customers understand the environmental benefits of energy efficiency and tying in efforts with organizations such as the CA Climate Registry.
- Focus on programs that serve as alternatives to more costly supply-side resource options ("resource programs") – By providing context to customers to help them understand that energy efficiency keeps energy resource procurement costs lower and that, over time *all* customers will share in the resource savings from energy efficiency**.**
- "Lost opportunities" – By helping customers understand the longer term benefits of energy efficiency actions, not just those with immediate returns.
- Appropriate balance for portfolio - By delivering communications across market sectors (e.g., residential, industrial, commercial) and across our service territory, tying into statewide marketing and outreach programs, supporting upstream market transformation programs, information and education programs, support for codes and standards and other activities.
- Support of new and improved energy efficiency products and applications can help sustain or increase current savings yields - By creating opportunities to showcase new energy efficiency technologies in various communications.

SoCalGas' Energy Efficiency Delivery Channel Innovation Program will raise awareness of SoCalGas' energy efficiency offerings and make the adoption of those measures and practices easier for our consumers. Thanks to significant input from PAG and public ideas, this program will help SoCalGas accomplish 2006-2008's more challenging efficiency goals through a new approach that leverages the full portfolio, boosts individual program effectiveness/efficiency by providing context, relevancy and will maximize outreach opportunities to get measures adopted and implemented.

| | SCG3504 EMO4-Energy Efficiency Delivery Channel Innovation Prog | |
|---|---|---|
| **BUDGET** | | |
| | | |
| **Administrative Costs** | **$** | **206,038** |
| Overhead and G&A | $ | 142,857 |
| Other Administrative Costs | $ | 63,181 |
| **Marketing/Outreach** | **$** | **2,793,962** |
| **Direct Implementation** | **$** | - |
| Total Incentives and Rebates | $ | - |
| User Input Incentive | $ | - |
| Direct Install Rebate | $ | - |
| Direct Install Labor | $ | - |
| Direct Install Materials | $ | - |
| Activity | $ | - |
| Installation | $ | - |
| Hardware & Materials | $ | - |
| Rebate Processing & Inspection | $ | - |
| **EM&V Costs** | **$** | - |
| **Budget** | **$** | **3,000,000** |
| **Costs recovered from other sources** | **$** | - |
| **Budget** (plus other costs) | **$** | **3,000,000** |
| | | |
| **PROGRAM IMPACTS** | | |
| **Program Reductions for Measures installed through 2008** | | |
| User Entered kW (kW) | | - |
| Net Jul-Sept Peak (kW) | | - |
| Net Dec-Feb Peak (kW) | | |
| Net NCP (kW) | | |
| Net CEC (kW) | | - |
| Annual Net kWh | | - |
| Lifecycle Net kWh | | - |
| Annual Net Therms | | - |
| Lifecycle Net Therms | | - |
| | | |
| **Cost Effectiveness** | | |
| **TRC** | | |
| Costs | $ | 3,000,000 |
| Electric Benefits | $ | - |
| Gas Benefits | $ | - |
| Net Benefits (NPV) | $ | (3,000,000) |
| BC Ratio | | - |
| | | |
| **PAC** | | |
| Costs | $ | 3,000,000 |
| Electric Benefits | $ | - |
| Gas Benefits | $ | - |
| Net Benefits (NPV) | $ | (3,000,000) |
| BC Ratio | | - |
| | | |
| **Levelized Cost** | | |
| **Levelized Cost TRC ($/kWh )** | | |
| Discounted kWh | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |
| **Levelized Cost PAC ($/kWh)** | | |
| Discounted kWh | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |
| **Levelized Cost TRC ($/therm)** | | |
| Discounted Therms | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |
| **Levelized Cost PAC ($/therm)** | | |
| Discounted Therms | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |

# 2006-2008 Energy Efficiency Concept Paper
# Energy Efficiency Education & Training Program

## 1. Projected Program Budget.

| | 2006 | 2007 | 2008 |
|---|---|---|---|
| Administration | | | |
| Administrative Overheads | $ 85,714 | $ 109,524 | $ 111,905 |
| Administrative Other | $ 258,802 | $ 338,876 | $ 341,550 |
| Marketing & Outreach | $ 2,000 | $ 6,725 | $ 27,222 |
| Direct Implementation | | | |
| Activity | $ - | $ - | $ - |
| Installation | $ - | $ - | $ - |
| Hardware & Materials | $ 1,453,483 | $ 1,844,875 | $ 1,869,324 |
| Procurement | $ - | $ - | $ - |
| Incentives | $ - | $ - | $ - |
| EM&V | $ - | $ - | $ - |
| *Total* | *$ 1,800,000* | *$ 2,300,000* | *$ 2,350,000* |

## 2. Projected Program Impacts

| 2006 | | | 2007 | | | 2008 | | |
|---|---|---|---|---|---|---|---|---|
| **kW** | **kWh** | **Therms** | **kW** | **kWh** | **Therms** | **kW** | **kWh** | **Therms** |
| - | - | 325,000 | - | - | 360,000 | - | - | 460,000 |

## 3. Program Cost Effectiveness

N/A

## 4. Program Descriptors

Energy Efficiency Education & Training – The Statewide Energy Efficiency Education and Training Program is an existing program and offered in the service territories of Pacific Gas & Electric (PG&E), Southern California Edison (SCE), San Diego Gas and Electric (SDG&E), and Southern California Gas Company (SoCalGas). Overall, the program promotes energy efficiency to a variety of customers segments through energy centers (physical and virtual) and other informational programs. The objective is to disseminate information about energy-efficient technology and practices to utility customers for the purpose of assisting them in reducing energy usage, lowering their utility bills, reducing operation and maintenance costs, and improving their productivity. The programs also provide services to a variety of market actors, architects, designers, engineers, distributors, and contractors who use information and tools to design more efficient buildings or processes and to conduct energy efficiency retrofits and renovations.

**5. Program Statement**

Education and Training is an information program that promotes energy efficiency to a variety of customer segments through the SoCalGas Energy Resource Center (ERC), Food Service Equipment Center (FSEC), and other information and training programs. The objective is to (1) disseminate information about energy efficiency technology and practices to utility customers for the purpose of assisting them in reducing energy usage, lowering their utility bills, reducing operation and maintenance costs, and improving their productivity; and (2) provide services to a variety of midstream and upstream market actors, including but not limited to architects, designers, engineers, distributors, and contractors, who use information and tools to design more efficient buildings or processes, and to conduct energy-efficient retrofits and renovations. New program offerings are being developed to further address specific concerns and priorities of customers.

**6. Program Rationale**

ERC - Customers often lack the knowledge or expertise to effectively address energy efficiency challenges. Feedback attained through PAG proceedings supports the concept that Education and Training plays an integral role to encourage the adoption of energy-efficient technologies and best practices. As an experienced provider of education and training programs, with a state-of-the-art facility and a successful curriculum in place, SoCalGas incurs nominal additional expenses to continue offering quality seminars on current topics requested by customers. The Education and Training program provides outreach to customers enabling them to recognize energy efficiency opportunities and new technologies. The Education and Training Program plays a significant role in the diffusion of technologies and the dissemination of other energy efficiency and PGC program information, such as incentive and rebate programs. Through these efforts there is greater potential to minimize lost energy savings opportunities.

**FSEC** - The FSEC is an integrated component of the ERC and offers equipment demonstrations, educational training and seminars featuring industry related “hot “ topics to maximize energy efficiency and productivity, as well as business solutions to assist customers with other food service issues. Customers value SoCalGas as foodservice industry experts who excel in developing valuable seminars as well as useful energy efficiency educational materials. With at least 140 pieces of equipment representing more than 60 different manufacturers, food service professionals use their own recipes and products to test the latest energy-efficient cooking equipment in the FSEC facility before purchasing new or replacement equipment for their operations. Customers also receive detailed information on other SoCalGas services and, incentive and rebate programs while touring the FSEC.

**Industrial End-User –** California is the sixth largest economy in the world, and its industry consumes over one-third of the State’s non-generation energy (21% of the electricity and 48% of the natural gas). Based on recommendations received from the California Energy Commission (CEC) throughout the PAG proceedings, SoCalGas proposes to conduct onsite energy efficiency seminars via mobile workshops at selected customer industrial sites.

These efforts will help the State's medium to large size industrial customers optimize their energy use, while contributing to conserve the State's energy resources.

Very little effort has been made to provide energy efficiency outreach to medium to large industrial customers. This program will expand outreach efforts by providing on-site workshops utilizing a "don't tell me - show me" training system, resulting in measurable savings which can be reproduced at other sites, while attempting to bridge the gap between financial decision makers and plant operators.

**NATE (North American Technician Excellence) Certification Training Program** - For years, the HVAC industry has struggled to combine a variety of technical skills and knowledge into a standard testing program that represents the entire industry. NATE provides comprehensive, nationwide testing and certification for HVAC technicians. As a result, many groups benefit. Consumers' opinions of the HVAC industry are raised, the supply of qualified technicians grows, and technicians themselves have a reason to reach higher and take even more pride in the job they do. Everyone with a stake in the industry reaps the rewards.

As NATE's momentum builds, consumers have good reasons to trust in the NATE-certified technicians: peace of mind, better system efficiency (and lower utility bills), comfort, and cost savings.
Quality begins at the individual level. With NATE certification, technicians are finally recognized and rewarded for their expertise. Certification provides the competitive edge needed to succeed in installing and servicing today's sophisticated heating and cooling equipment. As consumers gain awareness of NATE, the image of the entire industry - and those who work in it - soars. Highly qualified, NATE-certified technicians give contractors a valuable asset: better customer service with fewer callbacks, which can mean more business and a better bottom line. In fact, nearly nine out of 10 consumers prefer a certified technician to service their HVAC/R systems, according to a survey by Decision Analyst for Contracting Business magazine. When it comes to hiring, contractors recognize that NATE-certified technicians have proven their systems proficiency. Nationally recognized for its stringent standards, NATE testing and certification encourages proper installation and service of HVAC equipment by highly skilled and trained technicians. Manufacturers and distributors reap the benefits with fewer warranty returns of defect-free components and ultimately, a better bottom line. Endorsed by the U.S. Department of Energy, the NATE program turns out technicians who are highly skilled in the proper installation and service of HVAC equipment, which means equipment that operates at peak efficiency, helping utilities achieve load shape and energy goals.

Comments received through the PAG proceedings have suggested the need for HVAC technicians to perform to higher work standards. In response to these comments, SoCalGas proposes to offer courses in preparation for the NATE Certification Program. This training program will prepare HVAC contractors to take the NATE certification test in an effort to increase the number of passing grades helping to encourage the State's HVAC industry to design, install, and maintain energy-efficient HVAC systems utilizing a set of uniform HVAC standards.

**Food Service Kitchen Design Center** – As a new innovation, SoCalGas is proposing to add professional design assistance by offering no-fee expert consultation, including fundamental computer- aided design (CAD) drawings, for customers in need of a new small commercial kitchen, or renovation of their existing inefficient kitchen. By incorporating energy efficiency into the initial design plans, facilities can realize up to 15% energy savings. From the beginning design stages, kitchen layouts that meet with the owner's vision of the end result are of the utmost importance. An efficiently designed commercial kitchen is an integral element in the overall success of a foodservice operation. SoCalGas will ensure an efficient kitchen while sharing knowledge and giving consideration to the desired atmosphere and overall theme of the restaurant or other food service facility.

**Building Operator Certification (BOC) Training** – The Building Operator Certification and Training Program will be integrated into the 2006-08 Education and Training program portfolio. The program will be offered in the service territory of SoCalGas, in coordination with the efforts of Pacific Gas and Electric (PG&E), San Diego Gas and Electric (SDG&E), San Diego Regional Energy Office (SDREO), and Southern California Edison (SCE), as a continuation of the building operator training and certification program implemented in 2002 on a statewide basis. Operators of medium and large commercial buildings (including governmental and institutional buildings and complexes) are the primary target group for this program. The program content trains operators of these buildings to identify and implement long-term annual energy savings and electric peak-demand reduction opportunities as an integral part of their operations and maintenance activities. As a certification program, BOC seeks to establish a recognized professional credential for building operators.

## 7. Program Outcomes

Through showcasing and demonstration of hands-on energy efficiency displays and exhibits, and in conjunction with seminars specifically designed to leverage the information provided by the program focusing on emerging technologies to ensure the delivery of up-to-date information, the ERC strategy helps to break down customer market barriers concerning cost, performance uncertainty, and asymmetric product information. The Center offers an informative experience that can influence customers to implement energy-efficient measures, which can result in energy savings and conservation, as well as, effectively move them to participate in other public goods funded programs.

## 8. Program Strategy

Continue to disseminate information about energy-efficient technologies and best practices to customers and the market place, covering both the residential and nonresidential markets. This is done primarily at the SoCalGas Energy Resource Center (ERC) through education in the form of no-fee seminars, workshops, displays, demonstrations, technical consultations, facility presentations, fact sheets, and brochures. In addition, information is provided by taking specific seminars and presentations to offsite locations using community organizations, local government and trade associations as channels to a variety of constituencies.

The ERC also supports other Public Goods Charge (PGC) programs through the distribution of incentive and financing program promotional materials, providing field support, seminars, displays, equipment demonstrations and face-to-face contact with customers in a variety of venues, which can include trade shows and community meetings.

At the ERC, literature is provided and graphics and signage are designed to make connections for the customer between the exhibits and displays and other available PGC programs. Links are also created between seminar materials and available programs to insure customers attending seminars are aware of those offerings.

### 8.1.1 Program Strategy Description

The ERC will continue to assist with the diffusion of energy-efficient technologies and practices into all market segments. The primary venue for this is the ERC facilities providing education in the form of seminars and workshops. In addition, information is provided to the hard-to-reach customers by taking specific seminars and presentations to offsite locations. These activities will continue for 2006-08 complementing emerging technology and energy efficiency program strategies.

### 8.1.2 Program Indicators

**Education and Training**- 307 EE Seminars, 700 Equipment Demonstrations, 50 Manufacturer-Assisted Equipment Training Workshops, 45 FSEC CAD Kitchen Designs

**BOC** – Annually, 1) Conduct 1 Level-I classes and 1 Level-II class; 2) Enroll 20 students in Level-I and 12 students Level-II classes.

**BOC Class Offerings and Student Enrollment**

| BOC Program Element | 2006 | 2007 | 2008 | 3Yr. Total |
|---|---|---|---|---|
| Level I Classes | 1 | 1 | 1 | 3 |
| Level II Classes | 0 | 1 | 1 | 2 |
| Student Enrollment Level I | 20 | 20 | 20 | 60 |
| Student Enrollment Level II | 0 | 15 | 15 | 30 |

**NATE (North American Technician Excellence) Certification Training Program**

| NATE Training | 2006 | 2007 | 2008 | 3Yr. Total |
|---|---|---|---|---|
| Workshops | 3 | 3 | 3 | 9 |

*(Note) Each series of workshops consist of 8 classes*

**Food Service Kitchen Design Center**

| Kitchen Design Center | 2006 | 2007 | 2008 | 3Yr. Total |
|---|---|---|---|---|
| CAD Designs | 12 | 15 | 18 | 45 |

**9. Program Implementation**

**ERC/FSEC** - The Energy Center provides education in the form of seminars, workshops, displays, demonstrations, technical consultations, facility presentations, fact sheets and brochures. In addition, information is provided to customers representing economically disadvantaged and ethnically diverse communities by taking specific seminars and presentations to offsite locations. Supporting the educational curriculum are exhibits and displays that range from showcasing equipment to demonstrating the operation of specific applications. The presence of these exhibits and displays at the Center reinforces the information provided in the seminars and workshops. The exhibits and displays create an atmosphere of specialized knowledge in energy technology, lending unbiased credibility to the information.

Energy Center staff continues to be available to provide consultations to customers regarding their specific energy needs, ensuring that they are advised on the most energy efficient methods to meet those needs. This can be done in person, by telephone, and by e-mail, both direct and Website-generated through www.socalgas.com.

Seminar offerings are a key element of the overall Energy Center strategy. A variety of updated materials and new technology topics will be developed into seminars and exhibits addressing customer needs and emerging technology concepts. This work will be conducted in cooperation with various expert internal and external organizations, not only to meet customer needs as identified in the March 10, 2005 Statewide Education, Training and Services Program Study, but those needs obtained from other sources as well, including

customer feedback surveys, stakeholder input, etc.. As a result of customer and stakeholder feedback, targeted marketing efforts will be utilized to increase customer attendance and to achieve greater market saturation.

Exhibits and displays will continually be upgraded and newly constructed in support of the overall Energy Center seminar series and to promote various SoCalGas and statewide energy efficiency programs. These exhibits and displays help provide a balanced and well-rounded menu of learning methods while setting the Energy Center apart from organizations that do not offer such an extensive variety of exhibits and displays.

Statewide collaboration will continue through sharing course materials and classes, instructors, and advertising. The sharing of these resources ensures a more consistent energy efficiency message throughout the state. Also, sharing training materials can reduce development costs, dependent on the subject and needs of the specific target audience.

**Industrial End-User** – Working with Major Markets Account Executives, predetermined workshop sites will be selected during each year of the program. Collaborating with the CEC, Department of Energy (DOE), Universities, and the State's industrial assessment centers, SoCalGas AE's and Technicians will educate customers on achievable energy savings and technology developments, and provide technical assistance to help customers evaluate combustion efficiency and emissions data. Funding will be allocated to provide no-fee workshops, and updated materials on current DOE best practices of process heat and steam, qualitative surveys, and equipment recommendations.

NATE (North American Technician Excellence) Certification Training Program – **The NATE certification training program will consist of eight evening courses as follows:**

- HVAC Basics /CORE - four nights / three hours per night
- Gas Furnaces - two nights / three hours per night
- Air Conditioning/Heat Pump Combination - two nights / three hours per night

Upon completion of all eight classes, students will be eligible to take the NATE exam. Syllabus, handout materials and exam will be included for all portions of the program, and SCG will be proctored to give the exam. Training will be offered without fee; however, students will be required to pay for the "purchase price" of the exam. This comprehensive program will include personal, business and mechanical skills, as well as HVAC basics.

**Food Service Kitchen Design Center** – SoCalGas employees will utilize the Computer Aided Design (CAD) system to assist small commercial customers in designing an energy-efficient kitchen, providing a productive workflow and functionality for a safe, efficient facility which ensures compliance with local health and building codes as applicable. SoCalGas personnel will make site visits to determine the placement and availability of existing utilities and provide additional recommendations, such as energy audits, rebates and Energy Star equipment. Utilizing the CAD system, SoCalGas will create and print

project drawings, and provide customers with detailed lists of recommended energy-efficient equipment and collateral items.

**Building Operator Certification (BOC) Training –** The Building owners/operators that have had contact with BOC and have participated in the program recognize the value of the BOC Program as a key means to address the challenge outlined in section 5. They recognize BOC training is practical training, in that it focuses its training curriculum with students on the vital components of running a building properly, such as electrical systems, building main and subcomponent systems, HVAC systems, building controls, building automation, efficient lighting fundamentals, maintenance and building codes compliance, indoor air quality and most important energy efficiency and energy conservation. The program's training helps building operators identify those opportunities that can save energy, with electric peak-demand reduction and become more knowledgeable in how to respond to load reduction, demand response when managing their building's operation. There is a growing need on the part of owners to train new personnel or have existing building operators undergo BOC training to raise their level of skills, knowledge and expertise in all phases of building operations techniques due to the increased level of new building construction which will require operational staff to properly handle building operations. A trend that is starting to take hold in California, and that may become widespread as the cost for land and real estate continues to escalate, will drive construction builders in the commercial and industrial markets to construct more multi-story buildings, which have large energy consuming systems for refrigeration, heating, cooling and lighting.

**10. Customer Description**

The ERC's outreach promotes energy efficiency to virtually all market segments and customer types; commercial and industrial customers, midstream actors such as the design, engineering and contracting communities, distributors, manufacturers, facilities managers/building operators and residential midstream/upstream market actors.

**11. Customer Interface**

Program awareness is attained via both electronic and "hard" collateral targeted directly to customers, via field personnel, or through collaborative efforts with trade associations, municipalities, and government entities. SoCalGas seminars and workshops are marketed through a variety of mediums, including:

- Quarterly Schedules – There are four class schedules created each year. Each quarter, approximately 10,000 are distributed through direct mailing or other methods to SoCalGas customers, most located within a 30-mile radius of the ERC. The mailer consists of a listing of the classes offered, dates and times for each, and a brief description of what is covered.
- Annual Mailings – Each year one mailer is created focusing specifically on Foodservice seminars. This mailing goes out via direct mail or other method to approximately 25,000 SoCalGas customers, most located within a 30-mile radius of the ERC. The mailer consists of a listing of foodservice classes offered, dates and times for each, and a brief description of what is covered.
- Joint Utility Promotion – In cooperation with SDG&E, PG&E, and SCE, all energy efficiency classes offered through SoCalGas are promoted in their energy centers.

SoCalGas provides information on all energy efficiency classes offered through its educational programs to the other utility's energy centers.

- Socalgas.com – This is SoCalGas's website which contains all of the various programs and services offered through SoCalGas, including a schedule of classes offered at the ERC and various offsite locations, with easily accessible real-time registration via the website. Customers will find a comprehensive list of programs and services, as well as information about the training facilities detailed throughout the website and are able to make clear choices for those that could potentially meet their energy needs. The website can be accessed through: www.socalgas.com/erc.

**12. Energy Measure and Program Activity**

12.1. **Prescriptive Measures**.

12.2. **kWh Level Data**

12.3. **Non-energy Activities**

Based on the California Public Utilities Commission's (CPUC) approved Energy Efficiency Policy manual, an information-only program is not reasonably expected to provide an estimate of energy savings. Any deficiency in energy savings, demand reduction, therm savings, resource benefits, or a TRC ratio for any particular program (i.e. information programs), should not imply that a strategy, element, or program does not promote energy efficiency. In fact, due to the information and services they disseminate, the education and training strategies contribute to the success of SoCalGas energy efficiency incentive and demand response programs, and will continue to provide information in the form of a designated number of seminars, workshops, and demonstrations as their filed goal.

**13. Subcontractor Activities**

SoCalGas uses a variety of subcontractors for tasks including graphic design, exhibit construction and maintenance, resource and tool development, program and seminar development, catering requirements, specialized staffing needs, and other administrative support. The activities will continue to be awarded though the competitive bid process as the need arises.

**14. Quality Assurance and Evaluation Activities**

An evaluation plan will be developed in accordance with the soon to be developed EM&V Protocols. The CPUC Energy Division will be holding meetings, workshops and possibly hearings throughout the summer to develop these Protocols. SoCalGas looks forward to participating and commenting on those activities and plans to file EM&V plans for all programs on October 1, 2005 in conjunction with the ED, CEC, and the other IOUs

**15. Marketing Activities**

| ACTIVITY | DESCRIPTION |
|---|---|
| Quarterly Mailings | There are four class schedules created each year. Each quarter, approximately 10,000 are distributed through direct |

| ACTIVITY | DESCRIPTION |
|---|---|
| | mailing or other methods to SoCalGas customers, most located within a 30-mile radius of the ERC. The mailer consists of a listing of the classes offered, dates and times for each, and a brief description of what is covered. Field representatives also share the schedule of classes with their individual customers or individuals based on the end-uses or possible technologies those individuals may be considering. |
| Annual Mailings | Each year one mailer is created focusing specifically on Foodservice seminars. This mailing goes out via direct mail or other method to approximately 25,000 SoCalGas customers, most located within a 30-mile radius of the ERC. The mailer consists of a listing of foodservice classes offered, dates and times for each, and a brief description of what is covered. Field representatives also share the schedule of classes with their individual customers or individuals based on the end-uses or possible technologies those individuals may be considering. |
| Joint Utility Promotion | In cooperation with SDG&E, PG&E, and SCE, all energy efficiency classes offered through SoCalGas are promoted in their energy centers. SoCalGas provides information on all energy efficiency classes offered through its educational programs to the other utility's energy centers. |
| EnergyEfficiencyCenter.com | This joint utility Website features class listings for each of the State's energy centers. Class schedules are updated throughout the year and provide customers a one-stop shopping location to find what workshops are available to help solve their energy efficiency needs. |
| www.socal.com | This is SoCalGas' website which contains all of the various programs and services offered through SoCalGas, including a schedule of classes offered at the ERC and various offsite locations, with easily |

| ACTIVITY | DESCRIPTION |
|---|---|
| | accessible real-time registration via the website. Customers will find a comprehensive list of programs and services, as well as information about the training facilities detailed throughout the website and are able to make clear choices for those that could potentially meet their energy needs. The website can be accessed through: www.socalgas.com/erc. |
| Targeted Seminar Mailings | Workshops and seminars may require a separate mailer to reach certain customer segments or customer types. These mailings may be sent out to a limited number of customers, segment support groups and product-related vendors. |

**16. CPUC Objective**

Education and outreach have been sighted as key components in transforming the energy market. If true regional energy savings are to be achieved, people must understand the compelling social, environmental and economic benefits of energy efficiency and conservation. SoCalGas' participation in the Statewide Education and Training Program has been extremely successful in promoting hard energy savings through focused education and training, marketing, outreach, collaboration and partnering. The "*Evaluation of the 2002 Statewide Education, Training and Services Program*" report conducted by KEMA dated January 14, 2004 clearly indicates the education and training programs implemented by the Utilities had a positive effect on participating customers. The report indicates (1.) Attending the program's seminars reduces relevant market barriers, (2.) The program resulted in changes in awareness, behaviors, and attitudes for ¾ of participants, (3.) The program was effective in increasing energy-efficiency behaviors and adoptions for over ½ of the participants. A comprehensive education and training portfolio developed by SoCalGas for 2006-08 will continue to maximize outreach opportunities. Quantifying the results of educational efforts through ongoing contact with previous ERC/FSEC users and attendees of SoCalGas seminars, has clearly shown that the services provided through both of these components have led to documented reductions in energy use.

| | SCG3503 EET4-Education & Training Program | |
|---|---|---|
| **BUDGET** | | |
| | | |
| **Administrative Costs** | **$** | **1,246,371** |
| Overhead and G&A | $ | 307,143 |
| Other Administrative Costs | $ | 939,228 |
| **Marketing/Outreach** | **$** | **35,947** |
| **Direct Implementation** | **$** | **5,167,683** |
| Total Incentives and Rebates | | |
| User Input Incentive | $ | - |
| Direct Install Rebate | $ | - |
| Direct Install Labor | $ | - |
| Direct Install Materials | $ | - |
| Activity | $ | - |
| Installation | $ | - |
| Hardware & Materials | $ | 5,167,683 |
| Rebate Processing & Inspection | $ | - |
| **EM&V Costs** | **$** | - |
| **Budget** | **$** | **6,450,000** |
| **Costs recovered from other sources** | **$** | - |
| **Budget** (plus other costs) | **$** | **6,450,000** |
| | | |
| **PROGRAM IMPACTS** | | |
| **Program Reductions for Measures installed through 2008** | | |
| User Entered kW (kW) | | - |
| Net Jul-Sept Peak (kW) | | - |
| Net Dec-Feb Peak (kW) | | - |
| Net NCP (kW) | | - |
| Net CEC (kW) | | - |
| Annual Net kWh | | - |
| Lifecycle Net kWh | | - |
| Annual Net Therms | | 1,145,000 |
| Lifecycle Net Therms | | 17,175,000 |
| | | |
| **Cost Effectiveness** | | |
| **TRC** | | |
| Costs | $ | 8,264,712 |
| Electric Benefits | $ | - |
| Gas Benefits | $ | 8,043,408 |
| Net Benefits (NPV) | $ | (221,304) |
| BC Ratio | | 0.97 |
| | | |
| **PAC** | | |
| Costs | $ | 6,450,000 |
| Electric Benefits | $ | - |
| Gas Benefits | $ | 8,043,408 |
| Net Benefits (NPV) | $ | 1,593,408 |
| BC Ratio | | 1.25 |
| | | |
| **Levelized Cost** | | |
| **Levelized Cost TRC ($/kWh )** | | |
| Discounted kWh | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |
| **Levelized Cost PAC ($/kWh)** | | |
| Discounted kWh | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |
| **Levelized Cost TRC ($/therm)** | | |
| Discounted Therms | | 9,571,766 |
| Cost | $ | 0.8634 |
| Benefits | $ | 0.8403 |
| Benefit-Cost | $ | (0.0231) |
| **Levelized Cost PAC ($/therm)** | | |
| Discounted Therms | | 9,571,766 |
| Cost | $ | 0.6739 |
| Benefits | $ | 0.8403 |
| Benefit-Cost | $ | 0.1665 |

## Education & Training Program

| Year | Total Budget | Total Incentives | Admin Budget | Net kWh | Net Therms | Net kW |
|---|---|---|---|---|---|---|
| 2006 | $ 1,800,000 | $ - | $ 1,800,000 | - | 325,000 | - |
| 2007 | $ 2,300,000 | $ - | $ 2,300,000 | - | 360,000 | - |
| 2008 | $ 2,350,000 | $ - | $ 2,350,000 | - | 460,000 | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 318003 | Industrial End User Workshops (SPC Equivalent) | - | 1 | - | 0.8 | Therm | 15 | 406,250 | $ - | $ 1.80 | - | 325,000 | - |
| 2007 | 318003 | Industrial End User Workshops (SPC Equivalent) | - | 1 | - | 0.8 | Therm | 15 | 450,000 | $ - | $ 1.80 | - | 360,000 | - |
| 2008 | 318003 | Industrial End User Workshops (SPC Equivalent) | - | 1 | - | 0.8 | Therm | 15 | 575,000 | | $ 1.80 | - | 460,000 | - |

# Southern California Gas Company
# 2006-2008 Energy Efficiency Concept Paper
# On-Bill Financing Program

## 1. Projected Program Budget

| | 2006 | 2007 | 2008 |
|---|---|---|---|
| Administration | | | |
| Administrative Overheads | $ 118,765 | $ 119,967 | $ 127,204 |
| Administrative Other | $ 434,578 | $ 425,817 | $ 416,449 |
| Marketing & Outreach | $ 102,321 | $ 102,321 | $ 96,666 |
| Direct Implementation | | | |
| Incentives | $ - | $ - | $ - |
| Activity | $ 229,411 | $ 235,994 | $ 242,774 |
| Installation | $ - | $ - | $ - |
| Hardware & Materials | $ - | $ - | $ - |
| Rebate Processing & Inspection | $ 364,925 | $ 365,901 | $ 366,907 |
| EM&V | $ - | $ - | $ - |
| *Total* | *$ 1,250,000* | *$ 1,250,000* | *$ 1,250,000* |

**Notes:**

1. Other Administrative includes build-out of IT assets to automate the billing process.
2. Financial Incentives is shown as zero dollars in the budget. Up to $5 million of loan funds will be made available during 2006 and 2007 by SoCalGas from non-PGC funds.

## 2. Projected Program Impacts –

| 2006 | | | 2007 | | | 2008 | | |
|---|---|---|---|---|---|---|---|---|
| Net kWh | Net kW | Net Therms | Net kWh | Net kW | Net Therms | Net kWh | Net kW | Net Therms |
| - | - | - | - | - | - | - | - | - |

**Note:** Not applicable to the pilot phase of this program. Results of EM&V may indicate whether energy savings can be directly attributed to this program at some time in the future. Energy savings will be credited to the participating rebate/incentive programs in the interim.

## 3. Program Cost Effectiveness

N/A

## 4. Program Descriptors

The SoCalGas On-Bill Financing (OBF) Program is a new local program that provides financing for energy efficiency measures. The OBF program will target the following market sectors:

- Phase I ("pilot"):
  - Residential: Owners of multifamily units who do not live on the premises
  - Nonresidential: Small commercial and industrial customers
  - Local government

- Later Phases: expansion into additional market segments could be warranted and would occur during later phases of the program.

**5. Program Statement**

Historically, the multifamily and small business segments have been considered hard-to-reach, with limited participation in energy efficiency programs, while representing largely untapped energy efficiency potential. Local government entities have similarly limited participation driven by capital constraints and long budget cycles that have restricted their ability to participate in one-and two-year energy efficiency program cycles.

**What's New for 2006-2008?**

- Innovation
  - Test on-bill financing option as means to increase energy efficiency program participation and reduce program incentive costs
- Integration
  - Audits, information, and rebates

The On-Bill Financing program would facilitate the purchase and installation of qualified energy efficiency measures by customers who might otherwise not be able to act given capital constraints and administrative and time burdens to participation as well as concerns about or lack of understanding of the benefits of energy efficiency. The participating customer would be eligible to receive a reduced rebate/incentive from the participating rebate/incentive program(s) and to finance the balance of comprehensive, qualified energy efficiency measures through the On-Bill Financing option. Monthly payment on a term loan would be billed as part of the participating customer's utility bill.

The program will also address utility concerns with the risks and costs of offering this type of program in the State of California. Historically, these concerns have focused on the costs to upgrade customer information and billing systems as well as the imposition of and exposure to additional legal and regulatory requirements on the utility.

**6. Program Rationale**

On-Bill Financing programs have been offered by other utilities with varying levels of success. SoCalGas' On-Bill Financing program is designed to build on the successful programs run by others. Proponents advocating for the inclusion of on-bill financing options in overall utility portfolios argue that the availability of this type of program will allow more customers to participate in energy efficiency programs. Phase I of this program will test whether customers who face market barriers to participation in energy efficiency programs will actually increase their participation level. When customers utilize this program, their previous "lost opportunities" to manage and reduce their energy consumption will be minimized.

**7. Program Outcomes**

On-Bill Financing will leverage existing energy efficiency rebate/incentive programs. Through provision of a reduced rebate/incentive level in conjunction with financing,

participating energy efficiency rebate/incentive programs will be able to rebate/incent additional units and generate additional energy savings. Desired results of the program are:

- Incremental program participation in the rebate/incentive programs targeted in the pilot phase
- Incremental energy savings flowing from increased customer participation and ability to install a more comprehensive package of measures
- Convenience for customers to access financing through energy efficiency programs and ease of repayment through the utility bill
- Demonstration that the utility customer and billing systems can be upgraded at reasonable cost to handle a financing option
- Establish necessary procedures to comply with any additional legal and regulatory requirements imposed on the utility by this program.

## 8. Program Strategy

### 8.1.1 **Program Strategy Description**

Methods deployed in order to obtain program outcomes:

- Design and implementation of changes necessary to utility billing and accounting systems to provide on-bill presentment of a loan repayment as a new, single line item on the bill. There are two parts to Phase I implementation of systems changes. Part 1 of the phase will implement a manual billing process, making limited modifications to the billing system in order to allow for manual processing of monthly bills for customers participating in the OBF program. The manual billing process would be available in early 2006. Part 2, occurring concurrently with Part 1, will design and implement an automated billing process, making more extensive modifications to the customer information system and billing systems to accommodate OBF program transactions. The automated billing process is expected to be available at the end of 2006.
- Training for contractors to provide information on the participating energy efficiency rebate/incentive programs, including the financing option, to customers seeking energy efficiency improvements. It is expected that using contractors will be an important element in the success of this program. Contractors, along with utility account executives, will recruit customers and initiate the loan application for customer's energy efficiency project with the utility. A list of pre-screened/qualified contractors offering the financing option will be made available to any customer who requests it from the utility.
- Eligible market segments will be provided a reduced rebate/incentive for qualified energy efficiency equipment with zero-percent financing for 100% of the balance of project cost (up to loan maximum), including installation costs. Minimum loan available is $5,000 per meter; maximum loan available is $25,000 per meter. Maximum total loan funds available during the pilot phase are capped at $5 million for program years 2006 and 2007.

- Utility will complete credit screening on customer application and review payback analysis, reserving loan funds for approved projects. Customers not qualified for financing option will be referred back to the appropriate rebate/incentive program.

8.1.2 **Program Indicators**

- The manual billing process to be available in early 2006. The automated billing process to be available at the end of 2006.
- Initial recruiting and training of contractors to be completed in second Quarter 2006.
- Loan funding will be allocated to the three market segments – 20% to multifamily, 30% to small business, and 50% to local government. Expected number of loans during each of the 2 loan years is 300 (for a total of 600 loans over the life of the program). Number of loans could be between 100 to 500 each year.
- Number of customers not qualified for financing option and referred back to the appropriate rebate/incentive programs will be tracked with reasons for loan disqualification documented.

OBF is designed to provide an additional means to facilitate customer participation in energy efficiency programs that deliver permanent and verifiable energy savings from the targeted market segments. Objectives of the pilot phase are to: 1) establish internal procedures and systems upgrades to provide financing option to customers, 2) evaluate the benefits to customers and contribution to energy savings goals provided by on-bill financing, 3) provide loans using manual processing in PY 2006, 4) provide loans using automated processing in PY 2007, and 5) propose next generation On-Bill Financing program.

Milestone 1: Manual billing systems in place and loans available to customers by end of first quarter 2006.
Milestone 2: Automated billing systems in place and loans available to customers by the beginning of 2007.
Milestone 3: Evaluation and analysis of program processes and contribution to increased customer participation and increased real energy savings to be determined by internal assessment and EM&V plan.
Milestone 4: Utility filing of report on program results and request for next generation program consideration to Commission by the end of 2007.

## 9. Program Implementation

OBF program will be offered in conjunction with the Residential Multifamily Energy Efficiency Program, the Statewide Nonresidential Express Efficiency Program, and the Local Business Energy Efficiency Program. Loans will be offered in program years 2006 and 2007, or until loan funds are spent and/or committed. Marketing efforts for OBF will be coordinated with these programs.

- Utility Perspective
  SoCalGas will need to make a number of modifications to existing systems and procedures to facilitate implementation of OBF. These modifications will be transparent to the customer, involving enhancements to the customer information database, billing system and bill format. Additionally, changes to tariffs and rules will be filed with the Commission and internal procedures and processes updated.

  For 2006, a manual billing system will be implemented to include the loan payment as a line item on the customer's utility bill. Concurrently, work will begin to implement changes to the information systems that will enable loan payments to be handled automatically by the systems. Automated systems are expected to be available at the beginning of 2007.

  Marketing messages and materials will be developed in conjunction with the participating rebate/incentive programs as well as utility information and outreach programs. Program materials such as application forms, loan agreements and disclosure notices will be developed.

  A contractor/utility interface will be developed to facilitate communication between participating contractors and the utility. Training materials will be prepared to train utility account executives and contractors on the OBF option and the contractor/utility interface. Contractors will be selected (through OBF and/or in conjunction with participating rebate/incentive programs) and training conducted.

  Program will officially open for submission of project and loan application. Utility will review applications submitted by contractors and account executives for compliance with credit check criteria and project payback. Utility will notify parties of approved applications and provide loan documents for customer signature; customers failing to meet the credit check criteria will be referred to the appropriate rebate/incentive program(s). Upon notification that installation is complete, utility will verify installation and release funds.

  Upon release of funds, utility will enter loan payment into the billing system. Utility will begin monitoring remittance activity, track accounts moving into collections and analyze any loans going into default.

- Contractor Perspective
  Contractors interested in offering the OBF as an option to its customers will be asked to respond to an RFI/RFP initiated by either the participating rebate/incentive program or OBF. Once selected, the contractor will participate in training on the OBF program, including use of the contractor/utility interface and coordination with the participating rebate/incentive programs. Upon completion of training, contractors will be able to recruit customers to participate in the OBF program.

Contractor will submit customer project and loan application. Upon notification from utility that customer and project qualify for OBF and loan document has been signed by customer, contractor will install project measures. Upon completion of installation, utility will verify and inspect installation.

- Customer Perspective
  Customers interested in installing energy efficiency improvements at their facilities may become aware of the utility's energy efficiency programs in a number of ways: on their own or through their contractor or utility account executive. A customer who inquires about the OBF option will be referred to their account executive or referred to the list of pre-qualified contractors. The customer, working with their account executive or contractor, will decide upon the comprehensive package of energy efficiency measures to be installed and assist in the preparation of the program application and loan agreement, including the OBF option. Upon notification of approval to participate in the OBF option, the customer will schedule installation by the contractor and post-installation inspection by the utility. After installation is complete, utility will release the funds for the project's authorized costs and customer's loan repayment will begin appearing on the monthly utility bill.

**10. Customer Description**

The customers targeted by the OBF program are:

- Multi-Family Owner not living on the premises
- Small C&I
  - Core service gas (as defined per Rule 23)
- Local Government (cities, schools, etc.)
  - Core service gas (as defined per Rule 23)

**11. Customer Interface**

The program shall be presented to the customer through face-to-face contact from pre-screened installation contractors and SoCalGas Account Executives. Marketing materials, including coordination with participating rebate/incentive programs and outreach/information programs, and program contracts will be developed detailing the terms and conditions for participation in the financing option. Efforts will include the development and design of program literature, application forms, loan agreement, and other appropriate program literature as needed.

**12. Energy Measures and Program Activities**

12.1. **Prescriptive Measures.**
12.2. **kWh Level Data**
12.3. **Non-energy Activities**
12.3.1. Activity Description

Loan funding of up to $5 million will be provided by SoCalGas from non-PGC funds and will be made available in PY 2006 and PY 2007. No loans will be issued during PY 2008, pending assessment of program effectiveness. Zero

percent interest rate. Two to three year loan term for multifamily and small business market segments; three to five year loan term for local government segment. No penalty for early repayment. Partial or non-payment of loan could result in shut-off of utility service and turned over for collection. Balance of loan will become payable when customer closes utility account. Loan is not transferable.

12.3.2. Quantitative Activity Goals

- Loan funding will be allocated to the three market segments – 20% to multifamily, 30% to small business, and 50% to local government
- Expected number of loans during each of the 2 loan years is 300 (for a total of 600 loans over the life of the program). Number of loans could be as few as 100 each year (if all for maximum amount) to as many as 500 each year (if all for minimum amount). Average loan is expected to be $8,000.

12.3.3. Assigned attributes of the activity

**13. Subcontractor Activities**

Subcontractors may conduct training of energy services contractors.

**14. Quality Assurance and Evaluation Activities**

An evaluation plan will be developed in accordance with the soon to be developed EM&V Protocols. The CPUC Energy Division will be holding meetings, workshops and possibly hearings throughout the summer to develop these Protocols. SoCalGas looks forward to participating and commenting on those activities and plans to file EM&V plans for all programs on October 1, 2005 in conjunction with the ED, CEC, and the other IOUs.

Expected number/percent of inspections (planned percent of projects):
One hundred percent of the projects will be verified and inspected. Any failures will need to be corrected before funds are released.

**15. Marketing Activities**

Marketing efforts would be coordinated with the participating rebate/incentive programs to include a cross-reference to the on-bill financing option. These efforts would include development of program forms and applications, brochures and/or program summary sheets and contractor outreach.

**16. CPUC Objective**

The availability of on-bill financing at other utilities has allowed more customers to participate in those energy efficiency programs. SoCalGas' On-Bill Financing program will facilitate the purchase and installation of qualified energy efficiency measures by customers who might otherwise not be able to act given capital constraints or other market barriers. Leveraging existing energy efficiency rebate/incentive programs and offering an on-bill financing option will enable SoCalGas to increase program participation, rebate/incent additional units and generate additional energy savings while offering customers an easy, convenient means to afford and

install the equipment that will enable them to manage and reduce their energy usage. By helping SoCalGas meet its aggressive energy savings targets, the OBF program helps to meet CPUC's objectives to pursue all cost-effective energy efficiency options while minimizing lost opportunities.

| | SCG3514 OBF4-On-Bill Financing for Energy Efficiency Equipment | |
|---|---|---|
| **BUDGET** | | |
| | | |
| **Administrative Costs** | **$** | **1,642,780** |
| Overhead and G&A | $ | 365,936 |
| Other Administrative Costs | $ | 1,276,844 |
| **Marketing/Outreach** | **$** | **301,308** |
| **Direct Implementation** | **$** | **1,805,912** |
| Total Incentives and Rebates | $ | - |
| User Input Incentive | $ | - |
| Direct Install Rebate | $ | - |
| Direct Install Labor | $ | - |
| Direct Install Materials | $ | - |
| Activity | $ | 708,179 |
| Installation | $ | - |
| Hardware & Materials | $ | - |
| Rebate Processing & Inspection | $ | 1,097,733 |
| **EM&V Costs** | **$** | - |
| **Budget** | **$** | **3,750,000** |
| **Costs recovered from other sources** | **$** | - |
| **Budget** (plus other costs) | **$** | **3,750,000** |
| | | |
| **PROGRAM IMPACTS** | | |
| **Program Reductions for Measures installed through 2008** | | |
| User Entered kW (kW) | | - |
| Net Jul-Sept Peak (kW) | | - |
| Net Dec-Feb Peak (kW) | | |
| Net NCP (kW) | | |
| Net CEC (kW) | | - |
| Annual Net kWh | | - |
| Lifecycle Net kWh | | - |
| Annual Net Therms | | - |
| Lifecycle Net Therms | | - |
| | | |
| **Cost Effectiveness** | | |
| **TRC** | | |
| Costs | $ | 3,750,000 |
| Electric Benefits | $ | - |
| Gas Benefits | $ | - |
| Net Benefits (NPV) | $ | (3,750,000) |
| BC Ratio | | - |
| | | |
| **PAC** | | |
| Costs | $ | 3,750,000 |
| Electric Benefits | $ | - |
| Gas Benefits | $ | - |
| Net Benefits (NPV) | $ | (3,750,000) |
| BC Ratio | | - |
| | | |
| **Levelized Cost** | | |
| **Levelized Cost TRC ($/kWh )** | | |
| Discounted kWh | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |
| **Levelized Cost PAC ($/kWh)** | | |
| Discounted kWh | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |
| **Levelized Cost TRC ($/therm)** | | |
| Discounted Therms | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |
| **Levelized Cost PAC ($/therm)** | | |
| Discounted Therms | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |

# PARTNERSHIPS

# 2006-2008 Energy Efficiency Programs
# Bakersfield Kern County Energy Watch Concept Paper

## 1. Projected Program Budget

| | 2006 | 2007 | 2008 |
|---|---|---|---|
| Admistration | | | |
| Admistrative Overheads | $ 11,905 | $ 11,905 | $ 11,905 |
| Administrative Other | $ 17,896 | $ 21,409 | $ 22,095 |
| Marketing & Outreach | $ 20,199 | $ 16,686 | $ 11,000 |
| Direct Implementation | | | |
| Incentives | $ 60,000 | $ 120,000 | $ 180,000 |
| Activity | $ 140,000 | $ 80,000 | $ 25,000 |
| Installation | $ - | $ - | $ - |
| Hardware & Materials | $ - | $ - | $ - |
| Rebate Processing & Inspection | $ - | $ - | $ - |
| EM&V | $ - | $ - | $ - |
| *Total* | *$ 250,000* | *$ 250,000* | *$ 250,000* |

## 2. Projected Program Impacts

| 2006 | | | 2007 | | | 2008 | | |
|---|---|---|---|---|---|---|---|---|
| Net kWh | Net kW | Net Therms | Net kWh | Net kW | Net Therms | Net kWh | Net kW | Net Therms |
| - | - | 24,000 | - | - | 48,000 | - | - | 72,000 |

## 3. Program Cost Effectiveness

Attached

## 4. Program Descriptors

Market Sector: Residential, Small Commercial
Large Customer - Government Facilities

Program Classification: Local
Program Status: Existing Renewed

The Bakersfield and Kern County Energy Watch Partnership was designed to achieve immediate, long-term peak energy and demand savings and establish a permanent framework for sustainable, long-term, comprehensive energy management programs and set the foundation for sustainability and best practices for the Partnership's participating jurisdictions and customers. The Bakersfield and Kern County Energy Watch Partnership will build on the success of the 2004-2005 program. This Partnership is being done in conjunction with Pacific Gas and Electric Company (PG&E), and Southern California Edison (SCE).

The Partnership will build on its prior achievements in reducing energy use by providing energy efficiency information and direct installation of energy efficient equipment to homeowners in general and small businesses in targeted areas. The 2006-2008 program will be enhanced by a new component that offers training to city building inspectors.

**5. Program Statement**

SCG has actively embraced partnerships with local and state governments in energy efficiency programs in recent years. These efforts have been innovative and successful and have led to significant energy savings in local government, local businesses, other commercial and industrial sectors, schools, colleges, and universities throughout the SCG service area. In addition to the savings obtained, these partnerships have created a new paradigm for energy management in many of these jurisdictions and organizations, which have established the infrastructure necessary for long-term, permanent energy savings.

The desired outcomes Local Government Partnerships (LGPs) are:

- Short and Long-term energy savings and demand reduction for Partner organizations and the communities they serve. Partners, especially Jurisdictions, will leverage their local infrastructure to "spread the word" about energy efficiency and deepen the reach of the SCG portfolio of programs and services.
- An energy efficiency "ethic" resulting from delivery of energy information to the communities, training and education for local government facility managers, energy managers and other staff in the use of "best practices" methodology for identifying and implementing energy efficiency opportunities in their facilities; and possibly HVAC and other training targeted at refrigeration/HVAC technicians.
- Integration of demand side management strategies in Partner organizations and progress towards the goal of 10% reduction of grid based purchases by the year 2010 and 20% by 2015 in government organizations.

Objectives for the Kern/Bakersfield Partnerships include:

- Gaining the ability to provide specialized energy efficiency offerings to their local communities, businesses, and for their own municipal facilities;
- Informing their local communities about the wide variety of energy efficiency and demand reduction offerings available to them and encouraging participation; and
- Enhancement of current urban renewal projects through the addition of energy efficiency upgrades; and
- Incorporation of energy audits as a standard practice for city building inspectors.

**6. Program Rationale**

SCG Local Government Partnerships (LGP) program will optimize the opportunities for institutions, Jurisdictions and their communities to work toward the common goal of achieving short and long-term energy savings, reduced utility bills, and an enhanced level of comfort in municipal and commercial buildings as well as homes. LGP will help promote an energy efficiency "ethic" by increasing

awareness and participation in energy efficiency, demand response, self generation, and energy management assistance (low income energy efficiency and CARE) programs. Energy code training will feature strongly in the LGP. As recommended by the PAG, LGP will deliver energy code training to all cities and counties in SCG service territory.

LGP involves the creation of energy partnerships with cities, local governments, local government organizations, state and community universities and colleges to set energy efficiency goals and generate measurable, verifiable energy savings through identification of specific energy efficiency projects and community outreach activities. SCE will assist Jurisdictions in retrofitting municipal buildings in complying with the Governor's "Green Building Action Plan".

LGP supports the Commission vision, as set forth in Decision 05-01-055, which notes that "current or future partnerships between IOUs and local governments can take advantage of the unique strengths that both parties bring to the table to deliver cost-effective energy efficiency services." Local government economic redevelopment and similar designated area are specifically designed to increase community prosperity and represent a vital source of energy savings across a diverse residential and business market sector that has had lower participation in traditional energy efficiency programs. These customers represent significant energy savings and demand reduction potential, as well as potential lost opportunities if not given targeted consideration.

## 7. Program Outcomes

The Energy Watch Partnership will work toward the following outcomes:

- Greater demand for energy efficient products and technologies among residential and small business customers;
- Greater awareness of and participation in statewide energy efficiency programs at the local level;
- Increased participation in demand response programs, Flex Your Power Now! and other voluntary efforts; and
- Increased awareness of energy efficiency options as a purchasing consideration for new homeowners.

## 8. Program Strategy

The Bakersfield and Kern County Partnership is an "Existing Renewed" Partnership for 2006-2008. The implementation strategies are listed below in detail.

### **8.1.**Direct Install

SCG annual goal is to serve a combined 3,000 to 4,000 single family and multi-family units with direct install of interior and exterior CFLs and T8 fluorescent lamps, and 60 or more small businesses with energy audits and direct installed products. Contracted installers will canvass targeted residential and small business

areas by going door to door and providing information on the various program measures.

For small business customers, a selected contractor will:

- Canvass targeted areas, as referred by the city of Bakersfield and the county of Kern, to sign up small business customers.
- Arrange for energy audits to be done by CHEERS-trained auditors
- Install screw-in compact fluorescent lamps, occupancy sensors and T5 or T8 lamps as needed to replace inefficient existing equipment.

**8.2.**Municipal Retrofits

The program will also serve municipal buildings in the county of Kern, conduct audits of chosen facilities, and identify project opportunities including HVAC system replacements, domestic hot water boiler replacements, replace storage tank water heaters with high efficiency tank less water heaters, lighting opportunities including T8 installations, CFLs, exit signs and occupancy sensor installations, and cool roof projects.

**8.3.**Education and Training

The Bakersfield and Kern County Partnership education and training element will provide locally based energy efficiency, demand reduction, technology, and energy efficient design education and training, as appropriate for the geographic and demographic areas served. The program will provide education including 20 energy efficiency training classes at SCE's Agricultural Technology Application Center and PG&Es Pacific Energy Center.

**8.4.**Specialized Marketing and Outreach

A marketing company will be selected to:

- Develop marketing and advertising plans based on partners' needs and input;
- Design and produce partnership brochures, radio and television commercials;
- Staff an outreach booth/table at various local area stores to promote the partnership services;
- Create, print and store partnership marketing materials;
- Identify local events which can be used to market the Energy Watch partnership services.

In addition, the selected marketing contractor will employ third-party program partners to market the program. For the residential program, new homebuyers will be reached utilizing marketing and communications vehicles of the real estate community to reach, such as banner ads on web-based MLS listings.

Partners within the business community, such as the Greater Bakersfield Chamber of Commerce and Hispanic Chamber of Commerce will help educate members to the Energy Watch program. Targeted business lists will be provided by city and county partners.

In addition, the Energy Watch Program will use paid media schedules (TV and radio), as well as an infomercial on K-GOV television channel, to generate residential requests for a site visit.

Local governments will assist the effort through local and city channels by providing access to bill inserts, local cable television channels, websites, local newspapers, etc to distribute program information. A specific program phone number and website will also be used to disseminate information. The partners will also have in-house personnel who will answer questions and direct customers to the services offered.

**8.5.**Home Buyers Program

The Bakersfield and Kern County Energy Watch Partnership will provide specialized services to home buyers which may include an energy audit of the recently purchased home and free energy efficiency measures such as low flow showerheads, faucet aerators, and pipe insulation.

To reach homebuyers, the marketing contractor will leverage area Realtor® association marketing vehicles, participate in home shows and homebuyer fairs, and provide program information for use by home loan counselors and HUD/FHA first-time homebuyer classes to generate requests for site visits.

**8.6.**Energy Audits and Technical Services

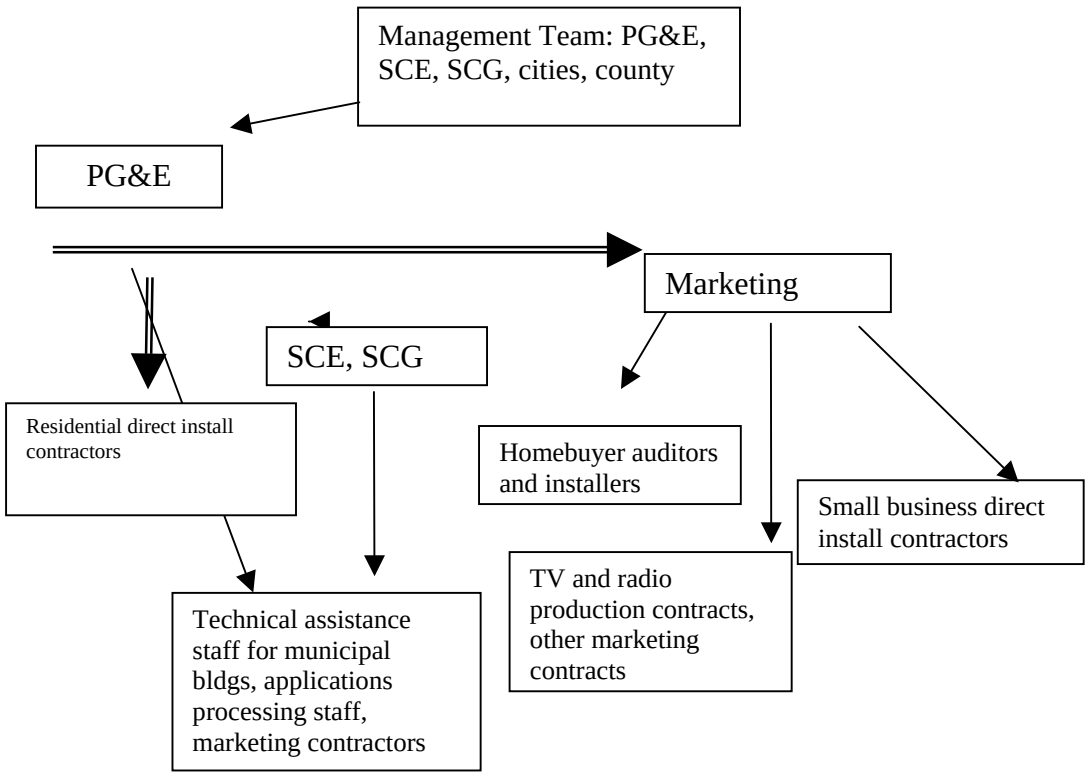
The Bakersfield and Kern County Partnership will offer energy audits to residents and businesses in participating local jurisdictions. Technical services will be offered primarily to government facilities in the targeted geographical areas. Targeted energy audits will identify and develop projects to be implemented through the energy efficiency retrofit program offerings.

Energy Watch will provide residential and comprehensive commercial (small business) onsite energy audits. In addition, Energy Watch will train city building inspectors to incorporate energy audits into their services.

**8.7.**Program Organizational Functions

PG&E will serve as the lead utility and directly oversee the residential direct install contractors for both SCG, SCE and PG&E customer installations, the marketing contractor, and the small business direct install contractor. SCG will directly oversee the municipal building projects and work directly with the county of Kern to identify opportunities. All partners will review marketing materials and outreach efforts. The organizational chart below identifies each utility's role.

**Energy Watch Functional Organization Chart**




## 9. Program Implementation

As with program strategy, specific implementation of each Partnership program and the roles of Partners will vary depending on program design and selected strategies.

The roles of each Partner will be defined and confirmed in a Partnership Agreement acceptable to all parties. All Partners will participate equally in program development and the establishment of goals, deliverables and milestones for the program and share commitment to the achievement of energy savings and demand reduction goals.

SCE will ensure that all energy-related information and marketing materials are made available for use or distribution by the Partners and will be responsible for providing technical support and energy and demand information as appropriate

**10. Customer Description**

- Customer types vary, depending on the services provided, and include:
- Residential and small business customers in Bakersfield and Kern County are targeted for energy efficiency education and audit services.
- Small businesses and municipal government (city and county) customers are targeted for energy efficiency retrofits, including LED exit signs, HVAC tune-ups, fluorescent tubes/ballasts, occupancy sensors, etc.
- Residential customers who buy a home in the county are targeted for education and audit services, as well as installation of CFLs.
- Municipal buildings are targeted for energy efficiency retrofits.

**11. Customer Interface**

The Bakersfield and Kern County Partnership will interface directly with their internal organizations, constituents, and customers in their jurisdictions. To reduce some of the confusion and duplication of effort that sometimes occurs between statewide, local and the SCE partnerships, the Bakersfield and Kern County Partnership will work with other programs to design a communication structure and a process for coordination of services that will optimize the Bakersfield and Kern County Partnership, SCE Public Affairs and Business Development representatives and other statewide and local programs.

This program features direct interface with customers through canvassing of business areas and scheduling of onsite visits to residences.

Customers will interact with contractors, vendors, and retail outlets. They will receive information from mass media and IOU marketing.

**12. Energy Measures and Program Activities**

**12.1. Prescriptive Measures.**

See SoCalGas February 1, 2006 Filing Workbook.

Many of the key program elements for the Bakersfield and Kern County Partnership are discussed above. The Partnership encompasses a full range of traditional and innovative energy efficiency measures. The measures to be included in the direct install program include a standardized list of deemed savings measures as developed by the Partnership through its direct install prime contract. Specific measures included in the program elements where energy savings are calculated, rather than deemed, will typically be determined as facility audits are completed and opportunities are identified. These measures will need to fit into the overall Partnership portfolio such that cost effectiveness targets are maintained.

### 12.2. Non-energy Activities

The Bakersfield and Kern County Partnership will include non-energy activities such as energy audits, marketing and outreach, program administration, and training and education. These activities will be limited and targeted to enhance the overall success of the program's energy impact goals and stated objectives.

#### 12.2.1. Activity Description

#### 12.2.2. Quantitative Activity Goals

#### 12.2.3. Assigned attributes of the activity (market sector, end use)

## 13. Subcontractor Activities

Staples Marketing Communications, Inc. is a full-service marketing communications firm with direct experience in conceptualizing, developing and implementing marketing and outreach programs for residential and commercial energy customers using a combination of targeted communications and third-party interventions. This company was integral to the success of the 2004-2005 program, and it is likely that they will continue to help implement the 2006-2008 program.

The marketing contractor may provide the following services:

- Primary responsibility for marketing and outreach, promotion and development of collateral materials.
- In coordination with the Partnership's direct install contractor, Staples Marketing will hire and train staff for onsite residential education and audits (as necessary); and non-residential canvassing, education and audits. The Partnership will provide management and oversight of all education, audit and installation activities associated with activities.
- The Partnership will coordinate with the SCE Home Energy Efficiency Survey program to deliver residential audits.

Other contractors will be selected to assist with the implementation of the program as necessary.

## 14. Quality Assurance and Evaluation Activities

SCE, working with the Bakersfield and Kern County Partnership, will establish and oversee quality assurance measures for the LGP programs, including oversight and verification of subcontractor activities. These procedures and the associated reporting will be developed in more detail as a part of program implementation. In general however, SCE and the LGPs will continue the level of due diligence and quality assurance of its present energy efficiency offerings, including a representative percentage of pre/post installation confirmation inspections for small hardware projects, and pre/post inspections on all large or specialized projects hardware projects.

## 15. Marketing Activities

Local governments have unique local communication channels including local government mailings, religious and ethnicity-based organizations, and tenant and landlord associations. The Bakersfield and Kern County Partnership will utilize a variety of marketing efforts to reach the end-use customers.

In addition, the Bakersfield and Kern County Partnership will work with the IOU Partners on an overall partnership initiative which will leverage the "Energy Watch" brand.

## 16. CPUC Objective

The program has been developed in conjunction with Kern County, the City of Bakersfield, and SCE to meet the applicable CPUC objectives, and guidelines as outline in the Energy Efficiency Policy Manual. This program supports the following CPUC objectives: (2) To pursue all cost-effective energy efficiency opportunities over both the short- and long-term; (5) Program Administrators should manage their portfolio of programs to meet or exceed the short- and long-term savings goals established by the Commission by pursuing the most cost-effective energy efficiency resource programs first, while minimizing lost opportunities; and (9) Program Administrators will manage a portfolio of programs implemented by IOUs and non-IOUs that are selected and evaluated based on their ability to best meet the policy objectives articulated in these Rules. Specifically, as a partnership program, emphasis has been to develop the program with the Bakersfield/Kern County Energy Watch on more equal footing as compared to other programs. The organization and governance of the program is achieved in partnership with the Kern County office of Economic Development, City of Bakersfield, and Energy Watch, and SCE. Although all partnerships share some common elements, the Bakersfield Kern County Energy Watch Partnership has been specifically tailored to the needs and unique characteristics of Kern County facilities, City.

| | SCG3523 BKP4-Bakersfield Kern Partnership | |
|---|---|---|
| **BUDGET** | | |
| | | |
| **Administrative Costs** | **$** | **97,115** |
| Overhead and G&A | $ | 35,715 |
| Other Administrative Costs | $ | 61,400 |
| **Marketing/Outreach** | **$** | **47,885** |
| **Direct Implementation** | **$** | **605,000** |
| Total Incentives and Rebates | | |
| User Input Incentive | $ | - |
| Direct Install Rebate | $ | 360,000 |
| Direct Install Labor | $ | - |
| Direct Install Materials | $ | - |
| Activity | $ | 245,000 |
| Installation | $ | - |
| Hardware & Materials | $ | - |
| Rebate Processing & Inspection | $ | - |
| **EM&V Costs** | **$** | **-** |
| **Budget** | **$** | **750,000** |
| **Costs recovered from other sources** | **$** | **-** |
| **Budget** (plus other costs) | **$** | **750,000** |
| | | |
| **PROGRAM IMPACTS** | | |
| **Program Reductions for Measures installed through 2008** | | |
| User Entered kW (kW) | | 0 |
| Net Jul-Sept Peak (kW) | | 0 |
| Net Dec-Feb Peak (kW) | | 0 |
| Net NCP (kW) | | 0 |
| Net CEC (kW) | | 0 |
| Annual Net kWh | | 0 |
| Lifecycle Net kWh | | 0 |
| Annual Net Therms | | 144000 |
| Lifecycle Net Therms | | 2160000 |
| | | |
| **Cost Effectiveness** | | |
| **TRC** | | |
| Costs | | 614536.7046 |
| Electric Benefits | | 0 |
| Gas Benefits | | 895155.7844 |
| Net Benefits (NPV) | | 280619.0798 |
| BC Ratio | | 1.46 |
| | | |
| **PAC** | | |
| Costs | $ | 701,857 |
| Electric Benefits | $ | - |
| Gas Benefits | $ | 895,156 |
| Net Benefits (NPV) | $ | 193,299 |
| BC Ratio | | 1.28 |
| | | |
| **Levelized Cost** | | |
| **Levelized Cost TRC ($/kWh )** | | |
| Discounted kWh | | 0 |
| Cost | | 0 |
| Benefits | | 0 |
| Benefit-Cost | | 0 |
| **Levelized Cost PAC ($/kWh)** | | |
| Discounted kWh | | 0 |
| Cost | | 0 |
| Benefits | | 0 |
| Benefit-Cost | | 0 |
| **Levelized Cost TRC ($/therm)** | | |
| Discounted Therms | | 1184327.104 |
| Cost | | 0.518891025 |
| Benefits | | 0.755834922 |
| Benefit-Cost | | 0.236943897 |
| **Levelized Cost PAC ($/therm)** | | |
| Discounted Therms | | 1184327.104 |
| Cost | | 0.592620512 |
| Benefits | | 0.755834922 |
| Benefit-Cost | | 0.163214411 |

## Bakersfield Kern Partnership

| Year | Total Budget | Total Incentives | Admin Budget | Net kWh | Net Therms | Net kW |
|---|---|---|---|---|---|---|
| 2006 | $ 250,000 | $ 60,000 | $ 190,000 | - | 24,000 | - |
| 2007 | $ 250,000 | $ 120,000 | $ 130,000 | - | 48,000 | - |
| 2008 | $ 250,000 | $ 180,000 | $ 70,000 | - | 72,000 | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 326001 | Gas Measures | - | 1 | - | 0.8 | Therm | 15 | 30,000 | $ 2.00 | $ 1.80 | - | 24,000 | - |
| 2007 | 326001 | Gas Measures | - | 1 | - | 0.8 | Therm | 15 | 60,000 | $ 2.00 | $ 1.80 | - | 48,000 | - |
| 2008 | 326001 | Gas Measures | - | 1 | - | 0.8 | Therm | 15 | 90,000 | $ 2.00 | $ 1.80 | - | 72,000 | - |

# 2006-2008 Energy Efficiency Programs
# SCG California Department of Corrections and Rehabilitation Program
# Concept Paper

## 1. Projected Program Budget

| | 2006 | 2007 | 2008 |
|---|---|---|---|
| Administration | | | |
| Administrative Overheads | $ 10,000 | $ 10,000 | $ 10,048 |
| Administrative Other | $ 21,426 | $ 21,651 | $ 21,883 |
| Marketing & Outreach | $ - | $ - | $ - |
| Direct Implementation | | | |
| Activity | $ 30,719 | $ 30,491 | $ 31,172 |
| Installation | $ - | $ - | $ - |
| Hardware & Materials | $ 1,508 | $ 1,502 | $ 1,531 |
| Procurement | $ 347 | $ 356 | $ 366 |
| Incentives | $ 146,000 | $ 146,000 | $ 146,000 |
| EM&V | $ - | $ - | $ - |
| *Total* | *$ 210,000* | *$ 210,000* | *$ 211,000* |

## 2. Projected Program Impacts

| 2006 | | | 2007 | | | 2008 | | |
|---|---|---|---|---|---|---|---|---|
| Net kWh | Net kW | Net Therms | Net kWh | Net kW | Net Therms | Net kWh | Net kW | Net Therms |
| - | - | 58,400 | - | - | 58,400 | - | - | 58,400 |

## 3. Program Cost Effectiveness

Attached

## 4. Program Descriptors

The SCG/California Department of Corrections and Rehabilitation (CDCR) Program is a new statewide nonresidential program that will be very similar to the existing SCG UC/CSU Partnership program. The program will offer incentives for retrofit projects, continuous commissioning, and educational training for the prisons and youth facilities.

## 5. Program Statement

The State of California Department of Corrections and Rehabilitation facilities consume vast quantities of energy and makes up a significant portion of the both the electric and natural gas-load in the State of California. The more than 30 institutions that make up this system are large and complex and are diverse from a geographic, climate, infrastructure and operational needs standpoint. But with this size and diversity also comes a considerable opportunity to save energy use and cost on a scale that is meaningful to the State of California. The Department of Corrections and Investor-Owned Utility (IOU) Energy Efficiency Program is designed to meet this challenge.

## 6. Program Rationale

The Program is a customized statewide energy efficiency program that accomplishes immediate, long-term peak energy and demand savings, and

establishes a permanent framework for a sustainable, long-term, comprehensive energy management program at the CDCR institutions served by California's four large IOUs. This program capitalizes on the vast opportunities for efficiency improvements and utilized the resources and expertise of CDCR and IOU staff to ensure a successful and cost-effective program that meets all objectives of the California Public Utilities Commission (CPUC or Commission). The program will be modeled after the UC/CSU partnership program first established in the 2004-2005 Energy Efficiency Program cycle, however assumes greater financial contribution from the CDCR. The new program will also address a significant backlog of cost effective projects that have been previously identified by the CDCR but could not be completed because of budget limitations. The previous 2004-2005 UC/CSU partnership established a model for statewide partnership programs facilitating expansion to other partners such as the CDCR in the 2006-2008 funding cycle.

**7. Program Outcomes**

The Program will continue the progress made during the last program cycle for establishing a statewide partnership programs delivery and will achieve new energy and demand savings goals as outlined in the estimates that accompany this narrative. It is anticipated that this program will also include the network of California Youth Authority facilities that were recently added the CDCR portfolio.

**8. Program Strategy**

To support the program's success, the following strategies will be used:

- Nonresidential Building Calculated Rebates
- Nonresidential Building Commissioning
- Nonresidential Downstream Training

**8.1.1. Program Strategy Description**

Like the 2004-2005 UC/CSU program, the 2006-2008 CDCR/IOU partnership program is comprised of three elements, which will operate on a statewide, integrated basis, providing immediate energy savings and setting the foundation for a long-term program focused on sustainability and best practices: In each case, the program elements will be customized to meet the specific needs of the CDCR and the specific barriers to implementing projects in the past.

- *Energy Efficiency Retrofits*

  The Energy Efficiency Retrofit element of the program involves implementation of energy efficiency retrofit projects providing cost-effective energy savings during the 2006-2008 program implementation period. CDCR has an existing and extensive inventory of cost-effective energy saving measures. This inventory will be reviewed and finalized during the initial stages of the program to finalize an implementation plan and schedule. Project

identification processes will incorporate the specific needs of the CDCR accounting for additional costs and processes of completing work in high security facilities. The process of finalizing the inventory and installation of measures will be well documented and establish guidelines implementation standards system wide.

- *Monitoring Based Commissioning (MBCx)*
  This element of the program is a unique approach to obtaining savings that combines the expertise of the CDCR's statewide facility management staff, additional utility and subcontractor expertise, and the installation of energy monitoring and metering equipment at the building submeter and system level. Through these resources, a systematic, comprehensive continuous commissioning program was developed by the UC/CSU program in the last cycle. This approach involves the usual first step of commissioning, a review of building operations and installation of equipment. However, it goes beyond the typical program to date in three aspects. First, the institutions that participate in this aspect of the program will install sufficient equipment to insure an extensive and comprehensive built-in measurement and verification capability. Second, this element of the program will be combined with the third element (Energy Efficiency Education and Best Practices Development and Training) to become a "continuous commissioning" program, that is institutionalized at the facilities for the foreseeable future. In this way, savings will be sustained well beyond those from the more typical and limited retro-commissioning programs. Third, the program will use the institution's facilities management staff to identify new cost-effective retrofit opportunities efficiently and at low cost.

- *Energy Efficiency Education and Best Practices Development and Training*
  The Energy Efficiency Education and Best Practices Development and Training element of the program will focus on meeting the specific needs of the CDCR to establish operational guidelines and improve retention of facilities staff. This element will establish a comprehensive program for energy education and information exchange among the CDCR project managers, and facility staff and with the IOUs that began with the 2004-2005 program cycle. This program provides a venue for those individuals responsible for managing energy and operating systems at institutions to share information and experiences related to facility operations, best practices, and successful retrofit projects, among other issues. This is an information and education program that develops and shares best practice operating methods and technologies applicable to institutional facilities. The primary vehicles for training and

dissemination of information will be and a series of training sessions and workshops (covering new construction, building operator training, retrofits, retro-commissioning, and monitoring based commissioning) to be held in locations statewide. Where applicable, course offerings, curriculum and content will be based on extensive material and best-practices documentation developed for the UC/CSU partnership during the 2004-2005 cycle, but will focus on the specific needs of the CDCR.

#### 8.1.2. Program Indicators

The primary goal of the program strategy is to procure energy savings and demand reduction to meet the program energy savings goals. However, for training and education, the number of classes and number of participants will also be tracked.

## 9. Program Implementation

The objectives of the program are as follows:

**A. Immediate, Cost-Effective Energy and Demand Savings**
Retrofit projects will be efficiently implemented to meet or exceed all savings goals as outlined in the program economics.

**B. Improved Energy Efficient Operations and Maintenance Practices**
CDCR staff will be trained on initial and continuous commissioning and will receive tools to reduce energy consumption and peak demand through energy information at the building systems level.

**C. CDCR Staff Trained To Identify and Implement Energy Efficient Opportunities**
Similarly, this program will fund training of CDCR project managers and other staff in use of a "best practices" methodology for identifying and implementing energy efficiency projects.

## 10. Customer Description

The CDCR institutional facilities in the four IOU service areas.

## 11. Customer Interface

The 2006-2008 Program will utilize a program management team to interface with the CDCR management and facilities staff. Staff from each utility and the CDCR will be responsible for the successful execution of the program.

## 12. Energy Measures and Program Activities

### 12.1. Prescriptive Measures.

See SoCalGas February 1, 2006 Filing Workbook.

### 12.2. kWh Level Data

See SoCalGas February 1, 2006 Filing Workbook.

### 12.3. Non-energy Activities

**12.3.1. Activity Description**

The training and education component of the partnership program involves training of CDCR design staff, project managers, facilities staff, and others on using best energy practices in the construction, retrofit and monitoring based commissioning of buildings and central plant infrastructures. This will continue progress made on the establishment of a statewide approach to training and building operation so that this best energy practices approach can be used for ensuring long-term energy efficiency savings. The training and education component will work hand-in-hand with the first two program components – energy retrofits and retro- and continuous commissioning.

**12.3.2. Quantitative Activity Goals**

As noted above, the number of classes and number of participants will also be tracked.

**12.3.3. Assigned attributes of the activity (market sector, end use)**

Training and education involves training of CDCR design staff, project managers, energy managers and others on using best energy practices in the construction, retrofit, and monitoring based commissioning of facilities and central plant infrastructures.

**13. Subcontractor Activities**

Subcontractors will be used to assist in program administration and management, and in each of the three program elements. This approach was used successfully in partnerships in the program previous cycle.

A consultant will assist in day-to-day coordination and communication among the partners (the CDCR and four utilities) and provide staffing to the Management and Administration Team and Program Specific Implementation Teams. Consultant will assist in identifying project tasks, establishing a schedule of deliverables and responsibilities, helping CDCR ensure successful program implementation, and obtaining CDCR input and decision-making on key program elements. The consultant will also assist in the three program elements, especially in facilitating coordination and communications with and among institutions, providing analytical assistance as needed, provide assistance with successful retention of subcontractors through competitive procurement processes, and helping to track and ensure successful program implementation based on specific deliverables required by the CPUC. Finally, the consultant will assist the IOUs and CDCR in CPUC reporting and regulatory communications. For the third program component, Training and Education, the consultant may assist in development of workshop agendas and materials, identification of experts, facilitation of workshops and training sessions, and preparation of the minutes.

The CDCR will hire Energy Efficiency Retrofit subcontractors to install the energy efficiency measures for the retrofit component.

As in the 2004-2005 program, the facilities management staff will play a major role in this program component but that one or more subcontractors will assist, particularly in their commissioning efforts. The Program Team will conduct a competitive process to develop a pool of qualified commissioning agents/trainers that will be available to the facilities.

**14. Quality Assurance and Evaluation Activities**

An evaluation plan will be developed in accordance with the 2006-2008 EM&V Protocols.

**15. Marketing Activities**

Since the CDCR already has an established communication network with its facilities' energy managers and staff, marketing will be based on the pre-established channels.

**16. CPUC Objective**

The program has been developed in conjunction with CCC to meet the applicable CPUC objectives and guidelines as outline in the Energy Efficiency Policy Manual. This program supports the following CPUC objectives: (2) To pursue all cost-effective energy efficiency opportunities over both the short- and long-term; (5) Program Administrators should manage their portfolio of programs to meet or exceed the short- and long-term savings goals established by the Commission by pursuing the most cost-effective energy efficiency resource programs first, while minimizing lost opportunities; and (9) Program Administrators will manage a portfolio of programs implemented by IOUs and non-IOUs that are selected and evaluated based on their ability to best meet the policy objectives articulated in these Rules. Emphasis has been to develop the program with the CCC on more equal footing as compared to other programs. The organization and governance of the program is achieved in partnership with the Chancellor's Office, the Foundation for California Community Colleges, and four IOUs via the Management Team, Program Team and Training and Education Team. Although all partnership share some common elements, the CCC Partnership has been specifically tailored to the needs and unique characteristics of the CCC Districts and campuses.

| | SCG3519 CDC4-CA Department of Corrections Partnership | |
|---|---|---|
| **BUDGET** | | |
| | | |
| **Administrative Costs** | **$** | **95,008** |
| Overhead and G&A | $ | 30,048 |
| Other Administrative Costs | $ | 64,960 |
| **Marketing/Outreach** | **$** | **-** |
| **Direct Implementation** | **$** | **535,992** |
| Total Incentives and Rebates | | |
| User Input Incentive | $ | - |
| Direct Install Rebate | $ | 438,000 |
| Direct Install Labor | $ | - |
| Direct Install Materials | $ | - |
| Activity | $ | 92,382 |
| Installation | $ | - |
| Hardware & Materials | $ | 4,541 |
| Rebate Processing & Inspection | $ | 1,069 |
| **EM&V Costs** | **$** | **-** |
| **Budget** | **$** | **631,000** |
| **Costs recovered from other sources** | **$** | **-** |
| **Budget** (plus other costs) | **$** | **631,000** |
| | | |
| **PROGRAM IMPACTS** | | |
| **Program Reductions for Measures installed through 2008** | | |
| User Entered kW (kW) | | 0 |
| Net Jul-Sept Peak (kW) | | 0 |
| Net Dec-Feb Peak (kW) | | 0 |
| Net NCP (kW) | | 0 |
| Net CEC (kW) | | 0 |
| Annual Net kWh | | 0 |
| Lifecycle Net kWh | | 0 |
| Annual Net Therms | | 175200 |
| Lifecycle Net Therms | | 1752000 |
| | | |
| **Cost Effectiveness** | | |
| **TRC** | | |
| Costs | $ | 473,109 |
| Electric Benefits | $ | - |
| Gas Benefits | $ | 817,387 |
| Net Benefits (NPV) | $ | 344,279 |
| BC Ratio | | 1.73 |
| | | |
| **PAC** | | |
| Costs | $ | 582,040 |
| Electric Benefits | $ | - |
| Gas Benefits | $ | 817,387 |
| Net Benefits (NPV) | $ | 235,348 |
| BC Ratio | | 1.40 |
| | | |
| **Levelized Cost** | | |
| **Levelized Cost TRC ($/kWh )** | | |
| Discounted kWh | | 0 |
| Cost | | 0 |
| Benefits | | 0 |
| Benefit-Cost | | 0 |
| **Levelized Cost PAC ($/kWh)** | | |
| Discounted kWh | | 0 |
| Cost | | 0 |
| Benefits | | 0 |
| Benefit-Cost | | 0 |
| **Levelized Cost TRC ($/therm)** | | |
| Discounted Therms | | 1148690.035 |
| Cost | | 0.411868014 |
| Benefits | | 0.711582234 |
| Benefit-Cost | | 0.299714221 |
| **Levelized Cost PAC ($/therm)** | | |
| Discounted Therms | | 1148690.035 |
| Cost | | 0.506698779 |
| Benefits | | 0.711582234 |
| Benefit-Cost | | 0.204883456 |

## CA Department of Corrections Partnership

| Year | Total Budget | Total Incentives | Admin Budget | Net kWh | Net Therms | Net kW |
|---|---|---|---|---|---|---|
| 2006 | $ 210,000 | $ 146,000 | $ 64,000 | - | 58,400 | - |
| 2007 | $ 210,000 | $ 146,000 | $ 64,000 | - | 58,400 | - |
| 2008 | $ 211,000 | $ 146,000 | $ 65,000 | - | 58,400 | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 325001 | Gas Measures | - | 1 | - | 0.8 | Therm | 10 | 73,000 | $ 2.00 | $ 1.80 | - | 58,400 | - |
| 2007 | 325001 | Gas Measures | - | 1 | - | 0.8 | Therm | 10 | 73,000 | $ 2.00 | $ 1.80 | - | 58,400 | - |
| 2008 | 325001 | Gas Measures | - | 1 | - | 0.8 | Therm | 10 | 73,000 | $ 2.00 | $ 1.80 | - | 58,400 | - |

# 2006-2008 Energy Efficiency Programs
# California Urban Water Conservation Council Concept Paper

## 1. Projected Program Budget

| | 2006 | 2007 | 2008 |
|---|---|---|---|
| Admistration | | | |
| Admistrative Overheads | $ 20,667 | $ 20,619 | $ 20,571 |
| Administrative Other | $ 16,098 | $ 16,536 | $ 15,721 |
| Marketing & Outreach | $ 57,100 | $ 55,710 | $ 55,573 |
| Direct Implementation | | | |
| Incentives | $ 270,135 | $ 270,135 | $ 270,135 |
| Activity | $ 70,000 | $ 70,000 | $ 70,000 |
| Installation | $ - | $ - | $ - |
| Hardware & Materials | $ - | $ - | $ - |
| Rebate Processing & Inspection | $ - | $ - | $ - |
| EM&V | $ - | $ - | $ - |
| *Total* | *$ 434,000* | *$ 433,000* | *$ 432,000* |

## 2. Projected Program Impacts

| 2006 | | | 2007 | | | 2008 | | |
|---|---|---|---|---|---|---|---|---|
| Net kWh | Net kW | Net Therms | Net kWh | Net kW | Net Therms | Net kWh | Net kW | Net Therms |
| - | - | 847,303 | - | - | 847,303 | - | - | 847,303 |

## 3. Program Cost Effectiveness

Attached.

## 4. Program Descriptors

**Market Sector:** Non-residential

**Program Classification (SW, local)**: Local

**Program Status (New, Existing, Modified), etc.:** Existing

## 5. Program Statement

The Pre-rinse Spray Valve Installation Program is a direct-install program that replaces high energy and water use pre-rinse spray valves with more efficient models. There is no cost to participants.

Due to the direct installation format and zero costs to the customer, the Pre-rinse Spray Valve Program doubles the natural attrition rate of high flow valves. The program is a high response (50%+ response) with high customer service ratings for Southern California Gas Company.

## 6. Program Rationale

This is the third second phase of this direct-install incentive-based program that replaces high energy and water use pre-rinse spray valves with more efficient models at food service facilities: restaurants, cafeterias, institutional kitchens and food preparation companies. There is no cost to the participants and water utilities

throughout the state are contributing a portion of the funds for program implementation. This program targets hard-to-reach food service operators.

The Pre-rinse Spray Valve Installation Program has achieved much in its three years of operation. We have secured over 55 million therms of gas to date and 8 billion gallons of water.

Although the legislation for spray valve standards will soon be passed, the marketplace will utilize high flow valves for years to come. It is estimated that there are 100,000 plus spray valves in California. The 5 year life of the product equates to a natural replacement of only 15,000 – 20,000 valves per year. Our program dramatically accelerates removal of these high flow models.

Because of the direct installation format, the Spray Valve Installation program significantly increasing the natural attrition rate of high flow spray valves and delivers extremely high customer service ratings from your customers. We explain to these business owners the IOU's role in providing funding and approval for the program. Customers have an extremely positive response to the program and will carry goodwill towards your company for many years.

It is most important to note that, despite the upcoming legislative changes, the Spray Valve Program will continue to operate cost effectively in 2006. With an average TRC of 2.74 the program makes good economic sense for California IOUs. The design of door-to-door canvass and direct installation program significantly limits the amount of free riders. Even factoring in a free ridership percentage, the program would still be deemed extremely cost effective.

## 7. Program Outcomes

Install 10,000 low flow spray valves in the 35,000 spray valve market.

## 8. Program Strategy

### 8.1.1. Program Strategy Description

Program strategy is to implement a one-stop approach, by providing direct installation of spray valves at no cost to the customers. This methodology overcomes a great number of traditional barriers, results in over a 50% response rate and ensures installation with minimal free-ridership.

### 8.1.2. Program Indicators

The primary goal of the program strategy is to procure energy savings through early replacement of spray valves at no cost to customers; thereby, accelerating the energy savings by reducing gas usage from hot water usage by an average of 317.58 therms.

**9. Program Implementation**

Customers are contacted through door-to-door outreach and provided free spray valves and free installation at the time of outreach.

**10. Customer Description**

Target market is food service owners and operators of restaurants, cafeterias, institutional kitchens and food preparation companies. Customer must be currently utilizing high flow models.

**11. Customer Interface**

Since customers are contacted through door-to-door outreach and provided free spray valves and free installation at the time of outreach, this program provides the highest level of customer ease possible for PG&E customers.

**12. Energy Measures and Program Activities**

**12.1. Prescriptive Measures.**

See SoCalGas February 1, 2006 Filing Workbook.

**12.2. kWh Level Data**

See SoCalGas February 1, 2006 Filing Workbook.

**12.3. Non-energy Activities**

None

**12.3.1. Activity Description**

**12.3.2. Quantitative Activity Goals**

**12.3.3. Assigned attributes of the activity (market sector, end use)**

**13. Subcontractor Activities**

The program will be implemented by California Urban Water Conservation Council.

**14. Quality Assurance and Evaluation Activities**

CUWCC will conduct 50% phone inspections and 10% on-site inspections to ensure product is installed.

**15. Marketing Activities**

CUWCC will conduct 20,000 door-to-door solicitations.

**16. CPUC Objective**

The program has been developed in conjunction with CUWCC to meet the applicable CPUC objectives and guidelines as outline in the Energy Efficiency Policy Manual. This program supports the following CPUC objectives: (2) To

pursue all cost-effective energy efficiency opportunities over both the short- and long-term; (5) Program Administrators should manage their portfolio of programs to meet or exceed the short- and long-term savings goals established by the Commission by pursuing the most cost-effective energy efficiency resource programs first, while minimizing lost opportunities; and (9) Program Administrators will manage a portfolio of programs implemented by IOUs and non-IOUs that are selected and evaluated based on their ability to best meet the policy objectives articulated in these Rules. Emphasis has been to develop the program with the CUWCC on more equal footing as compared to other programs. The organization and governance of the program is achieved in partnership with the CUWCC, and SCG. Although all partnerships share some common elements, the CUWCC Partnership has been specifically tailored to the needs and unique characteristics of the food service industry.

| | SCG3526 CUW4-California Urban Water Conservation Council | |
|---|---|---|
| **BUDGET** | | |
| | | |
| **Administrative Costs** | **$** | **110,212** |
| Overhead and G&A | $ | 61,857 |
| Other Administrative Costs | $ | 48,355 |
| **Marketing/Outreach** | **$** | **168,383** |
| **Direct Implementation** | **$** | **1,020,405** |
| Total Incentives and Rebates | | |
| User Input Incentive | $ | - |
| Direct Install Rebate | $ | 810,405 |
| Direct Install Labor | $ | - |
| Direct Install Materials | $ | - |
| Activity | $ | 210,000 |
| Installation | $ | - |
| Hardware & Materials | $ | - |
| Rebate Processing & Inspection | $ | - |
| **EM&V Costs** | **$** | - |
| **Budget** | **$** | **1,299,000** |
| **Costs recovered from other sources** | **$** | - |
| **Budget** (plus other costs) | **$** | **1,299,000** |
| | | |
| **PROGRAM IMPACTS** | | |
| **Program Reductions for Measures installed through 2008** | | |
| User Entered kW (kW) | | 0 |
| Net Jul-Sept Peak (kW) | | 0 |
| Net Dec-Feb Peak (kW) | | 0 |
| Net NCP (kW) | | 0 |
| Net CEC (kW) | | 0 |
| Annual Net kWh | | 0 |
| Lifecycle Net kWh | | 0 |
| Annual Net Therms | | 2541910 |
| Lifecycle Net Therms | | 7625731 |
| | | |
| **Cost Effectiveness** | | |
| **TRC** | | |
| Costs | | 1064448.57 |
| Electric Benefits | | 0 |
| Gas Benefits | | 4382796.953 |
| Net Benefits (NPV) | | 3318348.383 |
| BC Ratio | | 4.117434206 |
| | | |
| **PAC** | | |
| Costs | $ | 1,208,412 |
| Electric Benefits | $ | - |
| Gas Benefits | $ | 4,382,797 |
| Net Benefits (NPV) | $ | 3,174,385 |
| BC Ratio | | 3.63 |
| | | |
| **Levelized Cost** | | |
| **Levelized Cost TRC ($/kWh )** | | |
| Discounted kWh | | 0 |
| Cost | | 0 |
| Benefits | | 0 |
| Benefit-Cost | | 0 |
| **Levelized Cost PAC ($/kWh)** | | |
| Discounted kWh | | 0 |
| Cost | | 0 |
| Benefits | | 0 |
| Benefit-Cost | | 0 |
| **Levelized Cost TRC ($/therm)** | | |
| Discounted Therms | | 6176004.511 |
| Cost | | 0.172352298 |
| Benefits | | 0.709649247 |
| Benefit-Cost | | 0.537296949 |
| **Levelized Cost PAC ($/therm)** | | |
| Discounted Therms | | 6176004.511 |
| Cost | | 0.195662416 |
| Benefits | | 0.709649247 |
| Benefit-Cost | | 0.513986832 |

## California Urban Water Conservation Council

| Year | Total Budget | Total Incentives | Admin Budget | Net kWh | Net Therms | Net kW |
|---|---|---|---|---|---|---|
| 2006 | $ 434,000 | $ 270,135 | $ 163,865 | - | 847,303 | - |
| 2007 | $ 433,000 | $ 270,135 | $ 162,865 | - | 847,303 | - |
| 2008 | $ 432,000 | $ 270,135 | $ 161,865 | - | 847,303 | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 328002 | Spray Valve 5 year | - | 318 | - | 0.8 | Unit | 5 | 667 | $ 81.00 | $ 81.00 | - | 169,461 | - |
| 2006 | 328003 | Spray Valve 4 year | - | 318 | - | 0.8 | Unit | 4 | 667 | $ 81.00 | $ 81.00 | - | 169,461 | - |
| 2006 | 328004 | Spray Valve 3 Year | - | 318 | - | 0.8 | Unit | 3 | 667 | $ 81.00 | $ 81.00 | - | 169,461 | - |
| 2006 | 328005 | Spray Valve 2 Year | - | 318 | - | 0.8 | Unit | 2 | 667 | $ 81.00 | $ 81.00 | - | 169,461 | - |
| 2006 | 328006 | Spray Valve 1 Year | - | 318 | - | 0.8 | Unit | 1 | 667 | $ 81.00 | $ 81.00 | - | 169,461 | - |
| 2007 | 328002 | Spray Valve 5 year | - | 318 | - | 0.8 | Unit | 5 | 667 | $ 81.00 | $ 81.00 | - | 169,461 | - |
| 2007 | 328003 | Spray Valve 4 year | - | 318 | - | 0.8 | Unit | 4 | 667 | $ 81.00 | $ 81.00 | - | 169,461 | - |
| 2007 | 328004 | Spray Valve 3 Year | - | 318 | - | 0.8 | Unit | 3 | 667 | $ 81.00 | $ 81.00 | - | 169,461 | - |
| 2007 | 328005 | Spray Valve 2 Year | - | 318 | - | 0.8 | Unit | 2 | 667 | $ 81.00 | $ 81.00 | - | 169,461 | - |
| 2007 | 328006 | Spray Valve 1 Year | - | 318 | - | 0.8 | Unit | 1 | 667 | $ 81.00 | $ 81.00 | - | 169,461 | - |
| 2008 | 328002 | Spray Valve 5 year | - | 318 | - | 0.8 | Unit | 5 | 667 | $ 81.00 | $ 81.00 | - | 169,461 | - |
| 2008 | 328003 | Spray Valve 4 year | - | 318 | - | 0.8 | Unit | 4 | 667 | $ 81.00 | $ 81.00 | - | 169,461 | - |
| 2008 | 328004 | Spray Valve 3 Year | - | 318 | - | 0.8 | Unit | 3 | 667 | $ 81.00 | $ 81.00 | - | 169,461 | - |
| 2008 | 328005 | Spray Valve 2 Year | 0 | 318 | 0 | 0.8 | Unit | 2 | 667 | $ 81.00 | $ 81.00 | - | 169,461 | - |
| 2008 | 328006 | Spray Valve 1 Year | 0 | 318 | 0 | 0.8 | Unit | 1 | 667 | $ 81.00 | $ 81.00 | - | 169,461 | - |

# 2006-2008 Energy Efficiency Programs
# Energy Coalition Partnership Resource Concept Paper

## 1. Projected Program Budget

| | 2006 | 2007 | 2008 |
|---|---|---|---|
| Admistration | | | |
| Admistrative Overheads | $ 7,238 | $ 7,238 | $ 7,238 |
| Administrative Other | $ 24,112 | $ 22,162 | $ 22,727 |
| Marketing & Outreach | $ 15,650 | $ 12,600 | $ 12,625 |
| Direct Implementation | | | |
| Incentives | $ 50,000 | $ 60,000 | $ 60,000 |
| Activity | $ 55,000 | $ 50,000 | $ 49,410 |
| Installation | $ - | $ - | $ - |
| Hardware & Materials | $ - | $ - | $ - |
| Rebate Processing & Inspection | $ - | $ - | $ - |
| EM&V | $ - | $ - | $ - |
| *Total* | *$ 152,000* | *$ 152,000* | *$ 152,000* |

## 2. Projected Program Impacts

| 2006 | | | 2007 | | | 2008 | | |
|---|---|---|---|---|---|---|---|---|
| Net kWh | Net kW | Net Therms | Net kWh | Net kW | Net Therms | Net kWh | Net kW | Net Therms |
| - | - | 20,000 | - | - | 24,000 | - | - | 24,000 |

## 3. Program Cost Effectiveness

Attached

## 4. Program Descriptors

Market Sector: Cross-Cutting
Program Classification: SCG/SCE Service Territory
Program Status: Existing

## 5. Program Statement

The Community Energy Partnership is a hybrid and multidimensional partnership for the delivery of sustainable energy efficiency in Southern California. For seven years, The Energy Coalition has facilitated the development of an extensive program model for engaging communities in responsible energy use, raising their awareness about energy efficiency, the importance of peak demand reductions, and even renewable energy. It is a program model that draws upon the strengths of key energy stakeholders in each city, to create a powerful synergy.

### Partner Cities

Irvine
Santa Monica
Corona
San Bernardino

Moreno Valley
Palm Desert
Brea
Cathedral City
Hermosa Beach
Santa Clarita

## Partner Utilities

Southern California Edison
Southern California Gas

## Facilitating Partner

The Energy Coalition

The Community Energy Partnership is a demonstration partnership that has the potential to dramatically change the relationship between utilities and the cities they serve, and the responsibility that all consumers take for their energy use. Through the Partnership, a traditional equation is turned on its head: No longer are utilities perceived as commodity providers. Cities step up to the plate and play an active role in their energy future. The Partnership ultimately defines a new relationship and a new business model for electric and gas utilities.

**6. Program Rationale**

The Community Energy Partnership covers a variety of program types, or components, that collectively constitute the Partnership, and the involvement of approximately one hundred thousand Californians taking action on energy issues. It is a continually evolving set of initiatives in the partner communities to raise awareness about efficiency, and to get efficient products into the hands and homes and small businesses. It is purposefully broad and continually evolving to find ways of primarily working with people – not technology -- and includes education, training, direct installations, as well as marketing and outreach, and efficient product distributions and promotions. It involves and engages participants in many different ways, from basic information on efficiency to a Community Efficiency Tune-Up to designating Energy Champion participants.

The Community Energy Partnership model is not just a program, it is a movement. It involves people working together to foster responsible energy use and smart energy management in California cities. It involves leadership and volunteerism. In the 2006 – 2008 funding cycle, the Partnership will build on the plethora of relationships and the trust established thus far, allowing for greater levels of participation and penetration, and additional linkages to other utility services to maximize energy efficiency and smart energy management.

**7. Program Outcomes**

The Community Energy Partnership model is a hybrid approach that fully integrates both “non-resource” and “resource” savings into an effective program design. Non-resource savings come from raising awareness and educating the community about taking responsible and effective energy actions. This involves a broad spectrum of “educational” activities, from educating Team Leaders in the partner cities, to linking our city partners, to spending time with senior communities, customizing the

message for each Tune-Up recipient, and to PEAK Student Energy Actions, a sophisticated student curriculum that SCE and the Gas Company have supported. Non-resource savings from a host of community education activities are hard to measure and are qualified herein, but not quantified.

**Non-Resource / Community Education**

The Community Energy Partnership is rooted community organizing, and educating multiple audiences in the partner cities about the benefits of energy efficiency. There is special attention placed on opening doors and gaining the involvement of hard-to-reach customer segments, those that reap a disproportionately high benefit from basic efficiency measures. PEAK student lessons, Energy Rallies with guest speakers, highly publicized Efficiency Makeovers, quizzes at community events, practical information and fact sheets distributed through household and small business Tune-Ups -- provide persistent explanations of the benefits of efficiency and responsible energy use. Throughout the process, the partner cities are essential to this unique delivery channel for energy efficiency, and thus considerable resources are devoted to working with cities and aligning their missions with the Partnership's resources and direction.

Only a portion of the savings that the partners believe are being generated in the ten cities can be quantified using current CPUC reporting and tracking rules. The partners believe that the approach is generating a wide array of real and sustainable savings. Much of the "proof" of savings stem from the behavioral change that is invoked, and which will not be forthcoming for a number of years. Ultimate Partnership success will be the transformation of the way generations view and use energy resources.

**Resource Activities / Efficient Devices**

The Partnership has a track record of delivering a stream of immediate, "hard" savings through product distributions and direct household and small business efficiency installations. These resources can be measured by the partner utilities and their regulators, the efficiency measures appear in the DEER database, and are thus quantified in the Electric Resource workbook. A summary breakdown of Non-Resource and Resource activities follows:

**Resource and Non-Resource Activities**

| | Resource | Non-Resource |
|---|---|---|
| **Community Promotions** | | |
| | | Community organizing<br>Energy Rallies<br>Senior citizen activities<br>Contests<br>Multi-Media Outreach |
| | CFL Giveaways, Exchanges<br>Torchiere Exchanges | |
| | | Fan and shade tree distributions<br>Other efficiency measures |
| Demonstration Efficiency Makeovers | | |

| | | |
|---|---|---|
| | | Community outreach |
| | | Project management |
| | | Material costs, eg. paint |
| | Lighting measures | |
| | HVAC measures | |
| | | Other efficiency measures |
| **Municipal Services** | | |
| | | Building city relations |
| | CFL distributions, exchanges | |
| | | Energy Rallies |
| | | Energy advising |
| | | Strategic planning |
| | | Working on city energy issues |
| | | Designating Energy Champions |
| | | Engineering assessments |
| **Community Efficiency Tune-Ups** | | |
| Household | | |
| | | Energy Rallies |
| | | Participant education |
| | | Information sheets |
| | | Linking with other programs |
| | Lighting measures | |
| | HVAC measures | |
| | Water heating measures | Other efficiency measures |
| Small Business | | |
| | | Energy Rallies |
| | | Youth Services outreach |
| | | Participant education |
| | | Information sheets |
| | Water heating measures | Linking with other programs |
| | Lighting Measures | |
| | HVAC Measures | |
| **PEAK Student Energy Actions** | | |
| Student Education | | |
| | | Core Curriculum |
| | | Curriculum Variations |
| | | Contests and Exchanges |
| | CFL Distribution | |
| | CFL Fundraisers | |
| School Facility Activities | | |
| | | Advisory services |
| | | School energy patrols |
| | | Green clubs |
| | | Engineering assessments |
| | School energy demos | |
| | Demonstration retrofits | |
| Community Activities | | |
| | | Marketing Tune-Ups |
| | | Staffing Energy Rallies |

## 8. Program Strategy

Identify the various strategies that will be used for program success. *See the attached list.*


Program
Strategies.doc

### 8.1.1. Program Strategy Description

The Community Energy Partnership is unique in its flexibility and thus its ability to be continually creative and to make quick corrections. If a certain set of anticipated activities appear unlikely to deliver results, the Partnership may elect to change course reapply both staff time and program funds to another, more promising area. Inversely, wild success with one energy efficiency strategy may warrant an infusion of project funds.

The Partnership also has succeeded by reserving the right to shift resources between participating cities based on progress or lack thereof. This is all done with the primary program objectives in mind, that is to stimulate awareness and action that will lead to sustained savings for eager communities and the State. Some Non-Resource activity funds may result in Resource savings that can be counted, and will be in this event. In fact, the Partnership will take credit for measurable energy savings that it stimulates.

Balancing the flexibility in fund transfers to have maximum effect, the Community Energy Partnership is governed by an Executive Committee made up of officials from the cities, Southern California Edison, The Gas Company, and The Energy Coalition. Committee members meet quarterly to refine the Partnership's strategic direction, encourage continued development of the model, guide work plans, and approve the budget based on forecasts of quarterly expenditures.

## 9. Program Implementation

The Community Energy Partnership approach has proven to be an appealing model from a participant standpoint because it bundles services that have been disparate and thus sporadically utilized. Project participants are exposed to "the bigger picture" of local, state and global energy resources, and they are presented with a variety of savings opportunities through electric, gas, and water utility programs and sustainable practices. Results are not delivered in isolation. This is greatly facilitated by contract administrators from both SCE and The Gas Company who are deeply involved in the program and who are in routine communication with the facilitating partner, the Energy Coalition, as well as the city partners, serving as a link between the utility to the city.

The Partnership's ten diverse cities, with an aggregate population of about a million Californians, are out to make a difference. Through the Partnership, both SCE and The Gas Company develop strong ties by working closely with active cities eager to

engage in all manner of program offerings to benefit their constituents and their utility systems.

- Cities and their utilities work together to deliver customized efficiency programs
- Traditionally underserved customers are targeted for highly valued services
- Students are the core of demonstration and are integral to community activities
- Building trust and relationships in each city opens doors for other energy assistance
- A resource efficiency ethic is created, renewed, and supported

The Community Energy Partnership cities are eager to continue to be involved in the 2006 – 2008 funding cycle. They have proven through action their unique abilities to use their connections to their communities to build viable efficiency initiatives. Their collective program designs and planning stimulate a robust set of activities that "raise the flag" about the value of smart energy management. Building on each city's good standing in its community, the Community Energy Partnership delivers "hardware" savings while creating a long-lasting ethic of responsible resource use.

## 10. Customer Description

Customers participating in the Community Energy Partnership program are residential or small commercial customers residing within one of the participating program cities within the SCE service territory.

## 11. Customer Interface

The Community Energy Partnership outreaches to participants in many different ways. Community rallies may be held at Civic Hall or in the neighborhood grammar school parking lot. Apartment residents are invited to meet in the complex's recreation room for soda and pizza and to hear how they can benefit from receiving an energy efficiency tune-up. Outreach is tailored to match the type of customers found residing or doing business within the project's efforts.

Partner cities do they're share of outreach through various resources available. Events may be broadcast on the city's cable channel, written-up in city newsletters, or the program may have its own promotional Web page on the city's Web site.

The Partnership brings together all partners, participants and resources in a grass-roots, community effort to reach as many customers as possible.

## 12. Energy Measures and Program Activities

### 12.1. Prescriptive Measures.

#### Community Promotions

During the 2006-2008 program period, thousands of residents are expected to participate in community promotions. As the E3 Resource workbook documents, the Community Energy Partnership will provide discounted lighting products – notably

18,000 compact fluorescent lamps and 3,000 fluorescent torchiere lamps to participants.

- 18,000 compact fluorescent lamps
- 3,000 efficient fluorescent torchieres
- 6 Demonstration Efficiency Makeovers

The Demonstration Efficiency Makeovers are a new and now major aspect of the Partnership. While most of the benefit is of a non-resource nature, the specific appliances and efficiency measures installed in the six planned Makeovers will be counted in the Electric Resource workbook.

#### Municipal Facilities

The Community Energy Partnership will continue to work in a variety of ways. One specific way is the distribution of compact fluorescent lamps to city employees. By providing them with "buck-a-bulb" opportunities, or helping to relamp their homes through clever exchanges of bulbs, city employees become ambassadors for the program. In the 2006 – 2008 funding cycle, the Partnership will distribute 6,000 CFLs to city employees.

- 6,000 compact fluorescent lamps

In the hotter climate zone cities, the Community Energy Partnership will continue to promote the implementation of demand response strategies to realize capacity savings in key municipal facilities. By doing so, the cities set an example while potentially reaping incentives in addition to staying below ratcheting peak usage rates.

#### Community Efficiency Tune-Ups

There are two forms of Community Efficiency Tune-Ups: Household Tune-Ups and Small Business Tune-Ups. Tune-Ups are performed by licensed contractors, screened, selected and trained by the Partnership. Working with the head of household, the installation contractors determine the optimal savings measures and recommendations for that particular home.

During 2006 – 2008 the Partnership will Tune-Up approximately 5,400 households in the ten cities. The following is a partial list of measures that will be provided through the Community Energy Partnership Tune-Ups. Note that each home gets a custom set of services.

- Install 13-watt compact fluorescent lamps
- Install 15-watt compact fluorescent lamps
- Install 20-watt compact fluorescent lamps

- Install 23-watt compact fluorescent lamps
- Install 30-watt compact fluorescent lamps
- Install R30 PAR compact fluorescent lamps
- Install R40 PAR compact fluorescent lamps
- Install efficient compact fluorescent kitchen light fixtures
- Install efficient compact fluorescent bathroom light fixtures
- Install efficient LED night lights
- Install efficient compact fluorescent porch and yard lights
- Exchange halogen torchiere lamps with fluorescent models
- Replace furnace and air conditioner filters
- Caulk and weatherstrip windows, doors, and skylights
- Install ceiling fans
- Install low flow showerheads
- Install efficient faucet aerators
- Install water heater wraps
- Install weatherstripping

Installers use a detailed, triplicate checklist in the field to track installation activity, take notes on usage patterns, check major appliances, and provide the household with a record of the Tune-Up and the installer's top three recommendations for further savings. Note that other measures designed to effectively garner the participation levels desired, such as providing table fans (to reduce AC costs), checking smoke detectors and taking a quick look at the general condition of the refrigerator and water heater, are considered non-resource program activities.

#### Small Business Efficiency Tune-Ups

The Community Energy Partnership will work with approximately 450 small businesses in the 2006-2008 program years and to implement energy-efficient measures. As with the household Tune-Ups presented above, select small businesses in each partner city will be presented with Small Business Efficiency Tune-Ups that provide each participant with a customized set of efficiency measures intended to maximize the value of the up to $1,000 spent at each location. The following serves as a partial list of measures that will be offered to customers and that are counted in the Electric Resource workbook.

- Install 13-watt compact fluorescent lamps
- Install 15-watt compact fluorescent lamps
- Install 20-watt compact fluorescent lamps
- Install 23-watt compact fluorescent lamps
- Install 30-watt compact fluorescent lamps
- Install R30 PAR compact fluorescent lamps
- Install R40 PAR compact fluorescent lamps
- Install LED EXIT signs

- Retrofit single lamp, four-foot and eight-foot fixtures with T8s and electronic ballasts
- Retrofit 2-lamp, four-foot and eight-foot fixtures with T8s and electronic ballasts
- Retrofit 3-lamp, four-foot and eight-foot fixtures with T8s and electronic ballasts
- Retrofit 4-lamp, four-foot and eight-foot fixtures with T8s and electronic ballasts
- Install ceiling fans
- Replace furnace and air conditioner filters
- Caulk and weatherstrip windows, doors, and skylights
- Install low flow showerheads
- Install efficient faucet aerators
- Install water heater wraps
- Install weatherstripping
-

#### PEAK Student Energy Actions

PEAK is a multifaceted program. For the Electric Resource portion of the Partnership, two things will be counted: First, each of the projected 36,000 PEAK students will receive a compact fluorescent lamp as a symbol of the potential for efficiency. Second, PEAK students will sell and estimated 12,000 CFLs as fundraisers for their schools.

- 36,000 compact fluorescent lamps for students' homes
- 12,000 compact fluorescent lamps for fundraisers

### 12.2. Non-energy Activities

Non-energy activities are addressed in the Community Energy Partnership's non-resource program implementation plan.

#### 12.2.1. Activity Description

#### 12.2.2. Quantitative Activity Goals

#### 12.2.3. Assigned attributes of the activity (market sector, end use)

## 13. Subcontractor Activities

Fully trained and licensed installation companies will be under contract to deliver the direct installation of energy efficient measures, provide education, and identify utility program linkages to participating customers.

Installers use a detailed, triplicate checklist in the field to track installation activity, take notes on usage patterns, check major appliances, and provide the customer with

a record of the Tune-Up and the installer's top three recommendations for further savings. Note that other measures designed to effectively garner the participation levels desired, such as checking smoke detectors and the general condition of the refrigerator and water heater, are considered non-resource program activities.

## 14. Quality Assurance and Evaluation Activities

Quality assurance activities will include ride-alongs with the installation contractors and unannounced on-site visits during scheduled installation activity. Post-installation on-site visits will verify that contractor recorded measures have been installed. Program staff will survey customers post-participation for satisfaction ratings and measures installation verification.

### 14.1. Expected Number/Percent of Inspections

It is anticipated that approximately 3% of all participating customers or customer sites will receive quality assurance and inspection efforts.

## 15. Marketing Activities

The Partnership drives the process of organizing communities to take greater responsibility for their energy use. It involves building relationships with city governments, and with their constituents. It also involves bringing in all manner of stakeholders into the process of community organizing, from architects to teachers to the neighborhood, small business owner. The Partnership touches the community at many levels.

The Community Energy Partnership presented herein reaches out to a plethora of different audiences, many of whom realize quite different benefits of energy efficiency and smart energy management. Each requires its own marketing strategy and execution. By their very nature, community education activities take a number of forms and are cross-cutting, requiring custom articles for community newsletters, video and radio productions, press releases and video news releases, e-mail communications, printed materials for distribution to participants… all kinds of communications appropriate to each audience.

The Community Energy Partnership has four primary program components: Community organizing, working with partner cities on energy issues in a variety of ways, providing Tune-Ups and demonstrations for the communities, and educating youth and the community through PEAK Student Energy Actions. Participation targets for 2006 – 2008 are presented below.

| Program Components | Participation Targets |
|---|---|
| **Community Organizing** | |
| Compact Fluorescent Lamps | 18,000 |
| Fluorescent Torchieres | 3,000 |
| Other Efficient Device Distributions | 5,000 |
| Demonstration Efficiency Makeovers | 6 |
| **Municipal Activities** | 10 |

| | |
|---|---|
| Employee Distributions | 6,000 |
| **Community Efficiency Tune-Ups** | |
| Household Tune-Ups | 5,400 |
| Small Business Efficiency Tune-Ups | 450 |
| **PEAK Student Energy Actions** | |
| PEAK Students | 48,000 |
| PEAK Households | 27,000 |
| PEAK Schools | ~100 |
| PEAK School Districts | 8 |
| **Total Project Participants** | **~100,000** |

## 16. Summary

The measures presented in the resource component of the Community Energy Partnership complement a far broader and strategic program concept, the movement created and sustained by the Partnership. While these measures offer immediate value – energy and dollar savings for their recipients – the Partnership is profound in that it is delivering a host of short, mid, and long-term results. The measures presented herein, the partners believe, represent the tip of the iceberg. The vast majority of the value of the program will be in the ethic created and the practices sustained over time by its valued participants.

## 17. CPUC Objective

The program has been developed in conjunction with The Community Energy Partnership, Southern California Edison (SCE), and the Southern California Gas Company (SCG).to meet the applicable CPUC objectives and guidelines as outline in the Energy Efficiency Policy Manual This program supports the following CPUC objectives: (2) To pursue all cost-effective energy efficiency opportunities over both the short- and long-term; (5) Program Administrators should manage their portfolio of programs to meet or exceed the short- and long-term savings goals established by the Commission by pursuing the most cost-effective energy efficiency resource programs first, while minimizing lost opportunities; and (9) Program Administrators will manage a portfolio of programs implemented by IOUs and non-IOUs that are selected and evaluated based on their ability to best meet the policy objectives articulated in these Rules. Emphasis has been to develop the program with the cities participating in The Community Energy Partnerhisp on more equal footing as compared to other programs. The organization and governance of the program is achieved in partnership with the The Energy Coalition, SCE, and SCG. Although all partnerships share some common elements, The Community Energy Partnership has been specifically tailored to the needs and unique characteristics of the aforementioned cities.

| | SCG3525 EC4-Energy Coalition - Direct Install | |
|---|---|---|
| **BUDGET** | | |
| | | |
| **Administrative Costs** | **$** | **90,715** |
| Overhead and G&A | $ | 21,714 |
| Other Administrative Costs | $ | 69,001 |
| **Marketing/Outreach** | **$** | **40,875** |
| **Direct Implementation** | **$** | **324,410** |
| Total Incentives and Rebates | | |
| User Input Incentive | $ | - |
| Direct Install Rebate | $ | 170,000 |
| Direct Install Labor | $ | - |
| Direct Install Materials | $ | - |
| Activity | $ | 154,410 |
| Installation | $ | - |
| Hardware & Materials | $ | - |
| Rebate Processing & Inspection | $ | - |
| **EM&V Costs** | **$** | - |
| **Budget** | **$** | **456,000** |
| **Costs recovered from other sources** | **$** | - |
| **Budget** (plus other costs) | **$** | **456,000** |
| | | |
| **PROGRAM IMPACTS** | | |
| **Program Reductions for Measures installed through 2008** | | |
| User Entered kW (kW) | | 0 |
| Net Jul-Sept Peak (kW) | | 0 |
| Net Dec-Feb Peak (kW) | | 0 |
| Net NCP (kW) | | 0 |
| Net CEC (kW) | | 0 |
| Annual Net kWh | | 0 |
| Lifecycle Net kWh | | 0 |
| Annual Net Therms | | 68000 |
| Lifecycle Net Therms | | 1020000 |
| | | |
| **Cost Effectiveness** | | |
| **TRC** | | |
| Costs | | 394237.9865 |
| Electric Benefits | | 0 |
| Gas Benefits | | 429570.2003 |
| Net Benefits (NPV) | | 35332.21383 |
| BC Ratio | | 1.09 |
| | | |
| **PAC** | | |
| Costs | $ | 436,331 |
| Electric Benefits | $ | - |
| Gas Benefits | $ | 429,570 |
| Net Benefits (NPV) | $ | (6,760) |
| BC Ratio | | 0.98 |
| | | |
| **Levelized Cost** | | |
| **Levelized Cost TRC ($/kWh )** | | |
| Discounted kWh | | 0 |
| Cost | | 0 |
| Benefits | | 0 |
| Benefit-Cost | | 0 |
| **Levelized Cost PAC ($/kWh)** | | |
| Discounted kWh | | 0 |
| Cost | | 0 |
| Benefits | | 0 |
| Benefit-Cost | | 0 |
| **Levelized Cost TRC ($/therm)** | | |
| Discounted Therms | | 570905.239 |
| Cost | | 0.690548903 |
| Benefits | | 0.752436956 |
| Benefit-Cost | | 0.061888053 |
| **Levelized Cost PAC ($/therm)** | | |
| Discounted Therms | | 570905.239 |
| Cost | | 0.76427839 |
| Benefits | | 0.752436956 |
| Benefit-Cost | | -0.011841434 |

## Energy Coalition - Direct Install

| Year | Total Budget | Total Incentives | Admin Budget | Net kWh | Net Therms | Net kW |
|---|---|---|---|---|---|---|
| 2006 | $ 152,000 | $ 50,000 | $ 102,000 | - | 20,000 | - |
| 2007 | $ 152,000 | $ 60,000 | $ 92,000 | - | 24,000 | - |
| 2008 | $ 152,000 | $ 60,000 | $ 92,000 | - | 24,000 | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 327001 | Gas Measures | - | 1 | - | 0.8 | Therm | 15 | 25,000 | $ 2.00 | $ 1.80 | - | 20,000 | - |
| 2007 | 327001 | Gas Measures | - | 1 | - | 0.8 | Therm | 15 | 30,000 | $ 2.00 | $ 1.80 | - | 24,000 | - |
| 2008 | 327001 | Gas Measures | - | 1 | - | 0.8 | Therm | 15 | 30,000 | $ 2.00 | $ 1.80 | - | 24,000 | - |

# 2006-2008 Energy Efficiency Programs
# Energy Coalition Partnership Non Resource Concept Paper

## 1. Projected Program Budget

| | 2006 | 2007 | 2008 |
|---|---|---|---|
| Administration | | | |
| Administrative Overheads | $ 21,810 | $ 21,810 | $ 21,810 |
| Administrative Other | $ 62,222 | $ 62,330 | $ 62,734 |
| Marketing & Outreach | $ 162,469 | $ 162,360 | $ 158,956 |
| Direct Implementation | | | |
| Activity | $ 207,500 | $ 206,500 | $ 209,500 |
| Installation | $ - | $ - | $ - |
| Hardware & Materials | $ 4,000 | $ 5,000 | $ 5,000 |
| Procurement | $ - | $ - | $ - |
| Incentives | $ - | $ - | $ - |
| EM&V | $ - | $ - | $ - |
| *Total* | *$ 458,001* | *$ 458,000* | *$ 458,000* |

## 2. Projected Program Impacts

| 2006 | | | 2007 | | | 2008 | | |
|---|---|---|---|---|---|---|---|---|
| **kW** | **kWh** | **Therms** | **kW** | **kWh** | **Therms** | **kW** | **kWh** | **Therms** |
| | | | | | | | | |

## 3. Program Cost Effectiveness

## 4. Program Descriptors

Market Sector: Cross-Cutting
Program Classification: SCG Service Territory
Program Status: Existing

## 5. Program Statement

The Community Energy Partnership is a hybrid and multidimensional partnership for the delivery of sustainable energy efficiency in Southern California. For seven years, The Energy Coalition has facilitated the development of a far-reaching, innovative program for engaging communities in responsible energy use, raising their awareness about energy efficiency, the importance of peak demand reductions, as well as renewables and transportation energy. It is a demonstration that draws upon the strengths of key energy stakeholders in each city to create a powerful synergy.

**Partner Cities**

| | |
|---|---|
| Irvine | Corona |
| Santa Monica | San Bernardino |
| Moreno Valley | Cathedral City |
| Palm Desert | Hermosa Beach |
| Brea | Santa Clarita |

# 2006-2008 Energy Efficiency Programs
# Energy Coalition Partnership Non Resource Concept Paper

**Partner Utilities**

Southern California Edison Southern California Gas

**Facilitating Partner**

The Energy Coalition

The Community Energy Partnership is a demonstration partnership that has the potential to dramatically change the relationship between utilities and the cities they serve, and the responsibility that all consumers take for their energy use. Through the Partnership, a traditional equation is turned on its head: No longer are utilities perceived as commodity providers. Cities step up to the plate and play an active role in their energy future. The Partnership ultimately defines a new relationship and a new business model for electric and gas utilities.

## 6. Program Rationale

The Community Energy Partnership covers a variety of program types, or components, that collectively constitute the Partnership, and the involvement of approximately one hundred thousand Californians taking action on energy issues. It is a continually evolving set of initiatives in the partner communities to raise awareness about efficiency, and to get efficient products into the hands and homes and small businesses. It is purposefully broad and continually evolving to find ways of engaging people – supported by efficient technologies -- and includes education, training, direct installations, as well as marketing and outreach, and efficient product distributions and promotions. It involves and engages participants in many different ways, from basic information on efficiency to a Community Efficiency Tune-Up to designating Energy Champion participants.

The Community Energy Partnership model is not just a program, it is a movement. It involves people working together to foster responsible energy use and smart energy management in California cities. It involves leadership and volunteerism. In the 2006 – 2008 funding cycle, the Partnership will build on the plethora of relationships and the trust established thus far, allowing for greater levels of participation and penetration, and additional linkages to other utility services to maximize smart energy management.

The Community Energy Partnership is a demonstration model that has huge ramifications to the State's power system.

Proven Success

For the past two energy efficiency funding cycles, activities in the Partnership have far exceeded expectations, real efficiency savings were delivered, and there is remarkable enthusiasm on the part of each of the partners, to carry on and to dig deeper for sustainable energy savings.

Enthusiasm

The original partner cities are eager to extend their initiatives. Many of their citizens are ready to "take the controls" of their current energy use and energy future. The cluster of cities is working well, the program designs are effective, and the Coalition has a solid track record of implementation experience. The summary results of Planning Forum 2, attended by all the cities and held in November of 2005 to refine the program for 2006 – 2008 are presented below:

- We're on the right track; now its time to be creative and expand.
- Aggressively pursue energy solutions during time of peak demand
- Let's use the foundation set to leverage existing utility programs
- Modify the Tune-Ups to best meet community needs
- Integrate PEAK – bring more hands-on serving learning to the community
- Create new partnerships within the community, with students, churches, business associations, police and fire, and those already working with hard-to-reach groups.

Trust

The Community Energy Partnership works in a unique way and in doing so has been able to reach energy consumers that are most in need of energy and dollar savings. The Partnership works with participants who have been largely cynical about their prospects of having an impact at the community or state level.

Ethics

The Partnership educates participants and organizes communities to fundamentally change the way people think about energy and other finite resources. The Community Energy Partnership that has now grown to ten Southern California Edison cities, representing a million Californians, will build a responsible energy ethic to transform attitudes and markets.

Tapping "Ordinary People"

The model is proving that "ordinary people" can be educated and inspired to reap the benefits of immediate action and become part of a process of creating a healthy energy future. Through collaboration stimulated by the cities and the strategic partnerships developed by The Energy Coalition, Community Energy Partnerships are a potent model and expression of community energy responsibility.

Respect

The respect Community Energy Partnership has gained as an innovative and essential approach to delivering an energy efficiency ethic and measures has been

hard-earned. It speaks to the success of a robust set of activities in the partner cities that are at once providing immediate energy-savings benefits and building community responsibility for energy use through an energy ethic that has been heretofore missing.

## 7. Program Outcomes

The Community Energy Partnership model is a hybrid approach that fully integrates both "non-resource" and "resource" savings into an effective program design. Non-resource savings come from raising awareness and educating the community about means of taking responsible and effective energy actions. This involves a broad spectrum of "educational" activities, from educating Team Leaders in the partner cities, to linking city partners, to spending time with senior communities, to customizing the message for each Tune-Up recipient, and to PEAK Student Energy Actions, a sophisticated student curriculum that SCE and The Gas Company have supported. Non-resource savings from a host of community education activities are hard to measure and are qualified herein, but not quantified.

### Non-Resource / Community Education

The Community Energy Partnership is rooted community organizing, and educating multiple audiences in the partner cities about the benefits of energy efficiency. There is special attention placed on opening doors and gaining the involvement of hard-to-reach customer segments, those that reap a disproportionately high benefit from basic efficiency measures. PEAK student lessons, Energy Rallies with guest speakers, highly publicized Efficiency Makeovers, quizzes at community events, practical information and fact sheets distributed through household and small business Tune-Ups -- provide persistent explanations of the benefits of efficiency and responsible energy use. Throughout the process, the partner cities are essential to this unique delivery channel for energy efficiency, and thus considerable resources are devoted to working with cities and aligning their missions with the Partnership's resources and direction.

Only a portion of the savings that the partners believe are being generated in the ten cities can be quantified using current CPUC reporting and tracking rules. The partners believe, however, that the Partnership approach is generating a wide array of real and sustainable savings made possible through diligent community organizing. Much of the "proof" of savings stem from the behavioral change that is invoked, and which will not be forthcoming for a number of years. The ultimate Partnership success will be the transformation in the way that generations view and use energy resources.

### Resource Activities / Efficient Devices

The Partnership has a track record of delivering a stream of immediate, "hard" savings through product distributions and direct household and small business efficiency installations. The aspect is particularly valued by lower income participants as well as seniors on fixed incomes. These resources can be measured

by the partner utilities and their regulators, the efficiency measures appear in the DEER database, and are thus quantified in the Partnership Resource Workbook. A summary breakdown of Non-Resource and Resource activities follows:

## Resource and Non-Resource Activities

| | Resource | Non-Resource |
|---|---|---|
| **Community Promotions** | | |
| | | Community organizing |
| | | Energy Rallies |
| | | Senior citizen activities |
| | | Contests |
| | | Multi-Media Outreach |
| | CFL Giveaways, Exchanges | |
| | Torchiere Exchanges | |
| | | Fan and shade tree distributions |
| | | Other efficiency measures |
| Demonstration Efficiency Makeovers | | |
| | | Community outreach |
| | | Project management |
| | | Material costs, eg. paint |
| | Lighting measures | |
| | HVAC measures | |
| | | Other efficiency measures |
| **Municipal Services** | | |
| | | Building city relations |
| | CFL distributions, exchanges | |
| | | Energy Rallies |
| | | Energy advising |
| | | Strategic planning |
| | | Working on city energy issues |
| | | Designating Energy Champions |
| | | Engineering assessments |
| **Community Efficiency Tune-Ups** | | |
| Household | | |
| | | Energy Rallies |
| | | Participant education |
| | | Information sheets |
| | | Linking with other programs |
| | Lighting measures | |
| | HVAC measures | |
| | | Other efficiency measures |
| Small Business | | |
| | | Energy Rallies |
| | | Youth Services outreach |
| | | Participant education |
| | | Information sheets |
| | | Linking with other programs |
| | Lighting Measures | |
| | HVAC Measures | |
| **PEAK Student Energy Actions** | | |
| Student Education | | |
| | | Core Curriculum |
| | | Curriculum Variations |
| | | Summer PEAK program |
| | | Contests and Exchanges |

CFL Distribution
CFL Fundraisers

School Facility Activities

Advisory services
School energy patrols
Green Clubs
Engineering assessments

School energy demos
Demonstration retrofits

Community Activities

Marketing Tune-Ups
Staffing Energy Rallies

## 8. Program Strategy

The Community Energy Partnership is unique in its flexibility and thus its ability to be continually creative and to make quick corrections. If a certain set of anticipated activities appear unlikely to deliver results, the Partnership can elect to change course reapply both staff time and program funds to another, more promising area. Inversely, wild success with one energy efficiency strategy may warrant an infusion of project funds.

The Partnership also reserves the right to shift resources between participating cities based on progress or lack thereof. This is all done with the primary program objectives in mind, that is to stimulate awareness and activity that will lead to sustained savings for eager communities, their serving utilities, and the State. Some Non-Resource activity funds may result in Resource savings that can be counted, and will be in this event. In fact, the Partnership will take credit for measurable energy savings that it stimulates.

The Community Energy Partnership is marked by persistent innovation to garner community interest and action. To keep a close eye on this big picture, and to avoid the pitfall of being constrained by stricture, the Community Energy Partnership is governed by an Executive Committee made up of officials from the cities, Southern California Edison, Southern California Gas, and The Energy Coalition. Committee members meet quarterly to refine the Partnership's strategic direction, encourage continued development of the model, guide work plans, and approve budgets based on forecasts of quarterly expenditures

### 8.1.1. Program Strategy Description

The Partnership drives the process of organizing communities to take greater responsibility for their energy use. It involves building relationships with city governments, and with their constituents. It also involves bringing in all manner of stakeholders into the process of community organizing, from architects to teachers to the neighborhood, small business owner. The Partnership touches the community at many levels.

Engaging Diverse Audiences

The Community Energy Partnership presented herein reaches out to a plethora of different audiences, many of whom realize quite different benefits from energy efficiency and smart energy management. Each requires its own marketing strategy and execution. The following list contains some of the tools used by the Partnership to get the message out there… and more will continually be developed to raise and sustain interest.

| Sample Materials | Select Media |
|---|---|
| e-newsletters | One on One |
| Door Hangers | Radio |
| Banners and Exterior Signage | Television |
| Flags | Newspapers |
| Posters and Enlarged Maps | City Web Sites |
| Flyers | Bulbman Mascot! |

By their very nature, community education activities take a number of forms and are cross-cutting, requiring custom articles for community newsletters, video and radio productions, press releases and video news releases, e-mail communications, printed materials for distribution to participants… all kinds of communications appropriate to each audience.

City Value Proposition Promotion

The most profound program design element in terms of marketing is marketing with substance, and this is explicitly why the city partners become engaged in the Partnership: They see value in the project and are pleased to present the Partnership's multiple benefits to their diverse constituents. With the Coalition's assistance, the cities "market" the project on their web sites, in newsletters, through special mailings, on their city television stations, in city council meetings, and in many other ways giving the project credibility. Program participants include:

Senior Centers
Apartment Complexes
Mobile Home Parks
Neighborhood Associations
Community Centers
Homeowners Associations
Parks and Recreation Departments
Community Libraries
School Classes and Sports Teams
Senior Retirement Communities
Fire and Police Departments
Small Business Groups

Chambers of Commerce
Boy and Girl Scouts
Service Clubs (Rotary, Kiwanis)
College Fraternities and Sororities
Private Businesses
Government Agencies

### 8.1.2. Program Indicators

The Community Energy Partnership focuses on the four primary areas with target participation numbers presented for the three-years, doing Community Organizing, working with partner cities on energy issues in a variety of ways, providing Tune-Ups to the communities, and educating youth and the community through PEAK Student Energy Actions:

| Program Components | Participation Targets |
|---|---|
| **Community Organizing** | |
| Compact Fluorescent Lamps | 30,000 |
| Fluorescent Torchieres | 3,000 |
| Other Efficient Device Distributions | 5,000 |
| Energy Efficiency Makeovers | 6 |
| **Municipal Activities** | 10 |
| Employee Distributions | 6,000 |
| **Community Efficiency Tune-Ups** | |
| Household Tune-Ups | 5,400 |
| Small Business Efficiency Tune-Ups | 450 |
| **PEAK Student Energy Actions** | |
| PEAK Students | 36,000 |
| PEAK Households | 27,000 |
| PEAK Schools | ~100 |
| PEAK School Districts | 8 |
| **Total Project Participants** | **~100,000** |

**Community Organizing**

Community organizing takes many forms and unexpected directions and involves all types of participants. To get students, households, and businesses “fired up” about the potentials for energy efficiency, the Community Energy Partnership hosts a variety of special events. Community Energy Rallies often use discounted product and face-to-face interaction on the benefits of efficiency. Promotions are generally held within specifically targeted areas for program activity by the partner cities,

known as Energy Districts, and support participation in subsequent initiatives such as Community Efficiency Tune-Ups.

Building an Ethic

The Resource Portion of the Partnership Plan includes tens of thousands of CFLs distributed and thousands of halogen torchieres exchanged for safe and efficient fluorescent models. In these cases, the product is secondary to the message, but often lures participants. The Partnership's continual challenge and success, has been its ability to "touch" the community, to reach out to individuals and engender in them a sense of caring about energy and the environment. While the project will reach perhaps 100,000 participants, it is raising participant awareness – on-by-one - that is likely its most profound impact. For then, a participant is a believer and will continue to practice efficiency and sustainability to the best of his or her means, for life.

Continual Innovation

The Partnership's success has been its flexibility. By working closely with cities and their stakeholders, the program design continually evolves. Activities can be ramped up and down based on demand. The Partnership budget includes resources for "other" promotions that are not prescribed at this time. To be truly innovative and flexible, the Partnership reserves the time to get it right, to listen to its city partners – done continually – and to devise new and effective means of exciting people about the energy efficiency message. For example, this past funding cycle's creation of Bulbman, the program mascot, has been a huge success, and came about mid-stream with much input from city officials. As such, the project is owned by the cities. This flexibility is a key to the program and to keeping it fresh. Contests, recognition, public relations, etc…. all form the fabric of effective community organizing, and are at the core of the project.

Building Trust in the Communities

Another key aspect of community organizing involves building relationships. To effectively organize around responsible energy use, program staff spends countless hours in the field, in the cities, serving as the bridge between the serving utilities and the cities. The Partnership's funds bring essential community organizing to the table, which in turn lays a foundation for innovation as well as the full-scale delivery of SCE and Gas Company programs. Through the Partnership, participants get a holistic view of energy management – merging energy efficiency with conservation, demand response, and renewable energy resources. This integration is done because it is logical to the cities.

Working with Seniors

The Community Energy Partnership continues an impressive track record working with mobile home communities. Often occupied by seniors on fixed incomes, these communities are specifically included and have been the sites for Energy Rallies promoting energy efficiency as well as signing up participants for Community Efficiency Tune-Ups. Partnership activities also bring low-income-qualified utility and social services into these communities.

Apartment Tenant Outreach and Services

Rental apartments are also fundamental to the Partnership, often occupied by lower-to-moderate income consumers in need of lower utility bills as well as increased comfort and safety. The project brings Tune-Ups to this customer segment as well as Energy Rallies and other forms of special events, often with Spanish presenters working for the Partnership. At these events, participants are often given soft drinks and snacks, they hear a brief presentation, often get sample CFLs, and sometimes they can even sign up for a Tune-Up, in cases which start in the community right after the Energy Rally. This "fires up" the community, and the word spreads. As a result, dramatic participation levels have been achieved, and will be achieved using the concentrated approach. Marketing and outreach is fundamental to the Partnership's work.

**Municipal Activities**

The Community Energy Partnership is not a program, per se, but instead a process, an ongoing business relationship between vested parties. SCE and the Gas Company are vested, as are the partner cities. Each partner city makes a commitment to the Partnership – be it public works, police and traffic, fire, insurance, graphics, public endorsement, etc. -- and provides invaluable services. With this quid pro quo squarely in place, a resilient structure is at work and both parties can gain. The Partnership has built a foundation in the ten partner cities that now can serve as a uniquely powerful delivery channel for energy efficiency.

The Partnership works closely with each city, staying in routine contact with one or two Team Leaders, planning special events, convening quarterly Team Leaders meetings, and at appropriate City Council meetings, maintaining a close working relationship. A Memorandum of Understanding, executed by the City Manager as authorized through resolution of the Council, spells out expectations and responsibilities, but experience has shown the cities that the more they put in to the relationship between city and utility, the more services that they receive. In fact, there is a friendly competition between the cities, an unexpected but important

program design element. Several of the partner cities have really stepped up and have developed active demonstration projects with the Coalition, SCE, and the Gas Company that are separately funded, but which also show the value of the program as a platform for further activity and to further the partnership business model established by the Partnership.

To be effective in their communities, partner cities must be actively involved in "getting their own houses" in order. The Community Energy Partnership promotes a number of planning and management functions for the City itself to become a model energy consumer and a champion of smart energy management over time. The Community Energy Partnership requires its partner to be actively engaged in the smart energy management of its own facilities. Therefore, in terms of participation, all 10 partner cities will be involved.

**Household Tune-Ups: 5,400**

During the 2006 – 2008 funding cycle, the Community Energy Partnership will deliver approximately 5,400 Household Tune-Ups to deserving participants. Each city will target the Tune-Ups differently, to neighborhoods, apartment complexes, senior communities, mobile home parks, etc. The Tune-Ups are targeted and generally are provided to hard-to-reach customer segments in rental apartments and mobile homes, though this funding cycle will introduce single family retrofit activity. The Coalition markets the Tune-Ups, backed up by trained, professional installers. Tune-Ups take about an hour, sometimes less depending on the size of the crew.

During each Tune-Up, participants get information as well as the installation of energy-efficient devices, encapsulating the hybrid program approach. The Tune-Ups are not intended to complete the energy-saving task at each home, but instead are intended to serve as "the starter" and to inspire participants to continue to penetrate their efficiency opportunities, and to encourage their neighbors and friends, to do same. The Tune-Up strategy is to offer as complete and valuable a package of services… to get in the door and to have time with the head of household to educate him or her about the benefits of energy efficiency. Sophisticated training has led to dramatic success with installers doing an exceptional job in the field.

Each Tune-Up necessarily involves the head of household to assure that the efficiency message is delivered to the household decision-maker. Each household will get approximately $250 worth of goods and services. Tune-Up installers are paid for one hour of time at each Tune-Up to discuss efficiency with the head of household. A detailed checklist filled out with the head of household covers lighting, air conditioning, refrigerators, miscellaneous end-uses, building envelope, water use, as well as household

safety. By engaging the participant, the Tune-Up is made relevant, and the message about the efficiency opportunity spreads.

**Small Businesses: 450**

The Community Energy Partnership also focuses on local small businesses that often form the fabric of the community. They key to the inclusion of small business is to engage this critical market segment, and to help it become the voice of energy efficiency and smart energy management. This requires education, stimulated in large part by the $1,000 bundle of services offered. Working closely with the city partners, the Partnership tries to identify how to best target the limited number of Tune-Ups so that they can spread… the message that efficiency makes sense, and that there are other programs out there to help.

Small Business Tune-Ups address lighting, air handling, and refrigeration efficiency opportunities head on, while checking into business owners' unusual energy use and problem areas. Water-saving measures, funded through local water agencies, are often installed and safety is discussed, providing a comprehensive Tune-Up service… the news of which will spread. The Partnership also designates participating small business owners as Energy Champions who serve as emissaries to colleagues and customers. During the 2006-2008 program years, the Community Energy Partnership will deliver 450 Small Business Efficiency Tune-Ups to small businesses in the partner cities.

**PEAK Student Energy Actions**

**Students: 36,000**

PEAK Student Energy Actions, an educational curriculum and activities program for grammar, middle, and high school students, will continue in seven school districts, with at least two additional school districts exploring the program at this time. With the existing school districts currently on board, and the expectation of adding one more major school district, 36,000 students will be involved with PEAK over the three-year program period.

**PEAK Households: 27,000**

The PEAK Student Energy Actions program teaches the cities' youth an appreciation of how to manage energy consumption as well as how to manage the demand for electricity so as to clear up the "electricity traffic jam." Armed with this awareness and knowledge of how to take action, and simulations of their homes' optimal energy use, PEAK students take the message home. And that's where the action begins as PEAK Students become "household energy managers." Evaluations of the PEAK program

reveal broad savings effects in student households.

For the 2004-2005 program years, the Community Energy Partnership will engage approximately 27,000 PEAK households. This participation is 75% of the number of PEAK students, reflecting the situation in which a household has more than one child in the program, and that some older students have already been through the program and thus their homes are not double counted.

**PEAK School Districts 8**

During the 2006-2008 program years, The Energy Coalition projects that it will work with eight school districts to implement the PEAK Student Energy Actions program. This includes the four school districts squarely on board, plus the three pilot programs underway, and as stated above, the assumption that at least one of the two interested districts will also come on board with teaching the smart energy management curriculum.

The Community Energy Partnership provides a powerful platform for energy efficiency. Now the cities are on a path to achieve exemplary levels of participation in and penetration of efficiency services. For the past two energy efficiency funding cycles, activities in the Partnership have far exceeded expectations, real efficiency savings were delivered, and there is remarkable enthusiasm to carry on and to dig deeper.

**9. Program Implementation**

In each city, the Community Energy Partnership captures unique needs and interests and builds a stream of customized programs. Throughout the three-year funding cycle, the Coalition, cities, and utility partners will continue to innovate and to devise new programmatic approaches to spur interest and action in energy efficiency.

Strategic Planning

At the onset of the funding cycle, a strategic activity plan will be developed for the delivery of services to target participants in each city. The approach flourishes with community input. And it is grounded in incremental and sequential developments. Whichever initiatives are begun must effectively set the stage for the next. And it is this multiplicative effect that provides the basis for the synergy of results that leads to high levels of participation and penetration. This build out of activity is at the root of the Community Energy Partnership process.

Flexibility

The Community Energy Partnership is unique in its flexibility and thus its ability to be continually creative and to make quick corrections. If a certain set of anticipated

activities appear unlikely to deliver results, the Partnership can elect to change course reapply both staff time and program funds to another, more promising area. Inversely, wild success with one energy efficiency strategy may warrant an infusion of project funds. The Partnership also reserves the right to shift resources between participating cities based on progress or lack thereof. This is all done with the primary program objectives in mind, that is to stimulate awareness and activity that will lead to sustained savings for eager communities, their serving utilities, and the State.

Executive Guidance

The Community Energy Partnership is marked by persistent innovation to garner community interest and action. To keep a close eye on this big picture, and to avoid the pitfall of being constrained by stricture, the Community Energy Partnership is governed by an Executive Committee made up of officials from the cities, Southern California Edison, Southern California Gas, and The Energy Coalition. Committee members meet quarterly to refine the Partnership's strategic direction, encourage continued development of the model, guide work plans, and approve budgets based on forecasts of quarterly expenditures.

Leverage and Synergy

The Partnership is compelling business relationship for many reasons. And it has and will continue to link up with other organization and programs to leverage resources, be it collaboration at an event, a donated energy-efficient appliance, a group of volunteers for four hours, or a federal or state program. It also provides key linkages to other existing Southern California Edison programs, Southern California Gas programs, water efficiency opportunities, and community development and small business services. Partnership funds are judiciously expended where other funding is not available and used strategically raise awareness through demonstrations and leveraged outreach.

The Community Energy Partnership approach has proven to be an appealing model from a participant standpoint because it bundles services that have been disparate and thus sporadically utilized. Project participants are exposed to "the bigger picture" of local, state and global energy resources, and they are presented with a variety of savings opportunities through electric, gas, and water utility programs and sustainable practices. Results are not delivered in isolation. This is greatly facilitated by contract administrators from both SCE and The Gas Company who are deeply involved in the program and who are in routine communication with the Coalition as well as the city partners, serving as a link between the utility to the city.

**10. Customer Description**

Customers participating in the Community Energy Partnership program are residential or small commercial customers residing within one of the participating program cities within the SCE service territory.

**11. Customer Interface**

The Community Energy Partnership outreaches to participants in many different ways. Community rallies may be held at Civic Hall or in the neighborhood grammar school parking lot. Apartment residents are invited to meet in the complex's recreation room for soda and pizza and to hear how they can benefit from receiving an energy efficiency tune-up. Outreach is tailored to match the type of customers found residing or doing business within the project's efforts.

Partner cities do they're share of outreach through various resources available. Events may be broadcast on the city's cable channel, written-up in city newsletters, or the program may have its own promotional Web page on the city's Web site.

The Partnership brings together all partners, participants and resources in a grass-roots, community effort to reach as many customers as possible.

**12. Energy Measures and Program Activities**

Energy and demand savings are not quantified for Non-Resource activities. However, all measurable impacts that accrue from Non-Resource activities will be tallied and reported as part of the Resource savings.

The Partnership's ten diverse cities, with an aggregate population of about a million Californians, are out to make a difference and are demonstrating their commitment to a new partnership business model. Through the Partnership, cities work closely with their serving utilities to bring about a win-win situation, and both SCE and The Gas Company develop strong ties by working closely with active cities eager to engage in all manner of program offerings to benefit their constituents and their utility systems.

- Cities and their utilities work together to deliver customized efficiency programs
- Traditionally underserved customers are targeted for highly valued services
- Students are the core of demonstration and are integral to community activities
- Building trust and relationships in each city opens doors for other energy assistance
- A resource efficiency ethic is created, renewed, and supported

The Community Energy Partnership cities are eager to continue to be involved in the 2006 – 2008 funding cycle. They have proven through action their unique abilities to use their connections to their communities to build viable efficiency initiatives. Their collective program designs and planning stimulate a robust set of activities that "raise the flag" about the value of energy efficiency in particular and smart energy management in general. Building on each city's good standing in its community, the Community Energy Partnership delivers "hardware" savings while creating a long-lasting ethic of responsible resource use.

**Community Promotions**

During the 2006-2008 program period, thousands of residents are expected to participate in community promotions. While these events take many forms, the Community Energy Partnership will provide discounted lighting products – notably compact fluorescent lamps and fluorescent torchiere lamps – to these participants (and that are counted in the Resource Workbook). However, the technology – the promotional item – is just that, it is an item used to convey a message, and this is the gist of the Non-Resource portion of the Community Energy Partnership.

- PEAK Packs
- Table Fans
- Other Promotional Items

Beyond the two specific, community organizing measures accounted for in the Resource Workbook, the Partnership will find other means to innovate with promotions, again to convey a message. PEAK Packs developed in 2005 are insulated cooler bags stuffed with information and technologies to educate and engage participants in cutting peak demand in California. The PEAK Packs caught every city's interest and were delivered in a number of interesting collaborations. In another case, desert cities requested fan distributions to offset air conditioning use. Raffles for energy-efficient devices have and can be used to raise awareness and excite communities. The Partnership will continue to innovate with promotional items and approaches, understanding full well that changing behavior of Californians on energy use requires sophisticated marketing and outreach, involving a combination of message and reward.

- Demonstration Efficiency Makeovers

The Demonstration Efficiency Makeovers are a new and now major aspect of the community organizing. Two Makeovers were completed in the 2004 – 2005 funding cycle and garnered significant press attention, which again served to spread the efficiency message. Given their appeal in the press, the Partnership will again fully tap its city connections to identify and work with the right Makeover participants. And the success in getting the message out has been dramatic. Naturally the energy-savings from a single bungalow in San Bernardino or a mobile home in Palm Desert are not large on a system basis. But the message can be huge: The San Bernardino Makeover of "Grandma's" house resulted in press coverage hitting 1.4 million Californians. Makeovers may include demand response and alternative energy installations to demonstrate the value of integrated approaches with energy efficiency.

**Municipal Facilities**

The Community Energy Partnership will continue to work in a variety of ways with municipal facilities to cut energy use throughout city government, notably in city halls, as well as community centers, libraries, police and fire stations, corporate yards, etc. By doing so, cities "walk the talk" and save energy and money. Success will be achieved through a number of strategies including the provision of technical assistance, supporting consultants and staff to assess energy-savings opportunities, and by working with the cities to assure that they develop updated Strategic Energy Plans.

**Sample Municipal Facility Opportunities**

- Initial Employee Awareness-Raising Activities
- Developing City Energy Management Plans
- Engineering Assessments of Municipal Facilities
- Design Charrettes for New Facilities
- Incentives for High Visibility Demonstration Projects
- Incentives for Facility Operators
- Demand Responsiveness Opportunities
- Supporting Energy Advisors in City Government

In the hotter climate zone cities, the Community Energy Partnership will focus on the implementation of demand response strategies to realize capacity savings in key municipal facilities.

**Community Efficiency Tune-Ups**

There are two forms of Community Efficiency Tune-Ups: Household Tune-Ups and Small Business Tune-Ups. The Partnership takes direct action in the communities it serves by offering a number of Community Efficiency Tune-Ups in each participating city, thereby demonstrating the benefits of energy efficiency in practical household applications. The Tune-Ups are performed by licensed contractors, screened, selected and trained by the Partnership. Working with the head of household, the installation contractors determine the optimal savings measures and recommendations for that particular home.

The following is a partial list of measures that will be provided through the Community Energy Partnership Tune-Ups. Recent city suggestions for new equipment that may be included in the 2006 – 2008 funding cycle are fluorescent tube retrofits for homes, flashlights, fire extinguishers, and carbon monoxide sensors. The key is to find a package of offered measures that capture participant willingness to "open the door" and allow a variety of measures to be installed. Installers use a triplicate checklist in the field to track installation activity and to provide a record of the Tune-Up and the installer's top three recommendations for further savings.

**Lighting Measures**

- Exchange incandescent light bulbs for compact fluorescent bulbs
- Install efficient kitchen and bathroom fluorescent fixtures
- Install energy-saving LED night lights, fluorescent porch lights and safety lights
- Exchange halogen torchiere lamps with fluorescent models

**Household Electrical Appliances**

- Check, replace or repair refrigerator seals
- Maintain/clean refrigerator compressor
- Recommend disconnect, removal and recycling of second refrigerator
- Recommend: new Energy Star® refrigerator and washing machine
- Behavioral: Turn off or unplug unnecessary lights and appliances

**Space Heating and Cooling Savings Measures**

- Adjust thermostat
- Replace furnace and air conditioner filters
- Caulk, weatherstrip windows, doors, and skylights
- Install ceiling fans, distribute table or standing fans
- Install window film, shades; plant shade trees
- Recommend: low-e windows, insulation

**Small Business Efficiency Tune-Ups**

The Community Energy Partnership will work with approximately 450 small businesses in the 2006-2008 program years and to implement energy-efficient measures. As with the household Tune-Ups presented above, select small businesses in each partner city will be presented with Small Business Efficiency Tune-Ups that provide each participant with a customized set of efficiency measures intended to maximize the value of the $1,000 spent at each location.

**PEAK Student Energy Actions**

PEAK is a multifaceted program that involves classroom activities – both during the normal school year and as special features of summer school programs – as well as campus, household, and community activities. The Resource savings from each PEAK student is minimal but key to triggering a far greater savings stream in PEAK schools and PEAK homes and communities.

During the 2006 – 2008 funding cycle, PEAK will build on the impressive foundation established. At the urging of the city partners, new lessons will be developed to include student learning about transportation energy. Saving Energy

At School (SEAS) will continue to be a focus, as well as the promotion of PEAK Green Clubs… after-school clubs for students interested in all kinds of green initiatives from energy efficiency to water efficiency, and recycling. PEAK will also continue to innovate with artwork and essay contests, using incentives to inspire students to focus on responsible energy use and to take action at school and home and in their communities.

Student Fundraising

Every student enrolled in the program is given a compact fluorescent lamp as a symbol of how energy-efficient technologies can leverage energy and dollar savings at home. These savings will be counted in the Resource Workbook. It is projected that an additional 12,000 CFLs will be sponsored through the Partnership for school fundraising activities. As such, approximately 48,000 CFLs will be distributed through PEAK students.

**PEAK Households**

PEAK students become household energy managers, taking PEAK's ethic of resource efficiency home and to their families. Their actions are multiple and diverse but focused on lighting, refrigeration, air conditioning, and water heating measures. By raising awareness within PEAK households through the kids, homes get "relamped" using fluorescent technology, Energy Star appliances become the norm, new furnaces become high-e and noted to neighbors and extended family, windows and doors get that much tighter, and clothes dryers now have sophisticated moisture sensors.

Savings actions – which in many cases feature their child's newly learned information on smart energy management – are taken by parents voluntarily. Evidence suggests that each household will invest in some form of electrical and gas efficiency – be it behavioral or through the installation of a highly efficient appliance -- in the next five years as a result of PEAK. In many cases these actions will be supported by utility rebates; the Partnership serves as a catalyst. The following is an illustrative list of energy-saving measures at PEAK Households:

**Lighting Measures**

- Exchange incandescent light bulbs for compact fluorescent bulbs
- Install energy-saving LED night lights, fluorescent porch lights and safety lights
- Exchange halogen torchiere lamps with fluorescent models
- Use LED Christmas Lights

**Household Electrical Appliances**

- Purchase high-efficiency Energy Star® refrigerators
- Maintain and repair refrigerator gaskets
- Maintain and repair refrigerator compressor

- Discard and recycle second refrigerator
- Install ceiling fans
- Install solar swimming pool pump timers
- Behavioral: Turn off, unplug unnecessary lights and appliances

**Space Heating and Cooling Savings Measures**

- Adjust thermostat
- Purchase high-efficiency furnaces and air conditioning units
- Maintain and repair ductwork
- Replace furnace and air conditioner filters
- Install better household insulation
- Install better windows, doors, and skylights
- Install window film, shades; screen doors
- Plant shade trees

**Water Heating Savings Measures**

- Purchase highly efficient Energy Star® clothes washers
- Purchase high-efficiency Energy Star® dish washers
- Purchase high-efficiency water heater installation
- Add water heater insulation
- Hot water pipe insulation
- Check water temperature for optimal efficiency
- Behavioral: Use clothes washer and dish washers only when full
- Install low-flow showerheads
- Install low-flow faucet aerators

**PEAK School Districts**

Each school district participating in the PEAK Student Energy Actions program will benefit from energy savings stimulated by students' actions along with those of their teachers and custodians as energy awareness is raised on campus.

Saving Energy at School

The Energy Coalition and its partner cities work with PEAK schools in a number of ways, from policy guidance to engineering assistance. One of the most unique aspects of the partnership is the linkage between PEAK students and school facilities personnel. Through PEAK, kids are treated with respect and become the eyes and ears of energy use, and specifically waste, on campus. And they are recognized and rewarded in a number of ways, from awards at School Board and City Council meetings, to prizes such as Nano IPods and amusement park tickets and scholarships.

A recent Saving Energy at School (SEAS) scavenger hunt, a PEAK activity, has thousands of middle and high school students throughout the Partnership tracking waste on campus and devising plans to cut the waste, plugging the leak of dollars

out of their school so that they can be better applied to school's primary teaching purpose. The SEAS scavenger hunt is one example of innovation that may or may not be replicated in coming years, but that tests an outreach strategy and engages students with their school facilities.

Technical Services

The Coalition will continue to innovate with the PEAK program, just as last year the City of Moreno Valley suggested creating a mascot, what turned out to be Bulbman. Another innovative approach developed were PEAK Light and Amp Logger kits provided to participating districts. The kits have been used by students and maintenance staffs to monitor energy use and find waste, the date is then downloaded to computers on campus and analyze. Students armed with light meters found significant over-lighting at their school – using IES footcandle standards. With their teachers, they then developed strategies for cutting lighting intensity in classrooms.

**Sample School District Opportunities**

- Developing School District Energy Management Plans
- Supporting PEAK Student Energy Patrols
- Engineering Analyses of School Facilities
- Design Assistance for New Facilities
- Incentives for High Visibility Demonstration Project
- Incentives for Leading School Efforts
- Training for Students, Administrators, and Facility Operators

Policy Initiatives

The Community Energy Partnership works with school districts in a number of ways, for instance working with facilities staffs to eliminate the split incentive between school districts and individual schools. In other cases, the Partnership will work with select districts to enable individual schools to track their consumption. In some cases the Partnership will benchmark energy intensity and then track monthly consumption for significant variations that represent savings potentials.

The following budget overview for the Non-Resource activities of the Community Energy Partnership is approximately 67% of the total project budget.

**12.1. Prescriptive Measures.**

This narrative represents the Non-Resource component of the Community Energy Partnership program and thus has no measures per se, but rather, supports and enables the Resource component of the program where tangible energy efficiency measures are provided to customers. Those measures are spoken to above.

**12.2. Therm Level Data**

This narrative represents the Non-Resource component of the Community Energy Partnership program and thus has no direct savings, but rather, supports and enables the Resource component of the program.

**12.3. Non-energy Activities**

This Non-Resource component of the Community Energy Partnership program is primarily about non-energy activities. Please see above descriptions detailing activities.

**13. Subcontractor Activities**

There will be no subcontractors used to deliver Non-Resource activities.

**14. Quality Assurance and Evaluation Activities**

Quality assurance for Non-Resource activities will be of a more qualitative nature than quantitative. Program marketing and outreach efforts will be constantly monitored and evaluated to determine effectiveness and appropriate messaging and program representation.

Especially important will be attempting to quantify the broader effect of the Partnership, and to quantify those measures not reported in the Resource savings aspect of the 2006 – 2008 program.

**15. Marketing Activities**

The entire effort of the Non-Resource component of the Community Energy Partnership program is about marketing, outreach, awareness, supporting Resource activities, and finding new and exciting ways to get this message across to the partner cities and their constituents. That being said, please refer to the program description above which outlines marketing activities and more.

**16. CPUC Objective**

The program has been developed in conjunction with The Community Energy Partnership, Southern California Edison (SCE), and the Southern California Gas Company (SCG), to meet the applicable CPUC objectives and guidelines as outline in the Energy Efficiency Policy Manual This program supports the following CPUC objectives: (2) To pursue all cost-effective energy efficiency opportunities over both the short- and long-term; (5) Program Administrators should manage their portfolio of programs to meet or exceed the short- and long-term savings goals established by the Commission by pursuing the most cost-effective energy efficiency resource programs first, while minimizing lost opportunities; and (9) Program Administrators will manage a portfolio of programs implemented by IOUs and non-IOUs that are selected and evaluated based on their ability to best meet the policy objectives articulated in these Rules. Emphasis has been to develop the program with the cities participating in The Community Energy Partnerships on more equal footing as compared to other programs. The organization and governance of the program is

achieved in partnership with The Energy Coalition, SCE, and SCG. Although all partnerships share some common elements, The Community Energy Partnership has been specifically tailored to the needs and unique characteristics of the aforementioned cities.

| | SCG3524 EC5-Energy Coalition - Peak | |
|---|---|---|
| **BUDGET** | | |
| | | |
| **Administrative Costs** | **$** | **252,716** |
| Overhead and G&A | $ | 65,430 |
| Other Administrative Costs | $ | 187,286 |
| **Marketing/Outreach** | **$** | **483,785** |
| **Direct Implementation** | **$** | **637,500** |
| Total Incentives and Rebates | $ | - |
| User Input Incentive | $ | - |
| Direct Install Rebate | $ | - |
| Direct Install Labor | $ | - |
| Direct Install Materials | $ | - |
| Activity | $ | 623,500 |
| Installation | $ | - |
| Hardware & Materials | $ | 14,000 |
| Rebate Processing & Inspection | $ | - |
| **EM&V Costs** | | |
| **Budget** | **$** | **1,374,001** |
| **Costs recovered from other sources** | **$** | **-** |
| **Budget** (plus other costs) | **$** | **1,374,001** |
| | | |
| **PROGRAM IMPACTS** | | |
| **Program Reductions for Measures installed through 2008** | | |
| User Entered kW (kW) | | - |
| Net Jul-Sept Peak (kW) | | - |
| Net Dec-Feb Peak (kW) | | |
| Net NCP (kW) | | |
| Net CEC (kW) | | - |
| Annual Net kWh | | - |
| Lifecycle Net kWh | | - |
| Annual Net Therms | | - |
| Lifecycle Net Therms | | - |
| | | |
| **Cost Effectiveness** | | |
| **TRC** | | |
| Costs | $ | 1,374,001 |
| Electric Benefits | $ | - |
| Gas Benefits | $ | - |
| Net Benefits (NPV) | $ | (1,374,001) |
| BC Ratio | | - |
| | | |
| **PAC** | | |
| Costs | $ | 1,374,001 |
| Electric Benefits | $ | - |
| Gas Benefits | $ | - |
| Net Benefits (NPV) | $ | (1,374,001) |
| BC Ratio | | - |
| | | |
| **Levelized Cost** | | |
| **Levelized Cost TRC ($/kWh )** | | |
| Discounted kWh | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |
| **Levelized Cost PAC ($/kWh)** | | |
| Discounted kWh | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |
| **Levelized Cost TRC ($/therm)** | | |
| Discounted Therms | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |
| **Levelized Cost PAC ($/therm)** | | |
| Discounted Therms | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |

# 2006-2008 Energy Efficiency Programs
# SCG California Community Colleges Program Concept Paper

## 1. Projected Program Budget

| | 2006 | 2007 | 2008 |
|---|---|---|---|
| Administration | | | |
| Administrative Overheads | $ 31,714 | $ 31,762 | $ 31,762 |
| Administrative Other | $ 98,420 | $ 99,138 | $ 99,877 |
| Marketing & Outreach | $ 4,200 | $ 4,200 | $ 4,200 |
| Direct Implementation | | | |
| Activity | $ 61,987 | $ 62,190 | $ 61,418 |
| Installation | $ - | $ - | $ - |
| Hardware & Materials | $ 2,600 | $ 2,600 | $ 2,600 |
| Procurement | $ 1,079 | $ 1,110 | $ 1,143 |
| Incentives | $ 466,000 | $ 466,000 | $ 466,000 |
| EM&V | $ - | $ - | $ - |
| *Total* | *$ 666,000* | *$ 667,000* | *$ 667,000* |

## 2. Projected Program Impacts

| 2006 | | | 2007 | | | 2008 | | |
|---|---|---|---|---|---|---|---|---|
| Net kWh | Net kW | Net Therms | Net kWh | Net kW | Net Therms | Net kWh | Net kW | Net Therms |
| - | - | 186,400 | - | - | 186,400 | - | - | 186,400 |

## 3. Program Cost Effectiveness

Attached

## 4. Program Descriptors

The SCG California Community Colleges program is a new statewide nonresidential program that will be very similar to the existing SCG UC/CSU Partnership program. The program will offer incentives for retrofit and new construction projects, continuous commissioning, and educational training for the community colleges.

## 5. Program Statement

The California Community College (CCC) system includes 110 campuses statewide. These facilities consume vast quantities of energy and make up a significant portion of the both the electric and natural gas loads in the State of California. This is a large, complex organization with a broad set of goals, stakeholders, processes and constituencies. The organization is diverse from a geographic, climate, and operational needs standpoint. But with this size and diversity also comes a considerable opportunity to save energy use and cost on a scale that is meaningful to the State of California. The California Community College (CCC) and Investor-Owned Utility (IOU) Energy Efficiency program is designed to meet this challenge.

## 6. Program Rationale

The Program is modeled after the successful UC/CSU/IOU Energy Efficiency Partnership program that was funded in the 2004-2005 CPUC energy efficiency program cycle. This program capitalizes on the vast resources and expertise of Community College system and California IOUs to ensure a successful and cost-effective program that meets all objectives of the California Public Utilities Commission (CPUC or Commission). The new CCC/IOU program will incorporate lessons learned from previous statewide partnership programs in the areas of improved program delivery efficiency and communication between the stakeholders. The timing of the CCC/IOU Partnership is critical; the CCC is embarking on a major construction cycle and needs technical and financial input from the IOUs to ensure that the resulting new buildings are as energy efficient as possible.

## 7. Program Outcomes

The Program will adopt the framework and methodology of the UC/CSU/IOU Partnership Program to design and implement a sustainable, long-term, comprehensive energy management program at the CCC campuses served by California's four large IOUs. This will be a statewide energy efficiency program that is designed to efficiently accomplish immediate and long-term peak energy and demand savings goals as outlined in the estimates that accompany this narrative.

## 8. Program Strategy

To support the program's success, the following strategies will be used:

- Nonresidential Building Calculated Rebates
- Nonresidential Building Commissioning
- Nonresidential Downstream Training

### 8.1.1. Program Strategy Description

To best meet the need of the CCC system and optimize opportunities for energy savings and load reduction, the CCC/IOU Partnership is comprised of four program elements. These elements will operate on a statewide, integrated basis, providing immediate energy savings and setting the foundation for a long-term program focused on sustainability and best practices:

- *Energy Efficiency Retrofits and Load Management Projects*

  The Energy Efficiency Retrofit and Load Management Retrofit element of the program involves implementation of energy efficiency retrofit projects and retro-commissioning projects that will provide cost-effective energy savings during the 2006-2008 program implementation period. CCC has an existing and extensive inventory of cost-effective energy saving measures, as well as many new projects to be developed as part of the 2006-2008 program cycle.

Methodology for further screening and selection of eligible project will be standardized as part of the program, based on previous project identification tools the CCC has successfully used in the past. The resulting inventory of potential projects will be reviewed and finalized during the initial stages of the program to develop an overall implementation plan and schedule. Load management will be achieved through retro-commissioning and monitoring-based commissioning (MBCx) projects. These projects will be implemented where there are opportunities to achieve sustainable savings through operational changes. The MBCx projects involved installation of submetering equipment and will be based on best practices as developed during the 2004-2005 UC/CSU Partnership. The project plan assumes that the CCC will co-fund projects, paying for 20% of implementation cost.

- *New Construction Assistance*

  The New Construction Assistance element of the program focuses on the unique needs and opportunities of the CCC as they embark on a major construction cycle associated with bond funding as approved by Proposition 39. There are many demands on the budgets associated with these projects, and the buildings will be built to Title-24 minimum standards for energy efficiency without input from the IOUs that exceeds that available through general new construction programs. The needs of the CCC are both specific and vast and this program capitalizes on a unique window of opportunity to optimize the efficiency of millions of square feet of new building stock that will be added in the State of California over the next five years.

  New Construction Assistance will include design review, development of design guidelines and equipment specification standards, and incentivizing of the incremental cost of energy efficiency measure in new construction projects. The program will provide a uniform, statewide approach that will offer the CCC consistency and ease-of-access not available from standard programs like Savings By Design. The program will all directly focus on the CCC system's needs in implement the Governor's Green Building Initiative Executive order and LEED certification.

- *Energy Efficiency Education and Training*

  The Energy Efficiency Education and Training focuses on the specific needs of the CCC and is designed to compliment existing training programs available to the Campuses

including those offered internally, by the IOUs, and by the UC/CSU Partnership. Training class elements will focus on three primary opportunities:

- Training CCC staff on the identification and implementation of energy efficiency projects and MBCx projects and operation best practices,
- Training project managers on the elements of green building design and energy efficient specification and construction practices by exceeding Title-24,
- Developing and implementing vocational education training curriculum for students and trade technicians, including topics such a refrigeration and HVAC service and installation, duct testing and sealing, energy code compliance, lighting retrofits, and others.

Courses will be held statewide. Where applicable, course offerings, curriculum and content will be based on extensive material and best-practices documentation developed for the UC/CSU program during the 2004-2005 cycle.

- *Emerging Technologies Demonstration Program*

The Emerging Technologies Demonstration element capitalizes on the unique opportunities associated with the upcoming new construction projects at CCC campuses throughout the state. Along with New Construction Assistance and related training, the program provides specific opportunities for well planned and highly visible demonstration projects. A methodology will be developed to screen potential projects and determine the best applications for new and emerging technologies including high efficiency lighting, HVAC, and building envelope measures. Incremental cost will be funded through the partnership program at levels exceeding those offered through the New Construction Assistance program for selected demonstration projects.

### 8.1.2. Program Indicators

The primary goal of the program strategy is to procure energy savings and demand reduction. However, for training and education, the number of classes and number of participants will also be tracked.

## 9. Program Objectives

The objectives of the program are as follows:

**A. Immediate, Cost-Effective Energy and Demand Savings**

Retrofit projects will be efficiently implemented to meet or exceed all savings goals as outlined in the program economics.

**B. On-going Improved Energy Efficient Operations and Maintenance Practices**

Campus energy managers and other staff will be trained on initial and continuous commissioning and will receive tools to reduce energy consumption and peak demand through energy information at the building systems level.

**C. CCC Facilities Staff and Project Managers Trained To Identify and Implement Energy Efficient Opportunities**

Similarly, this program will fund training campus facilities staff, project managers and other staff in use of a "best practices" methodology for identifying and implementing energy efficiency projects.

**D. Optimization of the Energy Efficiency of New Construction projects**

The Partnership will provide technical and financial resources and a systematic program approach to ensure that millions of square feet of CCC new construction projects are built to optimal energy efficiency levels, avoiding significant future load growth.

**E. Future savings through Vocational Training and Technology demonstration**

Although it is not quantified, the Partnership will impact future energy and demand savings by helping to training the next generation of building technicians and through the demonstration of emerging technologies.

**10. Program Implementation**

The CCC/IOU Energy Efficiency Program will use a similar implementation strategy that was used in the UC/CSU program during the 2004-2005 cycle. A more detailed description of these implementations tasks will be provided in future with comprehensive program descriptions. The implementation plan for this cycle will include:

A. Coordination with other energy efficiency programs and ongoing campus projects
B. Energy Efficiency Retrofit and Load Management Project program implementation.
C. New Construction Assistance program implementation
D. Energy Efficiency Education and Training implementation
E. Emerging technologies Demonstration Program implementation

**11. Customer Description**

The program will be offered to all California Community College campus facilities in the four IOU service areas.

**12. Customer Interface**

The 2006-2008 Program will utilize a similar program management and team interface structure that was established during the UC/CSU/IOU Partnership in the previous cycle. The Community Colleges and the four IOUs will form a partnership to manage and implement the CCC Energy Efficiency Program. Staff from each utility and from the CCC Chancellors Office and system will be responsible for the

successful execution of the program. The CCC/IOU program will benefit from the significant progress that has been made with the UC/CSU/IOU program during the previous cycle in developing program processes and improving communication between the many partner organizations.

## 13. Energy Measures and Program Activities

### 13.1. Prescriptive Measures.

See SCG Filing Workbook

### 13.2. Therm Level Data

See SCG Filing Workbook

### 13.3. Non-energy Activities

#### 13.3.1. Activity Description

The training and education component of the partnership program involves training of campus facilities staff, project managers, energy managers and others on using best energy practices in the construction, retrofit and monitoring based commissioning of campus buildings and central plant infrastructures. This will continue progress made on the establishment of a statewide approach to training and building operation so that this best energy practices approach can be used for ensuring long-term energy efficiency savings. The training and education component will work hand-in-hand with the other program components.

#### 13.3.2. Quantitative Activity Goals

As noted above, the number of classes and number of participants will also be tracked.

#### 13.3.3. Assigned attributes of the activity (market sector, end use)

Training and education involves training of district and campus design staff, project managers, energy managers and others on using best energy practices in the construction, retrofit, and monitoring based commissioning of campus buildings and central plant infrastructures.

## 14. Subcontractor Activities

Subcontractors will be used to assist in program administration and management, and in each of the three program elements. This approach was used successfully in the UC/CSU/IOU partnership program in the previous cycle.

A consultant will assist in day-to-day coordination and communication among the partners (the colleges and four utilities) and provide staffing to the Management and Administration Team and Program Specific Implementation Teams. Consultant will assist in identifying project tasks, establishing a schedule of deliverables and responsibilities, helping the CCC ensure successful program implementation, and obtaining CCC input and decision-making on key program elements. Consultant

will also assist in the four program elements, especially in facilitating coordination and communications with and among campuses, providing analytical assistance to the CCCCO and campuses as needed, provide assistance with successful retention of subcontractors through competitive procurement processes, and helping to track and ensure successful program implementation based on specific deliverables required by the CPUC. Finally, the consultant will assist the IOUs and the CCC in CPUC reporting and regulatory communications. For the third program component, Training and Education, the consultant may assist in development of workshop agendas and materials, identification of experts, facilitation of workshops and training sessions, and preparation of the minutes. Newcomb|Anderson| McCormick, Inc., is in the process of being retained by SDG&E on behalf of the Partnership to fulfill this consulting role. In addition, the Foundation for California Community Colleges is also in process of being retained by SDG&E on behalf of the Partnership to function as a district and campus liaison.

The campuses will hire Energy Efficiency Retrofit subcontractors to install the energy efficiency measures for the retrofit component.

**15. Quality Assurance and Evaluation Activities**

An evaluation plan will be developed in accordance with the 2006-2008 EM&V Protocols.

**16. Marketing Activities**

Since the CCC team already has an established communication network with campus energy managers and staff, marketing will be based on the pre-established channels via the Chancellor's Office and the Foundation for California Community Colleges that will include the classes offered by the Training and Education program element and the CCFC Conference. In addition, the program website will provide program details and program updates.

**17. CPUC Objective**

The program has been developed in conjunction with CCC to meet the applicable CPUC objectives and guidelines as outline in the Energy Efficiency Policy Manual. Specifically, as a partnership program, emphasis has been to develop the program with the CCC on more equal footing as compared to other programs. The organization and governance of the program is achieved in partnership with the Chancellor's Office, the Foundation for California Community Colleges, and four IOUs via the Management Team, Program Team and Training and Education Team. Although all partnership share some common elements, the CCC Partnership has been specifically tailored to the needs and unique characteristics of the CCC Districts and campuses.

| | SCG3518 CCP4-IOU/Community College Partnership | |
|---|---|---|
| **BUDGET** | | |
| | | |
| **Administrative Costs** | **$** | **392,673** |
| Overhead and G&A | $ | 95,238 |
| Other Administrative Costs | $ | 297,435 |
| **Marketing/Outreach** | **$** | **12,600** |
| **Direct Implementation** | **$** | **1,594,727** |
| Total Incentives and Rebates | | |
| User Input Incentive | $ | - |
| Direct Install Rebate | $ | 1,398,000 |
| Direct Install Labor | $ | - |
| Direct Install Materials | $ | - |
| Activity | $ | 185,595 |
| Installation | $ | - |
| Hardware & Materials | $ | 7,800 |
| Rebate Processing & Inspection | $ | 3,332 |
| **EM&V Costs** | **$** | **-** |
| **Budget** | **$** | **2,000,000** |
| **Costs recovered from other sources** | **$** | **-** |
| **Budget** (plus other costs) | **$** | **2,000,000** |
| | | |
| **PROGRAM IMPACTS** | | |
| **Program Reductions for Measures installed through 2008** | | |
| User Entered kW (kW) | | - |
| Net Jul-Sept Peak (kW) | | - |
| Net Dec-Feb Peak (kW) | | - |
| Net NCP (kW) | | - |
| Net CEC (kW) | | - |
| Annual Net kWh | | - |
| Lifecycle Net kWh | | - |
| Annual Net Therms | | 559,200 |
| Lifecycle Net Therms | | 5,592,000 |
| | | |
| **Cost Effectiveness** | | |
| **TRC** | | |
| Costs | $ | 1,496,046 |
| Electric Benefits | $ | - |
| Gas Benefits | $ | 2,608,921 |
| Net Benefits (NPV) | $ | 1,112,876 |
| BC Ratio | | 1.74 |
| | | |
| **PAC** | | |
| Costs | $ | 1,843,730 |
| Electric Benefits | $ | - |
| Gas Benefits | $ | 2,608,921 |
| Net Benefits (NPV) | $ | 765,192 |
| BC Ratio | | 1.42 |
| | | |
| **Levelized Cost** | | |
| **Levelized Cost TRC ($/kWh )** | | |
| Discounted kWh | | 0 |
| Cost | | 0 |
| Benefits | | 0 |
| Benefit-Cost | | 0 |
| **Levelized Cost PAC ($/kWh)** | | |
| Discounted kWh | | 0 |
| Cost | | 0 |
| Benefits | | 0 |
| Benefit-Cost | | 0 |
| **Levelized Cost TRC ($/therm)** | | |
| Discounted Therms | | 3666366.823 |
| Cost | | 0.408045783 |
| Benefits | | 0.711582234 |
| Benefit-Cost | | 0.303536451 |
| **Levelized Cost PAC ($/therm)** | | |
| Discounted Therms | | 3666366.823 |
| Cost | | 0.502876548 |
| Benefits | | 0.711582234 |
| Benefit-Cost | | 0.208705686 |

## IOU/Community College Partnership

| Year | Total Budget | Total Incentives | Admin Budget | Net kWh | Net Therms | Net kW |
|---|---|---|---|---|---|---|
| 2006 | $ 666,000 | $ 466,000 | $ 200,000 | - | 186,400 | - |
| 2007 | $ 667,000 | $ 466,000 | $ 201,000 | - | 186,400 | - |
| 2008 | $ 667,000 | $ 466,000 | $ 201,000 | - | 186,400 | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 324001 | Gas Measures | - | 1 | - | 0.8 | Therm | 10 | 233,000 | $ 2.00 | $ 1.80 | - | 186,400 | - |
| 2007 | 324001 | Gas Measures | - | 1 | - | 0.8 | Therm | 10 | 233,000 | $ 2.00 | $ 1.80 | - | 186,400 | - |
| 2008 | 324001 | Gas Measures | - | 1 | - | 0.8 | Therm | 10 | 233,000 | $ 2.00 | $ 1.80 | - | 186,400 | - |

# 2006-2008 Energy Efficiency Programs
# SCG University of California and California State University Program
# Concept Paper

## 1. Projected Program Budget

| | 2006 | 2007 | 2008 |
|---|---|---|---|
| Administration | | | |
| Administrative Overheads | $ 48,571 | $ 48,571 | $ 48,571 |
| Administrative Other | $ 116,166 | $ 114,459 | $ 112,886 |
| Marketing & Outreach | $ 3,500 | $ 3,500 | $ 3,500 |
| Direct Implementation | | | |
| Incentives | $ 714,000 | $ 714,000 | $ 714,000 |
| Activity | $ 135,094 | $ 136,751 | $ 138,273 |
| Installation | $ - | $ - | $ - |
| Hardware & Materials | $ 1,000 | $ 1,000 | $ 1,000 |
| Rebate Processing & Inspection | $ 1,669 | $ 1,719 | $ 1,770 |
| EM&V | $ - | $ - | $ - |
| *Total* | *$ 1,020,000* | *$ 1,020,000* | *$ 1,020,000* |

## 2. Projected Program Impacts

| 2006 | | | 2007 | | | 2008 | | |
|---|---|---|---|---|---|---|---|---|
| Net kWh | Net kW | Net Therms | Net kWh | Net kW | Net Therms | Net kWh | Net kW | Net Therms |
| - | - | 285,600 | - | - | 285,600 | - | - | 285,600 |

## 3. Program Cost Effectiveness

Attached

## 4. Program Descriptors

The SCG, University of California and California State University (SCG/UC/CSU) program is an existing statewide nonresidential program that will continue in the 2006 through 2008. The program will continue to offer incentives for retrofit projects, continuous commissioning, and educational training for campus energy managers.

## 5. Program Statement

The University of California (UC) and California State University (CSU) systems consume vast quantities of energy and, as a combined entity, make up a significant portion of the both the electric and natural gas load in the State of California. These are large, complex organizations with a broad set of goals, stakeholders, processes and constituencies. They are diverse from a geographic, climate, and operational needs standpoint. But with this size and diversity also comes a considerable opportunity to save energy use and cost on a scale that is meaningful to the State of California. The University of California/California State University (UC/CSU) and Investor-Owned Utility (IOU) Energy Efficiency program is designed to meet this challenge.

**6. Program Rationale**

The Program is a unique, statewide energy efficiency program that accomplishes immediate, long-term peak energy and demand savings, and establishes a permanent framework for a sustainable, long-term, comprehensive energy management program at the UC and CSU campuses served by California's four large IOUs. This program capitalizes on the vast resources and expertise of UC/CSU and California IOUs to ensure a successful and cost-effective program that meets all objectives of the California Public Utilities Commission (CPUC or Commission) as articulated in Decision 03-08-067. The program is an extension of the same partnership first established in the 2004-2005 Energy Efficiency Program cycle, and will capitalize on lessons learned in the areas of improved program delivery efficiency and communication between the stakeholders. The new program will also address a backlog of cost effective projects that were identified in the previous cycle but could not be completed because of budget limitation. The previous 2004-2005 partnership not only provided a comprehensive energy efficiency program for UC/CSU, but also established a model for statewide partnership programs and which could allow expansion of this program, or establish new programs, to other partners such as the California's community colleges in the 2006-2008 funding cycle.

**7. Program Outcomes**

The Program will continue the progress made with the 2004-2005 US/CSU/IOU Energy Efficiency Partnership in developing the framework and implementing the energy savings strategies developed in that cycle, as well as achieving new energy and demand savings goals as outlined in the estimates that accompany this narrative.

**8. Program Strategy**

To support the program's success, the following strategies will be used:

- Nonresidential Building Calculated Rebates
- Nonresidential Building Commissioning
- Nonresidential Downstream Training

**8.1.1. Program Strategy Description**

Like the 2004-2005 program, the 2006-2008 UC/CSU/IOU partnership program is comprised of three elements, which will operate on a statewide, integrated basis, providing immediate energy savings and setting the foundation for a long-term program focused on sustainability and best practices:

- *Energy Efficiency Retrofits*

  The Energy Efficiency Retrofit element of the program involves implementation of energy efficiency retrofit projects providing cost-effective energy savings during the 2006-2008 program implementation period. UC and CSU have an existing and extensive inventory of cost-effective energy saving measures, as well as many new projects developed as

part of the 2004-2005 program cycle. This inventory will be reviewed and finalized during the initial stages of the program to finalize an implementation plan and schedule. Projects that were started in the previous cycle will be completed during this phase of the program. The process of finalizing the inventory and installation of measures will be well documented and passed on for use in the retro- and continuous commissioning element and the development of best practices and training and education in the third element of the program.

- *Monitoring Based Commissioning (MBCx)*

  This element of the program is a unique approach to obtaining savings that combines the expertise of the Universities' statewide campus facility management staff, additional utility and subcontractor expertise, and the installation of energy monitoring and metering equipment at the building submeter and system level. Through these resources, a systematic, comprehensive continuous commissioning program was developed by the program in the last cycle. Until the establishment of this program in the 2004-2005 cycle, almost every retro-commissioning program has consisted of a one-time review of building operations, installation of equipment control measures, one or two training workshops, and possibly development of commissioning documents. The approach of this portion of the partnership program is far different. It includes the usual first step, a review of building operations and installation of equipment. However, it goes beyond the typical program to date in three aspects. First, the campuses that participate in this aspect of the program will install sufficient equipment to insure an extensive and comprehensive built-in measurement and verification capability. Second, this element of the program will be combined with the third element (Energy Efficiency Education and Best Practices Development and Training) to become a "continuous commissioning" program, that is institutionalized at the campuses for the foreseeable future. In this way, savings will be sustained well beyond those from the more typical and limited retro-commissioning programs. Third, the program will use the campus facilities management staff to identify new cost-effective retrofit opportunities efficiently and at low cost.

The Monitoring Based Commissioning projects implemented during the 2004-2005 cycle have been thoroughly reviewed and evaluated for

effectiveness; best-practices have been documented and processes will be streamlined for MBCx activities during the 2006-2008 program cycle.

- *Energy Efficiency Education and Best Practices Development and Training*

  The Energy Efficiency Education and Best Practices Development and Training element of the program will continue the comprehensive program for energy education and information exchange among the UC/CSU campus energy managers, project managers, and facility staff and with the IOUs that began with the 2004-2005 program cycle. This program provides a venue for those individuals responsible for managing energy use on campuses to share information and experiences related to facility operations, best practices, and successful retrofit projects, among other issues. This is an information and education program that develops and shares best practice operating methods and technologies applicable to university campus facilities. The primary vehicles for training and dissemination of information will be and a series of training sessions and workshops (covering new construction, building operator training, retrofits, retro-commissioning, and monitoring based commissioning) to be held in Northern and Southern California. Course offerings, curriculum and content will be based on extensive material and best-practices documentation developed during the 2004-2005 cycle.

  Work is ongoing to refine the program elements and consider sub-elements to best meet the needs of the campuses and utility partners.

### 8.1.2. Program Indicators

The primary goal of the program strategy is to procure energy savings and demand reduction. However, for training and education, the number of classes and number of participants will also be tracked.

## 9. Program Objectives

The objectives of the program are as follows:

**A. Immediate, Cost-Effective Energy Savings and Demand Reduction**
Retrofit projects will be efficiently implemented to meet or exceed all savings goals as outlined in the program economics.

**B. Improved Energy Efficient Operations and Maintenance Practices**
Campus energy managers and other staff will be trained on initial and continuous commissioning and will receive tools to reduce energy consumption and peak demand through energy information at the building systems level.

**C. UC/CSU Energy Managers Trained To Identify and Implement Energy Efficient Opportunities**

Similarly, this program will fund training campus energy managers, project managers and other staff in use of a "best practices" methodology for identifying and implementing energy efficiency projects.

**10. Program Implementation**

The UC/CSU/IOU Energy Efficiency Program will use the same implementation strategy for the 2006-2008 cycle as was used in the last cycle. A more detailed description of these implementations tasks will be provided in future, comprehensive program descriptions. The implementation plan for this cycle will be refined to account for progress already made and will include:

A. Coordination with other energy efficiency programs and ongoing campus projects
B. Energy Efficiency Retrofit Program Element Implementation (including project selection and implementation).
C. Facility Monitoring Based Commissioning Implementation
D. Energy Efficiency Education and Best Practices Development and Training Implementation

**11. Customer Description**

The customer is the UC/CSU campus facilities in the four IOU service areas.

**12. Customer Interface**

The 2006-2008 Program will utilize the same program management and team interface structure that was established during the program previous cycle. UC/CSU and the four IOUs have formed a partnership to manage and implement the UC/CSU Energy Efficiency Program. Staff from each utility and from both UC and CSU will be responsible for the successful execution of the program. The 2006-2008 program will benefit from the significant progress that has been made during the previous cycle in developing program processes and improving communication between the many partner organizations.

**13. Energy Measures and Program Activities**

**13.1. Prescriptive Measures.**

See SoCalGas February 1, 2006 Filing Workbook.

**13.2. kWh Level Data**

See SoCalGas February 1, 2006 Filing Workbook.

**13.3. Non-energy Activities**

**13.3.1. Activity Description**

The training and education component of the partnership program will continue progress made on the establishment of a statewide approach to

training and building operation so that this best energy practices approach can be used for ensuring long-term energy efficiency savings. The training and education component will work hand-in-hand with the first two program components – energy retrofits and retro- and continuous commissioning.

**13.3.2. Quantitative Activity Goals**

As noted above, the number of classes and number of participants will also be tracked.

**13.3.3. Assigned attributes of the activity (market sector, end use)**

Training and education involves training of campus design staff, project managers, energy managers and others on using best energy practices in the construction, retrofit, and monitoring based commissioning of campus buildings and central plant infrastructures.

**14. Subcontractor Activities**

Subcontractors will be used to assist in program administration and management, and in each of the three program elements. This approach was used successfully in the program previous cycle.

A consultant will assist in day-to-day coordination and communication among the partners (the Universities and four utilities) and provide staffing to the Management and Administration Team and Program Specific Implementation Teams. Consultant will assist in identifying project tasks, establishing a schedule of deliverables and responsibilities, helping UC/CSU ensure successful program implementation, and obtaining UC/CSU input and decision-making on key program elements. Consultant will also assist in the three program elements, especially in facilitating coordination and communications with and among campuses, providing analytical assistance to UCOP and the CSU Chancellor's Office as needed, provide assistance with successful retention of subcontractors through competitive procurement processes, and helping to track and ensure successful program implementation based on specific deliverables required by the CPUC. Finally, the consultant will assist the IOUs and UC/CSU in CPUC reporting and regulatory communications. For the third program component, Training and Education, the consultant may assist in development of workshop agendas and materials, identification of experts, facilitation of workshops and training sessions, and preparation of the minutes. Newcomb|Anderson|McCormick, Inc., is in the process of being retained by the Partnership to fulfill this consulting role.

The campuses will hire Energy Efficiency Retrofit subcontractors to install the energy efficiency measures for the retrofit component.

As in the 2004-2005 program, the campus facilities management staff will play a major role in this program component with the assistance of subcontractors will assist, particularly in campuses in their commissioning efforts. The Program Team

will conduct a competitive process to develop a pool of qualified commissioning agents/trainers that will be available to the campuses.

**15. Quality Assurance and Evaluation Activities**

An evaluation plan will be developed in accordance with the 2006-2008 EM&V Protocols.

**16. Marketing Activities**

Since the UC/CSU/IOU team already has an established communication network with campus energy managers and staff, marketing will be based on the pre-established channels that include the classes offered by the Training and Education program element, the CSU Facilities Conference, and the UC Sustainability Conference. In addition, the program website will provide program details and program updates.

**17. CPUC Objective**

The program has been developed in conjunction with UC/CSU to meet the applicable CPUC objectives and guidelines as outline in the Energy Efficiency Policy Manual. This program supports the following CPUC objectives: (2) To pursue all cost-effective energy efficiency opportunities over both the short- and long-term; (5) Program Administrators should manage their portfolio of programs to meet or exceed the short- and long-term savings goals established by the Commission by pursuing the most cost-effective energy efficiency resource programs first, while minimizing lost opportunities; and (9) Program Administrators will manage a portfolio of programs implemented by IOUs and non-IOUs that are selected and evaluated based on their ability to best meet the policy objectives articulated in these Rules. Emphasis has been to develop the program with the UC/CSU on more equal footing as compared to other programs. The organization and governance of the program is achieved in partnership with the University of California Office of the President, California State Chancellor's Office, and four IOUs via the Executive Team, Management Team, MBCx Team, and Training and Education Team. Although all partnership share some common elements, the UC/CSU Partnership has been specifically tailored to the needs and unique characteristics of the UC and CSU campuses.

| | SCG3520 UCP4-IOU/UC/CSU Partnership | |
|---|---|---|
| **BUDGET** | | |
| | | |
| **Administrative Costs** | **$** | **489,224** |
| Overhead and G&A | $ | 145,713 |
| Other Administrative Costs | $ | 343,511 |
| **Marketing/Outreach** | **$** | **10,500** |
| **Direct Implementation** | **$** | **2,560,276** |
| Total Incentives and Rebates | | |
| User Input Incentive | $ | - |
| Direct Install Rebate | $ | 2,142,000 |
| Direct Install Labor | $ | - |
| Direct Install Materials | $ | - |
| Activity | $ | 410,118 |
| Installation | $ | - |
| Hardware & Materials | $ | 3,000 |
| Rebate Processing & Inspection | $ | 5,158 |
| **EM&V Costs** | **$** | - |
| **Budget** | **$** | **3,060,000** |
| **Costs recovered from other sources** | **$** | - |
| **Budget** (plus other costs) | **$** | **3,060,000** |
| | | |
| **PROGRAM IMPACTS** | | |
| **Program Reductions for Measures installed through 2008** | | |
| User Entered kW (kW) | | 0 |
| Net Jul-Sept Peak (kW) | | 0 |
| Net Dec-Feb Peak (kW) | | 0 |
| Net NCP (kW) | | 0 |
| Net CEC (kW) | | 0 |
| Annual Net kWh | | 0 |
| Lifecycle Net kWh | | 0 |
| Annual Net Therms | | 856800 |
| Lifecycle Net Therms | | 8568000 |
| | | |
| **Cost Effectiveness** | | |
| **TRC** | | |
| Costs | | 2287846.573 |
| Electric Benefits | | 0 |
| Gas Benefits | | 3997360.404 |
| Net Benefits (NPV) | | 1709513.83 |
| BC Ratio | | 1.75 |
| | | |
| **PAC** | | |
| Costs | $ | 2,820,565 |
| Electric Benefits | $ | - |
| Gas Benefits | $ | 3,997,360 |
| Net Benefits (NPV) | $ | 1,176,796 |
| BC Ratio | | 1.42 |
| | | |
| **Levelized Cost** | | |
| **Levelized Cost TRC ($/kWh )** | | |
| Discounted kWh | | 0 |
| Cost | | 0 |
| Benefits | | 0 |
| Benefit-Cost | | 0 |
| **Levelized Cost PAC ($/kWh)** | | |
| Discounted kWh | | 0 |
| Cost | | 0 |
| Benefits | | 0 |
| Benefit-Cost | | 0 |
| **Levelized Cost TRC ($/therm)** | | |
| Discounted Therms | | 5617566.333 |
| Cost | | 0.407266499 |
| Benefits | | 0.711582234 |
| Benefit-Cost | | 0.304315735 |
| **Levelized Cost PAC ($/therm)** | | |
| Discounted Therms | | 5617566.333 |
| Cost | | 0.502097264 |
| Benefits | | 0.711582234 |
| Benefit-Cost | | 0.209484971 |

## IOU/UC/CSU Partnership

| Year | Total Budget | Total Incentives | Admin Budget | Net kWh | Net Therms | Net kW |
|---|---|---|---|---|---|---|
| 2006 | $ 1,020,000 | $ 714,000 | $ 306,000 | - | 285,600 | - |
| 2007 | $ 1,020,000 | $ 714,000 | $ 306,000 | - | 285,600 | - |
| 2008 | $ 1,020,000 | $ 714,000 | $ 306,000 | - | 285,600 | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 323001 | Gas Measures | - | 1 | - | 0.8 | Therm | 10 | 357,000 | $ 2.00 | $1.80 | - | 285,600 | - |
| 2007 | 323001 | Gas Measures | - | 1 | - | 0.8 | Therm | 10 | 357,000 | $ 2.00 | $1.80 | - | 285,600 | - |
| 2008 | 323001 | Gas Measures | - | 1 | - | 0.8 | Therm | 10 | 357,000 | $ 2.00 | $1.80 | - | 285,600 | - |

# 2006-2008 Energy Efficiency Programs
# LA County Partnership Concept Paper

## 1. Projected Program Budget

| | 2006 | 2007 | 2008 |
|---|---|---|---|
| Admistration | | | |
| Admistrative Overheads | $ 23,810 | $ 23,810 | $ 23,810 |
| Administrative Other | $ 41,190 | $ 56,190 | $ 56,190 |
| Marketing & Outreach | $ - | $ - | $ - |
| Direct Implementation | | | |
| Incentives | $ 435,000 | $ 420,000 | $ 420,000 |
| Activity | $ - | $ - | $ - |
| Installation | $ - | $ - | $ - |
| Hardware & Materials | $ - | $ - | $ - |
| Rebate Processing & Inspection | $ - | $ - | $ - |
| EM&V | $ - | $ - | $ - |
| *Total* | *$ 500,000* | *$ 500,000* | *$ 500,000* |

## 2. Projected Program Impacts

| 2006 | | | 2007 | | | 2008 | | |
|---|---|---|---|---|---|---|---|---|
| Net kWh | Net kW | Net Therms | Net kWh | Net kW | Net Therms | Net kWh | Net kW | Net Therms |
| - | - | 120,000 | - | - | 168,000 | - | - | 168,000 |

## 3. Program Cost Effectiveness

Attached

## 4. Program Descriptors

Market Sector: Nonresidential, small, medium and large customers
Program Classification: Local
Program Status: Revised Existing

## 5. Program Statement

The 2006-08 SCE/SCG/County of Los Angeles Energy Efficiency Partnership will build on the lessons learned from the existing, successful partnership program. The current partnership consists of several elements such as Retrofit, Retro-commissioning, Technology Transfer/Feasibility Study and Public Housing Metering. This proposed PY06-08 Partnership will focus mainly on Retro-commissioning activities in County of LA facilities, continue the Public Housing Metering element, apply some of the recommendations from the Public Agency Collaboration study and will explore opportunities to expand the partnership to include retrofit and retro-commissioning activities in other County affiliated agencies. These agencies may include the Los Angeles County Office of Education (LACOE), the Los Angeles Unified School District (LAUSD), and the Metropolitan Transit Authority (MTA). The implementation of projects into these other agency facilities will be contingent on the availability of additional program funding during the PY06-08 program cycle.

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**6. Program Rationale**

This Partnership program is a continuation of the existing, successful program. This Partnership is unique in that it allows existing resources to be leveraged including technical and energy project management expertise to facilitate the implementation of needed energy efficiency projects.

There are many governmental agencies and school districts that have previously not participated on a regular basis in energy efficiency programs and can therefore be considered hard to reach. The partnership will look to identify savings opportunities in these markets and as additional funding becomes available will implement the projects.

**7. Program Outcomes**

This partnership program will continue to achieve immediate electric and gas energy savings and peak demand reduction in County facilities. These energy savings will be accomplished by applying the retro-commissioning (RCx) processes the will result in the implementation of recommended energy efficiency measures to optimize the operation HVAC and Lighting systems of each building.

The RCx program element will be enhanced with the County funding contribution, in –kind technical labor resources and the utilization of its existing, state-of-the-art Enterprise Energy Management Information System (EEMIS) which allows real-time, online monitoring of building systems.

Additional energy savings may be achieved by implementing retro-commissioning and retrofit measures in other County agencies. This partnership will seek opportunities to reduce peak demand and create energy savings in other facilities such as Los Angeles County Office of Education (LACOE), the Los Angeles Unified School District (LAUSD), and the Metropolitan Transit Authority (MTA). However, the implementation of projects for these organizations will be contingent on the availability of additional funds. Where applicable, these activities will be coordinated and will leverage resources of other utility programs such as Express Efficiency, Standard Performance Contract, Demand Response and Savings by Design.

As the opportunities arise to expand the program to include other County-affiliated organizations, a larger facility pool will be created to capture more energy savings. This increase in facility pool will meet or exceed the overall program cost effectiveness while capturing “lost opportunities.”

Other program outcome will include:

- Opportunities to share best practices and lessons learned from partnership activities, especially in the areas of retro-commissioning and monitoring based commissioning.

- Demonstrate the value of energy efficiency activities, and the benefits associated with having a local government energy efficiency management team that focuses on timely implementation of cost-effective projects with attractive payback for local government entities.
- Demonstrate the feasibility of a local government entity with upper management support in energy efficiency, can create opportunities to save energy, reduce operating cost and improve occupancy comfort.

## 8. Program Strategy

The implementation strategy will capitalize on the lessons learned from the current partnership program. A higher emphasis will be applied to the retro-commissioning element since preliminary results from the current RCx activities of 10 County Courthouses and Administration buildings have provided higher than expected energy savings. In addition, if funding is available, the partners will implement retrofit and RCx projects in other County affiliated agencies. There are more retrofit opportunities in other County affiliated agencies since County of LA departments, through the Internal Services Division, have already implemented most of the cost effective retrofit projects. The Multi-family Public Housing metering element will also be continued in this program cycle. Lastly, this partnership will seek opportunities to implement some of the recommendations noted in the feasibility study on public agency collaboration which was conducted as part of the PY04-05 program.

### 8.1.Program Strategy Description

#### 8.1.1. Retro-Commissioning Element (RCx):

There will be a major change in the implementation strategy for retro-commissioning. The County will apply the lessons learned from current RCx projects to streamline the RCx process for the new program cycle. The Internal Services Department (ISD) will contribute more in-house staff to perform many of the tasks associated with the retro-commissioning process such as preliminary investigation, bench marking, determination of system deficiencies, and correction of those deficiencies. Contractors will be utilized for tasks where County staff does not have the resources or expertise to address the issues. ISD will also contribute separate funding specifically for maintenance repairs.

The partners will assess the need for additional EEMIS monitoring points to replace those taken by current RCx activities in the 10 buildings and will add more points, as required, to accommodate new RCx activities. The use of EEMIS will ensure persistence in energy savings and will provide a real-time monitoring tool for County's maintenance and operations staff to efficiently and effectively monitor and diagnose issues in its buildings. EEMIS will also continue to be utilized for benchmarking, pre-functional and functional trending analysis, and post-implementation measurements. Furthermore, the California Commissioning Collaborative (CCC) may use EEMIS to support its

efforts to develop facility benchmarking standards utilizing energy management systems.

**8.1.2. Retrofit Element:**

This partnership will seek opportunities to reduce peak demand and create energy savings in other facilities such as Los Angeles County Office of Education (LACOE), the Los Angeles Unified School District (LAUSD), and the Metropolitan Transit Authority (MTA). However, the implementation of projects for these organizations will be contingent on the availability of additional funds. The partnership will work with these entities to identify projects and have a pool of projects available in the event that additional funding becomes available. These additional strategies will include retrofit projects such as complete lighting retrofits (T5 technology, LED applications, newer 28 watt T-8's), building wide lighting controls, boiler replacements, installation of waterheaters, tankless waterheaters, and HVAC upgrades/replacements in County-affiliated facilities. The experience and knowledge acquired in identifying and implementing retrofit projects will be transferred to staff members of these entities. If implemented, these projects will receive incentives for incremental energy savings for each measure and each project will have to meet the required utility cost effectiveness guidelines.

**8.1.3. Multi-Family Public Housing Metering Element:**

The Multi-family Public Housing metering element will be continued in this program cycle. More time is needed to install the metering equipment and sufficient time is required to gather customer energy usage data.

The partnership is currently collaborating with the Los Angeles County Community Development Commission to implement this element, SCE's Emerging Technologies Department and USCL, the supplier of the monitoring equipment.

**8.1.4. Public Agency Energy Efficiency Knowledge and Technology Transfer Element:**

This partnership will seek opportunities to implement some of the recommendations noted in the feasibility study on public agency collaboration that was conducted as part of the PY04-05 program.

***8.2.*Program Indicators**

Describe the units or other indicators used to internally track the achievements for each program strategy. If the primary goal of the program strategy is to procure energy savings and demand reduction, then that is all that needs to be stated. (Examples: Number of students reporting to be successfully implementing energy efficiency practices in their businesses, number of classes held, number of TV ads placed, number of customer contacts made)

**9. Program Implementation**

The implementation plan for this program cycle will include the continuation of activities implemented in the 2004-2005 SCE/SCG/County of LA Partnership program. The partnership will apply the lessons learned from the current partnership program. The management structure of the partnership will remain the same with projects managed by a management team which consisted of representatives from each partner (SCE, SCG, County of LA). Each program element will be coordinated through specific project teams for RCx, Retrofit and Public Housing Metering.

SCE will retain the overall administration of the partnership program. The partnership will work together to establish funding guidelines for various projects, sharing technical expertise, and implementing projects. The partnership also will coordinate the use of ISD's own resources and total program resources to identify and develop projects, manage individual projects, and track costs and savings. Contracting for construction work will be shifted from the utilities to the County to facilitate the implementation process. However, project decisions will continue to be made by the management team on a partnership level.

As previously noted, a higher emphasis will be placed on the retro-commissioning element since preliminary results from the current RCx activities of 10 County Courthouses and Administration buildings have provided higher than expected energy savings. In addition, if funding is available, the partners will implement retrofit and RCx projects in other County affiliated agencies. There are more retrofit opportunities in other County affiliated agencies since County of LA departments, through the Internal Services Division, have already implemented most of the cost effective retrofit projects. The Multi-family Public Housing metering element will also be continued in this program cycle. More time is needed to install the metering equipment and sufficient time is required to gather customer energy usage data. Lastly, this partnership will seek opportunities to implement some of the recommendations noted in the feasibility study on public agency collaboration which was conducted as part of the PY04-05 program.

**Retro-Commissioning (RCx) Program Element:**

The RCx program element will be implemented as follows:

| Key Activity | Description |
|---|---|
| **1. Identification and selection of facilities to be RCx** | Partnership Management Team (SCE, SCG, County of LA) will evaluate the potential of identified sites and select the most cost effective facility to proceed with RCx activities. |
| **2. Develop site specific assessment tools and checklists** | RCx project team (SCE, SCG, County of LA representatives) will establish the process for RCx activities and will coordinate with LAC/ISD staff to investigate facilities, determine equipment and systems, develop facility prioritization procedures. LAC/ISD's EEMIS will be heavily utilized in this phase. |
| **3. Market program, enroll customers** | Partnership Management Team (SCE, SCG, County of LA) will establish marketing strategies and will meet with and educate County facility managers and administrators about program scope, goals, their participation and follow-up. |
| **4. Hire contractors, determine roles** | Partnership Management Team (SCE, SCG, County of LA) will coordinate with LAC staff to develop the RFP's, solicit bids and will select RCx technical resource, and implementer as necessary, |
| **5. Hold building scoping meetings, site investigations, staff interviews** | RCx project team in coordination with LAC/ISD staff and technical resources/contractor will analyze the data collected during the investigations and identify the specific facilities in which to implement energy efficiency measures under this program. |
| **6. Install monitoring systems for initial diagnostic monitoring.** | RCx project team in coordination with LAC/ISD staff and contractors will work with the customers to record initial operating data. Much of this step will utilize EEMIS where it is already installed to provide historical operating data. |

| Key Activity | Description |
|---|---|
| **7. Analyze data and develop recommendations** | RCx project team in coordination with LAC/ISD staff and contractors will review data, determine recommended improvements, and determine feasibility. Improvements will include no-cost measures as well as potential retrofit measures. Recommendations will be forwarded to management team for review and approval prior to commencement of project implementation. |
| **8. Implement improvements** | RCx project team will have oversight of project implementation. LAC staff and/or RCx contractor will implement improvements. |
| **9. Second round of diagnostic monitoring** | RCx project team in coordination with LAC/ISD staff and contractors will work with the customers to record further operating data. Much of this step will utilize EEMIS where it is already installed to provide historical operating data. RCx project team will provide final improvement recommendations to Management team for review and approval prior to commencement of final improvements. |
| **10. Make final improvements** | RCx project team will have oversight of project implementation. LAC staff and/or RCx contractor will implement final improvements as needed.<br><br>LAC staff and/or RCx contractor will also identify opportunities to retrofit EE gas and electric measures to improve building operation. |
| **11. Train building staff** | RCx project team in coordination with LAC/ISD staff and/or contractor will provide training to facility management staff on implemented measures and recommended follow-up activities. |

| Key Activity | Description |
|---|---|
| **12. Project close out, submit final report** | RCx project team in coordination with Management team will establish the formats and requirements for the RCx final report. The RCx contractor will provide the final report in the established format and will provide information such as lists of deficiencies, improvements, recommendations and project annual and long term savings. Follow-up activities and recommendations will incorporate LAC/ISD's long-term ability to monitor performance via EEMIS. |

**Retrofit Program Element:**

The Retrofit element for this program, will be implemented only when additional funding is available to provide incentives for retrofit projects in other facilities such as Los Angeles County Office of Education (LACOE), the Los Angeles Unified School District (LAUSD), and the Metropolitan Transit Authority (MTA). The partnership will work with these entities to identify projects and have a pool of projects available in the event that additional funding becomes available. The energy efficiency measures for retrofit projects will include electric and gas measures such as lighting retrofits (T5 technology, LED applications, newer 28 watt T-8's), building wide lighting controls, boiler replacements, installation of waterheaters, tankless waterheaters, and HVAC upgrades/replacements. The partnership experience and knowledge acquired in identifying and implementing retrofit projects will be transferred to staff members of these entities. These retrofit projects will receive incentives for incremental energy savings for each measure and each project will have to meet the required utility cost effectiveness guidelines.

The Retrofit Element will be implemented as follows:

The table below describes the major activities this partnership will conduct and oversee to implement the proposed retrofit program element.

| Key Activity | Description |
|---|---|
| 1. Identify additional funding for Retrofit Projects | The Partnership Management Team will work with the utilities (SCE and SCG) Energy Efficiency Division to identify additional funding for retrofit projects of other county agencies. |

| Key Activity | Description |
|---|---|
| 2. Collaborate with targeted Agencies to discuss retrofit opportunities and get buy-in for project | If funding is available, the Partnership will meet with representatives from targeted agencies to discuss EE opportunities and obtain upper management approval for projects. |
| 3. Identify key stakeholders to participate in retrofit program | The management team in collaboration with targeted agency, will identify key stakeholders in each agency to participate in the retrofit project team. |
| 4. Develop project criteria and cost-effectiveness requirements. | The Retrofit Project team will establish the criteria for project selection and develop the requirements for incentive payments, etc. |
| 5. Develop process for identifying projects and to generate a pool of projects for agencies. | The Retrofit Project team will establish the process for identifying projects and develop forms and procedures to solicit projects and generate a pool of projects for potential retrofit work. |
| 6. Conduct solicitation for potential projects from participating agencies | The Retrofit Project Team will coordinate with LAC and targeted agency staff to generate a pool of projects for evaluation. |
| 7. Compile and evaluate projects based on project criteria and cost effectiveness requirements. | The Retrofit Project Team will perform due diligence on proposed projects to ensure that each project meets the criteria and cost-effectiveness requirements. Project team will provide a list of recommended projects to proceed with implementation. |
| 8. Approve projects for funding | The Management team will review project team recommendations for potential retrofit projects and will approve funding based on incremental energy savings. |
| 9. Coordinate project implementation with partners and contractors. | The Retrofit Project Team will have oversight of project implementation and will coordinate with LAC and contractors to ensure successful and timely implementation of the project. |

| Key Activity | Description |
|---|---|
| 10. Verify Project installation and provide incentive payments. | The Retrofit Project Team in coordination with LAC staff and contractors will inspect roughly 25% of the retrofit projects. Retrofit projects with incentive levels in excess of $100K shall be flagged for 100% inspection. Upon verification, project team will approve the completed projects for incentive payments. |
| 11. Compile project results and complete final report | The Retrofit Project Team will compile all relevant project information including measure information, energy savings, and program incentives paid, etc. |
| 12. Coordinate with EM&V contractor where applicable. | If required, the Management Team will coordination with the project teams and key stakeholders to support any requests from the CPUC approved EM&V contractor. |

**Multi-Family Public Housing Metering Program Element:**

The Public Housing Metering Element will be implemented as follows:

| Key Activity | Description |
|---|---|
| 1. Identification and providing access to public housing facilities for meter, sensor, and display installation. | The Metering Project Team will coordinate the selection of test sites with the Los Angeles Community Development Commission. In the PY04-05 program, the Orchard Arms facility, in Valencia was identified as one of the five locations for the project. The Partnership is in the process of identifying the remaining of the sites. |

| Key Activity | Description |
|---|---|
| 2. Meter acceptance testing, purchase and installation of revenue-grade meters, | The Metering Project Team, coordinated with internal SCE metering group, to acquire, validate and purchase revenue-grade meters for the projects. To date, all the meters have be completed and ordered. All meters for the Valencia facility have been installed. The meters were delivered and are waiting to be installed once the other sites are selected. SCE will coordinate with field delivery personnel to |
| 3. Provide notifications and assist in training of tenants to fully utilize the LCD display to encourage positive behavioral changes in conservation and to use appliances more efficiently. | The Metering Project Team will coordinate with LACDC to notify tenants of the projects and minimized issues that may arise from the meter installations. |
| 4. Installation of optical sensors and display units. | The Metering Project Team will coordinate with USCL (contractor) to install the optical sensors and display units. |
| 5. Establish an evaluation protocol to study the impacts of meter and display technology. | The Metering Project Team will coordinate with SCE's Emerging Technologies group to develop the monitoring protocol and evaluation process. |
| 6. Monitor and acquire energy usage data | USCL (contractor) will ensure that equipment operates as efficiently as positive and that pertinent data is capture for the final report |
| 7. Evaluate a test group and a control group and conduct energy usage analysis for all participating tenants to establish the pre and post impacts of the project. | ET will analyze the monitoring data and provide all pertinent information to be used in the final report. |
| **8.** Generate a final report for the project. | The Project team in coordination with ET and USCL, will compile all pertinent data to support the final report. |

**10. Customer Description**

The customer base comprises of the County's 38 departments that provide services to more than 10 million County residents. These departments include: Sheriff, Health Service, Probation, Supe4rior Courts, Children and Family Services, Public

and Social Service, Fire, Parks and Recreations, Registrar/Recorder, Chief Administrative Office, District Attorney, County Counsel, and Internal Services.

In addition, the partnership will explore opportunities with targeted agencies such as Los Angeles County Office of Education (LACOE), the Los Angeles Unified School District (LAUSD), and the Metropolitan Transit Authority (MTA).

## 11. Customer Interface

The partnership will interface with various County departments (customers). The partnership in coordination with LAC/ISD staff will meet with and educate the facility managers and administrator in the County and other targeted agencies about the program scope, goals, their participation and follow-up.

## 12. Energy Measures and Program Activities

### 12.1. Measures Information

The program primarily focuses on retro-commissioning activities that include building system optimization for lighting, heating and cooling loads. These RCx activities will identify opportunities to address system deficiencies for both gas and electric equipment. These deficiencies may require simple, quick fixes or may require a replacement of the inefficient or failed system component.

The retrofit measures may include lighting retrofits (T12 to T8, LED exit signs, HID, T5 technology), installation building-wide lighting controls, and HVAC upgrades/replacements (packaged units and chillers) that are not part of the RCx program. These retrofit projects will receive incentives for incremental energy savings for each measure and each project will have to meet the required utility cost effectiveness guidelines.

### 12.2. Energy Savings and Demand Reduction Level Data

See SoCal February 1, 2006 Filing Workbook.

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### 12.3. Non-energy Activities (Audits, Trainings, etc.)

The partnership program will provide training to facility staff through the RCx component of the program to allow for persistence and sustainability of achieved energy savings.

In addition, this partnership will seek opportunities to implement some of the recommendations noted in the feasibility study on public agency collaboration which was conducted as part of the PY04-05 program.

## 13. Subcontractor Activities

The Partnership will rely on subcontractors to carry out certain portions of the partnership program. These subcontractors will include but not limited to the following:

Retro-Commissioning Contractors ("Contractors")

The partnership management team which includes the SCE, SCG and LAC/ISD will oversee the procurement of RCx Contractors to assist in the implementation of the RCx program element.

- The RFP will be developed by LAC/ISD staff in coordination with the management team to obtain a pool of RCx contractors.
- 
- Each project will be competitively bid from a pool of RCx Contractors, solicited under ISD's procurement process.
- The scope of work for each successful contractors may include comprehensive audits, design, equipment purchase, and/or installation of the systems.
- The RCx project team in coordination with the management team will be responsible for approval of all design and installation activities.
- The contractors will enter into a contract with ISD to provide the agreed-upon equipment and services.
- Finally, RCx project team in coordination with LAC/ISD staff will provide all project management services on behalf of the customer.

Retrofit Contractors

As the partnership expands to other targeted agencies, additional contractors may be procured implement the RCx as well as energy retrofit projects. The key tasks that they may perform include:

- Completion of the final, comprehensive audits;
- Complete any necessary design work and obtain the necessary permits;
- Procurement of all material;
- Installation of the systems;
- Project Closeout including completion of punch list items.

**14. Quality Assurance and Evaluation Activities**

The SCE/SCG/County of LA management team will establish and oversee quality assurance measures for the Partnership programs, including oversight and verification of subcontractor activities. These procedures and the associated reporting will be developed in more detail as a part of program implementation. The management structure of this partnership will provide project teams, in each of

the program elements, the opportunities to continue the level of due diligence and quality assurance of the current partnership program, including a representative percentage of pre/post installation confirmation inspections for small hardware projects, and pre/post inspections on all large or specialized projects hardware projects (installation of energy efficient equipment, facility retrofits, and building commissioning and new construction projects).

### 14.1. Expected Number/Percent of Inspections (planned percent of projects)

This partnership will inspect 100% of the Retro-commissioning projects and will inspect roughly 25% of the retrofit projects. Retrofit projects with incentive levels in excess of $100K shall be flagged for 100% inspection.

## 15. Marketing Activities

The retro-commissioning and retrofit program element will use a similar marketing approach. The partnership management team, in coordination with the LAC/ISD staff, will conduct marketing and outreach efforts to better inform and educate customers of the energy efficiency services and programs available through the partnership program. The emphasis will be placed on marketing the retro-commissioning program element to large County facilities. The RCx program will target mainly buildings with office space of over 100,000 square feet. However, smaller building size may be considered if RCx process will yield cost-effective energy savings. The retrofit program will be targeted to the facilities in other county agencies. These building may be large, over 100,000 square feet. However, a majority of the retrofit projects will be in smaller size buildings that are 25,000 square foot and under. This established market base will allow the partners to focus directly on those customers.

This outreach effort will be accomplished mainly through contacts with facility administrators and managers to inform them of the availability and scope of the retrofit and RCx program elements and to explain the benefits associated with measures for which their facilities have been selected. Key activities will be:

| Key Activity | Description |
|---|---|
| **Outreach** | The Partnership Management team in coordination with LAC/ISD administrative staff will begin outreach efforts by contacting the heads of facilities management for each department to inform them of the availability of funds for approved measures and activities in County facilities. When additional funds are available, the team will also outreach to other targeted agencies within LA County. The team will schedule meetings to discuss the options, implementation criteria, and benefits of program participation, as well as program offerings. |
| **Customer** | The Partnership Management team in coordination with staff |

| Key Activity | Description |
|---|---|
| **Follow-Up** | from LAC/ISD, SCE and SoCalGas, will visit each targeted site to talk with facilities manager(s) about the various options and proposed energy efficiency measures. After confirming an appropriate site for implementing measures and/or retro-commissioning, The management team will meet with the appropriate facilities managers to present the anticipated energy savings, the incentive amount and other benefits and considerations associated with the implementation. |
| **Implementation – Training** | In addition, the partnership management team will share energy efficiency knowledge and implementation experience with other local government entities through a series of meetings and workshops. |

**16. CPUC Objective**

The program has been developed in conjunction with LA County ISD, SCE, and SCG to meet the applicable CPUC objectives and guidelines as outline in the Energy Efficiency Policy Manual. This program supports the following CPUC objectives: (2) To pursue all cost-effective energy efficiency opportunities over both the short- and long-term; (5) Program Administrators should manage their portfolio of programs to meet or exceed the short- and long-term savings goals established by the Commission by pursuing the most cost-effective energy efficiency resource programs first, while minimizing lost opportunities; and (9) Program Administrators will manage a portfolio of programs implemented by IOUs and non-IOUs that are selected and evaluated based on their ability to best meet the policy objectives articulated in these Rules. Emphasis has been to develop the program with the LA County ISD on more equal footing as compared to other programs. The organization and governance of the program is achieved in partnership with the LA County ISD, SCE, and SCG. Although all partnership share some common elements, the LA County IOU Partnership has been specifically tailored to the needs and unique characteristics of the LA County facilities.

| | SCG3527 LAP4-Los Angeles County partnership | |
|---|---|---|
| **BUDGET** | | |
| | | |
| **Administrative Costs** | **$** | **225,000** |
| Overhead and G&A | $ | 71,430 |
| Other Administrative Costs | $ | 153,570 |
| **Marketing/Outreach** | **$** | **-** |
| **Direct Implementation** | **$** | **1,275,000** |
| Total Incentives and Rebates | | |
| User Input Incentive | $ | - |
| Direct Install Rebate | $ | 1,275,000 |
| Direct Install Labor | $ | - |
| Direct Install Materials | $ | - |
| Activity | $ | - |
| Installation | $ | - |
| Hardware & Materials | $ | - |
| Rebate Processing & Inspection | $ | - |
| **EM&V Costs** | **$** | **-** |
| **Budget** | **$** | **1,500,000** |
| **Costs recovered from other sources** | **$** | **-** |
| **Budget** (plus other costs) | **$** | **1,500,000** |
| | | |
| **PROGRAM IMPACTS** | | |
| **Program Reductions for Measures installed through 2008** | | |
| User Entered kW (kW) | | 0 |
| Net Jul-Sept Peak (kW) | | 0 |
| Net Dec-Feb Peak (kW) | | 0 |
| Net NCP (kW) | | 0 |
| Net CEC (kW) | | 0 |
| Annual Net kWh | | 0 |
| Lifecycle Net kWh | | 0 |
| Annual Net Therms | | 456000 |
| Lifecycle Net Therms | | 6840000 |
| | | |
| **Cost Effectiveness** | | |
| **TRC** | | |
| Costs | | 948290.0504 |
| Electric Benefits | | 0 |
| Gas Benefits | | 2872635.856 |
| Net Benefits (NPV) | | 1924345.805 |
| BC Ratio | | 3.029279759 |
| | | |
| **PAC** | | |
| Costs | | 1358478.97 |
| Electric Benefits | | 0 |
| Gas Benefits | | 2872635.856 |
| Net Benefits (NPV) | | 1514156.886 |
| BC Ratio | | 2.11 |
| | | |
| **Levelized Cost** | | |
| **Levelized Cost TRC ($/kWh )** | | |
| Discounted kWh | | 0 |
| Cost | | 0 |
| Benefits | | 0 |
| Benefit-Cost | | 0 |
| **Levelized Cost PAC ($/kWh)** | | |
| Discounted kWh | | 0 |
| Cost | | 0 |
| Benefits | | 0 |
| Benefit-Cost | | 0 |
| **Levelized Cost TRC ($/therm)** | | |
| Discounted Therms | | 3815019.963 |
| Cost | | 0.24856752 |
| Benefits | | 0.752980557 |
| Benefit-Cost | | 0.504413037 |
| **Levelized Cost PAC ($/therm)** | | |
| Discounted Therms | | 3815019.963 |
| Cost | | 0.356086989 |
| Benefits | | 0.752980557 |
| Benefit-Cost | | 0.396893568 |

## Los Angeles County partnership

| Year | Total Budget | Total Incentives | Admin Budget | Net kWh | Net Therms | Net kW |
|---|---|---|---|---|---|---|
| 2006 | $ 500,000 | $ 435,000 | $ 65,000 | - | 120,000 | - |
| 2007 | $ 500,000 | $ 420,000 | $ 80,000 | - | 168,000 | - |
| 2008 | $ 500,000 | $ 420,000 | $ 80,000 | - | 168,000 | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 329001 | Gas Measures | - | 1 | - | 0.8 | Therm | 15 | 150,000 | $ 2.90 | $1.80 | - | 120,000 | - |
| 2007 | 329001 | Gas Measures | - | 1 | - | 0.8 | Therm | 15 | 210,000 | $ 2.00 | $1.80 | - | 168,000 | - |
| 2008 | 329001 | Gas Measures | - | 1 | - | 0.8 | Therm | 15 | 210,000 | $ 2.00 | $1.80 | - | 168,000 | - |

# 2006-2008 Energy Efficiency Programs
# Joint SCE Retro-Commissioning Program Concept Paper

## 1. Projected Program Budget

| | 2006 | 2007 | 2008 |
|---|---|---|---|
| Administration | | | |
| Administrative Overheads | $ 2,381 | $ 2,381 | $ 2,381 |
| Administrative Other | $ 5,891 | $ 6,055 | $ 6,225 |
| Marketing & Outreach | $ 1,000 | $ 1,000 | $ 1,000 |
| Direct Implementation | | | |
| Incentives | $ - | $ - | $ - |
| Activity | $ 39,972 | $ 39,795 | $ 39,612 |
| Installation | $ - | $ - | $ - |
| Hardware & Materials | $ 350 | $ 350 | $ 350 |
| Rebate Processing & Inspection | $ 406 | $ 419 | $ 432 |
| EM&V | $ - | $ - | $ - |
| *Total* | *$ 50,000* | *$ 50,000* | *$ 50,000* |

## 2. Projected Program Impacts

| 2006 | | | 2007 | | | 2008 | | |
|---|---|---|---|---|---|---|---|---|
| Net kWh | Net kW | Net Therms | Net kWh | Net kW | Net Therms | Net kWh | Net kW | Net Therms |
| - | - | 24,000 | - | - | 24,000 | - | - | 24,000 |

## 3. Program Cost Effectiveness

Attached

## 4. Program Descriptors

The Joint SCE Retro-Commissioning (RCx) Program is a new local nonresidential program.

## 5. Program Statement

Most buildings have never gone through any type of commissioning or quality assurance process and are therefore performing below their potential. Many problems from the original construction may exist and may not manifest themselves in an obvious manner, although they may be causing unnecessary consumption of energy and increased electrical demand. Even if building staff members have been able to work out most of the "obvious deficiencies", they are often forced to solve problems under severe time and budget constraints and without the benefit of proper documentation. Having to solve problems fast and without good information usually results in "quick and dirty" solutions which can lead to other problems that may be invisible yet costly.[1] Owners and building managers often ask "Do my existing buildings need commissioning?" Unfortunately, many existing buildings are limping along and most owners don't know it. As long as building systems

1 PECI and Oak Ridge National Laboratory. 1998. A Practical Guide For Commissioning Existing Buildings. U.S. Department of Energy

maintain a reasonably comfortable or tolerable environment, nothing appears wrong. Many problems are noticed only when a catastrophic failure or a visible consequence occurs. For example, when unnecessarily large volumes of outdoor air are drawn into a building due to a failed economizer actuator, more heating and cooling energy are used. However, as long as heating and cooling systems have the capacity to handle this increased outdoor air volume, the problem goes unnoticed. Other common problems that drive energy costs up but may or may not cause comfort problems include:

- Variable speed drives that no longer modulate properly
- Time clocks circumvented or set up improperly
- Equipment running more than necessary or running inefficiently due to improper operating strategies
- Equipment cycling excessively due to improper sequences of operation and/or equipment operational problems
- Equipment that is operated manually because the automated system operation is misunderstood or is causing operational problems
- Improperly sized equipment cannot meet the operational requirements as currently configured
- Airflow and/or water flows within the system are improperly balanced, leading to energy waste
- Energy management systems that were never installed or programmed to take full advantage of their capabilities or that have degraded over time
- Sensors and/or actuators out of calibration or have failed

Each of these problems can have a sizable effect on the economics of owning and operating a building. These types of problems are typical in many buildings.[2] The result is that significant savings are achievable for a majority of existing buildings. It may be surprising that market penetration is so low for building system optimization and RCx services. In general, there is a lack of demand for these services due to four main market barriers:

- There is a lack of awareness of building system optimization and RCx benefits.
- The first cost of building system optimization (BSO) and retro-commissioning (RCx) is too high to be funded through tight building operations budgets.
- The facilities staff lacks the time and/or initiative to implement this process.
- Inconsistent approaches to building system optimization and RCx do not give a sense of the service and value that owners receive.

In addition, previous RCx programs have revealed the following critical difficulties that have hindered success:

- Securing buy-in from building owners and facilities staff to participate in building system optimization and RCx programs has been difficult. In previous programs with short program cycles, the rush to secure participants and

[2] PECI and Oak Ridge National Laboratory. 1998. A Practical Guide For Commissioning Existing Buildings. U.S. Department of Energy

undertake field work has led to strategies that bypass owner and facilities staff involvement at the early stages of the process. This has caused difficulty and delay when moving from investigation results to the implementation of corrections. Prompt implementation requires owner and facilities staff commitment and the identification or cultivation of an internal champion for the process. This work should occur upfront in the process and is in fact an effective screening method to sort out participants that will help the project to succeed.

- Ensuring persistence of some savings measures in a cost-effective manner is challenging. Building owners must be interested and capable to make and sustain ongoing commitments of operating resources to ensure the implementation of and persistence of corrections. Because the savings are realized from a variety of operational interventions, their ongoing viability depends on the owner's readiness and ability to manage the systems effectively and oftentimes in new ways. Building facility staff must know and understand the consequences of their decisions as it impacts not only comfort, but energy usage. Again, candidates must be screened to ensure these qualities are present.
- Supporting large amounts of building system optimization and RCx is unmanageable when utilizing only a few service providers. The experience and skills required to quickly and efficiently diagnose and correct operating deficiencies is significant. The pool of service providers that can execute these tasks needs to be increased. Due to the wide variety of control systems and equipment likely to be found in the stock of existing buildings, the selection of vendors should allow flexibility in selecting vendors that have the appropriate experience for a particular retro-commissioning project. Additionally defined assessment protocols to identify building system optimization opportunities and clearly defined processes for RCx will provide valuable operations diagnostic experience to new providers and allow experienced providers to participate efficiently.
- The amount of time required to implement an RCx project is often underestimated. Unlike new construction commissioning there is no natural implementation timeline. Other issues often come up that tend to extend the process including capital funding availability, trending of data, availability of in-house labor, and unforeseen problems encountered during implementation. Enhanced screening of potential sites may help with the funding and in house labor issues. However, other unforeseen factors should be carefully considered in developing a realistic timeline for each individual project.
- The projected amount of project expenditures at the onset is inherently difficult to project. There are several aspects of the process that make projection of expenditures from the onset difficult. These include the unknown state of the system(s) prior to the investigation phase, unknown building issues found during installation of equipment and/or software modifications, and the difficulty of getting good cost estimates for work from multiple vendors before the full scope of work is known.

## 6. Program Rationale

Building commissioning is increasingly recognized as a cost-effective process to improve building performance, reduce energy use, increase equipment life, improve indoor air quality, and improve occupant comfort and productivity. Over the past ten years, utilities in California and across the United States have been important supporters of the commissioning industry, and that support has led to significant energy savings. However, the majority of existing buildings has never undergone a commissioning or quality assurance process, and is therefore most likely to be performing well below their potential. In 1998, a study for the Department of Energy estimated that less than 0.03% of existing buildings were retro-commissioned each year.[3] Although that percentage has most likely increased since 1998, there remains substantial energy saving opportunities through RCx existing buildings.

Retro-commissioning (RCx) applies a systematic process for improving and optimizing larger sized building's operations and for supporting those improvements with enhanced documentation and training. The process focuses on the operation of mechanical heating, ventilating, and air-conditioning (HVAC), refrigeration, lighting, domestic hot water (DHW) and related controls. The RCx process is intended to optimize how equipment operates as a system. Other specific equipment such as landscaping fountains may be included as well if they are applicable to a specific project and meet other program guidelines. RCx projects produce typical savings of 12-15% of total building energy costs, with a simple payback from energy savings alone averaging less than 2 years.[4]

Medium and large sized commercial, industrial, and institutional buildings represent a large proportion of the market potential that can be effectively realized using defined assessment protocols to identify building system optimization opportunities. In addition to significant energy savings, these practices can reduce maintenance costs, provide accurate building documentation, provide appropriate training to operating staff, aid in long term planning for retrofits, and increase the asset value of a building.

## 7. Program Outcomes

- Improve the ability of building operations staff to identify wasteful energy use
- Create persistent savings over the remaining lifetime of the affected equipment
- Prolong equipment life
- Optimize comfort in cases where the corrections rectify outstanding comfort issues

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[3] PECI. 1998. National Strategy for Building Commissioning. U.S. Department of Energy.

[4] PECI. 2000. California Commissioning Market Characterization Study. Report prepared for Pacific Gas and Electric Company.

- Demonstrate a well-delivered RCx process so that building owners and operators realize the value inherent in this service
- Documentation and staff training on the optimized building system operations.

## 8. Program Strategy

To support the program's success, the following strategies will be used:

- Nonresidential Building Commissioning

### 8.1.1. Program Strategy Description

The market barriers and programmatic difficulties described in the program statement are common limitations for incentive programs, and require innovative solutions. The program presented in this proposal is designed to overcome these issues by incorporating the following elements:

- **Careful building screening to reduce risk of ineffective RCx Activities.** Successful building system optimization and RCx projects require buildings with high potential for realizable operational savings. Buildings may be less desirable candidates for building system optimization and RCx due to their small size, their age, general level of maintenance, equipment types and imminent need for a major retrofit, or a lack of an automated building control system. Screening requirements will assure that the program does not invest in buildings that are poor physical RCx candidates.
- **Owners will be involved early, and screened based on their willingness and ability to undertake initial program steps.** As mentioned above successful projects require owners willing to invest capital and human resources in the project. Early owner recruitment and participation steps involve some owner decisions and actions including review and approval of a project scope and support of the RCx provider. Owners that cannot or will not undertake these initial steps are not likely to follow through with the subsequent building system optimization and RCx requirements.
- **Building operators will be involved early based on their willingness and ability to be an integral part of the RCx process.** If the building owner does not have the support of the facilities staff, the likelihood of successful RCx program and savings persistence is low. The facilities staff must eventually deal with any changes made, so they need to be supportive and understanding of any changes to be made. The owners need to allocate appropriate time and/or budget so that the facilities staff can adequately support the RCx process. Along with the owner, the facilities staff should be involved in the decision of which measures should be implemented. A designated staff member will be the point of contact for this portion of the process. Owners that cannot get this degree of buy in from the facilities staff are not likely

to be able to successfully follow through with the subsequent building system optimization and RCx requirements.

- **Targeting owners that have already engaged in energy efficiency activities and experienced success.** To keep projects moving through owner's decision processes, the identification of an internal champion is helpful. These people are likely to exist within organizations that have already undertaken efficiency upgrades, participated in earlier utility or third-party programs or employ graduates of the Building Operator Certification program or employ staff with documented RCx training. These owners are excellent candidates for taking the next step and pursuing increased operating efficiencies. The program will target these owners as a priority. Targeting and recruiting good owner candidates will reinforce the building screening and owner involvement elements above.
- **Ensuring the persistence of savings through carefully targeted requirements for building documentation, training, and energy tracking.** A challenge in the building system optimization and RCx process is how to prove that the benefits last. Verifying persistence of savings is a key goal of this program. The systems and methodologies developed to produce long-lasting results are a result of the most recent experience and research in monitoring building performance, working with building operators to understand their needs, and delivering building system optimization and RCx training to the appropriate audiences. Through these experiences, documentation and monitoring requirements will be streamlined to ensure the program delivers persistence of savings in a cost-effective manner.
- **Building the building system optimization and RCx infrastructure by providing consistent protocols suited to different building sizes and complexity, and thoroughly training service providers on the program.** The RCx Program will utilize the traditional trade ally design – a framework that has worked well for California utilities' past programs. For medium sized buildings and less complex systems, specific defined assessment protocols to identify building system optimization opportunities will be developed from those currently in use in today's market. These protocols will allow quick efficient assessments of system components and functions to identify opportunities and then employ specific analyses to further qualify the measure, and quantify the savings potential and define the scope of the correction. For larger buildings and more complex systems, the program will utilize a uniform set of RCx protocols and templates that will allow skilled providers flexibility in the diagnostic approach while yielding consistent deliverables from the process that conform to program requirements. As practical, web based tools may be used to enhance the reporting and resolution of issues among the participants. Participating service providers will be extensively trained in the use of

these tools and their deliverables will be monitored to ensure compliance with program requirements.

- **Processes will be developed to ensure that the process moves along at a reasonable rate and takes into account problems typically encountered.** A timeline that identifies typical milestones will be established. Allowances for typical delays (e.g. trending of data) will be included to ensure that realistic time expectations are created. Owners and RCx Service providers will need to meet their obligations with respect to the schedule to ensure that the project can be completed successfully.
- **A qualification process for service providers will be developed.** Due to the likely variation in building type, equipment, and control system, and location, it will be necessary to have a flexible process to obtain service providers for each individual project. This process will screen providers for required attributes including capability, cost, and experience with specific systems including controls, relationships with outside contractors, training capabilities and geographic location.

#### 8.1.2. Program Indicators

The primary goal of the program strategy is to procure energy savings and demand reduction.

## 9. Program Objectives

The program will provide optimization of existing buildings within the joint SCE and SCG service territories. Program benefits include a demand reductions and energy savings. Coordination with the SCE will be included with projected kWh savings and kW demand reduction as part of this process. A total of 40 million square feet of space will be retro-commissioned as part of this program. Ancillary benefits include improved occupant comfort, increased equipment life, increased training of the building operators, and a training program for the RCx community.

## 10. Program Implementation

The Retro-commissioning (RCx) Program is a unique energy efficiency effort aimed at cost-effective energy savings. Incentives for electricity-based measures found as part of the RCx process will be coordinated with SCE. The program is designed to expand building system optimization and RCx capabilities in the joint SCE and SCG service territories with program features that directly address market barriers, as well as to ensure the persistence of the program benefits. These objectives are met through the development of building and owner/operator candidate screening protocols, use of specific building system optimization and RCx protocols, building operator and commissioning provider trainings, and building operation tracking systems. Additional management tools will be used to keep the project on schedule and to assist with program and project budgeting. Furthermore, to effectively market the program services, the program will leverage existing relationships

among building owners, participation in other SCG retrofit programs, participants in the Building Operator Certification program, and local governments.

**Overview of Program Process**

The Program will provide the initial screening of the candidate buildings. Approved candidates will be required to enter into an agreement with the program to ensure the dedication to the process.

The program will assist owners in selecting a commissioning provider from the pre-qualified provider list if they are not already working with one. The building system optimization and RCx provider will contract directly with the owner, and all incentive payments will be made to the owner with the exception of the investigation scope and bid payment.

After the investigation scope and bid, a building with non-functioning equipment will be directed to complete repairs that affect the ability to perform RCx services. Next, the building system optimization and RCx provider completes the investigation, helps the facility staff to select items for implementation, aids implementation when necessary, and sets up the tracking system.

Required or recommended retrofit items will be referred to applicable rebate programs if the owner is interested in implementing these measures. If applicable, these measures can be evaluated as part of the RCx process.

The program will tap into the existing commissioning industry in California for RCx services and will assure long-lasting benefits by completing the following tasks:

**RCx Project Screening and Marketing**

A comprehensive process will be used to screen buildings and their occupants for participation in the program. The goal of the screening process is to ensure that the proper buildings with interested owners and operators are selected for the program. Considerations such as building EUI, equipment type and condition, building usage, funding, and building operator interest will all be considered.

Marketing of the program will be directed from a pre-screening of the applicants and through other vehicles such as a web site and project brochures.

**RCx Provider Selection**

The program will publish eligibility criteria for commissioning providers and will evaluate provider qualifications for eligibility. Eligibility criteria will include demonstrated experience in building lighting, HVAC and refrigeration systems, engineering, control systems, diagnostics, monitoring, data analysis, functional testing and energy savings calculations and approved pricing structure. These qualifications include work experience, training and/or education, and employee licenses or certifications. Additionally, the RCx provider will be required to have on staff or via subcontracts, personnel that are capable of operating and

programming a variety of control systems, and have software and/or hardware keys and qualifications to use them. Requirements for liability insurance and appropriate licensing will also be required. Due to the expected diversity, sizes, and locations, multiple vendors for specific types of work and/or subcontracting of portions of the work may be considered as part of this process.

The program will pre qualify RCx contractors for participation in the program. An initial qualification process will be initiated at the start of the program to ensure that the contractors are pre-qualified prior to the initiation of the RCx process in order to expedite the RCx process. Although the pre-screening will be done at the program onset, the process will be left open so that buildings requiring special skills, specific controls contractors, or a vendor of the owner's choosing can be accommodated as required. Applicants will be qualified and identified by particular skill sets that they bring to the program. A pool of qualified contractors will be available for the program projects. The program will be able to drop an RCx provider from the RCx provider pool and or a job due to non-performance, inaccurate projections, poor quality work, lack of timelines, owner complaints, lack of cooperation, etc.

Upon acceptance of the RCx process, the owner will be able to choose an RCx contractor of their own choice or one from the pool. The program will match appropriate contractors to a particular site based upon such factors as controls capability, engineering capability, RCx provider workload, and geography. If a particular match does not exist, the existing contractors with the most similar background will be asked to see if they can expand their capabilities (e.g. add separate subcontractors for a different control systems) to match a particular site.

**RCx Hardware Contractor Selection**

In general, contractors to perform hardware related work (valves, control sensors, VFDs, etc.) will be approved by the RCx program. In general the contractors used or referred by the current building staff will be utilized as long as they meet basic requirements including appropriate licenses, insurance, and qualification for the particular job. The RCx program will approve these contractors.

In cases where the existing building staff does not have a contractor for a specific portion of the work, other contractors will be qualified and contacted as needed for specific work.

**Building system Optimization and RCx Protocols**

For medium sized buildings and less complex systems, specifically defined assessment protocols to identify building system optimization opportunities will be developed from those currently in use by RCx providers. Specialized types of buildings may also have specific types of templates. These protocols will allow quick efficient assessments of system components and functions to identify opportunities and then employ specific analyses to further qualify the measure, quantify the savings potential and define the scope of the correction. For larger buildings and more complex systems, the program will utilize a uniform set of RCx

templates. While allowing for flexibility for individual commissioning provider styles, the protocol is a framework that will provide the requirements for the program, and shall create clear expectations for commissioning providers and customers. These templates shall also provide some level of quality control. Commissioning providers that qualify will complete a thorough RCx process using protocols that include candidate screening, building investigations, and implementation of deficiency corrections to achieve savings that persist over time.

Building system optimization, RCx Training and Orientation

To build the infrastructure for quality RCx process, a building system optimization and RCx orientation will be made available to potential and existing service providers. Qualified providers will be required to participate in a Program Orientation. The orientation will summarize how the retro-commissioning process will be operated in order to ensure consistent delivery and implementation. The Program Orientation will cover the required RCx program protocols and templates for the scoping studies, the RCx analyses, implementation of fixes, documentation, operator training, and operational tracking system.

Participants will benefit from working with an experienced commissioning provider in a well-developed framework for providing building system optimization and retro-commissioning services. Orientation topics include:

1. Scoping – tools and techniques
2. The system approach
3. Efficient methods for uncovering problems
4. Working with the building staff
5. Calculating the savings
6. Environmental impacts of reduced energy consumption
7. Implementing the findings
8. Providing a targeted Systems Manual
9. Building system assessment protocols

Participants will leave the orientation with an understanding of the building system optimization and RCx processes and how to apply that process in this program's building stock. The emphasis of the orientation is on the operation of the program, not how to retro-commission a building.

A separate training component with more emphasis on the general process and less emphasis on the program specifics will be offered as a one time course for interested building owners, building operators, service providers and decision makers.

**RCx Incentive and RCx Process**

The Building RCx program will provide incentives to the owners as a means to get them to undergo the RCx process and to implement the recommendations in a timely manner. The incentive process is a multi faceted approach that is meant to provide value to the customer, to the utility and to the operators of the buildings.

Upon approval of the RCx process by the owner, an initial fee may be charged to the owner. This fee is meant to financially engage the owner in the process at the beginning. The RCx Provider may bill both the RCx Program and the owner (the owner will share a significant part of the RCx process cost) on a regular basis through the project duration.

The RCx Program will allocate an incentive value per building based upon size, Energy Usage Index (EUI), and building type. A funding cap will be set for both the RCx process and incentives. This total budget will used be to fund a significant portion of the RCx process and the approved controls programming changes with the balance being used for hardware/labor buy downs that are not appropriate or funded by other programs. This split is meant to encourage owner financial involvement in the process and to encourage the funding of controls changes rather than major hardware changes (pure retrofit work) from RCx funds.

The RCx Program will develop a formula for doling out the hardware/labor buy downs for a given budget. In general, the following rational will be used to allocate and approve measures for funding incentives that are not strictly controls based, although similar considerations will be use to approve control changes.

- Does the measure have a payback from 1-3 years?
- Does the measure help meet the energy goals for the program?
- Will the measure improve occupant comfort?
- Will the measure improve equipment lifetimes?
- Does it make sense to and is their project time to fund this measure from another incentive program (The emphasis on this program is RCx and not pure retrofit measures)?
- Will this measure help other measures save more?

For measures with outstanding paybacks (after incentive) of less than one year, the owner will be expected to contract for this work and pay for the amount not covered by the incentive as a requirement of the program. For measures with outstanding paybacks over 3 years, the owner will be given incentives to take advantage of the measure, but is not required to do so as part of the program contract. The RCx provider will provide an estimated payback prior to implementation phase. Rebates will be calculated based upon installed costs and any quantification of energy cost savings that is done after installation. All hardware incentives will be paid to the owner by RCx Program at the successful completion of the program.

For the purposes of evaluation, measures are split into three groups.

- O&M and minor repairs (Fan belts, equipment tune ups, filters, broken gauges, etc.)
- Control repairs/enhancements (programming effort, broken sensors, broken actuators, etc)
- Major repairs (VFDs, major hardware repairs or replacements)

Both during the program and during the evaluation of the measures, the RCx Program will group the measures into the appropriate category using the basic strategy indicated below. For items all categories, the RCx provider will provide an engineering estimate of cost savings and implementation cost that yields a payback value.

Incentives for each type of measure will be paid as indicated for measures that have been approved by the building operator, building owner, and the RCx Program. Non approved measures will not be funded, but may be implemented at the owner's expense if desired.

For O&M and minor repair items, these items will be identified during the RCx process by the RCx Provider. Per the RCx contract terms, these items will probably be limited to $500 or less (each) and the cost and labor for the repair will be the full responsibility of the owner. The intent is that this will be covered by the owner's O&M budgeting and personnel. The RCx Provider will review and ok these fixes and coordinate any related programming with the owner's contractor.

For control repairs, these items will be identified during the RCx process by the RCx provider. For typical programming issues, the cost will be shared between the RCx process and the owner with a significant cost share. For control hardware costs, the owner will contract with a separate contractor to perform the installation/repair work. SCE/Admin will rebate the owner for this work based upon the guidelines indicated previously. The RCx provider will review and ok the hardware installation/repair.

For major repairs, these items may be identified both initially and during the RCx process. For critical problems that impact the RCx process near the onset (first portion of the RCx timeline), the owner will be required to pay the non-incentivized portion of the cost. If the owner refuses/cannot pay, the RCx will be stopped at this point, with the owner required to pay their share of any outstanding monthly fees to the RCx provider. For other major repairs found late in the process, the incentives will be evaluated using the criteria indicated previously. The owner may or may not decide to approve these measures.

At the completion of the project, interested building operators will be eligible for a rebate for the BOC class. At the completion of a successful course, the owner of each building with an operator will be paid for a maximum of two operators per building attending the courses. Because of the program and course timing issues, the program will be limited to 60 trainees that would most likely come from the first few buildings that are RCx'd.

Initially, only electric savings will be provided with incentives. Pending program success in cost-effective gas savings, incentives for gas savings may be added to the program.

**Program Completion**
At the end of the program, the full process will be evaluated for as built conditions and documentation provided to the building owner and the program. This documentation shall consist of training information, final performance and costs, targeted documentation of the RCx'd systems and a final report.

As indicated above, operators will become eligible for the BOC program incentives at the completion of the project. If applicable, after one year, the building may be reviewed for Energy Star® qualification by the RCx provider. Alternately, if interested, the owner will be provided with the documentation required by the RCx process of the LEED-EB program.

**Ongoing RCx Program Operations**
To ensure success of the RCx program, a quality control process will be established. The program will provide oversight and technical assistance to the commissioning providers and modify the program procedures to ensure that owner/management firms are being well served by the commissioning providers.

**Oversight**
Throughout the program, documentation from each step of the RCx project will be reviewed. The table below lists the documents that will be reviewed.

| RCx Phase | Quality Control Documentation |
|---|---|
| Screening | Screening report and Owner agreement |
| Scoping | Investigation scope and bid |
| Investigation | Findings list with energy savings calculations and cost estimates<br>Owner and operator approval of proposed measures form |
| Implementation | Confirmation of implemented measures |
| Persistence of Savings | Targeted Building Systems Manual<br>Integrate RCx process with Building Energy Monitoring System.<br>Tracking System Documentation<br>Training Documentation<br>Final Report |

**Ensuring Persistence Through Performance Tracking**
Recently conducted studies of RCx persistence have found a greater persistence of commissioning benefits when building operators were well-trained and tracked building performance[5]. Experience has shown that well-informed owners and

[5] H. Friedman, A. Potter, T. Haasl, D. Claridge, S. Cho, "Persistence of Benefits from New Building Commissioning", Proceedings of 11th National Conference on Building Commissioning, May 20-22, 2003.

operators not only ensure that RCx savings persist, but they also work to create additional savings. Savings need to be monitored and actions need to be taken periodically to fine tune building performance.

The commissioning providers will propose and implement a tracking system to monitor the improvements implemented in each building. The program will assist in the development of these plans where needed. These systems will track critical points for verification of the performance and persistence of improvements, and will provide that information to the program and the building operators. This approach ensures a high level of confidence in the realization of the savings from this program.

**11. Customer Description**

Nonresidential medium and large customers in the commercial & industrial, government and institutional segments are the primary customer groups. Office buildings, retail malls, supermarkets, hotels, institutional facilities, and public buildings would all be eligible under this program. The common portions of residential occupancy that has commercial meters would also be eligible (e.g. condos with central HVAC). The primary market actors targeted will be the building owners and key financial decision-makers.

Desirable characteristics we look for in buildings include:

- Greater than 100,000 square feet smaller areas may be justified for applications with higher potential energy savings that meet other criteria
- Owner occupied
- Owner able to commit to capital expenditures within 6 months or less of agreement
- Owner maintained
- Utilizes direct digital controls (DDC) for the primary operation of building systems to undergo RCx
- DDC system values can be readily trended using existing software and hardware
- HVAC and/or refrigeration systems primarily consist of built-up equipment or central plants rather than unitary equipment.
- High electricity and gas consumption
- Mechanical equipment in relatively good condition
- Building not commissioned or retro-commissioned within the last five years

**12. Customer Interface**

Although the RCx process is somewhat more complex than many energy efficiency programs, this program is designed to act as a single point of contact for a building retro- commissioning process. This feature will allow the customer to go to respected entities (SCE and SCG) that will be dealing with many of the complexities of the process including defining a process, qualifying providers, overseeing the implementation and providing estimates of energy savings and cost impacts. This will relieve the customer from having to investigate many of the activities that they may not be familiar with. Typically, the program will be

presented to the customer via SCE's and SCG's marketing process. Alternately, the customer may get information about the program through a website.

Screening will be done to ensure the customer meets the program guidelines, which will consist of quick facility walkthrough and some brief questions. Once the customer has been approved via the screening process, an agreement will be developed that summarizes the program scope including likely customer costs, customer time commitments, likely sources of inconvenience, and work being done by the RCx provider. Upon the completion of the investigation phase of work, the RCx provider will present a list of recommended measures to the Customer and to the RCx program. The customer and the customer's facility operator will need to review and approve any proposed measures to ensure they are comfortable with the operational and cost ramifications (including incentives). During the implementation phase, the RCx program and the RCx provider will work with the owner to ensure that the measures are installed and operate properly prior to being accepted.

One feature of this program is that appropriate retrofit measures identified as part of this process will be referred to the appropriate retrofit measure efficiency programs, which should make the identification, qualification, rebating and evaluation of these measures less intrusive for the owner and more integral to the retro commissioning process. Conversely, demand response opportunities identified as part of this process will be referred to the appropriate demand response efficiency programs, which should make the identification, qualification, rebating and evaluation of these measures less intrusive for the owner and more integral to the retro commissioning process.

## 13. Energy Measures and Program Activities

### 13.1. Prescriptive Measures.

See SoCalGas February 1, 2006 Filing Workbook.

### 13.2. Therm Level Data

See SoCalGas February 1, 2006 Filing Workbook.

### 13.3. Non-energy Activities

#### 13.3.1. Activity Description

The program activities that support the energy savings achieved, but do not directly achieve energy savings by themselves are as follows:

- Investigation scope and bid
- RCx investigation, including a findings list and simple payback analysis
- Service provider orientation on building system optimization and RCx
- Optional incentives will be provided to interested participant building operators that are interested in pursuing Building Operator Certification.

**13.3.2. Quantitative Activity Goals**
Number of customers and repeat customers are to be tracked.

**13.3.3. Assigned attributes of the activity (market sector, end use)**
As noted above, the program will include medium and large nonresidential facilities with a variety of energy-consuming end-uses.

**14. Subcontractor Activities**
The RCx provider will provide the full retro-commissioning support for the process. This includes activities detailed elsewhere including on site scoping and investigation work, data collection and analysis, evaluation of cost and energy savings, modifications of controls and implementation of controls based measures.

Additional subcontractors will be used as needed for major repair or retrofit items discovered during the RCx process and not funded otherwise.

**15. Quality Assurance and Evaluation Activities**
Initial inspections will be randomly inspected upon completion of the retro-commissioning by the service provider. The installation verification will be done by confirming if the installed measures match the measures indicated in the report. Inspections will be made prior to payment. An evaluation plan will be developed in accordance with the 2006-2008 EM&V Protocols.

**16. Marketing Activities**
Currently, market demand for RCx services is still low, except in certain markets where long-term ownership interests are high, such as government buildings and schools.

The RCx program will identify potential new candidates using customer billing data. This will provide a list of possible sites for the screening process. In addition, the marketing plan is designed to recruit and leverage existing customer contacts and networks from within previous utility programs as well as from local governments. The target audience is best approached through existing relationships and SCE, SCG, and local governments are the best source of existing relationships that can be tapped for recruitment. Commissioning providers and the program itself will also recruit owners.

A separate training course will be made available to train the decision makers about the retro-commissioning process. This will be tied into the marketing program.

The marketing messages will be designed to inform owners about building system optimization and RCx and to spur them to take advantage of the energy saving opportunities offered by the program. The marketing plan provides materials that have consistent messaging from credible sources and can be used by the providers,

SCE, SCG, local governments, and program staff to build awareness and enroll participants.

Marketing materials will be designed with a consistent look and message. Materials will include a brochure, fact sheets, and presentations that can be customized. The materials will explain the program approach, the energy savings potential, and available financial assistance, and include brief case study information. SCE, SCG, local governments and RCx providers may use the materials to aid in project recruitment.

A program webpage will be an integral part of promoting the program. It will contain all the marketing materials in an easy to download format. In addition, it will contain the program requirements, the RCx protocols and RCx resources for providers and owners. Means to share information between the various parties may also be integrated into this site.

**17. CPUC Objective**

The program has been developed in conjunction with SCE to meet the applicable CPUC objectives and guidelines as outline in the Energy Efficiency Policy Manual. This program supports the following CPUC objectives: (2) To pursue all cost-effective energy efficiency opportunities over both the short- and long-term; (5) Program Administrators should manage their portfolio of programs to meet or exceed the short- and long-term savings goals established by the Commission by pursuing the most cost-effective energy efficiency resource programs first, while minimizing lost opportunities; and (9) Program Administrators will manage a portfolio of programs implemented by IOUs and non-IOUs that are selected and evaluated based on their ability to best meet the policy objectives articulated in these Rules.

| | SCG3528 RCX4-RCx Partnership with SCE | |
|---|---|---|
| **BUDGET** | | |
| | | |
| **Administrative Costs** | **$** | **25,314** |
| Overhead and G&A | $ | 7,143 |
| Other Administrative Costs | $ | 18,171 |
| **Marketing/Outreach** | **$** | **3,000** |
| **Direct Implementation** | **$** | **121,686** |
| Total Incentives and Rebates | | |
| User Input Incentive | $ | - |
| Direct Install Rebate | $ | - |
| Direct Install Labor | $ | - |
| Direct Install Materials | $ | - |
| Activity | $ | 119,379 |
| Installation | $ | - |
| Hardware & Materials | $ | 1,050 |
| Rebate Processing & Inspection | $ | 1,257 |
| **EM&V Costs** | **$** | - |
| **Budget** | **$** | **150,000** |
| **Costs recovered from other sources** | **$** | - |
| **Budget** (plus other costs) | **$** | **150,000** |
| | | |
| **PROGRAM IMPACTS** | | |
| **Program Reductions for Measures installed through 2008** | | |
| User Entered kW (kW) | | 0 |
| Net Jul-Sept Peak (kW) | | 0 |
| Net Dec-Feb Peak (kW) | | 0 |
| Net NCP (kW) | | 0 |
| Net CEC (kW) | | 0 |
| Annual Net kWh | | 0 |
| Lifecycle Net kWh | | 0 |
| Annual Net Therms | | 72000 |
| Lifecycle Net Therms | | 1080000 |
| | | |
| **Cost Effectiveness** | | |
| **TRC** | | |
| Costs | | 265113.1574 |
| Electric Benefits | | 0 |
| Gas Benefits | | 456441.3095 |
| Net Benefits (NPV) | | 191328.1521 |
| BC Ratio | | 1.721684861 |
| | | |
| **PAC** | | |
| Costs | | 150000 |
| Electric Benefits | | 0 |
| Gas Benefits | | 456441.3095 |
| Net Benefits (NPV) | | 306441.3095 |
| BC Ratio | | 3.04 |
| | | |
| **Levelized Cost** | | |
| **Levelized Cost TRC ($/kWh )** | | |
| Discounted kWh | | 0 |
| Cost | | 0 |
| Benefits | | 0 |
| Benefit-Cost | | 0 |
| **Levelized Cost PAC ($/kWh)** | | |
| Discounted kWh | | 0 |
| Cost | | 0 |
| Benefits | | 0 |
| Benefit-Cost | | 0 |
| **Levelized Cost TRC ($/therm)** | | |
| Discounted Therms | | 607168.581 |
| Cost | | 0.436638465 |
| Benefits | | 0.751753836 |
| Benefit-Cost | | 0.31511537 |
| **Levelized Cost PAC ($/therm)** | | |
| Discounted Therms | | 607168.581 |
| Cost | | 0.247048356 |
| Benefits | | 0.751753836 |
| Benefit-Cost | | 0.504705479 |

## RCx Partnership with SCE

| Year | Total Budget | Total Incentives | Admin Budget | Net kWh | Net Therms | Net kW |
|---|---|---|---|---|---|---|
| 2006 | $ 50,000 | $ - | $ 50,000 | - | 24,000 | - |
| 2007 | $ 50,000 | $ - | $ 50,000 | - | 24,000 | - |
| 2008 | $ 50,000 | $ - | $ 50,000 | - | 24,000 | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 330001 | Gas Measures | - | 1 | - | 0.8 | Therm | 15 | 30,000 | $ - | $1.80 | - | 24,000 | - |
| 2007 | 330001 | Gas Measures | - | 1 | - | 0.8 | Therm | 15 | 30,000 | | $1.80 | - | 24,000 | - |
| 2008 | 330001 | Gas Measures | - | 1 | - | 0.8 | Therm | 15 | 30,000 | | $1.80 | - | 24,000 | - |

# 2006-2008 Energy Efficiency Programs
# SBESC Concept Paper

## 1. Projected Program Budget

| | 2006 | 2007 | 2008 |
|---|---|---|---|
| Administration | | | |
| Administrative Overheads | $ 5,714 | $ 5,714 | $ 5,714 |
| Administrative Other | $ 25,536 | $ 26,236 | $ 26,935 |
| Marketing & Outreach | $ 29,750 | $ 30,050 | $ 30,051 |
| Direct Implementation | | | |
| Incentives | $ - | $ - | $ - |
| Activity | $ 59,000 | $ 58,000 | $ 57,300 |
| Installation | $ - | $ - | $ - |
| Hardware & Materials | $ - | $ - | $ - |
| Rebate Processing & Inspection | $ - | $ - | $ - |
| EM&V | $ - | $ - | $ - |
| *Total* | *$ 120,000* | *$ 120,000* | *$ 120,000* |

## 2. Projected Program Impacts

| 2006 | | | 2007 | | | 2008 | | |
|---|---|---|---|---|---|---|---|---|
| Net kWh | Net kW | Net Therms | Net kWh | Net kW | Net Therms | Net kWh | Net kW | Net Therms |
| - | - | - | - | - | - | - | - | - |

## 3. Program Cost Effectiveness

Attached

## 4. Program Descriptors

Market Sector: Cross-cutting
Program Classification: Local
Program Status: Existing (Revised)

## 5. Program Statement

The South Bay Partnership is an alliance between the South Bay Cities Council of Governments (SBCCOG), Southern California Edison (SCE), and the Southern California Gas Company (SCG). The Partners propose to build on the current successful partnership program that established the South Bay Energy Savings Center (SBESC) in 2004 to become a more comprehensive source of energy information and expanding its efforts to deliver significant energy savings through project facilitation.

The 2006-08 program will be enhanced to deliver information regarding demand response, self-generation and low income programs, integrate more CTAC and ERC classes and identify retrofit opportunities in municipal facilities. Cities are now more than ever interested in energy efficiency as they develop strategies to implement the Governor's Executive Order S-20-04, (The Green Building Action Plan). The South Bay Energy Savings Center (SBESC) can be instrumental in identifying retrofit opportunities in South Bay municipal buildings and distributing

comprehensive energy information as well as provide support for cities as they transition their communities to the new energy codes.

**6. Program Rationale**

The South Bay Partnership will optimize the opportunities for the fifteen local governments of the South Bay and their communities to work toward the common goal of achieving short- and long-term energy savings, reduced utility bills, and an enhanced level of comfort in municipal and commercial buildings as well as homes.

The Partnership will help promote an energy efficiency 'ethic' by increasing awareness and participation in energy efficiency, demand response, self generation, CEC, DOE, EPA and energy management assistance (low income energy efficiency and CARE) programs. Energy code training will feature strongly in the Partnership.

This partnership supports the policy set forth in Decision (D.) 05-01-055 which notes that "current or future partnerships between IOUs and local governments can take advantage of the unique strengths that both parties bring to the table to deliver cost-effective energy efficiency services." Local government economic redevelopment and similar designated area are specifically designed to increase community prosperity and represent a vital source of energy savings across a diverse residential and business market sector that has had lower participation in energy efficiency programs. These customers represent significant energy savings and demand reduction potential, as well as potential lost opportunities if not given targeted consideration.

In addition, the SBCCOG region includes a number of markets, such as non-English speaking consumers, renters, small businesses and government organizations that traditionally have not taken optimum advantage of energy savings programs. The Partnership will expand awareness of energy efficiency programs and increase participation levels for all market sectors.

**7. Program Outcomes**

The desired outcomes of this program are:

- Short and Long-term energy savings and demand reduction for Local Government organizations and the communities they serve as well as reduction of greenhouse gas emissions. Jurisdictions will leverage their local infrastructure to "spread the word" about energy efficiency and deepen the reach of statewide and local EE programs and services.

- An energy efficiency 'ethic' resulting from delivery of energy information to the communities, training and education for local government facility managers, energy managers and other staff in the use of 'best practices' methodology for identifying and implementing energy efficiency opportunities in their facilities.

## 8. Program Strategy

The Partners believe that considerable progress towards our energy savings goals will come from partnering with local communities to help bring the message about energy efficiency, conservation and savings to our customers. IOUs are aware that our partners at the local level can be most effective in reaching out to their communities.

### 8.1.1. Program Strategy Description

### 8.1.2. South Bay Energy Savings Center - Energy Information

The South Bay Energy Savings Center (SBESC) is a local central clearinghouse for energy efficiency information, education and technical resources. The SBESC is designed to significantly increase the exposure and availability of energy efficiency programs and to assist all sectors of the community to derive the maximum benefit from energy efficiency programs. The center will provide government, businesses and residents with information on energy efficiency programs and services, demand response, self-generation, low income, CEC, DOE, EPA and other energy assistance programs such as gas and water efficiency resources. In addition, statewide and national energy marketing information will be distributed by the SBESC. Other features include an Energy Lending Library and exhibits and displays that focus on energy efficiency.

### 8.1.3. Training and Workshops

The Partnership will conduct energy code training and other energy training targeted to meet the needs of the region. Workshops will target businesses, residents, homeowner associations, business and social groups, seniors and mobile home parks and building professionals.

### 8.1.4. The South Bay Public Facilities Energy Efficiency Project (EE+)

The SBCCOG conducted a needs assessment in the South Bay in 2005 and have identified opportunities for building retrofits in all 15-member cities. This program element would provide technical resources for these cities to identify, plan and execute various energy efficiency projects. The initial feasibility assessments identified over 3 million kWh and over 500 kW of savings possible in 56 facilities in 13 of the 15 cities.

These cities will be provided with technical assistance and incentives offered by the IOUs to retrofit municipal buildings through the full range of programs and services provided by the IOUs. It is anticipated that SBESC will also facilitate early identification of residential and nonresidential new construction projects through their network and the cities permitting process. Retrofitting of municipal buildings will support compliance with the Governor's 'Green Building Action Plan.'

The program will provide for the means to reserve funds for specific projects to enable cities to incorporate incentives into their budgets for these projects.

### 8.1.5. Program Indicators

It is anticipated that the Partnership will funnel energy efficiency retrofits in municipal buildings to IOU rebate and incentive programs. Other objectives include:

1. Significantly increase the marketing of energy information, education and IOU incentive programs to all market segments in the South Bay enabling and encouraging customers to make informed decisions to change energy use and practices

2. Increase small business participation in the installation of energy efficient equipment

3. Identify retrofit opportunities in municipal facilities

4. Leverage the City's institutional strengths and communication infrastructure to identify and respond to the specific needs of constituents.

The program will achieve the following annual targets:

Twelve (4) workshops for Business

Six (2) Workshops for Government

Thirty (10) Workshops for Residential

Three (1) Community Sweeps

Eighteen (6) Community Outreach Events

## 9. Program Implementation

All Partners will participate equally in program development and the establishment of goals, deliverables and milestones for the program and share commitment to achievement of program goals.

SCE will identify a Partnership Representative on a full- or part-time basis, who will be the single point of contact between the SBESC and SCE Program Managers. SBCCOG will work with the member cities to designate Energy Champions for respective cities or group of cities. SBESC personnel may perform this function on behalf of the SBCCOG members.

Energy Savings Center

The South Bay Partnership will continue to operate from the centrally located SBESC office established by the SBCCOG to ensure easy access to the public, including handicap access. SCE/SCG will ensure that all energy-related information and marketing materials are made available for use or distribution by the SBESC and will be responsible for providing technical support and energy and demand information as appropriate. The Partners will work to strengthen the energy efficiency displays and the lending library.

Training and Workshops

At the beginning of the program period, SBESC will develop a training plan, including quarterly schedule. Workshop offerings will respond to the needs identified in the 2004-2005 Energy Efficiency Assessment. All training and workshop events will specifically promote relevant IOU energy savings programs.

Municipal Retrofits

SCE/ SCG will utilize existing infrastructure to process and pay rebates and incentives, to assist with pre and post inspection and verification as well as coordinate any evaluation, measurement and verification efforts. SCE/SCG will also facilitate the identification and scoping of energy savings projects and commit the required incentive funds.

Cities identifying municipal building retrofit opportunities will enter into agreement with the relevant SCE/SCG programs to secure incentives for the projects. SCE Business Customer Division will perform audits. SBCCOG may work with cities/energy champions to implement the projects. Savings will be tracked and credited to SBCCOG's efforts.

Community Events

Partnership personnel will work with appropriate city officials to plan and implement community outreach events. Events could include CFL change-outs or other measures for public housing units, refrigerator and freezer recycling sweeps, small business direct install sweeps, mobile home direct installations and re-lamping programs. The SCE Partnership Representative will identify SCE appropriate resources such as marketing materials, the mobile educational units, EE program support, trainers, etc. SBCCOG staff or contractor will implement community events.

SBCCOG member cities will use their communication channels, where possible, to conduct outreach to customers, community-based organizations, building officials and energy efficiency contractors.

Some community events will be specifically designed to 'funnel' energy programs such as the Small Business Direct Install, Refrigerator Recycling, Multi-family and Mobile Home and Integrated School-Based Programs. SCE Government Energy Action Resources materials will be used to support these efforts

**10. Customer Description**

The Partnership will target SBCCOG member cities. All SCE customer segments, residential and non-residential, that can be positively influenced by SBESC to harvest greater energy efficiency than would otherwise be possible through traditional marketing and outreach efforts, will benefit from the program. Low income customers, multi-family residences, small businesses and customers with primary languages other than English could be better served by SBESC activities.

**11. Customer Interface**

In the case of cities, Partnership personnel will initiate person to person contact with appropriate city staff or elected official. Customers benefiting from the Partnership through 'funneling' efforts will be subject to the customer interface feature of the respective program.

**12. Energy Measures and Program Activities**

This is an information only program. Activities include workshops, community sweeps and community outreach events.

**12.1. Prescriptive Measures.**

**12.2. Non-energy Activities**

Presentations, attendance at conferences, meetings, community fairs, outreach events, marketing materials such as brochures and information packets, on-site visits and Title 24 and other energy training classes are all non-energy related activities associated with the Partnership. In addition, the Partnership will conduct/facilitate energy audits.

**12.2.1. Activity Description**

**12.2.2. Quantitative Activity Goals**

**12.2.3. Assigned attributes of the activity (market sector, end use)**

**13. Subcontractor Activities**

The Partnership will coordinate with various organizations and competitively select subcontractors to help deliver various program elements.

**14. Quality Assurance and Evaluation Activities**

**14.1.** Partnership staff will verify that work invoiced by subcontractors have actually being performed through appropriate documentation of all activities for which the vendor requests payment as well as regular on-site visits to ensure that

training events and outreach activities are executed as planned. Back-up documentation will include marketing and outreach materials, attendance register, evaluation forms and expense reports as appropriate.

Because of the 'uncertainty in savings estimates' issue identified in the National Energy Efficiency Best Practices Study on Non-Residential Large Comprehensive Incentive Programs (Quantum Consulting Inc., December 2004), SCE will participate actively in the estimation of energy savings for each project.

**14.2.** The South Bay Partnership will utilize existing energy efficiency programs, and the existing program's inspection criteria will apply as appropriate.

## 15. Marketing Activities

SBESC will develop a comprehensive marketing and media plan that is flexible and responsive to include additional seasonal initiative promotions. Marketing is addressed through direct mail, E-Newsletter, program literature, fact sheets, face-to-face meetings, customer education and outreach events, web links and selected media advertising. Partners will be encouraged to participate in community events, including 'neighborhood sweeps' to create excitement and generate interest in energy efficiency and increase participation in IOU programs and services. CFLs will be distributed at outreach events to help generate interest in the program.

SBESC will develop public service announcements for local cable television (CATV) as well as coordinate opportunities for local cable television interview shows with our local elected officials, IOU's and SBESC representative.

Marketing and Outreach Materials: Partners, especially local governments, use their communications channels which include, water and waste removal bills, and tax notices to outreach to customers. SCE/SCG will provide program materials to the SBESC including information including statewide campaigns.

## 16. CPUC Objective

The program has been developed in conjunction with South Bay Cities Council of Governments (SBCCOG), Southern California Edison (SCE), and the Southern California Gas Company (SCG).to meet the applicable CPUC objectives and guidelines as outline in the Energy Efficiency Policy Manual. This program supports the following CPUC objectives: (2) To pursue all cost-effective energy efficiency opportunities over both the short- and long-term; (5) Program Administrators should manage their portfolio of programs to meet or exceed the short- and long-term savings goals established by the Commission by pursuing the most cost-effective energy efficiency resource programs first, while minimizing lost opportunities; and (9) Program Administrators will manage a portfolio of programs implemented by IOUs and non-IOUs that are selected and evaluated based on their

ability to best meet the policy objectives articulated in these Rules. Emphasis has been to develop the program with the Cities in the South Bay on more equal footing as compared to other programs. The organization and governance of the program is achieved in partnership with the SBCCOG, SCE, and SCG. Although all partnerships share some common elements, the SBESC Partnership has been specifically tailored to the needs and unique characteristics of the South Bay Community.

| | SCG3522 SBP4-South Bay Partnership | |
|---|---|---|
| **BUDGET** | | |
| | | |
| **Administrative Costs** | **$** | **95,849** |
| Overhead and G&A | $ | 17,142 |
| Other Administrative Costs | $ | 78,707 |
| **Marketing/Outreach** | **$** | **89,851** |
| **Direct Implementation** | **$** | **174,300** |
| Total Incentives and Rebates | $ | - |
| User Input Incentive | $ | - |
| Direct Install Rebate | $ | - |
| Direct Install Labor | $ | - |
| Direct Install Materials | $ | - |
| Activity | $ | 174,300 |
| Installation | $ | - |
| Hardware & Materials | $ | - |
| Rebate Processing & Inspection | $ | - |
| **EM&V Costs** | | |
| **Budget** | **$** | **360,000** |
| **Costs recovered from other sources** | **$** | **-** |
| **Budget** (plus other costs) | **$** | **360,000** |
| | | |
| **PROGRAM IMPACTS** | | |
| **Program Reductions for Measures installed through 2008** | | |
| User Entered kW (kW) | | - |
| Net Jul-Sept Peak (kW) | | - |
| Net Dec-Feb Peak (kW) | | |
| Net NCP (kW) | | |
| Net CEC (kW) | | - |
| Annual Net kWh | | - |
| Lifecycle Net kWh | | - |
| Annual Net Therms | | - |
| Lifecycle Net Therms | | - |
| | | |
| **Cost Effectiveness** | | |
| **TRC** | | |
| Costs | $ | 360,000 |
| Electric Benefits | $ | - |
| Gas Benefits | $ | - |
| Net Benefits (NPV) | $ | (360,000) |
| BC Ratio | | - |
| | | |
| **PAC** | | |
| Costs | $ | 360,000 |
| Electric Benefits | $ | - |
| Gas Benefits | $ | - |
| Net Benefits (NPV) | $ | (360,000) |
| BC Ratio | | - |
| | | |
| **Levelized Cost** | | |
| **Levelized Cost TRC ($/kWh )** | | |
| Discounted kWh | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |
| **Levelized Cost PAC ($/kWh)** | | |
| Discounted kWh | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |
| **Levelized Cost TRC ($/therm)** | | |
| Discounted Therms | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |
| **Levelized Cost PAC ($/therm)** | | |
| Discounted Therms | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |

# 2006-2008 Energy Efficiency Programs
# VCREA Partnership Concept Paper

## 1. Projected Program Budget

| | 2006 | 2007 | 2008 |
|---|---|---|---|
| Administration | | | |
| Administrative Overheads | $ 6,666 | $ 6,666 | $ 6,667 |
| Administrative Other | $ 29,164 | $ 29,324 | $ 30,333 |
| Marketing & Outreach | $ 57,170 | $ 57,010 | $ 57,000 |
| Direct Implementation | | | |
| Incentives | $ - | $ - | $ - |
| Activity | $ 47,000 | $ 47,000 | $ 46,000 |
| Installation | $ - | $ - | $ - |
| Hardware & Materials | $ - | $ - | $ - |
| Rebate Processing & Inspection | $ - | $ - | $ - |
| EM&V | $ - | $ - | $ - |
| *Total* | *$ 140,000* | *$ 140,000* | *$ 140,000* |

## 2. Projected Program Impacts

| 2006 | | | 2007 | | | 2008 | | |
|---|---|---|---|---|---|---|---|---|
| Net kWh | Net kW | Net Therms | Net kWh | Net kW | Net Therms | Net kWh | Net kW | Net Therms |
| - | - | - | - | - | - | - | - | - |

## 3. Program Cost Effectiveness

Attached

## 4. Program Descriptors

Market Sector: Cross-Cutting
Program Classification: Local
Program Status: Existing

## 5. Program Statement

The Ventura County Partnership is an alliance between the Ventura County Regional Energy Alliance (VCREA), SCE and SCG. The VCREA is a Joint Powers Agency (JPA) representing the County of Ventura, Ventura Community College District, Casitas Municipal Water District, Ventura Regional Sanitation District and the Cities of Ventura, Oxnard, Thousand Oaks and Santa Paula. Membership is open to all public agencies in the region and additional members are expected to join.

In 2004, the Partnership established the Ventura County Energy Resource Center (VCERC) as a local clearinghouse of energy information including energy efficiency, demand response, self-generation, CEC, DOE, EPA, and low-income and CARE programs. In addition, the Comprehensive Public Sector Program was implemented. This program element offered technical assistance and project management support that resulted in energy efficiency retrofits to several public facilities in the region. While a variety of projects have been successfully

completed, there remain ever-increasing opportunities as more agencies choose to participate in the offered programs. These energy efficiency opportunities are less likely to turn into energy savings projects without the technical support and project management support offered by the VCREA.

The Partners have decided to continue the program in 2006-2008. Enhancements to the program involve targeting 'community asset' organizations, including schools, hospitals, museums and community centers. Although these are small customer accounts, they collectively form a group of facilities that have had few energy upgrades. The opportunities for energy efficiency are significant. With over 21 districts and 237 facilities, the schools provide a great opportunity to engage in existing energy programs and will be funneled by the Partnership. Attempts will also be made to funnel statewide and local energy efficiency programs to the 6,000 small businesses in the county member cities.

**6. Program Rationale**

This partnership supports the policy set forth in CPUC Decision 05-01-055 which notes that "current or future partnerships between IOUs and local governments can take advantage of the unique strengths that both parties bring to the table to deliver cost-effective energy efficiency services."

The Partnership will find new opportunities for providing energy efficiency services to public agencies and community asset organizations within the region. Historically, these sectors have lagged behind in taking advantage of the IOU statewide energy programs. While cost has been perceived as the main barrier, a number of other issues impact the decision of local agencies to implement energy projects. The Partnership has found that a local resource such as the VCERC is a vital step in developing customer awareness, providing local training as well as planning and project management support to help with coordination and implementation of energy efficiency projects. VCERC has the experience and capability to:

- Conduct energy audits and feasibility studies
- Develop scopes of work and specifications
- Pre-qualify contractors through a competitive selection process
- Assist in the preparation of loan applications for the CEC low-interest loan program
- Provide project management during the construction phase
- Develop local training for maintenance, operation and technical staff.

The above functions will continue to be at the center of the Ventura County Partnership program.

**7. Program Outcomes**

SCE's objectives for the Local Government Partnerships (LGPs) include:

- Short and Long-term energy savings and demand reduction for Local Government organizations and the communities they serve as well as reduction of greenhouse gas emissions. Jurisdictions will leverage their local infrastructure to "spread the word" about energy efficiency and deepen the reach of statewide and local energy efficiency programs and services.

- An energy efficiency 'ethic' resulting from delivery of energy information to the communities, training and education for local government facility managers, energy managers and other staff in the use of 'best practices' methodology for identifying and implementing energy efficiency opportunities in their facilities.

The primary objectives of Ventura Partnership are to:

- Provide specialized energy efficiency service offerings to Ventura local governments, community asset organizations and small businesses and other target market segments in the region;
- Identify opportunities for municipal building retrofits, new construction, commissioning and retro commissioning as well as funnel existing IOU energy programs.
- Leverage local government communication infrastructure to inform their local communities about the wide variety of energy efficiency and demand reduction offerings available to them and encourage participation.

## 8. Program Strategy

The Partners believe that considerable progress towards our energy savings goals will come from partnering with local communities to help bring the message about energy efficiency, conservation and savings to our customers. IOUs are aware that our partners at the local level can be most effective in reaching out to their communities.

**8.1.**The primary elements of the 2006-2008 Ventura Partnership program are:

**8.1.1.** Ventura County Energy Resource Center - Energy Information

The Ventura County Energy Resource Center (VCERC) is a local clearinghouse for energy efficiency information, education and technical resources. The VCERC is designed to significantly increase the exposure and availability of energy efficiency programs and to assist all sectors of the community to derive the maximum benefit from energy efficiency programs. The center will provide government, businesses and residents with information on energy efficiency programs and services, demand response, self-generation, low income, CEC, DOE, EPA and other energy assistance programs such as gas and water efficiency resources. In addition, statewide and national energy marketing information will be distributed by the VCERC. Other features include an Energy Lending Library and exhibits and displays that focus on energy efficiency.

**8.1.2.** Training and Workshops

The Partnership will conduct energy code training and other energy training targeted to meet the needs of the region. Workshops will target businesses, residents, homeowner associations, business and social groups, seniors and mobile home parks and building professionals. In 2006-2008, a central strategy will be employed in the connection between training offerings and project implementation. Training will be tailored to targeted groups where it is believed that the outcome of the training will result in direct implementation of an energy efficiency project. Each training event will be an opportunity for the Partnership to provide the attendees with information on available programs and how the programs can be implemented and will provide information on removing the barriers (technical, operational, financial, etc.) to project implementation.

**8.1.3.** Comprehensive Public Sector Program

This program element will continue to provide technical resources for member agencies to identify, plan and execute various energy projects. The Partnership will continue its strategy to create opportunities for energy services that will cut across jurisdictional boundaries, such as competitive bidding for multiple agencies, information sharing, etc. The key strategy is to provide energy management services to entities whose budgets are too small to justify technical energy staff expertise but, when taken together, represent a sizeable regional energy user.

A key feature of the Partnership will be the deployment of local and statewide energy programs with a vigorous and focused local effort. The program will also provide for the means to reserve IOU program funds for specific projects to enable cities to incorporate incentives into their budgets for these projects.

## 8.2.Program Indicators

**8.2.1.** The Partnership has the capability to bring strong leadership and technical skills to the region and expects to produce energy efficiency that compliment the Business Incentive Program (BIP) and other utility programs, as well as leverage these programs to create real savings in lighting and controls, motors and VFDs, HVAC and controls, and retro-commissioning projects. Based on prior experiences and projected facility opportunities for the 2006-08 funding cycle, the Ventura Partnership expects to generate savings of over 5, 700,000 kWh and 1,237 KW over three years.

Annual goals 2006-08 Ventura Partnership program are:

1. General Awareness Campaign

- 4 quarterly newsletters
- 6 VCEDA/Star Press Ads
- A marketing campaign to include flyers, billing inserts and posters

2. Community Events
   - 12 Recycling/clean-up events
   - 3 Earth Day events
   - 1 Energy efficiency expo
   - 2 Community multi-family lighting days
   - 2 Best Practices energy efficiency events
   - 3 VCEDA business conferences
   - 3 Ventura Chamber of Commerce business expos

3. Education and Training Classes/Workshops
   - 4 Public sector workshops
   - 6 Business sector workshops
   - 6 Residential workshops/events

**9. Program Implementation**

All Partners will participate equally in program development and the implementation of goals, deliverables and milestones for the program. All parties will also share commitment to achievement of program goals. VCREA will continue to be the implementing partner with primary responsibility for the program goals.

SCE will identify a Partnership Representative on a part-time basis, who will be the single point of contact between the VCERC and the SCE Program Managers. VCERC will work with the county and member cities to designate 'Energy Champions' for respective jurisdictions to encourage and facility action on municipal retrofits and other energy initiatives.

Ventura County Energy Resource Center

The Ventura Partnership will continue to operate from the centrally-located VCERC office established by the VCREA. SCE/SCG will ensure that all energy-related information and marketing materials are made available for use or distribution by the VCERC and will be responsible for providing technical support and energy and demand information as appropriate. In addition, specialized templates from the Government Energy Action Resources Program will be providing to support community outreach activities. The Partners will work to strengthen the energy efficiency displays and the lending library.

In addition to the incentives available through the Partnership for Ventura county municipal facilities, VCERC will direct projects to the most likely IOU programs for successful implementation. Local government agencies and community asset facilities, such as schools, hospitals and community centers, will be encouraged to

participate in a full range of utility programs and energy efficiency services ranging from information and training to energy audits and technical services, leading to installations, retrofits and facility retro commissioning that enhance the impact of the Partnership.

Training and Workshops

At the beginning of the program period, VCERC will develop a training plan and quarterly schedule. All training and workshop events will specifically promote incentives available through the Partnership as well as relevant IOU energy savings programs.

By providing training, workshops and continuing educations units, the partnership funds will help grow local capacity for certified energy managers, building operators, installers, contractors, vendors, suppliers, etc., to support a higher level of energy efficiency activity in future years. The Partnership will address lost opportunities by providing a high level of training that will result in building the local job market and creating more sustainable work and career opportunities within the region.

Municipal Retrofits

The IOUs will utilize their existing infrastructure to process and pay incentives available through the Partnership. The IOUs will also assist with pre- and post-inspection and verification as well as coordinate any evaluation, measurement and verification efforts. SCE/SCG will also facilitate the identification and scoping of energy savings projects and commit the required incentive funds available through other IOU programs where necessary.

Community Events

Partnership personnel will work with appropriate city officials to plan and implement community outreach events. Events could include CFL change-outs or other measures for public housing units, refrigerator and freezer recycling sweeps, small business hard-to-reach retro-fit sweeps, mobile home direct installations and re-lamping programs.

VCREA member cities will use their communication channels such as water bills and business renewal notices, where possible, to conduct outreach to customers, community-based organizations, building officials and energy efficiency contractors.

Some community events will be specifically designed to ‘funnel’ energy programs such as the Small Business Direct Install, Appliance Recycling, Multi-family, Mobile Home and Integrated School-Based Programs.

VCREA staff will staff booths and events as appropriate from the existing program budget. The Mobile Educational Unit and other SCE departments may also participate in such events.

**10. Customer Description**

The Partnership will target the County of Ventura, VCREA member cities and other cities in Ventura as well as non profits and 'community asset' organizations. All SCE customer segments, residential and non-residential, that can be positively influenced by VCERC to harvest greater energy efficiency than would otherwise be possible through traditional marketing and outreach efforts, will benefit from the program. Low income customers, multi-family residences, small businesses and customers with primary languages other than English will also be better served by Partnership activities.

**11. Customer Interface**

In the case of cities and the County, Partnership personnel will initiate person-to-person contact with appropriate city staff or elected official. Organizations identifying retrofit projects that qualify for Partnership incentives will indicate their commitment in writing by letter or e-mail, once a decision has been made to implement the project.

Customers benefiting from the Partnership through 'funneling' efforts will be subject to the customer interface feature of the respective program.

**12. Energy Measures and Program Activities**

Provided SCG can find additional funding for gas measures the Ventura Partnership expects to undertake programs that will include the following type measures:

- HVAC and controls
- Retro-Commissioning
- Tankless water heaters
- Pre rinse spray nozzles

**12.1. Measures Information**

Detailed measure information is not currently available. Projects to be completed by the Partnership will be audited and recommended retrofits identified at that time.

**12.2. Energy Savings and Demand Reduction Level Data**

Will be determined if funds are made available for energy measures

**12.3. Non-energy Activities (Audits, Trainings, etc.)**

Presentations, attendance at conferences, meetings, community fairs, outreach events, marketing materials such as brochures and information packets, on-site visits and Title 24 and other energy training classes are all

non-energy related activities associated with the Partnership. In addition, the Partnership will conduct energy audits.

**13. Subcontractor Activities**

The Partnership will coordinate with various organizations and competitively select subcontractors to help deliver various program activities/elements.

**14. Quality Assurance and Evaluation Activities**

The local partnership staff will verify that work invoiced by subcontractors has actually been performed through appropriate documentation of all activities for which the vendor requests payment as well as regular on-site visits to ensure that training events and outreach activities are executed as planned. Back-up documentation will include marketing and outreach materials, attendance registers, evaluation forms and expense reports as appropriate. These materials will be included in the regular reporting process to minimize duplicated efforts by utility administrative staff.

**14.1. Expected Number/Percent of Inspections (planned percent of projects)**

All large retrofit projects utilizing customized incentives will be inspected. The Partnership will also utilize existing energy efficiency programs, and the existing program's inspection criteria will apply as appropriate.

**15. Subcontractor Activities**

The Partnership will coordinate with various organizations and competitively select subcontractors to help deliver various program activities/elements.

**16. Quality Assurance and Evaluation Activities**

**16.1.** The local partnership staff will verify that work invoiced by subcontractors has actually been performed through appropriate documentation of all activities for which the vendor requests payment as well as regular on-site visits to ensure that training events and outreach activities are executed as planned. Back-up documentation will include marketing and outreach materials, attendance registers, evaluation forms and expense reports as appropriate. These materials will be included in the regular reporting process to minimize duplicated efforts by utility administrative staff.

**16.1.1. Expected Number/Percent of Inspections (planned percent of projects)**

All large retrofit projects utilizing customized incentives will be inspected. The Partnership will also utilize existing energy efficiency programs, and the existing program's inspection criteria will apply as appropriate.

**17. Marketing Activities**

Partnership marketing may be enhanced through direct mail, program literature, fact sheets, face to face meetings, customer education and outreach events, web links

and advertising in local media. The Ventura Partnership will be strengthen with the support of the utilities who can provide tailored support materials and tools to be used in local billing inserts and newspaper advertisements. All partners will engage in community events designed to increase participating in other local and statewide energy efficiency programs. The Government Energy Action Resources program will provide templates and other marketing materials to facilitate marketing and promotion of community 'sweeps' and other outreach events.

**18. CPUC Objective**

The program has been developed in conjunction with Ventura County Regional Energy Alliance (VCREA), SCE and SCG to meet the applicable CPUC objectives and guidelines as outline in the Energy Efficiency Policy Manual. This program supports the following CPUC objectives: (2) To pursue all cost-effective energy efficiency opportunities over both the short- and long-term; and (9) Program Administrators will manage a portfolio of programs implemented by IOUs and non-IOUs that are selected and evaluated based on their ability to best meet the policy objectives articulated in these Rules. Emphasis has been to develop the program with the VCREA on more equal footing as compared to other programs. The organization and governance of the program is achieved in partnership with the the VCREA is a Joint Powers Agency (JPA) representing the County of Ventura, Ventura Community College District, Casitas Municipal Water District, Ventura Regional Sanitation District and the Cities of Ventura, Oxnard, Thousand Oaks and Santa Paula. Although all partnerships share some common elements, the VCREA Partnership has been specifically tailored to the needs and unique characteristics of Ventura County.

| | SCG3521 VCP4-Ventura County Partnership | |
|---|---|---|
| **BUDGET** | | |
| | | |
| **Administrative Costs** | **$** | **108,820** |
| Overhead and G&A | $ | 19,999 |
| Other Administrative Costs | $ | 88,821 |
| **Marketing/Outreach** | **$** | **171,180** |
| **Direct Implementation** | **$** | **140,000** |
| Total Incentives and Rebates | $ | - |
| User Input Incentive | $ | - |
| Direct Install Rebate | $ | - |
| Direct Install Labor | $ | - |
| Direct Install Materials | $ | - |
| Activity | $ | 140,000 |
| Installation | $ | - |
| Hardware & Materials | $ | - |
| Rebate Processing & Inspection | $ | - |
| **EM&V Costs** | | |
| **Budget** | **$** | **420,000** |
| **Costs recovered from other sources** | **$** | - |
| **Budget** (plus other costs) | **$** | **420,000** |
| | | |
| **PROGRAM IMPACTS** | | |
| **Program Reductions for Measures installed through 2008** | | |
| User Entered kW (kW) | | - |
| Net Jul-Sept Peak (kW) | | - |
| Net Dec-Feb Peak (kW) | | |
| Net NCP (kW) | | |
| Net CEC (kW) | | - |
| Annual Net kWh | | - |
| Lifecycle Net kWh | | - |
| Annual Net Therms | | - |
| Lifecycle Net Therms | | - |
| | | |
| **Cost Effectiveness** | | |
| **TRC** | | |
| Costs | $ | 420,000 |
| Electric Benefits | $ | - |
| Gas Benefits | $ | - |
| Net Benefits (NPV) | $ | (420,000) |
| BC Ratio | | - |
| | | |
| **PAC** | | |
| Costs | $ | 420,000 |
| Electric Benefits | $ | - |
| Gas Benefits | $ | - |
| Net Benefits (NPV) | $ | (420,000) |
| BC Ratio | | - |
| | | |
| **Levelized Cost** | | |
| **Levelized Cost TRC ($/kWh )** | | |
| Discounted kWh | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |
| **Levelized Cost PAC ($/kWh)** | | |
| Discounted kWh | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |
| **Levelized Cost TRC ($/therm)** | | |
| Discounted Therms | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |
| **Levelized Cost PAC ($/therm)** | | |
| Discounted Therms | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |

# STATEWIDE MARKETING AND OUTREACH PROGRAMS

| | |
|---|---|
| Projected Program Budget | $4,419,099 |
| Projected Program Impacts<br>MWH<br>MW (CEC Factor) | N/A |
| Program Cost Effectiveness | N/A |

Note – The budget amount shown reflects only the funding associated with SoCalGas service territory for this statewide program.

**4. Program Descriptors**

| | |
|---|---|
| Market Sector: | Residential/Nonresidential - All sectors (Commercial, industrial, Government, agricultural and residential) |
| Program Classification: | Statewide |
| Program Status: | Existing |

**5. Program Statement**

The Flex Your Power statewide energy efficiency marketing and outreach program is an extension of the innovative and historically successful *Flex Your Power* public education and outreach effort initiated by the State of California in 2001. The program works in partnership with the investor-owned utilities (IOUs), third parties and businesses, local governments, water agencies, non-profits and others including the state and federal government agencies with responsibility for energy and water efficiency.

The campaign is designed to educate Californians on the energy, financial and environmental benefits of energy efficiency and to support the energy efficiency programs of the Investor Owned Utilities (IOUs), third-party program providers and other organizations. The campaign does so through a full and synergistic range of marketing and outreach strategies including television; radio and newspaper ads; earned media; printed educational materials; events; a website resource; a biweekly electronic newsletter; and cooperative marketing and outreach efforts with businesses, government and nonprofit organizations.

The campaign will continue to coordinate with IOUs, municipal utilities, water agencies, non-utility program providers, manufacturers, retailers of energy-efficient products, and other energy efficiency service providers. The campaign also coordinates closely with demand response and renewable energy generation marketing and outreach programs including a combined energy efficiency/demand response Flex Your Power campaign (the CPUC-approved Flex Your Power NOW! campaign). .

California’s economy and population are expected to grow over the next three years, which means that, without action, so will the state’s demand for electricity. In fact, energy consumption is projected to grow by as much as 2% annually over the next 10 years.

The lessons learned during the 2001-02 energy crisis as well as Energy Star sales data showing increased sales of energy-efficient equipment and products over the last five years demonstrate that Californians can be motivated to reduce energy use.

- *Continuity in marketing and outreach*. To be effective, statewide marketing and outreach programs need long-term planning cycles to build and maintain lasting relationships, cost-effectively take advantage of mass media strategies and leverage additional public and private resources to make the most of the limited funding available.

- *Constant information*. Consumers must have constant and consistent messages to take action.

- *Compelling information*. To effectively communicate to consumers through mass media, the Internet and other forms, the messages conveyed must be clear, compelling and concise.

- *Consistency and coordination across the state*. In order to avoid confusing customers and amply compelling messages, California should coordinate messages and timing with the myriad of programs offered by program providers in the state – IOUs, municipal utilities, water agencies, manufacturers, retailers, third parties and contractors.

- *Leverage resources to promote energy efficiency*. Given their limited funding, energy efficiency marketing and outreach programs need to leverage private sector and other resources.

**6. Program Rationale**

*Continuity*. The Flex Your Power campaign will:

- Build on the existing momentum, structure, relationships, materials, and strategies.
- Continue to work with existing and build new relationships with sector leaders across the state.
- Maintain the equity of the campaign's "call to action" brand, Flex Your Power.

*Constant information*. The Flex Your Power campaign will:

- Continue to employ a wide range of message delivery vehicles, including paid and free media, outreach and partnerships, to reach targeted audience within each sector.
- Continue to utilize a variety of marketing and outreach tools to support energy efficiency programs.

*Compelling information*. The Flex Your Power campaign will:

- Convey the energy, financial and environmental savings potential of energy efficiency measures.
- Utilize market, focus group and other research to develop and test compelling messages for all sectors.

*Consistency and coordination across the state*. The Flex Your Power campaign will:

- Serve as a statewide umbrella for energy efficiency marketing and outreach and communicate across service areas, private sector market territories and media markets.
- Provide opportunities for regional and local educational efforts to benefit from identification with the Flex Your Power umbrella campaign in a way that would be cost prohibitive for them to undertake individually.
- Continue to coordinate with programs and partners to reduce confusion, eliminate duplication, and amplify each program's messages.
- Work with stakeholders and participants in the coordinated campaign through regular meetings and calls, the Flex Your Power website and e-Newswire.

*Leveraged resources*. The Flex Your Power campaign will:

- Continue to develop cooperative marketing and outreach programs with municipal utilities, water agencies, government and the private sector.
- Pending approval of the Flex Your Power NOW! campaign from the CPUC, provide integrated marketing and outreach of energy efficiency and demand response.

**7. Program Outcomes**

The campaign seeks to:

- Educate its target audiences on the economic, environmental and system reliability benefits of energy efficiency;
- Support the energy efficiency programs of the Investor Owned Utilities (IOUs), third-party program providers and other organizations; and
- Coordinate with the marketing and outreach efforts of other program providers, other energy industry stakeholders and customers from all sectors.

**8. Program Strategy**

The 2006-08 Flex Your Power statewide energy efficiency marketing and outreach program will use a full and synergistic range of marketing and outreach strategies including television; radio and newspaper ads; earned media; printed educational materials; events; a website resource; an electronic newsletter; and cooperative marketing and outreach programs with businesses, government and nonprofit organizations. The program works in cooperation with the investor-owned utilities (IOUs), third parties and businesses, local governments, water

agencies, non-profits and others including the state and federal government agencies with responsibility for energy and water efficiency.

When appropriate, Flex Your Power will coordinate closely with all the abovementioned entities. The campaign will also coordinate with demand response and renewable energy generation marketing and outreach programs such as Flex Your Power NOW!, which is an existing partnership between the IOUs, the ISO, CEC the administration and Flex Your Power.

The campaign design is intentionally flexible to allow Flex Your Power to take advantage of new opportunities over the course of the three years. In 2004-05, for example, this flexibility allowed Flex Your Power to take advantage of the Administration's request to host regional energy summits statewide to educate business and government leaders about energy efficiency. The summits drew more than 900 business and government leaders together with state officials and the utilities.

Another reason for flexibility is California's changing energy needs. In both 2004 and 2005, Flex Your Power was able to respond to requests from the CPUC, ISO Governor's office and the utilities to integrate peak energy use reduction messaging during the summers. Also, when natural gas prices began to skyrocket in late 2005, Flex Your Power was able, once again, to respond to a request from the CPUC, Governor's office and utilities to redirect media and outreach messaging and strategies to educate the general and ethnic markets about reducing natural gas use.

Finally, flexibility allows Flex Your Power to develop cooperative marketing and outreach strategies with manufacturers and retailers. These cooperative partnerships, which cannot be anticipated ahead of time and respond to the private sector's view of opportunities, augment the state's energy efficiency marketing and outreach.

**9. Program Objectives**

As an information-only program, Flex Your Power's efforts are not currently tied to direct energy savings goals. Flex Your Power's objectives include maximizing targeted reach and frequency of our general energy efficiency communications through paid advertising, continuing to build the subscriber base of the e-Newswire; continuing to drive traffic to Flex Your Power's website; and building new, and expanding existing, cooperative marketing and outreach programs.

Another objective is to support IOU and third party programs. Once the IOUs select these programs and the final plans are approved by the CPUC, EP will work with program providers on specific strategies.

**10. Program Implementation**

<u>10.1 Mass-Media Advertising</u>

EP will continue to produce and place television, radio and newspapers ads to educate California residents about the energy, financial and environmental benefits of energy efficiency.

The development of these ads will be informed by the results from a baseline (benchmark poll) in early 2006 measuring the awareness, education, propensity to act, motivators, messengers, sources of information, and tone. Before finalizing the ads, EP will test the ad concepts and messages, targeted to different audiences, in focus groups and gather feedback from the integrated campaign steering committee (comprised of members from the other marketing and outreach firms and the IOUs). All technical data in the ads will be vetted with the CEC and Energy Star when appropriate.

As it did in the past, EP will continue to refine media buys to ensure broadcast messages have the greatest impact on targeted markets. For instance, the general market media buy will reflect a targeted approach to reach those residents that are most likely to purchase energy-efficient products and appliances.

The media buy will also be run seasonally to help ease strain on the grid during seasons with high peak demand (e.g., during the summer months to keep energy at the top of residents' minds), and during winter when natural gas usage is high.

The Flex Your Power campaign will explore other mass-media opportunities, including online, direct mail and outdoor. As mentioned above, EP will also incorporate and coordinate where appropriate or as requested by the CPUC demand response and renewable energy generation messages into the overall efficiency messages.

10.2 Ethnic media partnerships

The Flex Your Power campaign will continue to work with its existing relationships with ethnic media publications to reach non-English speaking residents. EP will continue to place advertising for a wide range of cultural groups and work with the papers to run editorial content in support of energy efficiency.

The Flex Your Power campaign will continue to coordinate advertising with partner publications to outreach to their readers, which represent 16 different ethnicities and 13 different languages. Advertising, co-developed with the ethnic press, will follow the overarching themes of the general market campaign and be culturally relevant to the audience. Potential joint outreach strategies between Flex Your Power and partner publications include educating residents and businesses through editorial content (press releases, op-eds or articles); creating web links between media's and Flex Your Power's websites; and communicating with ethnic community leaders.

10.3 Educational Materials

EP will continue to produce written educational materials. The design and content of the materials will be targeted to the audience. All materials contain consistent messages and have data and facts checked by the CEC and Energy Star when appropriate. Past and potentially future, examples of informational materials include energy saving tip cards, grocery store flyers, appliance stickers, bill inserts and payroll stuffers. All materials will be presented to the integrated campaign steering committee for input and coordination of delivery channels (e.g., retailers).

EP will also continue to write and disseminate industry-specific case studies and best practice guides of successful projects to provide guidance on investment in energy efficiency. EP will work with program providers and partners to identify successful projects. The materials will be displayed on the Flex Your Power website and promoted via e-Newswire and through Flex Your Power campaign partner organizations.

10.4 Earned Media

The earned media will be a mix of opportunistic and planned events. For 2006, the press events will most likely include:
An annual summer energy assessment press conference, held jointly with the Flex Your Power NOW! campaign, IOUs, ISO and Governor's office.
An announcement of Flex Your Power Awards, both the call for applications and winners.
EP will participate in other opportunities in support of the IOUs, administration, and 3rd parties (e.g., ethnic small business gatherings with newspapers).

10.5 Events

EP will continue to convene and participate in events throughout 2006-08. In these events, EP will provide attendees access to information and resources to help them understand the benefits of energy efficiency and the state's long-term goals and needs (e.g., meeting the goals of the Governor's Green Building Initiative), as well as learn about successful programs from peers in their sector. At these events, EP will facilitate these organizations interaction with utilities, third parties, state agencies and other stakeholders.

While participation in many 2006-08 events will be opportunistic and cannot be described at this point (e.g., fairs, ethnic festivals), there are certain proposed events. For example EP will work with business and government associations to introduce Flex Your Power's Best Practice Guides and other resources that the utilities, third parties and others offer.

EP will disseminate materials at events and promote important energy efficient events through e-Newswire and website.

10.6 Flex Your Power Website

EP will continue to host and expand the Flex Your Power website. The Flex Your Power campaign will keep the web content timely, useful and relevant through regular communication and coordination with energy efficiency program providers and other stakeholders. The web address will be published in ads and materials and promoted through online outreach and link exchanges.

The website will continue to provide:

- Energy efficiency, demand response, and water efficiency programs (including rebates, grants, loans, technical assistance, classes, and audits offered by utilities, 3rd parties, water agencies, municipal utilities, and other relevant providers).
- Energy efficiency product guides describing the benefits and savings potential of high-efficiency products/equipment.
- Links to relevant information, program providers and other sites.
- Additional tools, such as Best Practice Guides.
- Information in Spanish and Chinese.

10.7 Direct Mail and Newsletters

EP will continue use of direct and electronic mail in support of programs and general awareness and education. Additionally, EP will continue to pursue cooperative mailings with manufacturers and retailers.

EP will also continue to communicate regularly with subscribers of the Flex Your Power e-Newswire. Through this medium, EP will bring timely information to Californian's desktops and link them to more in-depth information on the Flex Your Power website and the websites of program providers. EP will publish success stories to demonstrate what can be done and show that energy efficiency measures have many benefits.

10.8 Flex Your Power Awards

EP will recognize the successful energy efficiency efforts of entities statewide – businesses, governments, organizations, manufacturers, retailers, new home builders and water agencies through the Fifth (2006), Sixth (2007) and Seventh (2008) Annual Flex Your Power Awards. The winners will be acknowledged for their achievements through Flex Your Power-developed case studies, the Flex Your Power website and the e-Newswire. Their leadership and energy savings measures will be highlighted in congratulatory newspapers ads.

10.9 Joint Marketing and Outreach

- Retailers and manufacturers: (e.g., cooperative marketing and outreach promotions).
- State agencies and administration (e.g., marketing and outreach with the governor's office and state agencies to develop to promote the Green Building Initiative).

- Associations (e.g., CUWCC, League of Cities, BOMA, Sustainable Silicon Valley, Climate Registry, etc.).
- National and regional organizations (e.g., energy efficiency promotions of Energy Star, utilities and third parties).
- Water agencies (e.g., leverage the numerous synergies between water and energy efficiency strategies).

**11. Customer Description**

EP targets a range of customers and market segments and actors across the state, including hard-to-reach. Customers include:

- Residents: English-speaking, non-English speaking residents.
- Commercial: large commercial facilities (e.g., office buildings) and small commercial (e.g., small retail and restaurants).
- Industrial: fabrication, process, heavy industrial manufacturing, hi-tech facilities and wineries.
- Government: state government facilities, local government facilities and water agencies.
- Institutional
- Agriculture: irrigation and processing (integrated into industrial outreach)

**12. Customer Interface**

EP will work and coordinate with IOUs, third parties and other program providers to develop materials, events, the Flex Your Power website and other outreach strategies that provide program information using consistent and compelling messages.

**13. Energy Measures and Program Activities [1]**

**13.5. Quality Assurance and Evaluation Activities**

EP will conduct ongoing quality assurance activities to ensure the program runs efficiently and cost-effectively. EP will continue to work with groups such as BOMA and Flex Your Power Silicon Valley, to improve and coordinate energy efficiency marketing and outreach. EP will also meet regularly with the integrated steering committee to find the most effective ways to promote programs to help the utilities and third parties meet their goals.

EP will also conduct ongoing quality assurance activities of each marketing tool. The proposed tracking includes:

*Mass-media advertising*

- Vetting all technical data with the CEC and Energy Star when appropriate
- Running pre-production focus groups
- Compiling tear sheets and confirming run of each ad, reconciling any credits

[1] Not all of the categories in the Program Plans template applied to Statewide Marketing and Outreach Programs.

- Confirming reach and frequency with consultant

*Ethnic-media newspaper advertising*
- Vetting all technical data with the CEC and Energy Star when appropriate
- Compiling tear sheets and confirming run of each ad, reconciling any credits
- Collecting editorial content and tracking publication dates

*Educational materials*
- Vetting all technical data with the CEC and Energy Star when appropriate
- Running pre-production focus groups
- Tracking the number materials distributed, by whom, to who, where and when

*Events*
- Providing sign-in sheets for events when appropriate
- Distributing, where permitted, attendee survey to participants

*Flex Your Power Website*
- Tracking web usage data (e.g., page hits and downloads). Activity patterns will be compared before and after any major changes.
- Posting an online website appraisal questionnaire

*Direct mail and e-Newswire*
- Verifying distribution from mail house
- Tracking subscriber usage data (e.g., page hits and downloads). Activity patterns will be compared before and after any major changes.
- Sending a subscriber survey

*Joint Marketing & Outreach*
- Monitoring whether the partners are successfully fulfilling joint work plans
- Gathering assessment from partners about the joint promotions

The three statewide marketing and outreach programs and the IOUs jointly suggested principles and methods to evaluate overall marketing and outreach for the coordinated campaign. These recommendations were given to the statewide PRG and CPUC. EM&V is the subject of a separate proceeding at the CPUC. It goes without saying that EP will follow the CPUC's guidance and facilitate a thorough evaluation.

| | |
|---|---|
| Projected Program Budget | $736,500 |
| Projected Program Impacts<br>MWH<br>MW (CEC Factor) | N/A |
| Program Cost Effectiveness | N/A |

Note – The budget amount shown reflects only the funding associated with SoCalGas service territory for this statewide program.

**4. Program Descriptors**

Market Sector: Rural
Program Classification: Statewide
Program Status: Existing

**5. Program Statement**

The *Flex Your Power* rural marketing campaign, formerly called *Reach for the Stars*, is a comprehensive statewide energy efficiency communications effort designed to encourage residential energy users in rural areas to make permanent upgrades to their homes and to participate in statewide gas and electric energy efficiency activities.

In California, a typical homeowner is spending more on electricity than necessary. In fact, the average household could cut up to one-third of its current energy bill by switching to energy-efficient appliances, equipment and lighting, which use less energy than standard products. For rural communities, this issue is especially critical, given they are often situated in remote areas with extreme summer and/or winter climates and significantly greater electricity and/or natural gas requirements. They also historically have been underrepresented in energy efficiency programs. The rural campaign exposure is critical to the overall effectiveness of the California Public Utilities Commission's (CPUC) energy efficiency effort because many California communities are under-reached by traditional mass-market media.

**6. Program Rationale**

By extending RS&E's contract to implement one of three statewide energy efficiency marketing and outreach programs through 2008, we will be able to maintain the momentum built during the last three years. Since RS&E was awarded this contract in April 2003, we have made notable headway within the rural communities of California. However, ongoing education is imperative in changing people's attitudes and purchasing behaviors and creating social norms where communities and individuals understand and act responsibly when it comes to saving energy. Our program's advertising, public relations and grass roots outreach components, which have a synergistic effect in the rural communities, are intended to teach consumers about ways to reduce their energy consumption, while emphasizing long-term residential improvements.

As noted above, this program has been extremely successful in reaching the rural consumers in IOU territories and delivering energy efficiency messages. Some highlights of our 2004 campaign include:

- Generation of more than 85 million advertising impressions via radio.
- Outreach through ads in newspapers that had a total readership of almost 52 million.
- Outreach to more than 1.5 million Hispanic rural California residents throughout the state through media relations activities and radio and print partnerships.
- Dissemination of more than 111,000 pieces of collateral, including informational brochures and branding items at conferences, fairs and community events in rural areas statewide.
- Outreach to more than 100 community-based organizations (CBOs) and state organizations in recruitment of 15 grassroots organizations as partners.

**7. Program Outcomes**

RS&E has identified (through research) two key outcomes of its marketing and outreach activities:

Rural consumers have learned about ways to reduce their energy consumption and lower their utility bills, with emphasis on long-term residential improvements.

Rural residential energy users have made permanent upgrades to their homes and participated in statewide gas and electric energy efficiency activities.

**8. Program Strategy**

RS&E will maintain the key components of its current effort, recognizing the importance of grass roots outreach and the necessity of targeting rural communities through local media outlets. RS&E will also maintain flexibility in it's program structure in order to accommodate for opportunities that present themselves over the course of the campaign, i.e. spikes in energy costs or weather related. To reach the target audience and achieve its program objectives, RS&E intends to:

- Continue placing newspaper ads and radio commercials in rural markets throughout California.
- Expand the activities of the CBO network to facilitate direct access to rural consumers in need of energy efficiency information by coordinating more closely with other statewide marketing and outreach programs.
- Participating in a bi-weekly conference call between M&O contractors, as well as the IOUs and representatives of the CPUC.
- Sharing information, including a monthly report of marketing activities as well as collateral and advertising creative, in order to avoid duplication of marketing efforts.
- Continue providing consumers with an easy-to-access point of contact through the 24-hour toll-free phone line that provides information for energy efficiency programs. Additionally, RS&E will add messaging regarding the Flex Your

Power marketing program to the introductory information on the toll-free phone line.
- Produce advertising and outreach messages with energy efficiency information that is relevant to all rural customers.

**9. Program Objectives**

RS&E's statewide program will provide information about IOU and third-party energy-efficiency programs and the related energy saving benefits to the target group of all households in rural areas in order to ultimately reduce energy consumption by the target audience. Rural areas of California are based upon zip code data provided by the IOUs.

To reach these program objectives, our team will:
- Place newspaper ads in rural markets throughout the state.
- Develop a radio campaign to air in rural markets statewide.
- Augment the network of CBOs that will provide outreach to rural consumers seeking energy efficiency information.
- Continue the toll-free phone line service to provide energy efficiency program contact information and support throughout the contract.
- Implement a Spanish-language public relations effort throughout rural California.
- Evaluate messaging and awareness levels related to energy efficiency.

**10. Program Implementation**

RS&E firmly believes in the importance of coordination between marketing and outreach implementers. Coordination and consistency can only enhance results achieved by everyone. Since all marketing and outreach efforts support the IOU and statewide energy efficiency programs, we believe it is vitally important that the contractors work closely with each other and continually share information to avoid duplication. To that end, RS&E will coordinate its campaign efforts with those of both other marketing and outreach programs:

- Efficiency Partnership/McGuire & Co., Inc.'s (EP) statewide general market media campaign.
- Univision Television Group and Staples/Hutchinson and Associates' (Univision) Spanish-language media and outreach campaign.

RS&E will participate in regular conference calls and meetings between the M&O contractors listed above, as well as the IOUs and representatives of the CPUC. Additionally, all marketing and outreach materials will be accessible to these groups so information can be shared and the duplication of efforts can be avoided.

In order to implement a successful program, it will be imperative that we begin planning for the 2006 – 2008 program during the end of the 2005 campaign. We will coordinate the messaging and the timing of that messaging with the other

statewide marketing and outreach contractors. In addition we will send out requests for proposal to CBOs, research vendors and suppliers to ensure that the 2006-2008 program is as cost efficient as possible. Additionally, our media planning work will also begin early in order to negotiate the most beneficial rates for this program.

**11. Customer Description**

The populations targets for our 2006-2008 extended energy efficiency advertising component are rural "hard-to-reach" IOU customers who do not have easy access to information or generally do not participate in energy efficiency programs.

We will utilize zip code data provided by the IOUs to guide our media and marketing planning. Only those zip codes categorized by the utilities as "rural" and where the majority of households receive service from a participating IOU will be considered for advertising coverage. This is the same strategy RS&E used in identifying and targeting the appropriate customers in the past.

**12. Customer Interface**

In order to ensure that energy efficiency program information is accessible, RS&E will continue to direct consumers to the existing toll-free phone line, as well as to the Flex Your Power Web site. The toll-free phone number and the Web site address will be displayed on all our advertising and outreach materials. Additionally, RS&E added a Spanish-language option to the phone line in 2004 in an effort to support the Spanish-language collateral and Spanish language PR efforts, which will continue in the 2006 – 2008 contract term.

**13. Energy Measures and Program Activities**

**13.1. Measures Information**

Not applicable.

**13.2. Energy Savings and Demand Reduction Level Data**

Not applicable.

**13.3. Non-energy Activities**

All of the activities of the *Flex Your Power* rural campaign fall under the category of "non-energy activities" since the entire program is focused on marketing and outreach. That said, below is an outline of projected activities and tactics proposed for the 2006 – 2008 campaign. We should note that these are estimated projections that will be more clearly defined as development of the program implementation plan gets underway.

<u>Advertising</u>

RS&E will produce between 4 and 6 radio spots to air statewide each year. We will run more than 30,000 radio spots in 12 California metro markets and nine remote counties, including:

Metro Markets include:

- Bakersfield
- Chico
- Fresno
- Merced
- Modesto
- Palm Springs
- Redding
- Riverside/San Bernardino
- Sacramento
- San Luis Obispo
- Santa Maria
- Visalia/Tulare

Non-rated remote counties include:

- Humboldt
- Inyo
- Kern
- Lake
- Mendocino
- Plumas
- Riverside East
- San Bernardino West
- Tuolumne

RS&E will produce between 4 and 6 print ads per year to support the three seasonally appropriate messages (i.e. appliance replacement, cooling and heating and lighting). Print media will run in rural communities throughout the state. RS&E will place between 10 and 15 insertions per year in approximately 120 newspapers statewide.

CBO Outreach

RS&E's program will include the recruitment of between 16 and 18 CBOs strategically located in IOU rural territories throughout the state. These CBOs will be trained and monitored to disseminate materials and garner public relations locally to promote the energy efficiency messages associated with the *Reach for the Stars* program.

In order to ensure proper messaging is delivered in a quality manner, RS&E will also offer media training opportunities and host an annual gathering where best practices and ideas can be shared between grassroots organizations.

Each CBO will be required under contract to annually:

- Staff the campaign portable exhibit and distribute campaign materials at no less than three community events.

- Conduct a minimum of three presentations for local organizations or groups appropriate to the energy efficiency message (e.g., business groups, PTAs, etc.).
- Develop events or products themselves to further extend campaign messages (e.g., poster contests, public service announcements, etc.).
- Distribute press releases to local print media outlets and place campaign advertisements in local venues such as newspapers, newsletters or movie slides.

Hispanic Marketing and Public Relations

Through our Hispanic marketing and public relations efforts, RS&E will distribute press releases to more than 140 media outlets statewide. Additionally, we will secure radio partnerships with two radio networks covering the following markets:

- Placerville
- Grass Valley
- Auburn
- Palm Desert
- Hemet
- Moreno Valley
- Murrieta Hot Springs
- Temecula
- Sun City
- Tracy
- Bakersfield
- Tehachapi
- Hanford
- Atascadero
- Paso Robles
- Porterville
- Visalia

These radio partners will distribute promotional items at various community events, conduct live remotes, air 60-second spots and promote press coverage in the Hispanic markets. RS&E will also secure several print partners to run ads and place stories that support the energy efficiency messages directed at the Hispanic market.

### 13.4. Subcontractor Activities

RS&E plans to retain SG Henderson Consulting (SGH) to coordinate CBO activities acceptable for the 2006 – 2008 cycle. SGH, led by Suzane Henderson, has been actively involved in the *Reach for the Stars* program since RS&E was awarded the contract in 2003. For the next three years, these efforts will include:

- Implementing a request for proposal process to secure 18 CBOs throughout the state for a one-year term. (We will seek new participants as part of this process.)
- Conducting a two-day training session for all CBOs upon award of their contracts to educate them on the program.
- Coordinating CBO marketing activities in partnership with RS&E.
- Providing a final report of all CBO marketing activities each year of the contract.

RS&E will review proposals and select a research vendor to perform focus groups, the results of which will be used to guide creative development of the campaign. We will secure this vendor in 2006 for a three-year term to ensure continuity.

### 13.5. Quality Assurance and Evaluation Activities

While the evaluation and verification of marketing activities will be conducted by the California Public Utilities Commission, RS&E will conduct quality assurance and evaluation activities including:

- Tracking of incoming phone calls to toll-free line.
- Measuring the number of advertisements and media placements.
- Measuring the quantity of information distributed by participants in the grass roots outreach component.
- Conducting focus groups that help guide the messaging.

RS&E's focus groups will be conducted by a research firm based in California that has experience with energy related issues and marketing techniques.

#### 13.5.1. Expected Number/Percent of Inspections

In order to ensure work is performed in a quality and timely manner as stated in agreements secured with vendors, RS&E will conduct a review process for each CBO under contract each fiscal year. This review will consist of a monthly report submitted by contractors to detail their marketing activities, as well as a monthly follow up call conducted by RS&E staff. Additionally, RS&E will conduct random inspections of marketing and outreach activities performed by all subcontractors. These inspections will be conducted, at a minimum, on a monthly basis and will include random site visits to events and trainings hosted by grassroots organizations.

### 13.6. Marketing Activities

Our experience tells us that the sole use of a traditional medium, such as television, will not be successful in breaking down the barriers faced by this campaign's target audiences. As a result, we propose continuing with a multi-tiered, synergistic marketing approach, utilizing the following tactics:

- Placement of media specifically geared to consumers in the IOU rural service territories, using radio and local newspapers as primary mediums.
- A strong community connection in which CBOs will be encouraged and rewarded for spreading the word about these energy-saving programs within their communities.
- Hispanic/general market rural public relations (PR) activities to secure maximum interest in energy efficiency programs through the engagement of the news media, community leaders, etc.
- A toll-free telephone line to provide information in several languages for people who are confused about energy efficiency products or hesitant about taking advantage of IOU or local programs.

# Statewide Marketing & Outreach - Univision Television Energy Efficiency Marketing

| | |
|---|---|
| Projected Program Budget | $883,530 |
| Projected Program Impacts<br>MWH<br>MW (CEC Factor) | N/A |
| Program Cost Effectiveness | N/A |

Note – The budget amount shown reflects only the funding associated with SoCalGas service territory for this statewide program.

**4. Program Descriptors**

Market Sector: Residential Crosscutting
Program Classification: Statewide
Program Status: Existing

**5. Program Statement**

Hispanics represent one-third of California's population. According to the state's IOUs, Hispanics have been underrepresented in residential energy efficiency programs. Barriers to participation have included language, income, and location. In addition. Hispanics do not have the level of access to the web that the population in general enjoys.

**6. Program Rationale**

Despite the fact that Hispanics are responsible for the majority of the population growth in California and make-up one-third of the population, this audience is underserved by Spanish-language media. In fact, there is only one Spanish-language daily newspaper in the state. Growth in the Spanish market has been better realized in the broadcast media.

According to a recent study in Adweek, ethnic media fills the emotional, cultural and credibility gap link that is crucial to marketers building brand loyalty in ethnic communities. Research into the Spanish-speaking market, both in California and the rest of the nation, consistently identifies television as the number one preferred source for news and information.
Between 1990 and 2000 the Hispanic population grew more than four times as fast as the population as a whole (57.9% vs. 13.2%). Hispanic consumers are now driving forces in most of the largest markets in the country, including Los Angeles. Despite its importance, the Hispanic market is still underserved by many consumer-products companies and continues to offer significant opportunities for growth.
According to research by Yankelovich, 2000, *Hispanic Monitor*:

*Latinos tend to "adopt and adapt" to customs and habits in the U.S. without shedding traditions and value systems. Along that line, marketers, and those trying to tap into the Hispanic segment, cannot simply transfer directly to the U.S. Latino market the conceptualizations or marketing strategies that work with more*

*traditional, general market consumers. Latinos are assimilating to prevalent U.S. culture, but they are not, and probably never will be, fully assimilated. Instead, theirs is a path of acculturation. It is a process of integration of native and traditional immigrant cultural values with dominant cultural ones.*

Language is one of the most obvious examples of this, with studies predicting that Spanish is likely to remain the language of preference among U.S. Latinos. In fact, Univision is now the #5 network in the United States, behind ABC, NBC, CBS and Fox. Univision reaches over 97% of all Hispanic households.

Television is, in virtually al studies, the primary source of news and information for California's Hispanics. Research shows that Spanish language television commercials are 40% more effective at increasing awareness levels and twice as persuasive as English language commercials for the Hispanic audience.* The visual confirmations provided in television advertising are extremely important, especially so for Spanish-dominant Hispanics.

Univision often considered the fifth full time broadcast network in the US, is also the nations' fastest growing network, broadcast or cable, among the most highly prized audience segments, viewers aged 18-34 and 18-49. It is important to note that, whereas the prized demographic for the population at large is 25-54, Hispanics trend younger in terms of marrying and having families.

The UTEEM statewide marketing and outreach program was specifically designed to take advantage of this powerhouse medium – Spanish language television --in reaching California's Hispanic population with energy efficiency messages.

This program proposes to build on past success in reaching California's Hispanic population with information about and access to statewide energy efficiency programs. UTEEM utilizes a statewide network of Hispanic television stations to provide energy efficiency messages in Spanish, generating in-depth editorial coverage of energy efficiency subjects; deploying an aggressive program of outreach activities in Hispanic communities and distributing bilingual informational materials to Hispanic audiences. The program has encouraged audience acceptance of the messages by using well-known Hispanic media personalities as spokespersons.

**7. Program Outcomes**

This is an information-only program designed to increase participation in residential energy efficiency programs by Hispanic customers.

# Statewide Marketing & Outreach - Univision Television Energy Efficiency Marketing

**8. Program Strategy**

Since 2001, this program has used the Univision Television Group as the sole media subcontractor. Univision has 11 stations strategically located throughout the state of California which reach up to 98% of the IOUs customers with their broadcast signals.

The primary component of the program is an annual 20-week schedule of 30-second commercials promoting energy efficiency programs and initiatives. By focusing the advertising campaign in a single media, we have been able to effectively negotiate value-added opportunities worth over $1 million.

Delivered at no charge to the program, these bonus components include interviews on locally produced talk shows and news programming, distribution of program materials and information at Hispanic-oriented outreach activities throughout the state, and a bonus 10-second schedule worth 50% of the 30-second schedule.

To ensure that we are effectively reaching the statewide Hispanic audience and achieving the highest value for the available budget, Staples Marketing will investigate other statewide Hispanic media outlets that could be used alone or in combination with other media. At the time this program plan was submitted, Staples Marketing was reviewing a proposal from Telemundo television network.

For example, Univision has proposed to include its "sister" Telefutura network for the 2006-2008 program cycle. TeleFutura is the first 24-hour national broadcast network to premiere with network programming in every day part. TeleFutura is the first 24-hour national broadcast network to premiere with network programming in every daypart. TeleFutura counter programs existing Spanish-language television networks, airing alternative genres during nearly every daypart. For example, TeleFutura broadcasts hit movies against primetime novelas, first-run talk shows against daytime novelas, and original novelas against news and talk shows. TeleFutura also features original news briefs, original Latin American talk shows, first-run and encore novelas for all members of the family and a weekend morning kids block. In addition, TeleFutura broadcasts teen-related hit programming, and blockbuster sports programming.

A sister station to Univision, Telefutura serves nine major media markets in California.

Spanish-language television stations have a special commitment to their communities, including aggressive public service activities that lend stations credibility with the pubic. Over the years, Univision has been interested in increasing home ownership among California's Hispanics. California Energy

Efficiency Programs are relevant because Hispancs can decrease the total cost of home ownership by reducing their utility bills each month.

**9. Program Objectives**

This is an information only program and, therefore, is not tied to energy savings goals.

Staples Marketing has a goal of achieving 161,418,000 gross impressions in the Hispanic market per year. This translates to reaching 5,380,600 Hispanic consumers per year at least three times with energy efficiency messages.

The program also proposes to accomplish at least 14 talk show/public affairs programming/news interviews with IOU, CPUC, local government partnership or other relevant spokesperson each year among the statewide network of stations.

In addition, the program has a goal of at least two special events per station per year during which the public is provided with program information and materials.

Finally, the ultimate goal of the UTEEM program is to increase the number of Hispanics who are aware of and participate in the energy efficiency programs provided through the IOUs.

**10. Program Implementation**

Staples Marketing will investigate, plan and place an integrated advertising schedule designed to reach the statewide audience of Spanish-speaking Californians with market-specific information about energy efficiency programs available through SCE and the other IOUs.

Staples Marketing will augment the advertising campaign with outreach activities in the Hispanic community, providing outreach staff with training and orientation, as well as supplies of informational materials and handouts.

Handouts include a program-specific brochure developed for statewide marketing and outreach, as well as materials from the IOUs and third-party program implementers.

To provide Hispanic customers with more in-depth information regarding energy efficiency and statewide and local programs, Staples Marketing will work with the subcontracted media to identify opportunities for editorial coverage, such as interview shows or news programming, depending on availability. In addition, Staples Marketing will coordinate with all IOUs , CPUC and other stakeholders to identify bilingual representatives willing to be interviewed by the media subcontractor.

On a quarterly and as-needed basis, Staples Marketing will meet with the Marketing and Outreach Steering Committee to ensure program coordination.

**11. Customer Description**

The program targets California's Hispanic population, ages 18-54, with a primary focus on customers who speak Spanish as their first or second language. The majority of customers reached are moderate and middle income, with a large proportion of renters in certain SCE markets where there the economy is dependent on agriculture.

**12. Customer Interface**

The goal of this program is help Hispanic customers understand the value of and provide access to energy efficiency programs. Specifically, the advertising and marketing materials will provide phone and web contacts that allow them to access information about residential and small business energy efficiency programs in Spanish.

For the 2006-2008 program cycle, Staples Marketing will coordinate with Runyon Saltzman & Einhorn and Efficiency Partnership to offer a new toll-free phone number. The number will be provided, along with the Flex Your Power website, on all UTEEM materials. When an energy customer dials the number, he will have the opportunity to choose either English or Spanish language. The phone company offers a product, Call Navigator, which will ask the customer which utility he belongs to and then directly connect him to the correct utility. For example, a caller from the Sacramento area code will have the choice of being connected to PG&E or SMUD. The phone line will allow us to more closely coordinate the efforts of UTEEM with Flex Your Power and the RS&E program, 2) avoid boundary confusion among IOUs and muni's and 3) facilitate more frequent tracking of activity generated by the marketing efforts.

**13. Energy Measures and Program Activities**

Staples Marketing will not be installing any energy measures.

**13.1. Measures Information**

This does not apply.

**13.2. Energy Savings and Demand Reduction Level Data**

This is an information-only program and, therefore, does not have energy savings and demand reduction level data attached to it.

**13.3. Non-energy Activities (Audits, Trainings, etc.)**

All activities associated with this program involve marketing and the distribution of information.

**13.4. Subcontractor Activities**

The media subcontractor will broadcast the advertising campaign; schedule, sponsor and staff outreach activities; and provide vehicles for editorial coverage and facilitate interviews with SCE representatives.

UTEEM is unusual in its level of commitment to the program and the value added to the paid media schedule in terms of bonus spots, editorial opportunities on talk shows and public affairs programming, and outreach at special events.

Staples Marketing continues to invite proposals from Spanish language television other than Univision, with a requirement that any new media partner provide the same level of reach into California's Hispanic market for the budget dollars. For example, in 2005, Univision provided Staples Marketing a schedule at a cost per thousand that was under $15.

### 13.5. Quality Assurance and Evaluation Activities

For quality assurance, Staples Marketing will monitor advertising schedules and review monthly reports from the media subcontractor. Any advertising that doesn't not appear as ordered will be compensated for in the form of a no-charge "make good." Monthly media reports will update progress toward the program goals in terms of number of paid and no-charge ads realized on all media outlets and approximate audience reached.

Prior to the production of advertising, Staples Marketing will facilitate message testing on the previous year's marketing materials. An independent third-party research firm will use focus group(s) to review and comment on previous messages and creative approaches. The results of this message testing will drive the development and production of all future advertising and marketing materials for greatest effectiveness.

Staples Marketing will monitor outreach activities and editorial coverage on a monthly basis.

As in the past, Staples Marketing will provide all draft materials to the program administrator for review and approval. In addition, Staples Marketing will make the program administrator aware of each upcoming commercial flight, make any necessary adjustments, and identify and pursue new opportunities.

Marketing is, by its very nature, opportunistic. The UTEEM program schedule and budget will be designed with adequate flexibility to take advantage of opportunities that arise as a result of extreme weather or market conditions not that were not originally anticipated by the marketing plan.

The evaluation project will be three-pronged in its approach:

## Statewide Marketing & Outreach - Univision Television Energy Efficiency Marketing

Tier I will involve verification of program activities, including the commercial schedule, outreach activities and talk show opportunities. It is expected that the program tracking database of information will be available for use within the verification portion of this evaluation as well as any other information gathered by the program implementer.

Univision uses NHSI (Nielsen Hispanic Service Index), Nielsen Media Research (U.S.), an independently owned broadcast research firm, provides audience estimates for all national program sources, including broadcast networks, cable networks, Spanish language networks, and national syndicators. Local ratings estimates are produced for television stations, regional cable networks, MSOs, cable interconnects, and Spanish language stations in each of the 210 television markets, including electronic metered service in 56 markets.

To be responsive to customer needs, Nielsen Media Research is organized vertically by customer segments and aligned by the different sources of data.

Tier II will involve a combination of qualitative and quantitative research. Staples Marketing will subcontract with an independent third-party research firm to conduct focus groups of Spanish-speaking consumers. These groups will be used to test message effectiveness and identify issues that will guide a more extensive and statistically meaningful survey into the target market.

The survey will address impacts (effects) of the marketing on awareness, knowledge, attitudes and stated intentions to take energy efficiency purchase actions. The EM&V subcontractor will determine the best method to field the survey and locate a database of phone numbers or addresses of the targeted market (depending on the type of survey to be fielded). The survey will be statistically representative of Spanish-speaking population and enable 90/10 certainty that the results represent the population for the areas being analyzed.

Tier III will involve quarterly tracking of activity on the Spanish-language toll-free phone line to identify the immediate impact of marketing efforts in generating response to the call for action.

### 13.5.1. Expected Number/Percent of Inspections (planned percent of projects)

This does not apply.

### 13.6. Marketing Activities

This is an information only program and, therefore, entirely a marketing effort

Production of Marketing/Outreach Materials

## Statewide Marketing & Outreach - Univision Television Energy Efficiency Marketing

Based on the results of the previous year's message testing, accomplished through focus groups, Staples Marketing will script and produce a series of 30-second, Spanish-language commercials. They will be designed to deliver important energy efficiency messages to California's Hispanic population and motivate them to action.

Specifically, the call to action will direct viewers to the new toll-free phone line or Flex Your Power website. Whichever route of access the viewer chooses, he or she will be connected to the appropriate utility for access to rebate applications, online home or business energy surveys, appliance recycling instructions, and so on.

As in previous years, Staples Market will use on-air (television or radio) talent provided through the media contractor. Use of well-known personalities increases the memorability and credibility of the message among Hispanic viewers.

Staples Marketing will also produce compatible 10-second messages to compliment and enhance the 30-second spots. These 10-second spots will be used in the bonus schedule.

Staples Marketing is working with Efficiency Partnership and Runyon Saltzman & Einhorn to investigate either coordinating the graphics and messages of our respective program brochures or creating one brochure that can be used by all three statewide marketing and outreach programs.

Schedule of 30-Second Television Commercials

Staples Marketing will coordinate the Spanish-language television schedule with the statewide marketing and outreach programs of Efficiency Partnership, Runyon Saltzman & Einhorn and the four IOUs to present a more seamless program of energy efficiency messages to the public.

Commercials will be aired in a series of flights – totaling 20 weeks -- that coordinate with the program roll-outs of Efficiency Partnership and Runyon Saltzman & Einhorn:

| | |
|---|---|
| January-February: | Natural Gas Demand Reduction |
| May-June: | Energy Efficient Appliances |
| July-August: | Energy Efficient Cooling Equipment |
| September: | Lighting |

Marketing is, by its very nature, opportunistic. The UTEEM program schedule and budget will be designed with adequate flexibility to take advantage of opportunities that arise as a result of extreme weather or market conditions not that were not originally anticipated by the marketing plan.

## Statewide Marketing & Outreach - Univision Television Energy Efficiency Marketing

Messages will be designed to promote the goals of the 2006-2008 portfolio. For example, the lighting promotion in August will focus on hardwired fixtures, as opposed to CFLs.

We might also include a message about installation quality in any central air conditioning commercials prepared for the 2006-2008 program cycle. In other words, the messages will relate directly to key issues identified as priorities for the portfolio.

Because 2006 is an election year, Staples Marketing will avoid placing television schedules during September-November when availabilities are low and rates are high. The same will hold true in 2008.

The inclusion of the natural gas focus in the late fall-early winter is a result of a request from Sempra Utilities that the statewide marketing and outreach programs help customers reduce their demand for natural gas in light of rising prices.

In 2005, Staples Marketing prepared four 10-second commercials on the topics of energy efficient water heaters, programmable thermostats, furnaces and insulation. It is anticipated that compatible 30-second commercials will be produced on the same topics for 2006-2008 to take further advantage of this opportunity for savings.

The 30-second commercial schedule will be augmented by a concurrent schedule of 10-second bonus spots to be provided at no charge to the program by the media subcontractor. Staples Marketing will negotiate a bonus schedule that has the value of approximately 50% of the paid media schedule. The 10-second messages will reinforce the 30-second messages or repeat the call to action.

Staples Marketing places the media schedules on a quarterly basis to allow for as much flexibility as possible.

As noted previously, Staples Marketing is entertaining proposals from other television stations. Should Univision remain the primary media for this program, the commercial schedules will air on the following stations:

- KABE-TV -- Bakersfield
- KOFZ-TV -- Chico/Redding
- KFTV-TV -- Fresno
- KMEX-TV-- Los Angeles
- KVER-TV – Palm Springs
- KUVS-TV -- Sacramento
- KSMS-TV—Salinas/Monterey

- KBNT-TV – San Diego
- KDTV-TV – San Francisco
- KPMR-TV – Santa Barbara
- KVYE-TV – Yuma/El Central

The current plan is to air 5,928 30-second commercials and 2,632 10-second commercials over the 11 stations for an estimated total of 8,560 spots per year. These totals may or may not be changed, should Staples Marketing utilize a television subcontractor other than Univision Television Group.

Earned Media

Staples Marketing will work with producers of local talk shows, public affairs and news programming on the subcontracted television station(s) to arrange interviews of CPUC, IOU and stakeholder spokespersons. These interviews allow for the distribution of more in-depth information regarding energy efficiency programs. These programs also offer the UTEEM effort third-party credibility, since the information is coming from a valued news source. Though the content of specific interviews are left to the talk show producers and interviewees, Staples Marketing suggests topic ideas and lines of questioning that reinforce and augment and commercial schedule.

Staples Marketing is also working to offer these earned media opportunities to third-party program facilitators, local government partners and other stakeholders. For example, one of the first such talk shows during the 2006-2008 program cycle would feature a representative from the City of San Francisco on KDTV-TV discussing that city's partnerships for energy efficiency.

During the 2006-2008 program cycle, Staples Marketing will coordinate more closely with the public relations staffs of the IOUs to ensure that the news departments of the Univision or other television station subcontractor receives frequent information about energy efficiency programs and opportunities.

Outreach

Since the Univision program began in 2002, Staples Marketing has reached around 800,000 individuals through special events throughout the state. During the 2006-2008 program cycle, Staples Marketing will work with the television subcontractor to develop and facilitate a UTEEM outreach effort at Hispanic cultural events , festivals, fairs and other community events.

Specifically, the UTEEM program takes advantage of subcontractor booths and staffs for community outreach by training staff to incorporate energy efficiency information and materials into their usual activities. This includes a program

brochure, relevant IOU materials and handouts imprinted with the contact phone number and web site.

Prior to the start of "festival season," Staples Marketing will orient station staffs to program policies and procedures, use of display, brochure and giveaways, and sources for additional information. Stations will be provided an Orientation Manual to serve as a resource for staff in the booth.

As in past years, Staples Marketing will send a broadcast email to all third-party program implementers, offering them the opportunity to provide outreach materials to the subcontractor television station(s) serving their target markets. We will also contact the muni's and local government partnerships with a similar offer.

Staples Marketing will also provide each of the subcontractor television stations with some type of interactive game that will motivate people who stop at the booth to make sure they obtain information regarding energy efficiency.

Imprinted giveaways provided by Staples Marketing will feature the toll-free phone number and web site to further encourage Hispanic consumers to take action.

Branding

Staples Marketing has never branded its marketing and outreach program to avoid any potential confusion with the IOUs and other statewide marketing and outreach efforts.
Though Staples Marketing has utilized the Flex Your Power brand on all print materials during previous program years, the FYP brand will be applied to all marketing materials, including television commercials, in the 2006-2008 program cycle. This will further coordinate the statewide marketing and outreach programs for a more seamless approach.

Consistent use of the new toll-free phone number and FYP website will enhance the coordination of the programs.

Partnering

Staples Marketing has partnered with California's HUD offices in the past to reach moderate-middle income homebuyers with energy efficiency information. For the 2006-2008 program cycle, Staples Marketing will investigate mutally beneficial outreach opportunities with the HUD regional office in Santa Ana and branches throughout the state. Possibilities may include the inclusion of energy efficiency information in first-time homebuyer classes as well as distribution of

energy efficiency materials at HUD sponsored homebuyer fairs and neighborhood events.

Summary

By its very nature marketing is not an end in itself, but a means to an end. The role of UTEEM is to help support and promote the total portfolio by increasing the target market's awareness of and receptivity to the benefits of energy efficiency and providing the target market with easy access to energy efficiency programs.

During the 2006-2008 program cycle, Staples Marketing Communications will build on UTEEM's past successes and enhance its impact through improved coordination with all other statewide marketing and outreach programs.

Specifically, statewide branding and employment of a toll-free phone number will help prevent confusion among the marketing and outreach programs, while allowing for ongoing tracking of public response to our efforts.

All UTEEM elements, though coordinated with the other programs, will also address the unique language and cultural characteristics of the Hispanic market to ensure their effectiveness.

| | SCG3508 FYP4-Statewide Marketing & Outreach | |
|---|---|---|
| **BUDGET** | | |
| | | |
| **Administrative Costs** | **$** | **-** |
| Overhead and G&A | $ | - |
| Other Administrative Costs | $ | - |
| **Marketing/Outreach** | **$** | **6,039,129** |
| **Direct Implementation** | **$** | **-** |
| Total Incentives and Rebates | $ | - |
| User Input Incentive | $ | - |
| Direct Install Rebate | $ | - |
| Direct Install Labor | $ | - |
| Direct Install Materials | $ | - |
| Activity | $ | - |
| Installation | $ | - |
| Hardware & Materials | $ | - |
| Rebate Processing & Inspection | $ | - |
| **EM&V Costs** | **$** | **-** |
| **Budget** | **$** | **6,039,129** |
| **Costs recovered from other sources** | **$** | **-** |
| **Budget** (plus other costs) | **$** | **6,039,129** |
| | | |
| **PROGRAM IMPACTS** | | |
| **Program Reductions for Measures installed through 2008** | | |
| User Entered kW (kW) | | - |
| Net Jul-Sept Peak (kW) | | - |
| Net Dec-Feb Peak (kW) | | |
| Net NCP (kW) | | |
| Net CEC (kW) | | - |
| Annual Net kWh | | - |
| Lifecycle Net kWh | | - |
| Annual Net Therms | | - |
| Lifecycle Net Therms | | - |
| | | |
| **Cost Effectiveness** | | |
| **TRC** | | |
| Costs | $ | 6,039,129 |
| Electric Benefits | $ | - |
| Gas Benefits | $ | - |
| Net Benefits (NPV) | $ | (6,039,129) |
| BC Ratio | | - |
| | | |
| **PAC** | | |
| Costs | $ | 6,039,129 |
| Electric Benefits | $ | - |
| Gas Benefits | $ | - |
| Net Benefits (NPV) | $ | (6,039,129) |
| BC Ratio | | - |
| | | |
| **Levelized Cost** | | |
| **Levelized Cost TRC ($/kWh )** | | |
| Discounted kWh | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |
| **Levelized Cost PAC ($/kWh)** | | |
| Discounted kWh | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |
| **Levelized Cost TRC ($/therm)** | | |
| Discounted Therms | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |
| **Levelized Cost PAC ($/therm)** | | |
| Discounted Therms | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |

# THIRD PARTY RESOURCE PROGRAMS

# 2006-2008 Energy Efficiency Programs
# Constant Volume Retrofit Program (CVRP) Concept Paper

## 1. Projected Program Budget

| | | 2006 | 2007 | 2008 |
|---|---|---|---|---|
| Administration | | | | |
| | Administrative Overheads | $ 16,250 | $ 32,500 | $ 16,250 |
| | Administrative Other | $ 28,750 | $ 57,500 | $ 28,750 |
| Marketing & Outreach | | $ 40,000 | $ 30,000 | $ 10,000 |
| Direct Implementation | | | | |
| | Activity | $ - | $ - | $ - |
| | Installation | $ - | $ - | $ - |
| | Hardware & Materials | $ - | $ - | $ - |
| | Procurement | $ 5,000 | $ 5,000 | $ 10,000 |
| | Incentives | $ 290,000 | $ 480,000 | $ 240,000 |
| EM&V | | $ - | $ - | $ - |
| *Total* | | *$ 380,000* | *$ 605,000* | *$ 305,000* |

## 2. Projected Program Impacts

| 2006 | | | 2007 | | | 2008 | | |
|---|---|---|---|---|---|---|---|---|
| **Net kWh** | **Net kW** | **Net Therms** | **Net kWh** | **Net kW** | **Net Therms** | **Net kWh** | **Net kW** | **Net Therms** |
| 1,200,000 | 180 | 39,936 | 2,400,000 | 360 | 79,872 | 1,200,000 | 180 | 39,936 |

## 3. Program Cost Effectiveness

Attached

## 4. Program Descriptors

| | |
|---|---|
| **Market Sector** | **Nonresidential**<br>Large Commercial Sector:<br>Office Buildings, Hotels, College Campuses, Military Bases, Hospitals, etc. |
| **Program Classification** | **Statewide** |
| **Program Status** | **New** |
| **Geographic Area** | **Entire SoCalGas Service Territory** |
| **Percent of Market** | **10% or less** |

### Market Sector

The CVRP is a nonresidential program aimed at the commercial building market sector. Within that sector, the largest sub sector will be office buildings (private

sector and public sector). CVRP will also target non-office public buildings such as courthouses and airports, college campuses (particularly HVAC systems serving libraries, administrative offices, and the like), and large hotel buildings (conference rooms and meeting rooms). The program will target Real Estate Investment Trust companies (REITS), large hotel chains, government agencies, college campuses and other organizations with large portfolios of buildings in the SoCalGas service territory to achieve economies of scale and initial participant ramp-up. CVRP will serve this market sector with audits, custom energy efficiency reports and information, and direct installation of comprehensive energy efficiency measures. CVRP is a turnkey offering that will provide customers with a single source of information, technical assistance, and financial assistance thereby mitigating barriers to participation common among this market sector.

**Program Classification and Status**

CVRP is a new, statewide program. We have proposed CVRP to Southern California Edison, SDG&E, and we plan to propose it to Pacific Gas and Electric.

**Geographic Area**

CVRP will target the entire SoCalGas service territory, though customers are more likely to be located in urban areas because the targeted HVAC system type is predominantly located in large buildings.

**Percent of Market**

The CVRP is focused on converting legacy constant volume systems that serve multiple zones to VAV operation. These types of systems are found in buildings constructed prior to 1990. They are predominantly located in office buildings (public sector and private sector), non-office public buildings such as courthouses and airports, college campuses (particularly HVAC systems serving libraries, administrative offices, and the like), and large hotel buildings (conference rooms and meeting rooms). CVRP will perform installations in approximately 20 buildings and therefore estimates that it will impact approximately 10% of the commercial building market.

## 5. Program Statement

The Constant Volume Retrofit Program (CVRP) is focused on converting legacy constant volume systems that serve multiple zones to VAV operation. These types of systems are found in buildings constructed prior to 1990. The constant-volume terminal reheat system is one of the simplest systems to design and does a very good job of controlling room comfort. However, this system wastes a relatively large amount of energy. The greatest waste of energy in this system is the continuous running of the supply and return fan motors at their full load. There is no need for a constant supply of conditioned air to the space when it is not required, based on the local demand. Also, the constant-volume terminal reheat system cannot be easily reset when there is a reduction in occupancy at night and during weekends. This system can be converted, however, to a Variable Air

Volume system (VAV), which will save energy and satisfy the space needs. The conventional way to convert constant volume systems to VAV operation is by retrofitting the terminal units with VAV boxes. Additionally, a supply duct pressure sensor sand variable frequency drives (VFD) are added to the supply and return fans. The mechanical changes to the terminals are intrusive and expensive. Since many constant volume systems were installed when asbestos was used in building construction, asbestos abatement may be required before a conventional VAV retrofit can take place. A list and description of the obstacles and barriers to convert these energy inefficient systems are described below. The Program approaches to mitigating the barriers are described further in Section 3.

1. **High Initial Installation Cost**. Removing the existing mixing box form the air distribution systems usually involves cutting into the air distribution ductwork causing inconvenience to the occupants and creating down time for the building owner. If asbestos is present, the cost usually is significantly higher.

2. **Information or Search Costs.** Building owners and operators do not understand the opportunities and benefits associated with new technologies and their potential to increase their HVAC systems energy efficiency. For most, the energy costs are considered costs of doing business and not something they are able to change.

3. **Asymmetric Information**. Building owners and operators typically distrust contractors and others who are trying to sell them something, the black box concept, particularly when the seller is much more informed about the product and/or service.

4. **Economies of Scale.** The costs of developing, engineering and installing new energy efficiency technologies in a single facility is high.

5. **Performance Uncertainty.** Building owners and operators are skeptical about the actual energy savings that they will see from a new energy efficiency technology.

6. **Down Time and Lost of Productivity.** Building owners and operators typically are very concern with the lost of occupied space due to intrusive installation work, since it will affect their bottom line.

7. **Hazardous Conditions.** In older facilities, the presence of asbestos is a major concern for the typical building owner.

## 6. Program Rationale

The CVRP Program is uniquely designed to resolve all the concern of the building operator and to increase the participation of the underserved and hard-to-reach building owner. We will use an alternative approach developed by Federspiel Controls that uses commercially available wireless temperature sensors (Figure 1) and does not require mechanical changes to the terminals. A patent-pending control application called DART detects when load conditions allow the fan speed to be reduced without compromising comfort based on feedback from the wireless sensors. DART does not require a supply duct static pressure sensor,

nor does it require control dampers for each zone. Of course, the system still requires that VFDs be added to the fan motors. DART eliminates the need for intrusive and expensive terminal retrofits. Terminal retrofits often require that occupants leave the area during the construction process. Sometimes terminal retrofits require asbestos abatement. With DART, the existing zone temperature controls can be kept in place and used as-is. DART will not interfere with their normal operation.

***Exhibit 1: Wireless sensor nodes (sensor and network manager).***


The need for the program is high and the barriers to participation identified above are discussed in this section in terms of how the Program addresses and mitigates them:

1. **High Initial Installation Cost**. This barrier is addressed by the customized incentive feature of the Program that will pay for half of the installation cost.

2. **Information or Search Costs.** Is addressed by the CVRP Program through targeted information in the marketing and by performing a pilot installation at the beginning of the program. A case study will be develop and marketed to new potential customers to demonstrate the benefits of this new technology

3. **Asymmetric Information**. The Program addresses this barrier by being a part of the SOCALGAS Innovative Program umbrella and utilizing the SoCalGas brand in its marketing materials and communications. Clearly SoCalGas is trusted in all matters related to energy.

4. **Economies of Scale.** The Program addresses this barrier and creates economies of scale by pre-engineering the constant volume air distribution system retrofit and providing turnkey installations. In this way development and engineering costs on a per customer basis are greatly reduced. Installation costs are also greatly reduced by purchasing equipment and materials in bulk and by repeated installations performed by the same contractor.

5. **Performance Uncertainty.** The Program addresses this barrier by providing information to the customer and by performing installations in one pilot demonstration project that will be closely monitored and metered at the very onset

of the Program. Information from the pilot installations will be provided to customers in the marketing and auditing phase of the Program.

8. **Down Time and Lost of Productivity.** Since there is not need to cut into the ductwork to remove the mixing box, there is no need to disturb the occupant during normal hour of operations. All the major components of this retrofit will be installed at the air handling units' away form the occupied space.

9. **Hazardous Conditions.** There is no need to open holes in neither ceiling nor walls avoiding any asbestos disturbance.

The CVRP program approach is being advanced because it represents the incorporation of other non-residential program approaches and elements to serve a market segment that is relatively untouched. Furthermore, CVRP can serve as a model for other difficult markets and those that are generally served by complete utility-funded direct install programs. Its distinguishing features are summarized below. The CVRP program will furnish:

- Comprehensive and detailed engineering that provides for high levels of savings penetration, and cost effective direct installation;
- Highly reliable new technology easy to install and maintain;
- Direct installation process, that is easy for the customer to implement and creates economies of scale;
- Customized incentives, that increases customer participation by bringing the customer cost of the project down by 50%;
- Avoided down time and productivity.

The opportunity for CVRP is good because: a) building owners are already aware that constant volume systems are inefficient, and b) CVRP will make it easier for building operators to run their buildings, and c) CVRP offers large energy savings. Building owners have been aware of the problem with inefficient constant volume systems for decades, but until now they have not had a cost-effective solution. Existing solutions are expensive and disruptive, often requiring asbestos abatement. Many building operators are resistant to energy efficiency technologies because they cause operational problems. CVRP will make operating buildings easier for operations staff because CVRP will provide them with information about how their building is running that they didn't previously have.

## 7. Program Outcomes

Currently, this market segment is virtually untapped in terms of having a comprehensive program delivered to it by a single managing entity. While energy efficiency programs, such as Standard Performance Contracting (SPC), are available to this segment, participation has been limited. CVRP will be implemented strategically to meets its program goals and the program outcomes discussed below.

Exhibit 2 below provides an overview of Program activities, milestones, strategy, and goals. The Program will achieve 159,744 therms in annual savings.

***Exhibit 2***
***Program Outcome Matrix***

| | **Tasks / Actions** | **Milestones** | **Strategy** | **Goal** |
|---|---|---|---|---|
| Program Design | ▪ Research<br>▪ Selected List of Customers<br>▪ Identify target groups by ownership, geography, energy usage, etc. | Develop and finalize marketing lists | Work with industry trade group association alliances | Mailing Lists:<br>▪ Multiple Site Facility Owners<br>▪ Property Management Firms<br>▪ Single Building Owners |
| Marketing | Develop and finalize marketing materials | Initiate direct marketing, telephone follow-up, and outreach | Easy to understand materials | ▪ 300 units mailed<br>▪ 400 customer sites contacted<br>▪ 2 Forums |
| Enrollment | ▪ Schedule appointments<br>▪ Conduct audits and preliminary engineering design<br>▪ Deliver customer reports with energy and engineering recommendations | Meets program production schedule | Identify buildings with high savings potential at effective cost levels. | ▪ 20 audits and reports delivered |
| Installation of Measures | ▪ Reserve incentives for customer<br>▪ Issue work orders<br>▪ Develop Detailed Engineering<br>▪ Manage Installations and Work Inspections<br>▪ Pay customer incentive | Meets program production schedule | Customize incentives to pay for 50% of Installation Cost. | • 159,744 therms annual energy savings |

## 8. Program Strategy

Using the attached list, the program strategy non-residential direct install. Additionally, QuEST has identified a series of program strategies that do not fit into exactly into the attached list.

The overarching Program strategy is to design, develop, and implement a direct installation energy efficiency program specifically for the small and midsize commercial building market segment. By addressing all market barriers through turnkey approach combined with customized financial incentives, higher economic incentives and the direct installation of equipment through **a single managing entity**, CVRP will achieve its goals. The Program is convenient to participate in for the customer, it is easy to understand, and includes energy conservation education and measures that are relevant to this type of utility customer.

CVRP integrates a high close-rate marketing and recruitment process that leverages industry trade group alliances, optimized customer information and incentives, turnkey direct installation to ensure the highest level of cost-effective savings possible.

By delivering a program to this market segment that takes into account all of these program elements CVRP will achieve the following outcomes:

- **Cost-Effectively Captures a Significant Share of an Otherwise Untapped Efficiency Resource.** The Program will achieve 159,744 therms savings per year. These savings are roughly 10% of facility electricity consumption for participating customers.

- **Achieves Long Term Persistence by Installing Hardware Measures Only**. The Program achieves long-term persistence of savings by installing hardware measures (e.g., DDC controls and VFDs that must be installed with tools and cannot be easily reversed). Measure life for installed equipment ranges from 8 to 16 years with savings weighted average measure life of 14 years. Information regarding energy efficiency will be provided to customers as a part of the Program.

- **Focuses on a High Potential, Underserved and Hard-to-reach Market.** The Program will target the small and midsize commercial buildings market segment. All building owners located within SoCalGas' service territory are eligible to participate.

- **Creates Momentum for Energy Efficiency Participation for an Underserved, Hard-to-reach Market Segment.** The Program will help to build a long-term market for energy efficiency implementation in the commercial building market segment within SoCalGas' service territory. This will occur in two ways: 1) by achieving customer interest and participation for the first time in this market segment; and 2) by creating a demonstrated solution for cost effective energy efficiency measure implementation in this market that the local contractor community can utilize CVRP to develop future business.

### 8.1.1. Program Strategy Description

The program strategy is to directly install controls and monitoring to cost-effectively convert CAV systems to VAV. The following "process" will be followed:

Step 1 - Finding Customers and Program Introduction: The program begins with Initial Program Marketing and Customer Recruiting, where screening is done for customer eligibility and to determine their commitment to this program. Customers will be required to sign an implementation agreement as the final test of their commitment.

Step 2 – Facility Audit and Work Order Issued: After customer sites are selected and an agreement has been signed, a Facility Audit is performed, consisting of an Energy Baseline Analysis as well as an Engineering Pre-design of the control application. From this information, an Audit Report Package is generated, containing the Facility Audit Report, a Program Installation Proposal, and a formal Funding Request Form. This material is used by QuEST and Federspiel Controls to sell the program to the client. To proceed to the next step, the customer must sign an authorization form to generate a SoCalGas work order.

Step 3 – CVRP Installation and Inspections: Complete construction documents consisting of engineering drawings and specifications will be generated by a professional engineer provided by QuEST or Federspiel Controls. QuEST will assign a construction manager to oversee daily construction activities, commissioning of new equipment will be also provided by QuEST. Inspections and construction checklist will be part of this process.

Step 4 – Customer Satisfaction and Quality Assurance: QuEST and Federspiel Controls will verify that installation has been done according to specifications and current California Construction Codes; a customer satisfaction survey will also be conducted at the end of the construction period.

Step 5 – Invoice Creation: After construction is completed and the customer has signed off on the job, a post inspection will be performed before submitting the invoice to SoCalGas and the customer for approval. Disputes arising form this task will be resolve within five days of presenting the invoice to SoCalGas.

Step 6 – Payment: Payment will occur after SoCalGas and the customer are completely satisfied with installation and all the issues have been resolved.

### 8.1.2. Program Indicators

Indicators are presented in Section 7 *Program Outcomes.*

## 9. Program Objectives

Program objectives are presented in Section 7 *Program Outcomes*.

## 10. Program Implementation

QuEST and Federspiel Controls staff has delivered energy and demand savings to a wide range of industrial and commercial customers. The program implementation process for this program is based on the success achieved and lessons learned from PG&E's Cross-cutting Demand Reduction Program, the BTU Program, the Oakland Energy Partnership, the California Energy Commission's Innovative Peak Load Reduction Program and the California Public Utilities Commission's Municipal Wastewater Retro-commissioning and Process Optimization Program (implemented in PG&E, SDG&E and SCE service territories).

A detailed description of the implementation process is illustrated in Exhibit 2. This process can be group into the six step described in detail in the section below.

**Step 1 - Finding Customers and Program Introduction:** The program begins with Initial Program Marketing and Customer Recruiting, where screening is done for customer eligibility and to determine their commitment to this program. Customers will be required to sign an implementation agreement as the final test of their commitment.

**Step 2 – Facility Audit and Work Order Issued:** After customer sites are selected and an agreement has been signed, a Facility Audit is performed, consisting of an Energy Baseline Analysis as well as an Engineering Pre-design of the control application. From this information, an Audit Report Package is generated, containing the Facility Audit Report, a Program Installation Proposal, and a formal Funding Request Form. This material is used by QuEST and Federspiel Controls to sell the program to the client. To proceed to the next step, the customer must sign an authorization form to generate a SoCalGas work order.

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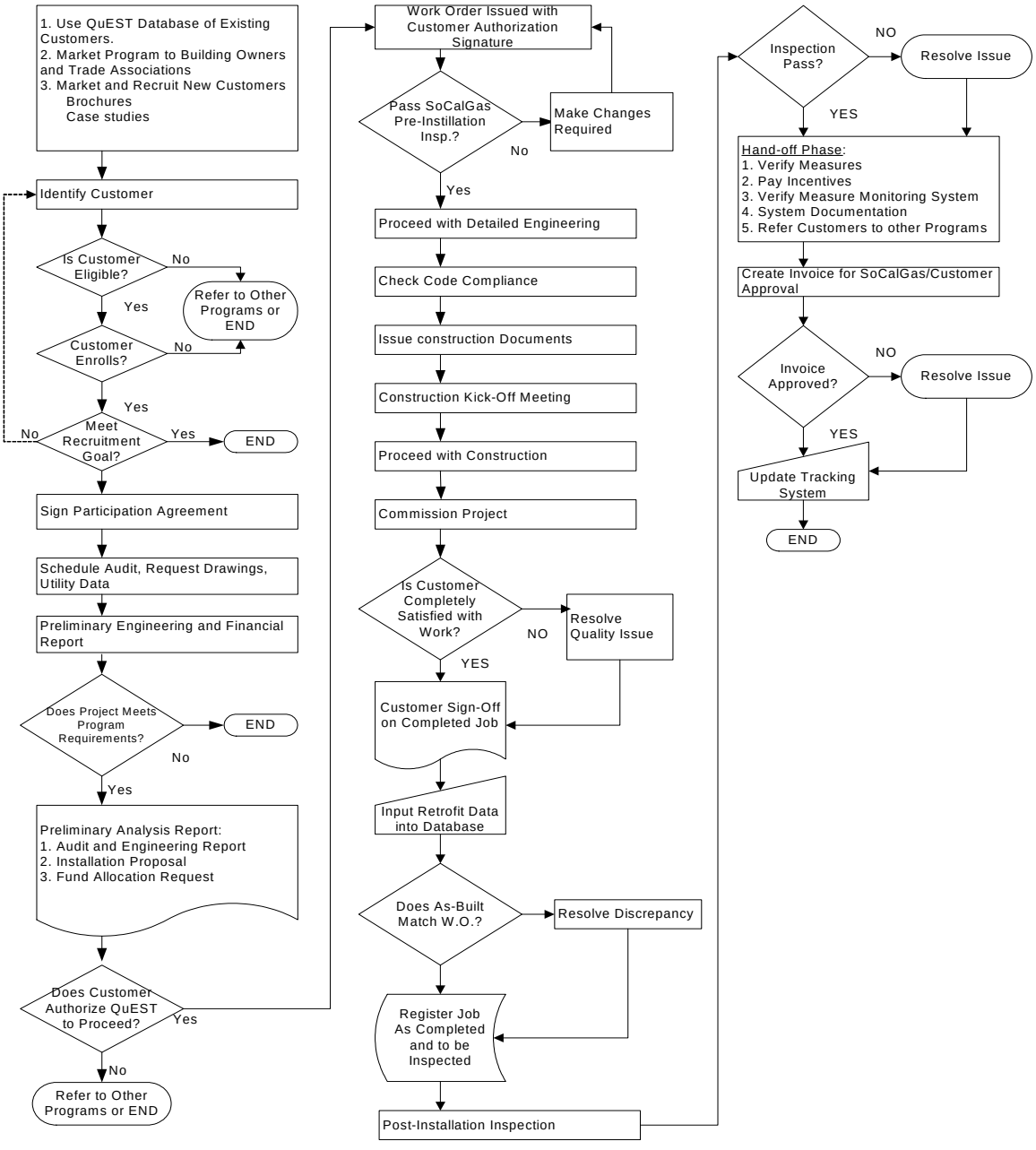
**Step 6 – Payment:** Payment will occur after SoCalGas and the customer are completely satisfied with installation and all the issues have been resolved.

***Exhibit 3***

***Program Process Flow Chart***




## 11. Customer Description

The CVRP is focused on converting legacy constant volume systems that serve multiple zones to VAV operation. These types of systems are found in buildings

constructed prior to 1990. They are predominantly located in office buildings (public sector and private sector), non-office public buildings such as courthouses and airports, college campuses (particularly HVAC systems serving libraries, administrative offices, and the like), and large hotel buildings (conference rooms and meeting rooms). The program will target Real Estate Investment Trust companies (REITS), large hotel chains, government agencies, college campuses and other organizations with large portfolios of buildings in the SoCalGas service territory to achieve economies of scale and initial participant ramp-up.

## 12. Customer Interface

QuEST has experience with and is sensitive to the issues and needs of this market segment and is committed to investing in the time required to overcome participation barriers. Issues of language, culture, and mistrust of "outsiders" are prevalent barriers and compound the barriers described in the original proposal. Spending enough time to deliver quality customer education in order to provide the customer with meaningful information to inform their decision is of paramount importance. Furthermore, the additional time is necessary, as the presence and steady support will serve to give the customer an added sense of confidence to participate in the program.

QuEST proposes to develop marketing materials that are easy to understand; short and to the point; attractive with meaningful graphics that economically and accurately describe the benefits of participation.

Program marketing material will precede the auditor's visit. The program progress will be presented and characterized in easy to follow "Steps" so that at each phase of the Program the customer will be able to refer to the program material and know exactly what to anticipate.

Customers will be recruited to participate in the program first by getting their approval to receive a store audit. The enrollment in the building audit component of the Program will occur either in person as a result of canvassing or by telephone (answering questions to determine energy savings potential and indicating interest in Program participation). Customer enrollment in the installation component of the Program requires participation in the facility audit component, potential for cost effective measure installation as determined by the results of the facility assessment, and a customer agreement on the measures to be installed.

## 13. Energy Measures and Program Activities

### 13.1. Prescriptive Measures.

See SoCalGas February 1, 2006 Workbook

### 13.2. kWh Level Data

See SoCalGas February 1, 2006 Workbook

### 13.3. Non-energy Activities

CVRP includes the following non-energy activities as part of the program's scope:

a. Site audits are planned as part of the CVRP Program. Every customer who participates in the program will receive an energy audit and a preliminary engineering report.

b. Community breakfast meetings and roundtable forums (Forums) will be held over the course of the program to introduce local building owners and operators will be convened.

#### Activity Description

**Audits:** CVRP offers a comprehensive no-cost and no-obligation energy efficiency audit as part of its program participation requirement. The audit provide QuEST with a unique opportunity to survey this market sector for existing equipment, condition, usage as well as an opportunity to provide customers with energy efficiency information and end use education.

Specifically, the Audit is as a comprehensive walk-through tour of a facility that includes a visual inspection of all the air distribution systems. The audit activities also require that the following information be collected and included in the customer audit report.

- Evaluation of buildings age and the condition of the energy systems
- Identification of all energy systems
- Analysis of improvement impacts to those systems
- Production of the custom energy report for the customer
- Production of detailed work order for the installation and retrofit contractor
- Photographing existing equipment and manufacturer labels (as feasible)
- Draft of floor plan

The audit process includes an evaluation of energy consumption data to analyze energy use quantities and patterns. Also, these data will be used to compare to industry averages for the type and size of the facility. Occupancy and hours of operation data will be collected. The auditor will also note whenever program measures are "not feasible" for installation so as not to include the savings estimates pertaining to the retrofit in the energy analysis.

At the end of the walk-through audit, the auditor will conduct a review of his finding with the customer including the following;

- A summary of what the auditor saw during the walk through

- An indication of when the final customer report will be completed and delivered

While other vendors may offer instant reports, the value of this is diminished when reports are printed and not reviewed. Furthermore, based on our CVRP program experience, customers in this small commercial market segment require more face-time in order to mitigate the barriers that exist for these hard to reach customers; trust, lack of energy efficiency knowledge, etc. For the vast majority, these barriers cannot be overcome in a "one-stop-audit."

All customer audit reports will be delivered in person. QuEST will produce a customer report and proposal package that will include the following report components:

Summary. The report summary will include a brief statement pertaining to energy usage and costs as assessed, a list of the recommended technologies and associated savings. The summary will present the findings in a concise and easy to read format.

- Estimated Annual / Monthly Costs with Existing Equipment
- Estimated Annual / Monthly Savings with Installed New Controls Technology
- Estimated Cost
- Rebate Amount
- Simple Payback Period
- Survey Totals
- Estimates Green House Gas reduction calculation

**Building Information. T**he report will provide general background of the facility, the existing energy systems, a description of the envelope, age, size, hour of occupation, and equipment maintenance information.

**Utility Summary.** This section of the customer report will identify general information about customer utility costs such as their annual energy costs and average monthly energy expenditures. As feasible, an explanation of the SoCalGas bill will be included to highlight customer tariff information, actual monthly usage, and how costs are calculated.

**Forums:** Over the course of the program, trade association and community group sponsored breakfast forums for local building owners will be convened. QuEST will work with BOMA and other trade groups, to invite and host breakfast forums for local building owners and operators across the SoCalGas utility service territory. These roundtable forums will provide important opportunities to discuss the Program, its benefits, and

energy efficiency in general. Presentation will include energy savings tips for each end use (no-cost/low-cost recommendations that can be implemented by storeowners) as well as an introduction to the benefits of installing the retrofits and new equipment offered through CVRP.

### 13.3.1. Activity Description

See Section 13.3.

### 13.3.2. Quantitative Activity Goals

**a. Audits:** QuEST estimates that in order to meet its energy savings goals; up to 60 audits may be required. The total number of audits performed will be driven by the cumulative energy savings achieved through the installation of measures in participating stores. We estimate that approximately 20 commercial buildings will be required to meet our energy savings goal. Our experience indicates that 1 out of 3 customers will agree to install measures.

**b. Forums:** A total of 2 Forums will be convened over the course of the program in different regions across the territory.

### 13.3.3. Assigned attributes of the activity (market sector, end use)

The value of performing Audits and Forums are described in below. The market sector and end use apply to both activities. The hard-reach, commercial building, including hotels, hospitals, etc.

a. **Audits** – attributes and value

1. One-on-one opportunity to address the unique energy usage and equipment characteristics of facility
2. Opportunity to impart energy efficiency information to 100% of program participants
3. Energy conservation information provided during the audit will be of value to all customers; low-cost / no-cost energy saving tips will be provided. Customer energy usage habits will be addressed and as applicable, the auditor will make recommendations in behavior changes that will result in immediate energy savings for the customer.
4. The presentation of the customer report (audit results) will provide the customer with a list of recommended improvements that they can act on. In other words, even if customers decline participation in CVRP installation, they can use the report to undertake the improvements as they deem fit.
5. The in-person walk-through audit will mitigate barriers to participation in other program as customers increase their level of energy efficiency knowledge, realize the cost benefits associated

with committing to energy efficiency, and extend themselves to participate in other utility programs.

b. **Forums** – attributes and value

1. Through a series of breakfast forums on CVRP and energy efficiency convened by a partner trade associations (e.g. BOMA), the Program will make important inroads for energy efficiency in the communities it works in.
2. Small roundtables will serve to present the program to building owners at the same time.
3. By collaborating with trusted entities such as BOMA, the Program will gain credibility and trust that might not otherwise be attained with members of this market segment.

One of the forums will be specifically for the multiple-site owners and operators to address Program and energy efficiency benefits in scale.

## 14. Subcontractor Activities

QuEST will subcontract the installation of the VFDs, VFD-rated motors, and the high-voltage power supply for the controller to a licensed C-10 contractor. Federspiel Controls will provide installation of the low-voltage components. Federspiel Controls will also install the wireless sensors and the wireless actuators. In some cases, Federspiel Controls will subcontract the installation of the wireless sensors and actuators. Federspiel Controls will commission the systems.

QuEST will provide the majority of program design, administration, and marketing functions for the CVRP Program. Exhibit 5 provides a summary list of the major program activities required

***Exhibit 5***
***Program Contractor Activities***

| **TASK** | CONTRACTOR |
|---|---|
| **Administration:** | QuEST |
| Policy and procedures manual | QuEST |
| Subcontracts and work authorizations | QuEST |
| Invoicing and payment | QuEST |
| Monthly reporting | QuEST |
| Incentive payment | QuEST |
| Progress tracking | QuEST |
| Account management functions | QuEST |
| **Recruitment:** | |
| Customer Lists | QuEST |

| TASK | CONTRACTOR |
|---|---|
| Presentations to groups | QuEST |
| Presentations at customer sites | QuEST |
| **Marketing:** | |
| Website development | QuEST |
| Case Studies | Federspiel Controls |
| Business Case Development | QuEST |
| Presentations | QuEST |
| Brochures | QuEST |
| **Program Design:** | |
| Evaluation Phase report templates | QuEST |
| Design Phase report templates | QuEST |
| Calculation spreadsheet formats | Federspiel Controls |
| Policy and Procedures Manual | QuEST |
| Monthly report templates | QuEST |
| **Implementation:** | |
| Design and Specification Documents | Federspiel Controls |
| Subcontractor Selection | QuEST |
| Construction and Project Management | QuEST |
| Operation and Maintenance Manuals | Federspiel Controls |
| Measurement and Verification | Federspiel Controls |
| **Hand-off Activities:** | |
| ECM Installation Inspections | QuEST |

**Subcontracted Roles**

QuEST and Federspiel Control, Inc. will, jointly, develop program infrastructure (such as creation of report templates, manuals, and savings calculation procedures), and measurement and verification of savings. Federspiel Controls will also provide wireless control technology and systems integration.

## 15. Quality Assurance and Evaluation Activities

**Installation Inspections**

QuEST and Federspiel Controls will post-inspect all the hardware installations, review exactly what was installed with the customer, and obtain a signature from the customer indicating that all equipment was installed and reviewed with the customer. This "installation checklist" with customer signature will be required to accompany invoices as a condition for invoice approval and payment.

**QuEST Post-Inspections**

In addition, QuEST will conduct inspections of installed work. QuEST believes that systematic installation problems can be identified and corrected by inspecting 100% of the first 5 installations. This approach will help ensure that problems do not persist through later phases of the program. Systematic problems will be addressed immediately through writing installation procedures, identifying new equipment, supplies, or requiring additional training.

It is estimated that installations will be performed for 20 commercial buildings located throughout SoCalGas' service territory.

*i. Expected number/percent of inspections (planned percent of projects)*

1. Telephone QA Audit Participants: 50%
2. Telephone QA Installation: 100%
3. Installation Checklists (signed): 100%
4. QuEST post-inspections: 50%

QuEST includes here its Customer Complaint Resolution policy. After working with hundreds of customers over the last four years, the project team has yet to experience a complaint.

In the event of a customer complaint or dispute, a QuEST representative will contact the customer within one business day of notification of the pending dispute. The QuEST representative will then speak to the subcontractor, if necessary, to allow them to properly remedy the dispute. The subcontractor shall reasonably attempt to cure the dispute within 3 business days of notice. If the subcontractor has not reasonably resolved the dispute within the cure period, QuEST will work with both the customer and the subcontractor to arrive at a mutually beneficial solution within 30 business days of the original dispute date. SOCALGAS will be notified of all customer complaints and/or concerns and their remedy.

## 16. Marketing Activities

To capture the program objectives of nearly 2.0 M ft2 in building square footage and more than 160,000 therms in savings, our program experience indicates that more than 450,000 therms will need to be committed and enrolled in the program. To acquire this market, QuEST will implement the following strategies:

- **Market to, and capture companies with multiple properties rather than single sites.** We will emphasize marketing efforts on companies with multi-site holdings, thereby stretching marketing resources. The CVRP Program will also conduct outreach to owners of single (or relatively few) sites, and trade organizations.
- **Focus on owner-managed properties rather than managed properties.** As with most investments, owners of properties are more likely to make energy efficiency investments in properties than properties that are managed by third parties. Marketing to firms such as Cushman Wakefield and CB Richard Ellis has yielded limited success, relative to owner-managed sites such as Cisco, HP, IBM, Equity Office Properties, Shorenstein, and Government buildings. This is not to say that future efforts should not target property management firms, only that they have not been among the first participants in our previous

energy conservation programs. Future efforts should likely target ownership of commercial office property rather than property management firms.

- **Coordinated Marketing Efforts with SoCalGas Key Account Managers**. Coordination activity with SoCalGas Staff and Key Account Services will be important for program success, we know working with utility staff to conduct site visits and move projects forward will accelerate program success. Coordination Activities will include marketing update meetings to ensure focus on highest energy users and to reduce multiple programs competing for the same customers or confusing a single customer with multiple program offerings.
- **Development of cross industry marketing channels.** Generally only one leader within a sector is required to build momentum. A case in point is QuEST's Building Tune Up (BTU) Program's initial foray into the high-tech facilities market that has resulted in numerous other participants from that sector. Targeting recognized leaders in each sector pays dividends. For example, Marriott has used the BTU Program to gain national recognition in Forbes, the WSJ, and elsewhere for the Marriott Retro-commissioning Program. Now, interest amongst others in the hospitality sector is developing, including the Starwood Corporation.
- **Leverage market movers and first adopters.** Industry interest is not evenly distributed; some firms such as Marriott and Federated are at the leading edge, while others within their respective industries have not expressed interest in energy conservation. Working to leverage these market movers through press releases in the financial press and sector specific publications can get the less innovative firms to accept the CVRP.

QuEST will summarize and document its marketing information and insights, and provide it to SoCalGas prior to a CVRP Program kickoff meeting. This will enable a more informed discussion of the marketing plan development.

New marketing materials will be developed based on feedback from the kickoff meeting, and key members of SoCalGas' team. The marketing materials will have a "look and feel" consistent across the program. In addition the QuEST Team will develop program brochures, presentations, letters, and case studies.

QuEST has already assembled several of the major components required for the marketing plan. These include:

- Identified several large multi-site property owners who are receptive to new technologies and eager to participate in innovative energy conservation programs, greatly enhancing the program's ability to meet the recruitment goals under our aggressive timeline,
- Developed effective program branding that has gained widespread recognition in previous utility-sponsored programs (The Oakland Energy Partnership, and The BTU Program

- Leveraged several other national programs and offerings to promote the CVRP Program attractiveness to owners, including ENERGYSTARä, LEED-EB, Building Operator Certification Training programs, and the Governor's Green Action Initiative,
- Identified successful venues for marketing the CVRP program, including WECC conferences, BOMA expositions, and IFMA meetings, and

Developed a management system that tracks each customer's progress through the CVRP Program, ensuring that the customer remains engaged in the process, and installs the CVRP measures.

## 17. CPUC Objective

QuEST has read and fully understands the CPUC's Energy Efficiency Policy Manual, Version 3. QuEST appreciates the role that cost-effective energy efficiency can play, from lower energy costs, to reduced green-house gas emissions, as well we value the role EM&V can play in improving program design and ensuring success of future programs.

Focusing specifically on Section II of the Policy Manual, QuEST has tailored the CVRP Program to meet the energy efficiency policy objectives as follows:

**Energy Efficiency as the highest priority resource**. The CVRP Program is designed to compete cost-effectively with non-energy efficiency resources by delivering hard savings for $0.30 per therm. To achieve this, administrative and marketing costs have been kept to a bare minimum.

**Pursue energy efficiency over the short and long term.** The CVRP Program focuses on long term measures, measures with a useful life of ten plus years. By focusing on these measures, the CVRP Program can ensure that savings persist well beyond the short term.

**Eliminate "lost opportunities" and "cream skimming."** The CVRP Program is a comprehensive program that encompasses a solution to s real problem. To further ensure that a larger of systems are installed the CVRP Program offers high incentives to make it easier for participants to implement more measures, while not constraining themselves financially.

**Support the Governor and State's goals to reduce greenhouse gas emissions.** To make the link between greenhouse gas emissions (GHG) and energy efficiency, the CVRP Program will include the total GHG reduction associated to each of the recommended measures in the customer reports created from store audits. Given that small business owners have little time outside of running their business, the CVRP

Program audit will provide a small window into the relationship between energy conservation and controlling emissions.

| | SCG3536 3P CVRP | |
|---|---|---|
| **BUDGET** | | |
| | | |
| **Administrative Costs** | **$** | **180,000** |
| Overhead and G&A | $ | 65,000 |
| Other Administrative Costs | $ | 115,000 |
| **Marketing/Outreach** | **$** | **80,000** |
| **Direct Implementation** | **$** | **1,030,000** |
| Total Incentives and Rebates | | |
| User Input Incentive | $ | - |
| Direct Install Rebate | $ | 98,000 |
| Direct Install Labor | $ | 266,000 |
| Direct Install Materials | $ | 646,000 |
| Activity | $ | 20,000 |
| Installation | $ | - |
| Hardware & Materials | $ | - |
| Rebate Processing & Inspection | $ | - |
| **EM&V Costs** | **$** | - |
| **Budget** | **$** | **1,290,000** |
| **Costs recovered from other sources** | **$** | - |
| **Budget** (plus other costs) | **$** | **1,290,000** |
| | | |
| **PROGRAM IMPACTS** | | |
| **Program Reductions for Measures installed through 2008** | | |
| User Entered kW (kW) | | 720 |
| Net Jul-Sept Peak (kW) | | 720 |
| Net Dec-Feb Peak (kW) | | 447 |
| Net NCP (kW) | | 630 |
| Net CEC (kW) | | 1042 |
| Annual Net kWh | | 4800000 |
| Lifecycle Net kWh | | 48000000 |
| Annual Net Therms | | 159744 |
| Lifecycle Net Therms | | 1597440 |
| | | |
| **Cost Effectiveness** | | |
| **TRC** | | |
| Costs | | 1672088.853 |
| Electric Benefits | | 3190517.68 |
| Gas Benefits | | 744568.7697 |
| Net Benefits (NPV) | | 2262997.596 |
| BC Ratio | | 2.35339554 |
| | | |
| **PAC** | | |
| Costs | | 1180043.541 |
| Electric Benefits | | 3190517.68 |
| Gas Benefits | | 744568.7697 |
| Net Benefits (NPV) | | 2755042.909 |
| BC Ratio | | 3.334695978 |
| | | |
| **Levelized Cost** | | |
| **Levelized Cost TRC ($/kWh )** | | |
| Discounted kWh | | 31456537.85 |
| Cost | | 0.043097818 |
| Benefits | | 0.101426218 |
| Benefit-Cost | | 0.0583284 |
| **Levelized Cost PAC ($/kWh)** | | |
| Discounted kWh | | 31456537.85 |
| Cost | | 0.030415116 |
| Benefits | | 0.101426218 |
| Benefit-Cost | | 0.071011103 |
| **Levelized Cost TRC ($/therm)** | | |
| Discounted Therms | | 1046873.58 |
| Cost | | 0.30221481 |
| Benefits | | 0.711230834 |
| Benefit-Cost | | 0.409016025 |
| **Levelized Cost PAC ($/therm)** | | |
| Discounted Therms | | 1046873.58 |
| Cost | | 0.213291563 |
| Benefits | | 0.711230834 |
| Benefit-Cost | | 0.497939271 |

## 3P Constant Volume Retrofit Program (CVRP)

| Year | Total Budget | Total Incentives | Admin Budget | Net kWh | Net Therms | Net kW |
|---|---|---|---|---|---|---|
| 2006 | $ 380,000 | $ 290,000 | $ 90,000 | 1,200,000 | 39,936 | 180 |
| 2007 | $ 605,000 | $ 480,000 | $ 125,000 | 2,400,000 | 79,872 | 360 |
| 2008 | $ 305,000 | $ 240,000 | $ 65,000 | 1,200,000 | 39,936 | 180 |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 349001 | DART | 3 | 0 | 0.00 | 0.8 | sq.ft. | 10 | 400,000 | $ 0.48 | $ 0.98 | 960,000 | 31,949 | 144 |
| 2006 | 349002 | DART | 3 | 0 | 0.00 | 0.8 | sq.ft. | 10 | 100,000 | $ 0.98 | $ 0.98 | 240,000 | 7,987 | 36 |
| 2007 | 349001 | DART | 3 | 0 | 0.00 | 0.8 | sq.ft. | 10 | 1,000,000 | $ 0.48 | $ 0.98 | 2,400,000 | 79,872 | 360 |
| 2007 | 349002 | DART | 3 | 0 | 0.00 | 0.8 | sq.ft. | 10 | | $ 0.98 | $ 0.98 | - | - | - |
| 2008 | 349001 | DART | 3 | 0 | 0.00 | 0.8 | sq.ft. | 10 | 500,000 | $ 0.48 | $ 0.98 | 1,200,000 | 39,936 | 180 |
| 2008 | 349002 | DART | 3 | 0 | 0.00 | 0.8 | sq.ft. | 10 | | $ 0.98 | $ 0.98 | - | - | - |

# 2006-2008 Energy Efficiency Programs Concept Paper
# Designed for Comfort – Affordable Housing Innovative Outreach and Measure Installation

## 1. Projected Program Budget

| | | 2006 | 2007 | 2008 |
|---|---|---|---|---|
| Administration | | | | |
| | Administrative Overheads | $ 80,306 | $ 88,337 | $ 13,180 |
| | Administrative Other | $ 11,500 | $ 12,300 | $ 97,170 |
| Marketing & Outreach | | $ 65,000 | $ 65,000 | $ 63,500 |
| Direct Implementation | | | | |
| | Activity | $ 7,000 | $ 7,700 | $ 8,470 |
| | Installation | $ - | $ - | $ - |
| | Hardware & Materials | $ 15,000 | $ 15,000 | $ 6,000 |
| | Procurement | $ 7,000 | $ 7,700 | $ 8,470 |
| | Incentives | $ 121,000 | $ 181,500 | $ 242,000 |
| EM&V | | $ - | $ - | $ - |
| *Total* | | *$ 306,806* | *$ 377,537* | *$ 438,790* |

## 2. Projected Program Impacts

| 2006 | | | 2007 | | | 2008 | | |
|---|---|---|---|---|---|---|---|---|
| **Net kWh** | **Net kW** | **Net Therms** | **Net kWh** | **Net kW** | **Net Therms** | **Net kWh** | **Net kW** | **Net Therms** |
| 93,628 | 229 | 8,195 | 130,718 | 338 | 11,773 | 174,821 | 481 | 13,967 |

## 3. Program Cost Effectiveness

Attached

## 4. Program Descriptors

***Market Sector***

According to the 2002 NAICS CEE Segment Mappings, the ***DfC*** program covers the following market sectors:

1. 2300 Residential Apartments – Individually Metered (Multifamily Rehab 20% Improvement)
2. 2400 Residential Apartments – Master Metered (Supportive Housing Rehab 20% Improvement)
3. 2000 Residential Apartments – (EnergySmart Paks)
4. 3300 Public Housing

***Program Classification***

This program would be considered local but has statewide overlap among program elements. Because of the differing solicitations among utilities statewide, HMG was not able to propose the exact same program throughout all utility jurisdictions. However, HMG proposed some version of the *Designed for Comfort* program in each jurisdiction. For example, because of specific requirements in the PG&E and SCE solicitations, HMG only proposed the resource (incentive) portion of the program in their service territories. However, HMG has proposed the whole program (resource, marketing, and outreach to housing authorities) to SCG and

SDG&E. Also, HMG proposed the Central Water Heating Tune-Up (CWHT) program in PG&E's service territory, but presents it here as a *Designed for Comfort* strategy to maximize therm savings.

***Program Status***

*Designed for Comfort* is an existing program, which HMG implemented in SCG and SCE territories in PY2002-03, and statewide in PY2004-05. HMG proposes the following modifications:

- Supportive Housing — Include a "supportive housing" element.
- Central Water Heating Focus – Include a focused effort to obtain central water heating therm savings.
- Continue to work with housing authorities to implement the Energy Efficiency-Based Utility Allowance schedule which provides a long term pay back mechanism for owners who invest in energy efficiency.
- Collaborate with the Southern California Association of Non-Profit Housing (SCANPH), the Enterprise Foundation, and other non-profits to promote energy efficiency programs to their members.
- Continue engaging tenants of participating projects to conserve energy through education and by providing each household with an EnergySmart Pak that contains CFLs as well as water saving measures such as a low flow shower head and a faucet aerator.
- Explore and incorporate where possible, SCG "On-Bill Financing" option for property owners (to avoid lost opportunities for owners who otherwise could not participate in the program due to capital constraints).

The need for this rehabilitation program is based on HMG's experience with implementing the *DfC* program in program years 2002-2005. The primary targets of the program are affordable and supportive housing owners. They and their tenants (the ultimate beneficiaries) meet several of the CPUC criteria for hard-to-reach ratepayer categories: affordable multifamily owners, supportive housing owners, income-qualified tenants/renters, and those with special needs. Non-profit Supportive Housing provides homes to persons with special needs, including people with particular illness, such as HIV/AIDS, drug and alcohol treatment, transitional housing for at-risk youth and adults, and more. This segment has been overlooked by many residential and commercial programs because it falls somewhere in between (it is residential, but typically master-metered). In the previous funding cycles, HMG had to turn away such projects because they are not defined as multifamily. HMG proposes to fill this gap by adding a Supportive Housing element to the *DfC* program. Because the utility costs for virtually all Supportive Housing projects are borne by the owner, they have a keen interest in lowering their utility costs.

Another new element of the *DfC* program targets buildings with central water heating and will identify many of the worst offenders. HMG will provide the property owners with advice on the most cost-effective improvements for their specific buildings and water heating systems. We will also walk them through

estimates of the costs and benefits of the options, and help them evaluate professional bids to supply and install the upgrades.

***Geographic Area Targeted***

All affordable housing projects and owners in SCG's service territory may qualify for this program. However, we expect much lower levels of participation in the less populated regions where there are fewer services to support affordable housing, fewer large multifamily projects (the kind that typically have central water heating systems), and fewer affordable housing units in general. Therefore, most of the savings will be realized in the areas of greater population density. We are not specifically targeting participants only in areas identified by California Independent System Operator as "electric transmission constrained," but projects in these areas are welcome if they qualify. Most of the savings will be in natural gas, so the level of electricity transmission constraint for a region is of lesser importance.

***Percentage of the Market that the Program Will Address***

According to the California State Department of Finance, there are approximately 1.5 to 2.1 million multifamily dwelling units in Southern California Gas Company's service territory (the data is not fine enough to exactly match to SCG's territory). According to the Southern California Association of Non-Profit Housing, an estimated 62,000 of those units are deemed "affordable" and are governed by a housing authority. With rehabilitations averaging every 10 years (cosmetic rehabilitations may take place more frequently), an average of 4,133 multifamily units are ripe for rehabilitation each year. .HMG proposes to recruit 100 units (3.6% market share) in the first year, 150 units in the second year and 200 units in the third year for a total of 16.3% market penetration. Additionally, HMG proposes to recruit 225 supportive housing units.

**5. Program Statement**

These hard-to-reach markets (affordable and supportive housing) have been unresponsive due to lack of awareness, funds, and motivation. Additional and consistent attention is warranted. *Designed for Comfort* aims to overcome these barriers by targeting older affordable housing, and providing design assistance, training, and incentives. This will improve the participant buildings' energy efficiency by at least 20% and increase awareness of efficiency options among the underserved affordable and supportive housing owners.

Although there are multiple efforts to "weatherize" affordable housing (for example, LI-HEAP), those efforts do not attend to the needs of income-qualified single family homeowners in need of heating, cooling, and water heating equipment replacement and upgrades, nor do they substantially increase owners' consciousness of the existing energy efficiency opportunities. *DfC* fills this gap by providing incentives for the replacement of old, inefficient heating, cooling, and water heating equipment, as well as assistance with analysis using a whole-building performance approach. HMG carefully avoids duplication by making sure that program

participants are aware of free programs and services. Further, HMG makes sure that if program participants are taking advantage of another program that there is no duplication or overlap. For example, if a property owner takes advantage of a utility CFL program, it is acceptable to also take advantage of DfC for heating, cooling, and water heating upgrades. However, HMG is careful not to provide incentives for heating savings related to a new furnace, for example, if the participant is getting assistance from another.

Owners of multifamily housing with central water heating represent a substantial potential for energy efficient upgrades. Recent estimates used by the CEC in its 2005 Title 24 standards update proceeding; indicate that about 30% have central water heating systems. Due to tenant satisfaction concerns, the larger of these have recirculating loops. Since all but about 13% of them were built more than 12 years ago[1] (when the NAECA standards took effect), much of the equipment in this building stock is very inefficient. Additionally, in the same period, there have been several technological advances in controlling heat losses from hot water loops. These advances are finding their way into the new construction market, but the existing stock of buildings with CDHW still waste 20%-45% of all the energy used for water heating.[2]

The ultimate beneficiaries of upgrades made by participants of *DfC* are low-income tenants. In California, low income households spend approximately 25% of their monthly income on utilities. This compares with an average of only 5% of monthly income spent on utilities for the average California household. This program will help reduce the housing burden on this market segment, freeing up resources for other necessities, such as clothing, medication or childcare.

Ultimately, the energy savings from this innovative program that serves this hard to reach market can help SCG achieve its energy saving targets in a cost-effective manner.

## 6. Program Rationale

*Designed for Comfort* aims to overcome the barriers listed above by targeting older affordable housing, providing design assistance, training, and incentives to improve energy efficiency by 20%. The ultimate goal is to increase awareness of efficiency options among the underserved affordable and supportive housing owners. The program is complementary to SCG's prescriptive program for multifamily property owners, and in the PY2004-05 funding cycle, there was room for both. *DfC* supports an additional level of analysis and energy calculations. This helps

1 California Department of Finance Housing Data; downloaded from DOF web site 10/11/2005.

2 Based on analysis performed by HMG under contract to PG&E in support of the CEC's 2005 Title 24 code revision process.

(affordable and supportive housing) property owners to understand how their buildings perform and how to select the best, most cost-effective energy efficiency upgrades specific to their buildings. It also increases awareness among property owners, and gives them the tools to make similar decisions on upcoming rehabilitations of other properties.

The primary targets of the program are affordable and supportive housing owners. They and their tenants (the ultimate beneficiaries) meet several of the CPUC criteria for hard-to-reach ratepayer categories: affordable multifamily owners, supportive housing owners, income-qualified tenants/renters, and those with special needs. The supportive housing market consists of housing for tenants with special needs and has been overlooked by many residential and commercial programs because it falls somewhere in between. Non-profit Supportive Housing provides homes to persons with special needs, including people with particular illnesses (such as HIV/AIDS), drug and alcohol treatment, transitional housing for at-risk youth and adults, and more. In the previous funding cycles, HMG has had to turn away such projects because many could not be defined as multifamily. Others who would have qualified, were prevented by a lack of capital (up-front funds) even though they have a keen interest in lowering their utility costs and are interested in providing comfortable and attractive housing for tenants with special needs. By directly targeting this market sector, and exploring the possibility of linking with SCG's "on-bill" financing program, we can overcome their barriers.

This program allows the owner to take a holistic or comprehensive approach to determine cost-effective energy efficiency measure upgrades through the use of energy consultants and HERS raters. These consultants provide accurate analysis to estimate energy savings, as well as third party verification of measure installation. This allows the program to report actual energy savings through modeling software.

Further, affordable housing projects have major renovations no more frequently than every 10-15 years. If the best water heating efficiency options are not adopted at that time, there generally is not another opportunity for at least another decade. Yet, most multifamily property owners (indeed, most of the engineers and energy consultants who serve them) lack the requisite experience to identify the optimal upgrades. Further, cash-strapped multifamily property owners without the best expert advice will usually come to the conclusion that any upgrades that make sense would cost too much to implement. Without adding a central hot water heating focus to *DfC*, these properties will continue to waste hundreds of thousands of therms of natural gas each year for at least the next decade.

Finally, these innovative approaches offer owners more insight into how a building performs and focuses on maximizing energy savings through the analysis and the focus on central water heating (for therm savings). It also differs from a typical program from energy service providers who work with housing authorities to implement performance contracts by separating the program implementer from the energy consultant, the consultant from the installer, and the installer from the

verification (HERS) entity. One benefit of the *DfC* program for public housing is that the resulting cash flow from energy savings stays with the housing authority, allowing them to fund more energy efficiency upgrades, fund programs and services, or fund their reserves.

**7. Program Outcomes**

*DfC* provides incentives to affordable housing property owners as well as to energy consultants and HERS raters. The energy consultants and HERS raters will assess the buildings' existing conditions and make recommendations to cost-effectively improve efficiency, and then inspect/verify the installation of measures. While the program will promote the appropriate measures needed to achieve a 20% improvement, HMG will focus on achieving a high level of therm savings through replacing central hot water boilers and distribution loops. Significant energy savings can be found by upgrading older boilers, re-designing the distribution loop, increasing pipe insulation, and incorporating advanced controls. Such systems can be improved cost-effectively – frequently with paybacks of less than a year – but building owners, designers and plumbing engineers often do not know how to identify the most cost-effective options. Indeed, they generally do not know such savings are even possible without sacrificing the quality of hot water delivery service.

The program also provides EnergySmart Paks to project tenants. This is a box of sample energy saving devices such as CFLs, low-flow shower head, faucet aerators, and tips to save energy.

HMG has set a goal of 450 multifamily units and 225 special needs units totaling over 675 dwelling units, over the next funding cycle. To accomplish this goal, HMG proposes incentives for energy consultants and HERS raters based on 900 units each. HMG proposes to continue to pay ½ the fee when the initial property assessment is completed and the balance upon project completion (meaning the HERS rater only gets ½ the incentive if a project drops out of the program). HMG also proposes to distribute a total of 1000 EnergySmart Paks to the market including one for each participating unit, as well as some for use with training and some as a marketing tool.

| Projected Goals for 2006-08 Funding Cycle | | | | |
|---|---|---|---|---|
| **Units** | **2006** | **2007** | **2008** | **Total** |
| **Multifamily Rehab** | 100 | 150 | 200 | 450 |
| **Special Needs Housing Rehab** | 50 | 75 | 100 | 225 |
| **Energy Consultant** | 200 | 300 | 400 | 900 |
| **HERS Raters** | 200 | 300 | 400 | 900 |
| **Energy Smart Paks** | 300 | 350 | 350 | 1000 |

**8. Program Strategy**

Program strategies include the following (per SCG list):

- Residential Targeted Marketing
- Residential Comprehensive Retrofit

- Residential Audits (by independent HERS raters)
- Residential Building Design Assistance
- Residential Comprehensive HVAC
- Residential Comprehensive DHW

***8.1.*** **Program Strategy Description**

Initial program launch will entail updating *DfC* program materials to implement *DfC*'s Residential **Targeted Marketing** campaign to outreach to potential property owners through proven marketing channels such as conferences, meetings, workshops, and email. HMG's initial plan includes working with waitlisted property owners who are already identified and interested in participating.

Through these channels, HMG will make personal contacts and identify interested parties and subsequently meet with them to describe in detail the benefits and operation s of the program and potential incentive and energy savings opportunities specific to their properties.

Once the owner-developer or Housing Authority decides to participate, HMG will provide them with a list of HERS raters and energy consultants, who in conjunction with HMG's **Design Assistance** will provide a **Residential Audit** to establish a baseline from which to work and make recommendations for a **Residential Comprehensive Retrofit** which may include one or more of the following strategies to achieve at least a 20% improvement in energy efficiency: **Residential Comprehensive HVAC or Residential Comprehensive DHW.**

HMG will identify a subset of these target properties throughout SCG's service territory ripe for a **Residential Comprehensive DHW** retrofit and will follow the same path as any other retrofit, but with an emphasis on a comprehensive audit of their hot water system, and then developing a set of recommendations for improving the system.

The HERS Raters and Energy Consultants will conduct the baseline assessment and recommend equipment and/or installation practices that will save energy and accomplish the customer's participation objectives. HMG will present the recommendations to the owner along with the incentives to help offset the cost.

HMG will assist the HERS Raters, Energy Consultants, and property owners as necessary. The HERS Rater and Energy Consultant provide HMG with an initial audit, energy calculations reflecting the baseline audit, energy calculations reflecting recommendations based on a minimum of a 20%

improvement, and after verification of installation, a certificate of completion verifying that the measures recommended were installed.

The owner proceeds with the installation and installs the equipment.

HMG and SCG implement agreed upon incentive payment procedure (to be defined and may entail HMG presenting a request for incentive payment to SCG to ensure that the participant receives a check from the utility).

### 8.2. Program Indicators

HMG will use the following units and indicators to internally track program achievements as such:

- Number of multifamily units participating by year
- Number of special needs housing participating by year
- Number of energy consultants (for participating projects as well as for projects that may drop out)
- Number of HERS raters (for participating projects as well as for projects that may drop out)
- The total of kW, kWh, and therms saved each year by participating projects (as indicated from energy modeling)
- Number of articles and advertising placed in industry publications
- Number of EnergySmart Paks distributed for marketing purposes (non-tenant) and for installation in participating project units (tenant)

## 9. Program Objectives

Currently, as the third-party program implementer of *Designed for Comfort*, HMG is working with participating owners and energy consultants on 146 units, surpassing our goal of 115 units in SCG's service territory. They were scheduled for completion by November – December, 2005, and are now completed. HMG also has 450 units on a waiting list, in hopes of funding in PY2006-08.

Since our initial response during Stage I, HMG received additional interest in the program which could warrant additional program funding. To accommodate this additional interest, HMG has set a goal of 450 multifamily units and 225 special needs units totaling over 675 dwelling units, over the next funding cycle. To accomplish this goal, HMG proposes incentives for energy consultants and HERS raters based on 900 units each, (HMG proposes to continue to pay ½ the fee when the initial property assessment is completed if a project drops out of the program). HMG also proposes to distribute a total of 1000 EnergySmart Paks to the market including one for each participating unit as well as training and marketing tool.

**10. Program Implementation**

Initial program launch will entail HMG working with wait-listed property owners who we have already identified as being interested in participating. HMG will update marketing materials to include supportive housing and a focus on domestic hot water for gas savings, and will distribute those materials through proven marketing channels such as conferences, meetings, workshops, and email.

HMG will conduct outreach to property owners to solicit additional interest in the program and will recruit projects. We will coordinate arrangements between participants and HERS raters to get a baseline assessment of the energy efficiency status of the participant's property.

A HERS Rater or Energy Consultant will perform an analysis based on the baseline assessment and recommend equipment and/or installation practices that will save energy and accomplish the customer's participation objectives. In cooperation with the HERS rater or Energy Consultant, HMG will present the recommendations to the owner along with the incentives available for the project.

HMG will assist the HERS Raters, Energy Consultants, and property owners as necessary as the owner proceeds with the installation of the equipment. The HERS rater will verify that the specified equipment was installed. After verification, if necessary, the energy savings will be re-calculated for reporting.

This program will systematically identify the likely central water heating tune-up candidates, market the value of hot water energy savings to them, and help them understand the range of their options, associated costs, and the available benefits. The central water heating element has been designed to impact affordable housing property owners, and their tenants, saving millions of Btus of natural gas over the three year period of the program.

HMG will target a subset of property owners who have buildings with central water heating systems. Up to $2500 of their total incentives will be used to conduct an on-site audit of their systems, to be performed by a highly qualified expert in central water heating energy efficiency. Within two weeks of the audit, the participant will receive a report that describes the most cost-effective upgrades with an *estimate* of the cost, and a rebate offer that will cover a portion of the installed cost depending upon which measures are cost effective at that site. After signing a rebate agreement, participants will be encouraged to get two or more competing bids, to select their contractor, and have the work performed. Once it is done, *DfC* program staff will inspect the installation for conformance with the terms of the rebate agreement. When the work is completed properly, the owner will receive the rebate check.

HMG will also continue engaging tenants of participating projects to conserve energy by providing each household with an EnergySmart Pak that contains CFLs

as well as water saving measures such as a low flow shower head and a faucet aerator. EnergySmart Paks are also distributed to property owners as a marketing tool.

HMG will continue to serve housing authority needs in implementing the Energy Efficiency-Based Utility Allowance schedule, providing owner-developer training on energy efficiency and promoting all energy efficiency programs to the affordable housing market.

HMG proposes to explore and where possible, incorporate Sempra's "On-Bill Financing" option for property owners. This will help avoid lost opportunities whereby owners could not otherwise participate in the program due to a lack of up-front funds.

**11. Customer Description**

There are three types of customers we are targeting for this program including housing authorities, owners of multifamily affordable housing projects and owners of supportive housing projects. At least 10% of the units in participant affordable housing (generally closer to 90%) will be occupied by tenants identified as "affordable qualified" (e.g., Section 8 voucher recipients, individuals with SSI as their primary income). Most of the tenants in *supportive* housing (e.g., young adults transitioning out of foster care, single mothers escaping abusive situations, emotionally or physically handicapped) also fit the definition of income-qualified.

**Housing Authorities**

An important lesson that HMG learned while implementing *Designed for Comfort* in PY2002-05 is that Public Housing Authorities (PHAs) are in dire need of technical assistance, yet are too short-handed and under-funded to obtain it themselves. They have a tremendous influence on the status of efficiency in affordable housing, but they need help in identifying, implementing, and promoting energy efficiency programs to their constituent property owners and developers. PHAs simply do not have the resources to climb the "learning curve" and become proficient in current energy efficiency opportunities or to utilize the various programs available. Many of these entities are confused by energy efficiency programs, yet they serve the market segment most in need of utility cost relief. For affordable housing tenants, utility costs represent the second largest portion of their housing burden. Further, some housing authorities in SCG's service territory have adopted the Energy Efficiency-Based Utility Allowance schedule but need further assistance in promoting and implementing the policy to further encourage energy efficiency.

**Affordable Housing Owner**

Affordable housing developers use low-income housing tax credits or bond financing to build or acquire and rehabilitate affordable housing. They are required by state and federal law to be, establishing, or partner with a non-profit entity who will be responsible for the ongoing ownership and maintenance of the property. As

non-profits, these entities generally have very little cash reserves, and their tenants often have difficulties meeting their housing burdens (rent plus utilities). Increased efficiency will lower tenants' bills and ease the burdens on both tenants and owners. We have a goal of assisting 450 units in this category.

**Small Affordable Apartment Owners**

If they use tax credits or bond financing, these entities are functionally identical to the category above. If they don't, but accept housing vouchers, then their properties are also eligible for *DfC* assistance.

**Supportive Housing Owner**

The Supportive Housing market segment has been overlooked by many residential and commercial programs because it falls somewhere in between the two categories' restrictions. Non-profit Supportive Housing provides homes to persons with special needs. In the previous funding cycles, HMG has had to turn away such projects because they are not defined as multifamily. HMG proposes to fill this gap, and minimize lost opportunities, by adding a Supportive Housing element to the *DfC* program to provide the much needed services and funds to these projects.

As non-profits, these entities generally have very little cash reserves, yet their residents/tenants often have difficulties meeting their housing burdens (rent plus utilities). Increased efficiency will ease the burdens on both residents/tenants and owners. We have a goal of assisting 225 units in this category.

**12. Customer Interface**

Through four years of implementing *DfC* in SCG's service territory, HMG has established a strong positive relationship with scores of property owners and housing authorities who are familiar with the *DfC* program requirements and procedures. However, for new prospective participants HMG will meet with the property owner to outline the process and introduce them to an energy consultant or HERS Rater. HMG will prepare a check list for owners to reference while participating in the program.

HMG will also update the *Designed for Comfort* Website and marketing materials to reflect any program changes.

**13. Energy Measures and Program Activities**

**13.1. Prescriptive Measures.**

See SoCalGas February 1, 2006 Filing Workbook.

**13.2. kWh Level Data**

See SoCalGas February 1, 2006 Filing Workbook.

**13.3. Non-energy Activities**

### 13.3.1. Activity Description

***Audits***

Non-energy activities include incentivizing energy consultants and HERS raters to (a) conduct a baseline audit, (b) run an energy calculations model, (c) run another model with recommended energy efficiency measure upgrades, (d) conduct a HERS inspection to verify that the equipment measures used to qualify for the program are installed, and (e) potentially run another model based on the measures verified, if they differ at all.

***PHA Assistance***

Additional non-energy related activities include assisting housing authorities with area workshops on energy efficiency for the projects that they own or fund, assisting them to adopt, promote, and implement an Energy Efficiency-Based Utility Allowance schedule, and providing a tailored energy efficiency action plan to encourage them to consider energy efficiency as a resource.

***Training***

The only training definitely included in *DfC* will be specific to individual participant projects and will be provided on an ad hoc basis.

However, upon request by SCG, HMG is willing and qualified to present design training sessions regarding a multitude of topics surrounding multifamily housing building energy efficiency, Codes and Standards, and building energy simulation and analysis. While such trainings do not have direct energy savings associated with them, we feel that they help in the effectiveness of the program by overlapping with program implementation tasks such as marketing, project recruitment and design assistance. We also feel that they will be particularly valuable in showing potential program participants how to achieve additional energy savings above and beyond the standard designs.

***Program Staff HERS Rater and CEPE Training, Exams & Certification***

HMG maintains staff certifications as HERS Raters and Certified Energy Plans Examiners in order to insure quality of verification and project eligibility review services to clients. While HMG is not a production HERS company and does not do T-24 compliance HERS verification (in fact, we make a point of supporting rather than competing with raters or energy consultants), we do have raters certified with both CHEERS and CalCERTS in order to maintain access to both registries for project upload purposes. Because the raters we work with are certified through both HERS Providers they can input project verifications to either website. We collaborate with the HERS providers to give support to HERS raters as they use the registry to verify multifamily housing buildings. In addition to enabling user specific staff website Registry access, HERS certification

is valuable towards understanding the HERS verification requirements, registry use fees and sampling procedures when we are coordinating the developer's verification. Because there is no ENERGY STAR program for high rise residential (HRR) buildings, there are no official HERS raters for the high-rise projects. HMG staff, who are HERS raters , and who have been specially trained by an in-house mentor for verification of HRR buildings, will conduct all high-rise verification inspections. We continue to collaborate with CalCERTS to customize and adapt their Registry to increasingly accommodate multifamily high rise projects. We are also part of a national working group assisting U.S. EPA with development of HRR ENERGY STAR criteria.

HMG will acquire additional HERS Training and Certification staff and an additional CEPE Certification staff to support currently trained staff with project eligibility review and verification. We are including time and material budget allowance to cover part of the cost for this certification since it is fundamental to the delivery of program services.

**13.3.2. Quantitative Activity Goals**
N/A

**13.3.3. Assigned attributes of the activity (market sector, end use)**
N/A

**14. Subcontractor Activities**
HMG may use the following subcontractors:

***Pat Davis Design Group***

Existing generic marketing materials can be used to immediately initiate program marketing. *Pat Davis Design Group* (PDDG) will help to update and reprint program collateral materials including brochures, Web site, exhibit display, and EnergySmart Pak inserts and covers. The design firm may also design collateral materials including, but not limited to:

- A template advertisement to be placed in conference programs and other venues to advertise the program.
- An "advertorial" that showcases case studies
- A template for participating project case studies
- Other collateral material as needed

PDDG provided graphic design work for the launch of the statewide non-residential program, Savings By Design, as well as every iteration of *Designed for Comfort*. Pat Davis has worked with several IOUs and munis on brochures and other graphics for several of their programs.

***EnergySmart Pak vendor: Resource Action Program***

HMG proposes to continue delivering the EnergySmart Paks to program participants, tenants and key market actors. HMG proposes to use *Resource Action Program* as the vendor to compile and ship these EnergySmart Paks.

***Mark Franklin, owner of Saves You Energy (formerly Watersavers)***

Saves You Energy will perform many of the central water heating audits and installation inspections. Mr. Franklin is often consulted by the California Energy Commission on the potential for central water heating energy and water savings. *Watersavers* has installed scores of central water heating control systems throughout California and the West.

None of the subcontractors (nor HMG) will be performing any direct installations or selling equipment to program participants. Plumbing contractors offering those services to the program will be chosen by participants and will have no contractual relationship with *DfC* or HMG. At owners' request, *DfC* staff will help them review proposals for completeness and appropriate details.

**15. Quality Assurance and Evaluation Activities**

Quality control by way of the C-HERS verification process in an integral part of the *DfC* implementation structure. An independent HERS rater (or *DfC* staff in the case of HRR, or Mark Franklin in the case of extensive central DHW measures) will inspect the installation to ensure that the equipment matches the specifications. In addition to requiring a HERS inspection for each participating project, as an additional quality control measure, HMG will inspect approximately 10% of participating projects using in-house HERS-certified raters after the independent HERS rater has done so. If a deficient verification is discovered, HMG staff will work directly with the HERS rater to remedy the situation. In rare cases, if a rater refuses to cooperate or demonstrates a lack of sufficient knowledge to perform the HERS Rating process, a complaint may be filed with the certifying HERS Provider.

**16. Marketing Activities**

HMG's marketing strategy builds upon the momentum of the PY2002-05 *Designed for Comfort* program and benefits from having already established tracking systems, a pipeline of potential projects, strong client relations, trained staff, and a successful track record in the eyes of the affordable housing development community. Below is a variety of strategies that we will employ to reach our target audience. Attending affordable housing conferences is paramount to the success of the recruitment efforts. At these events, a face is associated with the program and property owners get to know the *DfC* staff on a first name basis. Initial program launch will entail HMG working with waitlisted property owners who are already identified and interested in participating. HMG will update marketing materials to include supportive housing and distribute those materials through proven marketing channels such as conferences, meetings, workshops, and email.

HMG will conduct outreach to property owners to solicit interest in the program and recruit projects to conduct a baseline assessment and provide recommendations to property owners.

We will present and exhibit at conferences including, but not limited to:

- Southern California Association of Non-profit Housing (SCANPH)
- Affordable Housing Management Association
- Kennedy Commission Conference
- Enterprise Foundation
- California Redevelopment Association Conference
- California Housing Consortium
- Housing California
- California Council of Affordable Housing
- SCG Housing Authorities

Outreach to target market existing lists

- Waitlist
- Existing database of all SCG area housing authorities, property owners and developers.

Distribute EnergySmart Paks

- At conferences and to tenants in completed participating projects

Articles in Industry Publications

- Place articles in 2 publications

**17. CPUC Objectives**

*DfC* meets the following CPUC objectives:

- CPUC Objective #2: Purse all cost-effective energy efficiency opportunities over both the short- and long-term.
- CPUC Objective #4: Avoid Lost Opportunities and avoid “cream skimming”

| | SCG3537 3P Designed_for_Comfort | |
|---|---|---|
| **BUDGET** | | |
| | | |
| **Administrative Costs** | **$** | **302,793** |
| Overhead and G&A | $ | 265,813 |
| Other Administrative Costs | $ | 36,980 |
| **Marketing/Outreach** | **$** | **193,500** |
| **Direct Implementation** | **$** | **626,840** |
| Total Incentives and Rebates | | |
| User Input Incentive | $ | - |
| Direct Install Rebate | $ | 544,500 |
| Direct Install Labor | $ | - |
| Direct Install Materials | $ | - |
| Activity | $ | 82,340 |
| Installation | $ | - |
| Hardware & Materials | $ | - |
| Rebate Processing & Inspection | $ | - |
| **EM&V Costs** | **$** | - |
| **Budget** | **$** | **1,123,133** |
| **Costs recovered from other sources** | **$** | - |
| **Budget** (plus other costs) | **$** | **1,123,133** |
| | | |
| **PROGRAM IMPACTS** | | |
| **Program Reductions for Measures installed through 2008** | | |
| User Entered kW (kW) | | 1049 |
| Net Jul-Sept Peak (kW) | | 1033 |
| Net Dec-Feb Peak (kW) | | 94 |
| Net NCP (kW) | | 795 |
| Net CEC (kW) | | 87 |
| Annual Net kWh | | 399167 |
| Lifecycle Net kWh | | 7367352 |
| Annual Net Therms | | 33935 |
| Lifecycle Net Therms | | 583726 |
| | | |
| **Cost Effectiveness** | | |
| **TRC** | | |
| Costs | | 1002811.35 |
| Electric Benefits | | 837596.0927 |
| Gas Benefits | | 218294.5776 |
| Net Benefits (NPV) | | 53079.32029 |
| BC Ratio | | 1.052930514 |
| | | |
| **PAC** | | |
| Costs | | 1054300.052 |
| Electric Benefits | | 837596.0927 |
| Gas Benefits | | 218294.5776 |
| Net Benefits (NPV) | | 1590.618164 |
| BC Ratio | | 1.001508696 |
| | | |
| **Levelized Cost** | | |
| **Levelized Cost TRC ($/kWh )** | | |
| Discounted kWh | | 3629325.224 |
| Cost | | 0.196056615 |
| Benefits | | 0.230785626 |
| Benefit-Cost | | 0.03472901 |
| **Levelized Cost PAC ($/kWh)** | | |
| Discounted kWh | | 3629325.224 |
| Cost | | 0.212876451 |
| Benefits | | 0.230785626 |
| Benefit-Cost | | 0.017909174 |
| **Levelized Cost TRC ($/therm)** | | |
| Discounted Therms | | 295496.8772 |
| Cost | | 0.719586207 |
| Benefits | | 0.738737342 |
| Benefit-Cost | | 0.019151135 |
| **Levelized Cost PAC ($/therm)** | | |
| Discounted Therms | | 295496.8772 |
| Cost | | 0.713854548 |
| Benefits | | 0.738737342 |
| Benefit-Cost | | 0.024882794 |

## 3P Designed for Comfort

| Year | Total Budget | Total Incentives | Admin Budget | Net kWh | Net Therms | Net kW |
|---|---|---|---|---|---|---|
| 2006 | $ 306,806 | $ 121,000 | $ 185,806 | 93,628 | 8,195 | 229 |
| 2007 | $ 377,537 | $ 181,500 | $ 196,037 | 130,718 | 11,773 | 338 |
| 2008 | $ 438,790 | $ 242,000 | $ 196,790 | 174,821 | 13,967 | 481 |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 346001 | Multifamily Rehab (20% Improvement) Large CZ 6 (Cool) | 288 | 70 | 0.60 | 0.8 | Homes | 20 | 5 | $ 700.00 | $ 825.00 | 1,152 | 281 | 2 |
| 2006 | 346002 | Multifamily Rehab (20% Improvement) Large CZ 8,9 (Moderate) | 960 | 44 | 3.25 | 0.8 | Homes | 20 | 38 | $ 700.00 | $ 825.00 | 29,169 | 1,348 | 99 |
| 2006 | 346003 | Multifamily Rehab (20% Improvement) Large CZ 10 (Hot) | 401 | 88 | 0.80 | 0.8 | Homes | 20 | 10 | $ 700.00 | $ 825.00 | 3,206 | 703 | 6 |
| 2006 | 346004 | Multifamily Rehab (20% Improvement) Large CZ 14, 15 | 658 | 53 | 0.94 | 0.8 | Homes | 20 | 10 | $ 700.00 | $ 825.00 | 5,260 | 423 | 8 |
| 2006 | 346005 | Multifamily Rehab (20% Improvement) Small CZ 6 (Cool) | 288 | 70 | 0.60 | 0.8 | Homes | 20 | | $ 1,500.00 | $ 825.00 | - | - | - |
| 2006 | 346006 | Multifamily Rehab (20% Improvement) Small CZ 8,9 (Moderate) | 960 | 44 | 3.25 | 0.8 | Homes | 20 | 4 | $ 1,500.00 | $ 825.00 | 3,070 | 142 | 10 |
| 2006 | 346007 | Multifamily Rehab (20% Improvement) Small CZ 10 (Hot) | 401 | 88 | 0.80 | 0.8 | Homes | 20 | 3 | $ 1,500.00 | $ 825.00 | 962 | 211 | 2 |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 346008 | Multifamily Rehab (20% Improvement) Small CZ 14, 15(Extremely Hot) | 658 | 53 | 0.94 | 0.8 | Homes | 20 | 3 | $ 1,500.00 | $ 825.00 | 1,578 | 127 | 2 |
| 2006 | 346009 | Multifamily Rehab Central Water Heating CZ 6 (Cool) | 288 | 70 | 0.60 | 0.8 | Homes | 20 | 3 | $ 700.00 | $ 825.00 | 691 | 169 | 1 |
| 2006 | 346010 | Multifamily Rehab Water Heating CZ 8,9 (Moderate) | 960 | 44 | 3.25 | 0.8 | Homes | 20 | 14 | $ 700.00 | $ 825.00 | 10,746 | 497 | 36 |
| 2006 | 346011 | Multifamily Rehab Water Heating Large CZ 10 (Hot) | 401 | 88 | 0.80 | 0.8 | Homes | 20 | 5 | $ 700.00 | $ 825.00 | 1,603 | 352 | 3 |
| 2006 | 346012 | Multifamily Rehab Water Heating CZ 14, 15 | 658 | 53 | 0.94 | 0.8 | Homes | 20 | 5 | $ 700.00 | $ 825.00 | 2,630 | 212 | 4 |
| 2006 | 346013 | Supportive Housing Rehab (20% Improvement) Large CZ 6 (Cool) | 144 | 35 | 0.30 | 0.8 | Homes | 20 | 5 | $ 500.00 | $ 412.50 | 576 | 141 | 1 |
| 2006 | 346014 | Supportive Housing Rehab (20% Improvement) CZ 8,9 (Moderate) | 479.75 | 22.175 | 1.625 | 0.8 | Homes | 20 | 35 | $ 500.00 | $ 412.50 | 13,433 | 621 | 46 |
| 2006 | 346015 | Supportive Housing Rehab (20% Improvement) CZ 10 (Hot) | 200.4 | 43.95 | 0.4 | 0.8 | Homes | 20 | 5 | $ 500.00 | $ 412.50 | 802 | 176 | 2 |
| 2006 | 346016 | Supportive Housing (20% Improvement) CZ 14, 16 (Extremely Hot) | 328.75 | 26.45 | 0.47 | 0.8 | Homes | 20 | 5 | $ 500.00 | $ 412.50 | 1,315 | 106 | 2 |
| 2006 | 346017 | EnergySmart Paks | 72.64 | 11.2 | 0.02 | 0.8 | Homes | 9.4 | 300 | $ - | $ 30.00 | 17,434 | 2,688 | 5 |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 346018 | Energy Consultants | | | | 0.8 | Homes | | 200 | $ 40.00 | $ 75.00 | - | - | - |
| 2006 | 346019 | HERS Raters | | | | 0.8 | Homes | | 200 | $ 50.00 | $ 50.00 | - | - | - |
| 2007 | 346001 | Multifamily Rehab (20% Improvement) Large CZ 6 (Cool) | 288.1 | 70.3 | 0.6 | 0.8 | Homes | 20 | 5 | $ 700.00 | $ 825.00 | 1,152 | 281 | 2 |
| 2007 | 346002 | Multifamily Rehab (20% Improvement) Large CZ 8,9 (Moderate) | 959.5 | 44.35 | 3.25 | 0.8 | Homes | 20 | 55 | $ 700.00 | $ 825.00 | 42,218 | 1,951 | 143 |
| 2007 | 346003 | Multifamily Rehab (20% Improvement) Large CZ 10 (Hot) | 400.8 | 87.9 | 0.8 | 0.8 | Homes | 20 | 30 | $ 700.00 | $ 825.00 | 9,619 | 2,110 | 19 |
| 2007 | 346004 | Multifamily Rehab (20% Improvement) Large CZ 14, 15 | 657.5 | 52.9 | 0.94 | 0.8 | Homes | 20 | 5 | $ 700.00 | $ 825.00 | 2,630 | 212 | 4 |
| 2007 | 346005 | Multifamily Rehab (20% Improvement) Small CZ 6 (Cool) | 288.1 | 70.3 | 0.6 | 0.8 | Homes | 20 | 3 | $ 1,500.00 | $ 825.00 | 691 | 169 | 1 |
| 2007 | 346006 | Multifamily Rehab (20% Improvement) Small CZ 8,9 (Moderate) | 959.5 | 44.35 | 3.25 | 0.8 | Homes | 20 | 4 | $ 1,500.00 | $ 825.00 | 3,070 | 142 | 10 |
| 2007 | 346007 | Multifamily Rehab (20% Improvement) Small CZ 10 (Hot) | 400.8 | 87.9 | 0.8 | 0.8 | Homes | 20 | 4 | $ 1,500.00 | $ 825.00 | 1,283 | 281 | 3 |
| 2007 | 346008 | Multifamily Rehab (20% Improvement) Small CZ 14, 15(Extremely Hot) | 657.5 | 52.9 | 0.94 | 0.8 | Homes | 20 | 4 | $ 1,500.00 | $ 825.00 | 2,104 | 169 | 3 |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2007 | 346009 | Multifamily Rehab Central Water Heating CZ 6 (Cool) | 288.1 | 70.3 | 0.6 | 0.8 | Homes | 20 | 5 | $ 700.00 | $ 825.00 | 1,152 | 281 | 2 |
| 2007 | 346010 | Multifamily Rehab Water Heating CZ 8,9 (Moderate) | 959.5 | 44.35 | 3.25 | 0.8 | Homes | 20 | 25 | $ 700.00 | $ 825.00 | 19,190 | 887 | 65 |
| 2007 | 346011 | Multifamily Rehab Water Heating Large CZ 10 (Hot) | 400.8 | 87.9 | 0.8 | 0.8 | Homes | 20 | 5 | $ 700.00 | $ 825.00 | 1,603 | 352 | 3 |
| 2007 | 346012 | Multifamily Rehab Water Heating CZ 14, 15 | 658 | $ 52.90 | $ 0.94 | 0.8 | Homes | 20 | 5 | $ 700.00 | $ 825.00 | 2,630 | 212 | 4 |
| 2007 | 346013 | Supportive Housing Rehab (20% Improvement) Large CZ 6 (Cool) | 144 | $ 35.15 | $ 0.30 | 0.8 | Homes | 20 | 15 | $ 500.00 | $ 412.50 | 1,729 | 422 | 4 |
| 2007 | 346014 | Supportive Housing Rehab (20% Improvement) CZ 8,9 (Moderate) | 480 | $ 22.18 | $ 1.63 | 0.8 | Homes | 20 | 50 | $ 500.00 | $ 412.50 | 19,190 | 887 | 65 |
| 2007 | 346015 | Supportive Housing Rehab (20% Improvement) CZ 10 (Hot) | 200 | $ 43.95 | $ 0.40 | 0.8 | Homes | 20 | 5 | $ 500.00 | $ 412.50 | 802 | 176 | 2 |
| 2007 | 346016 | Supportive Housing (20% Improvement) CZ 14, 16 (Extremely Hot) | 329 | $ 26.45 | $ 0.47 | 0.8 | Homes | 20 | 5 | $ 500.00 | $ 412.50 | 1,315 | 106 | 2 |
| 2007 | 346017 | EnergySmart Paks | 73 | $ 11.20 | $ 0.02 | 0.8 | Homes | 9.4 | 350 | $ - | $ 30.00 | 20,339 | 3,136 | 6 |
| 2007 | 346018 | Energy Consultants | | | | 0.8 | Homes | | 300 | $ 40.00 | $ 75.00 | - | - | - |
| 2007 | 346019 | HERS Raters | | | | 0.8 | Homes | | 300 | $ 50.00 | $ 50.00 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2008 | 346001 | Multifamily Rehab (20% Improvement) Large CZ 6 (Cool) | 288 | $ 70.30 | $ 0.60 | 0.8 | Homes | 20 | 15 | $ 700.00 | $ 825.00 | 3,457 | 844 | 7 |
| 2008 | 346002 | Multifamily Rehab (20% Improvement) Large CZ 8,9 (Moderate) | 960 | $ 44.35 | $ 3.25 | 0.8 | Homes | 20 | 80 | $ 700.00 | $ 825.00 | 61,408 | 2,838 | 208 |
| 2008 | 346003 | Multifamily Rehab (20% Improvement) Large CZ 10 (Hot) | 401 | $ 87.90 | $ 0.80 | 0.8 | Homes | 20 | 20 | $ 700.00 | $ 825.00 | 6,413 | 1,406 | 13 |
| 2008 | 346004 | Multifamily Rehab (20% Improvement) Large CZ 14, 15 | 658 | $ 52.90 | $ 0.94 | 0.8 | Homes | 20 | 10 | $ 700.00 | $ 825.00 | 5,260 | 423 | 8 |
| 2008 | 346005 | Multifamily Rehab (20% Improvement) Small CZ 6 (Cool) | 288 | $ 70.30 | $ 0.60 | 0.8 | Homes | 20 | 5 | $ 1,500.00 | $ 825.00 | 1,152 | 281 | 2 |
| 2008 | 346006 | Multifamily Rehab (20% Improvement) Small CZ 8,9 (Moderate) | 960 | $ 44.35 | $ 3.25 | 0.8 | Homes | 20 | 5 | $ 1,500.00 | $ 825.00 | 3,838 | 177 | 13 |
| 2008 | 346007 | Multifamily Rehab (20% Improvement) Small CZ 10 (Hot) | 401 | $ 87.90 | $ 0.80 | 0.8 | Homes | 20 | 5 | $ 1,500.00 | $ 825.00 | 1,603 | 352 | 3 |
| 2008 | 346008 | Multifamily Rehab (20% Improvement) Small CZ 14, 15(Extremely Hot) | 658 | $ 52.90 | $ 0.94 | 0.8 | Homes | 20 | 5 | $ 1,500.00 | $ 825.00 | 2,630 | 212 | 4 |
| 2008 | 346009 | Multifamily Rehab Central Water Heating CZ 6 (Cool) | 288 | $ 70.30 | $ 0.60 | 0.8 | Homes | 20 | 5 | $ 700.00 | $ 825.00 | 1,152 | 281 | 2 |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2008 | 346010 | Multifamily Rehab Water Heating CZ 8,9 (Moderate) | 960 | $ 44.35 | $ 3.25 | 0.8 | Homes | 20 | 40 | $ 700.00 | $ 825.00 | 30,704 | 1,419 | 104 |
| 2008 | 346011 | Multifamily Rehab Water Heating Large CZ 10 (Hot) | 401 | $ 87.90 | $ 0.80 | 0.8 | Homes | 20 | 5 | $ 700.00 | $ 825.00 | 1,603 | 352 | 3 |
| 2008 | 346012 | Multifamily Rehab Water Heating CZ 14, 15 | 658 | $ 52.90 | $ 0.94 | 0.8 | Homes | 20 | 5 | $ 700.00 | $ 825.00 | 2,630 | 212 | 4 |
| 2008 | 346013 | Supportive Housing Rehab (20% Improvement) Large CZ 6 (Cool) | 144 | $ 35.15 | $ 0.30 | 0.8 | Homes | 20 | 15 | $ 500.00 | $ 412.50 | 1,729 | 422 | 4 |
| 2008 | 346014 | Supportive Housing Rehab (20% Improvement) CZ 8,9 (Moderate) | 480 | $ 22.18 | $ 1.63 | 0.8 | Homes | 20 | 75 | $ 500.00 | $ 412.50 | 28,785 | 1,331 | 98 |
| 2008 | 346015 | Supportive Housing Rehab (20% Improvement) CZ 10 (Hot) | 200 | $ 43.95 | $ 0.40 | 0.8 | Homes | 20 | 5 | $ 500.00 | $ 412.50 | 802 | 176 | 2 |
| 2008 | 346016 | Supportive Housing (20% Improvement) CZ 14, 16 (Extremely Hot) | 329 | $ 26.45 | $ 0.47 | 0.8 | Homes | 20 | 5 | $ 500.00 | $ 412.50 | 1,315 | 106 | 2 |
| 2008 | 346017 | EnergySmart Paks | 73 | $ 11.20 | $ 0.02 | 0.8 | Homes | 9.4 | 350 | $ - | $ 30.00 | 20,339 | 3,136 | 6 |
| 2008 | 346018 | Energy Consultants | | | | 0.8 | Homes | | 400 | $ 40.00 | $ 75.00 | - | - | - |
| 2008 | 346019 | HERS Raters | | | | 0.8 | Homes | | 400 | $ 50.00 | $ 50.00 | - | - | - |

# 2006-2008 Energy Efficiency Programs
# Cypress Gas Cooling Concept Paper

## 1. Projected Program Budget

| | | 2006 | 2007 | 2008 |
|---|---|---|---|---|
| Administration | | | | |
| | Administrative Overheads | $ 15,438 | $ 12,725 | $ 12,906 |
| | Administrative Other | $ 30,875 | $ 25,450 | $ 25,813 |
| Marketing & Outreach | | $ 95,000 | $ 75,000 | $ 50,000 |
| Direct Implementation | | | | |
| | Activity | $ 50,000 | $ 25,000 | $ 15,000 |
| | Installation | $ - | $ - | $ - |
| | Hardware & Materials | $ - | $ - | $ - |
| | Procurement | $ 38,750 | $ 4,500 | $ 5,625 |
| | Incentives | $ 125,000 | $ 150,000 | $ 187,500 |
| EM&V | | $ - | $ - | $ - |
| *Total* | | *$ 355,063* | *$ 292,675* | *$ 296,844* |

## 2. Projected Program Impacts

| 2006 | | | 2007 | | | 2008 | | |
|---|---|---|---|---|---|---|---|---|
| **Net kWh** | **Net kW** | **Net Therms** | **Net kWh** | **Net kW** | **Net Therms** | **Net kWh** | **Net kW** | **Net Therms** |
| - | - | 205,800 | - | - | 246,960 | - | - | 308,700 |

## 3. Program Cost Effectiveness

Attached

## 4. Program Descriptors

Market Sector: Single family residential and small commercial.

Program Classification: Local but can be applied statewide

Program Status: Modified, SCG has offered upstream rebates for high efficiency gas a/c in the past. This program would work with upstream and midstream market channels but the incentive would be targeted to the end use customer. The program would be a new format although SCG has promoted gas air conditioning in the past.

We are not limiting participation to certain climate zones even though it is recognized that savings are affected by climate. Cypress feels that by including all of SCG service territories that manufacturers will recognize the value in making high efficiency equipment available in sufficient quantities and at reduced costs that will help transform the Southern California market to the more efficient product. Market percentage will be directly related to the ability to significantly reduce the incremental customer costs by leveraged incentives and financing options. Increased consumer awareness regarding energy costs and a strong marketing strategy and implementation plan will lead to the penetration targets listed in the documentation provided.

# 2006-2008 Energy Efficiency Programs
# Cypress Gas Cooling Concept Paper

**5. Program Statement**

Gas cooling units are installed in homes and small businesses throughout the SCG service territory. These units are old and may fail soon, so customers are entering the market to replace the units.

The market share for gas cooling has been on the decline over the years due to a variety of factors including rising gas rates, lower costs for the electric alternative product, high equipment prices for the gas units, limited product choice (few manufacturers) poor market strategy by the upstream players, and lack of quality assurance for the product and lack of qualified installers.

Cypress believes it is in the best interest of the natural gas industry to continue to serve its customer base that has opted for gas cooling product in the past by continuing to serve this market through the promotion of newer more efficient equipment and by working to improve the quality of installations and service by working with the manufacturers, distributors, and contractors that provide the product to the end use customer. Cypress believes this program can improve both the economics and quality control aspects of gas cooling while providing energy savings for the SCG and its customers.

This program will work to ensure the replacement of these old, existing units transition to new, high efficiency gas AC equipment instead of alternative technologies.

**6. Program Rationale**

Normally upstream rebates in the single family residential market have a greater impact on reducing customer incremental cost of high efficiency equipment than customer rebates. However in the case of gas cooling we think that the program is better served by incenting the end use consumer. At the same time we also recognize the importance of engaging the market delivery channel in the promotion of the energy efficient equipment. The potential of this program is limited to customers already having gas cooling systems and unlike water heating and space heating programs this is a niche opportunity as opposed to a mass market effort. Everything from marketing to incentives is more targeted.

**7. Program Outcomes**

1)Set goals, parameters, strategies with SCG, 2) Recruit manufacturer partners, 3) Identify participating distributors, 4) Recruit and train select contractors 5) Identify customers and launch consumer marketing efforts, 6) Open CSC lines for reservation and program implementation 7) Program progress review with SCG on set intervals. 8) Go forward or modify program based on results.

**8. Program Strategy**

Applicable strategies from the attached list include the following:

Residential Downstream Deemed Rebates
Nonresidential Downstream Deemed Rebates
Residential Upstream Training
Residential Downstream Training
Nonresidential Upstream Training
Nonresidential Downstream Training

### 8.1.1. Program Strategy Description

**Program Activities**

- Cypress will work with upstream manufacturers and distributors serving both residential and small non-residential end-use customers (the distribution channel is identical for both market segments). These partners will be educated of the availability of rebates and incentives in order to coordinate their own material and marketing messages to customers in the targeted service territories. Cypress will work to ensure the effort is accurate and reflects all the information required by the utility.
- Cypress will then work with the installation contractors (downstream partners) to ensure they understand the availability and requirements of the rebates. This will be accomplished through a comprehensive educational program, with targeted efforts to reach the contractors active in both the gas cooling technologies and geographic areas desired by the utility. Ongoing training performance will be tracked throughout the process. The contracting community is generally identical for both the residential and small commercial markets.
- Cypress will then work directly with end-use customers to administer and provide rebates for successful installation of qualified gas cooling technologies. This step will include verification of the technology type, customer verification, and multiple contacts throughout the installation cycle. Payment will be made only after verified installation of technology, sent in a timely manner to the recipient in the form of a check. Again, the residential and non-residential customers will generally be handled in an identical fashion.

### 8.1.2. Program Indicators

Internal indicators will include one or more of the following:

Number of contractors contacted
Number of contractors trained
Brochures / materials requested by contractors

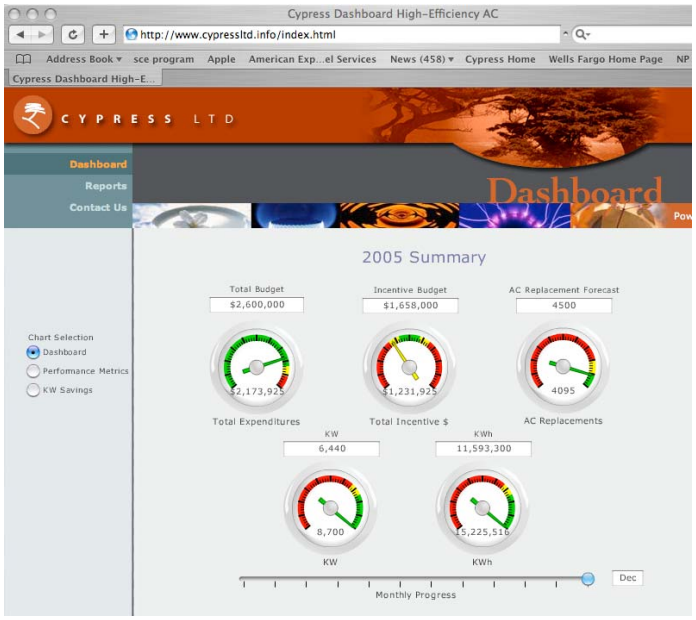
Event milestones for marketing communications, possibly newspaper or direct mail
Customer enrollment
Rebates paid

## 9. Program Objectives

Cypress will measure its success based on specific, consumer-based milestones as the program progresses. This will include a "before/after" measurement of market penetration of high efficiency equipment, as well as the total number of high efficiency installations in the service territory.

Additional milestones will be translated to Therm savings through the use of standard calculations and M&V procedures.

Information will be tracked in real-time and available for SCG review. Cypress works to develop data visualization tools that are useful for our clients, translating our current progress to the overall goals set forth by the utility (and the CPUC, in this case).
Example:




## 10. Program Implementation

Previous responses discussed the stages of setting program expectations and terms with SCG and then developing the partnerships with the various members of the delivery channel and designing the marketing material. The implementation piece continues with the Program Manager managing the program by maintaining SCG and channel relationships and contacts.

Key early stage objectives will likely include:

- Development and implementation of an incentive payment system for consumers to apply for, reserve, and receive cash rebates.
- Co-marketing plan and implementation schedule for awareness campaigns with the upstream partners (manufacturers).
- Highly targeted market awareness campaign directed to customers who likely already have old gas AC units in their homes or small businesses.
- Training & certification process development and implementation schedule with mid-stream partners.
- Initiate enrollment and "kick off" of the program.

The Cypress Customer Service Center (CSC) then gets engaged in the day to day process of taking incentive reservations. We offer online enrollment but will also take applications by fax and phone. Cypress project management will continue to develop and maintain the relationships with channel partners.

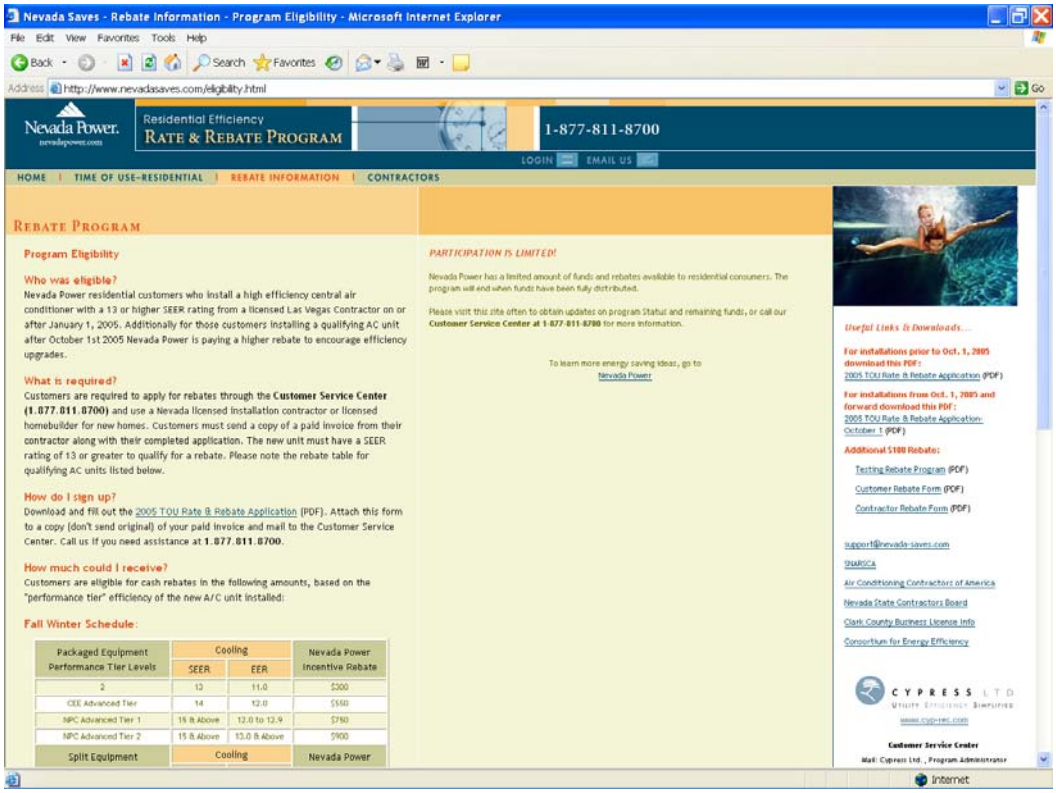
The CSC representatives are trained in the details of the program as well as being trained in general energy efficiency and utility operations. All programs have their own tracking systems and the data is available to SCG in real time increments. All reports are updated automatically as new subscriptions are taken. In other HVAC programs we administer for utilities, the distributors, contractors or customers have direct contact with our CSRs. The CSC also dispatches field verifications to our inspectors when notified of equipment installations.

**11. Customer Description**

Single family residential and small commercial customers that have existing gas air conditioning units of 25 tons or less.

**12. Customer Interface**

The customer is the homeowner or commercial customer who in this program will purchase a new high efficiency air conditioning system at a reduced price. The customer will be made aware of the program though the consumer marketing effort and will work with the Cypress CSC to reserve funds and obtain information on equipment choices and qualified contractors.
Customers will interact with the CSC via phone, fax, brochures (generally left behind by installation contractors) and website. An example of a Cypress consumer-based website interface is shown below:




## 13. Energy Measures and Program Activities

### 13.1. Prescriptive Measures:

See SoCalGas February 1, 2006 Workbook

**kWh Level Data:**

See SoCalGas February 1, 2006 Workbook

**13.2. Non-energy Activities** : Contractor training and certification and work with manufacturer and distributor partners.

**13.2.1. Activity Description:** Promote, track, and report installations and rebates and train installation contractors.

**13.3.2Quantitative Activity Goals:** Establish timeline for development of marketing strategy and materials, development of criteria for contractor certification, and primarily track unit installations.

**13.3.3Assigned attributes of the activity (market sector, end use):** Addresses existing residential and small commercial customers with existing gas air conditioning systems.

## 14. Subcontractor Activities

Cypress will engage Conservation Technology as a sub-contractor for engineering assistance, product evaluation, and monitoring services. Ying Yu of Conservation

Technology has extensive background and expertise in gas air conditioning and will be an integral part of the Cypress team.

**15. Quality Assurance and Evaluation Activities**

Work with manufacturers, contractors, IHACI and CHEERS to promote quality installation improvements among HVAC contractors in general and specifically regarding gas cooling installations. Encourage NATE certifications and CHEERS duct testing services. Cypress has also responded to utility RFP's for quality assurance programs that will provide additional value to this program. Again this program in particular will have training and a quality assurance element specific to gas cooling.

From an internal and project management perspective, Cypress utilizes quantitative and milestone-based measurement systems to identify the overall quality of the program and customer experience. We measure our own processes for consistency, speed, and delivery.

Cypress has also responded to utility RFPs for quality assurance programs that will provide additional value to this program.

**16. Marketing Activities**

A highly targeted consumer awareness marketing campaign will be executed to educate applicable consumers of the availability of the program, and of the existence of high efficiency gas AC equipment. Additional direct mail, outbound telemarketing, or other targeted marketing efforts will also be integrated and executed, as needed, to drive consumer participation. The general participation goals of the program are modest enough that Cypress believes the marketing execution will remain focused and effective.

**17. CPUC Objective**

1. We assume the program will be implemented by the utility as a "first loading order", according to the CPUC objective #1.
2. It is a "cost effective" energy efficiency opportunity, as identified in the attached TRC rating in the E3 calculator.
3. Again, the program is a savings-based initiative, meeting the CPUC's third objective to "serve as alternatives to more costly supply-side resource options."
4. From a "lost opportunities" perspective, customers participating in this program generally are purchasing a new air conditioning due to an equipment failure or system that is no longer performing effectively and efficiently. This is not a decision they have the ability to defer, nor is this a discretionary decision made strictly from an energy savings perspective (e.g. unlike replacing T12 fixtures with T8 fixtures).
5. The customer, therefore, will make his or her decision whether the utility provides incentives or makes market-based efforts to influence this decision. Furthermore, the decision results in an efficiency rating for the given unit for

between 12-20 years in most cases, which is the useful life of gas cooling equipment.

6. This program captures opportunities that are lost for the 12-20 years that result when consumers purchase lower efficiency cooling equipment. In other words, if the market efforts are not taken by Cypress and SCG, the result is an inefficient home that will continue to be inefficient until the air conditioner fails, usually 12-20 years down the line.
7. This program does not specifically address capacity utilization or peak loads, as it is strictly a gas initiative.
8. This program will be balanced across the geography of the service territory, and make specific efforts to reach markets that typically are underserved (the multifamily market). Furthermore, this program defines an upstream market transformation program, properly addressing specific objective details in #6 of the PUC objectives.
9. This program can be integrated into any utility effort related to the California Climate Action Registry, as greenhouse gas reduction is specifically outlined as a part of the E3 model.
10. The program includes the integration of very high efficiency (1.05 COP) units that could be classified as "emerging" in some senses. Cypress will also work to identify any other new gas cooling technologies (including some coming onto the market from China), linking supply chain steps where required to meet the needs of the marketplace. Cypress has the ability to drive for these technologies to ensure we help in meeting Objective #8.
11. Cypress will adjust the program "on the fly" based on public or advisory input.
12. All funds will be spent in the SCG service territory.

| | SCG3538 3P Gas_Cooling_Upgrade | |
|---|---|---|
| **BUDGET** | | |
| | | |
| **Administrative Costs** | **$** | **123,206** |
| Overhead and G&A | $ | 41,069 |
| Other Administrative Costs | $ | 82,138 |
| **Marketing/Outreach** | **$** | **220,000** |
| **Direct Implementation** | **$** | **601,375** |
| Total Incentives and Rebates | | |
| User Input Incentive | $ | - |
| Direct Install Rebate | $ | 462,500 |
| Direct Install Labor | $ | - |
| Direct Install Materials | $ | - |
| Activity | $ | 90,000 |
| Installation | $ | - |
| Hardware & Materials | $ | - |
| Rebate Processing & Inspection | $ | 48,875 |
| **EM&V Costs** | **$** | - |
| **Budget** | **$** | **944,581** |
| **Costs recovered from other sources** | **$** | - |
| **Budget** (plus other costs) | **$** | **944,581** |
| | | |
| **PROGRAM IMPACTS** | | |
| **Program Reductions for Measures installed through 2008** | | |
| User Entered kW (kW) | | 0 |
| Net Jul-Sept Peak (kW) | | 0 |
| Net Dec-Feb Peak (kW) | | 0 |
| Net NCP (kW) | | 0 |
| Net CEC (kW) | | 0 |
| Annual Net kWh | | 0 |
| Lifecycle Net kWh | | 0 |
| Annual Net Therms | | 761460 |
| Lifecycle Net Therms | | 11421900 |
| | | |
| **Cost Effectiveness** | | |
| **TRC** | | |
| Costs | | 1132794.252 |
| Electric Benefits | | 0 |
| Gas Benefits | | 4928955.96 |
| Net Benefits (NPV) | | 3796161.708 |
| BC Ratio | | 4.351148456 |
| | | |
| **PAC** | | |
| Costs | | 888776.8761 |
| Electric Benefits | | 0 |
| Gas Benefits | | 4928955.96 |
| Net Benefits (NPV) | | 4040179.083 |
| BC Ratio | | 5.545774302 |
| | | |
| **Levelized Cost** | | |
| **Levelized Cost TRC ($/kWh )** | | |
| Discounted kWh | | 0 |
| Cost | | 0 |
| Benefits | | 0 |
| Benefit-Cost | | 0 |
| **Levelized Cost PAC ($/kWh)** | | |
| Discounted kWh | | 0 |
| Cost | | 0 |
| Benefits | | 0 |
| Benefit-Cost | | 0 |
| **Levelized Cost TRC ($/therm)** | | |
| Discounted Therms | | 6357138.717 |
| Cost | | 0.17819247 |
| Benefits | | 0.775341892 |
| Benefit-Cost | | 0.597149422 |
| **Levelized Cost PAC ($/therm)** | | |
| Discounted Therms | | 6357138.717 |
| Cost | | 0.13980769 |
| Benefits | | 0.775341892 |
| Benefit-Cost | | 0.635534202 |

## 3P Gas Cooling Upgrade Program

| Year | Total Budget | Total Incentives | Admin Budget | Net kWh | Net Therms | Net kW |
|---|---|---|---|---|---|---|
| 2006 | $ 355,063 | $ 125,000 | $ 230,063 | - | 205,800 | - |
| 2007 | $ 292,675 | $ 150,000 | $ 142,675 | - | 246,960 | - |
| 2008 | $ 296,844 | $ 187,500 | $ 109,344 | - | 308,700 | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 345001 | Gas Cooling Unit Upgrade | | 1,029 | | 0.8 | Units | 15 | 250 | $ 500.00 | $ 1,000.00 | - | 205,800 | - |
| 2007 | 345001 | Gas Cooling Unit Upgrade | | 1,029 | | 0.8 | Units | 15 | 300 | $ 500.00 | $ 1,000.00 | - | 246,960 | - |
| 2008 | 345001 | Gas Cooling Unit Upgrade | | 1,029 | | 0.8 | Units | 15 | 375 | $ 500.00 | $ 1,000.00 | - | 308,700 | - |

# 2006-2008 Energy Efficiency Programs
# Coin Op Laundry Concept Paper

## 1. Projected Program Budget

| | | 2006 | 2007 | 2008 |
|---|---|---|---|---|
| Administration | | | | |
| | Administrative Overheads | $ 14,330 | $ 22,688 | $ 22,688 |
| | Administrative Other | $ 279,124 | $ 441,363 | $ 441,363 |
| Marketing & Outreach | | $ 255,600 | $ 404,700 | $ 404,700 |
| Direct Implementation | | | | |
| | Activity | $ - | $ - | $ - |
| | Installation | $ - | $ - | $ - |
| | Hardware & Materials | $ - | $ - | $ - |
| | Procurement | $ - | $ - | $ - |
| | Incentives | $ 1,271,035 | $ 2,018,680 | $ 2,130,785 |
| EM&V | | $ - | $ - | $ - |
| *Total* | | *$ 1,820,089* | *$ 2,887,431* | *$ 2,999,536* |

## 2. Projected Program Impacts

| 2006 | | | 2007 | | | 2008 | | |
|---|---|---|---|---|---|---|---|---|
| **Net kWh** | **Net kW** | **Net Therms** | **Net kWh** | **Net kW** | **Net Therms** | **Net kWh** | **Net kW** | **Net Therms** |
| 1,688,000 | - | 853,257 | 2,700,800 | - | 1,288,800 | 2,869,600 | - | 1,297,600 |

## 3. Program Cost Effectiveness

Attached

## 4. Program Descriptors

The Coin-Operated Laundry Program is not submitted as a statewide program. The program is most cost effective in the case of SCE and SoCal Gas when operated so that both gas and electric savings can be achieved concurrently. That is the manner in which this program was approved in April 2005 by the PAG. However, UCONS has been encouraged by the IOUs to submit this as a stand-alone project not requiring approval by more than 1 utility. The TRC and program description are for a stand-alone gas program (which can be enhanced should both SCE and SoCal Gas approve the program).

This is a modified program based upon a similar program successfully delivered in Oregon in 2001 by Laundry Team members UCONS and RMC. The program has been developed in conjunction with SoCal Gas and Metropolitan Water District in early 2005, and submitted to the Southern California PAG in April 2005, at which time the program was approved.

## 5. Program Statement

The market potential is 90,000 commercial washers in Southern California which use gas heated hot water. The hurdles include:

- Current low level of rebates
- Washers are not replaced at end of lease with Energy Star washers
- No call to action and no current means to encourage parties to renegotiate lease terms
- Lack of education on how both leasing companies and property managers can benefit from an early replacement of washers.

There are 3 principle market barriers which have caused this market to not have been substantially impacted in recent years (even when rebates were at much higher than 2005 levels):

- Current rebate levels are too low to cause any party to throw out a current lease agreement (between equipment leasing companies and property managers who utilize coin op equipment
- One size program does not work for most transactions. There are many forms of equipment leases. A marketing and educational process involving both decision makers is required to help each party achieve a "win" from the issue of new leases with new equipment.
- A utility Team approach (involving both gas and water utilities) plus a comprehensive efficiency package (delivered by The Laundry Team) adds to the overall program value to decision makers.

**6. Program Rationale**

This is a proven gas, electric and water/sewer conservation program in which Team members: UCONS, ASC, Intergy, RMC, and Battelle (PNL) have collaborated with local water districts and associations. The depth and experience of The Laundry Team to collaborate with: equipment leasing companies; property mangers; plus energy and water utilities and agencies is the key to removing current market barriers to early replacement of inefficient coin operated laundry machines in high-usage Laundromats and multi family common areas. The energy savings have been independently verified by Team member Battelle NW for SCE. The DEER database program manager has instructed how to adjust current database for frequency Laundromats usage is higher than current DEER. This program utilizes holistic innovative resource and informational strategies to achieve the desired objectives.

In April, the program was developed in coordination with input from SoCal Gas, SCE and Metropolitan Water District before being submitted to the Southern California PAG in April 2005, at which time the Template was approved. This program has been designed to address market barriers which have acted to delay replacement of high usage (coin operated laundry machines). Current rebate levels have not substantially impacted lessee/lessor contract arrangements.

This program addresses the separate needs of each decision maker (equipment leasing; property managers; bill payers) through education; development of new lease terms; monitoring of utility bill savings for each party...so as to greatly expand the reduction in change out of inefficient coin operated machines.

## 7. Program Outcomes

The program goals are as follows:

- replace 22,000 coin op clothes washers (with gas heated hot water) with efficient washers by December 2008
- achieve energy savings stated above
- reduce water consumption by 600,000 to 800,000,000 gallons annually
- achieve a customer satisfaction level >90%

## 8. Program Strategy

- non residential direct install
- non residential targeted marketing
- non residential rebates
- residential direct install
- residential targeted marketing
- residential mid stream rebates

### 8.1.1. Program Strategy Description

The Coin-op program is directed at both commercial sector (hi use) Laundromats and high use multi family (apartment) common area laundry rooms. The methods to address current market barriers associated with each of these non res and Res strategies are as follows:

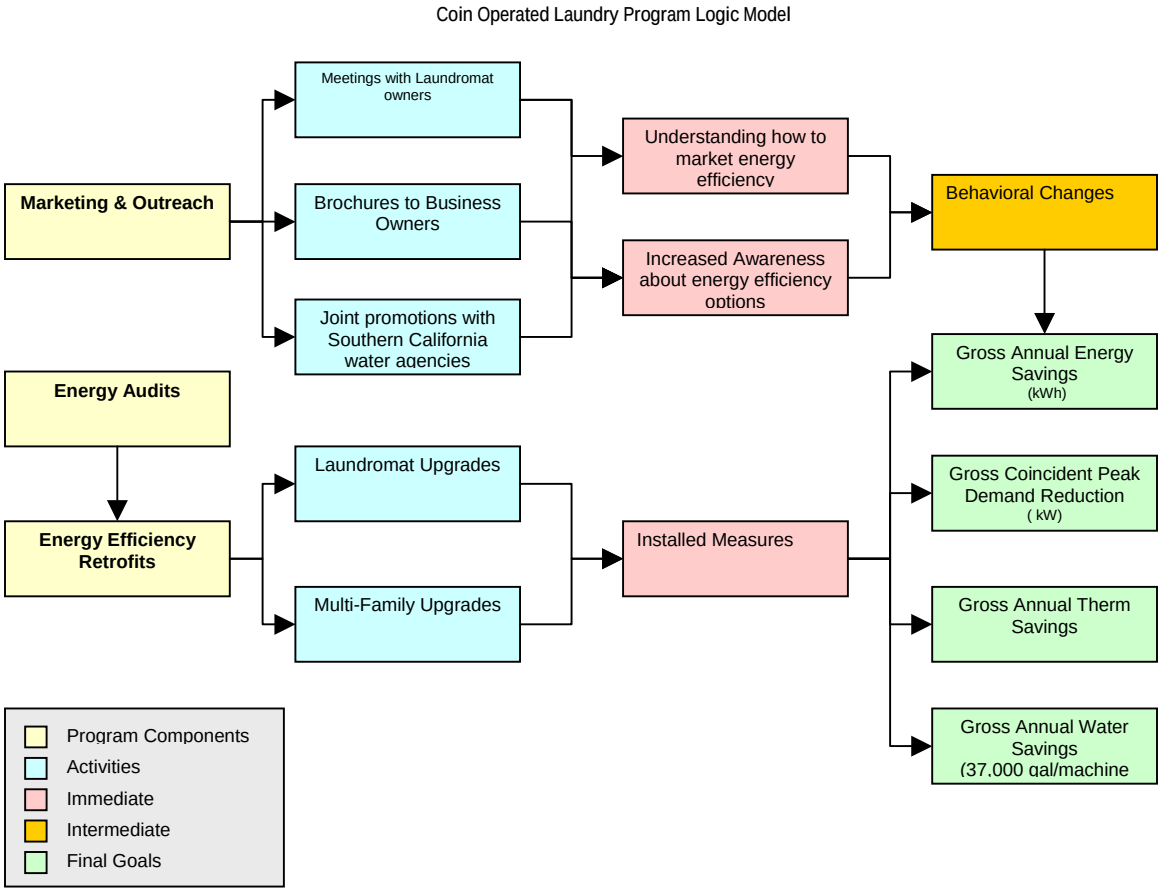
- The Coin Operated Laundry Program will work with local water agencies to identify qualifying businesses that have the willingness and ability to become customers of the program.
- Coin operated washer leasing companies will be notified of the program and meetings between leasing companies and property managers will be arranged to discuss new program options and to educate the parties on the benefits of program participation.
- The program will provide an array of cost effective supplemental measures (other than washers) through our direct install Team so as to minimize any lost opportunities.
- The Coin Operated Laundry Program will develop outreach and marketing materials in cooperation with local water agencies.

- Upon agreement from the customer, the installations are scheduled and the measures installed.
- Post-installation education of the customer (and maintenance contractors as appropriate) will be conducted to ensure optimal operation of the installed measures, including appropriate periodic preventative maintenance of the equipment. This program component will improve persistence of energy savings while helping reduce customer O&M costs.

**Program Assumptions**

- Laundromat and Multi-Family owner/operators are typically unaware of the magnitude of potential energy savings that can be gained; it is often assumed that these savings may be at the expense of the customers' comfort and satisfaction.
- Collaboration between program Team members and local water agencies will ensure the identification and enrollment of a sufficient number of customers to meet the savings goals of the program.
- Jointly developed marketing materials will help increase the awareness of facility owner/operators. These materials will be used in structured meetings with equipment leasing companies and property managers to educate on the financial and operational benefits for an early change-out of washers.

The goal of this program as defined by the program is to reduce the energy and water consumption of an estimated 4000 Laundromats and multi-family units, in replacing 22,000 inefficient coin operated laundry washers by 2008.




### 8.1.2. Program Indicators

The primary goal of the program strategy is to procure them savings plus water and sewer savings. Secondary goals will be to have the water companies and agencies increase their rebate contributions in later program years.

## 9. Program Objectives

- Complete statement of work and program budget 30 days following notice to proceed
- Complete the remaining 10% of program development activities within 30 days notice to proceed. This includes meetings with the Metropolitan Water District to engage their assistance in promoting benefits to program participants and to initiate a rebate increase for 2007 and 2008.
- Begin program marketing and sit down meetings with coin op washer leasing agents and property managers within 60 days notice to proceed

- Establish a schedule for beginning direct installation activities within 60 days notice to proceed
- First replacement of 500 commercial coin op washers and direct installation measures within 90 days of notice to proceed.
- Normal monthly operations of 700 commercial coin op washers changed-out monthly (and direct installation of other cost effective measures in the Laundromats and multi family common area laundry rooms) 120 days after notice to proceed until program conclusion in 2008.
- Program ramp-down and preparation for program shut down 120 days prior to program conclusion in 2008.

## 10. Program Implementation

**Program Workflow:**

The Coin Operated Laundry Program will work with local water agencies to identify qualifying businesses that have the willingness and ability to become customers of the program.

Coin operated washer leasing companies will be notified of the program and meetings between leasing companies and property managers will be arranged to discuss new program options and to educate the parties on the benefits of program participation.

The program will provide an array of cost effective supplemental measures (other than washers) through our direct install Team so as to minimize any lost opportunities.

The Coin Operated Laundry Program will develop outreach and marketing materials in cooperation with local water agencies.

Upon agreement from the customer, the installations are scheduled and the measures installed.

Post-installation education of the customer (and maintenance contractors as appropriate) will be conducted to ensure optimal operation of the installed measures, including appropriate periodic preventative maintenance of the equipment. This program component will improve persistence of energy savings while helping reduce customer O&M costs.

## 11. Customer Description

There are 3 categories of customers:

- utilities (gas and water and possibly electric)
- property managers and owners (Laundromats and multi family properties)

- equipment leasing companies (of coin operated washers)

## 12. Customer Interface

In summary, educational and marketing materials will be presented in face-to-face meetings between the 2 principal customer groups to address current market barriers to early retirement of current equipment lease agreements of coin op washers.

The program breaks down current market barriers by providing information and training materials directly to each of the separate decision makers (local water districts, equipment leasing companies and property managers). The depth and experience of The Laundry Team to collaborate with: equipment leasing companies; property mangers; plus energy and water utilities and agencies is the key to removing current market barriers to early replacement of inefficient coin operated laundry machines in high-usage Laundromats and multi family common areas. This program utilizes holistic innovative resource and informational strategies to achieve the desired objectives.

This program addresses the separate needs of each decision maker (equipment leasing; property managers; bill payers) through education; development of new lease terms; monitoring of utility bill savings for each party...so as to greatly expand the reduction in change out of inefficient coin operated machines.

## 13. Energy Measures and Program Activities

### 13.1. Prescriptive Measures.

See SoCalGas February 1, 2006 Workbook

### 13.2. kWh Level Data

See SoCalGas February 1 Filing Workbook

### 13.3. Non-energy Activities

This program has significant non-energy impact in the very large reduction of water and sewer utilities achieved with the replacement of each inefficient commercial clothes washer.

#### 13.3.1. Activity Description

UCONS and Battelle have provided the PAG and SoCal Gas documentation on the measured level (gallons) of water saved with the replacement of each hi-use commercial washer. This program contains a separate budget line item for reviewing this level of savings for SoCal Gas.

#### 13.3.2. Quantitative Activity Goals

The previous DEER and Battelle PNL studies approved by the PAG demonstrate that each replaced washer will reduce water consumption by

25,000 to 37,500 gallons annually (depending on specific machine replacements and on annual usage factors).

**13.3.3. Assigned attributes of the activity (market sector, end use)**

The market sectors realizing the water savings will be the commercial Laundromats and the common area (laundry rooms) of multi family properties within SoCal Gas service area.

## 14. Subcontractor Activities

**UCONS** is the developer and overall program manager for the California coin-operated program as proposed herein. After successfully developing and implementing this program in Oregon in 2000 and 2001, UCONS began developing this program with California utilities, municipalities plus experienced California Team members the past two years. UCONS has overseen this program through the development phase to its current status. This a program ready to implement by the 4 principal sub contractors. The largest single budget item is for increasing rebates for coin operated laundry machines. Most of the remaining budget cost items are to support the specific sub contractor activities by team members discussed below.

**American Synergy: (direct install team leader)**

American Synergy Corp (Synergy Companies) will coordinate all direct install activities and property manager customer interface for the laundry program. In addition, they will assist with program tracking and benchmark tracking. Synergy was established in 1982 and has worked extensively with the IOU's and CPUC in energy efficiency throughout the State of California. Their headquarters is in Hayward, CA with offices in Moreno Valley, Temecula and the Fresno Area. Energy conservation and efficiency is a core part of Synergy's business strategy in the past, currently and we are committed to the Energy Services Industry for the long-term future. Synergy has completed tens of thousands of units throughout the State of California over the last 23 years.

Synergy Companies is an energy service company and an active member of the National Association of Energy Service Companies (NAESCO), the leading industry association advocating energy efficiency.

**Battelle Memorial (Pacific Northwest Labs) PNL: (Design & Performance team leader)**

This program has a budget element to ensure program objectives will be met be providing a "pre M&V" component (independent of the comprehensive CPUC requirements for EM&V, and under the supervision of SoCal Gas). The Team has found that early-feedback can help better focus the program delivery and provide assurance to the utility, PAG, PRG and regulatory agencies that problem areas are addressed early on. This "early feedback" service will be done in coordination with SoCal Gas requirements and feedback so as to not conflict or burden the independent EM&V process.

**Field Performance Monitoring Protocol**

To conduct a small-sample-size metering study to determine the water and energy use of conventional and high-performance commercial coin-op clothes washers. The specific project objectives are listed below:

- Evaluate water and energy use of conventional and high-performance commercial clothes washers.
- Evaluate water and energy saving associated with high-performance commercial clothes washers.
- Evaluate clothes washer utilization (average cycles per period).
- Present the water and energy consumption data, and economic findings.

**Intergy Corporation: (Water agency interface team leader)**

Intergy will provide coordinated communications and interface with local water agencies to promote implementation of program objectives. The Metropolitan Water District is currently involved with both UCONS and with Intergy on this project. Metropolitan and other water agencies have provided a substantially higher rebate level in prior years and have expressed an interest to returning to these higher rebate levels on a partnered program which can address the market barriers of prior rebate efforts. Intergy will also ensure that equipment requirements of the program match those of the local water agencies. Intergy offers a range of energy efficiency services and IT services to the energy industry. Their analytical and practical expertise and experience enable them to offer unique, creative, and cost-effective solutions to our clients.

**Resource Management Corporation (RMC):** will provide the major interface for the program with commercial laundry equipment leasing companies. In accomplishing this, RMC will provide the outreach to multi-family property owners and managers for program participation. Key to this will be the facilitation of financial terms that make the equipment replacement option compelling. This will entail working closely with the business financial community as well.

## 15. Quality Assurance and Evaluation Activities

Each Laundry Team member has delivered programs in California to utilities and has an established QC/QA support staff and operational program. For the Coin Op Laundry program, the primary direct install Team Leader will be American Synergy Corporation. The same quality assurance and QC programs employed on SoCal Gas mobile home programs by ASC will be employed on this program.

ASC expects to conduct 10 to 20 percent random inspections of their completed projects. Battelle will be doing a separate evaluation to establish program savings.

## 16. Marketing Activities

Much of the marketing activities have been completed the past year during the program development phase prior to presenting this program to the PAG in April 2005. This effort required:

- meeting with all primary electric and gas utilities (to understand the CPUC program goals and program targets)
- Meeting with Metropolitan Water District and other water agencies (to understand their decisions for reducing rebates levels in recent years and their level of program support).
- Reviewing current lease terms for commercial coin-op washers between leasing companies and property managers.

The remaining marketing activities to be implemented following a notice to proceed will be develop the different financial incentives (plus marketing and educational materials) to facilitate one-on-one meetings between property managers of apartments and property managers of Laundromats.

## 17. CPUC Objective

The Coin Op Laundry program meets the following CPUC objectives:

- To "pursue all cost-effective energy efficiency opportunities over both the short and long-term. The TRC for this program is greater than 3 and the PAC is greater than 2.
- Partnership arrangements between utilities and local governments. This program has been developed as either a stand-alone gas program (for SoCal Gas) or a combined gas and electric program (implemented with SCE). In either instance, this program targets all Southern California water agencies and water districts.
- Substantial reductions in use of water and sewer requirements
- Comprehensiveness and avoiding Lost Opportunities (This program has added supplemental direct install measures to address utility recommendations prior to submittal to the PAG)
- Consistent with PAG objectives (previously approved by the Southern California PAG)

The utilities have challenged UCONS and the Laundry Team to minimize lost opportunities by providing additional cost effective measures concurrently with the change-out of new washers. This program is based on providing the following cost effective measures (in addition to the Energy Star washers):

- Hot and cold water pipe wrap
- Hot water temperature setback to 130 degrees F.

- Lighting in common areas of commercial Laundromats and multi family laundry rooms
- Providing information to property managers on water heating upgrades

| | SCG3540 3P Laundry_Coin-op_Program | |
|---|---|---|
| **BUDGET** | | |
| | | |
| **Administrative Costs** | **$** | **1,218,556** |
| Overhead and G&A | $ | 1,158,850 |
| Other Administrative Costs | $ | 59,706 |
| **Marketing/Outreach** | **$** | **1,065,000** |
| **Direct Implementation** | **$** | **5,420,500** |
| Total Incentives and Rebates | | |
| User Input Incentive | $ | - |
| Direct Install Rebate | $ | 2,934,750 |
| Direct Install Labor | $ | 1,934,230 |
| Direct Install Materials | $ | 551,520 |
| Activity | $ | - |
| Installation | $ | - |
| Hardware & Materials | $ | - |
| Rebate Processing & Inspection | $ | - |
| **EM&V Costs** | **$** | - |
| **Budget** | **$** | **7,704,056** |
| **Costs recovered from other sources** | **$** | - |
| **Budget** (plus other costs) | **$** | **7,704,056** |
| | | |
| **PROGRAM IMPACTS** | | |
| **Program Reductions for Measures installed through 2008** | | |
| User Entered kW (kW) | | 0 |
| Net Jul-Sept Peak (kW) | | 0 |
| Net Dec-Feb Peak (kW) | | 0 |
| Net NCP (kW) | | 0 |
| Net CEC (kW) | | 1575 |
| Annual Net kWh | | 7258400 |
| Lifecycle Net kWh | | 108876000 |
| Annual Net Therms | | 3439657 |
| Lifecycle Net Therms | | 51594852 |
| | | |
| **Cost Effectiveness** | | |
| **TRC** | | |
| Costs | | 4343525.249 |
| Electric Benefits | | 0 |
| Gas Benefits | | 21637632.69 |
| Net Benefits (NPV) | | 17294107.45 |
| BC Ratio | | 4.981583265 |
| | | |
| **PAC** | | |
| Costs | | 7041012.434 |
| Electric Benefits | | 0 |
| Gas Benefits | | 21637632.69 |
| Net Benefits (NPV) | | 14596620.26 |
| BC Ratio | | 3.073085426 |
| | | |
| **Levelized Cost** | | |
| **Levelized Cost TRC ($/kWh )** | | |
| Discounted kWh | | 60464068.42 |
| Cost | | 0 |
| Benefits | | 0 |
| Benefit-Cost | | 0 |
| **Levelized Cost PAC ($/kWh)** | | |
| Discounted kWh | | 60464068.42 |
| Cost | | 0 |
| Benefits | | 0 |
| Benefit-Cost | | 0 |
| **Levelized Cost TRC ($/therm)** | | |
| Discounted Therms | | 28725165.46 |
| Cost | | 0.151209756 |
| Benefits | | 0.753263988 |
| Benefit-Cost | | 0.602054232 |
| **Levelized Cost PAC ($/therm)** | | |
| Discounted Therms | | 28725165.46 |
| Cost | | 0.245116514 |
| Benefits | | 0.753263988 |
| Benefit-Cost | | 0.508147474 |

## 3P Laundry Coin-Op Program

| Year | Total Budget | Total Incentives | Admin Budget | Net kWh | Net Therms | Net kW |
|---|---|---|---|---|---|---|
| 2006 | $ 1,820,089 | $ 1,271,035 | $ 549,054 | 1,688,000 | 853,257 | - |
| 2007 | $ 2,887,431 | $ 2,018,680 | $ 868,751 | 2,700,800 | 1,288,800 | - |
| 2008 | $ 2,999,536 | $ 2,130,785 | $ 868,751 | 2,869,600 | 1,297,600 | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 351001 | GAS Appliance-Washing Machine Replacement | 422 | 22 | | 0.8 | Per Unit | 15 | 5,000 | $ 224.21 | $ 136.50 | 1,688,000 | 88,000 | - |
| 2006 | 351002 | GAS Non RES Water Heater Setback to 130 degrees from 139 degrees | - | 280 | | 0.8 | Per Unit | 15 | 3,333 | $ 40.00 | $ - | - | 746,592 | - |
| 2006 | 351003 | GAS Non RES Pipe Wrap | - | 7 | | 0.8 | Per Unit | 15 | 3,333 | $ 5.00 | $ - | - | 18,665 | - |
| 2007 | 351001 | GAS Appliance-Washing Machine Replacement | 422 | 22 | | 0.8 | Per Unit | 15 | 8,000 | $ 224.21 | $ 136.50 | 2,700,800 | 140,800 | - |
| 2007 | 351002 | GAS Non RES Water Heater Setback to 130 degrees from 139 degrees | - | 280 | | 0.8 | Per Unit | 15 | 5,000 | $ 40.00 | $ - | - | 1,120,000 | - |
| 2007 | 351003 | GAS Non RES Pipe Wrap | - | 7 | | 0.8 | Per Unit | 15 | 5,000 | $ 5.00 | $ - | - | 28,000 | - |
| 2008 | 351001 | GAS Appliance-Washing Machine Replacement | 422 | 22 | | 0.8 | Per Unit | 15 | 8,500 | $ 224.21 | $ 136.50 | 2,869,600 | 149,600 | - |
| 2008 | 351002 | GAS Non RES Water Heater Setback to 130 degrees from 139 degrees | - | 280 | | 0.8 | Per Unit | 15 | 5,000 | $ 40.00 | $ - | - | 1,120,000 | - |
| 2008 | 351003 | GAS Non RES Pipe Wrap | - | 7 | | 0.8 | Per Unit | 15 | 5,000 | $ 5.00 | $ - | - | 28,000 | - |

# 2006-2008 Energy Efficiency Programs
# Comprehensive Manufactured-Mobile Home Program
# Synergy Companies

## 1. Projected Program Budget

| | 2006 | 2007 | 2008 |
|---|---|---|---|
| Administration | | | |
| Administrative Overheads | $ 37,167 | $ 37,167 | $ 37,166 |
| Administrative Other | $ 195,551 | $ 195,551 | $ 192,550 |
| Marketing & Outreach | $ 110,871 | $ 110,871 | $ 110,870 |
| Direct Implementation | | | |
| Activity | $ - | $ - | $ - |
| Installation | $ - | $ - | $ - |
| Hardware & Materials | $ - | $ - | $ - |
| Procurement | $ - | $ - | $ - |
| Incentives | $ 1,181,413 | $ 1,181,413 | $ 1,181,413 |
| EM&V | $ - | $ - | $ - |
| *Total* | *$ 1,525,001* | *$ 1,525,001* | *$ 1,521,998* |

## 2. Projected Program Impacts

| 2006 | | | 2007 | | | 2008 | | |
|---|---|---|---|---|---|---|---|---|
| Net kWh | Net kW | Net Therms | Net kWh | Net kW | Net Therms | Net kWh | Net kW | Net Therms |
| 633,458 | 607 | 226,643 | 633,458 | 607 | 226,643 | 633,458 | 607 | 226,643 |

## 3. Program Cost Effectiveness

Attached

## 4. Program Descriptors

The targeted market that this program is designed to cover is the manufactured and mobile home market. The comprehensive manufactured and mobile home program is currently being operated in the SCE/SCG territory and elements of this program have previously been delivered to PG&E as a local program.

Synergy and its primary sub contractor (Cal UCONS) have the greatest in-depth experience in addressing this market sector. This program is based upon a proven capability to market and to deliver to your mobile home customers. It has been modified based upon insights gained in this market segment over the last four years. The geographical areas to be covered by this program will be in the Southern CA Gas service territory with an emphasis on the areas that can achieve the greatest energy savings first (high use of furnaces and gas).

There are an estimated 156,000 (infosource 2005) manufactured/mobile homes in the Southern CA Gas service territory. According to our market research there have been about 31,000 of those homes treated on a comprehensive basis or a saturation of approximately 19%.

This program is designed to treat approximately 10,000 homes over the next three years or an additional market saturation of 6.5% with gas customers or 11% (17,500 homes) if combined with the SCE program.

One of the primary objectives of this program is to deliver the energy savings stated above.

There is a large untapped potential for energy savings in this market. This program has three significant innovative features to it:

1. The introduction of 100% quality installations of Duct Seal work.
2. A unique marketing approach to optimize market saturation.
3. The potential option of combining IOU administration with SCE, as we have in the last four years, and gain a synergy in claimed energy savings (therms for SGC and kWh for SCE) as we leverage funds that can benefit each IOU. This program, at the option of the IOU's, can either stand alone as a successful GAS program or be leveraged together with SCE for additional Therm savings.

**5. Program Statement**

There are market failures and barriers to address the mobile home market related to: cost effectiveness; split incentives; park management directives; income and language.

The basis for the SCG comprehensive Manufactured/Mobile Home proposal is to reach these moderate and fixed-income customers of SCG in a cost effective and comprehensive manner. In recent years, we found few contractors serving this market segment.

We also learned that this market segment was not likely to take advantage of programs because of language, economic, or educational barriers. Synergy associates also found that many of the tenants being served are senior citizens, on a fixed income and many times not physically able to install these measures themselves. Our firm observed these issues to be significant barriers to using EE fund and programs.

**6. Program Rationale**

Synergy and its sub contractor UCONS have successfully addressed each of the following hurdles in the mobile home arena the past seven years.

***A. Hurdle #1:*** Clearly identifying target sites for program education and introduction.

Our full-time marketing department identifies customers, which is lead by Julie Richardson. Ms. Richardson has been with Synergy for 20 years. She possesses a

great deal of history and experience in knowing which areas are most responsive and the appropriate techniques to identify qualified parks for this program.

***B. Hurdle #2:*** How to break down park manager barriers to allowing personal contacts with park residences.

The tactic to address this hurdle is to recognize the separate decision makers in mobile home parks and to establish credibility with park managers (in addition to mobile home owners) through repeated meetings and participation in their scheduled park association meetings. This is a real hurdle as park owners and managers are protective and suspicious of anyone that wishes to "market or contact" their tenants and residents. Synergy's long-term reputation of serving hundreds of parks and owners is a significant asset. Our high satisfaction rating with other park managers can be readily verified. This enables Synergy to build "trust" with many park managers.

***C. Hurdle #3:*** How to address the suspicion and reluctance of senior citizens to permit individuals in their homes.

The tactic to address this hurdle is to gain the support of the park management, and to clearly establish this is a SoCalGas program. The reputation of the IOU and Synergy's reputation are important assets to address this hurdle.

***D. Hurdle #4:*** Recognizing and addressing language, economic and age barriers.

The tactics to address this hurdle have been addressed above. In addition, many of Synergy's associates are bi-lingual. Our long-standing reputation in this arena is also helpful.

If selected for 2006-2008, SCG (and the Manufactured/Mobile Home customers we have identified in our bid) are assured that the program will be delivered promptly and that long term and cost effective savings will be delivered. Synergy has consistently demonstrated we will dependably deliver the proposed savings either on schedule or ahead of time.

Bidder has the capability to ramp-up or reduce the size of this program budget should SCG wish to use flexibility to optimize savings and use of the budgets.

## 7. Program Outcomes

| Description of Outcome | Program Goal |
|---|---|
| 1. To target customers in the manufactured and mobile home customers and to provide them a comprehensive set of Energy Efficiency measures. (Duct Test & Seal, Aerators, Low Flow Showerheads, pipe wrap and water-heater blankets) | 1. 1. To serve and educate about 10,000 customers in this market segment. |
| 2. To deliver cost effective energy savings | 2. To deliver the stated energy savings |
| 3. To reduce emissions of CO2, NOX, and PM-10 | 3. To reduce emissions by:<br>a. CO2 emissions reduction-1,151 tons<br>b. NOX- 325 lbs.<br>c. PM-10- 146 lbs. |
| 4. To have a have quality and satisfaction rating | 4. To have 100% quality installations of Duct Seal, with follow-up surveys and random sample inspections for other items. To have 97% customer satisfaction |

## 8. Program Strategy

In addition to the methods described previously, this program will deploy a creative marketing program to teach energy efficiency in Mobile parks and neighborhood gatherings. These meetings not only introduce the customers to the measures that will be utilized in their home, but helps them be comfortable with the technicians that will do the work. Each customer is provided with an energy efficiency tips brochure that also teaches about other energy efficiency programs, providing phone numbers and contact information for those that may be able to take advantage of them. The features mentioned allow us to optimize energy savings opportunities and to avoid lost opportunities. Our technicians also contact all neighbors when the actual work is being completed to further educate to the program availability.

# 2006-2008 Energy Efficiency Programs
# Comprehensive Manufactured-Mobile Home Program
# Synergy Companies

This Manufacturer- Mobile Home Program will employ the following strategies:

- Residential Comprehensive Retrofit
- Residential Education
- Residential Quality Installation
- Residential Direct Install
- Residential Downstream Training
- Residential Targeted Marketing

### 8.1.1. Program Strategy Description

Initial program launch will have Synergy initiating marketing in those geographic sectors, which SCG indicates of highest priority. Synergy has developed marketing and program descriptors for this program and will review these with SCG prior to providing to the mobile home park managers and to their homeowners.

Targeted marketing will be on the mobile home sectors, which SCG indicates of highest priority. Prior to initiating the education and direct install component, both the prescriptive and innovative measures will be described to each mobile home park manager over the course of the first 45 days. It is their support and cooperation, which is key prior to marketing the program to the individual park homeowners. In many instances, the park manager will have Synergy attend or host a park or neighborhood association meeting to explain program benefits to each mobile home owner. Upon notification of customer interest, Synergy will do a walk-through with each customer and install measures, which are found to be needed in each home.

- The Synergy strategy for ensuring Quality Installation has been provided both stage I and stage II submittals. This portion of the program will be implemented to ensure that: all customer needs are met and customer satisfaction levels exceed 95% (which they have in each of our prior California direct install programs); that long-term persistence of savings is achieved in order to meet or exceed E-3 calculator levels of savings; and finally, a separate early-M&V program will be implemented by sub contractors UCONS and Stellar to maximize therm, kWh and peak kW savings from each of the innovative measures.

The early-M&V component will utilize the same in-field testing and evaluation features which have been utilized by UCONS in their current SCE evaporative cooler mobile home program. This feature enabled SCE and UCONS to feedback data from early program studies on those

program elements showing greatest savings potential (and de-emphasizing areas where measured savings were not meeting program objectives). Fan depowering was shown to be a solid component for peak demand and energy savings (where evaporative cooling was employed).

- The strategy for achieving Downstream Training will employ Synergies' long-standing policy of providing long-term: educational materials; response to customer inquiries; and providing long-term service and repairs long-after contract deadlines. This policy maintains customer awareness of the potential for energy savings, which is a key problem with many mobile home residential ratepayers (who have typically some of the highest energy bills in the residential sector).

### 8.1.2. Program Indicators

The primary goal of the program strategy is to procure energy savings and demand reduction.

## 9. Program Objectives

| ACTIVITY DESCRIPTION | Targeted |
|---|---|
| Finalize Operations Plan | 1/15/06 |
| Completion and approval of Marketing Piece | 1/20/06 |
| Add Laptops for technicians | 2/1/06 |
| Begin Roll-out of Marketing Campaign | 2/05/06 |
| Modification of Web Page to Reflect this Program | 2/15/06 |
| Complete Energy Savings Materials for Customers | 2/15/2006 |
| Evaluate Response Rates to Marketing | 3/05/06 |
| Synergy Stakeholders Training Session | 01/11/06 |
| Monthly Report (Every month by the 21st) | 3/21/06 |
| Quarterly Evaluation and Training Meetings | 4/14/06 |
| Complete Implementation Plan | 12/31/08 |

**Production Benchmarks**

| Date | Projected Units Complete | Progress Measurement |
|---|---|---|
| 1st Qtr 2006 | 700 | Monthly Report (On the 21st of each Month) and Invoice |
| 2nd Qtr | 900 | Monthly Report (On the 21st of each Month) and Invoice |
| 3rd Qtr | 900 | Monthly Report (On the 21st of each Month) and Invoice |
| 4th Qtr | 800 | Monthly Report (On the 21st of each Month) and Invoice |
| 1st Qtr 2007 | 700 | Monthly Report (On the 21st of each Month) and Invoice |

**2006-2008 Energy Efficiency Programs**
**Comprehensive Manufactured-Mobile Home Program**
**Synergy Companies**

| Date | Projected Units Complete | Progress Measurement |
|---|---|---|
| 2nd Qtr | 900 | Monthly Report (On the 21st of each Month) and Invoice |
| 3rd Qtr | 900 | Monthly Report (On the 21st of each Month) and Invoice |
| 4th Qtr | 800 | Monthly Report (On the 21st of each Month) and Invoice |
| 1st Qtr 2008 | 800 | Monthly Report (On the 21st of each Month) and Invoice |
| 2nd Qtr | 900 | Monthly Report (On the 21st of each Month) and Invoice |
| 3rd Qtr | 900 | Monthly Report (On the 21st of each Month) and Invoice |
| 4th Qtr | 800 | Monthly Report (On the 21st of each Month) and Invoice |
| 1st Qtr 2009 | | Program Evaluation and Final Report |
| Total | 10,000 | |

| | Contacts/Meetings with Managers/Owners | Attendees at Neighborhood Meetings | Direct Mail/Canvass Notifications |
|---|---|---|---|
| 1st Qtr 2006 | 10 | 300 | 2,000 |
| 2nd Qtr | 15 | 400 | 3,000 |
| 3rd Qtr | 15 | 600 | 3,000 |
| 4th Qtr | 10 | 300 | 2,000 |
| 1st Qtr 2007 | 10 | 300 | 2,000 |
| 2nd Qtr | 15 | 400 | 3,000 |
| 3rd Qtr | 15 | 600 | 3,000 |
| 4th Qtr | 10 | 300 | 2,000 |
| 1st Qtr 2008 | 10 | 300 | 2,000 |
| 2nd Qtr | 15 | 400 | 3,000 |
| 3rd Qtr | 15 | 600 | 3,000 |
| 4th Qtr | 0 | 300 | 2,000 |
| 1st Qtr 2009 | 0 | 0 | 0 |
| **Total** | **140** | **4,800** | **30,000** |

**10. Program Implementation**

The program design has been completed in preparation for a timely launch of this program. An overview of the Program is as follows:

| | |
|---|---|
| **Marketing Method** | ▪ Direct mail and canvass notification<br>▪ Meetings with Park Managers and Owners<br>▪ Telemarketing |
| **Delivery Approach** | ▪ On-site survey |

| | |
|---|---|
| | ▪ Direct installation of products and services |
| **Customer and Market Segments** | * Focus first on the Manufactured/Mobile Home Customers in warmer and dryer climates |
| **Contract Length** | 24 months of field operations<br>Marketing and field activities begin January 2006<br>**Customer installations targeted for completion by November 30, 2008**<br>Final Invoice and Report by March 30, 2009 |

While the elements of our program design are highlighted above, it is also important to understand the sequence of customer interactions and overall program below.

Depicted below is the Process Flow Diagram and Process Flow Narrative of the Innovative and Comprehensive Manufactured/Mobile Home Program:

| **Customer Enrollment** |
|---|
| Once customer requests participation, the Customer Service Rep will verify eligibility including:<br>▪ Location<br>▪ Customer classification (Manufactured/Mobile Home Resident)<br>▪ Measures have not previously been installed or are in need of service<br>⬇ |
| CSR will set convenient time for the installer and technician to visit customer site<br>⬇ |
| **Delivery of On-site Services** |
| The installer and technician arrive on-site, explain the survey and installation process, and obtain customer agreement to program rules<br>⬇ |
| Installer and technician conduct the site walk-through to determine eligible measures and provide customer with Energy Tips Brochure<br>⬇ |

| |
|---|
| The installer and technician perform the immediate installation |

of equipment and measures as needed:

- Duct Test and Seal. Technicians will use the Enalasys Systems to VERIFY 100% of the Duct Seal work completed
- Aerators and Low-Flow Showerheads
- Pipe wrap and water heater blankets

⬇

Program team will ensure site is left clean with all trash and discarded materials removed from site

⬇

Program team will then notify customer when all work is completed and request customer signature of acceptance

⬇

**Data Entry, Reporting and Invoicing**

Each night the work completed will be electronically uploaded from the computer or handheld to the platform. Information is loaded into the computer or handheld through sensors and cannot be manipulated by the technician.

⬇

Paperwork is returned to Program office

⬇

Paperwork is reviewed for completeness and accuracy

⬇

After review, data is entered in Program tracking system, compared to the platform and available for reporting and invoicing

⬇

SGC will have access to customer and Program data on virtual time basis this includes: production, energy savings estimates and site specific customer records

⬇

Invoices will be generated and delivered to SCG with the monthly report on the 21st of each month

**11. Customer Description**

The customers targeted for this program are the owners and renters of manufactured and mobile homes in mobile home parks throughout SoCalGas service area. This

customer group is typically retired and on a fixed or lower income level. They are typically older customers who reside in residential structures with some of the highest energy costs.

**12. Customer Interface**

Describe how the program will be presented to customers to ensure that the energy efficiency programs are easy for customers to use.

The customers will likely be introduced to the program through a live neighborhood meeting, where the program and associated measures are presented and demonstrated. Those desiring to take advantage of the program may sign-up for a schedule date at the neighborhood meeting.

In addition, flyers will be sent to each potential customer, inviting him/her to call the toll-free number for an appointment if they are interested in the program.

At the time of installation, the technician does a walk through and explains to the customer what service will be provided at their home. At the conclusion of the installations, the technician provides the customer with a follow-up of what was installed and is provided the energy efficiency tips brochure.

A high level of customer satisfaction has been running at about 97%, according to the independent EM&V report.

**13. Energy Measures and Program Activities**

**13.1. Prescriptive Measures.**
See SoCalGas February 1, 2006 Workbook

**13.2. kWh Level Data**
See SoCalGas February 1, 2006 Workbook

**13.3. Non-energy Activities**
Not applicable in this program

**13.3.1. Activity Description**

**13.3.2. Quantitative Activity Goals**

**13.3.3. Assigned attributes of the activity (market sector, end use)**

**14. Subcontractor Activities**

Synergy Companies will work in conjunction with CAL-UCONS, a design, marketing, and EM&V consulting firm with an outstanding reputation in the Energy Efficiency Industry.

CAL-UCONS will focus on program design (including innovative features of fan depowerment for evaporative cooling) plus EM&V support to assure delivery of energy savings. Synergy Companies will provide the marketing, customer support and overall program management and implementation for the program.

**15. Quality Assurance and Evaluation Activities**

Synergy Companies, in conjunction with Enalasys Corp, will use an electronic sensor program to VERIFY 100% of the Duct Seal. The state-of-the-art Enalasys technology will measure both pre and post work equipment efficiency readings. These reading are electronically read and not manually Input by a technician. This provides for 100% verification of quality Installations. General input information i.e. Name, Address, equipment serial number, etc, are entered manually or are push down to the laptop. The diagnostic data measured from sensors and testing equipment i.e. duct blaster, ChargeRite are RF transmitted to the laptop where they are either recorded or used in algorithms for calculating performance criteria as well as calculated and deemed energy savings. All of this data is then uploaded to a central secured database that can be accessed and downloaded in various formats by the sponsoring entity and program partners. This information provides the basis for the calculations of the EM&V.

In addition, Synergy has an office that is dedicated to quality control and customer satisfaction. This office calls 20% of customers after the work is complete to determine customer satisfaction and to gain other important information about the work completed.

Synergy also has an in-house inspector that physically and randomly inspects 5% of all jobs complete. These measures support a high level and commitment to quality installations at each home.

**16. Marketing Activities**

Synergy's marketing program to this targeted sector is in itself a marketing innovation that has resulted in a high level of service and saturation within each mobile home park.

Synergy begins its efforts in its marketing department by doing research for all Manufactured/Mobile home parks and residences available, by target market. In the SCG service territory Synergy has located about 156,000 homes for marketing. Next, one of the most talented outreach individuals in the industry, Kent Walker, who has been working with Manufactured/Mobile Park Managers and Owners for five years personally contacts each manager or owner and presents the program opportunity.

Much of Synergy's success can be attributed to the trust established between Mr. Walker and the park management.

From this experience, a neighborhood meeting is set up to explain the program. Attending the meeting are Kent Walker, Maureen McCarty and an experienced technician.

During the neighborhood meeting, typical activities would include setting up a table with energy conservation savings packets and programs. During the meeting a demonstration would be held with the types of measures that can provide energy savings, such as duct test and seals, aerators, low flow showerheads, water-heater blanks and pipe-wrap. A question and answer session would also be held. Many customers will schedule service right at the meeting.

Synergy and UCONS have established a well-developed and respected position with many property owners, managers and park managers within SCE/SCG service areas.

The Synergy marketing teams have bilingual capability staffed with individuals who speak English, Spanish, and Navajo.

Other marketing activities include:
1) Working directly with local Community Organizations: Senior Citizen Centers, Mobile Home Associations, Association of Retired People, Chambers of Commerce, Local Libraries of community information.
2) Flyers.
3) Word-of-mouth.

Marketing and outreach plans have been carefully developed by the program implementer to address the primary market barriers. Prior marketing efforts in these targeted sectors demonstrate that it is not practical to acquire customer contributions from the typical mobile home owner. There can be exceptions to this rule, but we have found that it often costs more from a marketing and long-term customer care perspective to collect a contribution …than the amount of the contribution itself. For this targeted market sector, our experience is that the most cost effective use of Public Goods funds is to provide a direct install program (which is also cost effective on its own merits) without a customer contribution.

**17. CPUC Objective**

The Innovative and Comprehensive Manufactured/Mobile Home meets the following CPUC objectives:

- To "pursue all cost-effective energy efficiency opportunities over both the short- and long-term." The TRC and the PAC measure the cost-effectiveness of a program. The TRC for this program is greater than 4.2 and the PAC is greater than 1.7, both meeting the requirement for a strong cost-effective program.
- Partnership arrangements between utilities and local government. Synergy has worked with a number of community organizations and associations, including

mayors and city councils in combining efforts to promote energy efficiency within numerous communities.

- Collaborative and Innovative Solutions to current market barriers. Synergy has worked with a number of players from different segments of the energy efficiency industry to explore the most advance technologies, measures, products, and processes that can overcome market barriers and optimize energy efficiency at each customer's home. This has been manifest in its marketing approach, quality processes with VERIFED work on Duct Systems, and avoiding lost opportunities by seeking to service all potential energy consumption while visiting the customer's home.
- Comprehensiveness and avoiding Lost Opportunities. This program meets this CPUC requirement because of the comprehensive nature of the program. In addition to the comprehensive service provided, SCG is taking advantage of this contact to educate the customer to the other EE programs that might be available to this customer.
- Consistent with PAG objectives.
- Reduction of greenhouse gas emissions. Because this program produces a reduction of CO2, NOX, and PM-10 emissions it also meets the important CPCU objective.
- The deployment of new and improved EE products and applications can help sustain or increase current savings yields. This objective is met in this program through the use of the VERIFED duct seal. In the past, this was left to human calculations and the adjustments could have been off or a technician could have even "fudged" the numbers. With this independent on-site electronically sensored approach, the technician responds to efficiency changes in the system as recommended by the computer prompted calculations. This tamper-proof system is a significant improvement in processes for achieving quality installations at each home.

| | SCG3539 3P Manufactured_Mobile_Home_Program | |
|---|---|---|
| **BUDGET** | | |
| | | |
| **Administrative Costs** | **$** | **695,150** |
| Overhead and G&A | $ | 583,650 |
| Other Administrative Costs | $ | 111,500 |
| **Marketing/Outreach** | **$** | **332,612** |
| **Direct Implementation** | **$** | **3,544,238** |
| Total Incentives and Rebates | | |
| User Input Incentive | $ | - |
| Direct Install Rebate | $ | - |
| Direct Install Labor | $ | 2,139,293 |
| Direct Install Materials | $ | 1,404,945 |
| Activity | $ | - |
| Installation | $ | - |
| Hardware & Materials | $ | - |
| Rebate Processing & Inspection | $ | - |
| **EM&V Costs** | **$** | - |
| **Budget** | **$** | **4,572,000** |
| **Costs recovered from other sources** | **$** | - |
| **Budget** (plus other costs) | **$** | **4,572,000** |
| | | |
| **PROGRAM IMPACTS** | | |
| **Program Reductions for Measures installed through 2008** | | |
| User Entered kW (kW) | | 1822 |
| Net Jul-Sept Peak (kW) | | 1822 |
| Net Dec-Feb Peak (kW) | | 166 |
| Net NCP (kW) | | 1519 |
| Net CEC (kW) | | 412 |
| Annual Net kWh | | 1900373 |
| Lifecycle Net kWh | | 34206705 |
| Annual Net Therms | | 679930 |
| Lifecycle Net Therms | | 10050565 |
| | | |
| **Cost Effectiveness** | | |
| **TRC** | | |
| Costs | | 1675193.571 |
| Electric Benefits | | 2489842.939 |
| Gas Benefits | | 4675087.509 |
| Net Benefits (NPV) | | 5489736.877 |
| BC Ratio | | 4.277076138 |
| | | |
| **PAC** | | |
| Costs | | 4175820.405 |
| Electric Benefits | | 2489842.939 |
| Gas Benefits | | 4675087.509 |
| Net Benefits (NPV) | | 2989110.043 |
| BC Ratio | | 1.715813841 |
| | | |
| **Levelized Cost** | | |
| **Levelized Cost TRC ($/kWh )** | | |
| Discounted kWh | | 17622795.95 |
| Cost | | 0.035695167 |
| Benefits | | 0.141285353 |
| Benefit-Cost | | 0.105590185 |
| **Levelized Cost PAC ($/kWh)** | | |
| Discounted kWh | | 17622795.95 |
| Cost | | 0.070653302 |
| Benefits | | 0.141285353 |
| Benefit-Cost | | 0.07063205 |
| **Levelized Cost TRC ($/therm)** | | |
| Discounted Therms | | 5552056.947 |
| Cost | | 0.188424746 |
| Benefits | | 0.84204603 |
| Benefit-Cost | | 0.653621284 |
| **Levelized Cost PAC ($/therm)** | | |
| Discounted Therms | | 5552056.947 |
| Cost | | 0.527860522 |
| Benefits | | 0.84204603 |
| Benefit-Cost | | 0.314185508 |

## 3P Comprehensive Manufactured/Mobile Home Program

| Year | Total Budget | Total Incentives | Admin Budget | Net kWh | Net Therms | Net kW |
|---|---|---|---|---|---|---|
| 2006 | $ 1,525,001 | $ 1,181,413 | $ 343,589 | 633,458 | 226,643 | 607 |
| 2007 | $ 1,525,001 | $ 1,181,413 | $ 343,589 | 633,458 | 226,643 | 607 |
| 2008 | $ 1,521,998 | $ 1,181,413 | $ 340,586 | 633,458 | 226,643 | 607 |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 348001 | Duct Test and Seal | 219 | 48 | 0.21 | 0.89 | Per Unit | 18 | 3,250 | $ 244.15 | $ 84.00 | 633,458 | 138,840 | 607 |
| 2006 | 348002 | Faucet Aerator | | 7 | | 0.89 | Per Unit | 9 | 4,500 | $ 12.70 | | - | 26,966 | - |
| 2006 | 348003 | Low Flow Showerheads | | 9 | | 0.89 | Per Unit | 10 | 4,500 | $ 37.95 | | - | 35,957 | - |
| 2006 | 348004 | Pipe Wrap | | 9 | | 0.89 | Per Unit | 10 | 2,000 | $ 40.00 | | - | 15,981 | - |
| 2006 | 348005 | Water Heater Blanket | | 5 | | 0.89 | Per Unit | 10 | 2,000 | $ 40.00 | | - | 8,900 | - |
| 2007 | 348001 | Duct Test and Seal | 219 | 48 | 0.21 | 0.89 | Per Unit | 18 | 3,250 | $ 244.15 | $ 84.00 | 633,458 | 138,840 | 607 |
| 2007 | 348002 | Faucet Aerator | | 7 | | 0.89 | Per Unit | 9 | 4,500 | $ 12.70 | | - | 26,966 | - |
| 2007 | 348003 | Low Flow Showerheads | | 9 | | 0.89 | Per Unit | 10 | 4,500 | $ 37.95 | | - | 35,957 | - |
| 2007 | 348004 | Pipe Wrap | | 9 | | 0.89 | Per Unit | 10 | 2,000 | $ 40.00 | | - | 15,981 | - |
| 2007 | 348005 | Water Heater Blanket | | 5 | | 0.89 | Per Unit | 10 | 2,000 | $ 40.00 | | - | 8,900 | - |
| 2008 | 348001 | Duct Test and Seal | 219 | 48 | 0.21 | 0.89 | Per Unit | 18 | 3,250 | $ 244.15 | $ 84.00 | 633,458 | 138,840 | 607 |
| 2008 | 348002 | Faucet Aerator | | 7 | | 0.89 | Per Unit | 9 | 4,500 | $ 12.70 | | - | 26,966 | - |
| 2008 | 348003 | Low Flow Showerheads | | 9 | | 0.89 | Per Unit | 10 | 4,500 | $ 37.95 | | - | 35,957 | - |
| 2008 | 348004 | Pipe Wrap | | 8.978 | | 0.89 | Per Unit | 10 | 2000 | $ 40.00 | | - | 15,981 | - |

# 2006-2008 Energy Efficiency Programs
# SCG LivingWise® School Program Concept Paper

## 1. Projected Program Budget

| | | 2006 | 2007 | 2008 |
|---|---|---|---|---|
| Administration | | | | |
| | Administrative Overheads | $ 18,536 | $ 25,790 | $ 36,266 |
| | Administrative Other | $ 22,767 | $ 31,677 | $ 44,545 |
| Marketing & Outreach | | $ 18,939 | $ 26,350 | $ 37,055 |
| Direct Implementation | | | | |
| | Activity | $ 59,437 | $ 82,695 | $ 116,289 |
| | Installation | $ - | $ - | $ - |
| | Hardware & Materials | $ 95,099 | $ 132,311 | $ 186,062 |
| | Procurement | $ 6,900 | $ 9,600 | $ 13,501 |
| | Incentives | $ 4,987 | $ 6,938 | $ 9,756 |
| EM&V | | $ - | $ - | $ - |
| *Total* | | *$ 226,665* | *$ 315,361* | *$ 443,474* |

## 2. Projected Program Impacts

| 2006 | | | 2007 | | | 2008 | | |
|---|---|---|---|---|---|---|---|---|
| **Net kWh** | **Net kW** | **Net Therms** | **Net kWh** | **Net kW** | **Net Therms** | **Net kWh** | **Net kW** | **Net Therms** |
| - | - | 128,141 | - | - | 178,284 | - | - | 250,711 |

## 3. Program Cost Effectiveness

Attached

## 4. Program Descriptors

Market Sector: Residential

Program Classification: Local

Program Status: Modified (program is currently in use by SCG and SCE in selected partnership areas)

Geographic Area: Open to any portions of the SCG territory as jointly identified by SCG and SCE. The LW program is suitable for all parts of the territory, as it can be implemented in a single classroom or an entire region. As such, it can be a highly effective enhancement or complement to other K-12 school programs. LW can cover gaps in school program coverage, augment areas which need more support or energy savings, or be used as a premium/incentive to encourage key schools and districts to participate in a package of SCG sponsored school programs.

Percentage of Coverage: The population of Grade 6 students in the SCE service territory alone is roughly estimated at 200,000. By serving an average of 22,500 participants per year, the proposed LW program would reach approximately 11% of the potential per year. LW is scalable and can easily be adjusted up or down.

**5. Program Statement**

Energy Efficiency Education is universally regarded as an essential component of the energy efficiency program mix. Measuring success – particularly in terms of energy savings and cost effectiveness - is often challenging. Teacher participation in K12 education programs can be difficult to establish and track. Schools, students, and families can be confused or even irritated by multiple conservation messages or program promotions from water, electric or gas providers – or the opportunity to present a united resource conservation message might be missed entirely. Many education programs provide information that is never fully assimilated or ever used by either children or adults.

Beyond these hurdles, there are some of the more traditional barriers to energy efficiency which can be addressed:

**1. Barrier:** *Hassle or transaction costs, along with Information or search costs*. California's energy supply needs would be dramatically reduced if every household was to install a single (or more) cfl, yet most homes have no plan to do so. This lack of awareness or knowledge persists in part due to the perceived 'wall' – the thought that learning about the benefits of efficiency will take too much time or money to overcome. The perceived benefits do not outweigh the assumed costs. The basic goal of energy efficiency education should be to demonstrate the value of energy efficiency - that energy efficient products and practices save money, maintain or increase performance, and are easy.

**2. Barrier:** *Performance uncertainties*. Skepticism regarding performance often outweighs the motivation to save money or resources. People tend to associate conservation with sacrifice, which discourages consideration of even the most basic improvements such as efficient lighting and simple water efficient devices, much less higher cost/return options such as new appliances or duct repair.

Additionally, there can be an inherent distrust of 'outside' information sources such as government, business, or other advocates who might have differing agendas from those of the general public. Use of traditional marketing and communication channels also positions energy efficiency products as well as the overall benefits of efficiency in the same light as consumer products. This not only builds skepticism of a perceived 'marketing message', but also is vulnerable to being ignored entirely as people seek to tune out the barrage of messaging that they are hit with each day in the form of advertising, mail, and other communications which advocate actions or purchases.

**3. Barrier:** *Bounded rationality*. While the benefits of a high efficiency showerhead and energy efficient lights are difficult to dispute, resistance to change and inertia among the general public prevent widespread use of these measures. Unlike the previous barriers, this covers those who *do* know better – that is, they realize that energy efficiency saves money and offers additional benefits. But, even though

armed with that information, they fail to take even the simplest of actions to take advantage of those benefits.

## 6. Program Rationale

LW is designed to be a valuable and trackable element of the educational mix. Versatile, targeted to specific regions or even neighborhoods, and appealing to participating teachers and students, LW can be implemented in a single classroom or district wide. Centralized implementation allows diverse locations to participate economically. The program is a module which can complement virtually any other educational program, offering an enticing incentive for potential participating teachers. This can help boost participation in other K12 programs.

LW features comprehensive implementation practices which track participation and collects individual results from students and their families. Ongoing contact is maintained with participating teachers. Energy savings are based on the installation of individual measures – no savings from behavioral changes are claimed.

LW uses an integrated program approach to resource efficiency education, linking electricity, gas and water conservation education in a single program. Educational impact is greatly enhanced by the actions which students take in their own homes. Students provide a personal and 'un-ignorable' message to adults and other family members, which reaches an audience which can easily be missed by traditional communication channels such as mass media, bill inserts, mailings etc.

This program approach offers the advantages of co-sponsorship (gas, water and energy benefits encourage sponsorship by all providers), and the cost-sharing feature increases the cost effectiveness for all parties dramatically. The LW program is unusual among educational programs by its tangible cost savings and cost effectiveness.

The LW Program effectively addresses the barriers identified above:

**Barrier:** *Hassle or Transaction Costs, along with Information or Search Costs*
LW reduces information gathering costs to zero, because information on energy efficiency is delivered to participating families through the voices and actions of the enthusiastic students (their children). Participants are able to use resource saving devices in their own homes and experience the benefits first-hand.

Additionally, there may be no more compelling voice for an adult than that of their newly educated child – especially when that child can act as the 'home expert' and share that knowledge with other older family members.

More information is also available via the website, kit contents and fliers which inform participants of additional program opportunities.

**2. Barrier:** *Performance uncertainties*

LW provides a 'free in-home trial' for energy efficient products allowing students and their families to personally sample the benefits and simplicity of an energy efficient lifestyle. Without the retrofit assignments, school-based learning does not reach adults as effectively. Teachers are consistently impressed with the amount of parent response generated by the LW Program, confirming the program's impact on otherwise hard to influence adults.

**3. Barrier:** *Bounded Rationality*
The LW 'in-home test drive' proves that energy efficient product performance can be equal or superior. The showerhead and other energy efficient products in the Resource Action Kit are all top quality devices, ensuring optimal performance and participant satisfaction. Kit products provide a personal demonstration of the quality, effectiveness, and ease of energy efficiency products - all at no cost to the participant.

LW is catalyst for action. Not only do the installation activities overcome resistance or ignorance, but they inspire interest in additional program opportunities. When surveyed as part of the 2001 SCE LW program, ninety percent of LivingWise® households asked to be informed about other available energy efficiency programs. New options for web and phone access to information, along with kit inserts and materials, will help capture this interest and build participation in other programs.

**SCG-Specific Rationale**
The SCG LW program will:

- Boost the energy efficiency/TRC results for SCG educational programs.
- Offer a potential incentive for key schools to adopt a 'package' of educational programs of which LW is an attractive module.
- Cover areas that are underserved or have been missed by other education programs. LW can be implemented in a single classroom or rural location – easily filling gaps in coverage.
- Provide an immediately responsive program option. In addition to being highly target-able, LW can be launched in a new area within 2-3 weeks, offering an extremely short lead time and unusually quick response factor.

## 7. Program Outcomes

**Quantitative Outcomes** @ 22,500 participants per year (scalable)

- **Knowledge Gained.** Increased knowledge of energy and water conservation along with general resource knowledge as shown by performance on pre and post tests provided in classes. *Knowledge Gain Target: 30% gain in test scores.*

- **Cost Effective Therm, kWh and Water Savings.** Extensive installation of kit measures, yielding cost effective therm, kWh and water savings. E3

Calculator is attached, although not required. Savings are measured by actual installation data collected from participants. *Annual Savings Targets: As stated above.*

- **Teacher and Participant Satisfaction**. Teacher evaluations, along with written feedback from students and parents are a solid indicator of program satisfaction. Program success in this area not only builds support for LW, but also helps increase participation in other energy efficiency education programs and support for energy efficiency overall. *Teacher Satisfaction Goal: 95% satisfaction (program rating of Good or Excellent)*

- **Increased Participation in Other EE Programs**. One of the key objectives of the LW program is to boost awareness of other program opportunities and either generate leads or actually drive program enrollment. Success in these efforts can be tracked by website traffic, coded enrollment materials, or call center activity. *Target: TBD*

**Qualitative Outcomes**

- **Superior Efficiency Education Results.** More thorough and lasting learning results from students' actions to put classroom knowledge into practice in their homes. Practical knowledge of how to achieve savings at home or in the community, and how to assess new situations to find resource savings solutions.

- **In-Home 'Test Drive' Delivers the Message to Adults.** With children as the primary messengers and advocates for change, parents and family members get a first-hand demonstration of how easy and effective energy efficiency products and practices can be. Clearly, this is more personal and effective than any advertising, promotions or conventional communications.

- **Increased Public Awareness.** LW program participants become a powerful and local voice to promote energy efficiency and specific program opportunities. Between press coverage and additional community or school activities, events and promotions, a new voice can emerge in the community.

## 8. Program Strategy

The LivingWise Program employs an innovative blend of conventional strategies to maximize program impacts and cost-effectiveness. These include various forms of Residential Audits, Residential Direct Install, Mass Marketing, and Residential Downstream Training. Other program-specific strategies include:

- **Program Customization.** Personalizes the program content to incorporate local program opportunities and topics. Messaging, activity content, and kit contents can be customized as specifically as by individual school. This attracts outside sponsorship as well.

- **Combining Education with Action**. Reinforces learning while actively involving parents and other family members in the process. Action yields the cost-effective savings results.

- **Participant Accountability and Comprehensive Implementation.** Ongoing contact with teachers and clear expectations for implementation, results collection and other teacher/student responsibilities improves results and enables clear assessment of program performance. The teacher communication also enables midstream and annual adjustments to program content and implementation tactics to enhance results.

- **Inspiring Additional Action**. Students become very excited and proud of becoming the 'resident experts' for their families. Adults and family members become aware of and interested in additional opportunities for savings. The LW Program builds on this interest by cross-promoting other available programs, websites and phone numbers for additional information. Dialogue between parents and teachers, as well as with the program and its sponsors is actively encouraged.

### 8.1.1. Program Strategy Description

- **Residential Audits** – where students work with their parents to complete a simple survey of home attributes, products, and practices.
- **Residential Direct Install** – where students work with their parents to install new energy efficiency devices provided in their Resource Action Kits, and assigned as homework projects.
- **Mass Marketing** – Local and regional coverage of program activities (not for enrollment purposes) which promotes energy efficiency as well as program activities and accomplishments. Creates a local voice for energy efficiency – a 'bottom-up' approach in contrast to most top-down mass marketing communication efforts
- **Residential Downstream Training** – Students and parents receive education and 'training' regarding the specific retrofit devices as well as energy efficiency and resource conservation topics.

**Program-Specific Strategies:**

- **Program Customization.** Personalizes the program content to incorporate local program opportunities and topics. Messaging, activity content, and kit contents can be customized as specifically as by individual school. This can also help attract outside sponsorship.
- **Combining Education with Action**. Reinforces learning while actively involving parents and other family members in the process. Actions (retrofit installations) yield the cost-effective savings results.
- **Participant Accountability and Comprehensive Implementation.** Ongoing contact with teachers and clear expectations for

implementation, results collection and other teacher/student responsibilities improves results and enables clear assessment of program performance. The teacher communication also enables midstream and annual adjustments to program content and implementation tactics to enhance results.

- **Inspiring Additional Action**. Students become very excited and proud of becoming the 'resident experts' for their families. Adults and family members become aware of and interested in additional opportunities for savings. The LW Program builds on this interest by cross-promoting other available programs, websites and phone numbers for additional information. Dialogue between parents and teachers, as well as with the program and its sponsors is actively encouraged.

### 8.1.2. Program Indicators

- **Residential Audits** – Reported via Scantron forms, which are collected by teachers and submitted for tabulation by the LW Program Center.
- **Residential Direct Install** – Installation activities are reported on Scantron forms and submitted for tabulation by the LW Program Center.
- **Mass Marketing** – Local media coverage or participation in community events is tracked and documented. Units = # occurrences.
- **Residential Downstream Training** – Educational activities are conducted by teachers as part of program participation. Students then take this information home and work with their parents. Units = # participants.

**Program-Specific Strategies:**

- **Program Customization** – Prior to each school year, materials can be customized to include specific programs to be cross-promoted to LW program participants for that year.
- **Combining Education with Action**. Measured by returns of Scantron forms.
- **Participant Accountability and Comprehensive Implementation.** This is reflected in the number of teachers who return results and evaluations.
- **Inspiring Additional Action**. Interest, requests for information, and actual enrollment in additional energy efficiency programs can be tracked.

## 9. Program Objectives

i. Program Customization

- Identify the top residential programs to be cross-promoted via the LW program and integrate them effectively into program content and materials.

- Establish clear means for connecting interested parents to obtain additional program information as well as to actually enroll in eligible programs. (website, reply card, toll-free numbers, etc)

- Identify clear priorities for LW program implementation (target locations).

ii. Teacher Outreach and Enrollment

- Individually enroll teachers in targeted areas to fill 100% of the program budget.

iii. Materials Shipment

- Ship materials directly to participating teachers at their classrooms. Confirm materials receipt.

iv. Ongoing Teacher Support

- Establish and maintain contact with each participating teacher. Answer all questions, monitor program progress, and supervise results collection.

v. Results Collection

- Collect Household Report Cards, student pre/post test results, teacher evaluations, parent response cards and student letters from teachers.

- Tabulation of each measure above for analysis and reporting, referral, or program modification.

vi. Supplemental Activities and Publicity

- Identify sponsor priorities by program, theme and location.

- Design school, media, and/or community events or supplemental program activities to publicize or promote the chosen theme(s) to the desired audiences and communities.

## 10. Program Implementation

### 1. Additional Program Sponsor Solicitation

- LW is designed to meet the objectives of water agency sponsors as well as other corporate or regional interests. Depending on the desired timetable and the target areas identified in the following step, additional sponsorship funding will be sought.

**2. Program Customization and Planning**

- LW will meet with SCG, SCE, and any other sponsors to identify and develop any custom content, kit inserts, or other modifications to the program and specific local target area. Customization can include the identification of other energy efficiency programs to cross-promote, additional community activities to build awareness, or other tools to build traffic at websites, increase usage of postcards or other mailed items.

- Additional customization of teacher, student and family instructions, incentives and website will be ongoing.

- As part of the planning process, LW will work with sponsors to identify sponsor priorities for potential additional community outreach efforts. Priorities will include desired program or message, target audience, location, and timing.

**3. Materials Production and Assembly**

- LW will produce all written materials necessary for program implementation, including but not limited to teacher instructions, student activity booklets, parent correspondence, surveys, and installation instructions, all incorporating sponsor logos and any other customized elements as identified above.

- LW will assemble a LivingWise® Resource Action Kit for each participant. The kits will include, but are not limited to: 2.0 gpm high efficiency showerhead, compact fluorescent bulb, electro-luminescent Night Light, FilterTone® Alarm, kitchen aerator, water temp check card, air ruler, bathroom aerator, mini tape measure, flow rate test bag, resource fact wheel, toilet leak detector tablets, drip gauge, interactive educational CD-ROM game, installation instructions, and Household Report Card survey
form. Custom inserts will also be included, if identified by the sponsors in the customization phase.

**4. Teacher Outreach and Enrollment**

- Enrollment data and teacher information is gathered for eligible schools in the target area(s) as determined by SCG and other sponsors. Teachers are contacted via mail, email, fax and phone to introduce the program. Individual participation commitments are collected.

**5. Materials Shipment**

- Collation of individual shipments, by school, is coordinated by the Program Center. Individual classroom shipments of materials utilize UPS, Fed Ex or Common Carrier to ship directly to participating schools.

**6. Ongoing Teacher Support**

- LW contacts participating teachers via phone and email to confirm receipt of materials, reconfirm implementation timing, answer implementation questions and monitor program progress.

**7. Results Collection and Tabulation**

- Participating teachers gather completed student program materials, including completed Household Report Card surveys and evaluations, and forwards them to the LW Program Center for processing.

- LW provides ongoing support to participating teachers to ensure maximum response.

**8. Supplemental Activities and Publicity**

- LW will work with SCG, SCE, and any other sponsors to design and assist with the implementation of any activities, events, or other media coverage efforts as identified in the first step above.

**11. Customer Description**

The LW Program targets residential customers with children attending Grade 6 classes.

**12. Customer Interface**

Program materials and activities are designed for a Grade 6 audience. This helps ensure that the information will be accessible to both children and adults of all educational backgrounds. Materials addressing all types of learning preferences are provided, including written materials, video, website, classroom posters, and the kit itself.

**13. Energy Measures and Program Activities**

**13.1. Prescriptive Measures.**
See SoCalGas February 1, 2006 Workbook.

**13.2. kWh Level Data**
See SoCalGas February 1, 2006 Workbook.

## 13.3. Non-energy Activities

### 13.3.1. Activity Description

1. Behavioral Change from Education.

LW is an educational program and its content provides specific suggestions for savings in addition to the retrofit activities specified by the kits.

2. Home Audits

Each student is assigned a simple home audit to be completed with their parents or guardians.

3. Cross-promotion of other efficiency programs

A key objective of the LW Program is to promote additional program opportunities to LW program participants. This capitalizes on the 'test drive' aspect of having experienced the performance and value of simple energy and water efficient products and practices in their own homes. Additional program opportunities will be specifically promoted, using a variety of print and web materials.

4. PR and community outreach

Participating students, families, and teachers are energized and enthusiastic. This enthusiasm sets the stage for media coverage, as well as participation in community events, award presentations, and supplemental activities such as contests, PSA's and other forms of outreach to the overall community. This raises community awareness for not only the efforts of the LW participants, but also for specific programs as well as energy efficiency overall.

### 13.3.2. Quantitative Activity Goals

1. Behavioral Change from Education – none

2. Home Audits – goal is 100% of LW Program participants

3. Cross-promotion of other efficiency programs – goal is that 100% of program participants will receive this type of information. Actual signups or lead generation is difficult to predict.

4. PR and community outreach – a minimum of four events or activities, unless otherwise specified by SCG.

### 13.3.3. Assigned attributes of the activity (market sector, end use)

1. Behavioral Change from Education - Residential, general: lighting, water heat, HVAC, and appliance usage.

2. Home Audits - Residential, general: lighting, water heat, HVAC, and appliance usage.

3. Cross-promotion of other efficiency programs – TBD based on SCG input. Most likely residential appliance and HVAC, although programs targeting small business or other sectors are possible.

4. PR and community outreach – Residential and potentially small commercial, based on SCG priorities.

**14. Subcontractor Activities**

No subcontractors will be used.

**15. Quality Assurance and Evaluation Activities**

- Parental Signatures on student surveys
- Teacher evaluations
- Student pre/post test results
- Parent comment cards
- Teacher advisory board input
- Expected number/percent of inspections (planned % of projects) = 40%

**16. Marketing Activities**

i. Soliciting program sponsorship to other potential funding partners, including water providers and corporations.

- Once target areas are identified, water providers will be identified and contacted for program participation. Relationships are already in place with several water providers.

ii. Teacher Outreach and Enrollment

- Once target areas are identified (by region, neighborhood, or school), eligible schools will be identified. Outreach is typically handled directly with eligible teachers, although school and district level materials are available, along with presentations, if called for.

- Teacher contact employs a variety of means, including telephone, fax, email, mail and in-person visits. Teachers are informed of their eligibility and the program's availability to them. Signup rates are typically in excess of 80%.

iii. Cross-promotion and lead generation or enrollment in other available efficiency programs for parents of program participants

- LW participants and their families get the chance to experience the benefits of energy efficiency products and practices in their own homes, first-hand. This in effect serves to predispose them toward additional programs and opportunities which they might be eligible for. LW capitalizes on this interest through:

- Parent Comment Cards and other inserts in student kits.

- Direct correspondence with parents/guardians via program.

- Web links for additional program information or actual signups, including IOU and FYP.

- Toll-free phone numbers for clearinghouse information on locally available programs.

- Special promotions to build interest, leads or actual signups. Options will be discussed during initial customization phase, as well as throughout program implementation.

iv. Community publicity for program activities, additional opportunities, and energy efficiency in general.

- LW will assist SCG to coordinate community events, media coverage and other activities to increase community awareness of local family and school participation in LW, as well as overall energy efficiency efforts in the community and region. Activities and specific target locations will be identified in advance, and discussed throughout the program implementation period.

**17. CPUC Objective**

LW addresses the following CPUC objectives from Section 2 of the Energy Efficiency Policy Manual

- **Deliver energy efficiency savings over the short and long term.** The LW program supports short and long term energy efficiency by educating two generations and inspiring immediate action to change habits and products. Retrofits yield cost-effective results (TRC > 1) based solely on the hardware installations. Retention of knowledge gained is much more thorough and long lasting when that knowledge is put into action, going well beyond the outcomes generated by conventional educational programs.

- **Eliminate "lost opportunities" and "cream skimming."** LW provides a broad overview of household resource efficiency opportunities, including electricity,

gas, and water. The program inspires action by participating students and their families, and motivates them to take advantage of additional program opportunities.

- **Include a selection of information and education programs that support the Commission's short-term and long-term energy savings goals**. LW is a highly cost effective educational approach based solely on the installed hardware from the retrofit activities. Savings from behavioral changes as well as increased participation in additional program opportunities are over and above what is projected on the attached E3 documentation.

- **Support state goals to reduce greenhouse gas emissions.** LW content and activities make a connection between everyday habits and products used in the home and both energy efficiency and greenhouse gas impacts. To make the link between greenhouse gas emissions (GHG) and energy efficiency, the LW Program will include the total GHG reduction associated with the recommended measures.

| | SCG3534 3P LivingWise | |
|---|---|---|
| **BUDGET** | | |
| | | |
| **Administrative Costs** | **$** | **179,580** |
| Overhead and G&A | $ | 80,592 |
| Other Administrative Costs | $ | 98,988 |
| **Marketing/Outreach** | **$** | **82,344** |
| **Direct Implementation** | **$** | **723,574** |
| Total Incentives and Rebates | | |
| User Input Incentive | $ | - |
| Direct Install Rebate | $ | 21,898 |
| Direct Install Labor | $ | - |
| Direct Install Materials | $ | - |
| Activity | $ | 258,420 |
| Installation | $ | - |
| Hardware & Materials | $ | 413,472 |
| Rebate Processing & Inspection | $ | 29,784 |
| **EM&V Costs** | **$** | - |
| **Budget** | **$** | **985,498** |
| **Costs recovered from other sources** | **$** | - |
| **Budget** (plus other costs) | **$** | **985,498** |
| | | |
| **PROGRAM IMPACTS** | | |
| **Program Reductions for Measures installed through 2008** | | |
| User Entered kW (kW) | | 0 |
| Net Jul-Sept Peak (kW) | | 0 |
| Net Dec-Feb Peak (kW) | | 0 |
| Net NCP (kW) | | 0 |
| Net CEC (kW) | | 0 |
| Annual Net kWh | | 0 |
| Lifecycle Net kWh | | 0 |
| Annual Net Therms | | 442030 |
| Lifecycle Net Therms | | 3978266 |
| | | |
| **Cost Effectiveness** | | |
| **TRC** | | |
| Costs | | 978906.8133 |
| Electric Benefits | | 0 |
| Gas Benefits | | 1928905.688 |
| Net Benefits (NPV) | | 949998.875 |
| BC Ratio | | 1.970469162 |
| | | |
| **PAC** | | |
| Costs | | 982733.5167 |
| Electric Benefits | | 0 |
| Gas Benefits | | 1928905.688 |
| Net Benefits (NPV) | | 946172.1717 |
| BC Ratio | | 1.962796278 |
| | | |
| **Levelized Cost** | | |
| **Levelized Cost TRC ($/kWh )** | | |
| Discounted kWh | | 0 |
| Cost | | 0 |
| Benefits | | 0 |
| Benefit-Cost | | 0 |
| **Levelized Cost PAC ($/kWh)** | | |
| Discounted kWh | | 0 |
| Cost | | 0 |
| Benefits | | 0 |
| Benefit-Cost | | 0 |
| **Levelized Cost TRC ($/therm)** | | |
| Discounted Therms | | 2649360.883 |
| Cost | | 0.369487909 |
| Benefits | | 0.728064531 |
| Benefit-Cost | | 0.358576622 |
| **Levelized Cost PAC ($/therm)** | | |
| Discounted Therms | | 2649360.883 |
| Cost | | 0.370932297 |
| Benefits | | 0.728064531 |
| Benefit-Cost | | 0.357132234 |

## 3P School Targeted LivingWise

| Year | Total Budget | Total Incentives | Admin Budget | Net kWh | Net Therms | Net kW |
|---|---|---|---|---|---|---|
| 2006 | $ 226,665 | $ 4,987 | $ 221,678 | - | 128,141 | - |
| 2007 | $ 315,360 | $ 6,938 | $ 308,422 | - | 178,284 | - |
| 2008 | $ 443,475 | $ 9,756 | $ 433,719 | - | 250,711 | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 347001 | LivingWise School Energy Kit | - | 11 | | 0.8 | Kit | 8.5 | 15,111 | $ 0.33 | $ 0.33 | - | 128,141 | - |
| 2007 | 347001 | LivingWise School Energy Kit | - | 11 | | 0.8 | Kit | 8.5 | 21,024 | $ 0.33 | $ 0.33 | - | 178,284 | - |
| 2008 | 347001 | LivingWise School Energy Kit | - | 11 | | 0.8 | Kit | 8.5 | 29,565 | $ 0.33 | $ 0.33 | - | 250,711 | - |

# 2006-2008 Energy Efficiency Programs
# Residential Upstream Central Heating Replacement and Midstream Duct Testing and Sealing and Quality Installation Assurance Program
# Concept Paper

## 1. Projected Program Budget

| | | 2006 | 2007 | 2008 |
|---|---|---|---|---|
| Administration | | | | |
| | Administrative Overheads | $ 63,480 | $ 67,297 | $ 67,455 |
| | Administrative Other | $ 242,532 | $ 216,767 | $ 221,953 |
| Marketing & Outreach | | $ 181,000 | $ 137,000 | $ 138,000 |
| Direct Implementation | | | | |
| | Activity | $ - | $ - | $ - |
| | Installation | $ - | $ - | $ - |
| | Hardware & Materials | $ - | $ - | $ - |
| | Procurement | $ - | $ - | $ - |
| | Incentives | $ 1,311,437 | $ 1,686,134 | $ 1,686,134 |
| EM&V | | $ - | $ - | $ - |
| *Total* | | *$ 1,798,449* | *$ 2,107,198* | *$ 2,113,542* |

## 2. Projected Program Impacts

| 2006 | | | 2007 | | | 2008 | | |
|---|---|---|---|---|---|---|---|---|
| **Net kWh** | **Net kW** | **Net Therms** | **Net kWh** | **Net kW** | **Net Therms** | **Net kWh** | **Net kW** | **Net Therms** |
| - | - | 113,847 | - | - | 146,375 | - | - | 146,375 |

There are no electrical savings being claimed as this is a gas only program.

## 3. Program Cost Effectiveness

Attached

Conservation Services Group, Inc. (CSG), in partnership with D&R International (D&R) and Proctor Engineering Group (PEG), offers the following innovative approach to Southern California Gas' (SoCalGas) Residential Upstream Central Heating Replacement, and Midstream Duct Testing and Sealing and Quality Installation Assurance Program (Event 334). We propose to work with distributors and other upstream market actors, especially manufacturers and major retailers, and with HVAC dealers and contractors to present strong value propositions to their customers, which will include high efficiency gas furnaces, quality installations, and duct testing and sealing.

A crucial element of our strategy is to direct equipment incentives straight to dealers and contractors upon the successful sale and installation of a qualifying furnace. These market actors are in the best position to leverage the incentives and integrate them into the deals they present to customers.

We further propose to pay furnace incentives only when the new furnace gets a quality install, including optimizing air flow and input rate as measured by temperature rise, checking fan off run time, and testing ducts. We also propose to incentivize duct sealing when it is called for.

These two features, a) high efficiency furnace incentives aimed at the midstream and b) only paying these incentives when the equipment is quality installed, will result in considerable gas savings, a dramatic reduction in lost opportunities, and better utilization of SoCalGas's program investments.

We recognize that this approach differs markedly from past programs that utilized market incentives at the distributor or manufacturer level. While these programs, in California and elsewhere, have attained a reasonable throughput of product, they have been largely disconnected from promoting and supporting other gas heat efficiency efforts such as quality installation and ensuring duct integrity. They bear a substantial risk of free ridership and impose data collection and reporting requirements that some distributors and manufacturers have found burdensome and that erode some or all of the value of the incentives.

| Production and Budget Summary | | | | |
|---|---|---|---|---|
| | 2006 | 2007 | 2008 | Total |
| AFUE 90+ Furnaces (quality installed ) | 2,213 | 2,846 | 2,846 | 7,905 |
| Duct Systems Tested | 2,213 | 2,846 | 2,846 | 7,905 |
| Duct Systems Sealed | 1,771 | 2,277 | 2,277 | 6,325 |

- Stand alone residential HVAC programs that are not directly bundled with similar work in commercial facilities typically have benefit cost ratios that are less than one. For example, CSG is also responding to the San Diego Gas & Electric Upstream HVAC/Motors Program RFP which includes both residential and commercial customers. In this program, measure TRCs for residential work are projected to be less than 1.00, but are blended with commercial work to produce a program TRC of greater than 1.00. We assume that SoCalGas's overall portfolio of gas efficiency programs could accommodate a strong residential program.
- We are concerned that the E3 calculator may be conservative on the future direction of natural gas prices. Prices have recently gone up significantly in the California market, which does not appear to have been modeled in the E3 calculator. While no one knows whether the higher price levels will be sustained or where prices will be going over the years, we believe that the CPUC would be responsive to a prudent approach to gas efficiency that would anticipate higher prices. Since the benefit cost ratios in the E3 calculator are directly proportional to future gas prices as modeled, this would result in a higher TRC ratio.

- We believe that our program design will produce real, verifiable savings that will assist SoCalGas in meeting key CPUC requirements:
  - Achieve sector equity by serving residential customers.
  - Dramatically reduce the cream skimming, free ridership, and resulting lost opportunities that we believe are endemic to even the best traditional upstream rebate programs.

## 4. Program Descriptors

The proposed Residential Upstream/Midstream Heating Program targets residential customers in both the retrofit and new construction markets. This is part of a comprehensive statewide approach to addressing the HVAC market at the upstream, midstream, and downstream levels; the Conservation Services Group (CSG) Team is also proposing a similar approach to other IOUs. The proposed program is new and, we believe, innovative. While high efficiency furnaces have been included in SoCalGas's Statewide Residential Rebate program for years, the proposed program separates residential HVAC from the downstream rebate program, moves incentives and outreach to the upstream and midstream sectors, and integrates duct testing and sealing as well as quality installation.

One of the most significant new developments CSG proposes as part of the program is that incentives would be issued at the midstream level to maximize cost-effectiveness and market impacts, while working with upstream players – manufacturers and distributors – in a manner that supports their business goals and secures their participation.

The program targets all of SoCalGas territory, but emphasizes customers in Climate Zones 5, 10, and 14. These three climate zones comprise approximately 13% of SoCalGas's territory, based on US Census population data. The climate zones targeted are those that offer the greatest potential for cost-effective savings and upgrades to premium efficiency equipment. The CSG Team estimates that market potential in the 2006-2008 period for premium efficiency equipment, properly installed, will be approximately 12% of new construction and retrofit/replacement furnaces in the targeted regions.

## 5. Program Statement

The HVAC equipment market is highly competitive. Customers tend to view equipment as a commodity, and consider brand important only as a measure of anticipated product reliability or customer service, based on prior experience. Price competition, increasing materials and component costs, first-cost approaches to sales, and the commoditization of HVAC equipment have driven profits down so that most upstream and midstream actors are earning maximum profits of about 5 percent on each sale. As a result of these market conditions, manufacturers in

particular are desperate to find opportunities for increased brand recognition and market differentiation. In summary, the current HVAC market is characterized by sales that are based predominantly on the lowest equipment costs. This has led to dwindling profitability in the upstream and midstream sectors, and insufficient information among customers about the benefits of energy efficiency. All parties would benefit from changing the discussion at the time of sale to focus on comfort, customer service, and the lifecycle cost of operating the equipment.

At the same time, customers who are at all attuned to energy efficiency concerns may believe that products that meet the new Title 24 standard are already highly energy efficient. Customers need more information about the range of efficiency available in the market, and the size of efficiency gain they can experience by combining premium equipment with quality installation and sealed ducts.

The CEC estimates that the average California home's ducts leak 30% of their air to outside the building. That is worse than a furnace with an AFUE of 70%. Yet at the present time there is only a small market for high efficiency duct systems.

Designed airflow rates on furnaces have increased about 25% in recent years, in spite of a general reduction in installed furnace size. This increase in flow produces higher efficiency furnaces but duct systems have not been modified to allow for the higher flows. The resulting inadequacy of duct design causes an increase in external static pressure that causes lower than designed airflow, and efficiencies that do not meet the manufacturers' specifications. Technicians usually do not check the airflow on furnaces upon installation.

The higher efficiency units are very dependent on proper airflow to approach or pass flue gas condensing temperatures. Proper airflow is essential.

Another integral change to furnace design to achieve high efficiencies is the extension of the fan run time at the end of the burner cycle. When the fan run times are long, the maximum amount of heating is delivered out of the heat exchanger. If the fan time/temperature delay is set incorrectly, the furnace loses efficiency.

## 6. Program Rationale

To address the first problem identified above –an HVAC market focused on first cost, resulting in generic equipment installation and minimal profitability in the industry – the CSG Team proposes a coordinated program that brings upstream and midstream strategies closer together. Our approach can help the entire industry to move from the marginally profitable business of selling standard equipment to customers every 18 years to a sustainable service-oriented business model that integrates installation techniques, duct sealing, and ongoing maintenance. The service-based approach has been proven to increase customer retention, predict and prevent peak season equipment failure, improve customer service scheduling, and

dramatically increase profits at both the upstream and midstream levels. This also obviously will help to achieve cost-effective energy savings.

To address the second problem – customers' assumption that they are getting energy efficient equipment with standard product and installation – the program incentivizes premium efficiency equipment and requires that these incentives are only paid when the furnace receives a quality installation, thus maximizing energy savings, cost-effectiveness, and customer association of efficiency with quality customer service.

To address the problems of duct leakage and inadequate airflow, the CSG Team is proposing a new approach. This approach is to direct all incentives at the midstream level rather than upstream or downstream. We are advancing this approach for several reasons:

- Manufacturers and distributors already have a strong business motivation to sell premium efficiency equipment – higher profitability for more advanced equipment. They do not need financial incentives to motivate their efforts to sell higher margin equipment, but instead need market support and tools to change the critical actor in the entire HVAC decision process: the contractor and specifier. In fact, manufacturers have commented that incentives need to be higher than the market would truly require simply to justify their administrative burden for gathering and tracking customer information. In this market sector, it is more cost-effective – and leads to more lasting market changes – to aim the incentives at the midstream.
- Manufacturers and distributors can influence the products available to the midstream and provide the technical, business, and sales tools to allow dealers to upsell high efficiency equipment with a quality installation.
- The incentives at the midstream allow the contractor the option of either passing the incentive along to the customer or keeping the incentive as profit (or more likely, something in between). The key is for the contractor to sharpen the value proposition to the customer and also improve their sales techniques so that the customer will choose the premium efficiency package.
- Influencing the knowledge, behavior, and power of the midstream will have longer term impacts on HVAC installation practices, minimizing lost opportunities that could be created with an upstream, rebate-only approach.

We believe that this approach offers the potential, compared to other approaches, for changing stocking and supply practices without upstream incentives and therefore at greater cost-effectiveness. By coordinating incentives with midstream actors, we intend to create strong motivation for dealers and contractors to improve their sales techniques for premium efficiency equipment and integrate quality installation as a standard practice. This approach leads to sustainable practices that

serve as a profitable business model for all market sectors and benefit customers with improved equipment and installation.

The proposed approach will train contractor level sales personnel in selling the advantages of high efficiency equipment, high efficiency installation, and high efficiency ducts. It will not only train the midstream participants in proper installation and duct sealing, it will include a proven quality assurance system that ensures that these practices are properly implemented at every installation.

## 7. Program Outcomes

The major program outcomes anticipated for the proposed program are:

- The purchase of AFUE 90%+ furnaces, their quality installation, and testing of the associated duct system in over 7,900 homes during the three year program period. This will result in an increased percentage of furnaces receiving a quality installation (with the requirement that every unit that receives an incentive pass the quality assurance screen).
- Duct sealing jobs performed on over 6,300 gas heat systems during the three year program period. This will result in an increased market penetration of duct sealing as a percentage of furnace installations. When there are cost effective sealing opportunities, ducts will be sealed below 15% leakage or will have a 15% leakage reduction (these figures are percentages of nominal airflow). We project that this will be the case 60% of the time in Climate Zone 5 and 90% of the time in Climate Zones 10 and 14.
- Participation of all major HVAC manufacturers and distributors active in SoCalGas territory (participants should represent at least 75% of combined market share).
- Increased supply and stocking of premium efficiency furnaces for SoCalGas residential customers.
- Increased sales and technical training of midstream contractors focused on premium efficiency equipment and quality installation. At least nine sales trainings and nine installation and duct sealing trainings will be performed. Half of these trainings will take place in the first year.
- Increased energy efficiency-oriented advertising by upstream and midstream participants.

In the first program year, the CSG Team anticipates focusing upstream efforts on the manufacturers representing the largest share of the HVAC market: Carrier (UTC), Trane (American Standard), Goodman (Amana) and Lennox will be targeted, in addition to recruiting Sears as part of the residential upstream sector. Combined, these companies represent over 70 percent of residential HVAC systems sold in California. In addition to their concentrated market power, these

manufacturers – and their distributors, an increasingly consolidated market sector – have the closest ties to the midstream players, and have expressed interest in moving beyond business models based on first-cost and equipment replacement on failure.

We will work with all manufacturers and distributors participating in the current statewide program to ensure a smooth transition to the new approach. We will build upon our existing contact base to ensure we develop a manufacturer and distributor network that fully represents the commercial and residential sectors and includes product and technical personnel as well as sales, marketing, and training representatives.

By summer 2006, in time to influence the 2006-2007 heating season, we will recruit all major manufacturers and distributors. Participation, since the program does not rely on upstream incentives, will be defined by:

- Active engagement and expressed interest in the program;
- Dedicated contacts who will work with the program;
- Commitment to increased stocking and sale of premium efficiency furnaces;
- Commitment to promoting – through training, coordinated manufacturer/distributor incentives, and marketing – the proper installation of premium efficiency equipment at the midstream level, especially to their "elite" dealer and contractor networks; and
- Assistance in downstream marketing efforts focused on achieving efficiency gains, to be executed through the midstream.

The major milestones will be measuring impacts during the pre- and peak sales seasons for heating equipment, allowing an assessment of market impacts at the upstream and midstream levels. The CSG Team will provide quarterly market updates to ensure the program is on target for its goals, that all upstream actors have the tools, information, and motivation they need to increase the supply and proper installation of premium central heating equipment, and that sufficient contractors are enrolled in the program and performing at required production and quality levels. Please see schedule below.

# 2006-2008 Energy Efficiency Programs
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| SCG Residential Heating and Duct Testing Program Schedule | | | 2006 | | | | 2007 | | | | 2008 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1st Qtr | 2nd Qtr | 3rd Qtr | 4th Qtr | 1st Qtr | 2nd Qtr | 3rd Qtr | 4th Qtr | 1st Qtr | 2nd Qtr | 3rd Qtr | 4th Qtr |
| Deliverables/Milestones | Start | End | | | | | | | | | | | | |
| Program kickoff | Jan 06 | N/A | ■ | | | | | | | | | | | |
| Startup and capacity building: program design completion; outreach to manufacturers and distributors; outreach to new construction market actors; conceptual development of marketing and training materials; market research for targeting pre-1978 home owners; reenergizing existing PEG-affiliated contractors and recruiting new ones | Jan 06 | Mar 06 | ■ | ■ | ■ | | | | | | | | | |
| Develop annual plan | Jan 06 | Dec 07 | ■ | | | ■ | | | | ■ | | | | |
| Work with contractors to support and QC production of high efficiency furnaces, quality installations, and duct testing and sealing to meet the program unit and therm goals | Mar 06 | Dec 08 | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Develop marketing materials and outreach plans for heating pre-season; coordinate with upstream to integrate program methods and information into heating season marketing materials and sales training curricula; recruit contractors; plan contractor training materials | Apr 06 | June 06 | | ■ | | | | | | | | | | |
| Enrollment and training of contractors, preparation of fall marketing campaigns | July 06 | Sept 06 | | | ■ | | | | | | | | | |
| Coordinate with upstream partners and contractors on heating season outreach efforts; launch fall marketing campaign | Oct 06 | Dec 06 | | | | ■ | | | | | | | | |
| Continue work with contractors; continue outreach and coordination with upstream | Jan 07 | June 07 | | | | | ■ | ■ | | | | | | |
| Assess lessons learned from 2006-2007 heating season; prepare for 2007-2008 heating season; coordinate with upstream to increase participation and adjust implementation tactics to maximize midstream and downstream impact; continue work with contractors | July 07 | Sept 07 | | | | | | | ■ | | | | | |
| Coordinate with upstream partners and contractors on heating season outreach efforts; launch fall marketing campaign | Oct 07 | Dec 07 | | | | | | | | ■ | | | | |
| Continue work with contractors; continue outreach and coordination with upstream | Jan 08 | June 08 | | | | | | | | | ■ | ■ | | |
| Assess lessons learned from 2007-2008 heating season; prepare for 2008-2009 heating season; coordinate with upstream to increase participation and adjust implementation tactics to maximize midstream and downstream impact; continue work with contractors | July 08 | Sep 08 | | | | | | | | | | | ■ | |
| Coordinate with upstream partners and contractors on heating season outreach efforts; launch fall marketing campaign; prepare for program termination Dec 2008 and/or rollover to continued program, possibly with handoff to new program management contractor | Oct 08 | Dec 08 | | | | | | | | | | | | ■ |
| Quarterly Status Reports | Mar 06 | Dec 08 | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Annual market assessment reports; providing insight into market conditions, market penetration, and barriers and strategies to overcome them; insights into manufacturers and distributors; recommendations on future program activities | Jul 06 | Jul 08 | | | ■ | | | | ■ | | | | ■ | |

## 8. Program Strategy

| Program Strategies |
|---|
| Residential Midstream Rebates |
| Residential Upstream Rebates |
| Residential Quality Installation |
| Residential Appliance Early Retirement |
| Residential New Construction |
| Residential Comprehensive HVAC |
| Residential Upstream Training |
| Residential Downstream Training |
| Residential Targeted Marketing |

### 8.1.1. Program Strategy Description

- *Residential Midstream Rebates*: The strategy of the proposed program is intended to increase the level of coordination between the upstream and midstream sectors, leveraging the significant influence of the midstream on the actual equipment installed. Midstream rebates will be issued for high and premium efficiency furnaces in both new construction and retrofit applications when they meet quality installation guidelines. The midstream service provider, Proctor Engineering Group, will verify the quality installation of every unit through the CheckMe system.

- *Residential Upstream Rebates*: The rebates in the proposed program will be issued at the midstream rather than upstream level, with the cooperation of upstream players. However, there will be significant upstream outreach and coordination, led by D&R International. The goal of upstream outreach is to present the business case for increased stocking and sale of premium efficiency equipment, and to engage the upstream players in providing technical and sales tools to the midstream sector to improve follow-through during direct customer interactions. We anticipate that midstream rebates will also benefit manufacturers and distributors, who typically offer their own midstream and downstream rebates for selected equipment during early season promotions.

- *Residential Quality Installation*: One of the innovative elements of the CSG Team strategy is that all HVAC installations are required to meet defined quality installation standards in order to be eligible for the incentive. This strategy increases total energy and demand savings, and is expected to improve customer satisfaction and business relationships between customers and their HVAC suppliers.

- *Residential Appliance Early Retirement* (HVAC): The CSG Team, as part of its upstream relationships, anticipates working with manufacturers and distributors to encourage them to track and share (at least with the midstream) data on product sales by date. By identifying customers with older, inefficient systems, we will target good candidates for early retirement and lock in energy saving at the earliest possible date. We will also use any information that can be provided by the utilities to identify candidate customers for early retirement. This information could be construction dates for major residential developments, unusually high residential energy consumption, or customer account turnover within a home, indicating purchase of an existing home that could trigger upgrades and remodeling investments.

- *Residential New Construction*: Incentives and quality installation will be offered for both existing/retrofit applications and new construction. In order to secure the quality installation of premium efficiency equipment in new construction applications, the CSG Team will coordinate with relevant programs such as SoCalGas's residential new construction program managers and other statewide programs to ensure that builders and developers are aware of HVAC related opportunities to go beyond code.

- *Residential Comprehensive HVAC*: The components of the proposed comprehensive HVAC program include new construction and residential retrofit, high and premium efficiency heating equipment, as well as quality installation. The program will address these measures through the upstream in coordination with the midstream to deliver increased stocking of premium efficiency equipment, improved sales training by the upstream players, and improved customer service and quality installation at the midstream levels. As the contractor selected to implement SCE's comprehensive HVAC program, the SoCalGas residential elements will be coordinated to secure both heating and cooling savings in the most cost-effective manner.

- *Residential Upstream Training*: Manufacturers and distributors typically offer sales tools and incentives to influence the products and models sold by the midstream sector. The CSG Team will work with the upstream players to provide technical, business, and sales tools to improve the conversion rate for early retirement, annual maintenance, and adoption of premium efficiency units. The Team will work through the upstream, and will help manufacturers and distributors incorporate these training tools into their own training curricula and offerings to the midstream.

- *Residential Targeted Marketing:* As an upstream program, the CSG Team will target the manufacturers and distributors of HVAC equipment representing SoCalGas territory. The team will build on existing relationships with industry to reach out to these players, and will work one-on-one with each organization. Therefore, the Team does not anticipate the need for large quantities of marketing materials; key materials will include program overviews and the business case for selling premium efficiency equipment through the program.

### 8.1.2. Program Indicators

The primary goal of the program strategy is to procure energy savings and demand reduction. The program savings goals are summarized in Section 2.

## 9. Program Implementation

CSG, as the prime contractor for the Residential Upstream/Midstream Heating Program, will have overall responsibility for the success of the program and will serve as the point of contact for SoCalGas, with the programs of other IOUs, and with statewide HVAC activities to ensure consistency of goals, approach, and messaging.

D&R will lead upstream outreach and coordination. D&R has extensive experience working in the upstream sector, based on its work with the national ENERGY STAR program, serving as the liaison for the program with manufacturers and retailers for several major product groups. D&R has already contacted several leading manufacturers. D&R, CSG, and PEG will work with these companies, as well as building on their contacts in trade associations such as North American Technical Excellence (NATE), Air Conditioning Contractors of America (ACCA), Air-Conditioning and Refrigeration Institute (ARI), and Heating, Air Conditioning, and Refrigeration Distributors International (HARDI), to explain the details of the program, understand the specifics of market actors' business models, and find custom-tailored ways for them to expand their sale and stocking of premium efficiency equipment. We will also develop plans, tools, and content for distributor and dealer training to improve the follow-through at the critical time of contractor-customer interaction. D&R will work with manufacturers and distributors on an ongoing basis to identify any market barriers to increased supply of high efficiency equipment, help overcome them, and provide the tools and information that upstream actors require.

PEG will recruit, train, monitor, and pay incentives to the participating HVAC contractors.

## 10. Customer Description

The program, while focused on interacting primarily with upstream actors and contractors, targets residential customers seeking furnace replacements in existing buildings or having them installed for new construction applications. We will especially target customers in climate zones 5, 10, and 14 as these climate zones have sufficient density and large enough heating loads to make measures more cost effective. Because parts of the target area also have cooling loads, we will need to coordinate with air conditioning programs and work out an equitable treatment for duct savings.

In particular, we will target retrofit/replacement incentives toward owners of pre-1978 homes as these homes provide the best bang for the buck given the probability of greater air infiltration in the structures.

## 11. Customer Interface

The program design, moving incentives to the midstream, is intended to support the critical communication between contractors and their customers and it creates a motivation on the part of contractors to promote the sale of premium efficiency equipment, quality installation, and duct efficiency.

By engaging the contractors that are the primary sales channel for retrofit and replacement furnaces to consumers, we support the application of motivation and information at precisely the right place and at just the right time: at the customer's kitchen table as the customer is deciding on a new furnace. Successful contractors already know how to sell furnaces to customers. We make it even easier for the customer by providing independent third party information and verification. The customer is better informed and more comfortable with the transaction.

The CSG Team will ensure that manufacturers and distributors have up-to-date information about program status, numbers of incentives issued and remaining, and market impacts in SoCalGas territory.

The CSG Team will provide clear and concise information about incentives, applicable federal tax credits, sales techniques, quality installation procedures, and other marketing and education materials to manufacturers and distributors and will encourage and support the direct contacts between PEG and the dealers/contractors. The contractors will use the presentation materials in their sales proposals to customers.

*Reach out to owners of older, leakier homes:*

The CSG Team will market directly to owners of older homes. We will obtain market information through public and private sources to identify individual homeowners of older homes or through census tracts or zip codes with significant percentages of such homes. We will then mail to these customers and follow up via phone as appropriate to make the customers aware of the program opportunity and how they can participate. We will direct customers to their existing heating contractor, if that contractor is enrolled in the program, or refer the customer to an enrolled contractor. The CSG Team will also seek to work with SoCalGas marketing and call center personnel to best leverage customer high bill complaints and other inbound and outbound customer communication.

*New Construction:*

We will connect with the new construction customer largely through builders, IOU new construction programs, and other intermediaries.

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## 12. Energy Measures and Program Activities

### 12.1. Prescriptive Measures.

See SoCalGas February 1, 2006 Workbook

### 12.2. kWh Level Data

See SoCalGas February 1, 2006 Workbook

### 12.3. Non-energy Activities

Midstream non-energy activities will include: training in duct sealing and quality installation of furnaces, training on interactions between the equipment and the house as a system, the creation and distribution of pre- and post- sales literature.

Upstream activities are covered above in several parts of Section B.

End Use Load (if applicable)

Residential natural gas heating

Targeted Sector (if applicable)

Residential Contractors and Residential Consumers

#### 12.3.1. Activity Description

This program addresses the need for clear and comprehensive contractor training by providing both classroom and field training on:

- Correct sizing procedures - ACCA Manual J and S for equipment sizing and selection, ACCA Manual D for duct system sizing.
- Correct installation and commissioning of heating systems.
- Duct system testing and sealing procedures.
- High efficiency HVAC sales training utilizing the EPA Energy Star Regional sales training program.

The program addresses the homeowner knowledge gap by:

- Providing “pre-sale” literature to the contractor for their sales.

- Mailing "post-sale" literature to each owner further solidifying the owners' knowledge and promoting owner referrals. This literature includes a report on the installation and duct sealing process's successes on their home. The fact that this report is mailed to the customer has proven to be one of the most powerful incentives for the contractor to communicate with the customer. The contractors are trained and know through CheckMe! program experience that the customer does not like to find out something in the follow-up report that they were not told by the contractor. The result is that the contractor communicates extremely well with the customer. Customer satisfaction cards (a regular feature of every report) consistently refer to the great knowledge of the contractor and their willingness to explain things.

### 12.3.2. Quantitative Activity Goals

Pre- and post-sale information packets will be provided to every customer in the program (expected number of customers: approximately 7,900).

Customer satisfaction postage paid mail-back cards will be provided to every customer in the program (expected return rate at 5% or better).

We will perform a minimum of nine sales trainings and nine installation and duct sealing trainings.

### 12.3.3. Assigned attributes of the activity (market sector, end use)

Please see above.

## 13. Subcontractor Activities

Technically, CSG Team members D&R and PEG would be subcontractors to CSG in the performance of the program. Their activities have been clearly described above.

## 14. Quality Assurance and Evaluation Activities

The CSG Team is well versed and very experienced in performing quality assurance. Quality assurance will occur on three levels. First, PEG will require that participating HVAC contractors demonstrate a sound QA/QC system. Second, PEG

will run every job, every technician, and every contractor through its rigorous process:

Before the technician gets to the home:

a. PEG trains and certifies every technician participating – not just one person in a contractor's shop.

b. PEG verifies that every technician has the proper equipment

c. Potential customers are given the pre-sale CheckMe! literature which includes the toll free number of PEG.

While the technician is on site:

d. PEG obtains all the initial test information immediately from the technician. This information is immediately recorded in the database.

e. PEG verifies that the test is a valid test through immediate analysis of the data including relationships between the measured numbers.

f. PEG immediately transfers the technician to a furnace or duct expert to deal with any problems in their test procedure

g. PEG immediately informs the technician of any adjustments or revisions necessary to have the installation/duct system meet the standard.

If any adjustments are needed to bring the furnace/duct system into compliance with the standards and while the technician is on site:

h. PEG obtains all adjustment information and the final confirmation test information immediately from the technician. This information is immediately recorded in the database.

i. PEG verifies that the test is a valid test through immediate analysis of the data including relationships between the measured numbers.

j. PEG immediately transfers the technician to a furnace or duct expert to deal with any problems in their test or repair procedure.

k. This loop continues until the system meets the standard.

In the week after the installation:

l. PEG mails the final report, customer satisfaction mail back card, and additional educational material to the customer. This packet includes the PEG toll free number for customer questions and comments.

m. PEG uses proprietary statistical analysis routines to check the data from each technician to determine if there are any indications of patterned (made up) data. The graphical representations of the 12 combined factors in this analysis are reviewed by three experts. If any one of the experts expresses any concern additional analysis and actions are taken. These

actions include: inspections, ride-alongs, questioning the technician, etc. as needed.

In the succeeding timeframe:

n. PEG reviews the information on all the customer mail-back cards; contacts every customer that have indicated any issues; and determines a course of action based on the investigation.

o. PEG randomly inspects technicians' work to ensure that the statistical system is sufficiently robust. (NOTE: these random inspections have never found a problem with any unit that passed the statistical tests).

PEG has created this quality assurance program based on 26 years of working directly with technicians in the field determining what it takes to get the job done right every time. The system has become extremely sophisticated and incredibly effective over the years of its use. The system has been used on over 100,000 systems from the East coast to the West coast and from the Canadian border to the Mexican border. CheckMe! quality assurance is effective because it concentrates on a system that looks at EVERY installation and ensures that every installation is supported and verified as successful.

The third level of QA/QC is CSG's review of PEG's results and presentation of those results on a regular basis to SoCalGas program management staff.

i. Expected number/percent of inspections (planned percent of projects)

The percentage of inspections will depend on the results of the statistical analysis. It is our experience that the PEG QA/QC system, which requires that each job be verified in real time, dramatically reduces the need for additional follow up inspections to under 1% while still ensuring very high levels of quality performance. Follow up inspections will be performed when patterns in performance data appear that warrant additional scrutiny of a particular contractor or technician.

## 15. Marketing Activities

Marketing is so integral to the program that we have covered it extensively above. Please see points above regarding a) marketing and outreach to upstream HVAC market actors, b) marketing and outreach to new construction market actors, c) marketing and sales training for contractors and technicians, and d) marketing to owners of older, leakier homes.

## 16. CPUC Objectives

The program meets the following CPUC objectives (as stated in the Energy Efficiency Policy Manual, Version 3, pages 2-4):

- "Reduce the environmental impact (including the greenhouse gas emissions) associated with the state's energy consumption": The program significantly improves gas furnace efficiency thereby reducing the volume of transmission and consumption of natural gas.
- "Pursue all cost-effective energy efficiency opportunities over both the short- and long-term": The program will contribute to the achievement of balanced energy savings by SoCalGas's portfolio of programs through:
    - Requiring quality installation to qualify for an equipment incentive. This will reinforce the push to go beyond nameplate equipment efficiency to complete system efficiency, will help to align the interests of upstream and midstream market actors; and will contribute to a more complete transformation of market practices, balancing short term resource acquisition with longer term market transformation.
    - Building on developments in building codes, federal equipment standards, ENERGY STAR branding, and the efforts by CEE, NATE, and others to define and deploy quality installation standards and practices
- Reduce lost opportunities and eliminate cream skimming: The program links equipment incentives with quality installation, thus reducing the lost opportunities and cream skimming inherent in equipment only programs. Full coordination between the upstream and midstream will best leverage the investments in each area in marketing, customer contact and enrollment, field costs, and program administration, thereby further reducing lost opportunities.
- "Appropriate balance for portfolio funding of resource programs across market sectors (e.g., residential, industrial, commercial)": The program has extensive goals for gas heat savings in residential buildings, thereby complementing SoCalGas's continued work in commercial buildings and increasing equity across customer sectors.
- "Deployment of new and improved energy efficiency products and applications": The program will incentivize above code equipment, thus continuing to guide the HVAC industry to push efficiency beyond building code and federal equipment standards. The link we propose between furnace incentives and quality installation and duct integrity will assist SoCalGas in the broader deployment of more advanced energy efficiency services that have not yet become established in the market.

| | SCG3541 3P Upstream/Midstream Gas Heat | |
|---|---|---|
| **BUDGET** | | |
| | | |
| **Administrative Costs** | **$** | **879,477** |
| Overhead and G&A | $ | 879,477 |
| Other Administrative Costs | $ | - |
| **Marketing/Outreach** | **$** | **456,000** |
| **Direct Implementation** | **$** | **4,683,713** |
| Total Incentives and Rebates | | |
| User Input Incentive | $ | - |
| Direct Install Rebate | $ | 4,683,713 |
| Direct Install Labor | $ | - |
| Direct Install Materials | $ | - |
| Activity | $ | - |
| Installation | $ | - |
| Hardware & Materials | $ | - |
| Rebate Processing & Inspection | $ | - |
| **EM&V Costs** | **$** | - |
| **Budget** | **$** | **6,019,190** |
| **Costs recovered from other sources** | **$** | - |
| **Budget** (plus other costs) | **$** | **6,019,190** |
| | | |
| **PROGRAM IMPACTS** | | |
| **Program Reductions for Measures installed through 2008** | | |
| User Entered kW (kW) | | 0 |
| Net Jul-Sept Peak (kW) | | 0 |
| Net Dec-Feb Peak (kW) | | 0 |
| Net NCP (kW) | | 0 |
| Net CEC (kW) | | 0 |
| Annual Net kWh | | 0 |
| Lifecycle Net kWh | | 0 |
| Annual Net Therms | | 406596 |
| Lifecycle Net Therms | | 7318731 |
| | | |
| **Cost Effectiveness** | | |
| **TRC** | | |
| Costs | | 6663513.808 |
| Electric Benefits | | 0 |
| Gas Benefits | | 3333327.474 |
| Net Benefits (NPV) | | -3330186.334 |
| BC Ratio | | 0.500235697 |
| | | |
| **PAC** | | |
| Costs | | 5470658.962 |
| Electric Benefits | | 0 |
| Gas Benefits | | 3333327.474 |
| Net Benefits (NPV) | | -2137331.488 |
| BC Ratio | | 0.609310048 |
| | | |
| **Levelized Cost** | | |
| **Levelized Cost TRC ($/kWh )** | | |
| Discounted kWh | | 0 |
| Cost | | 0 |
| Benefits | | 0 |
| Benefit-Cost | | 0 |
| **Levelized Cost PAC ($/kWh)** | | |
| Discounted kWh | | 0 |
| Cost | | 0 |
| Benefits | | 0 |
| Benefit-Cost | | 0 |
| **Levelized Cost TRC ($/therm)** | | |
| Discounted Therms | | 3747863.434 |
| Cost | | 1.777950004 |
| Benefits | | 0.889394059 |
| Benefit-Cost | | -0.888555945 |
| **Levelized Cost PAC ($/therm)** | | |
| Discounted Therms | | 3747863.434 |
| Cost | | 1.459674041 |
| Benefits | | 0.889394059 |
| Benefit-Cost | | -0.570279981 |

## 3P Upstream/Midstream Gas Heat

| Year | Total Budget | Total Incentives | Admin Budget | Net kWh | Net Therms | Net kW |
|---|---|---|---|---|---|---|
| 2006 | $ 1,798,449 | $ 1,311,437 | $ 487,012 | - | 113,847 | - |
| 2007 | $ 2,107,198 | $ 1,686,134 | $ 421,064 | - | 146,375 | - |
| 2008 | $ 2,113,542 | $ 1,686,134 | $ 427,408 | - | 146,375 | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 352001 | Duct Test and Seal Built before 1978 | | 0 | | 0.89 | kBtuh | 18 | 14,518 | $ 4.47 | $ 6.02 | - | 5,286 | - |
| 2006 | 352002 | Duct Test and Seal Built between 1978 and 1992 | | 0 | | 0.89 | kBtuh | 18 | 29,036 | $ 4.47 | $ 7.85 | - | 5,321 | - |
| 2006 | 352003 | Duct Test and Seal Built between 1993 and 2001 | | 0 | | 0.89 | kBtuh | 18 | 1,452 | $ 4.47 | $ 5.80 | - | 182 | - |
| 2006 | 352004 | Duct Test and Seal Built between 2002 and 2005 | | 0 | | 0.89 | kBtuh | 18 | - | $ 4.47 | $ 5.58 | - | - | - |
| 2006 | 352005 | Duct Test and Seal Built 2006 and later (measures as retrofit for nonresidential) | | 0 | | 0.89 | kBtuh | 18 | - | $ 4.47 | $ 5.58 | - | - | - |
| 2006 | 352006 | Duct Test and Seal Built before 1978 | | 0 | | 0.89 | kBtuh | 18 | - | $ 3.95 | $ 6.05 | - | - | - |
| 2006 | 352007 | Duct Test and Seal Built between 1978 and 1992 | | 0 | | 0.89 | kBtuh | 18 | - | $ 3.95 | $ 5.92 | - | - | - |
| 2006 | 352008 | Duct Test and Seal Built between 1993 and 2001 | | 0 | | 0.89 | kBtuh | 18 | - | $ 3.95 | $ 5.11 | - | - | - |
| 2006 | 352009 | Duct Test and Seal Built between 2002 and 2005 | | 0 | | 0.89 | kBtuh | 18 | - | $ 3.95 | $ 4.93 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 352010 | Duct Test and Seal Built 2006 and later (measures as retrofit for nonresidential) | | 0 | | 0.89 | kBtuh | 18 | - | $ 3.95 | $ 4.93 | - | - | - |
| 2006 | 352011 | Duct Test and Seal Built before 1978 | | 0 | | 0.89 | kBtuh | 18 | - | $ 5.05 | $ 7.99 | - | - | - |
| 2006 | 352012 | Duct Test and Seal Built between 1978 and 1992 | | 0 | | 0.89 | kBtuh | 18 | - | $ 5.05 | $ 7.64 | - | - | - |
| 2006 | 352013 | Duct Test and Seal Built between 1993 and 2001 | | 0 | | 0.89 | kBtuh | 18 | - | $ 5.05 | $ 6.38 | - | - | - |
| 2006 | 352014 | Duct Test and Seal Built between 2002 and 2005 | | 0.07508448 | | 0.89 | kBtuh | 18 | 0 | $ 5.05 | $ 6.15 | - | - | - |
| 2006 | 352015 | Duct Test and Seal Built 2006 and later (measures as retrofit for nonresidential) | | 0.0750868 | | 0.89 | kBtuh | 18 | 0 | $ 5.05 | $ 6.15 | - | - | - |
| 2006 | 352016 | Duct Test and Seal Built before 1978 | | 0.43499104 | | 0.89 | kBtuh | 18 | 14756 | $ 5.24 | $ 6.49 | - | 5,713 | - |
| 2006 | 352017 | Duct Test and Seal Built between 1978 and 1992 | | 0.22120296 | | 0.89 | kBtuh | 18 | 29512 | $ 5.24 | $ 6.58 | - | 5,810 | - |
| 2006 | 352018 | Duct Test and Seal Built between 1993 and 2001 | | 0.19923552 | | 0.89 | kBtuh | 18 | 1475.6 | $ 5.24 | $ 6.46 | - | 262 | - |
| 2006 | 352019 | Duct Test and Seal Built between 2002 and 2005 | | 0.22775632 | | 0.89 | kBtuh | 18 | 0 | $ 5.24 | $ 9.88 | - | - | - |
| 2006 | 352020 | Duct Test and Seal Built 2006 and later (measures as retrofit for nonresidential) | | 0.22734008 | | 0.89 | kBtuh | 18 | 0 | $ 5.24 | $ 9.88 | - | - | - |
| 2006 | 352021 | Duct Test and Seal Built before 1978 | | 0.51194616 | | 0.89 | kBtuh | 18 | 15708 | $ 4.92 | $ 5.32 | - | 7,157 | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 352022 | Duct Test and Seal Built between 1978 and 1992 | | 0.33282392 | | 0.89 | kBtuh | 18 | 31416 | $ 4.92 | $ 6.42 | - | 9,306 | - |
| 2006 | 352023 | Duct Test and Seal Built between 1993 and 2001 | | 0.32060248 | | 0.89 | kBtuh | 18 | 1570.8 | $ 4.92 | $ 8.96 | - | 448 | - |
| 2006 | 352024 | Duct Test and Seal Built between 2002 and 2005 | | 0.36343824 | | 0.89 | kBtuh | 18 | 0 | $ 4.92 | $ 7.90 | - | - | - |
| 2006 | 352025 | Duct Test and Seal Built 2006 and later (measures as retrofit for nonresidential) | | 0.36284072 | | 0.89 | kBtuh | 18 | 0 | $ 4.92 | $ 7.90 | - | - | - |
| 2006 | 352026 | Duct Test and Seal Built before 1978 | | 0.20173736 | | 0.89 | kBtuh | 18 | 0 | $ 4.71 | $ 5.20 | - | - | - |
| 2006 | 352027 | Duct Test and Seal Built between 1978 and 1992 | | 0.071523056 | | 0.89 | kBtuh | 18 | 0 | $ 4.71 | $ 6.12 | - | - | - |
| 2006 | 352028 | Duct Test and Seal Built between 1993 and 2001 | | 0.048093496 | | 0.89 | kBtuh | 18 | 0 | $ 4.71 | $ 8.38 | - | - | - |
| 2006 | 352029 | Duct Test and Seal Built between 2002 and 2005 | | 0.05929704 | | 0.89 | kBtuh | 18 | 0 | $ 4.71 | $ 7.36 | - | - | - |
| 2006 | 352030 | Duct Test and Seal Built 2006 and later (measures as retrofit for nonresidential) | | 0.059245824 | | 0.89 | kBtuh | 18 | 0 | $ 4.71 | $ 7.36 | - | - | - |
| 2006 | 352031 | Gas Heating Savings Only Furnace Replacement | | | | | | | 0 | $ - | | - | - | - |
| 2006 | 352032 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt before 1978 | | $ 0.69 | | 0.89 | kBtuh | 18 | 11614.4 | $ 4.51 | $ 6.66 | - | 7,090 | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 352033 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.35 | | 0.89 | kBtuh | 18 | 23228.8 | $ 4.51 | $ 6.66 | - | 7,243 | - |
| 2006 | 352034 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.24 | | 0.89 | kBtuh | 18 | 1161.44 | $ 4.51 | $ 6.66 | - | 251 | - |
| 2006 | 352035 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.24 | | 0.89 | kBtuh | 18 | 0 | $ 4.51 | $ 6.66 | - | - | - |
| 2006 | 352036 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.24 | | 0.89 | kBtuh | 18 | 0 | $ 4.51 | $ 6.66 | - | - | - |
| 2006 | 352037 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt before 1978 | | $ 0.83 | | 0.89 | kBtuh | 18 | 1451.8 | $ 4.51 | $ 7.63 | - | 1,076 | - |
| 2006 | 352038 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.43 | | 0.89 | kBtuh | 18 | 2903.6 | $ 4.51 | $ 7.63 | - | 1,099 | - |
| 2006 | 352039 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.29 | | 0.89 | kBtuh | 18 | 145.18 | $ 4.51 | $ 7.63 | - | 38 | - |
| 2006 | 352040 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.29 | | 0.89 | kBtuh | 18 | 0 | $ 4.51 | $ 7.63 | - | - | - |
| 2006 | 352041 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.29 | | 0.89 | kBtuh | 18 | 0 | $ 4.51 | $ 7.63 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 352042 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt before 1978 | | $ 0.97 | | 0.89 | kBtuh | 18 | 725.9 | $ 6.15 | $ 8.60 | - | 629 | - |
| 2006 | 352043 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.50 | | 0.89 | kBtuh | 18 | 1451.8 | $ 6.15 | $ 8.60 | - | 642 | - |
| 2006 | 352044 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.34 | | 0.89 | kBtuh | 18 | 72.59 | $ 6.15 | $ 8.60 | - | 22 | - |
| 2006 | 352045 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.34 | | 0.89 | kBtuh | 18 | 0 | $ 6.15 | $ 8.60 | - | - | - |
| 2006 | 352046 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.34 | | 0.89 | kBtuh | 18 | 0 | $ 6.15 | $ 8.60 | - | - | - |
| 2006 | 352047 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt before 1978 | | $ 1.11 | | 0.89 | kBtuh | 18 | 725.9 | $ 6.15 | $ 9.58 | - | 715 | - |
| 2006 | 352048 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.57 | | 0.89 | kBtuh | 18 | 1451.8 | $ 6.15 | $ 9.58 | - | 731 | - |
| 2006 | 352049 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.39 | | 0.89 | kBtuh | 18 | 72.59 | $ 6.15 | $ 9.58 | - | 25 | - |
| 2006 | 352050 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.39 | | 0.89 | kBtuh | 18 | 0 | $ 6.15 | $ 9.58 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 352051 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.39 | | 0.89 | kBtuh | 18 | 0 | $ 6.15 | $ 9.58 | - | - | - |
| 2006 | 352052 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt before 1978 | | $ 0.41 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 6.66 | - | - | - |
| 2006 | 352053 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.23 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 6.66 | - | - | - |
| 2006 | 352054 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.14 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 6.66 | - | - | - |
| 2006 | 352055 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.14 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 6.66 | - | - | - |
| 2006 | 352056 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.14 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 6.66 | - | - | - |
| 2006 | 352057 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt before 1978 | | $ 0.49 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 7.63 | - | - | - |
| 2006 | 352058 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.27 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 7.63 | - | - | - |
| 2006 | 352059 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.17 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 7.63 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 352060 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.17 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 7.63 | - | - | - |
| 2006 | 352061 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.17 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 7.63 | - | - | - |
| 2006 | 352062 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt before 1978 | | $ 0.58 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 8.60 | - | - | - |
| 2006 | 352063 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.32 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 8.60 | - | - | - |
| 2006 | 352064 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.20 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 8.60 | - | - | - |
| 2006 | 352065 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.20 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 8.60 | - | - | - |
| 2006 | 352066 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.20 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 8.60 | - | - | - |
| 2006 | 352067 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt before 1978 | | $ 0.66 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 9.58 | - | - | - |
| 2006 | 352068 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.36 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 9.58 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 352069 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.23 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 9.58 | - | - | - |
| 2006 | 352070 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.22 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 9.58 | - | - | - |
| 2006 | 352071 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.22 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 9.58 | - | - | - |
| 2006 | 352072 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt before 1978 | | $ 0.44 | | 0.89 | kBtuh | 18 | 0 | $ 5.09 | $ 6.66 | - | - | - |
| 2006 | 352073 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.22 | | 0.89 | kBtuh | 18 | 0 | $ 5.09 | $ 6.66 | - | - | - |
| 2006 | 352074 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.13 | | 0.89 | kBtuh | 18 | 0 | $ 5.09 | $ 6.66 | - | - | - |
| 2006 | 352075 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.13 | | 0.89 | kBtuh | 18 | 0 | $ 5.09 | $ 6.66 | - | - | - |
| 2006 | 352076 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.13 | | 0.89 | kBtuh | 18 | 0 | $ 5.09 | $ 6.66 | - | - | - |
| 2006 | 352077 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt before 1978 | | $ 0.54 | | 0.89 | kBtuh | 18 | 0 | $ 5.09 | $ 7.63 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 352078 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.27 | | 0.89 | kBtuh | 18 | 0 | $ 5.09 | $ 7.63 | - | - | - |
| 2006 | 352079 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.16 | | 0.89 | kBtuh | 18 | 0 | $ 5.09 | $ 7.63 | - | - | - |
| 2006 | 352080 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.16 | | 0.89 | kBtuh | 18 | 0 | $ 5.09 | $ 7.63 | - | - | - |
| 2006 | 352081 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.16 | | 0.89 | kBtuh | 18 | 0 | $ 5.09 | $ 7.63 | - | - | - |
| 2006 | 352082 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt before 1978 | | $ 0.63 | | 0.89 | kBtuh | 18 | 0 | $ 6.94 | $ 8.60 | - | - | - |
| 2006 | 352083 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.31 | | 0.89 | kBtuh | 18 | 0 | $ 6.94 | $ 8.60 | - | - | - |
| 2006 | 352084 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.18 | | 0.89 | kBtuh | 18 | 0 | $ 6.94 | $ 8.60 | - | - | - |
| 2006 | 352085 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.18 | | 0.89 | kBtuh | 18 | 0 | $ 6.94 | $ 8.60 | - | - | - |
| 2006 | 352086 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.18 | | 0.89 | kBtuh | 18 | 0 | $ 6.94 | $ 8.60 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 352087 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt before 1978 | | $ 0.71 | | 0.89 | kBtuh | 18 | 0 | $ 6.94 | $ 9.58 | - | - | - |
| 2006 | 352088 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.36 | | 0.89 | kBtuh | 18 | 0 | $ 6.94 | $ 9.58 | - | - | - |
| 2006 | 352089 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.21 | | 0.89 | kBtuh | 18 | 0 | $ 6.94 | $ 9.58 | - | - | - |
| 2006 | 352090 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.21 | | 0.89 | kBtuh | 18 | 0 | $ 6.94 | $ 9.58 | - | - | - |
| 2006 | 352091 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.21 | | 0.89 | kBtuh | 18 | 0 | $ 6.94 | $ 9.58 | - | - | - |
| 2006 | 352092 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt before 1978 | | $ 0.48 | | 0.89 | kBtuh | 18 | 11804.8 | $ 4.44 | $ 6.66 | - | 5,050 | - |
| 2006 | 352093 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.25 | | 0.89 | kBtuh | 18 | 23609.6 | $ 4.44 | $ 6.66 | - | 5,213 | - |
| 2006 | 352094 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.23 | | 0.89 | kBtuh | 18 | 1180.48 | $ 4.44 | $ 6.66 | - | 238 | - |
| 2006 | 352095 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.26 | | 0.89 | kBtuh | 18 | 0 | $ 4.44 | $ 6.66 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 352096 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.26 | | 0.89 | kBtuh | 18 | 0 | $ 4.44 | $ 6.66 | - | - | - |
| 2006 | 352097 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt before 1978 | | $ 0.58 | | 0.89 | kBtuh | 18 | 1475.6 | $ 4.44 | $ 7.63 | - | 767 | - |
| 2006 | 352098 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.30 | | 0.89 | kBtuh | 18 | 2951.2 | $ 4.44 | $ 7.63 | - | 791 | - |
| 2006 | 352099 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.28 | | 0.89 | kBtuh | 18 | 147.56 | $ 4.44 | $ 7.63 | - | 36 | - |
| 2006 | 352100 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.31 | | 0.89 | kBtuh | 18 | 0 | $ 4.44 | $ 7.63 | - | - | - |
| 2006 | 352101 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.31 | | 0.89 | kBtuh | 18 | 0 | $ 4.44 | $ 7.63 | - | - | - |
| 2006 | 352102 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt before 1978 | | $ 0.68 | | 0.89 | kBtuh | 18 | 737.8 | $ 6.05 | $ 8.60 | - | 448 | - |
| 2006 | 352103 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.35 | | 0.89 | kBtuh | 18 | 1475.6 | $ 6.05 | $ 8.60 | - | 462 | - |
| 2006 | 352104 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.32 | | 0.89 | kBtuh | 18 | 73.78 | $ 6.05 | $ 8.60 | - | 21 | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 352105 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.37 | | 0.89 | kBtuh | 18 | 0 | $ 6.05 | $ 8.60 | - | - | - |
| 2006 | 352106 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.37 | | 0.89 | kBtuh | 18 | 0 | $ 6.05 | $ 8.60 | - | - | - |
| 2006 | 352107 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt before 1978 | | $ 0.78 | | 0.89 | kBtuh | 18 | 737.8 | $ 6.05 | $ 9.58 | - | 509 | - |
| 2006 | 352108 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.40 | | 0.89 | kBtuh | 18 | 1475.6 | $ 6.05 | $ 9.58 | - | 526 | - |
| 2006 | 352109 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.37 | | 0.89 | kBtuh | 18 | 73.78 | $ 6.05 | $ 9.58 | - | 24 | - |
| 2006 | 352110 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.42 | | 0.89 | kBtuh | 18 | 0 | $ 6.05 | $ 9.58 | - | - | - |
| 2006 | 352111 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.42 | | 0.89 | kBtuh | 18 | 0 | $ 6.05 | $ 9.58 | - | - | - |
| 2006 | 352112 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt before 1978 | | $ 0.57 | | 0.89 | kBtuh | 18 | 12566.4 | $ 4.17 | $ 6.66 | - | 6,327 | - |
| 2006 | 352113 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.37 | | 0.89 | kBtuh | 18 | 25132.8 | $ 4.17 | $ 6.66 | - | 8,349 | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 352114 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.36 | | 0.89 | kBtuh | 18 | 1256.64 | $ 4.17 | $ 6.66 | - | 408 | - |
| 2006 | 352115 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.41 | | 0.89 | kBtuh | 18 | 0 | $ 4.17 | $ 6.66 | - | - | - |
| 2006 | 352116 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.41 | | 0.89 | kBtuh | 18 | 0 | $ 4.17 | $ 6.66 | - | - | - |
| 2006 | 352117 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt before 1978 | | $ 0.69 | | 0.89 | kBtuh | 18 | 1570.8 | $ 4.17 | $ 7.63 | - | 960 | - |
| 2006 | 352118 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.45 | | 0.89 | kBtuh | 18 | 3141.6 | $ 4.17 | $ 7.63 | - | 1,267 | - |
| 2006 | 352119 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.44 | | 0.89 | kBtuh | 18 | 157.08 | $ 4.17 | $ 7.63 | - | 62 | - |
| 2006 | 352120 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.50 | | 0.89 | kBtuh | 18 | 0 | $ 4.17 | $ 7.63 | - | - | - |
| 2006 | 352121 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.50 | | 0.89 | kBtuh | 18 | 0 | $ 4.17 | $ 7.63 | - | - | - |
| 2006 | 352122 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt before 1978 | | $ 0.80 | | 0.89 | kBtuh | 18 | 785.4 | $ 5.68 | $ 8.60 | - | 561 | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 352123 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.53 | | 0.89 | kBtuh | 18 | 1570.8 | $ 5.68 | $ 8.60 | - | 740 | - |
| 2006 | 352124 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.52 | | 0.89 | kBtuh | 18 | 78.54 | $ 5.68 | $ 8.60 | - | 36 | - |
| 2006 | 352125 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.59 | | 0.89 | kBtuh | 18 | 0 | $ 5.68 | $ 8.60 | - | - | - |
| 2006 | 352126 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.59 | | 0.89 | kBtuh | 18 | 0 | $ 5.68 | $ 8.60 | - | - | - |
| 2006 | 352127 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt before 1978 | | $ 0.91 | | 0.89 | kBtuh | 18 | 785.4 | $ 5.68 | $ 9.58 | - | 638 | - |
| 2006 | 352128 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.60 | | 0.89 | kBtuh | 18 | 1570.8 | $ 5.68 | $ 9.58 | - | 842 | - |
| 2006 | 352129 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.59 | | 0.89 | kBtuh | 18 | 78.54 | $ 5.68 | $ 9.58 | - | 41 | - |
| 2006 | 352130 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.67 | | 0.89 | kBtuh | 18 | 0 | $ 5.68 | $ 9.58 | - | - | - |
| 2006 | 352131 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.67 | | 0.89 | kBtuh | 18 | 0 | $ 5.68 | $ 9.58 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 352132 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt before 1978 | | $ 0.22 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 6.66 | - | - | - |
| 2006 | 352133 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.08 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 6.66 | - | - | - |
| 2006 | 352134 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.05 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 6.66 | - | - | - |
| 2006 | 352135 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.07 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 6.66 | - | - | - |
| 2006 | 352136 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.07 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 6.66 | - | - | - |
| 2006 | 352137 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt before 1978 | | $ 0.27 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 7.63 | - | - | - |
| 2006 | 352138 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.10 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 7.63 | - | - | - |
| 2006 | 352139 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.07 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 7.63 | - | - | - |
| 2006 | 352140 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.08 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 7.63 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 352141 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.08 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 7.63 | - | - | - |
| 2006 | 352142 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt before 1978 | | $ 0.32 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 8.60 | - | - | - |
| 2006 | 352143 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.11 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 8.60 | - | - | - |
| 2006 | 352144 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.08 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 8.60 | - | - | - |
| 2006 | 352145 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.10 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 8.60 | - | - | - |
| 2006 | 352146 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.10 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 8.60 | - | - | - |
| 2006 | 352147 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt before 1978 | | $ 0.36 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 9.58 | - | - | - |
| 2006 | 352148 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.13 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 9.58 | - | - | - |
| 2006 | 352149 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.09 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 9.58 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 352150 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.11 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 9.58 | - | - | - |
| 2006 | 352151 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.11 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 9.58 | - | - | - |
| 2006 | 352152 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt before 1978 | | $ 0.28 | | 0.89 | kBtuh | 18 | 11614.4 | $ 0.00 | $ 0.00 | - | 2,916 | - |
| 2006 | 352153 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.14 | | 0.89 | kBtuh | 18 | 23228.8 | $ 0.00 | $ 0.00 | - | 2,936 | - |
| 2006 | 352154 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.10 | | 0.89 | kBtuh | 18 | 1161.44 | $ 0.00 | $ 0.00 | - | 100 | - |
| 2006 | 352155 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.10 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352156 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.10 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352157 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt before 1978 | | $ 0.28 | | 0.89 | kBtuh | 18 | 1451.8 | $ 0.00 | $ 0.00 | - | 365 | - |
| 2006 | 352158 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.14 | | 0.89 | kBtuh | 18 | 2903.6 | $ 0.00 | $ 0.00 | - | 367 | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 352159 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.10 | | 0.89 | kBtuh | 18 | 145.18 | $ 0.00 | $ 0.00 | - | 13 | - |
| 2006 | 352160 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.10 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352161 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.10 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352162 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt before 1978 | | $ 0.28 | | 0.89 | kBtuh | 18 | 725.9 | $ 0.00 | $ 0.00 | - | 182 | - |
| 2006 | 352163 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.14 | | 0.89 | kBtuh | 18 | 1451.8 | $ 0.00 | $ 0.00 | - | 183 | - |
| 2006 | 352164 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.10 | | 0.89 | kBtuh | 18 | 72.59 | $ 0.00 | $ 0.00 | - | 6 | - |
| 2006 | 352165 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.10 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352166 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.10 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352167 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt before 1978 | | $ 0.28 | | 0.89 | kBtuh | 18 | 725.9 | $ 0.00 | $ 0.00 | - | 182 | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 352168 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.14 | | 0.89 | kBtuh | 18 | 1451.8 | $ 0.00 | $ 0.00 | - | 183 | - |
| 2006 | 352169 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.10 | | 0.89 | kBtuh | 18 | 72.59 | $ 0.00 | $ 0.00 | - | 6 | - |
| 2006 | 352170 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.10 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352171 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.10 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352172 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt before 1978 | | $ 0.17 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352173 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.09 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352174 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.06 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352175 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.06 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352176 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.06 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 352177 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt before 1978 | | $ 0.17 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352178 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.09 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352179 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.06 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352180 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.06 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352181 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.06 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352182 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt before 1978 | | $ 0.17 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352183 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.09 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352184 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.06 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352185 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.06 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 352186 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.06 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352187 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt before 1978 | | $ 0.17 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352188 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.09 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352189 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.06 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352190 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.06 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352191 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.06 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352192 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt before 1978 | | $ 0.18 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352193 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.09 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352194 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.05 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 352195 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.05 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352196 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.05 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352197 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt before 1978 | | $ 0.18 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352198 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.09 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352199 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.05 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352200 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.05 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352201 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.05 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352202 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt before 1978 | | $ 0.18 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352203 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.09 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 352204 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.05 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352205 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.05 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352206 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.05 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352207 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt before 1978 | | $ 0.18 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352208 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.09 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352209 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.05 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352210 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.05 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352211 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.05 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352212 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt before 1978 | | $ 0.20 | | 0.89 | kBtuh | 18 | 11804.8 | $ 0.00 | $ 0.00 | - | 2,077 | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 352213 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.10 | | 0.89 | kBtuh | 18 | 23609.6 | $ 0.00 | $ 0.00 | - | 2,113 | - |
| 2006 | 352214 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.09 | | 0.89 | kBtuh | 18 | 1180.48 | $ 0.00 | $ 0.00 | - | 95 | - |
| 2006 | 352215 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.10 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352216 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.10 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352217 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt before 1978 | | $ 0.20 | | 0.89 | kBtuh | 18 | 1475.6 | $ 0.00 | $ 0.00 | - | 260 | - |
| 2006 | 352218 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.10 | | 0.89 | kBtuh | 18 | 2951.2 | $ 0.00 | $ 0.00 | - | 264 | - |
| 2006 | 352219 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.09 | | 0.89 | kBtuh | 18 | 147.56 | $ 0.00 | $ 0.00 | - | 12 | - |
| 2006 | 352220 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.10 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352221 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.10 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 352222 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt before 1978 | | $ 0.20 | | 0.89 | kBtuh | 18 | 737.8 | $ 0.00 | $ 0.00 | - | 130 | - |
| 2006 | 352223 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.10 | | 0.89 | kBtuh | 18 | 1475.6 | $ 0.00 | $ 0.00 | - | 132 | - |
| 2006 | 352224 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.09 | | 0.89 | kBtuh | 18 | 73.78 | $ 0.00 | $ 0.00 | - | 6 | - |
| 2006 | 352225 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.10 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352226 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.10 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352227 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt before 1978 | | $ 0.20 | | 0.89 | kBtuh | 18 | 737.8 | $ 0.00 | $ 0.00 | - | 130 | - |
| 2006 | 352228 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.10 | | 0.89 | kBtuh | 18 | 1475.6 | $ 0.00 | $ 0.00 | - | 132 | - |
| 2006 | 352229 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.09 | | 0.89 | kBtuh | 18 | 73.78 | $ 0.00 | $ 0.00 | - | 6 | - |
| 2006 | 352230 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.10 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 352231 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.10 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352232 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt before 1978 | | $ 0.23 | | 0.89 | kBtuh | 18 | 12566.4 | $ 0.00 | $ 0.00 | - | 2,603 | - |
| 2006 | 352233 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.15 | | 0.89 | kBtuh | 18 | 25132.8 | $ 0.00 | $ 0.00 | - | 3,384 | - |
| 2006 | 352234 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.15 | | 0.89 | kBtuh | 18 | 1256.64 | $ 0.00 | $ 0.00 | - | 163 | - |
| 2006 | 352235 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.17 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352236 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.16 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352237 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt before 1978 | | $ 0.23 | | 0.89 | kBtuh | 18 | 1570.8 | $ 0.00 | $ 0.00 | - | 325 | - |
| 2006 | 352238 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.15 | | 0.89 | kBtuh | 18 | 3141.6 | $ 0.00 | $ 0.00 | - | 423 | - |
| 2006 | 352239 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.15 | | 0.89 | kBtuh | 18 | 157.08 | $ 0.00 | $ 0.00 | - | 20 | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 352240 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.17 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352241 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.16 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352242 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt before 1978 | | $ 0.23 | | 0.89 | kBtuh | 18 | 785.4 | $ 0.00 | $ 0.00 | - | 163 | - |
| 2006 | 352243 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.15 | | 0.89 | kBtuh | 18 | 1570.8 | $ 0.00 | $ 0.00 | - | 211 | - |
| 2006 | 352244 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.15 | | 0.89 | kBtuh | 18 | 78.54 | $ 0.00 | $ 0.00 | - | 10 | - |
| 2006 | 352245 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.17 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352246 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.16 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352247 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt before 1978 | | $ 0.23 | | 0.89 | kBtuh | 18 | 785.4 | $ 0.00 | $ 0.00 | - | 163 | - |
| 2006 | 352248 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.15 | | 0.89 | kBtuh | 18 | 1570.8 | $ 0.00 | $ 0.00 | - | 211 | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 352249 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.15 | | 0.89 | kBtuh | 18 | 78.54 | $ 0.00 | $ 0.00 | - | 10 | - |
| 2006 | 352250 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.17 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352251 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.16 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352252 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt before 1978 | | $ 0.09 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352253 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.03 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352254 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.02 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352255 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.03 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352256 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.03 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352257 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt before 1978 | | $ 0.09 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 352258 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.03 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352259 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.02 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352260 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.03 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352261 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.03 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352262 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt before 1978 | | $ 0.09 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352263 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.03 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352264 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.02 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352265 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.03 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352266 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.03 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 352267 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt before 1978 | | $ 0.09 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352268 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.03 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352269 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.02 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352270 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.03 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2006 | 352271 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.03 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352001 | Duct Test and Seal Built before 1978 | | $ 0.41 | | 0.89 | kBtuh | 18 | 18666 | $ 4.47 | $ 6.02 | - | 6,796 | - |
| 2007 | 352002 | Duct Test and Seal Built between 1978 and 1992 | | $ 0.21 | | 0.89 | kBtuh | 18 | 37332 | $ 4.47 | $ 7.85 | - | 6,841 | - |
| 2007 | 352003 | Duct Test and Seal Built between 1993 and 2001 | | $ 0.14 | | 0.89 | kBtuh | 18 | 1866.6 | $ 4.47 | $ 5.80 | - | 233 | - |
| 2007 | 352004 | Duct Test and Seal Built between 2002 and 2005 | | $ 0.14 | | 0.89 | kBtuh | 18 | 0 | $ 4.47 | $ 5.58 | - | - | - |
| 2007 | 352005 | Duct Test and Seal Built 2006 and later (measures as retrofit for nonresidential) | | $ 0.14 | | 0.89 | kBtuh | 18 | 0 | $ 4.47 | $ 5.58 | - | - | - |
| 2007 | 352006 | Duct Test and Seal Built before 1978 | | $ 0.24 | | 0.89 | kBtuh | 18 | 0 | $ 3.95 | $ 6.05 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2007 | 352007 | Duct Test and Seal Built between 1978 and 1992 | | $ 0.13 | | 0.89 | kBtuh | 18 | 0 | $ 3.95 | $ 5.92 | - | - | - |
| 2007 | 352008 | Duct Test and Seal Built between 1993 and 2001 | | $ 0.08 | | 0.89 | kBtuh | 18 | 0 | $ 3.95 | $ 5.11 | - | - | - |
| 2007 | 352009 | Duct Test and Seal Built between 2002 and 2005 | | $ 0.08 | | 0.89 | kBtuh | 18 | 0 | $ 3.95 | $ 4.93 | - | - | - |
| 2007 | 352010 | Duct Test and Seal Built 2006 and later (measures as retrofit for nonresidential) | | $ 0.08 | | 0.89 | kBtuh | 18 | 0 | $ 3.95 | $ 4.93 | - | - | - |
| 2007 | 352011 | Duct Test and Seal Built before 1978 | | $ 0.26 | | 0.89 | kBtuh | 18 | 0 | $ 5.05 | $ 7.99 | - | - | - |
| 2007 | 352012 | Duct Test and Seal Built between 1978 and 1992 | | $ 0.13 | | 0.89 | kBtuh | 18 | 0 | $ 5.05 | $ 7.64 | - | - | - |
| 2007 | 352013 | Duct Test and Seal Built between 1993 and 2001 | | $ 0.08 | | 0.89 | kBtuh | 18 | 0 | $ 5.05 | $ 6.38 | - | - | - |
| 2007 | 352014 | Duct Test and Seal Built between 2002 and 2005 | | $ 0.08 | | 0.89 | kBtuh | 18 | 0 | $ 5.05 | $ 6.15 | - | - | - |
| 2007 | 352015 | Duct Test and Seal Built 2006 and later (measures as retrofit for nonresidential) | | $ 0.08 | | 0.89 | kBtuh | 18 | 0 | $ 5.05 | $ 6.15 | - | - | - |
| 2007 | 352016 | Duct Test and Seal Built before 1978 | | $ 0.43 | | 0.89 | kBtuh | 18 | 18972 | $ 5.24 | $ 6.49 | - | 7,345 | - |
| 2007 | 352017 | Duct Test and Seal Built between 1978 and 1992 | | $ 0.22 | | 0.89 | kBtuh | 18 | 37944 | $ 5.24 | $ 6.58 | - | 7,470 | - |
| 2007 | 352018 | Duct Test and Seal Built between 1993 and 2001 | | $ 0.20 | | 0.89 | kBtuh | 18 | 1897.2 | $ 5.24 | $ 6.46 | - | 336 | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2007 | 352019 | Duct Test and Seal Built between 2002 and 2005 | | $ 0.23 | | 0.89 | kBtuh | 18 | 0 | $ 5.24 | $ 9.88 | - | - | - |
| 2007 | 352020 | Duct Test and Seal Built 2006 and later (measures as retrofit for nonresidential) | | $ 0.23 | | 0.89 | kBtuh | 18 | 0 | $ 5.24 | $ 9.88 | - | - | - |
| 2007 | 352021 | Duct Test and Seal Built before 1978 | | $ 0.51 | | 0.89 | kBtuh | 18 | 20196 | $ 4.92 | $ 5.32 | - | 9,202 | - |
| 2007 | 352022 | Duct Test and Seal Built between 1978 and 1992 | | $ 0.33 | | 0.89 | kBtuh | 18 | 40392 | $ 4.92 | $ 6.42 | - | 11,965 | - |
| 2007 | 352023 | Duct Test and Seal Built between 1993 and 2001 | | $ 0.32 | | 0.89 | kBtuh | 18 | 2019.6 | $ 4.92 | $ 8.96 | - | 576 | - |
| 2007 | 352024 | Duct Test and Seal Built between 2002 and 2005 | | $ 0.36 | | 0.89 | kBtuh | 18 | 0 | $ 4.92 | $ 7.90 | - | - | - |
| 2007 | 352025 | Duct Test and Seal Built 2006 and later (measures as retrofit for nonresidential) | | $ 0.36 | | 0.89 | kBtuh | 18 | 0 | $ 4.92 | $ 7.90 | - | - | - |
| 2007 | 352026 | Duct Test and Seal Built before 1978 | | $ 0.20 | | 0.89 | kBtuh | 18 | 0 | $ 4.71 | $ 5.20 | - | - | - |
| 2007 | 352027 | Duct Test and Seal Built between 1978 and 1992 | | $ 0.07 | | 0.89 | kBtuh | 18 | 0 | $ 4.71 | $ 6.12 | - | - | - |
| 2007 | 352028 | Duct Test and Seal Built between 1993 and 2001 | | $ 0.05 | | 0.89 | kBtuh | 18 | 0 | $ 4.71 | $ 8.38 | - | - | - |
| 2007 | 352029 | Duct Test and Seal Built between 2002 and 2005 | | $ 0.06 | | 0.89 | kBtuh | 18 | 0 | $ 4.71 | $ 7.36 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2007 | 352030 | Duct Test and Seal Built 2006 and later (measures as retrofit for nonresidential) | | $ 0.06 | | 0.89 | kBtuh | 18 | 0 | $ 4.71 | $ 7.36 | - | - | - |
| 2007 | 352031 | Gas Heating Savings Only Furnace Replacement | | | | | | | 0 | $ - | | - | - | - |
| 2007 | 352032 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt before 1978 | | $ 0.69 | | 0.89 | kBtuh | 18 | 14932.8 | $ 4.51 | $ 6.66 | - | 9,116 | - |
| 2007 | 352033 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.35 | | 0.89 | kBtuh | 18 | 29865.6 | $ 4.51 | $ 6.66 | - | 9,313 | - |
| 2007 | 352034 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.24 | | 0.89 | kBtuh | 18 | 1493.28 | $ 4.51 | $ 6.66 | - | 322 | - |
| 2007 | 352035 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.24 | | 0.89 | kBtuh | 18 | 0 | $ 4.51 | $ 6.66 | - | - | - |
| 2007 | 352036 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.24 | | 0.89 | kBtuh | 18 | 0 | $ 4.51 | $ 6.66 | - | - | - |
| 2007 | 352037 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt before 1978 | | $ 0.83 | | 0.89 | kBtuh | 18 | 1866.6 | $ 4.51 | $ 7.63 | - | 1,384 | - |
| 2007 | 352038 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.43 | | 0.89 | kBtuh | 18 | 3733.2 | $ 4.51 | $ 7.63 | - | 1,414 | - |
| 2007 | 352039 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.29 | | 0.89 | kBtuh | 18 | 186.66 | $ 4.51 | $ 7.63 | - | 49 | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2007 | 352040 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.29 | | 0.89 | kBtuh | 18 | 0 | $ 4.51 | $ 7.63 | - | - | - |
| 2007 | 352041 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.29 | | 0.89 | kBtuh | 18 | 0 | $ 4.51 | $ 7.63 | - | - | - |
| 2007 | 352042 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt before 1978 | | $ 0.97 | | 0.89 | kBtuh | 18 | 933.3 | $ 6.15 | $ 8.60 | - | 808 | - |
| 2007 | 352043 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.50 | | 0.89 | kBtuh | 18 | 1866.6 | $ 6.15 | $ 8.60 | - | 826 | - |
| 2007 | 352044 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.34 | | 0.89 | kBtuh | 18 | 93.33 | $ 6.15 | $ 8.60 | - | 29 | - |
| 2007 | 352045 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.34 | | 0.89 | kBtuh | 18 | 0 | $ 6.15 | $ 8.60 | - | - | - |
| 2007 | 352046 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.34 | | 0.89 | kBtuh | 18 | 0 | $ 6.15 | $ 8.60 | - | - | - |
| 2007 | 352047 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt before 1978 | | $ 1.11 | | 0.89 | kBtuh | 18 | 933.3 | $ 6.15 | $ 9.58 | - | 919 | - |
| 2007 | 352048 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.57 | | 0.89 | kBtuh | 18 | 1866.6 | $ 6.15 | $ 9.58 | - | 939 | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2007 | 352049 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.39 | | 0.89 | kBtuh | 18 | 93.33 | $ 6.15 | $ 9.58 | - | 33 | - |
| 2007 | 352050 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.39 | | 0.89 | kBtuh | 18 | 0 | $ 6.15 | $ 9.58 | - | - | - |
| 2007 | 352051 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.39 | | 0.89 | kBtuh | 18 | 0 | $ 6.15 | $ 9.58 | - | - | - |
| 2007 | 352052 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt before 1978 | | $ 0.41 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 6.66 | - | - | - |
| 2007 | 352053 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.23 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 6.66 | - | - | - |
| 2007 | 352054 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.14 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 6.66 | - | - | - |
| 2007 | 352055 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.14 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 6.66 | - | - | - |
| 2007 | 352056 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.14 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 6.66 | - | - | - |
| 2007 | 352057 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt before 1978 | | $ 0.49 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 7.63 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2007 | 352058 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.27 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 7.63 | - | - | - |
| 2007 | 352059 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.17 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 7.63 | - | - | - |
| 2007 | 352060 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.17 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 7.63 | - | - | - |
| 2007 | 352061 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.17 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 7.63 | - | - | - |
| 2007 | 352062 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt before 1978 | | $ 0.58 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 8.60 | - | - | - |
| 2007 | 352063 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.32 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 8.60 | - | - | - |
| 2007 | 352064 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.20 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 8.60 | - | - | - |
| 2007 | 352065 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.20 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 8.60 | - | - | - |
| 2007 | 352066 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.20 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 8.60 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2007 | 352067 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt before 1978 | | $ 0.66 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 9.58 | - | - | - |
| 2007 | 352068 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.36 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 9.58 | - | - | - |
| 2007 | 352069 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.23 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 9.58 | - | - | - |
| 2007 | 352070 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.22 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 9.58 | - | - | - |
| 2007 | 352071 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.22 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 9.58 | - | - | - |
| 2007 | 352072 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt before 1978 | | $ 0.44 | | 0.89 | kBtuh | 18 | 0 | $ 5.09 | $ 6.66 | - | - | - |
| 2007 | 352073 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.22 | | 0.89 | kBtuh | 18 | 0 | $ 5.09 | $ 6.66 | - | - | - |
| 2007 | 352074 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.13 | | 0.89 | kBtuh | 18 | 0 | $ 5.09 | $ 6.66 | - | - | - |
| 2007 | 352075 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.13 | | 0.89 | kBtuh | 18 | 0 | $ 5.09 | $ 6.66 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2007 | 352076 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.13 | | 0.89 | kBtuh | 18 | 0 | $ 5.09 | $ 6.66 | - | - | - |
| 2007 | 352077 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt before 1978 | | $ 0.54 | | 0.89 | kBtuh | 18 | 0 | $ 5.09 | $ 7.63 | - | - | - |
| 2007 | 352078 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.27 | | 0.89 | kBtuh | 18 | 0 | $ 5.09 | $ 7.63 | - | - | - |
| 2007 | 352079 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.16 | | 0.89 | kBtuh | 18 | 0 | $ 5.09 | $ 7.63 | - | - | - |
| 2007 | 352080 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.16 | | 0.89 | kBtuh | 18 | 0 | $ 5.09 | $ 7.63 | - | - | - |
| 2007 | 352081 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.16 | | 0.89 | kBtuh | 18 | 0 | $ 5.09 | $ 7.63 | - | - | - |
| 2007 | 352082 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt before 1978 | | $ 0.63 | | 0.89 | kBtuh | 18 | 0 | $ 6.94 | $ 8.60 | - | - | - |
| 2007 | 352083 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.31 | | 0.89 | kBtuh | 18 | 0 | $ 6.94 | $ 8.60 | - | - | - |
| 2007 | 352084 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.18 | | 0.89 | kBtuh | 18 | 0 | $ 6.94 | $ 8.60 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2007 | 352085 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.18 | | 0.89 | kBtuh | 18 | 0 | $ 6.94 | $ 8.60 | - | - | - |
| 2007 | 352086 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.18 | | 0.89 | kBtuh | 18 | 0 | $ 6.94 | $ 8.60 | - | - | - |
| 2007 | 352087 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt before 1978 | | $ 0.71 | | 0.89 | kBtuh | 18 | 0 | $ 6.94 | $ 9.58 | - | - | - |
| 2007 | 352088 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.36 | | 0.89 | kBtuh | 18 | 0 | $ 6.94 | $ 9.58 | - | - | - |
| 2007 | 352089 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.21 | | 0.89 | kBtuh | 18 | 0 | $ 6.94 | $ 9.58 | - | - | - |
| 2007 | 352090 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.21 | | 0.89 | kBtuh | 18 | 0 | $ 6.94 | $ 9.58 | - | - | - |
| 2007 | 352091 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.21 | | 0.89 | kBtuh | 18 | 0 | $ 6.94 | $ 9.58 | - | - | - |
| 2007 | 352092 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt before 1978 | | $ 0.48 | | 0.89 | kBtuh | 18 | 15177.6 | $ 4.44 | $ 6.66 | - | 6,493 | - |
| 2007 | 352093 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.25 | | 0.89 | kBtuh | 18 | 30355.2 | $ 4.44 | $ 6.66 | - | 6,702 | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2007 | 352094 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.23 | | 0.89 | kBtuh | 18 | 1517.76 | $ 4.44 | $ 6.66 | - | 306 | - |
| 2007 | 352095 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.26 | | 0.89 | kBtuh | 18 | 0 | $ 4.44 | $ 6.66 | - | - | - |
| 2007 | 352096 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.26 | | 0.89 | kBtuh | 18 | 0 | $ 4.44 | $ 6.66 | - | - | - |
| 2007 | 352097 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt before 1978 | | $ 0.58 | | 0.89 | kBtuh | 18 | 1897.2 | $ 4.44 | $ 7.63 | - | 986 | - |
| 2007 | 352098 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.30 | | 0.89 | kBtuh | 18 | 3794.4 | $ 4.44 | $ 7.63 | - | 1,017 | - |
| 2007 | 352099 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.28 | | 0.89 | kBtuh | 18 | 189.72 | $ 4.44 | $ 7.63 | - | 46 | - |
| 2007 | 352100 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.31 | | 0.89 | kBtuh | 18 | 0 | $ 4.44 | $ 7.63 | - | - | - |
| 2007 | 352101 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.31 | | 0.89 | kBtuh | 18 | 0 | $ 4.44 | $ 7.63 | - | - | - |
| 2007 | 352102 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt before 1978 | | $ 0.68 | | 0.89 | kBtuh | 18 | 948.6 | $ 6.05 | $ 8.60 | - | 576 | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2007 | 352103 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.35 | | 0.89 | kBtuh | 18 | 1897.2 | $ 6.05 | $ 8.60 | - | 594 | - |
| 2007 | 352104 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.32 | | 0.89 | kBtuh | 18 | 94.86 | $ 6.05 | $ 8.60 | - | 27 | - |
| 2007 | 352105 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.37 | | 0.89 | kBtuh | 18 | 0 | $ 6.05 | $ 8.60 | - | - | - |
| 2007 | 352106 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.37 | | 0.89 | kBtuh | 18 | 0 | $ 6.05 | $ 8.60 | - | - | - |
| 2007 | 352107 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt before 1978 | | $ 0.78 | | 0.89 | kBtuh | 18 | 948.6 | $ 6.05 | $ 9.58 | - | 655 | - |
| 2007 | 352108 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.40 | | 0.89 | kBtuh | 18 | 1897.2 | $ 6.05 | $ 9.58 | - | 676 | - |
| 2007 | 352109 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.37 | | 0.89 | kBtuh | 18 | 94.86 | $ 6.05 | $ 9.58 | - | 31 | - |
| 2007 | 352110 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.42 | | 0.89 | kBtuh | 18 | 0 | $ 6.05 | $ 9.58 | - | - | - |
| 2007 | 352111 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.42 | | 0.89 | kBtuh | 18 | 0 | $ 6.05 | $ 9.58 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2007 | 352112 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt before 1978 | | $ 0.57 | | 0.89 | kBtuh | 18 | 16156.8 | $ 4.17 | $ 6.66 | - | 8,135 | - |
| 2007 | 352113 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.37 | | 0.89 | kBtuh | 18 | 32313.6 | $ 4.17 | $ 6.66 | - | 10,734 | - |
| 2007 | 352114 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.36 | | 0.89 | kBtuh | 18 | 1615.68 | $ 4.17 | $ 6.66 | - | 525 | - |
| 2007 | 352115 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.41 | | 0.89 | kBtuh | 18 | 0 | $ 4.17 | $ 6.66 | - | - | - |
| 2007 | 352116 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.41 | | 0.89 | kBtuh | 18 | 0 | $ 4.17 | $ 6.66 | - | - | - |
| 2007 | 352117 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt before 1978 | | $ 0.69 | | 0.89 | kBtuh | 18 | 2019.6 | $ 4.17 | $ 7.63 | - | 1,235 | - |
| 2007 | 352118 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.45 | | 0.89 | kBtuh | 18 | 4039.2 | $ 4.17 | $ 7.63 | - | 1,629 | - |
| 2007 | 352119 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.44 | | 0.89 | kBtuh | 18 | 201.96 | $ 4.17 | $ 7.63 | - | 80 | - |
| 2007 | 352120 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.50 | | 0.89 | kBtuh | 18 | 0 | $ 4.17 | $ 7.63 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2007 | 352121 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.50 | | 0.89 | kBtuh | 18 | 0 | $ 4.17 | $ 7.63 | - | - | - |
| 2007 | 352122 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt before 1978 | | $ 0.80 | | 0.89 | kBtuh | 18 | 1009.8 | $ 5.68 | $ 8.60 | - | 721 | - |
| 2007 | 352123 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.53 | | 0.89 | kBtuh | 18 | 2019.6 | $ 5.68 | $ 8.60 | - | 952 | - |
| 2007 | 352124 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.52 | | 0.89 | kBtuh | 18 | 100.98 | $ 5.68 | $ 8.60 | - | 47 | - |
| 2007 | 352125 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.59 | | 0.89 | kBtuh | 18 | 0 | $ 5.68 | $ 8.60 | - | - | - |
| 2007 | 352126 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.59 | | 0.89 | kBtuh | 18 | 0 | $ 5.68 | $ 8.60 | - | - | - |
| 2007 | 352127 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt before 1978 | | $ 0.91 | | 0.89 | kBtuh | 18 | 1009.8 | $ 5.68 | $ 9.58 | - | 820 | - |
| 2007 | 352128 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.60 | | 0.89 | kBtuh | 18 | 2019.6 | $ 5.68 | $ 9.58 | - | 1,083 | - |
| 2007 | 352129 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.59 | | 0.89 | kBtuh | 18 | 100.98 | $ 5.68 | $ 9.58 | - | 53 | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2007 | 352130 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.67 | | 0.89 | kBtuh | 18 | 0 | $ 5.68 | $ 9.58 | - | - | - |
| 2007 | 352131 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.67 | | 0.89 | kBtuh | 18 | 0 | $ 5.68 | $ 9.58 | - | - | - |
| 2007 | 352132 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt before 1978 | | $ 0.22 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 6.66 | - | - | - |
| 2007 | 352133 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.08 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 6.66 | - | - | - |
| 2007 | 352134 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.05 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 6.66 | - | - | - |
| 2007 | 352135 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.07 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 6.66 | - | - | - |
| 2007 | 352136 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.07 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 6.66 | - | - | - |
| 2007 | 352137 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt before 1978 | | $ 0.27 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 7.63 | - | - | - |
| 2007 | 352138 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.10 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 7.63 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2007 | 352139 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.07 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 7.63 | - | - | - |
| 2007 | 352140 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.08 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 7.63 | - | - | - |
| 2007 | 352141 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.08 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 7.63 | - | - | - |
| 2007 | 352142 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt before 1978 | | $ 0.32 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 8.60 | - | - | - |
| 2007 | 352143 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.11 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 8.60 | - | - | - |
| 2007 | 352144 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.08 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 8.60 | - | - | - |
| 2007 | 352145 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.10 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 8.60 | - | - | - |
| 2007 | 352146 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.10 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 8.60 | - | - | - |
| 2007 | 352147 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt before 1978 | | $ 0.36 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 9.58 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2007 | 352148 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.13 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 9.58 | - | - | - |
| 2007 | 352149 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.09 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 9.58 | - | - | - |
| 2007 | 352150 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.11 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 9.58 | - | - | - |
| 2007 | 352151 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.11 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 9.58 | - | - | - |
| 2007 | 352152 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt before 1978 | | $ 0.28 | | 0.89 | kBtuh | 18 | 14932.8 | $ 0.00 | $ 0.00 | - | 3,750 | - |
| 2007 | 352153 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.14 | | 0.89 | kBtuh | 18 | 29865.6 | $ 0.00 | $ 0.00 | - | 3,775 | - |
| 2007 | 352154 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.10 | | 0.89 | kBtuh | 18 | 1493.28 | $ 0.00 | $ 0.00 | - | 129 | - |
| 2007 | 352155 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.10 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352156 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.10 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2007 | 352157 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt before 1978 | | $ 0.28 | | 0.89 | kBtuh | 18 | 1866.6 | $ 0.00 | $ 0.00 | - | 469 | - |
| 2007 | 352158 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.14 | | 0.89 | kBtuh | 18 | 3733.2 | $ 0.00 | $ 0.00 | - | 472 | - |
| 2007 | 352159 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.10 | | 0.89 | kBtuh | 18 | 186.66 | $ 0.00 | $ 0.00 | - | 16 | - |
| 2007 | 352160 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.10 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352161 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.10 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352162 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt before 1978 | | $ 0.28 | | 0.89 | kBtuh | 18 | 933.3 | $ 0.00 | $ 0.00 | - | 234 | - |
| 2007 | 352163 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.14 | | 0.89 | kBtuh | 18 | 1866.6 | $ 0.00 | $ 0.00 | - | 236 | - |
| 2007 | 352164 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.10 | | 0.89 | kBtuh | 18 | 93.33 | $ 0.00 | $ 0.00 | - | 8 | - |
| 2007 | 352165 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.10 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2007 | 352166 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.10 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352167 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt before 1978 | | $ 0.28 | | 0.89 | kBtuh | 18 | 933.3 | $ 0.00 | $ 0.00 | - | 234 | - |
| 2007 | 352168 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.14 | | 0.89 | kBtuh | 18 | 1866.6 | $ 0.00 | $ 0.00 | - | 236 | - |
| 2007 | 352169 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.10 | | 0.89 | kBtuh | 18 | 93.33 | $ 0.00 | $ 0.00 | - | 8 | - |
| 2007 | 352170 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.10 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352171 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.10 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352172 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt before 1978 | | $ 0.17 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352173 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.09 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352174 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.06 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2007 | 352175 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.06 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352176 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.06 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352177 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt before 1978 | | $ 0.17 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352178 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.09 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352179 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.06 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352180 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.06 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352181 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.06 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352182 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt before 1978 | | $ 0.17 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352183 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.09 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2007 | 352184 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.06 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352185 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.06 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352186 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.06 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352187 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt before 1978 | | $ 0.17 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352188 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.09 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352189 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.06 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352190 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.06 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352191 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.06 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352192 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt before 1978 | | $ 0.18 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2007 | 352193 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.09 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352194 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.05 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352195 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.05 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352196 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.05 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352197 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt before 1978 | | $ 0.18 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352198 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.09 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352199 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.05 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352200 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.05 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352201 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.05 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2007 | 352202 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt before 1978 | | $ 0.18 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352203 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.09 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352204 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.05 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352205 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.05 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352206 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.05 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352207 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt before 1978 | | $ 0.18 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352208 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.09 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352209 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.05 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352210 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.05 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2007 | 352211 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.05 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352212 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt before 1978 | | $ 0.20 | | 0.89 | kBtuh | 18 | 15177.6 | $ 0.00 | $ 0.00 | - | 2,671 | - |
| 2007 | 352213 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.10 | | 0.89 | kBtuh | 18 | 30355.2 | $ 0.00 | $ 0.00 | - | 2,716 | - |
| 2007 | 352214 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.09 | | 0.89 | kBtuh | 18 | 1517.76 | $ 0.00 | $ 0.00 | - | 122 | - |
| 2007 | 352215 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.10 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352216 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.10 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352217 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt before 1978 | | $ 0.20 | | 0.89 | kBtuh | 18 | 1897.2 | $ 0.00 | $ 0.00 | - | 334 | - |
| 2007 | 352218 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.10 | | 0.89 | kBtuh | 18 | 3794.4 | $ 0.00 | $ 0.00 | - | 340 | - |
| 2007 | 352219 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.09 | | 0.89 | kBtuh | 18 | 189.72 | $ 0.00 | $ 0.00 | - | 15 | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2007 | 352220 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.10 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352221 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.10 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352222 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt before 1978 | | $ 0.20 | | 0.89 | kBtuh | 18 | 948.6 | $ 0.00 | $ 0.00 | - | 167 | - |
| 2007 | 352223 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.10 | | 0.89 | kBtuh | 18 | 1897.2 | $ 0.00 | $ 0.00 | - | 170 | - |
| 2007 | 352224 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.09 | | 0.89 | kBtuh | 18 | 94.86 | $ 0.00 | $ 0.00 | - | 8 | - |
| 2007 | 352225 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.10 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352226 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.10 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352227 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt before 1978 | | $ 0.20 | | 0.89 | kBtuh | 18 | 948.6 | $ 0.00 | $ 0.00 | - | 167 | - |
| 2007 | 352228 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.10 | | 0.89 | kBtuh | 18 | 1897.2 | $ 0.00 | $ 0.00 | - | 170 | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2007 | 352229 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.09 | | 0.89 | kBtuh | 18 | 94.86 | $ 0.00 | $ 0.00 | - | 8 | - |
| 2007 | 352230 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.10 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352231 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.10 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352232 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt before 1978 | | $ 0.23 | | 0.89 | kBtuh | 18 | 16156.8 | $ 0.00 | $ 0.00 | - | 3,346 | - |
| 2007 | 352233 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.15 | | 0.89 | kBtuh | 18 | 32313.6 | $ 0.00 | $ 0.00 | - | 4,351 | - |
| 2007 | 352234 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.15 | | 0.89 | kBtuh | 18 | 1615.68 | $ 0.00 | $ 0.00 | - | 210 | - |
| 2007 | 352235 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.17 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352236 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.16 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352237 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt before 1978 | | $ 0.23 | | 0.89 | kBtuh | 18 | 2019.6 | $ 0.00 | $ 0.00 | - | 418 | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2007 | 352238 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.15 | | 0.89 | kBtuh | 18 | 4039.2 | $ 0.00 | $ 0.00 | - | 544 | - |
| 2007 | 352239 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.15 | | 0.89 | kBtuh | 18 | 201.96 | $ 0.00 | $ 0.00 | - | 26 | - |
| 2007 | 352240 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.17 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352241 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.16 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352242 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt before 1978 | | $ 0.23 | | 0.89 | kBtuh | 18 | 1009.8 | $ 0.00 | $ 0.00 | - | 209 | - |
| 2007 | 352243 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.15 | | 0.89 | kBtuh | 18 | 2019.6 | $ 0.00 | $ 0.00 | - | 272 | - |
| 2007 | 352244 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.15 | | 0.89 | kBtuh | 18 | 100.98 | $ 0.00 | $ 0.00 | - | 13 | - |
| 2007 | 352245 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.17 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352246 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.16 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2007 | 352247 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt before 1978 | | $ 0.23 | | 0.89 | kBtuh | 18 | 1009.8 | $ 0.00 | $ 0.00 | - | 209 | - |
| 2007 | 352248 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.15 | | 0.89 | kBtuh | 18 | 2019.6 | $ 0.00 | $ 0.00 | - | 272 | - |
| 2007 | 352249 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.15 | | 0.89 | kBtuh | 18 | 100.98 | $ 0.00 | $ 0.00 | - | 13 | - |
| 2007 | 352250 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.17 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352251 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.16 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352252 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt before 1978 | | $ 0.09 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352253 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.03 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352254 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.02 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352255 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.03 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2007 | 352256 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.03 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352257 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt before 1978 | | $ 0.09 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352258 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.03 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352259 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.02 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352260 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.03 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352261 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.03 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352262 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt before 1978 | | $ 0.09 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352263 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.03 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352264 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.02 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2007 | 352265 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.03 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352266 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.03 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352267 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt before 1978 | | $ 0.09 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352268 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.03 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352269 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.02 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352270 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.03 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2007 | 352271 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.03 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352001 | Duct Test and Seal Built before 1978 | | $ 0.41 | | 0.89 | kBtuh | 18 | 18666 | $ 4.47 | $ 6.02 | - | 6,796 | - |
| 2008 | 352002 | Duct Test and Seal Built between 1978 and 1992 | | $ 0.21 | | 0.89 | kBtuh | 18 | 37332 | $ 4.47 | $ 7.85 | - | 6,841 | - |
| 2008 | 352003 | Duct Test and Seal Built between 1993 and 2001 | | $ 0.14 | | 0.89 | kBtuh | 18 | 1866.6 | $ 4.47 | $ 5.80 | - | 233 | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2008 | 352004 | Duct Test and Seal Built between 2002 and 2005 | | $ 0.14 | | 0.89 | kBtuh | 18 | 0 | $ 4.47 | $ 5.58 | - | - | - |
| 2008 | 352005 | Duct Test and Seal Built 2006 and later (measures as retrofit for nonresidential) | | $ 0.14 | | 0.89 | kBtuh | 18 | 0 | $ 4.47 | $ 5.58 | - | - | - |
| 2008 | 352006 | Duct Test and Seal Built before 1978 | | $ 0.24 | | 0.89 | kBtuh | 18 | 0 | $ 3.95 | $ 6.05 | - | - | - |
| 2008 | 352007 | Duct Test and Seal Built between 1978 and 1992 | | $ 0.13 | | 0.89 | kBtuh | 18 | 0 | $ 3.95 | $ 5.92 | - | - | - |
| 2008 | 352008 | Duct Test and Seal Built between 1993 and 2001 | | $ 0.08 | | 0.89 | kBtuh | 18 | 0 | $ 3.95 | $ 5.11 | - | - | - |
| 2008 | 352009 | Duct Test and Seal Built between 2002 and 2005 | | $ 0.08 | | 0.89 | kBtuh | 18 | 0 | $ 3.95 | $ 4.93 | - | - | - |
| 2008 | 352010 | Duct Test and Seal Built 2006 and later (measures as retrofit for nonresidential) | | $ 0.08 | | 0.89 | kBtuh | 18 | 0 | $ 3.95 | $ 4.93 | - | - | - |
| 2008 | 352011 | Duct Test and Seal Built before 1978 | | $ 0.26 | | 0.89 | kBtuh | 18 | 0 | $ 5.05 | $ 7.99 | - | - | - |
| 2008 | 352012 | Duct Test and Seal Built between 1978 and 1992 | | $ 0.13 | | 0.89 | kBtuh | 18 | 0 | $ 5.05 | $ 7.64 | - | - | - |
| 2008 | 352013 | Duct Test and Seal Built between 1993 and 2001 | | $ 0.08 | | 0.89 | kBtuh | 18 | 0 | $ 5.05 | $ 6.38 | - | - | - |
| 2008 | 352014 | Duct Test and Seal Built between 2002 and 2005 | | $ 0.08 | | 0.89 | kBtuh | 18 | 0 | $ 5.05 | $ 6.15 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2008 | 352015 | Duct Test and Seal Built 2006 and later (measures as retrofit for nonresidential) | | $ 0.08 | | 0.89 | kBtuh | 18 | 0 | $ 5.05 | $ 6.15 | - | - | - |
| 2008 | 352016 | Duct Test and Seal Built before 1978 | | $ 0.43 | | 0.89 | kBtuh | 18 | 18972 | $ 5.24 | $ 6.49 | - | 7,345 | - |
| 2008 | 352017 | Duct Test and Seal Built between 1978 and 1992 | | $ 0.22 | | 0.89 | kBtuh | 18 | 37944 | $ 5.24 | $ 6.58 | - | 7,470 | - |
| 2008 | 352018 | Duct Test and Seal Built between 1993 and 2001 | | $ 0.20 | | 0.89 | kBtuh | 18 | 1897.2 | $ 5.24 | $ 6.46 | - | 336 | - |
| 2008 | 352019 | Duct Test and Seal Built between 2002 and 2005 | | $ 0.23 | | 0.89 | kBtuh | 18 | 0 | $ 5.24 | $ 9.88 | - | - | - |
| 2008 | 352020 | Duct Test and Seal Built 2006 and later (measures as retrofit for nonresidential) | | $ 0.23 | | 0.89 | kBtuh | 18 | 0 | $ 5.24 | $ 9.88 | - | - | - |
| 2008 | 352021 | Duct Test and Seal Built before 1978 | | $ 0.51 | | 0.89 | kBtuh | 18 | 20196 | $ 4.92 | $ 5.32 | - | 9,202 | - |
| 2008 | 352022 | Duct Test and Seal Built between 1978 and 1992 | | $ 0.33 | | 0.89 | kBtuh | 18 | 40392 | $ 4.92 | $ 6.42 | - | 11,965 | - |
| 2008 | 352023 | Duct Test and Seal Built between 1993 and 2001 | | $ 0.32 | | 0.89 | kBtuh | 18 | 2019.6 | $ 4.92 | $ 8.96 | - | 576 | - |
| 2008 | 352024 | Duct Test and Seal Built between 2002 and 2005 | | $ 0.36 | | 0.89 | kBtuh | 18 | 0 | $ 4.92 | $ 7.90 | - | - | - |
| 2008 | 352025 | Duct Test and Seal Built 2006 and later (measures as retrofit for nonresidential) | | $ 0.36 | | 0.89 | kBtuh | 18 | 0 | $ 4.92 | $ 7.90 | - | - | - |
| 2008 | 352026 | Duct Test and Seal Built before 1978 | | $ 0.20 | | 0.89 | kBtuh | 18 | 0 | $ 4.71 | $ 5.20 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2008 | 352027 | Duct Test and Seal Built between 1978 and 1992 | | $ 0.07 | | 0.89 | kBtuh | 18 | 0 | $ 4.71 | $ 6.12 | - | - | - |
| 2008 | 352028 | Duct Test and Seal Built between 1993 and 2001 | | $ 0.05 | | 0.89 | kBtuh | 18 | 0 | $ 4.71 | $ 8.38 | - | - | - |
| 2008 | 352029 | Duct Test and Seal Built between 2002 and 2005 | | $ 0.06 | | 0.89 | kBtuh | 18 | 0 | $ 4.71 | $ 7.36 | - | - | - |
| 2008 | 352030 | Duct Test and Seal Built 2006 and later (measures as retrofit for nonresidential) | | $ 0.06 | | 0.89 | kBtuh | 18 | 0 | $ 4.71 | $ 7.36 | - | - | - |
| 2008 | 352031 | Gas Heating Savings Only Furnace Replacement | | | | | | | 0 | $ - | | - | - | - |
| 2008 | 352032 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt before 1978 | | $ 0.69 | | 0.89 | kBtuh | 18 | 14932.8 | $ 4.51 | $ 6.66 | - | 9,116 | - |
| 2008 | 352033 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.35 | | 0.89 | kBtuh | 18 | 29865.6 | $ 4.51 | $ 6.66 | - | 9,313 | - |
| 2008 | 352034 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.24 | | 0.89 | kBtuh | 18 | 1493.28 | $ 4.51 | $ 6.66 | - | 322 | - |
| 2008 | 352035 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.24 | | 0.89 | kBtuh | 18 | 0 | $ 4.51 | $ 6.66 | - | - | - |
| 2008 | 352036 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.24 | | 0.89 | kBtuh | 18 | 0 | $ 4.51 | $ 6.66 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2008 | 352037 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt before 1978 | | $ 0.83 | | 0.89 | kBtuh | 18 | 1866.6 | $ 4.51 | $ 7.63 | - | 1,384 | - |
| 2008 | 352038 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.43 | | 0.89 | kBtuh | 18 | 3733.2 | $ 4.51 | $ 7.63 | - | 1,414 | - |
| 2008 | 352039 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.29 | | 0.89 | kBtuh | 18 | 186.66 | $ 4.51 | $ 7.63 | - | 49 | - |
| 2008 | 352040 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.29 | | 0.89 | kBtuh | 18 | 0 | $ 4.51 | $ 7.63 | - | - | - |
| 2008 | 352041 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.29 | | 0.89 | kBtuh | 18 | 0 | $ 4.51 | $ 7.63 | - | - | - |
| 2008 | 352042 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt before 1978 | | $ 0.97 | | 0.89 | kBtuh | 18 | 933.3 | $ 6.15 | $ 8.60 | - | 808 | - |
| 2008 | 352043 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.50 | | 0.89 | kBtuh | 18 | 1866.6 | $ 6.15 | $ 8.60 | - | 826 | - |
| 2008 | 352044 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.34 | | 0.89 | kBtuh | 18 | 93.33 | $ 6.15 | $ 8.60 | - | 29 | - |
| 2008 | 352045 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.34 | | 0.89 | kBtuh | 18 | 0 | $ 6.15 | $ 8.60 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2008 | 352046 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.34 | | 0.89 | kBtuh | 18 | 0 | $ 6.15 | $ 8.60 | - | - | - |
| 2008 | 352047 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt before 1978 | | $ 1.11 | | 0.89 | kBtuh | 18 | 933.3 | $ 6.15 | $ 9.58 | - | 919 | - |
| 2008 | 352048 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.57 | | 0.89 | kBtuh | 18 | 1866.6 | $ 6.15 | $ 9.58 | - | 939 | - |
| 2008 | 352049 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.39 | | 0.89 | kBtuh | 18 | 93.33 | $ 6.15 | $ 9.58 | - | 33 | - |
| 2008 | 352050 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.39 | | 0.89 | kBtuh | 18 | 0 | $ 6.15 | $ 9.58 | - | - | - |
| 2008 | 352051 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.39 | | 0.89 | kBtuh | 18 | 0 | $ 6.15 | $ 9.58 | - | - | - |
| 2008 | 352052 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt before 1978 | | $ 0.41 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 6.66 | - | - | - |
| 2008 | 352053 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.23 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 6.66 | - | - | - |
| 2008 | 352054 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.14 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 6.66 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2008 | 352055 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.14 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 6.66 | - | - | - |
| 2008 | 352056 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.14 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 6.66 | - | - | - |
| 2008 | 352057 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt before 1978 | | $ 0.49 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 7.63 | - | - | - |
| 2008 | 352058 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.27 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 7.63 | - | - | - |
| 2008 | 352059 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.17 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 7.63 | - | - | - |
| 2008 | 352060 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.17 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 7.63 | - | - | - |
| 2008 | 352061 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.17 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 7.63 | - | - | - |
| 2008 | 352062 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt before 1978 | | $ 0.58 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 8.60 | - | - | - |
| 2008 | 352063 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.32 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 8.60 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2008 | 352064 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.20 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 8.60 | - | - | - |
| 2008 | 352065 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.20 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 8.60 | - | - | - |
| 2008 | 352066 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.20 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 8.60 | - | - | - |
| 2008 | 352067 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt before 1978 | | $ 0.66 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 9.58 | - | - | - |
| 2008 | 352068 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.36 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 9.58 | - | - | - |
| 2008 | 352069 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.23 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 9.58 | - | - | - |
| 2008 | 352070 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.22 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 9.58 | - | - | - |
| 2008 | 352071 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.22 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 9.58 | - | - | - |
| 2008 | 352072 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt before 1978 | | $ 0.44 | | 0.89 | kBtuh | 18 | 0 | $ 5.09 | $ 6.66 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2008 | 352073 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.22 | | 0.89 | kBtuh | 18 | 0 | $ 5.09 | $ 6.66 | - | - | - |
| 2008 | 352074 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.13 | | 0.89 | kBtuh | 18 | 0 | $ 5.09 | $ 6.66 | - | - | - |
| 2008 | 352075 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.13 | | 0.89 | kBtuh | 18 | 0 | $ 5.09 | $ 6.66 | - | - | - |
| 2008 | 352076 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.13 | | 0.89 | kBtuh | 18 | 0 | $ 5.09 | $ 6.66 | - | - | - |
| 2008 | 352077 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt before 1978 | | $ 0.54 | | 0.89 | kBtuh | 18 | 0 | $ 5.09 | $ 7.63 | - | - | - |
| 2008 | 352078 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.27 | | 0.89 | kBtuh | 18 | 0 | $ 5.09 | $ 7.63 | - | - | - |
| 2008 | 352079 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.16 | | 0.89 | kBtuh | 18 | 0 | $ 5.09 | $ 7.63 | - | - | - |
| 2008 | 352080 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.16 | | 0.89 | kBtuh | 18 | 0 | $ 5.09 | $ 7.63 | - | - | - |
| 2008 | 352081 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.16 | | 0.89 | kBtuh | 18 | 0 | $ 5.09 | $ 7.63 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2008 | 352082 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt before 1978 | | $ 0.63 | | 0.89 | kBtuh | 18 | 0 | $ 6.94 | $ 8.60 | - | - | - |
| 2008 | 352083 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.31 | | 0.89 | kBtuh | 18 | 0 | $ 6.94 | $ 8.60 | - | - | - |
| 2008 | 352084 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.18 | | 0.89 | kBtuh | 18 | 0 | $ 6.94 | $ 8.60 | - | - | - |
| 2008 | 352085 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.18 | | 0.89 | kBtuh | 18 | 0 | $ 6.94 | $ 8.60 | - | - | - |
| 2008 | 352086 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.18 | | 0.89 | kBtuh | 18 | 0 | $ 6.94 | $ 8.60 | - | - | - |
| 2008 | 352087 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt before 1978 | | $ 0.71 | | 0.89 | kBtuh | 18 | 0 | $ 6.94 | $ 9.58 | - | - | - |
| 2008 | 352088 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.36 | | 0.89 | kBtuh | 18 | 0 | $ 6.94 | $ 9.58 | - | - | - |
| 2008 | 352089 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.21 | | 0.89 | kBtuh | 18 | 0 | $ 6.94 | $ 9.58 | - | - | - |
| 2008 | 352090 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.21 | | 0.89 | kBtuh | 18 | 0 | $ 6.94 | $ 9.58 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2008 | 352091 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.21 | | 0.89 | kBtuh | 18 | 0 | $ 6.94 | $ 9.58 | - | - | - |
| 2008 | 352092 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt before 1978 | | $ 0.48 | | 0.89 | kBtuh | 18 | 15177.6 | $ 4.44 | $ 6.66 | - | 6,493 | - |
| 2008 | 352093 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.25 | | 0.89 | kBtuh | 18 | 30355.2 | $ 4.44 | $ 6.66 | - | 6,702 | - |
| 2008 | 352094 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.23 | | 0.89 | kBtuh | 18 | 1517.76 | $ 4.44 | $ 6.66 | - | 306 | - |
| 2008 | 352095 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.26 | | 0.89 | kBtuh | 18 | 0 | $ 4.44 | $ 6.66 | - | - | - |
| 2008 | 352096 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.26 | | 0.89 | kBtuh | 18 | 0 | $ 4.44 | $ 6.66 | - | - | - |
| 2008 | 352097 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt before 1978 | | $ 0.58 | | 0.89 | kBtuh | 18 | 1897.2 | $ 4.44 | $ 7.63 | - | 986 | - |
| 2008 | 352098 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.30 | | 0.89 | kBtuh | 18 | 3794.4 | $ 4.44 | $ 7.63 | - | 1,017 | - |
| 2008 | 352099 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.28 | | 0.89 | kBtuh | 18 | 189.72 | $ 4.44 | $ 7.63 | - | 46 | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2008 | 352100 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.31 | | 0.89 | kBtuh | 18 | 0 | $ 4.44 | $ 7.63 | - | - | - |
| 2008 | 352101 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.31 | | 0.89 | kBtuh | 18 | 0 | $ 4.44 | $ 7.63 | - | - | - |
| 2008 | 352102 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt before 1978 | | $ 0.68 | | 0.89 | kBtuh | 18 | 948.6 | $ 6.05 | $ 8.60 | - | 576 | - |
| 2008 | 352103 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.35 | | 0.89 | kBtuh | 18 | 1897.2 | $ 6.05 | $ 8.60 | - | 594 | - |
| 2008 | 352104 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.32 | | 0.89 | kBtuh | 18 | 94.86 | $ 6.05 | $ 8.60 | - | 27 | - |
| 2008 | 352105 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.37 | | 0.89 | kBtuh | 18 | 0 | $ 6.05 | $ 8.60 | - | - | - |
| 2008 | 352106 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.37 | | 0.89 | kBtuh | 18 | 0 | $ 6.05 | $ 8.60 | - | - | - |
| 2008 | 352107 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt before 1978 | | $ 0.78 | | 0.89 | kBtuh | 18 | 948.6 | $ 6.05 | $ 9.58 | - | 655 | - |
| 2008 | 352108 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.40 | | 0.89 | kBtuh | 18 | 1897.2 | $ 6.05 | $ 9.58 | - | 676 | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2008 | 352109 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.37 | | 0.89 | kBtuh | 18 | 94.86 | $ 6.05 | $ 9.58 | - | 31 | - |
| 2008 | 352110 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.42 | | 0.89 | kBtuh | 18 | 0 | $ 6.05 | $ 9.58 | - | - | - |
| 2008 | 352111 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.42 | | 0.89 | kBtuh | 18 | 0 | $ 6.05 | $ 9.58 | - | - | - |
| 2008 | 352112 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt before 1978 | | $ 0.57 | | 0.89 | kBtuh | 18 | 16156.8 | $ 4.17 | $ 6.66 | - | 8,135 | - |
| 2008 | 352113 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.37 | | 0.89 | kBtuh | 18 | 32313.6 | $ 4.17 | $ 6.66 | - | 10,734 | - |
| 2008 | 352114 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.36 | | 0.89 | kBtuh | 18 | 1615.68 | $ 4.17 | $ 6.66 | - | 525 | - |
| 2008 | 352115 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.41 | | 0.89 | kBtuh | 18 | 0 | $ 4.17 | $ 6.66 | - | - | - |
| 2008 | 352116 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.41 | | 0.89 | kBtuh | 18 | 0 | $ 4.17 | $ 6.66 | - | - | - |
| 2008 | 352117 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt before 1978 | | $ 0.69 | | 0.89 | kBtuh | 18 | 2019.6 | $ 4.17 | $ 7.63 | - | 1,235 | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2008 | 352118 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.45 | | 0.89 | kBtuh | 18 | 4039.2 | $ 4.17 | $ 7.63 | - | 1,629 | - |
| 2008 | 352119 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.44 | | 0.89 | kBtuh | 18 | 201.96 | $ 4.17 | $ 7.63 | - | 80 | - |
| 2008 | 352120 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.50 | | 0.89 | kBtuh | 18 | 0 | $ 4.17 | $ 7.63 | - | - | - |
| 2008 | 352121 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.50 | | 0.89 | kBtuh | 18 | 0 | $ 4.17 | $ 7.63 | - | - | - |
| 2008 | 352122 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt before 1978 | | $ 0.80 | | 0.89 | kBtuh | 18 | 1009.8 | $ 5.68 | $ 8.60 | - | 721 | - |
| 2008 | 352123 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.53 | | 0.89 | kBtuh | 18 | 2019.6 | $ 5.68 | $ 8.60 | - | 952 | - |
| 2008 | 352124 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.52 | | 0.89 | kBtuh | 18 | 100.98 | $ 5.68 | $ 8.60 | - | 47 | - |
| 2008 | 352125 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.59 | | 0.89 | kBtuh | 18 | 0 | $ 5.68 | $ 8.60 | - | - | - |
| 2008 | 352126 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.59 | | 0.89 | kBtuh | 18 | 0 | $ 5.68 | $ 8.60 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2008 | 352127 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt before 1978 | | $ 0.91 | | 0.89 | kBtuh | 18 | 1009.8 | $ 5.68 | $ 9.58 | - | 820 | - |
| 2008 | 352128 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.60 | | 0.89 | kBtuh | 18 | 2019.6 | $ 5.68 | $ 9.58 | - | 1,083 | - |
| 2008 | 352129 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.59 | | 0.89 | kBtuh | 18 | 100.98 | $ 5.68 | $ 9.58 | - | 53 | - |
| 2008 | 352130 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.67 | | 0.89 | kBtuh | 18 | 0 | $ 5.68 | $ 9.58 | - | - | - |
| 2008 | 352131 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.67 | | 0.89 | kBtuh | 18 | 0 | $ 5.68 | $ 9.58 | - | - | - |
| 2008 | 352132 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt before 1978 | | $ 0.22 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 6.66 | - | - | - |
| 2008 | 352133 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.08 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 6.66 | - | - | - |
| 2008 | 352134 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.05 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 6.66 | - | - | - |
| 2008 | 352135 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.07 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 6.66 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2008 | 352136 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.07 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 6.66 | - | - | - |
| 2008 | 352137 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt before 1978 | | $ 0.27 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 7.63 | - | - | - |
| 2008 | 352138 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.10 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 7.63 | - | - | - |
| 2008 | 352139 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.07 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 7.63 | - | - | - |
| 2008 | 352140 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.08 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 7.63 | - | - | - |
| 2008 | 352141 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.08 | | 0.89 | kBtuh | 18 | 0 | $ 3.99 | $ 7.63 | - | - | - |
| 2008 | 352142 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt before 1978 | | $ 0.32 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 8.60 | - | - | - |
| 2008 | 352143 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.11 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 8.60 | - | - | - |
| 2008 | 352144 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.08 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 8.60 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2008 | 352145 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.10 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 8.60 | - | - | - |
| 2008 | 352146 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.10 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 8.60 | - | - | - |
| 2008 | 352147 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt before 1978 | | $ 0.36 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 9.58 | - | - | - |
| 2008 | 352148 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.13 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 9.58 | - | - | - |
| 2008 | 352149 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.09 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 9.58 | - | - | - |
| 2008 | 352150 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.11 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 9.58 | - | - | - |
| 2008 | 352151 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.11 | | 0.89 | kBtuh | 18 | 0 | $ 5.43 | $ 9.58 | - | - | - |
| 2008 | 352152 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt before 1978 | | $ 0.28 | | 0.89 | kBtuh | 18 | 14932.8 | $ 0.00 | $ 0.00 | - | 3,750 | - |
| 2008 | 352153 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.14 | | 0.89 | kBtuh | 18 | 29865.6 | $ 0.00 | $ 0.00 | - | 3,775 | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2008 | 352154 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.10 | | 0.89 | kBtuh | 18 | 1493.28 | $ 0.00 | $ 0.00 | - | 129 | - |
| 2008 | 352155 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.10 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352156 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.10 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352157 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt before 1978 | | $ 0.28 | | 0.89 | kBtuh | 18 | 1866.6 | $ 0.00 | $ 0.00 | - | 469 | - |
| 2008 | 352158 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.14 | | 0.89 | kBtuh | 18 | 3733.2 | $ 0.00 | $ 0.00 | - | 472 | - |
| 2008 | 352159 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.10 | | 0.89 | kBtuh | 18 | 186.66 | $ 0.00 | $ 0.00 | - | 16 | - |
| 2008 | 352160 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.10 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352161 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.10 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352162 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt before 1978 | | $ 0.28 | | 0.89 | kBtuh | 18 | 933.3 | $ 0.00 | $ 0.00 | - | 234 | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2008 | 352163 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.14 | | 0.89 | kBtuh | 18 | 1866.6 | $ 0.00 | $ 0.00 | - | 236 | - |
| 2008 | 352164 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.10 | | 0.89 | kBtuh | 18 | 93.33 | $ 0.00 | $ 0.00 | - | 8 | - |
| 2008 | 352165 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.10 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352166 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.10 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352167 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt before 1978 | | $ 0.28 | | 0.89 | kBtuh | 18 | 933.3 | $ 0.00 | $ 0.00 | - | 234 | - |
| 2008 | 352168 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.14 | | 0.89 | kBtuh | 18 | 1866.6 | $ 0.00 | $ 0.00 | - | 236 | - |
| 2008 | 352169 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.10 | | 0.89 | kBtuh | 18 | 93.33 | $ 0.00 | $ 0.00 | - | 8 | - |
| 2008 | 352170 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.10 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352171 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.10 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2008 | 352172 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt before 1978 | | $ 0.17 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352173 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.09 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352174 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.06 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352175 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.06 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352176 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.06 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352177 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt before 1978 | | $ 0.17 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352178 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.09 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352179 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.06 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352180 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.06 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2008 | 352181 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.06 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352182 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt before 1978 | | $ 0.17 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352183 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.09 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352184 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.06 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352185 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.06 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352186 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.06 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352187 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt before 1978 | | $ 0.17 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352188 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.09 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352189 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.06 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2008 | 352190 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.06 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352191 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.06 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352192 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt before 1978 | | $ 0.18 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352193 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.09 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352194 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.05 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352195 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.05 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352196 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.05 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352197 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt before 1978 | | $ 0.18 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352198 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.09 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2008 | 352199 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.05 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352200 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.05 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352201 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.05 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352202 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt before 1978 | | $ 0.18 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352203 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.09 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352204 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.05 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352205 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.05 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352206 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.05 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352207 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt before 1978 | | $ 0.18 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2008 | 352208 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.09 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352209 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.05 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352210 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.05 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352211 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.05 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352212 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt before 1978 | | $ 0.20 | | 0.89 | kBtuh | 18 | 15177.6 | $ 0.00 | $ 0.00 | - | 2,671 | - |
| 2008 | 352213 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.10 | | 0.89 | kBtuh | 18 | 30355.2 | $ 0.00 | $ 0.00 | - | 2,716 | - |
| 2008 | 352214 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.09 | | 0.89 | kBtuh | 18 | 1517.76 | $ 0.00 | $ 0.00 | - | 122 | - |
| 2008 | 352215 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.10 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352216 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.10 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2008 | 352217 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt before 1978 | | $ 0.20 | | 0.89 | kBtuh | 18 | 1897.2 | $ 0.00 | $ 0.00 | - | 334 | - |
| 2008 | 352218 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.10 | | 0.89 | kBtuh | 18 | 3794.4 | $ 0.00 | $ 0.00 | - | 340 | - |
| 2008 | 352219 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.09 | | 0.89 | kBtuh | 18 | 189.72 | $ 0.00 | $ 0.00 | - | 15 | - |
| 2008 | 352220 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.10 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352221 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.10 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352222 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt before 1978 | | $ 0.20 | | 0.89 | kBtuh | 18 | 948.6 | $ 0.00 | $ 0.00 | - | 167 | - |
| 2008 | 352223 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.10 | | 0.89 | kBtuh | 18 | 1897.2 | $ 0.00 | $ 0.00 | - | 170 | - |
| 2008 | 352224 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.09 | | 0.89 | kBtuh | 18 | 94.86 | $ 0.00 | $ 0.00 | - | 8 | - |
| 2008 | 352225 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.10 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2008 | 352226 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.10 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352227 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt before 1978 | | $ 0.20 | | 0.89 | kBtuh | 18 | 948.6 | $ 0.00 | $ 0.00 | - | 167 | - |
| 2008 | 352228 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.10 | | 0.89 | kBtuh | 18 | 1897.2 | $ 0.00 | $ 0.00 | - | 170 | - |
| 2008 | 352229 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.09 | | 0.89 | kBtuh | 18 | 94.86 | $ 0.00 | $ 0.00 | - | 8 | - |
| 2008 | 352230 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.10 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352231 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.10 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352232 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt before 1978 | | $ 0.23 | | 0.89 | kBtuh | 18 | 16156.8 | $ 0.00 | $ 0.00 | - | 3,346 | - |
| 2008 | 352233 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.15 | | 0.89 | kBtuh | 18 | 32313.6 | $ 0.00 | $ 0.00 | - | 4,351 | - |
| 2008 | 352234 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.15 | | 0.89 | kBtuh | 18 | 1615.68 | $ 0.00 | $ 0.00 | - | 210 | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2008 | 352235 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.17 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352236 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.16 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352237 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt before 1978 | | $ 0.23 | | 0.89 | kBtuh | 18 | 2019.6 | $ 0.00 | $ 0.00 | - | 418 | - |
| 2008 | 352238 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.15 | | 0.89 | kBtuh | 18 | 4039.2 | $ 0.00 | $ 0.00 | - | 544 | - |
| 2008 | 352239 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.15 | | 0.89 | kBtuh | 18 | 201.96 | $ 0.00 | $ 0.00 | - | 26 | - |
| 2008 | 352240 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.17 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352241 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.16 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352242 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt before 1978 | | $ 0.23 | | 0.89 | kBtuh | 18 | 1009.8 | $ 0.00 | $ 0.00 | - | 209 | - |
| 2008 | 352243 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.15 | | 0.89 | kBtuh | 18 | 2019.6 | $ 0.00 | $ 0.00 | - | 272 | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2008 | 352244 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.15 | | 0.89 | kBtuh | 18 | 100.98 | $ 0.00 | $ 0.00 | - | 13 | - |
| 2008 | 352245 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.17 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352246 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.16 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352247 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt before 1978 | | $ 0.23 | | 0.89 | kBtuh | 18 | 1009.8 | $ 0.00 | $ 0.00 | - | 209 | - |
| 2008 | 352248 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.15 | | 0.89 | kBtuh | 18 | 2019.6 | $ 0.00 | $ 0.00 | - | 272 | - |
| 2008 | 352249 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.15 | | 0.89 | kBtuh | 18 | 100.98 | $ 0.00 | $ 0.00 | - | 13 | - |
| 2008 | 352250 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.17 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352251 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.16 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352252 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt before 1978 | | $ 0.09 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2008 | 352253 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.03 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352254 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.02 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352255 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.03 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352256 | Condensing 90 AFUE (1.11 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.03 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352257 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt before 1978 | | $ 0.09 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352258 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.03 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352259 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.02 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352260 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.03 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352261 | Condensing 92 AFUE (1.08 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.03 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2008 | 352262 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt before 1978 | | $ 0.09 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352263 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.03 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352264 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.02 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352265 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.03 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352266 | Condensing 94 AFUE (1.06 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.03 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352267 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt before 1978 | | $ 0.09 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352268 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1978 and 1992 | | $ 0.03 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352269 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 1993 and 2001 | | $ 0.02 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |
| 2008 | 352270 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt between 2002 and 2005 | | $ 0.03 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2008 | 352271 | Condensing 96 AFUE (1.03 HIR) FurnaceBuilt 2006 and later (measures as retrofit for nonresidential) | | $ 0.03 | | 0.89 | kBtuh | 18 | 0 | $ 0.00 | $ 0.00 | - | - | - |

# 2006-2008 Energy Efficiency Programs
# Value and Energy Stream Mapping (VeSM) Program Concept Paper

## 1. Projected Program Budget

| | | 2006 | 2007 | 2008 |
|---|---|---|---|---|
| Administration | | | | |
| | Administrative Overheads | $ 15,000 | $ 15,000 | $ 15,000 |
| | Administrative Other | $ 198,000 | $ 217,800 | $ 244,200 |
| Marketing & Outreach | | $ 52,500 | $ 52,500 | $ 45,000 |
| Direct Implementation | | | | |
| | Activity | $ 30,000 | $ 40,000 | $ 50,000 |
| | Installation | $ - | $ - | $ - |
| | Hardware & Materials | $ - | $ - | $ - |
| | Procurement | $ - | $ - | $ - |
| | Incentives | $ 240,000 | $ 320,000 | $ 400,000 |
| EM&V | | $ - | $ - | $ - |
| *Total* | | *$ 535,500* | *$ 645,300* | *$ 754,200* |

## 2. Projected Program Impacts

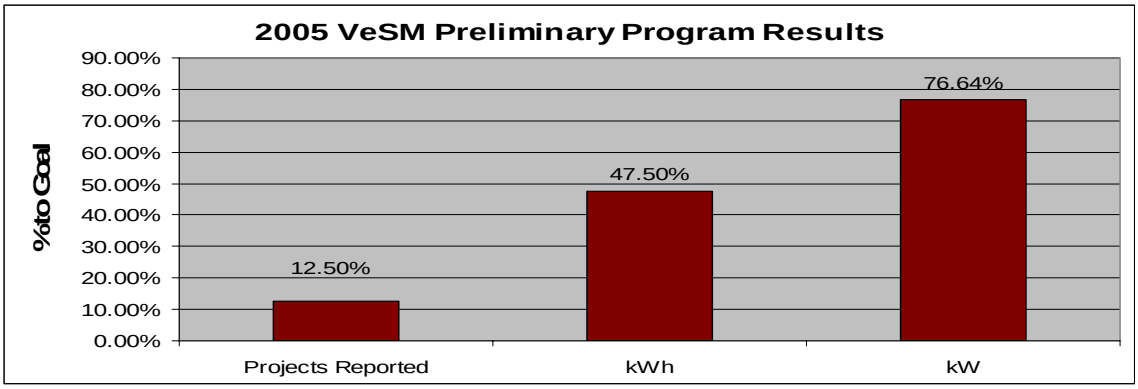
| 2006 | | | 2007 | | | 2008 | | |
|---|---|---|---|---|---|---|---|---|
| **Net kWh** | **Net kW** | **Net Therms** | **Net kWh** | **Net kW** | **Net Therms** | **Net kWh** | **Net kW** | **Net Therms** |
| - | - | 298,920 | - | - | 398,560 | - | - | 498,200 |

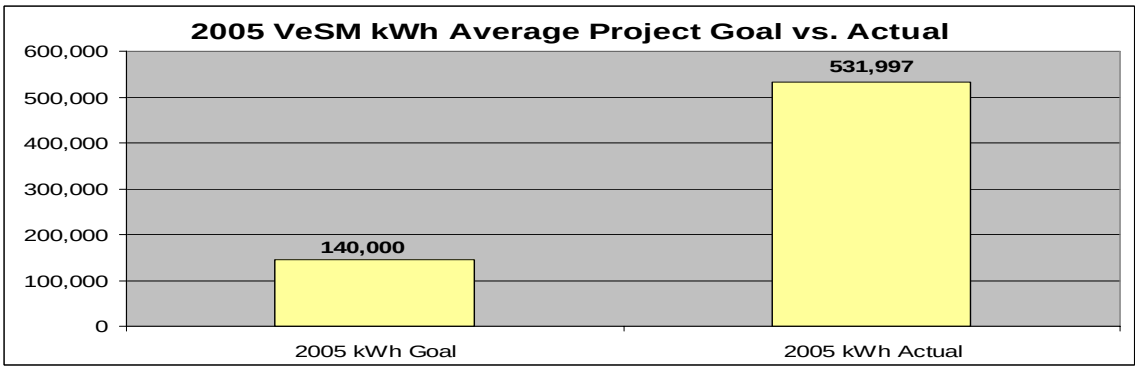
## 3. Program Cost Effectiveness

Attached

**Of special note:**

CMTC is operating under an SCE 2005 local energy efficiency program. The first four projects demonstrate greater energy savings than originally forecasted. The following charts show preliminary results.
CMTC is confident that the same performance will be possible in an energy efficiency program centered on gas consumption. This proposal is on the conservative side with respect to therm savings per project. To date, 2005 VeSM performance:




While it is beyond the scope of this proposal, it is entirely possible that SoCal Gas and SCE would benefit from project crossover energy savings without risk of double counting. These benefits appear to be within CPUC guidelines and fit the commission's goal to extend successful programs statewide and better leverage resources, i.e. greater impact from the same investment. This concept, of course, would need to be presented to all stakeholders and require collaboration between them. This arrangement may not be of interest to either IOU and does not change the value of VeSM™ as a stand alone program in SoCal Gas' portfolio.

## 4. Program Descriptors

The status of the proposed Value and Energy Stream Mapping (VeSM™) program is to modify an existing SCE local energy efficiency program. Due to VeSM's ™ robust solution, ***significant gas and electric savings have been produced at the same time in the same projects.*** Therefore, it's a simple transition to provide the VeSM™ program to Southern California Gas Company customers targeting gas intensive manufacturing processes. Other program descriptors include:

- The market sector and focus of VeSM™ is medium and large manufacturers
- VeSM™ will operate under a Local Program Classification
- VeSM™ has been operating under an existing SCE energy efficiency program, however, VeSM™ if approved, will be a new energy efficiency tool in SoCal Gas' service territory.
- The VeSM™ Program is proposed to operate SoCal Gas service area wide

- In accordance with the 2002 US Economic Census, there are an estimated 24,165 manufacturing establishments within SoCal Gas service territory. CMTC proposes to complete 48 VeSM™ projects and conduct 6 VeSM™ workshops reaching approximately 150 manufacturing companies or .08% of the total.

## 5. Program Statement

Our VeSM™ experience has found that energy efficiency has not been a priority for manufacturers and the knowledge base for achieving savings is limited. This is supported by the American Council for an Energy Efficient Economy (ACEEE, 1994) study: "Designing Industrial DSM (Demand Side Management) Programs that Work", which concluded that many manufacturing companies have poor performance regarding energy efficiency projects for the following reasons:

- Energy costs are often small relative to other costs.
- Energy efficiency projects are not considered of strategic value and typically do not garner the necessary focus and dedicated resources for proper implementation.
- Concerns over the long-term benefits of energy efficiency savings.
- Payback periods have been long term in nature.
- Companies lack in-house expertise to implement energy efficiency improvement projects.

The VeSM™ program overcomes many of the manufacturer's barriers to focusing on energy efficiency by providing companies with a rapid, substantial, long term financial return.

Using productivity improvements to improve the efficient use of energy is not new. For approximately a decade, the 25 university-based Industrial Assessment Centers (IAC) has worked with audits in conjunction with estimating the benefits of energy efficient solutions.

Recently IAC expanded auditing procedures by adding productivity and waste minimization components to their energy audits. On analyzing the IAC database, it has been noted "About 50% of the effective energy savings identified are directly from productivity improvements." (See "On Accounting for Energy Savings from Industrial Productivity Improvements," ACEEE Summer Program 2004). The authors state, "Often the impact of productivity projects on energy use in the plant is ignored or underestimated."

## 6. Program Rationale

Focusing on manufacturing production offers the highest potential for improving the efficient use of energy. Industrial sector end use is concentrated in process applications, lighting, and HVAC.

The Program's rationale is to address this high potential manufacturing market by:

- Implementing a program that addresses the specific energy efficiency needs of the manufacturing customer segment.
- Tapping into significant potential for energy savings through a field-tested and proven process improvement strategy.
- Increasing the overall efficiency of manufacturing processes which will lead to a more efficient use of energy.
- Stimulating regional economic growth by improving the manufacturing sector's productivity making manufacturers more competitive in the world economy.

## 7. Program Outcomes

Program tasks included in the VeSM™ program will include the following:

**Task 1** - Conduct 6 VeSM™ Workshops

- Provide orientation and awareness to approximately 150 manufacturing company representatives.

**Task 2** - Conduct 48 VeSM™ Projects to capture Annual Net Reduction of 1,272,000 therms through the following steps

- Develop 48 VeSM™ Energy Savings Assessments showing changes needed from current to future state production process
- Implement 96 Process Improvements in the manufacturing plant (Two Kaizen events per implementation) yielding the potentially highest energy efficiency gains.
- Document 48 Project Summaries calculating energy efficiency savings.

## 8. Program Strategy

The VeSM™ Program is designed to increase energy efficiency for manufacturing companies through the improvement of production processes. This proposal is to conduct projects with 48 manufacturing companies to achieve an annual net reduction of 1,272,000 therms.

The proposed VeSM™ Advantage Plus (VeSM™) is based on an overall concept that has been used successfully for many years in conjunction with "Lean" manufacturing principals. CMTC expanded the "Lean" approach to include an energy efficiency element and successfully piloted a program in the City of Los Angeles in conjunction with the Los Angeles Department of Water & Power.[1]

[1] Gerald Church, CMTC, "Value and Energy Stream Mapping, Linking Process Improvement to Energy Savings," World Energy Engineering Congress Proceedings, 2005.

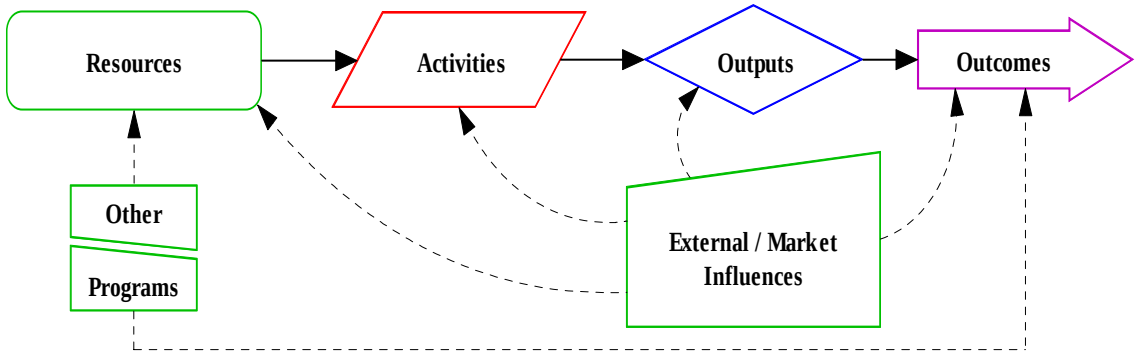
The VeSM™ program was so successful, it was funded and expanded by Southern California Edison (SCE) as part of SCE's 2005 Innovative Energy Efficiency Energy Application (IDEEA) program. The SCE contract which started in December 2004 funds 24 industrial projects for SIC codes 2000-3999. Thus far, twelve projects have been implemented successfully; all 24 are under contract. Due to the robust nature of VeSM™, a broad range of process improvement events were proven to produce energy savings in both gas and electric applications.

CMTC is proposing the VeSM™ Advantage Plus™ Program (VeSM™) to increase energy efficiency for manufacturing companies in the SoCal Gas region. Based on the experience of the SCE program and the characteristics of SoCal Gas' region, the proposed VeSM™ Program will be enhanced to include gas savings to the existing energy efficiency model.

The following discussion represents the fundamental logic behind the VeSM program model designed as a market intervention model:

A Market Intervention Program Logic Model[2] can be used to describe the theory and logic of the VeSM Program. This model assumes the use of Resources to provide Activities, which generate Outputs (for targeted program "customers") resulting in Outcomes (over the short, intermediate or long term). In addition, the program model is affected by External Influences as well as by Other Interventions. A graphical depiction of the normative Market Intervention Program Logic Model is shown below.

**Logic Model: Outputs for the "Customers" Served**




It is important to note that this logic model is "customer-centric" in the sense that it assumes all program Outputs are intended to impact specific primary groups of targeted market participants, the so called "customers" of the program. The VeSM program is designed to produce Outputs affecting medium to large size industrial

[2] Adapted by GeoPraxis from McLaughlin & Jordan, 1999 and other studies.

manufacturers in the SoCal Gas Company service area. Hence these are the primary "customers" that the program is intended to directly influence and benefit.

The program takes strategic advantage of CMTC's proprietary tools that improves manufacturing efficiencies by up to 25 % therein increasing the energy efficiency of each manufactured product by as much as 15%. The deployment of the VeSM™ tool establishes a very high potential for using energy more efficiently. For example, a medium size manufacturing company of 150 employees saved 81,416 therms annually.

The Program has synergy with Economic Development Organizations. Its unique energy saving potential offers an economic development tool to help manufacturing businesses become more competitive, thereby retaining and/or expanding the manufacturing capability in the region. Because of this synergy and the resulting benefits, CMTC will form alliances with economic development organizations servicing SoCal Gas' service area. These organizations, with their extensive network and ability to reach the target market, will extend the Program's reach and provide excellent outreach and educational opportunities to encourage participation by manufacturers.

The objective of the VeSM™ Program is to provide a turnkey solution to provide quantified energy savings through manufacturing improvements. The program will identify new areas of energy waste and reduce the amount of energy consumed per unit of output. CMTC will strategically deploy the following key elements of the VeSM™ Program to achieve energy efficiency goals:

- Energy project evaluations
- Waste minimization strategies
- Process efficiency
- Operational improvements
- Potential for direct reinvestment from VeSM™ projects into improved energy systems and equipment

### 8.1.1 Program Strategy Description

The total cost of each project is $27,500 of which the participating manufacturer pays the first $7,500 (client cost share) and the balance ($20,000) will be billed on a Time and Material basis to SoCal Gas. CMTC will also bill SoCal Gas (on a Time and Material basis) for Administrative, Marketing, Evaluation and Monitoring costs.

Essential design elements of the Program are Client Cost Share, Engaging the Manufacturer in Multi-Improvement Events including Two-Phase Implementation and Energy Efficiency Analysis.

*Client Cost Share*

CMTC has learned first hand about the importance of client investment into projects. CMTC designed the proposed VeSM™ program based on a history of implementing hundreds of projects with manufacturers. For example: Having contracts to deliver training from California's Employer Training Panel (ETP), CMTC discovered problems with furnishing 100% project offsets with no client investment. CMTC learned the need to scope projects with the right balance between client monetary investment and time commitment.

CMTC now delivers almost exclusively hands-on projects with a client financial contribution. From these experiences, CMTC proposed a 30% cost share mechanism for SCE's IDEEA program in 2004-2005 that met client price elasticity constraints while providing a strong motive to move forward with a contract. The proposed client share for the VeSM™ program under SoCal Gas Innovation Programs is 27%. The slight adjustment is made to deliver greater impact and energy savings.

*Multiple Efficiency Improvement Solution Events*

From CMTC's experience with the SCE contract, CMTC learned that the broad variety of potential clients and project scope demonstrated that two process improvement events per project was an optimum number to ensure enough manufacturing processes were addressed to generate the anticipated results.

**Two-Phase Implementations Process**

*Phase 1 - Identification of Key Opportunities for Energy Efficiency*

Each participating manufacturer will receive an extensive assessment of their production processes using the CMTC proprietary VeSM™ opportunity mapping tool, that systematically documents all actions (both value added and non-value added) in the production process. This helps companies understand the flow of material and information as a product makes its way through the production process. The tool applied by CMTC senior consultants will provide manufacturing companies opportunities to:

- Identify energy use and savings potential of production process improvements,
- Quantify and validate energy reductions as processes are improved,
- Establish an energy used per unit produced ratio for finished goods,
- Link benefits of process improvements to energy improvements,
- Quantify relationships between scrap and rework and energy savings,
- Reduce company operating costs; and,
- Increase production capacity.

*Phase 2 – Implementing Energy Efficiency Solutions (Kaizens)*

Once the most significant production energy efficiency opportunities are identified, CMTC will propose an action plan and implement two improvement events, called Kaizen. Both events will quantify baseline performance and measure post-Kaizen improvements, which forms the basis for energy efficiency calculations. Process improvement strategies typically focus on:

- Productivity and Capacity Improvements
- Waste Minimization
- Efficiency Improvements
- Scheduling Enhancements
- Material Handling
- Lean Manufacturing
- Equipment Maintenance

*Energy Efficiency Analysis*

Energy Efficiency Analysis services will be conducted by Alternative Energy Systems Consulting, Inc. (AESC), an engineering and project development firm devoted to providing technical services available to a broad range of energy service providers and end-users. CMTC will bill SoCal Gas for these services on a fixed fee basis in accordance to CMTC's agreement with AESC.

The Energy Efficiency Analysis will include the following information:

- Evaluation and assessment of current energy usage by energy systems and equipment
- Performance assessment of existing energy saving equipment in use at manufacturing facilities
- Data collection and analysis in support of energy efficiency calculations
- Evaluation and tailored recommendations of additional energy saving technologies
- Information and assistance in leveraging local energy incentive programs

### 8.1.2 Program Indicators

The VeSM™ Advantage Plus™ Program (VeSM™) is an energy efficiency program for manufacturing companies. The program takes strategic advantage of CMTC's proprietary tools that improves manufacturing efficiencies by up to 25 % therein increasing the energy

efficiency of each manufactured product by as much as 15%. The deployment of the VeSM™ tool establishes a very high potential for using energy more efficiently. For example, a recent VeSM project for a medium size manufacturing company of 150 employees, was able to save 81,416 therms annually through process improvements.

The VeSM™ provides energy efficiencies in both electricity and gas. CMTC recently implemented a VeSM™ project at a small forge shop with 19 employees that saved $48,000 annually by reducing the use of unnecessary gas-fired kilns on the second shift. At the same time electric savings were estimated to be 613,641 kWh.

VeSM™ focuses on improving energy efficiency by enhancing manufacturing productivity, reducing waste, and improving process efficiencies. The objectives of the VeSM™ Program are:

- Eliminate primary sources of manufacturing wastes regardless of energy source especially related to gas consumption applications.
- Identify other related energy efficiency opportunities inherent in manufacturing facilities, to encourage upgrading equipment such as boilers, heat treat equipment, lighting, motors, air systems, HVAC and refrigeration.
- Provide manufacturers with production scheduling alternatives enabling them to shut down unnecessary equipment, thereby reducing the amount of energy consumed per unit produced.
- Improve cash flow enabling companies to commit to other energy efficiency initiatives.
- Implement two manufacturing improvement solutions per participating manufacturer which generates an approximate range of therms saved from 21,000 to 32,000 per participating manufacturer.

VeSM™ stimulates regional economic growth by improving manufacturing sector productivity and competitiveness; and by, creating new productivity improvements based linkage with traditional hardware-based energy efficiency incentive programs offered by utilities and non-utilities.

**9. Program Objectives**

CMTC management will project manage the overall implementation of the 48 projects, 6 workshops and achievement of program goals, including; program interface with SoCal Gas, selection of the proper target companies, scheduling of VeSM™ projects, overseeing the collection of project documentation and coordination of project auditing.

| VeSM 2006-08 Milestones | 2006 | 2007 | 2008 | Totals |
|---|---|---|---|---|
| Workshops | 3 | 2 | 1 | 6 |
| Projects | 12 | 16 | 20 | 48 |

**10. Program Implementation**

CMTC has developed a proven set of standard procedures and guidelines for implementing the VeSM™ Program. Over the past year, these set of standarized procedures have optimized outcomes for VeSM™ clients. Standard process flows, project plans, checklists, kickoff meeting documents, quantifying baselines and post-Kaizen results are part of the systematic approach that provides consistent, reproducible results.

Secondary benefits also flow from the VeSM™ Program. In the first seven SCE VeSM™ projects the following observations and recommendations were made outside the standard improvement or Kaizen events demonstrating secondary benefits:

| Industry Type | Recommendation or Measure |
|---|---|
| Textile | Boiler leaks and potential upgrade, bulk gas purchasing advice, lighting project, waste water treatment options from dyeing process |
| Food Processing | Lighting audit, heating and cooling system requirements, air compressor leak detection, install plastic barriers |
| Battery Manufacturer | Aluminum heating options for casting and pasting operations, cogeneration candidate, lighting project, controls, waste heat recovery, load shift analysis |
| Thermoforming Plastics | Deferred purchase of 2 machines, process change in regrinding operation, lighting audit, DOE IAC referral |
| Injection Molder Plastics | Review motor replacement strategy, controls recommendations |
| Forge Shop | Collapse second shift and turn off two 2000 degree kilns estimated to generate $48,000 annual gas savings |
| Heath Care Equipment | Lighting audit, investigating resource capacity to reduce energy consumption by eliminating unnecessary systems |

**11. Customer Description**

Customer characteristics:

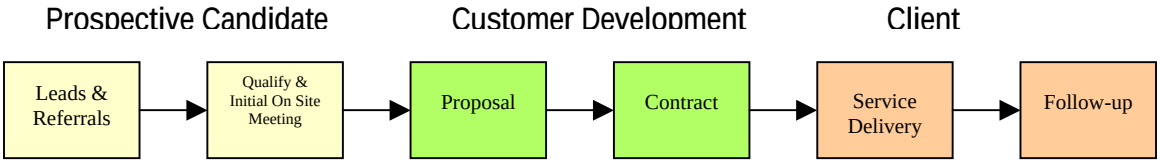
1. Manufacturers from SIC codes 2000-3999 with specific targeting to high percentage of gas consumption related to unit output

2. Medium size companies with annual consumption from 400,000-750,000 therms and large size companies greater than 750,000
3. Specific industries identified by SoCal Gas Company and CMTC with greatest energy savings opportunities and manufacturing improvement benefits

**12. Customer Interface**

CMTC has developed a unique process flow for enrolling the highest opportunity candidates in the VeSM™ program, including referrals/leads from CMTC's account representatives, business development staff, partner organizations and/or promotional programs.

**Customer Enrollment Process**




Relative to enrollment for on-site services, the program anticipates leads and referrals will be received from partner organizations (EDCs or other partners), utility account executives, workshops and/or previously served clients. All referrals will be submitted to CMTC's consulting group who will verify initial eligibility (i.e., location within the service area, minimum therm qualification, manufacturer in appropriate SIC). After passing an initial assessment as to the opportunity for energy efficiency, the prospective candidates will be scheduled for an initial on-site meeting.

During the on-site meeting the VeSM™ consultant will review facilities to determine appropriateness, explain program benefits and process. If a prospective candidate is willing to engage and participate in the program, the VeSM™ consultant will prepare and have the customer sign a VeSM™ contact that includes a scope of work listing deliverables and other pertinent information.

Once the customer has signed the contract, the company is considered a participant and is scheduled for VeSM™ service delivery, including a VeSM™ assessment followed by process improvement/optimization events. After service delivery is complete, customers will be scheduled for a follow-up site inspection and evaluation.

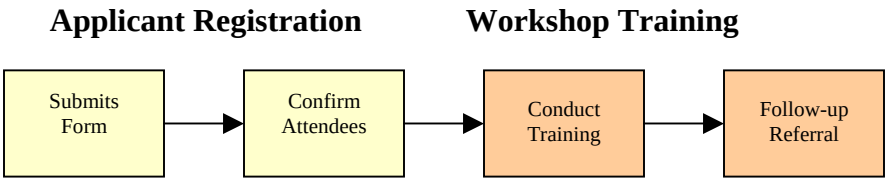
CMTC has developed delivery principles to help ensure clearly defined project goals and activities, consistent quality, and timely performance of a project.

There are five basic principles that VeSM™ consultants apply to our standardized service delivery: (1) confirm objectives and success criteria; (2) develop a milestone plan; (3) hold a review meeting (including confirmation of scope and deliverables); (4) implement service delivery procedures; and (5) manage the transitions associated with project completion.

Throughout the project process, groundwork is laid for referrals to other energy efficiency programs. A systematic series of progress reports is developed during a project. Many projects lend themselves to cross-linking with other areas of the customer's business. Referrals are actively encouraged during the entire project.

Consultants also look for and integrate other resources to enhance the project, such as VeSM™ workshops. CMTC has developed a proven process for identifying and building workshop attendance outlined in the Chart below.

**Workshop Enrollments and Training Process**




Regarding workshop enrollment, the program distributes a self-registration brochure explaining the benefits of the workshop, who should attend and what attendees can expect to get out of the workshop, dates/times/locations where the workshops will be held and a simple (user friendly) registration form. The registration form will request attendee's contact information, include the program's contact information and allow prospective attendees to phone/fax or e-mail in registration forms. The VeSM™ workshop brochure will also be converted into PDF format for e-mailing. It is anticipated that registration forms will be received via a toll free phone number (800) 300-CMTC, and from partner organizations (EDCs or other partners), partner associations and e-mail.

Once a registration form is received, the program will submit a confirmation notice to attendees and to assure attendance, follow-up with a second confirmation notice one-week before the scheduled workshop.

Workshop agendas will include an *Energy Efficiency Outreach* time-slot to highlight the VeSM™ on-site services and other energy efficiency programs. At the end of each workshop, attendees will be provided an opportunity to be referred to the VeSM™ Program. Follow-up calls will be made to attendees to determine if any energy efficiency actions have been undertaken.

## 13. Energy Measures and Program Activities

### 13.1. Prescriptive Measures

See SoCalGas February 1, 2006 Workbook

### 13.2. kWh Level Data

See SoCalGas February 1, 2006 Workbook

### 13.3. DNon-energy Activities

Phase 1 - Identification of Key Opportunities for Energy Efficiency

Each participating manufacturer will receive an extensive assessment of their production processes using the CMTC proprietary VeSM™ opportunity mapping tool that systematically documents all actions in the production process. This helps companies understand the flow of material and information as a product makes its way through the production process. The tool applied by CMTC senior consultants will provide manufacturing companies opportunities to:

- Identify energy use and savings potential of production process improvements,
- Quantify and validate energy reductions as processes are improved,
- Establish an energy used per unit produced ratio for finished goods,
- Link benefits of process improvements to energy improvements,

Workshop Training

Over the 2006-2008 period, CMTC will conduct six half-day workshops designed to create a maximum benefit for manufacturers even if not enrolled as a VeSM™ participant. Workshops will be designed to build awareness in how to reduce energy usage and how operations can support a strategy of doing more with less. The workshop will also serve a screening purpose to filter those companies with a willingness to adopt lean manufacturing. It will be explained that process improvement requires substantial effort from participating companies and qualification into the program requires their commitment in time and dedicated resources.

A number of workshop participants will adopt immediate steps to improve manufacturing operations, adapt schedules to reduce energy usage and review energy efficiency equipment options. Companies will be shown the VeSM™ process using an approved workshop from the Lean Enterprise Institute entitled “Learning to see”. CMTC’s Lean Manufacturing Consultants are trained and approved in delivering the workshop, which has been adapted to include an energy component demonstrating the relationship between world-class manufacturing and energy efficiency.

**13.4. End Use Load (if applicable)**

N/A

**13.5. Targeted Sector (if applicable)**

CMTC will work with SoCal Gas to develop a target list of gas intensive manufacturing sectors and applications. In the case of the current SCE contract, CMTC and account executives have identified prospects in need

of reducing energy costs and upgrading poor performance from older equipment and technologies.

From its own resources, CMTC has over a dozen years working with manufacturers and has developed relationships with thousands of manufacturing companies that fit the need for the VeSM™ program. CMTC has an up-to-date database with key management contacts. In many cases these same contacts have an understanding of CMTC's efforts to improve manufacturer's competitiveness and are receptive to meeting with CMTC.

Included in this past history are long-term relationships with local economic development groups, city officials, trade organizations, industry groups and professional associations. Over a dozen years CMTC has made hundreds of presentations to these same groups.

### 13.6. Activity Description

Under this program CMTC will operate as a primary subcontractor and report to SoCal Gas' assigned program manager. CMTC assigns a VeSM™ program manager to work with SoCal Gas' program manager to implement marketing, enrollment, evaluation/monitoring and verification (EM&V) services.

CMTC has identified three key personnel in addition to seven VeSM™ consultants within CMTC whose time will be allocated to the VeSM™ program.

- Program Manager (Gerald Church) will be dedicated to the program and will handle the overall management of the program and interface with SoCal Gas program staff. The CMTC Program Manager reports to the Vice President of Operations.
- Energy Efficiency Program Analyst (Kirk Prather) will be assigned to the program to coordinate the collection of onsite data, run statistical analysis, and validate project data before submitting for inspection.
- A Senior Consultant (Michael Gigliotti) will be assigned to this project as a project manager coordinating project resources, timelines, and milestones.

A pool of seven VeSM™ consultants will be assigned on an as needed basis. The CMTC Program Manager will provide monthly reports to SoCal Gas' program manager. CMTC will also coordinate EM&V support services as required and schedule on-site participant interviews/visits on an as needed basis.

### 13.7. Quantitative Activity Goals

- 48 VeSM™ Projects
- 6 VeSM™ Workshops

### 13.8. Assigned attributes of the activity (market sector, end use)

CMTC's VeSM™ program will serve the Non-Residential Industrial Sector, medium to large manufacturers and provide process improvement assessments and implementation.

## 14. Subcontractor Activities

In addition to work performed by key CMTC staff members, CMTC proposes to contract with Alternative Energy Systems Consulting, Inc. (AESC), an engineering and project development firm devoted to providing technical services available to a broad range of energy service providers and end-users. AESC was instrumental in developing the current energy efficiency model and has spent more than one year learning about the VeSM process. AESC's extensive knowledge in the energy industry, advanced energy systems and advanced computing technologies provides CMTC and its participants advanced energy assessment and analysis services to assure energy savings are properly calculated and link CMTC services with SoCal Gas and/or 3rd party energy efficiency services.

AESC will conduct the following on-site services:

- Evaluate and assess current energy usage
- Assess performance of existing energy saving equipment in use at manufacturing facilities
- Evaluate and recommend additional energy saving technologies where appropriate
- Determine appropriate energy incentive programs

## 15. Quality Assurance and Evaluation Activities

CMTC, the primary subcontractor, has provided on-site consulting services for over 12-years and has developed policies and procedures for addressing customer concerns that have resulted in a very low customer complaint percentage. To assure customer needs and/or service delivery concerns are addressed, CMTC includes a high-quality commitment in all of its contracts with clients. CMTC maintains and publicizes a toll-free telephone number (800) 300-CMTC (2682) and logs all customer calls through a centralized control desk. All customer complaint calls are referred to the Operations Vice President's office, investigated by quality control/customer satisfaction personnel.

CMTC's customer complaint percentage is also extremely low due to ongoing a monitoring and satisfaction survey program conducted internally and by the

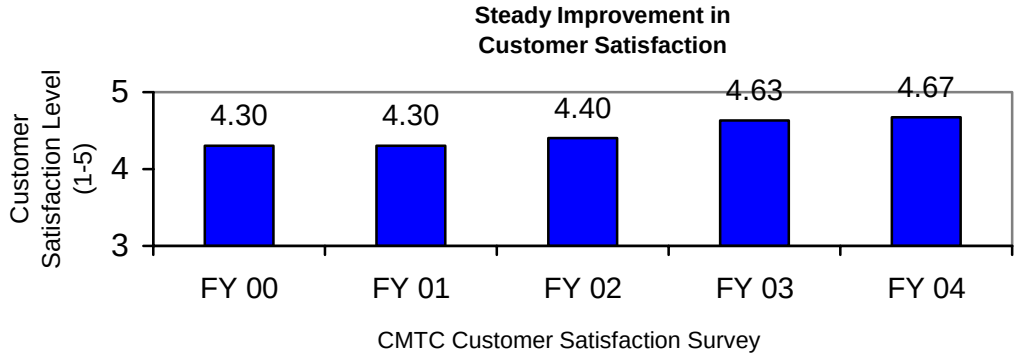
National Institute of Standards and Technology (NIST) under the U.S. Department of Commerce. These programs are designed to identify and handle potential client satisfaction issues before they become problems.

Projects are also monitored, while in progress and at closeout, to ensure that every preventative measure is taken to assure customer satisfaction. The number of complaints are posted and rigorously reviewed by the leadership team for appropriate action. Complaint data is collected, charted and analyzed to assess trends and establish benchmarks. We require direct action by industry sector directors on all customer complaints. CMTC's quality statement "We Exceed Clients' Expectations, Period." is indicative of a company culture that ensures a rigorous follow-up to any customer issues and an expeditious resolution to customer problems (refer to the following chart).

Specifically, CMTC has established a formal evaluation process and schedule in order to track project performance and measure impacts. The evaluation is made primarily through customer surveys. The process is monitored by NIST, which conducts customer surveys on a quarterly basis.

At the end of each quarter, CMTC provides NIST with a comprehensive listing of customers served. Each quarter NIST compiles customers served a year prior and sends the data to an independent research firm (currently Synovate) to conduct the survey. Once the survey is completed, Synovate sends the survey results to NIST, which is then forwarded to CMTC. In its most recent full year evaluation, in FY 2004, CMTC received a 4.67 customer satisfaction rating on a 1-5 scale with 5 measuring "Extremely Satisfied."

**CMTC Exceeds Customer Expectations**




In addition to third party surveys through NIST, CMTC also conducts its internal surveys to measure customer satisfaction and quality of service delivery. These surveys are conducted during project implementation and at project closeout. Surveys that are conducted during project implementation provide information on customer satisfaction at mid-point of the project, so that timely corrective actions can be taken as necessary. Surveys at project closeout show a customer's satisfaction with the implementation of the entire project. They review the entire project, identifying strengths and weaknesses in project implementation and service

delivery, as well as reporting outcomes achieved. Project evaluation allows CMTC to measure customer satisfaction and service quality.

Customer feedback is utilized at every level of service delivery to assure that services are on target with industry needs and expectations. Customer feedback is obtained in a formal way through surveys, and the results are used to make improvements in the service delivery model. This applies to one-on-one services (i.e., projects) as well as group services (i.e., seminars, workshops, and training).

CMTC's policy is to distribute evaluation forms after each seminar and workshop. Evaluation forms are analyzed thoroughly, and follow-up interviews are conducted with various attendees to ascertain their satisfaction level, lessons learned and follow-up needs. Customer feedback from on-site meetings also provides extensive and valuable information.

All completed projects will be submitted to NIST for follow-up survey services for client satisfaction and impact.

## 16. Marketing Activities

CMTC has been successful in enrolling 24 companies in the SCE VeSM™ program in approximately 12-months (15 VeSM™ projects were engaged within a 3-month period). CMTC attributes its success to not only the VeSM™ program design but also to its marketing capabilities. In addition to VeSM™ workshops, active referrals from strategic economic development partners, CMTC has highly skilled and dedicated business development and account management staff assigned to promote CMTC programs including VeSM™. CMTC has successfully marketed to the manufacturing sector and is considered an "expert" in process improvement techniques.

## 17. CPUC Objective

VeSM™ meets all CPUC objectives numbered 1-10 as summarized below:

1. VeSM™ demonstrates cost effective energy efficiency
2. VeSM™ is cost-effective both on a short and long term basis
3. VeSM™ energy efficiency approach is less costly than supply-side options
4. VeSM™ demonstrates a "lost opportunity" characteristic -- long lived, cost-effective savings energy, which if not exploited with other low cost options, would be lost
5. VeSM™ results in reduced peak loads
6. VeSM™ provides SoCal Gas an opportunity to more equitably serve the hard-to-reach manufacturing sector
7. VeSM™ contributes to reduced greenhouse gas emissions

8. VeSM™ is an innovative, new and improved energy efficiency program application
9. VeSM™ complies with proposal guidelines and selection criteria in conjunction with SoCal Gas' advisory group
10. VeSM™ is proposed to be implemented within SoCal Gas' service territory and offered to eligible rate payers

In summary, VeSM™ has proven to be a cost-effective energy efficiency program. As proposed the program will realize at least a TRC ratio of 2.77 and a PAC of 2.72. In addition, to being cost effective, VeSM™ demonstrates short and long term energy savings, all of which are high priorities and objectives voiced by the CPUC.

| | SCG3535 3P VESM_Advantage | |
|---|---|---|
| **BUDGET** | | |
| | | |
| **Administrative Costs** | **$** | **705,000** |
| Overhead and G&A | $ | 45,000 |
| Other Administrative Costs | $ | 660,000 |
| **Marketing/Outreach** | **$** | **150,000** |
| **Direct Implementation** | **$** | **1,080,000** |
| Total Incentives and Rebates | | |
| User Input Incentive | $ | - |
| Direct Install Rebate | $ | - |
| Direct Install Labor | $ | 960,000 |
| Direct Install Materials | $ | - |
| Activity | $ | - |
| Installation | $ | 120,000 |
| Hardware & Materials | $ | - |
| Rebate Processing & Inspection | $ | - |
| **EM&V Costs** | **$** | - |
| **Budget** | **$** | **1,935,000** |
| **Costs recovered from other sources** | **$** | - |
| **Budget** (plus other costs) | **$** | **1,935,000** |
| | | |
| **PROGRAM IMPACTS** | | |
| **Program Reductions for Measures installed through 2008** | | |
| User Entered kW (kW) | | 0 |
| Net Jul-Sept Peak (kW) | | 0 |
| Net Dec-Feb Peak (kW) | | 0 |
| Net NCP (kW) | | 0 |
| Net CEC (kW) | | 0 |
| Annual Net kWh | | 0 |
| Lifecycle Net kWh | | 0 |
| Annual Net Therms | | 1195680 |
| Lifecycle Net Therms | | 23913600 |
| | | |
| **Cost Effectiveness** | | |
| **TRC** | | |
| Costs | | 1766624.515 |
| Electric Benefits | | 0 |
| Gas Benefits | | 8296138.411 |
| Net Benefits (NPV) | | 6529513.896 |
| BC Ratio | | 4.696039447 |
| | | |
| **PAC** | | |
| Costs | | 1817153.74 |
| Electric Benefits | | 0 |
| Gas Benefits | | 8296138.411 |
| Net Benefits (NPV) | | 6478984.671 |
| BC Ratio | | 4.565457633 |
| | | |
| **Levelized Cost** | | |
| **Levelized Cost TRC ($/kWh )** | | |
| Discounted kWh | | 0 |
| Cost | | 0 |
| Benefits | | 0 |
| Benefit-Cost | | 0 |
| **Levelized Cost PAC ($/kWh)** | | |
| Discounted kWh | | 0 |
| Cost | | 0 |
| Benefits | | 0 |
| Benefit-Cost | | 0 |
| **Levelized Cost TRC ($/therm)** | | |
| Discounted Therms | | 11502681.45 |
| Cost | | 0.153583712 |
| Benefits | | 0.72123517 |
| Benefit-Cost | | 0.567651458 |
| **Levelized Cost PAC ($/therm)** | | |
| Discounted Therms | | 11502681.45 |
| Cost | | 0.157976533 |
| Benefits | | 0.72123517 |
| Benefit-Cost | | 0.563258637 |

## 3P VeSM Advantage Plus

| Year | Total Budget | Total Incentives | Admin Budget | Net kWh | Net Therms | Net kW |
|---|---|---|---|---|---|---|
| 2006 | $ 535,500 | $ 240,000 | $ 295,500 | - | 298,920 | - |
| 2007 | $ 645,300 | $ 320,000 | $ 325,300 | - | 398,560 | - |
| 2008 | $ 754,200 | $ 400,000 | $ 354,200 | - | 498,200 | - |

| Year | Filing Meas. # | Meas. Desc. | Gross kWh | Gross Therms | Gross kW | NTG | Unit Type | Meas. Life | Units | Incentive | IMC | Total Net kWh | Total Net Therms | Total Net kW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 350001 | Medium Size Manufacturing -- Process Optimization | | 21,000 | | 0.94 | | 20 | 6 | $ 20,000.00 | $ 20,000.00 | - | 118,440 | - |
| 2006 | 350002 | Large Size Manufacturing -- Process Optimization | | 32,000 | | 0.94 | | 20 | 6 | $ 20,000.00 | $ 20,000.00 | - | 180,480 | - |
| 2007 | 350001 | Medium Size Manufacturing -- Process Optimization | | 21,000 | | 0.94 | | 20 | 8 | $ 20,000.00 | $ 20,000.00 | - | 157,920 | - |
| 2007 | 350002 | Large Size Manufacturing -- Process Optimization | | 32,000 | | 0.94 | | 20 | 8 | $ 20,000.00 | $ 20,000.00 | - | 240,640 | - |
| 2008 | 350001 | Medium Size Manufacturing -- Process Optimization | | 21,000 | | 0.94 | | 20 | 10 | $ 20,000.00 | $ 20,000.00 | - | 197,400 | - |
| 2008 | 350002 | Large Size Manufacturing -- Process Optimization | | 32,000 | | 0.94 | | 20 | 10 | $ 20,000.00 | $ 20,000.00 | - | 300,800 | - |

# THIRD PARTY NON-RESOURCE PROGRAMS

# 2006-2008 Energy Efficiency Programs
# Chinese Language Efficiency Outreach (CLEO) Concept Paper

## 1. Projected Program Budget:

| | | 2006 | 2007 | 2008 |
|---|---|---|---|---|
| Administration | | | | |
| | Administrative Overheads | $ 14,779 | $ 14,779 | $ 14,779 |
| | Administrative Other | $ 28,794 | $ 28,794 | $ 28,794 |
| Marketing & Outreach | | $ 77,890 | $ 77,890 | $ 77,890 |
| Direct Implementation | | | | |
| | Activity | $ 30,264 | $ 30,264 | $ 30,264 |
| | Installation | $ - | $ - | $ - |
| | Hardware & Materials | $ - | $ - | $ - |
| | Procurement | $ - | $ - | $ - |
| | Incentives | $ - | $ - | $ - |
| EM&V | | $ - | $ - | $ - |
| *Total* | | *$ 151,727* | *$ 151,727* | *$ 151,727* |

## 2. Projected Program Impacts: "Not Applicable" (Information Only Program)

| 2006 | | | 2007 | | | 2008 | | |
|---|---|---|---|---|---|---|---|---|
| Net kWh | Net kW | Net Therms | Net kWh | Net kW | Net Therms | Net kWh | Net kW | Net Therms |
| - | - | - | - | - | - | - | - | - |

## 3. Program Cost Effectiveness:

N/A

## 4. Program Descriptors:

### MARKET SECTOR:

CLEO serves the ethnic Chinese customers in SoCalGas and SCE service areas. The program relies on ethnic Chinese densities in certain areas to impact the best-cost efficiencies. For example the Chinese customers of San Gabriel Valley and Irvine/Cerritos will be targeted.

CLEO is unique in its targeted delivery of non-resource energy efficiency services for subsequent resource savings. CLEO ensures that a critical mass of activity takes place to raise program awareness and visibility. In-Language community education and organizing is at the core of the CLEO approach; it's all about educating entire communities so that they can take the controls of their own energy futures and craft sustainable paths for themselves and future generations. Trust is established through collaboration with local community-based organizations and through face-to-face interactions. Short-term efficiency gains are made that lay the foundation for long-term energy sustainability.

# 2006-2008 Energy Efficiency Programs
# Chinese Language Efficiency Outreach (CLEO) Concept Paper

## OVERCOMING BARRIERS & CUSTOMER OUTREACH

- **Creating Language based outreach for the ethnic communities**
- **Raising Awareness through Community Workshops**
  - **Leveraging Energy Awareness for Energy Savings**
  - **Earning Trust through Participation in Community Events**
    - **Building a Critical Mass of Activities and Synergies**
    - **Building a Sustainable foundation through Community Partners**

**PROGRAM CLASSIFICATION:** CLEO is offered as a local non-resource program for SoCalGas and SCE.

CLEO will serve the ethnic customers in SoCalGas service area. The program is primarily focused towards residential customers and is cross cutting in nature and addresses customers in multiple segments. The program leverages cost efficiencies by focusing on demographics with higher densities of targeted ethnic communities.

**PROGRAM STATUS:** CLEO is an existing non-resource, efficiency outreach program currently implemented for PY 2004-2005 in SoCalGas, SCE and PG&E services areas.

**GEOGRAPHIC AREA:** CLEO will offer program services in SoCalGas and SCE's service areas specifically focusing on demographics with a higher density of Asian ethnic population. These areas are the San Gabriel Valley, Orange County and South Bay. The program further zooms in to cities with a critical mass of ethnic customers such as Monterey Park, Alhambra, to Diamond Bar, Rowland Heights, Irvine, Westminster, Artesia, Cerritos and Torrance. The demographics of a Cities targeted is presented from Census data. Peripheral Cities will also be encouraged to participate.

### 2000 Census Data: (10.92% of Asian population in Southern California)

| COUNTY | CITY | Total | ASIAN | % |
|---|---|---|---|---|
| Los Angeles | Arcadia | 53,054 | 24,018 | 45.270856 |
| Los Angeles | Artesia | 16,380 | 4,460 | 27.228327 |
| Los Angeles | Cerritos | 51,488 | 29,989 | 58.24464 |
| Los Angeles | Diamond Bar | 56,287 | 23,922 | 42.500044 |
| Los Angeles | El Monte | 115,965 | 21,315 | 18.380546 |
| Los Angeles | La Mirada | 46,783 | 6,900 | 14.748947 |
| Los Angeles | Lakewood | 79,345 | 10,548 | 13.293843 |
| Los Angeles | Monterey Park | 60,051 | 36,912 | 61.467752 |
| Los Angeles | Rosemead | 53,505 | 25,970 | 48.53752 |
| Los Angeles | San Gabriel | 39,804 | 19,399 | 48.736308 |
| Los Angeles | Torrance | 137,946 | 39,210 | 28.424166 |
| Los Angeles | Walnut | 30,004 | 16,665 | 55.542594 |

| COUNTY | CITY | Total | ASIAN | % |
|---|---|---|---|---|
| Los Angeles | West Covina | 105,080 | 23,543 | 22.404834 |
| Los Angeles | Total Incorporated Cities | 845,692 | 282,851 | 33.44610 |
| | | | | |
| County Total | | 2,846,289 | 383,810 | |
| Orange | Fullerton | 126,003 | 20,130 | 15.97581 |
| Orange | Garden Grove | 165,196 | 50,803 | 30.753166 |
| Orange | Irvine | 143,072 | 42,506 | 29.709517 |
| Orange | La Palma | 15,408 | 6,874 | 44.613188 |
| Orange | Tustin | 67,504 | 10,008 | 14.825788 |
| Orange | Westminster | 88,207 | 33,511 | 37.991316 |
| Orange | Yorba Linda | 58,918 | 6,502 | 11.035677 |
| Orange | Total Incorporated Cities | 664,308 | 170,334 | 25.640817 |
| San Bernardino | Chino Hills | 66,787 | 14,575 | 21.823109 |

## 5. Program Statement

The program specifically addresses the 'Language Barrier' of ethnic Chinese (Mandarin and Cantonese) customers, which prevents them from accessing Utility and third party EE offerings.

## 6. Program Rationale

**PROGRAM RATIONALE:**

The Education, Training, and Outreach Program plays a significant role in overcoming market barriers related to insufficient information and product knowledge regarding energy efficient products and technologies.

*(Fostering 'Energy Knowledge for Real Power' Savings)*

GES through its CLEO program's in-language workshops has clearly demonstrated the need for a sustainable efficiency outreach with direct human interface. CLEO's in-language efficiency seminar platform will empower residential customers with 'Energy Knowledge for Real Power' savings. CLEO's in-language non-resource offerings include a media blitz on ethnic media with weekly energy quizzes, energy saving seminars, free home, phone, and mail-in energy audits with in-language reports, toll free phone support, community booths, schools program, efficiency partnership with churches and religious CBO's and a community/city partnership for cost effective ethnic outreach. CLEO portrays a much-needed personalized human image to energy efficiency with in-language offerings thereby cost effectively addressing the lost opportunities. This effort will create and raise energy awareness, transforming it to measurable direct implementation of Utility programs, energy efficient products and technologies.

***(Transforming' Energy Knowledge to Energy Wisdom')***

GES will leverage the non-resource component of focused in-language seminars, phone support, energy audits and community booths to facilitate implementation of SoCalGas's bouquet of energy efficiency programs in Chinese communities with language barriers and in-language program preference. This will create effective therm savings while minimizing lost opportunities.

**PROGRAM INNOVATION:**

With CLEO, GES will introduce new and customer focused frontiers in efficiency program marketing and delivery. In-language media blitz, weekly newspaper energy quizzes, community, city and cbo's partnerships and face-to-face customer interaction form the backbone of the program. The in-language, empowering energy knowledge is effectively transformed to crosscutting implementation of SoCalGas, efficiency program elements.

GES's proven innovation with the on-going CLEO program will be replicated. The program delivery innovations are the 'Green Ambassadors' program – a community outreach module, Empowering Schools outreach, Local Cities and Community Partnerships, 100% in-language home energy audits with simplified, customized home energy audit software and energy audit reports in Ethnic languages. In addition, each week GES will feature an Energy Efficiency Quiz each week in local ethnic dailies with simple efficiency prizes for winners.

- 'Lighten-UP' - GES will duplicate the success of the Photo-Cell Energy star CFL program in Anaheim to install 20W Photocell CFL lamps on outdoor residential porches. In addition to saving significant energy these specialty CFL's create a safer neighborhood and strategically positions Utility efficiency programs on the customer's front porch, carving out a loving space in the energy consciousness of Utility customers. Additionally these CFL's will be Styrofoam packaged for direct mailing -an unique first of its kind delivery mechanism. The box covers on these lamps will market CLEO and SoCalGas programs.

- A specialty LED Photocell Night Light with dancing LED lights, on which we are experiment installing a voice card. This LED Night Light will have the last word when customers retire for the day and switch off all their lights and say "Thank You For Saving Energy' or 'Energy Saving Pays'.

**7. Program Outcomes:**

Presented below are the expected qualitative program outcomes:

| CLEO PROGRAM OUTCOMES<br>ACTIVITIES PY 2006 – PY 2007 - SoCalGas | | | |
|---|---|---|---|
| **TASK NO.** | **DELIVERABLES** | **ANNUAL GOALS** | **PROG.(3 YEARS) GOALS** |
| **1.** | **IN-LANGUAGE SEMINARS** | **15** | **45** |
| **2.** | **FREE HOME AUDITS** | **50** | **150** |
| **3.** | **FREE PHONE AUDITS** | **50** | **150** |
| **4.** | **BOOTHS** | **5** | **15** |
| **5.** | **NEWSPAPER ADS.** | **40** | **120** |
| **5.1** | **NEWSPAPER QUIZ** | **40** | **120** |
| **6.** | **TELEVISION ADS.** | **20** | **60** |
| **7.** | **TOLL FREE HOTLINE** | **100%** | **1** |
| **8.** | **SCHOOL OUTREACH** | **100%** | **1** |
| **9.** | **CHURCH OUTREACH** | **100%** | **1** |
| **10.** | **CITIES PARTNERSHIP** | **100%** | **1** |
| **11.** | **CBO's PARTNERSHIP** | **100%** | **1** |
| **12.** | **PRINTING** | **100%** | **1** |
| **13.** | **ON-LINE WEB** | **100%** | **1** |

**8. Program Strategy:**

| Program Strategies – Information Only |
|---|
| Nonresidential Audits |
| Nonresidential Targeted Marketing |
| Residential Audits |
| Residential Targeted Marketing |
| Mass Marketing |

*CLEO will impact the short listed Strategies above*

**8.1.1. Program Strategy Description:**
**PROGRAM STRATEGY:**

The program process consists of the following activities in logical coordinated progression. The Work Plan illustrates these activities in logical sequence.

**Program Marketing and Outreach:** Leveraged unsolicited marketing blitz through low cost community newspapers, ethnic in-language newspapers and Television, local Cities - Newsletters and Television, local Churches, highly popular ethnic CBO type organizations and schools. GES will reinforce and leverage existing relations with local Churches, Schools and Cities to partner on the program outreach and delivery.

**Direct Outreach:** Face-to-face classroom style seminars with efficiency incentives (free CFL's, Phone cards to their countries of origin etc.) to generate awareness, interest and program participation. These seminars educate customers on common energy, gas and water saving strategies and empower them to implement lasting energy efficiency measures. In addition customers are informed of Utility and third party efficiency program offerings and encouraged to take advantage of these programs. These seminars also enroll customers for free Home Energy surveys and audits. CLEO will also set up community booths to disseminate information, sign-up customers for seminars and home energy audits. Customers will be encouraged to participate in CLEO offerings at these community booths.

**Direct Implementation:** Trained and experienced in-language energy engineers visit customers who have signed for free home energy audits including gas and water savings at the seminars and community booths. Customers are given free CFL's, LED Speaking Photocell Night Lights (which says 'Thank you for saving energy' or a similar efficiency message when all the lights are turned off as customers retire for the day), and Photocell dawn to dusk CFL's during these home visits. These home audits and seminars facilitate implementation of the resource offerings in a responsive and personalized manner ensuring sustainable efficient relationships. In addition to directly implementing low/no cost efficiency measures customers receive incentives for participating in Home audits.

**Customers Relationship:** Provide excellent customer relations with toll free in-language hot line and a dedicated web site. The schools program, media outreach, energy quizzes in local papers and community efficiency ambassadors reinforces the bonding with customers.

**Customer Feedback:** Dynamic EM&V of the program at seminars, booths and during home energy surveys for improvement and fine-tuning of ongoing and future program offerings. The Work Plan details the workflow with timelines.

**Program Reporting:** GES will report all activities by submitting monthly updates on E-3 calculator and CPUC workbook or any other format as

designated. GES will work with SoCalGas to ensure a smooth reporting process.

**8.1.2. Program Indicators:**

| CLEO PROGRAM INDICATORS<br>ACTIVITIES PY 2006 – PY 2007 - SoCalGas | | | |
|---|---|---|---|
| **TASK NO.** | **DELIVERABLES** | **ANNUAL GOALS** | **PROG.(3 YEARS) GOALS** |
| **1.** | **IN-LANGUAGE SEMINARS** | **15** | **45** |
| **2.** | **FREE HOME AUDITS** | **50** | **150** |
| **3.** | **FREE PHONE AUDITS** | **50** | **150** |
| **4.** | **COMMUNITY BOOTHS** | **5** | **15** |
| **5.** | **NEWSPAPER ADS.** | **40** | **120** |
| **5.1** | **NEWSPAPER QUIZ** | **40** | **120** |
| **6.** | **TELEVISION ADS.** | **20** | **60** |
| **7.** | **TOLL FREE HOTLINE** | **100%** | **1** |
| **8.** | **SCHOOL OUTREACH** | **100%** | **1** |
| **9.** | **CHURCH OUTREACH** | **100%** | **1** |
| **10.** | **CITIES PARTNERSHIP** | **100%** | **1** |
| **11.** | **CBO's PARTNERSHIP** | **100%** | **1** |
| **12.** | **PRINTING** | **100%** | **1** |
| **13.** | **ON-LINE WEB** | **100%** | **1** |

## 9. Program Objectives:

The Program Objectives are outlined in Program Outcomes above presented in a Table format. In summary CLEO will offer a total of 45 in-language seminars, 150 home audits, 150 phone audits, 15 community booths, 120 newspaper ads and 150 newspaper energy quizzes, an in-language toll free hotline, a schools outreach program, outreach with local community churches, cities and cbo's. In addition CLEO will create an effective web presence and provide attractive in-language program fliers and energy reports.

## 10. Program Implementation

The Program Strategy in 8.1.1. details the steps of Program Implementation. In summary the program is jump started by a focused **program marketing and outreach** with an aggressive media campaign, partnerships with local cities, churches and schools. This is followed by a **direct outreach** with classroom style hands-on seminars and visits to SoCalGas Energy Center. The marketing leads on to

**program implementation** in the form of home and phone audits with implementation of Low/No Cost efficiency measures. The whole implementation is supported by effective **customer relationship** by providing toll free in-language phone support and a dedicated in-language web site.

**11. Customer Description:**

The on-going CLEO program (and the approved SCE's EE filing of the CLEO program) targets the Chinese customers of Southern California with a language barrier or an in-language preference. The proposed CLEO program will target the Chinese (Mandarin and Cantonese) speaking customers of Southern California.

The demographics and customer information is presented in Item-4, **Program Descriptors.**

**12. Customer Interface:**

CLEO's mantra is to maximize direct customer interaction. We strive on building direct face-to-face relationships with our customers. CLEO's seminars, booths, home audits, schools and church programs provide excellent opportunities for direct customer interface resulting in excellent opportunities for implementation of energy efficiency measures. In addition **all** program are presented in-language with active question and answer sessions and directly empowering customers for efficiency implementation.

**13. Energy Measures and Program Activities:**

**13.1. Prescriptive Measures -** Not Applicable

**13.2. kWh Level Data -** Not Applicable

**13.3. Non-energy Activities**

CLEO's non-energy activities have been fine tuned over the past two program cycles for maximum effectiveness.

CLEO's non-energy activities include but are not limited to empowering seminars, free home energy and phone audits, toll free phone consultation, in-language efficiency marketing and outreach in local ethnic media, community and schools outreach. A detailed list is presented in Item 8.12.

**13.3.1. Activity Description**

CLEO's in-language seminars have registered an average attendance of 40 customers. In PY 2002-03 and PY 2004-05, CLEO has offered over 100 classroom style interactive seminars, 600 home energy audits and 600 phone energy audits.

In-language, Customer care executives and energy engineers have designed seminar brochures and colorful handouts. Seminars are presented by trained in-language Professional Engineers (P.E.'s) with extensive energy efficiency experience and a penchant for community outreach. A Typical CLEO seminar is highly interactive, where customers are empowered to effect energy savings and participation in Utility programs.

CLEO's trained in-language energy auditors, visit customer homes for home audits and for on-site implementation of low/no cost measures and motivating customers to implement long lasting gas, electric and water savings. All audit reports are hand delivered to the customers and discussed with them by our trained experts. In addition customers will be given free Photocell Dawn to dusk CFL's lovingly positioning Utilities on the customers front porch and a free voice activated Photocell Nightlight LED lamp, which bids the customer goodnight by thanking them for saving energy each night as the LED Nightlights come on when all the other lights are closed.

**13.3.2. Quantitative Activity Goals:**

| CLEO PROGRAM ACTIVITIES<br>ACTIVITIES PY 2006 – PY 2007 - SoCalGas | | | |
|---|---|---|---|
| **TASK NO.** | **DELIVERABLES** | **ANNUAL GOALS** | **PROG.(3 YEARS) GOALS** |
| **1.** | **IN-LANGUAGE SEMINARS** | **15** | **45** |
| **2.** | **FREE HOME AUDITS** | **50** | **150** |
| **3.** | **FREE PHONE AUDITS** | **50** | **150** |
| **4.** | **BOOTHS** | **5** | **15** |
| **5.** | **NEWSPAPER ADS.** | **40** | **120** |
| **5.1** | **NEWSPAPER QUIZ** | **40** | **120** |
| **6.** | **TELEVISION ADS.** | **20** | **60** |
| **7.** | **TOLL FREE HOTLINE** | **100%** | **1** |
| **8.** | **SCHOOL OUTREACH** | **100%** | **1** |
| **9.** | **CHURCH OUTREACH** | **100%** | **1** |
| **10.** | **CITIES PARTNERSHIP** | **100%** | **1** |
| **11.** | **CBO's PARTNERSHIP** | **100%** | **1** |
| **12.** | **PRINTING** | **100%** | **1** |
| **13.** | **ON-LINE WEB** | **100%** | **1** |

### 13.3.3. Assigned attributes of the activity (market sector, end use)

Residential sectors, Residential end-use and Small Business Outreach.

## 14. Subcontractor Activities

CLEO's trained and in-language sub-contractors provide program assistance with in-language development of program material, providing in-language seminars, audit reports and other related activities. CLEO has worked with E-Energy Solutions and Oscar Energy to provide assistance with in-language outreach and support CLEO's in-house trained Chinese staff.

## 15. Quality Assurance and Evaluation Activities

CLEO program believes in 'staying foolish' and 'staying hungry' listening to customers and assimilating lessons learnt through a dedicated and dynamic customer feedback mechanism.

The CLEO program will be evaluated through a combination of evaluation processes. These are:

- Our media partners will conduct a survey before the program is launched. Consumer awareness of the State, Utility and Local programs will be recorded for the San Gabriel Valley Cities. Surveys will focus on demographic areas of Chinese and Hispanic consumers. A similar survey will be conducted at the end of the program. The two sets of data will be evaluated for program performance.
- A direct feedback survey will be conducted at the face-to-face seminars. The survey will focus on media effectiveness, program design, consumer awareness and the effectiveness of the program offerings to empower customers with knowledge to implement energy efficiency measures. Workshop attendees will also be encouraged to fill out an in-language evaluation covering the different program offerings such as Media Ads, Hotline, Web Site and Workshop offerings. This will provide a direct feedback from the consumer, which will help us improve our offerings.
- The number of calls to the hotline will be recorded. These will serve as a program evaluation tool. Customers calling the Hot line will be asked for program feedback, which will be recorded.
- All records of Hotline calls, Booth signups for Workshops, Workshop signups and attendees will be recorded as soft and hard copies and submitted with monthly reports. In addition, program fulfillment with a consumer's plan for efficiency measure implementation will be evaluated as part of these surveys.
- We will generate a written report of its findings. The report will measure and evaluate the increase in awareness of the Chinese & community as a result of the marketing and outreach effort. It will also measure the relative increase of

customers participating in Utility and Local programs as a result of this program. The evaluation will also focus on the implementation of in-home energy efficiency upgrades and self energy audits for residential customers.

- Expected number/percent of inspections (planned percent of projects) Every customer's feedback is important to us. CLEO collects a feedback from each customer attending the seminars and visiting the booths. The feedback over the past cycles has resulted in excellent cost savings by allocating ratepayer dollars effectively. Any ethnic language program has to respond to the subtle cultural needs of the community and CLEO will harness all information to fine tune program offerings.

**16. Marketing Activities**

**The table below presents the program's marketing activities:**

| MARKETING ACTIVITIES<br>PY 2006 – PY 2008 | | | |
|---|---|---|---|
| **TASK NO.** | **DELIVERABLES**<br>**MEDIA MARKETING** | **ANNUAL GOALS** | **PROG.(3 YEARS) GOALS** |
| **1.** | **NEWSPAPER ADS.** | **40** | **120** |
| **1.1** | **NEWSPAPER QUIZ** | **40** | **120** |
| **2.** | **TELEVISION ADS.** | **20** | **60** |
| **3.** | **ON-LINE WEB** | **100%** | **1** |
| | **COMMUNITY MARKETING** | | |
| **1.** | **SEMINARS** | **15** | **45** |
| **2.** | **COMMUNITY BOOTHS** | **5** | **15** |
| **3.** | **SCHOOL OUTREACH** | **100%** | **1** |
| **4.** | **CHURCH & ADULT CTR. OUTREACH** | **100%** | **1** |
| **5.** | **CITIES PARTNERSHIP** | **100%** | **1** |

## MEDIA MARKETING:

**1. Newspaper Outreach:** CLEO's partnership with Chinese Daily News, Southern California's premier newspaper has allowed CLEO to develop, design and publish customer responsive ads and manage the ads in-house resulting in effective and cost efficient media outreach. Newspaper Ads. will announce CLEO seminars, relevant Utility and Third party program information, and create energy awareness.

**1.1 Energy Quizzes:** CLEO will team with media partners and feature weekly energy quizzes on Newspapers. Quiz winners will be announced and awarded certificates and energy efficient prizes. Schools and communities will be informed and encouraged o participate in these quizzes.

**2. Television Outreach:** CLEO has designed highly effective focused media Ads leveraging real life cultural aspects of the community designing and developing creative energy efficiency spots. CLEO's 'Yoga energy', 'Home energy wise' and 'Fortune Cookie' spots have received wide acclaim. CLEO expects to reinforce the brand recognition and continue creating awareness in the community.

**3. Web Site:** A dedicated in-language web presence similar to the current in-language site (www.CLEO2005.com) will support the program providing effective links to Utility and Third Party offerings.

**COMMUNITY MARKETING:**

**1. Seminars:** CLEO will offer 15 seminars a year for a total of 45 seminars. CLEO's has recorded an average attendance of 40 customers per seminar. The seminars will therefore provide a direct classroom style forum to over 1800 customers. These seminars empower customers with 'Energy Knowledge for Energy Wisdom' teaching them simple ways of saving Gas, electricity and water. Customers take home a wealth of knowledge, energy efficient gifts such as the Photocell dawn to Dusk CFL Porch Light, and Voice activated Photocell LED night-lights.

**2. Community Booths:** CLEO will continue participating in prominent ethnic cultural booths such as the 'Chinese New Year' and 'Harvest Moon Festivals'. In addition, colorful Booths in partnership with local Cities will figure efficiency contests with prizes, customer feedback and encourage customers to take advantage of program offerings.

**3. Schools Outreach:** In PY 2004-2005 CLEO conducted an effective Schools Outreach with ethnic Chinese schools. Students participated in an 'Energy-Artist' contest with winners from each School and overall winners awarded prizes and recognition. CLEO plans to introduce take home audits, efficiency quiz contests, and energy-artist competition for PY 2006-08.

**4. Church & Adult day care Center Outreach:** Local community Churches and religious forums form the backbone of ethnic community. In these troubling modern times, Churches provide the community with peace and reassurance. Ethnic Churches also provide a forum for Community get-together and an excellent platform to market and encourage energy savings. CLEO will cultivate and add to the existing relationships with churches and Adult day Care centers to effectively cultivate program participation and energy savings.

**5. Cities Partnership:** CLEO will cultivate existing relationships and partnerships with the cities of Monterey Park, San Gabriel, Alhambra, Walnut, Diamond Bar and other cities to deliver cost effective outreach. City Newspapers and Television will broadcast efficiency messages and encourage ethnic Chinese customers to enroll in the program offerings.

**17. CPUC Objective**

CLEO meets the following CPUC objectives:

**CPUC Objective # 1:** CLEO provides a cost effective resource fine tuned for optimal implementation. Implementation of CLEO with SCE's approved CLEO program will ensure a fast track implementation and cost-effective program delivery.

**CPUC Objective # 4**: CLEO provides a sustainable foundation to energy saving by educating and empowering the customer with hands on training. CLEO addresses "Lost Opportunities' by providing 'In-Language' program delivery to ethnic customers encouraging them to effect permanent efficiency upgrades.

**CPUC Objective # 6:** CLEO provides 'Information and Education' in a direct delivery one-on-one and classroom format, interacting with customers and enriching their knowledge for energy efficiency implementation.

**CPUC Objective # 9**: CLEO introduces innovative technologies (Photocell CFL Porch Lights and Photocell LED speaking Nightlights) ensuring a caring presence within the customer's efficiency consciousness, thus carving an awareness translating to direct and sustainable efficiency implementation.

In essence the program delivers a free flowing sustainable outreach by addressing the following elements:

**OVERCOMING BARRIERS & SUSTAINABLE CUSTOMER OUTREACH**

- Creating Language based outreach for the ethnic communities
- Raising Awareness through Community Workshops
- Leveraging Energy Awareness for Energy Savings
- Earning Trust through Participation in Community Events
- Building a Critical Mass of Activities and Synergies
- Building a Sustainable foundation through Community Partners

| | SCG3532 3P Chinese Language Efficiency Outreach Program | |
|---|---|---|
| **BUDGET** | | |
| | | |
| **Administrative Costs** | **$** | **130,719** |
| Overhead and G&A | $ | 44,337 |
| Other Administrative Costs | $ | 86,382 |
| **Marketing/Outreach** | **$** | **233,670** |
| **Direct Implementation** | **$** | **90,792** |
| Total Incentives and Rebates | | |
| User Input Incentive | $ | - |
| Direct Install Rebate | $ | - |
| Direct Install Labor | $ | - |
| Direct Install Materials | $ | - |
| Activity | $ | 90,792 |
| Installation | $ | - |
| Hardware & Materials | $ | - |
| Rebate Processing & Inspection | $ | - |
| **EM&V Costs** | **$** | - |
| **Budget** | **$** | **455,181** |
| **Costs recovered from other sources** | **$** | - |
| **Budget** (plus other costs) | **$** | **455,181** |
| | | |
| **PROGRAM IMPACTS** | | |
| **Program Reductions for Measures installed through 2008** | | |
| User Entered kW (kW) | | - |
| Net Jul-Sept Peak (kW) | | - |
| Net Dec-Feb Peak (kW) | | |
| Net NCP (kW) | | |
| Net CEC (kW) | | - |
| Annual Net kWh | | - |
| Lifecycle Net kWh | | - |
| Annual Net Therms | | - |
| Lifecycle Net Therms | | - |
| | | |
| **Cost Effectiveness** | | |
| **TRC** | | |
| Costs | $ | 455,181 |
| Electric Benefits | $ | - |
| Gas Benefits | $ | - |
| Net Benefits (NPV) | $ | (455,181) |
| BC Ratio | | - |
| | | |
| **PAC** | | |
| Costs | $ | 455,181 |
| Electric Benefits | $ | - |
| Gas Benefits | $ | - |
| Net Benefits (NPV) | $ | (455,181) |
| BC Ratio | | - |
| | | |
| **Levelized Cost** | | |
| **Levelized Cost TRC ($/kWh )** | | |
| Discounted kWh | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |
| **Levelized Cost PAC ($/kWh)** | | |
| Discounted kWh | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |
| **Levelized Cost TRC ($/therm)** | | |
| Discounted Therms | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |
| **Levelized Cost PAC ($/therm)** | | |
| Discounted Therms | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |

# 2006-2008 Energy Efficiency Programs
# PACE Energy Efficient Ethnic Outreach Program Concept Paper

## 1. Projected Program Budget

| | | 2006 | 2007 | 2008 |
|---|---|---|---|---|
| Administration | | | | |
| | Administrative Overheads | $ 116,667 | $ 119,327 | $ 122,066 |
| | Administrative Other | $ 18,000 | $ 18,540 | $ 19,096 |
| Marketing & Outreach | | $ 65,400 | $ 67,362 | $ 69,383 |
| Direct Implementation | | | | |
| | Activity | $ 749,933 | $ 766,431 | $ 783,424 |
| | Installation | $ - | $ - | $ - |
| | Hardware & Materials | $ - | $ - | $ - |
| | Procurement | $ - | $ - | $ - |
| | Incentives | $ - | $ - | $ - |
| EM&V | | $ - | $ - | $ - |
| *Total* | | *$ 950,000* | *$ 971,660* | *$ 993,969* |

## 2. Projected Program Impacts

| 2006 | | | 2007 | | | 2008 | | |
|---|---|---|---|---|---|---|---|---|
| **Net kWh** | **Net kW** | **Net Therms** | **Net kWh** | **Net kW** | **Net Therms** | **Net kWh** | **Net kW** | **Net Therms** |
| - | - | - | - | - | - | - | - | - |

## 3. Program Cost Effectiveness

N/A

## 4. Program Descriptors

- **Market Sector** – The market sector that will be reached in this proposal are SoCal Gas company customers who are ethnic minorities and immigrants.

- **Program Classification:** PACE Environmental programs focus on Los Angeles County, although our inspection programs cover the entire SoCal Gas. See specific geographic territory below "Geographic Area".

- **Program Status -** PACE is considered an existing program provider for the SoCal Gas Company. This Ethnic Efficiency Contract complements current existing and funded Energy Programs.

- **Include geographic area targeted by this program.**
  While PACE's primary service area is Central Los Angeles, the South Bay area and the San Gabriel Valley, as previously noted, we operate programs for both SCE and the Gas Company throughout the utility service area and the activities in this program will focus on Los Angeles County, but some activities may overlap those service areas, specifically: as far north as Visalia, north-west to Paso Robles and all coastal cities along the way. To the east we go all the way to the

Arizona border when we go to Blythe and to the south we have gone to Calexico which is at the Mexican border. The counties we serve are Los Angeles, Orange, San Bernardino, Riverside, Kern, Tulare, Fresno, San Luis Obispo, Santa Barbara, Ventura, and Imperial Counties.

- **Percentage of the market expected to be impacted by this program.**
The potential market for training and education provided through the Energy Efficient Ethnic Outreach Program is as huge as southern California's low income, ethnic and immigrant populations. As noted above, Los Angeles County is home to the largest percentage of both Hispanics and APIs in the United States—and those numbers continue to grow. In the 2004 census data reported by the U.S. Government (http://factfinder.census.gov) , the Hispanic and API population in Los Angeles County was:

| | | | |
|---|---|---|---|
| LA Total Population | 9,761,037 | | |
| Hispanic | 4,584,498 | 46.97% | |
| API | 1,290,175 | 13.22% | |
| **Total API and Hispanic** | 5,874,673 | | **60.18%** |

As these communities grow—and the ethnic population concentrations rise and the communities become more self-sufficient and insular--it actually becomes more challenging to reach them. An effective strategy must include utilizing trusted community institutions and media in language with culturally appropriate awareness. Because of the isolation in which many of these populations live, linking the program to existing relationships (such as those many of these ethnic communities have with PACE), accepted programs or institutions is an effective strategy. PACE's ability to do all of these things will assure increased, effective outreach for SoCal Gas Company programs.

While the total number of customers reached by PACE's proposed program seems large—150,000 customers--it is less than 3% of the total API and Hispanic population of 5,874,673 in the LA area.

**5. Program Statement**

The huge existing diversity in languages and cultures—and the continually increasing number of people of diverse languages and cultures-- in the SoCal Gas service area presents a challenge to efforts to reach out to implement energy efficiency programs. Both language and culture must be addressed to effectively reach these households. As noted above, many of the targeted low income, ethnic households targeted are not only of different cultures, they also often have very limited English speaking abilities. While SoCal Gas has many programs to educate consumers about energy efficiency as well as programs for low income customers such as CARE and LIEE, they are often difficult for non English speaking

populations to understand and limited language and literacy skills often result in them not participating or applying.

PACE is uniquely able to implement the Energy Efficient Ethnic Outreach Program. The PACE mission is "to serve as a resource for identifying, securing, and administering economic solutions to problems of housing, unemployment and business development, for low income populations, especially immigrant communities of all ethnic origins." With this as our mission for the past 29 years, PACE has experience, success and credibility working with low income, immigrant, ethnic minority populations. We are known among these groups, and, most importantly, we are a trusted provider or a wide range of services with them.

Although PACE was established as an organization to deliver job training services specifically to the Asian Pacific Islander (API) community, over the years our clientele has become as diverse as Los Angeles. In section 2 above, there is a chart that depicts the ethnic breakdown of our clients-- 12% Asian, 29% Latino and 53% African American. PACE provides training in 10 languages--English, Spanish, Korean, three dialects of Chinese, Vietnamese, Tagalog (Filipino), Thai and Cambodian—and additional languages can be added if demand warrants. PACE staff reflects the diverse ethnicities of the Los Angeles area. In addition to the languages listed, PACE staff are fluent in Armenian, Cambodian, Arabic, Lingala (Congo), French, Nigerian, and Amharic languages and cultures. PACE's vast knowledge of these languages and ethnic minority cultures assures maximum ethnic outreach for this program.

Knowing the language and the culture are two important, essential components of PACE's outreach program. Key also will be having the internal and external community contacts that will enable those ethnic minorities previously not reached to be included in the PACE effort.

**6. Program Rationale**

The program that PACE is advancing as Energy Efficient Ethnic Outreach contractor utilizes PACE's 30 year history of successfully working with low income immigrant populations in the Los Angeles area to increase the market penetration of energy efficiency education by So Cal Gas Company. PACE has a proven track record of working with these populations that includes knowledge of both language and culture to assure maximum impact.

As the Energy Efficient Ethnic Outreach contractor for SoCal Gas Company, PACE will implement a comprehensive program of outreach, education and information utilizing language and culturally appropriate methods targeted to specific ethnic communities. This strategy will involve three specific types of outreach activities. First, we will utilize PACE's existing network of clients and programs for ethnic communities—as noted earlier in this application it exceeds 33,000 participants

annually. Second, PACE will utilize the network of other service providers throughout southern Californian including other HeadStart providers, other WorkSource Center operators, other Business Development counselors and others as described on pages 7 – 9. Third, PACE's outreach activities will provide a significant penetration into the ethnic minority communities themselves. This combination of efforts will enable PACE's Ethnic Efficient Ethnic Outreach Program to achieve a significant penetration of ethnic customers in the SoCal Gas Company service area. PACE's program will reach and engage ethnic customers who have not previously been aware of energy conservation and rate reduction programs because of language or other cultural barriers. Within this community PACE will target three types of ethnic minority customers: (a) those who are low income and eligible for special services of the program; (b) customers who are not low income, but who do not know how to implement conservation measures; and (c) business customers.

PACE has proven its ability to reach these populations through its environmental, housing, job training, business development and other social service programs for the past 29 years. Over this time we have worked directly with more than 250,000 low income, ethnic minority and immigrant residents of LA County and southern California—the same market area and target population of the Gas Company.

PACE's program is composed of four essential elements: (1) public awareness; (2) training and information; (3) customer-specific information; (4) linkages to existing SoCal Gas and other programs.

(1) **Public Awareness** – Using our extensive knowledge of ethnic and minority communities in the target market, PACE will undertake three specific activities to increase public awareness within these communities.

   (a) **Engaging Support of Community Leaders** – PACE will identify and contact community leaders in every major ethnic community in the target area to explain the program and enlist their input into how to best reach the maximum number of members of their community. Additionally, PACE will seek their endorsement of the effort and will use their endorsement in the local public awareness campaign.

   (b) **Conducting Public Awareness campaign** through cultural institutions and ethnic language media – In each ethnic community, PACE will identify primary and secondary media (both print and on-air). PACE will then contact those media outlets and strategize with them to define a plan to advertise both the energy conservation and reduction goals of the program as well as training and information events planned in the community.

(2) **Education and Information** – PACE will provide two types of events in ethnic communities to increase knowledge by residents of energy conservation and reduction:

   (a) **Education Events** - Working with trusted community institutions, as well as through existing PACE programs such as LIHEAP, HeadStart, WorkSource

Center and Business Development Center, PACE will offer culturally appropriate, in-language training on energy conservation and use reduction for SoCal Gas customers and community residents. While trainings will vary from one hour to one day in length depending upon the audience, all participants will receive information about how to conserve energy and reduce their usage. PACE will offer a minimum of 48 training programs annually (a total of 144 trainings over the course of this contract) covering every major (and some minor) ethnic minorities in the SoCal Gas service area. The total number of people trained will be 30,000.

(b) **Public Information –** Again, working with trusted community institutions, PACE will participate at community events, using them as an opportunity to make contact with more ethnic community households. While small, neighborhood festivals will be an important part of this strategy; larger events will also provide an important forum to get our message out. Some examples of some of the larger events (and the average number of attendees) include

| Ethnic Event | Average Attendance |
|---|---|
| Chinese Lunar New Year Festival in Chinatown | 40,000 |
| Cambodian New Year in Long Beach Park | 20,000 |
| Cinco De Mayo Festival at Olvera Street | 50,000 |
| Philippine Independence Day at Temple Area | 20,000 |
| Chinese/Vietnamese Festival in Chinatown & Westminster | 50,000 |

(3) **Customer Specific Information** - PACE staff will work one on one with individuals reached either through training or public awareness campaign, to be sure that they receive the information and referrals needed for them to adopt energy conservation and reduction strategies that will enable them to optimally reduce their energy demand. Participants may, depending upon eligibility, take part in other energy conservation programs, including those that may result in the purchase and installation of energy efficient products.

(4) **Linkages to other Agencies or Programs** - When appropriate, these program participants may be referred to other agencies for additional training or energy services. Examples of such referrals may include SoCal Gas Company's LIEE program for low income households. Another example might be to refer a client to their local LIHEAP service provider.

**7. Program Outcomes**

Through the Energy Efficient Ethnic Outreach program, PACE will reach a minimum of 150,000 households over the 3 years of the contract. This will be accomplished by providing services provide the following:

| Program Activity | Outcome Over 3 Years |
|---|---|
| 1. Public Awareness | |
| Community Leaders Meetings | Meet with 180 Community Leaders |
| Public Media Placements (print & electronic) | 150 Media Placements |
| 2. Training & Information | |

| Program Activity | Outcome Over 3 Years |
|---|---|
| Training Events Held | 144 Training Events Held |
| Number of Participants Trained | 40,000 Participants in Training Events |
| Public Event Participation | Participate in 72 Public Events |
| Number of Contacts | 100,000 Ethnic Minority Contacts at Public Events |
| 3. Customers Counseled | Individually Counsel 5,000 Customers |
| 4. Customer Referrals | Provide Referrals to other assistance programs for 5,000 Customers |
| 5. Increase Overall Awareness | Increase awareness of Energy Efficiency Programs in Ethnic Minority communities generally |

**8. Program Strategy**

Of the list of Program Strategies provided by SoCal Gas Co., the PACE program will utilize Residential Downstream Training, Residential Targeted Marketing and Mass Marketing.

**8.1.1. Program Strategy Description**

PACE will employ five primary strategies to meet the goal reaching 150,000 ethnic minority households over the three years of the Energy Efficient Ethnic Outreach Program. As discussed throughout this response, PACE is committed to tracking program activities, outputs and impacts for purposes of both program management and reporting as described in The California Evaluation Framework. The program strategies described below (and their companion activities, outputs and impacts) will be tracked using PACE in-house database systems and reported regularly to SoCal Gas. The five strategies for implementing this program included:

- First will be to target existing participants in PACE environmental programs. As noted previously, PACE currently serves more than 33,000 low income, ethnic minority clients a year. By including SoCal Gas Co. Energy Efficiency training in our contact with this group will assure that at least 25,000 ethnic minority households will be reached by this new outreach effort.

- Second, PACE will target participants in other PACE programs including HeadStart, Job Placement, Business Development, and Housing programs who are also low income and ethnic minorities to benefit from Energy Efficiency outreach and training. This strategy will reach an additional 8,000 households.

- Third, PACE will provide additional outreach and training with civic, religious, and cultural institutions located within these ethnic communities. This effort will result in an additional 2,000 households

being reached. Additionally, participating in ethnic festivals and events will reach an additional 100,000 ethnic customers (see partial list of large events on page 15).

- Fourth, PACE will sub-contract with other LIHEAP service providers in the Los Angeles County to reach an additional 20,000 low income, ethnic minority households traditionally serviced by their programs. The four organizations are the Urban League, Community Enhancement Services, Maravilla Foundation and VICS (Veterans in Community Services). The Urban League traditionally serves an African American population and the other three serve an immigrant Latino population.

- A fifth strategy will be employed to create overall credibility and awareness of the program. PACE will create and distribute public information alerts in language to ethnic media including newspapers, radio and television stations as well as other community news outlets. These informational alerts will be distributed in the languages of the major ethnic minorities targeted (Spanish, Korean, Chinese, Vietnamese, Cambodian) and, later, depending on market penetration in other languages.

### 8.1.2. Program Indicators

Unlike other programs of SoCal Gas Co., the Energy Efficient Ethnic Outreach Program focuses on making contact and providing information with hard-to-reach populations, not with installation of specific energy saving devices. Also, because this group is often wary of reporting personal information, requiring them to disclose current energy use levels would serve as a strong deterrent to their participation in the primary objective of the program: simply learning about energy conservation measures and programs for which they might be eligible. PACE will document the number of persons (households) that participate in the trainings and other activities and will report this information on a monthly basis to SoCal Gas. PACE will attempt to track participants, although the success of this effort will be dependent on the participants agreeing to provide contact information and be responsive to future queries. Other types and measures of accountability for program performance and documentation will include:

- Number of people trained (as evidenced by sign in sheets, program announcements and copies of training agendas)
- Effectiveness of trainings (as evidenced by evaluation forms filled out by participants)
- Number of media placements (as evidenced by copies of same)

- Number of public events attended and number of visitors to the Energy Efficient Ethnic Outreach booth (as evidenced by participant listings of venues and sign in sheets of booth visitors)
- Number of individual customers counseled and referred (as evidenced by lists submitted by staff)

**9. Program Objectives**

| Program Activity | Outcome Over 3 Years |
|---|---|
| 1. Public Awareness | |
| Community Leaders Meetings | Goal: Meet with 5 Community Leaders Per Month<br>Identify Communities<br>Identify Leaders<br>Contact Leaders & Make Appointments<br>Meet with Leaders to Get their Endorsement<br>Obtain further Community Referrals especially other leaders and popular media. |
| Public Media Placements (print & electronic) | Create Copy for Generic Public Service Print Ad<br>Translate into languages as needed<br>Identify Placements in Ethnic Media<br>Make Contact with Media and Make Placement<br>Document Placement |
| 2. Training & Information | |
| Hold Training Events | 1. Contact PACE program sponsors; schedule training; hold training; conduct evaluation<br>2. Contact Ethnic community program sponsors; schedule training; hold training; conduct evaluation |
| Number of Participants Trained | Document training participants with sign in sheet<br>Enter information into training database |
| Public Event Participation | Identify large public events; schedule participation<br>Identify small public events; schedule participation<br>Create booth including educational & informational displays (and translations as needed)<br>Identify various levels of program give-always to draw traffic to event booth<br>Create/modify informational brochures as needed to meet ethnic cultural and language requirements |
| Number of Contacts | Document receipt of information with sign in sheets |
| 3. Customers Counseled | Create customer counseling protocol sheet<br>Create/obtain/modify informational brochures and other materials<br>Provide follow up to training, public event contact as needed to provide individual assistance. |
| 4. Customer Referrals | Create and maintain a database/file of information about energy programs in southern CA.<br>Provide follow up to training and public event contact as needed to provide appropriate referral information. |

| Program Activity | Outcome Over 3 Years |
|---|---|
| 5. Increase Overall Awareness | Increased and increasing willingness of immigrant populations to participate in energy efficiency programs as evidenced by increased numbers of participants over time. |

**10. Program Implementation**

The Energy Efficient Ethnic Outreach Program will be implemented by the Environmental Services division of PACE. Program oversight will be provided by the Program Director, Cynthia Llana. Ms. Llana is fluent in English and Filipino/Tagalog and has 14 years of experience in the implementation and management of energy conservation programs. Ms. Llana has been responsible for PACE successfully fulfilling PACE's growing contractual goals. Other staff positions for the Energy Efficient Energy Outreach Program will be filled from a combination of new hires and reassignment of existing staff (whose current jobs would then be filled with new hires). This combination of existing and new staff will assure that the program builds from PACE's strength and experience.

The program will be implemented by a full time Program Coordinator with assistance from an Energy Conservation Specialist, a Field Assistant for Training, a Community Outreach Specialist and an assistant for training and community liaison. The Program Director and the Program Coordinator will create a work plan that includes staging inclusion of various ethnic populations to coincide with the creation of culturally appropriate and translated training, support and marketing materials. The Community Outreach Specialist and the Program Coordinator will initiate contact with the various ethnic community leaders and institutions. They will also provide program information to the subcontractors and the coordinating PACE programs. The Energy Conservation Specialist and the assistant for training and community liaison will attend the public events. The Field Assistant for Training will conduct the trainings (with assistance, as needed from other staff). The Program Coordinator will be responsible for gathering all data and information needed for reporting and preparing reports. The Program Director will approve all program plans as well as program reports. Detailed job descriptions for each position are available upon request.

As noted below, we will also subcontract with 4 other LIHEAP providers that specialize in specific ethnic populations in Los Angeles County to be sure that the ethnic households in those communities are afforded the opportunity to fully participate in the EEEOP.

**11. Customer Description**

Broadly, targeted program participants are SoCal Gas Company consumers that are ethnic minorities with limited English proficiency living primarily in Los Angeles County. It is anticipated that customers will primarily be Asian Pacific Islanders (API) and Hispanic who make up almost 60% of the population of Los Angeles County, although other ethnic groups such as African Americans and Native Americans will be included. These customers will be of three types: low income ethnic minority (100% or less of Area Median Income); ethnic minority (100% or more of AMI), and/or ethnic minority business customers. As stated in other sections of this application, as need demands and resources allow, PACE will implement elements of the EEEOP in other parts of SoCal Gas Company's service area outside Los Angeles County.

**12. Customer Interface**

Language and cultural barriers often prevent ethnic minority populations from receiving information about programs for which they are eligible that could provide them important services and benefits. This is true of many government programs that could provide cash benefits such as the Earned Income Tax Credit (which goes unclaimed by hundreds of thousands eligible recipients in Los Angeles County alone) as well as for energy conservation programs offered by SoCal Gas Co. It is a daunting challenge to try to gain the attention and trust of people who have a very different cultural orientation to life—and often a different language as well. Assuming that you can get their attention and communicate the message of energy conservation and efficiency, it requires a huge leap to get them to take action based on the message. While this task is daunting, it is what PACE does day in and day out in our existing energy programs. With one family at a time, PACE has, for almost three decades, provided patient, culturally appropriate, in-language training and information to low income, ethnic minorities to enable them to become active participants in the quest to conserve energy. With ethnic minorities comprising more than 60 % of the population of Los Angeles County (see census data cited at item 4 in the previous section), ethnic populations must be active participants in any energy conservation and reduction strategy for any utility supplier--including SoCal Gas Company--to reach their energy efficiency goals.

**13. Energy Measures and Program Activities -** Energy Measures are not applicable to the Energy Efficient Ethnic Outreach Program

**13.1. Prescriptive Measures.**

**13.2. kWh Level Data**

**13.3. Non-energy Activities**

**13.3.1. Activity Description**

**13.3.2. Quantitative Activity Goals**

### 13.3.3. Assigned attributes of the activity (market sector, end use)

**14. Subcontractor Activities**

PACE will sub-contract with other energy assistance providers in the Los Angeles area to reach additional low income, ethnic minority households traditionally serviced by their programs. The four organizations are:

Maravilla Foundation
Alex Sotomayor, President
5729 E. Union Pacific
City of Commerce, CA 90022
Tel - 323-869-4500

Community Enhancement Services
Zigmund Vays, President
1335 N. La Brea
Hollywood, CA 90028
Tel - 323-850-4676

Veterans in Community Services
Tony Gallegos, President
10260 Matern Place
Santa Fe Springs, CA 90670
562-204-0548

Urban League
Sandra Carter, Vice President
3450 Mount Vernon Drive
Los Angeles, CA 90008
Tel - 323-299-9660

The Urban League traditionally serves an African American population and the other three serve an immigrant Latino population. Activities in which these four organizations will engage include:

- Identification and Outreach of potential ethnic participants
- Screening and intake of training participants
- Adaptation of training materials and curriculum to meet the language and cultural needs of participants
- Conduct of training for their targeted participants (including conducting evaluations and maintaining records and reporting that information to PACE)
- Distribution of energy efficiency, conservation and use reduction information/brochures to their program participants.

The subcontractors will be responsible for providing training to 5,000 ethnic customers annually. Their performance will be reviewed by PACE based upon monthly reports to be submitted to PACE. Payment for services will be on the basis of the number of training program participants up to a maximum of 5,000 per year.

Like PACE, three of the four subcontractors are certified Women Minority Business Enterprises as established by the Women Minority Business Enterprise Clearinghouse of the Public Utilities Commission of the State of California. The fourth uncertified WMBE organization is eligible and has applied for WMBE certification.

**15. Quality Assurance and Evaluation Activities**

While PACE provides Quality Assurance Inspections for both SoCal Gas and SoCal Edison's LIEE Programs, quality assurance for the Energy Efficient Ethnic Outreach Program is not one that requires inspections. QA for this program will come from a number of tracking and reporting sources including:

- Number of people trained (as evidenced by sign in sheets, program announcements and copies of training agendas)
- Effectiveness of trainings (as evidenced by evaluation forms filled out by participants)
- Number of media placements (as evidenced by copies of same)
- Number of public events attended and number of visitors to the Energy Efficient Ethnic Outreach booth (as evidenced by participant listings of venues and sign in sheets of booth visitors)
- Number of individual customers counseled and referred (as evidenced by lists submitted by staff)

**16. Marketing Activities**

Marketing activities are key to the success of the program. PACE will work with its own marketing contractor (and coordinate with SoCal Gas marketing department as needed) to devise an overall campaign including design features. Important to the design is that it be adaptable for a variety of languages and cultural uses. Specific marketing materials will include:

- ✓ Informational Brochures (adaptations of SoCal Gas as possible) – distributed to existing PACE program participants, participants of PACE program networks (such as other HeadStart providers), attendees of PACE events at ethnic public events, in response to requests resulting from public awareness media campaign.
- ✓ Informational Posters – posted at PACE program sites, PACE program network sites, ethnic institutions and businesses.

- ✓ Public Service Announcements – in both print and on-air media in ethnically targeted media.
- ✓ Camera Ready Copy for use by local media and in other bulletins – to be included in local, ethnic newspapers, newsletters, programs and other print media.
- ✓ Web page for PACE's Website to convey information about the program
- ✓ Participation in Ethnic Community Events – with a booth to distribute energy efficiency informational materials, information about education programs and other utility and/or government programs. Giveaways will be provided to draw traffic to the booth as well as to remind visitors to practice energy efficient and usage reduction as well as to serve as a reminder of where to obtain additional information and/or sign up for education or programs.
- ✓ Presentations to PACE programs, PACE program networks, ethnic civic and community associations.

How each activity contributes to the goal is described in the chart below:

| Program Activity | Contribution to Goal |
|---|---|
| Contact Community Leaders and receive Individual and Institutional Endorsements for the program | Enlists community support; Provides credibility within the ethnic community; Assists with program implementation; Increases interest and awareness of the program. |
| Media Placements | Increases visibility within ethnic communities (with culturally appropriate and in-language message); Increases ethnic participation in training and information program; |
| Energy Efficiency Brochures translated into ethnic languages | Increases access to information among ethnic groups |
| Public Event Participation | Increases awareness of energy assistance/discounts and efficiency programs;<br>Increases distribution of energy efficiency products; |
| Promotional/Give-away items for use in conjunction with public events and trainings | Increases awareness of the program; Increases "traffic" at public events and attendance in training and informational sessions; Provides reminders in the home |

| Program Activity | Contribution to Goal |
|---|---|
| | of the need to use energy efficiently |

**17. CPUC Objective**

Does the program meet the CPUC objectives? List the objectives met.

The Energy Efficient Ethnic Outreach program proposed by PACE in this application meets the follow Energy Efficiency Policy Objectives and Program Funding Guidelines as listed in "Attachment 3 – Energy Efficiency Policy Manual, Version 3", part of this proposal package.

D.04-09-060 – PACE's proposal will target ethnic populations of Los Angeles county that represent more than 60% of the population—and a number that is growing significantly every year. By targeting this population there will be both immediate and long term energy efficiencies achieved. Further, PACE's proposed program addresses the problem of institutional barriers associated with introducing new products to the market.

| | SCG3531 3P PACE Energy Efficient Ethnic Outreach Program | |
|---|---|---|
| **BUDGET** | | |
| | | |
| **Administrative Costs** | **$** | **413,696** |
| Overhead and G&A | $ | 358,060 |
| Other Administrative Costs | $ | 55,636 |
| **Marketing/Outreach** | **$** | **202,145** |
| **Direct Implementation** | **$** | **2,299,788** |
| Total Incentives and Rebates | | |
| User Input Incentive | $ | - |
| Direct Install Rebate | $ | - |
| Direct Install Labor | $ | - |
| Direct Install Materials | $ | - |
| Activity | $ | 2,299,788 |
| Installation | $ | - |
| Hardware & Materials | $ | - |
| Rebate Processing & Inspection | $ | - |
| **EM&V Costs** | **$** | - |
| **Budget** | **$** | **2,915,629** |
| **Costs recovered from other sources** | **$** | - |
| **Budget** (plus other costs) | **$** | **2,915,629** |
| | | |
| **PROGRAM IMPACTS** | | |
| **Program Reductions for Measures installed through 2008** | | |
| User Entered kW (kW) | | - |
| Net Jul-Sept Peak (kW) | | - |
| Net Dec-Feb Peak (kW) | | |
| Net NCP (kW) | | |
| Net CEC (kW) | | - |
| Annual Net kWh | | - |
| Lifecycle Net kWh | | - |
| Annual Net Therms | | - |
| Lifecycle Net Therms | | - |
| | | |
| **Cost Effectiveness** | | |
| **TRC** | | |
| Costs | $ | 2,915,629 |
| Electric Benefits | $ | - |
| Gas Benefits | $ | - |
| Net Benefits (NPV) | $ | (2,915,629) |
| BC Ratio | | - |
| | | |
| **PAC** | | |
| Costs | $ | 2,915,629 |
| Electric Benefits | $ | - |
| Gas Benefits | $ | - |
| Net Benefits (NPV) | $ | (2,915,629) |
| BC Ratio | | - |
| | | |
| **Levelized Cost** | | |
| **Levelized Cost TRC ($/kWh )** | | |
| Discounted kWh | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |
| **Levelized Cost PAC ($/kWh)** | | |
| Discounted kWh | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |
| **Levelized Cost TRC ($/therm)** | | |
| Discounted Therms | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |
| **Levelized Cost PAC ($/therm)** | | |
| Discounted Therms | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |

# 2006-2008 Energy Efficiency Programs
# Energy Efficiency Kiosk Pilot Concept Paper

## 1. Projected Program Budget

| | | 2006 | 2007 | 2008 |
|---|---|---|---|---|
| Administration | | | | |
| | Administrative Overheads | $ - | $ - | $ - |
| | Administrative Other | $ 50,000 | $ 63,000 | $ 57,000 |
| Marketing & Outreach | | $ 460,000 | $ 152,000 | $ 118,000 |
| Direct Implementation | | | | |
| | Activity | $ - | $ - | $ - |
| | Installation | $ - | $ - | $ - |
| | Hardware & Materials | $ - | $ - | $ - |
| | Procurement | $ - | $ - | $ - |
| | Incentives | $ - | $ - | $ - |
| EM&V | | $ - | $ - | $ - |
| *Total* | | *$ 510,000* | *$ 215,000* | *$ 175,000* |

## 2. Projected Program Impacts –N/A

This is a pilot information program – there are no direct energy and demand savings associated with it.

| 2006 | | | 2007 | | | 2008 | | |
|---|---|---|---|---|---|---|---|---|
| **kW** | **kWh** | **Therms** | **kW** | **kWh** | **Therms** | **kW** | **kWh** | **Therms** |
| | | | | | | | | |

## 3. Program Cost Effectiveness—N/A

## 4. Program Descriptors

| ***Energy Efficiency Kiosk Pilot Program Descriptors*** | |
|---|---|
| Program market sector | Residential retrofit (English and Spanish-speaking) |
| Program classification | Local (SCE/SoCalGas service territory) |
| Program status, geography, and percent of market impacted | This is a new pilot program, and will be targeted to residents via the refinance market. Kiosks will be piloted in the San Gabriel Valley. |
| Program Goals | To achieve tangible educational and behavioral results tied to incentive and rebate programs. |
| Program will test incentives | The program will test incentives to derive the optimal incentive to move-the-market. |
| Timing | January 2006-December 2008 |
| Funding requested | $900,000 |

**5. Program Statement**

Historically, home owners or buyers do not consider energy efficiency retrofits or upgrades during the refinancing or financing process. Information about energy efficiency upgrades are not usually available to customers through lending institutions, nor are they encouraged to participate in an energy efficiency program at these critical decision-making times. There is tremendous energy savings among home buyers and owners, particularly in the retrofit and upgrade market; however, homeowners have been reluctant to initiate energy efficiency upgrades and retrofits for a variety of reasons, including:

- ***Lack of knowledge and understanding of energy efficiency benefits.*** Most homeowners are not aware of the significant benefits available to them for energy efficiency improvements. Typically, they don't take the time to understand the various incentives available or what programs, like Demand Response mean.

- ***High first costs and competing requests for funds***. Homeowners have historically struggled with the high cost of retrofits and upgrades; they have not been able to understand the most cost-effective ways of implementing projects. Without adequate incentives, energy efficiency retrofits are often out of the reach of many homeowners' budgets.

- ***Technology information search costs***. Homeowners lack the time and expertise to evaluate efficiency opportunities. With a variety of pressing demands and limited budgets, owners are not well informed about energy efficiency.

- ***Performance uncertainties.*** Homeowners can be unsure about appropriate energy efficiency technologies as well as unfamiliar contractors.

- ***Controllability.*** Homeowners view energy costs as fixed rather than as expenses they can control.

**6. Program Rationale**

The Energy Efficiency Kiosk Pilot Program (EEKPP) will promote energy efficiency upgrades to homeowners and small business owners through the development of an interactive kiosk, which will be placed in lending institutions, and other key locations, at a significant decision point. The California Association of Mortgage Brokers and other local mortgage and construction lenders will provide program support. The program capitalizes on this opportunity by using interactive kiosks to provide valuable energy efficiency information at the time of financing. EEKPP will also test four unique incentive mechanisms to encourage lenders to provide preferred financial packages to customers who consider energy efficiency during the remodeling process. Each of these four pilots will clearly document the resulting participation in rebate programs and the associated demand/energy savings. EEKPP is presented by Intergy Corporation and Geltz Communications and planned implementation is with IndyMac Bank, and Countrywide Financial. Geltz will provide expertise in kiosk development, Intergy will provide the energy

efficiency expertise, and the lending institutions will provide the hosting site for the kiosks. EEKPP will use twenty kiosks located at bank branches in the San Gabriel Valley area. The program intends to influence a minimum of 500 customers to complete documented energy efficiency activities as a result of the interactive kiosks.

There is significant potential for energy efficiency in the vast homeowners market. Retrofits and upgrades to lighting, water heaters, appliances and similar equipment can have a significant impact on energy and natural gas consumption. EEKPP offers a variety of innovative concepts to help homeowners and small business owners understand energy efficiency and how to implement retrofits and upgrades. The program will:

- ***Address high first costs and competing needs for funds***. Through the inactive kiosk video, homeowners and small business owners will learn the best and most effective energy efficiency applications for their circumstances.

- ***Clearly explain the various rebates and incentives available from SCE and SoCalGas***. Energy efficiency analysis and incentives available will help borrowers make the best choices.

- ***Reduce technology information search costs***. The program will provide information that clearly explains the advantages of energy efficiency efforts. The program will be in both English and Spanish to reach the largest number of customers in the service area.

- ***Address controllability.*** The program will offer training and guidance to help borrowers understand that energy costs can be mitigated through energy efficiency activities.

- ***Provide incentives for energy efficiency retrofits and upgrades.*** As a pilot, the program will be able to test which incentives are most compelling to the potential homeowner or small business owner at the decision-making moment for financing or refinancing.

This interactive kiosk program will reach homeowners and small business owners during the critical financing or refinancing process. It will provide high-impact information and an incentive to the borrower as well as help the lending institutions attract new customers. The program will create a very appealing dynamic that will help SCE and SoCalGas deliver their messages and achieve their energy savings goals.

The interactive kiosk program will provide compelling and practical information as well as candid customer testimonials to encourage homeowners and building owners to implement energy efficiency measures--right where and when they and their

lenders need it most. Both Intergy and Geltz Communications have had extensive experience with the small commercial market and understand this segment's needs.

Three talented multimedia artists, with extensive experience, have agreed to create the interactive kiosk presentation. Pamela Glintenkamp, the director, created video and kiosk presentations for the J. Paul Getty Museum. The energy efficiency kiosk's program will provide compelling and practical information as well as candid customer testimonials to encourage homeowners and building owners to implement energy efficiency measures--right where and when they and their lenders need it most. As a pilot program, the project will test and offer incentives to homeowners at the point of the loan to test how best to move the market. EEKPP will test four incentive strategies over the three years. Each of these strategies will be for a fixed duration – all targeted twenty branches with kiosks will run the same test at any given time.

The interactive kiosks will include extensive interactive information about energy efficiency. In addition, four specific pilots will be implemented:

- Partial payment of origination fees, which typically amount to one percent of a home equity line of credit (HELOC). The incentive would be capped at $250 and the homeowner would need to agree to an energy efficiency audit or show evidence that the upgrades or retrofits were completed. Payment will also require that the customer review the information provided in the kiosk.
- Payment of $125 toward the origination fee. The homeowner would need to agree to an audit, and or proof of purchase of energy efficiency appliances or retrofits. Payment will also require that the customer review the information provided in the kiosk.
- Incentives keyed to homebuilder/remodeling projects. Borrowers would receive $50 credits to retailers for energy efficiency-related projects. Payment will also require that the customer review the information provided in the kiosk.
- Kiosk only, without incentive. This will be an information only pilot.

The incentive would be combined with convincing program information presented at the time of the financial decision. The various tests outlined above will provide valuable information on the extent to which an incentive will have to be combined with information to move the remodel and upgrade market.

This program brings together Intergy Corporation, a firm with extensive energy efficiency experience and Geltz Communications, a creative communications agency with a proven record of providing innovative, award-winning solutions for the energy efficiency industry. Both have successfully worked with many other major energy suppliers and programs, including Southern California Edison, PG&E and Energy Star to create engaging and effective communication and marketing materials that achieve energy efficiency results.

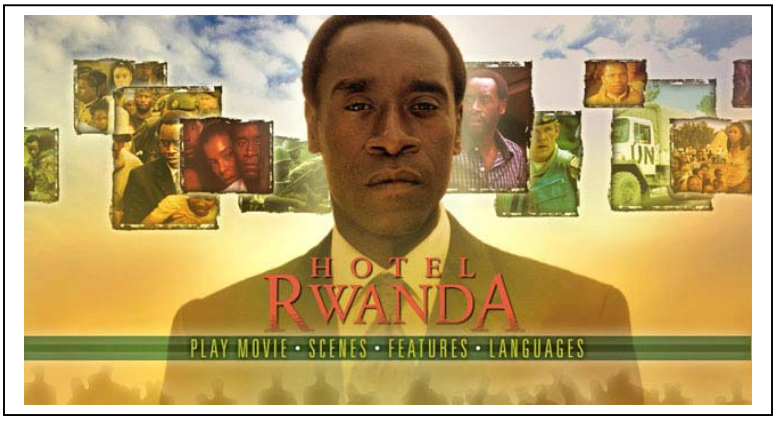
The team is ideally suited to create an interactive video on energy efficiency, combining energy efficiency experience and communications. To ensure the

highest-quality possible in the creative effort, Intergy/Geltz team has recruited three exceptional multi-media artists for the proposed project. These talented producers, directors and designers have extensive experience in creating appealing interactive videos and multi-media presentations, and will provide the program with a dynamic kiosk presentation.

*Robin Rundle,* of RSR Productions will be the producer for the kiosk video program. A former award-winning associate producer with PBS Station KOCE-TV, Rundle is an independent producer-director with an extensive background in video documentaries. Currently, she is completing an interactive multi-media presentation for NASA's Columbia Memorial Space Learning Center in Downey. Other recent video projects include a documentary on Maya Lin for the Arts Plaza at the Claire Trevor School of Arts at UC Irvine. Other recent multi-media presentations include four video documentaries for the Beall Center for Art and Technology and one for the National Science Foundation's California Reading and Literature Project.

*Pamela Glintenkamp* will direct the interactive kiosk video. Glintenkamp has a wealth of experience with multi-media and kiosk presentations, including project management for 20 interactive kiosk video segments for the J. Paul Getty Museum's Art Access Interactive System. Her other recent work includes the creation of six alternative language versions of the audio tour for the newly opened $2 billion Wynn Art Collection complex. She has worked for Walt Disney and LucasFilm.

*Jeremiah McNulty,* of Jeremiah McNulty Design, will provide the project with the highest quality designs for the kiosk, as well as print and collateral materials. McNulty is an award-winning designer who has created DVD menu design and packaging for Columbia TriStar, MGM, Warner Brothers, MCA Records and other major entertainment companies. McNulty will ensure that the energy efficiency message will be appealing and compelling. Below is one of McNulty's designs for the DVD market.




These award-winning creative talents will provide this SCE/SoCalGas kiosk pilot with the best possible multi-media presentation available and will greatly enhance the program's message and efforts to promote energy efficiency. All materials

produced and actions taken will be developed with the concurrence and support of the utilities. In addition, the kiosk team will coordinate the program with local government, community-based, Hispanic, and builder/remodeling trade organizations.

The Intergy/Geltz team is ideally suited to create a pilot kiosk program, which has the potential to play a significant role in SCE/SoCalGas's efforts to bring energy efficiency efforts to the service area. The companies bring together several decades of experience in the energy and information technology fields, offering innovative solutions to challenging resource problems. Clients include public agencies and private companies from small businesses to large investor-owned utility companies, and include cities, counties, schools and colleges.

Both companies have expertise in the marketing, design and implementation of energy efficiency programs and the development and implementation of information systems for the energy industry. The companies have worked for the CPUC, SCE, PG&E and SDG&E, local governments and energy efficiency vendors to provide comprehensive energy solutions. Intergy Corporation is a certified small business and minority owned company, and has successfully implemented energy efficiency information programs for the City of Pomona, the City of Stockton, and San Joaquin County.

## 7. Program Outcomes

The program's primary goal is to test the energy efficiency kiosk concept, provide solid results that will indicate the success of the tested incentives, and to recommend a long-term strategy. The program will also seek to achieve tangible educational and behavioral results that are tied to rebate and incentive programs. This program will persuade customers to include energy efficient products and technologies in their home remodels/upgrades through information and the incentive of a reduction in their loan origination fees at the financial institution. In addition, the program will be created so that it can be distributed through other channels such as on CDs provided by lenders, architects, and contractors and on lender-branded Web pages. EEKPP intends to influence a minimum of 500 customers to complete documented energy efficiency activities as a result of the interactive kiosks.

Additional program outcomes:

- Lending institution momentum toward promoting energy efficiency programs as part of their competitive edge
- Effective, timely cross-marketing of other energy efficiency programs, as well as demand response and renewable programs
- Increase favorable publicity for SCE/SoCalGas in local communities and local media
- Further momentum and "free marketing" through word-of-mouth communications of satisfied program participants

**8. Program Strategy**

The program will promote energy efficiency upgrades to homeowners and small business owners through the development of an interactive kiosk, which are planned to be placed in twenty branches of IndyMac and Countrywide. The program will coordinate with SCE/SoCalGas and the various lending institutions to ensure cost effective delivery. We will coordinate all activities with the California Association of Mortgage Brokers and other local mortgage and construction lenders. This will ensure that there is wide recognition of this strategy. The results of each of the four pilot strategies will be closely monitored, measured, and results used for further program decisions.

The interactive kiosk program will provide compelling and practical information as well as candid customer testimonials to encourage homeowners and building owners to implement energy efficiency measures--right where and when they and their lenders need it most. As a pilot program, the project will test and offer incentives to homeowners at the point of the loan to test how best to move the market. EEKPP will test four incentive strategies over the three years. Each of these strategies will be for a fixed duration – all kiosks will run the same test at any given time.

The interactive kiosks being used will include extensive interactive information about energy efficiency. In addition, four specific pilots will be implemented. These strategies include:

- Partial payment of origination fees, which typically amount to one percent of a home equity line of credit (HELOC). The incentive would be capped at $250 and the homeowner would need to agree to an energy efficiency audit or show evidence that the upgrades or retrofits were completed. Payment will also require that the customer review the information provided in the kiosk.
- Payment of $125 toward the origination fee. The homeowner would need to agree to an audit, and or proof of purchase of energy efficiency appliances or retrofits. Payment will also require that the customer review the information provided in the kiosk.
- Incentives keyed to homebuilder/remodeling projects. Borrowers would receive $50 credits to retailers for energy efficiency-related projects. Payment will also require that the customer review the information provided in the kiosk.
- Kiosk only, without incentive. This will be an information only pilot.

The incentive would be combined with convincing program information presented at the time of the financial decision. The various tests outlined above will provide valuable information on the extent to which an incentive will have to be combined with information to move the remodel and upgrade market.

Information also will be available from a web page available at participating financial institution websites, and on free DVDs provided by lenders and remodeling contractors. To support this effort, the program will develop appropriate business, builder, retailer, and community partnerships, and provide supporting print collateral and a media release/media article campaign for the utilities and their corporate communications/public affairs staff.

### 8.1.1. Program Strategy Description

As a pilot program, the project will test and offer incentives to homeowners at the point of the loan to determine how best to move the market. During the three-year project period, the program will test four types of incentives:

| Summary of Program Pilots | Incentives | Duration | Customer action |
|---|---|---|---|
| Pilot #1—Pay of half origination fee | Capped at $250 | Six months | Customer receives rebate and program information and agrees to audit |
| Pilot #2—Pay $150 of origination fee | Capped at $125 | Six months | Customer receives rebate and program information and agrees to audit |
| Pilot #3—Gift certificate | $50 | Six months | Customer receives rebate Information |
| Pilot #4—Control group | No incentive | Six months | Customer receives program Information |

The program will test the incentives in sequence, so that all lenders will have the same program at the same time. The incentive would be combined with convincing program information presented at a time of decision, and should make it considerably easier for the homeowner to take action. The program's message is extremely timely during this period of rising energy costs.

Ultimately, this program is intended to be a marketing channel for the Southern California Gas and SCE resource programs. These interactive energy efficiency kiosks are the perfect means to leverage the features and benefits of a variety of Resource Programs to create momentum in the residential market. Our experience has taught us that incentives get customers' attention, but the long-term cost savings and other benefits of energy efficiency programs convince customers to participate. The team will work closely with SCE and SoCalGas program managers to present and cross-market Resource Programs whose features and benefits will clearly deliver long-term energy and cost savings when installed in the home. The kiosk presentation will include clear information about the various rebate and incentive programs available. Information about the programs will also be available on the program website and printed

materials will be available at the kiosk. For the audits, the program will provide SCE and SoCalGas with a list of audits that are done, and where possible the program will coordinate audits with the utilities. Available incentives for these programs will figure into the calculations in the Loan Calculator section of the kiosks.

**Strategy to reach Non-English speaking**

The Latino population is the fastest growing population in Southern California. There are almost seven million Hispanics in the SCE/SoCalGas service area. These dynamic communities are also becoming major economic drivers. In the San Gabriel Valley there are almost 30,000 small businesses owned by Latino or Asians. The program will develop a Spanish language version of the interactive kiosk and giveaway DVD to reach the large Hispanic population in the service area. Language-appropriate printed collateral information will support the video, and Spanish language materials also will be distributed as part of the loan application process. In addition, the Intergy marketing team will provide outreach through Hispanic community-based organizations and media, and develop real-life customer testimonials with Spanish-speaking customers who use the kiosk and take advantage of the loan incentive program to incorporate energy efficient features in their home remodel. Finally, the team will use existing SCE/SoCalGas materials in Spanish to cross-market other energy efficiency programs.

As noted before, members of the creative team have extensive experience in producing videos and supporting materials in multiple languages. The team will provide the expertise needed to communicate to diverse groups.

The ethnic populations are the fastest growing groups in California, with a particularly heavy concentration in the southern part of the state. The California Department of Finance projects that the ethnic populations will make up over 80 percent of Los Angeles County's population by 2050.

**Projected General and Ethnic Populations through 2050**
**Los Angeles County**

| Year | | Total | White | Hispanic | Asian | Pacific Islander | Black | American Indian | Multi-Race |
|---|---|---|---|---|---|---|---|---|---|
| **2000** | Number | **9,559,635** | **3,056,684** | **4,264,140** | **1,139,396** | **24,132** | **916,140** | **27,691** | **131,452** |
| | Percent | *100.00%* | *31.97%* | *44.61%* | *11.92%* | *0.25%* | *9.58%* | *0.29%* | *1.38%* |
| **2010** | Number | **10,461,007** | **3,078,169** | **5,060,274** | **1,131,189** | **24,842** | **969,868** | **35,866** | **160,799** |
| | Percent | *100.00%* | *29.43%* | *48.37%* | *10.81%* | *0.24%* | *9.27%* | *0.34%* | *1.54%* |
| **2020** | Number | **10,885,092** | **2,832,727** | **5,650,010** | **1,197,401** | **27,606** | **942,273** | **54,961** | **180,114** |
| | Percent | *100.00%* | *26.02%* | *51.91%* | *11.00%* | *0.25%* | *8.66%* | *0.50%* | *1.65%* |
| **2030** | Number | **11,236,734** | **2,614,550** | **6,221,668** | **1,214,042** | **29,101** | **886,468** | **73,120** | **197,785** |

| Year | | Total | White | Hispanic | Asian | Pacific Islander | Black | American Indian | Multi-Race |
|---|---|---|---|---|---|---|---|---|---|
| | Percent | *100.00%* | *23.27%* | *55.37%* | *10.80%* | *0.26%* | *7.89%* | *0.65%* | *1.76%* |
| **2040** | Number | **11,380,841** | **2,373,749** | **6,689,252** | **1,183,877** | **29,517** | **807,261** | **89,334** | **207,851** |
| | Percent | *100.00%* | *20.86%* | *58.78%* | *10.40%* | *0.26%* | *7.09%* | *0.78%* | *1.83%* |
| **2050** | Number | **11,423,198** | **2,163,318** | **7,079,074** | **1,121,185** | **29,314** | **717,093** | **104,295** | **208,919** |
| | Percent | *100.00%* | *18.94%* | *61.97%* | *9.81%* | *0.26%* | *6.28%* | *0.91%* | *1.83%* |

Source: California Dept. of Finance

### 8.1.2. Program Indicators

| Program indicators | Comments | Date |
|---|---|---|
| Create interactive video and kiosk program | English and Spanish versions | 6/06 |
| Install 20 EE Kiosks in lending institutions | Installations could be rotated or moved to test locations | 7/06 |
| Educate customers about energy efficiency options | Ongoing | Ongoing |
| Recruit 500 customers | Ongoing | Ongoing |
| Test incentive variations | Test variations at different locations | Ongoing |
| Determine best incentive | Requires careful tracking and reporting | Program completion |

All incentives and customer contacts will be monitored carefully and incentives will be adjusted over the three-year pilot in the San Gabriel Valley with the eventual goal of rolling out the program territory-wide for SCE and SoCalGas.

## 9. Program Objectives

Program objectives will include, but not be limited to, the following:

- Create dynamic, high impact energy efficiency video/interactive kiosk in English and Spanish versions.
- Create support marketing plan and support materials
- Install Energy Efficiency Kiosks in 20 locations of lending institutions in the San Gabriel Valley.
- Educate customers about energy efficiency options they can choose for home remodel, retrofit or upgrades. This includes cross-marketing other utility incentive programs.
- Recruit 500 customers for the loan incentive program.

- Program will test incentive variations based on the origination fee, or credit at a retail outlet toward energy efficiency equipment or retrofits.
- Program will determine the optimal incentive necessary to move-the-market toward energy efficiency upgrades or retrofits at this critical decision-making opportunity.
- Program will seek to be included in SoCalGas's regular incentive offerings.

**10. Program Implementation**

As they have in the past to support other successful projects, the Intergy marketing team will create synergistic partnerships with the utilities program managers as well other departments, such as Corporate Communications, Public Affairs, and Business Solutions. Through these partnerships, SCE/SoCalGas will leverage existing communication channels and media and customer relationships, streamline costs, bolster the success of the Energy Efficiency Kiosk program, cross-market other IOUs energy efficiency programs (as well as demand response and renewable programs, as applicable), enhance SCE and SoCalGas's public relations priorities, and increase value to the customer.

The Intergy/Geltz team will meet with SCE/SoCalGas program managers and marketing and communications staffs on a regular basis to share ideas, seek approval on strategies and collateral tools, and explore new communication channels, techniques, and messages.

Activity 1 Hold team strategy meeting with SoCalGas and SCE.

Activity 2 Devise detailed program strategy.

Activity 3 Hold meetings with lending institutions and associations, seek their endorsement and participation, listen to their needs, and obtain feedback.

Activity 4 Meet with community based organizations, local government representatives, and building/remodeling trade associations and seek their endorsement and support of using their communication channels to promote the program.

Activity 5 Prepare marketing messages, program application, lending institution forms and procedures (including capturing end use energy reduction potential of installs).

Activity 6 Seek out early adopters for testimonials through local remodeling/HVAC contractors.

Activity 7 Design, shoot testimonial footage for, and produce kiosk/DVD content, capture still photography for supporting print collateral.

Activity 8 Design print collateral and web page.

Activity 9 Prepare media list including newsletter of local community organization newsletter, and provide list along with media releases and articles for release by corporate communications/public affairs.

Activity 10 Finalize list of IndyMac and Countrywide branches for the twenty interactive kiosks.

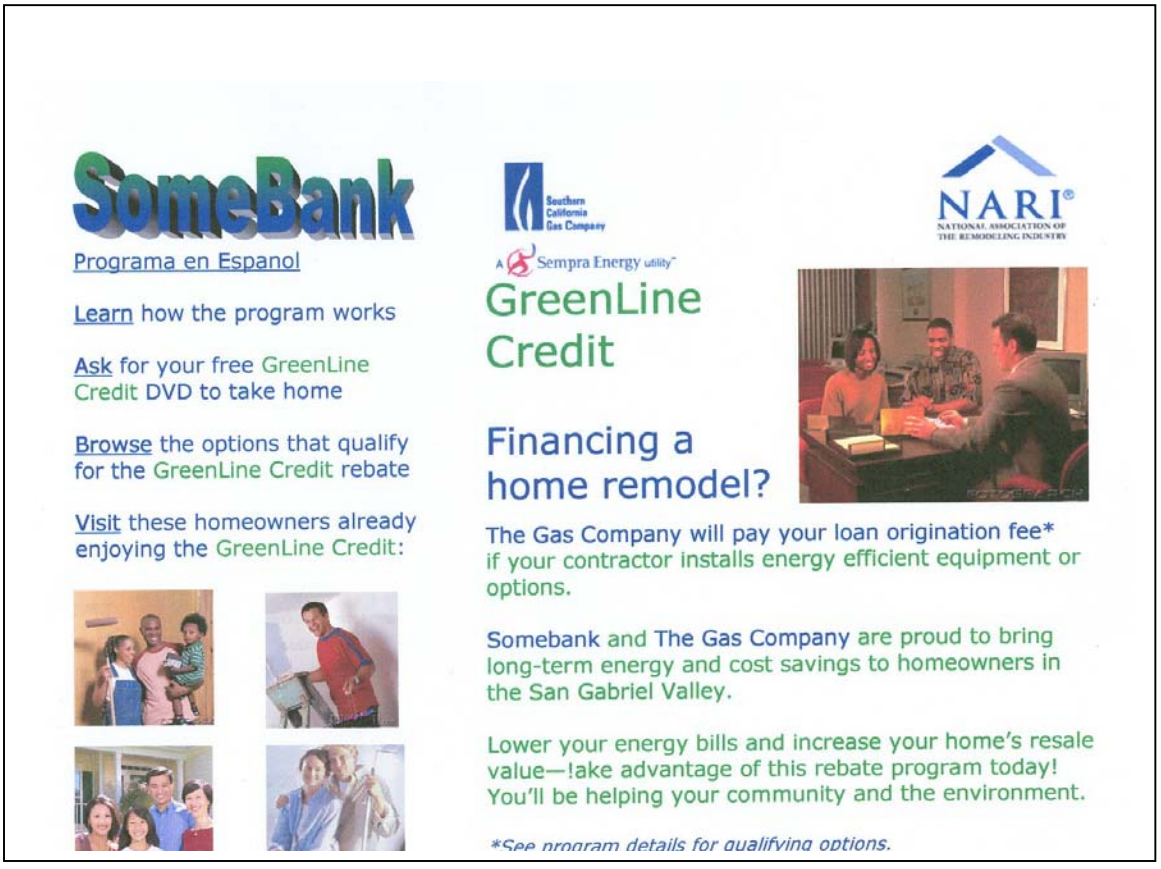
Activity 11 Deliver energy efficiency kiosks at lending institution branches and train lending officers in its use, the DVD giveaway, and the incentive application, and the tracking paperwork.

Activity 12 Do energy audits for customers that received incentive.

Activity 13 Monitor use of kiosks and capture feedback from customers and lending officers to revise content and navigation as needed.

Activity 14 Track customer applications and lender information to assess energy savings from incented retrofits.

Included below is a draft of the kiosk's initial screen. *(Logos and photos are for position only).* The kiosk design and look will be finalized with the program stakeholders.



## 11. Customer Description

**Primary target**: English-and Spanish-speaking residential homeowners in the San Gabriel Valley who are customers of SCE/SoCalGas and are seeking to finance home remodels and upgrades at financial institutions.

**Secondary target**: Loan officers and top management at lending institutions.

**Tertiary targets**: Lending institution associations and media, local government and community-based organizations and media, home remodeling and HVAC contractors and their trade associations, and home remodel and repair retailers.

## 12. Customer Interface

Intergy and Geltz Communications have extensive experience in marketing energy efficiency programs, and this expertise will be used to create an interactive DVD presentation for the Energy Efficiency Kiosk Pilot. We propose to create a DVD with a total of 24 minutes of cumulative video content that will be presented in both English and Spanish.

The DVD will include an introductory segment with a maximum running time of 3 minutes. In addition, there will be three segments or "themes", each with a maximum running time of 3 minutes. We will include a separate loan calculator and a segment of animated graphics.

The production will consist of interviews/testimonials in both English and Spanish. We plan to interview homeowners in their homes and to shoot b-roll of their energy efficient appliances, etc. at their homes. In addition, we will shoot additional footage as needed. For the video updates scheduled for every six months, we will conduct an additional 2 days of interviews and b-roll in English and Spanish.

The English version will include Spanish language interviews subtitled in English for the English version. The Spanish language version will include voice over in Spanish with the image content remaining the same. The English language interviews will be subtitled in Spanish for the Spanish version. The total cumulative running time maximum for the four English segments is 12 minutes. The total cumulative running time maximum for the four Spanish segments is the same, 12 minutes.

The DVD interactive presentation will include one main screen offering four options: Introduction, Theme 1, Theme 2, and Theme 3. An opening screen will ask the user to proceed either in English or Spanish. Upon selection of each button, the video content plays. Animated graphics and music will introduce the presentation and be used to transition from one segment to another.

The user will be presented with a computer with DVD player. The user interacts with the DVD interface controlled by a mouse. The computer and peripheral connections will be housed in a display stand.

Every six months, the video content will be updated. We will shoot new interviews, edit, and create new DVD files to be installed in the computer/kiosk presentation. We are assuming that these updates will consist of changing a percentage of the interview segments and informational sections rather than completely re-editing or re-creating these video themes.

The Intergy team will make every effort to present the material in an easy-to-understand, easy-to-navigate format. In addition, the flexible format of the content will allow for revisions based on feedback from the field.

## 13. Energy Measures and Program Activities

### 13.1. Prescriptive Measures. N/A

### 13.2. kWh Level Data N/A

### 13.3. Non-energy Activities

The pilot program is targeting new home buyers and/or existing home owners who are financing or refinancing a mortgage. The program believes that at this critical decision point, these borrowers are inclined to consider energy efficiency options if the information is presented in an easy-to-understand, easy-to-use fashion. Various incentives, including a reduction in the loan origination fee will be tried to see at what type of incentive will move the market.

#### 13.3.1. Activity Description

The program will do a variety of non-energy activities to reach its intended audience, including:

A. Meet with lending institutions and associations, seek their endorsement and participation, listen to their needs, and secure commitment from them.

A. Meet with community-based organizations, local government representatives, and building/remodeling trade associations to seek support of using their communication channels to promote the program.

B. Prepare marketing messages, program application, lending institution forms and procedures (including capturing end use energy reduction potential of installs).

C. Seek out early adopters for testimonials through local remodeling/HVAC contractors.

D. Design, shoot testimonial footage for, and produce kiosk/DVD content, capture still photography for supporting print collateral

E. Design print collateral and web page

F. Prepare media list including newsletter of local community organization newsletter, and provide list along with media releases and articles for release by SCE/SoCalGas Corporate Communications/Public Affairs.

G. Deliver energy efficiency kiosks at lending institution branches and train lending officers in its use, the DVD giveaway, and the incentive application, and the tracking paperwork.

H. Monitor use of kiosks and capture feedback from customers and lending officers to revise content and navigation as needed.

I. Track customer applications and lender information to assess energy savings from incented retrofits.

### 13.3.2. Quantitative Activity Goals

The program's goal is to achieve tangible educational and behavioral results tied to SCE/SoCalGas incentive and rebate programs. This program will persuade customers to include energy efficient products and technologies in their home remodels/upgrades through information and the incentive of a reduction in their loan origination fee. The program will be created so that it can be distributed by architects, and contractors, and on lender-branded web pages.

The program will:

- Install and monitor 20 kiosks at lending institutions in the high-growth San Gabriel Valley.
- The kiosks will have a high-impact message about energy efficiency upgrades and retrofits.
- Offer various incentives to test which incentive is most likely to generate consumer action.
- Enroll 500 or more customers in the program.
- Track customer use of incentives and application of energy efficiency equipment.

Other outcomes include:

- Lending institution momentum toward promoting energy efficiency programs as part of a competitive edge.
- Effective, timely cross-marketing of other energy efficiency programs, as well as demand response and renewable programs.

- Increase in favorable publicity for SCE/SoCalGas in local communities and local media.

- Further momentum and "free marketing" through word-of-mouth communications of satisfied program participants.

- Measured increase in rebates during the course of the campaign.

The Intergy/Geltz team has extensive experience with creating complete marketing support programs.

### 13.3.3. Assigned attributes of the activity (market sector, end use)

The program will develop a high-impact interactive kiosk that will help homeowners and home buyers understand the benefits of energy efficiency upgrades and retrofits. The kiosk will be installed in prominent locations in lending institutions and supported by collateral marketing materials. A Spanish language version of the kiosk and giveaway DVD will be developed to reach the large Hispanic population in the SCE/SoCalGas service area. Additional outreach will be through Hispanic community-based organizations and media. The program will use testimonials of Spanish-speaking customers who use the kiosk and take advantage of the loan incentive program to incorporate energy efficient features in their home remodel. The program will cross-market other energy efficiency programs.

## 14. Subcontractor Activities

With its extensive experience in designing and delivering award-winning collateral tools in support of major programs, the Intergy/Geltz team is well positioned to work with the most creative, responsive, and cost-effective marketing support vendors for the Energy Efficiency Kiosk program. The Intergy team will coordinate the marketing strategy and tools with SCE and SoCalGas program managers and in-house personnel to determine the best use of in-house and external resources. The

Intergy/Geltz team has had preliminary discussions with a group of talented producers, directors and designers who have had extensive experience in multi-media and kiosk video creation. These talented artist will use their skills in each category—video production, web design and programming, graphic design, printing, packaging, distribution, and customer displays—to ensure the on-time and on-cost delivery of only the best products and services.

The artists are:

*Robin Rundle*, of RSR Productions will be the producer for the kiosk video program. A former award-winning associate producer with PBS Station KOCE-TV, Rundle is an independent producer-director with an extensive background in video documentaries. Currently, she is completing an interactive multi-media presentation for NASA's Columbia Memorial Space Learning Center in Downey. Other recent video projects include a documentary on Maya Lin for the Arts Plaza at the Claire Trevor School of Arts at UC Irvine. Other recent multi-media presentations include four video documentaries for the Beall Center for Art and Technology and one for the National Science Foundation's California Reading and Literature Project.

*Pamela Glintenkamp* will direct the interactive kiosk video. Glintenkamp has a wealth of experience with multi-media and kiosk presentations, including project management for 20 interactive kiosk video segments for the J. Paul Getty Museum's Art Access Interactive System. Her other recent work includes the creation of six alternative language versions of the audio tour for the newly opened $2 billion Wynn Art Collection complex. She has worked for Walt Disney and LucasFilm.

*Jeremiah McNulty*, of Jeremiah McNulty Design, will provide the project with the highest quality designs for the kiosk, as well as print and collateral materials. McNulty is an award-winning designer who has created DVD menu design and packaging for Columbia TriStar, MGM, Warner Brothers, MCA Records and other major entertainment companies. McNulty will ensure that the energy efficiency message will be appealing and compellingly presented.

## 15. Quality Assurance and Evaluation Activities

The program will do a variety of activities that maintain quality and further the objectives of the campaign:

- The kiosk's message will be based on research and carefully crafted to provide the most compelling energy efficiency information in an easy-to-understand, easy-to-navigate format. All members of the team have extensive experience in the production of creative and effective kiosk.
- The program will work with the California Association of Mortgage Brokers, and Southern California banking institutions to identify and create the high-impact message.

- The program will use community-based organizations, local government representatives, and building/remodeling trade associations for support and endorsement.
- A synergistic partnership with the SCE/SoCalGas program managers as well as other departments like corporate communications, public affairs and business solutions will be developed to ensure consistency of message.

i. *Expected number/percent of inspections (planned percent of projects*)

The program plans to install 20 kiosks. The kiosks will be carefully monitored, inspected and maintained.

**16. Marketing Activities**

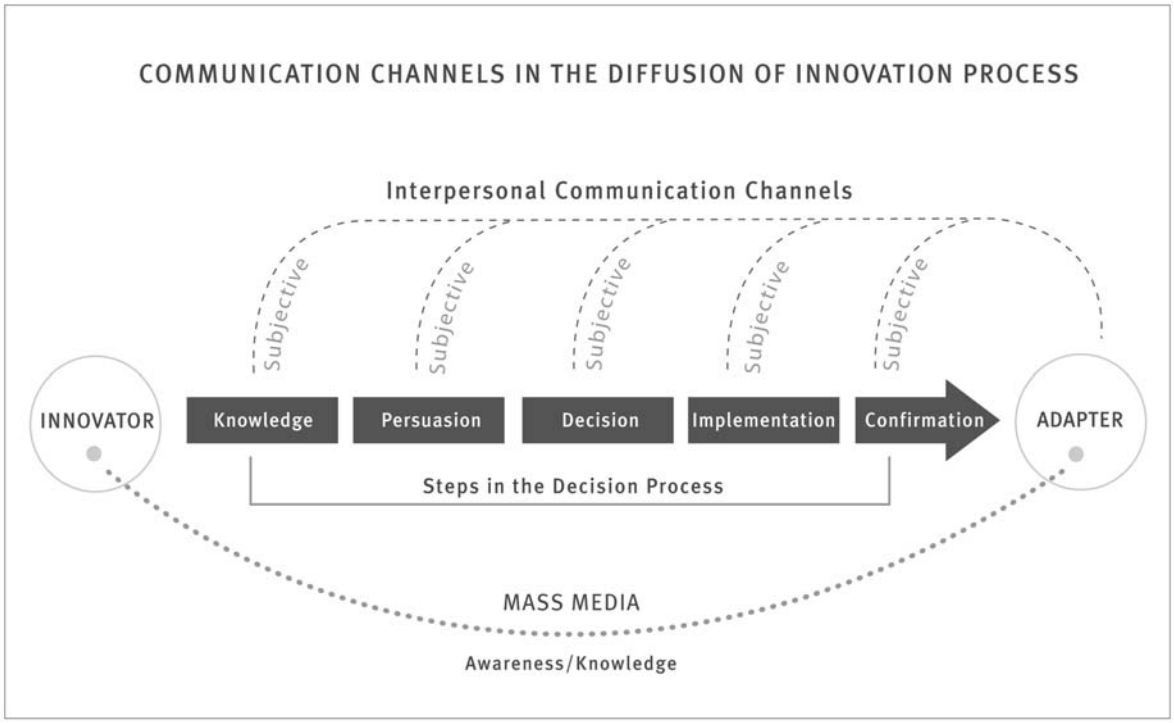
The Intergy/Geltz marketing activities will employ a "diffusion of innovations" approach to customer communications and persuasion. Unlike the neo-econometric approach of most energy efficiency programs that seeks to overcome barriers and uses logical messages directed at the potential adopter, diffusion of innovations theory sees adopters as social beings influenced at various stages in the decision-making process by a variety of messages and sources. This influence is most effective with subjective messages delivered through interpersonal communication channels.

In this approach (see diagram below), mass media and traditional outreach provide program awareness and knowledge, and the adopters initiate communication channels through which they deliver persuasive messages to other adopters, thereby becoming program "evangelists." And because of all the benefits to all the actors in the process, everybody wins.

Adoption of new technologies is inherently a difficult process for most customers and requires that they take a "leap of faith" with regards to claims, costs, and potential benefits of the new measures. Once users adopt the technology, there also is the need for confirmation of the decision process that should encourage further peer adoption, word of mouth communication among peer groups and upward transactional discussions that should increase the adoption fulfillment process, as per expected channel delivery procedures.

By means of Intergy's "diffusion of innovations" approach to program communications and persuasion, customers will receive both objective and subjective messages about the features and benefits of energy efficient options and equipment. This will serve to engage and reassure even late adopters, and persuade them to participate in the program and even convince them to persuade others in their social or business network.

For this program Intergy/Geltz will provide program awareness and knowledge by the informational portion of the energy efficiency kiosk and the giveaway DVDs, as well as by program brochures, media releases, articles, and customer testimonials/success stories prepared by Intergy and released through SoCalGas.




In this instance, filmed early adopter testimonials will be included as part of the kiosk content, providing subjective messages that will help to persuade potential customers to take advantage of the financing incentive to perform the retrofits. These testimonials, in English and Spanish, will allow the customers to identify with people who have already gone through the experience and reaped the benefits. In addition, the Intergy team will provide program messages and testimonials through local media, their builders and contractors, their lenders and such trusted third parties as local community organizations and civic clubs.

The Intergy team will market and raise awareness about the program directly to lenders and through SoCalGas's existing relationships with them as well as their trade associations. In addition, Intergy will market and raise awareness about the program to builders and contractors through SCE/SoCalGas's existing relationships with them and their trade associations.

## 17. CPUC Objective

The program corresponds to the Governor's and state's policies to reduce the environmental impact associated with California's energy consumption. The Intergy-Geltz kiosk program meets CPUC objectives numbers 3, 4 and 5.

- *CPUC Objective 3*. The program efforts are targeted to a cross-section of consumers, both English and non-English speaking, and focuses on energy efficiency programs that serve as alternatives to more costly supply-side resource options.

- *CPUC Objective 4.* This innovative pilot program extends SCE/SoCalGas's existing mainstream advertising and communication efforts and will significantly increase energy efficiency awareness and interest in incentive and rebate programs; moreover it will establish a foundation and infrastructure for long-term energy efficiency in this vast market.
- *CPUC Objective 5.* The program is designed to contribute to energy efficiency both short and long-term, and to serve as an alternative to more costly supply-side resource options. The program will deploy a variety of methods to obtain program outcomes and minimize lost opportunities and will help SCE/SoCalGas meet or exceed its savings goal. The program will also reach across various sectors; and the service will be provided in the area in which the PGC funds are derived.

| | SCG3529 3P Energy Efficiency Kiosk Pilot Program | |
|---|---|---|
| **BUDGET** | | |
| | | |
| **Administrative Costs** | **$** | **170,000** |
| Overhead and G&A | | |
| Other Administrative Costs | $ | 170,000 |
| **Marketing/Outreach** | **$** | **730,000** |
| **Direct Implementation** | **$** | - |
| Total Incentives and Rebates | | |
| User Input Incentive | $ | - |
| Direct Install Rebate | $ | - |
| Direct Install Labor | $ | - |
| Direct Install Materials | $ | - |
| Activity | $ | - |
| Installation | $ | - |
| Hardware & Materials | $ | - |
| Rebate Processing & Inspection | $ | - |
| **EM&V Costs** | **$** | - |
| **Budget** | **$** | **900,000** |
| **Costs recovered from other sources** | **$** | - |
| **Budget** (plus other costs) | **$** | **900,000** |
| | | |
| **PROGRAM IMPACTS** | | |
| **Program Reductions for Measures installed through 2008** | | |
| User Entered kW (kW) | | - |
| Net Jul-Sept Peak (kW) | | - |
| Net Dec-Feb Peak (kW) | | |
| Net NCP (kW) | | |
| Net CEC (kW) | | - |
| Annual Net kWh | | - |
| Lifecycle Net kWh | | - |
| Annual Net Therms | | - |
| Lifecycle Net Therms | | - |
| | | |
| **Cost Effectiveness** | | |
| **TRC** | | |
| Costs | $ | 900,000 |
| Electric Benefits | $ | - |
| Gas Benefits | $ | - |
| Net Benefits (NPV) | $ | (900,000) |
| BC Ratio | | - |
| | | |
| **PAC** | | |
| Costs | $ | 900,000 |
| Electric Benefits | $ | - |
| Gas Benefits | $ | - |
| Net Benefits (NPV) | $ | (900,000) |
| BC Ratio | | - |
| | | |
| **Levelized Cost** | | |
| **Levelized Cost TRC ($/kWh )** | | |
| Discounted kWh | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |
| **Levelized Cost PAC ($/kWh)** | | |
| Discounted kWh | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |
| **Levelized Cost TRC ($/therm)** | | |
| Discounted Therms | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |
| **Levelized Cost PAC ($/therm)** | | |
| Discounted Therms | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |

# 2006-2008 Energy Efficiency Programs
# SoCalGas Alliance Partners Program Concept Paper

**BIDDER NAME**

***Navigant Consulting, Inc. (NCI)*** and the ***Global Energy Center for Community Sustainability (GEC)*** on behalf of the ***California Sustainability Alliance (the Alliance):***

Other Alliance Partners: Craig Sheehy; Christine Ervin; Build It Green; California Urban Water Conservation Council, Flex Your Power; Inland Empire Utilities Agency; Kiley and Associates; Los Angeles Department of Water and Power; Metropolitan Water District of Southern California; Nexant, Inc.; Public Sustainability Partnership; Resource Action Programs; U.S. Department of Housing and Urban Development

**PROGRAM CONCEPT**

A comprehensive statewide "sustainability" program. Because of the structure of the individual utilities' energy efficiency procurements, this statewide program is being proposed to SCE, SDG&E, SoCalGas and PG&E in multiple pieces which, when combined, will comprise the Alliance's scope of energy efficiency activities. The scope of the Alliance's proposed assistance under this solicitation consists of developing joint programs with Alliance partners in which the combined resources and assets of SoCalGas and the Alliance result in significant leverage and benefits for all. Initial proposed programs include:

1. A Comprehensive Sustainable Communities Program
2. Sustainable and Affordable Housing Programs
3. Portfolios of the Future

## 1. Projected Program Budget

| | | 2006 | 2007 | 2008 |
|---|---|---|---|---|
| Administration | | | | |
| | Administrative Overheads | $ - | $ - | $ - |
| | Administrative Other | $ 60,000 | $ 60,000 | $ 60,000 |
| Marketing & Outreach | | $ 220,000 | $ 220,000 | $ 220,000 |
| Direct Implementation | | | | |
| | Activity | $ 760,000 | $ 820,000 | $ 850,000 |
| | Installation | $ - | $ - | $ - |
| | Hardware & Materials | $ - | $ - | $ - |
| | Procurement | $ - | $ - | $ - |
| | Incentives | $ - | $ - | $ - |
| EM&V | | $ - | $ - | $ - |
| *Total* | | *$ 1,040,000* | *$ 1,100,000* | *$ 1,130,000* |

[a] The above reflects an allowance for grants and subsidies for participation of local governmental entities and non-profits. The total amount of financial incentives to be paid will depend on the final program portfolio and structure.

[b] Total WMDVBE participation is 25% of the total program budget.

## 2. Projected Program Impacts

| 2006 | | | 2007 | | | 2008 | | |
|---|---|---|---|---|---|---|---|---|
| Net kWh | Net kW | Net Therms | Net kWh | Net kW | Net Therms | Net kWh | Net kW | Net Therms |
| - | - | - | - | - | - | - | - | - |

The Alliance Partners Program is being proposed as an innovative non-resource program that will employ the unique resources and assets of Alliance partners, including their relationships and access to hard-to-reach sectors and other targeted utilities' program participants, to cost effectively increase and accelerate participation in the utilities' energy efficiency programs and adoption of comprehensive sustainability best practices.

## 3. Program Cost Effectiveness

N/A
This program is designed as a statewide program. Essentially the same programs developed for SoCalGas could be used by other utilities.

Following are the benefits of the Alliance's approach:

- Market transformation efforts are more effective if the majority of a regional market is included
- Many of the organizations targeted for adoption of sustainability practices have activities throughout the state
- Alliance partners bring considerable resources and assets to help SoCalGas develop and implement a robust portfolio, and to share the risks, costs and benefits
- There are significant opportunities to dovetail the statewide activities of the Alliance with other statewide initiatives with complementary goals to further leverage resources and assets
- The scope of many of the Alliance partners' programs are also statewide
- Program management and administrative costs are largely fixed, allow the program to be cost effectively expanded for modest incremental cost
- Leveraging ratepayer funds to share costs and leverage the combined resources and assets of all parties will enable a more robust program, increasing opportunities for adoption

## 4. Program Descriptors

**Market Sector:** Natural Gas, all customer classes (residential, commercial, industrial; new and retrofit)
**Program Classification:** Statewide
**Program Status:** New
**Geographic Area:** Statewide
**Percentage of Market:** Variable (depends on the specific measures and market/customer classes)

## 5. Program Statement

Historical volatility in natural gas prices and supplies, including recent experiences such as the 2000/01 California power crisis and supply disruptions resulting from both natural and man-made causes, have highlighted California's extreme vulnerability to natural gas shortages. To reduce risks to ratepayers, the CPUC has established aggressive goals for reduced reliance on natural gas. The 2000/01 California power crisis dedicated significant resources to harvesting as much low hanging energy efficiency fruit as quickly as possible to alleviate risks of blackouts and adverse economic impacts of unprecedented price volatility. While the savings achieved were significant and important, this has created a circumstance in which the bar needs to be set higher to order to maintain comparable levels of energy savings.

In order to meet these challenges, the state's approach to attaining energy savings must change. In quickly harvesting low hanging fruit, remaining energy efficiency opportunities have become more difficult to attain – both because they require re-engaging potential adopters who feel they have already done what they can, and because these measures tend to be more difficult to implement and/or less cost effective on a stand-alone basis.

## 6. Program Rationale

The Alliance seeks to address these challenges through the following actions:

- Build the value proposition for adoption of comprehensive sustainability principles
- Significantly simplify and reduce risks and costs of adoption
- Leverage every opportunity to access targeted adopters to encourage more comprehensive implementation of energy efficiency measures
- Increase cost effectiveness by leveraging resources and assets of multiple stakeholders who share complementary goals and objectives to the greatest possible extent

By linking the energy efficiency message to the more comprehensive goal of "sustainability", the following benefits accrue:

- More channels are accessible to promote the energy efficiency message, thereby increasing the frequency of delivering the energy efficiency message, as well as its value to targeted adopters (i.e., by identifying additional potential value streams)
- Bundling energy efficiency with other complementary goals provides access to additional programs, resources and assets that help sell the entire bundle
- Sharing channels, resources and assets reduces the marketing and outreach cost per participant and per program

# 2006-2008 Energy Efficiency Programs
# SoCalGas Alliance Partners Program Concept Paper

The Alliance is distinguished from all other prior efforts in the following important respects:

- Leadership
- Comprehensiveness
- Inclusiveness
- Leverage
- Proactive
- Strategic
- Realistic
- Action-Oriented

Sustainable development requires substantial changes from current practices. Change does not happen on its own and has to be precipitated by leadership. First, opinion leaders adopt the new practice. Others rapidly follow these market leaders. Then, the new practices become status quo.

## 7. Program Outcomes

The primary goal of this program is to significantly accelerate and increase adoption of energy efficiency measures and best practices. The California Sustainability Alliance proposes to dramatically demonstrate how this can be attained through unprecedented multi-agency and stakeholder collaboration.

The missions, goals and objectives of Alliance partners are complementary with those of the CPUC and the utilities on behalf of California ratepayers. Many of the same markets and customers are being targeted, presenting the opportunity to significantly reduce program delivery costs. Further, a combined portfolio provides greater value to customers, resulting in both higher market adoption and greater savings per customer. The opportunity to achieve the missions and goals of multiple public purpose programs more effectively and efficiently is irresistible.

Below is a description of one such opportunity for collaboration through the Alliance that is being proposed by partners HUD and LADWP. The Alliance intends to tailor similar types of collaborative targeted efforts for other targeted market and customer sectors during the course of the program.

| CONCEPT | | Comprehensive Sustainable & Affordable Housing Program |
|---|---|---|
| **Partners and Their Roles** | City of LA | •Community Development & Affordable Housing Projects & Program Funds<br>•Superior relationships with, and access to targeted stakeholders |
| | LADWP | •$20 million investment commitment for energy efficiency retrofits (electric) and water conservation appliances<br>•Energy efficiency & water conservation technical assistance & funding programs |
| | HUD | •Targeted low interest mortgage instruments<br>•Superior stakeholder access and relationships<br>•Mandatory 5 year resource efficiency audits |
| | SoCalGas | •Technical assistance & funding programs for natural gas efficiency |
| **Primary Services** | | •One-stop shopping for affordable housing developers, owners & operators<br>–Sustainability design assistance<br>–Applications for grants, subsidies & incentives<br>•HUD & SoCalGas participation in LA Mayor's Affordable Housing Program<br>•Leverage HUD additional public housing energy audit requirement<br>•Joint meetings with affordable housing developers<br>•Joint development of "Housing for the Homeless"<br>•Development of a customized "LEED-LA" certification program |

Affordable housing is one proposed Alliance program. Others include the ***Sustainable Communities*** and ***Portfolios of the Future*** programs that are described below. It is the Alliance's intent to work with the utilities to design other such collaborative activities that target high priority goals and objectives shared by the utilities and Alliance partners.

***Sustainable Communities***

The Alliance proposes to combine the marketing, outreach, education, design assistance, partnering, training, and other complementary elements of the utilities' residential energy efficiency programs, including the California New Homes, Sustainable Communities, and Advanced Homes Programs, under the umbrella of the California Sustainability Alliance, a comprehensive statewide program. Through the Alliance, the program infrastructure needed to substantially accelerate and increase builder participation in all of these utilities' programs will be established. While residential construction is a very important target market, the umbrella of "Sustainable Communities" activities encompasses all customer and market sectors, including residential, commercial and industrial, both new and retrofit construction. The primary distinction between the Alliance's program and others is that the Alliance proposes to bundle the provision of energy efficiency assistance within a comprehensive portfolio of holistic sustainable planning and development to leverage the collective resources and assets of all partners and participants for maximum cost effective market penetration and adoption.

***Portfolios of the Future***

Another potential scope of the Alliance's activities includes assisting the utilities in developing and managing their respective portfolios of R+D activities that leverage the joint interests and resources of the utilities and Alliance partners to identify, test, prove and promulgate early adoption of new and emerging sustainability measures and best practices. The Alliance believes that continually advancing the body of knowledge of sustainability technologies and best practices is an essential element of a sustainable program.

## 8. Program Strategy

The Alliance has developed an ambitious and comprehensive program to significantly accelerate the adoption of sustainability practices, of which energy efficiency is a very important part. This program provides a unique opportunity to California's energy utilities to leverage their resources with the complementary tools, resources, and relationships that the Alliance brings.

Below is a description of the Alliance's overall program strategy:

- ***Builds the "sustainability" value proposition, including energy efficiency as a key element***
  - Provides policy leadership and inspiration
  - Creates additional channels for delivering energy efficiency

- Maximizes opportunities for cost sharing by leveraging resources and assets of other sustainability programs with complementary goals (e.g., water use efficiency, wastewater treatment and disposal, renewable resources, solid waste management, transportation)

- ***Creates "one-stop shopping"***
  - Comprehensive sustainability design assistance [Title 24; Energy Star; LEED; "Zero Energy"; sustainable complexes, communities and neighborhoods]
  - Low interest loans, grants, subsidies and incentives for the broad spectrum of sustainability elements
- ***Incorporates "sustainability" elements into its own program design***
  - Enlists key stakeholders, including membership associations and local communities, to proactively enroll program participants
  - Builds local capability and resources by training key stakeholders and community based organizations, and using these entities for outreach and assistance
  - Provides comprehensive education and training in sustainable operations and design principles, tools and techniques
  - Continually builds upon the body of "best practices", including new and emerging technologies
  - Creates recognition, awards and rewards to encourage accelerated adoption of new and emerging best practices
  - Builds knowledge and appreciation of sustainability benefits
  - Inculcates "sustainability" values into the next generation

### 8.1.1. Program Strategy Description

This program employs a wide variety of program strategies to achieve its objectives, including:

- Building design assistance (non-residential and residential)
- New construction (non-residential and residential)
- Targeted marketing (non-residential and residential)
- Technology commercialization (non-residential and residential)

The Alliance's approach includes a comprehensive set of activities that reinforce each other built around four groups of activities or work areas:

- Awareness building, outreach, recognition, and rewards – includes cooperative advertising and promotion with Flex Your Power, SoCalGas and other partners, and programs to award and recognize exemplary achievements

- Enrollment—pro-active outreach and recruitment of opinion leaders and entities that directly influence decisions in a large portion of a market

- Technical assistance and resources – provide tools, resources, references, training and technical assistance to organizations

- Targeted program offerings or enhancements to leverage and coordinate resources and activities – coordinate multiple programs to create "one-stop" shops for customers. For example, a residential developer can get both energy efficiency and the solar assistance within a single process. Similarly, an owner of Section 8 housing could receive combined assistance from the LADWP, HUD and HUD programs without having to navigate the processes of the three individual organizations.

A major problem with many marketing programs is that they focus on raising awareness. An aware customer must still do make the commitment to act, and then act. Our strategy moves beyond only raising awareness, to getting the commitment, and then providing the tools, support resources, and process to make it as easy to act as possible.

### 8.1.2. Program Indicators

- Number of organizations enrolled/committed and the amount of gas that they buy annually, including:

  - Communities adopting elements of the Alliance recommended principles for planning, zoning, and development, and size of the communities

  - Residential developers commitments

  - Corporate and government agencies commitments to meet or exceed Energy Star, LEED requirements for all new and rehabilitation projects

- Participation rates of enrolled organizations in SoCalGas and other (e.g. LADWP, HUD, and California SGIP) programs, including:

  - Energy savings

  - Other benefits e.g. water savings

  - TRC benefits

- Number of participants in combined and enhanced program offerings including:

  - Energy savings

  - Other benefits e.g. water savings

  - TRC benefits

## 9. Program Objectives

The Alliance's program implementation strategy revolves around four major work areas:

| | |
|---|---|
| **Awareness Building, Outreach, Recognition & Rewards** | Support Governor's Executive Orders, Green Action Team, Real Estate Industry Leadership Council, and others in developing strategies and new business models to ***collaboratively facilitate market transformation & build the sustainability value proposition*** |
| **Enrollment** | Actively solicit and enroll targeted organizations to make commitments for sustainable development & operation<br>•Near-term: Recruit participants who have an existing project or are presently in the planning phase (get in early to influence design decisions)<br>•Long-term: Engage additional organizations, including community based organizations, into the enrollment process<br>– Train local organizations to provide program services<br>– Provide on-going program oversight and course corrections as may be needed<br>– Provide a suite of standard participation models for each targeted group<br>•Developers of new residential construction<br>•Affordable housing developers/owners<br>•Commercial property developers/owners/managers |
| **Technical Assistance & Resources** | Provide tools, resources, references, training and technical assistance<br>•Near-term: Most of technical support provided by Alliance partners<br>•Long-term: Enhance & expand resources, tools & training to incorporate learnings from pilots and adjust for new and emerging sustainability best practices |
| **Targeted Program Offerings or Enhancements** | The Alliance partners have identified multiple opportunities to leverage resources and will work collaboratively with other entities to develop enhanced program offerings to achieve higher level of energy savings. |

## 10. Program Implementation

Below are the primary tasks proposed by the Alliance under this statewide program.

Task 1 – Develop Short-Term and Long-Term Sustainability Program Strategies. Develop a comprehensive "California Sustainability Roadmap" that includes both short-term and long-term actions that are deemed essential to achieving market transformation.

Task 2 – Develop Network of Alliances – Continually build the network of partners in the Alliance, with a heavy focus on obtaining strong participation from all of the key stakeholders needed to successfully increase and accelerate adoption of sustainability best practices.

Task 3 – Design, Develop and Implement Program and Service Offerings – Develop core initial program services, and then establish a process for periodically reviewing and assessing program performance, and making adjustments as may be needed to assure that the program structure and offerings adapt to new and changed circumstances, such that the program goals and objectives are attained.

Task 4 – Recruit Participants – Proactively enroll participation in the utilities' energy efficiency programs.

Task 5 – Provide Technical Assistance – Provide "one stop shopping" for technical and financial assistance to significantly simplify the universe of choices for targeted program participants and to increase and accelerate adoption of sustainability best practices.

Task 6 – Deliver and Track Program Offerings and Services – Regularly track and report changed circumstances, recommended program adjustments, changes that are implemented, and the rationale underlying any adopted changes.

Task 7 – Marketing and Outreach – Program outreach, marketing and promotion.

Task 8 – Training – Develop a portfolio of training materials and curricula, and directly conduct initial training and develop programs to "train the trainers".

Task 9 – Advance and Promulgate New and Emerging Technologies & Best Practices – Continually advance the body of sustainability best practices.

The Alliance intends that this program be flexible and adaptable to changed circumstances, such that it does not begin tomorrow and end in three years. Instead, the Alliance would like to see this partnership grow, expand and adapt as may be needed to attain an increasingly higher threshold of sustainability goals.

## 11. Customer Description

As described previously, all customer sectors – residential, commercial, industrial; both new and retrofit construction—are targeted by the Alliance's comprehensive sustainability program.

Within SoCalGas' service territory, specific customer information will be determined after the market/customer assessment is completed that estimates the potential energy benefits attainable by various market and customer sectors, and SoCalGas' Program Manager has made ranked the opportunities in accordance with SoCalGas' overall goals and objectives for this program. Estimated participation/enrollment by customer sector is a deliverable under the project scope of work.

**12. Customer Interface**

As described previously, the Alliance's program is designed to proactively recruit and enroll participants in the utilities' programs. Multiple points of interface and outreach will be established, including reaching out to targeted groups of participants through industry associations, conferences, seminars, webinars, etc. In addition, a multitude of tools and materials will be provided via the Alliance's, partners', utilities' and other related entities (e.g., DOE, CEC) websites.

The Alliance believes that more entities would incorporate more energy efficiency and sustainability elements into their projects if the choices and processes were simpler. Consequently, one very important cornerstone of the Alliance's program is "one-stop shopping" for technical and financial assistance for a wide variety of sustainability elements, of which energy efficiency is a very important component. Please see Question 10, Task 5 for more information about the concept of "one-stop [sustainability] shopping".

**13. Energy Measures and Program Activities**

This is a non-resource program.

Non-energy activities consist of comprehensive innovative marketing, outreach, education and training. This is a cross-cutting program in that it targets both electric and gas savings, in addition to other types of resource efficiency (e.g., water, wastewater, storm water, waste management); and these sustainability elements are targeted for all market and customer sectors: residential, commercial and industrial, including institutional; both new and retrofit construction.

Because of the comprehensiveness of the proposed program and various elements, the specific goals and objectives for various market and customer sectors cannot be determined until the scope of programs and activities desired by the utilities and the state is determined. The Alliance believes that all of the activities that it has proposed would be most beneficial if conducted on a statewide basis. However, for purposes of bidding into the respective utilities' energy efficiency procurements, the Alliance's full scope of proposed activities needed to be split into separate components.

Once the full scope of the energy component of the Alliance's statewide program is determined, we can develop goals and objectives separately for each of the approved program elements, by market and customer sector.

## 14. Subcontractor Activities

The roles and responsibilities of Core Team members of the Alliance are described generally below. Each team member may participate in multiple services. However, their primary roles are described generally in the below table, and described more fully in the text that follows.

| Core Team Member | Primary Responsibility(s) |
|---|---|
| Navigant Consulting, Inc. | Program Manager |
| Global Energy Center for Sustainable Communities (GEC) | Co-Program Lead: Sustainable Communities Design & Development Assistance; Education and Training; Design Assistance to Exceed New Title 24 Requirements; LEED certifications |
| Craig Sheehy, Real Estate Industry Leadership Council | Lead: Policy Leadership & Direction; Enrollment of Builders |
| Christine Ervin | Co-Lead - Policy Leadership & Direction; U.S. Green Building Council liaison; LEED & Green Building Certifications; Outreach to Builders and Government Building Officials |
| Build-it-Green | Green Buildings Design |
| Flex Your Power | Market Outreach & Communications |
| Inland Empire Utilities Agency (IEUA) | Best Practices in Wastewater and Stormwater Collection & Treatment; Innovation in Biogas Production & Utilization |
| Kiley and Associates | Enrollment of Builders |
| Los Angeles Department of Water and Power (LADWP) | Joint Programs (e.g., Affordable Housing); Water and Wastewater Management Best Practices; other jointly beneficial opportunities (e.g., productive utilization of biogas) |
| Nexant Inc. | Measurement & Verification (portions of program elements, TBD) |
| Metropolitan Water District of Southern California (MWD) | Best Practices in Water Systems Design & Water Use Efficiency; Water Use Efficiency Innovation Solicitation; Water Use Efficiency technical support and incentives |
| Public Sustainability Partnership | Enrollment of Alliance Partners (local, state & federal governmental agencies; non-profits; research organizations; for-profit businesses) |
| Resource Action Programs | Schools Educational Programs |
| U.S. Department of Housing and Urban Development (HUD) | Development/Implementation of Green/Sustainable Mortgages and Affordable Housing Programs; Enrollment of Builders and Affordable Housing Developers, Owners, Operators, etc. (HUD also brings participation of U.S.EPA and U.S. DOE through federal cooperative agreements) |

## 15. Quality Assurance and Evaluation Activities

- **Data Security & Integrity** - Data for this project will be stored on secure networks that are fire-wall protected with full spam and virus protection; and, where appropriate, have full password and encryption protection.
- **Quality Assurance/Quality Controls** - All pilot projects will be carefully monitored and managed; and, where necessary, independently assessed. The

results will be meticulously and objectively documented, so that proposed technologies and best practices can be evaluated in context of cost vs. benefit and ranked relative to other technologies and practices being considered.

- **Program Management -** The selected Program Manager has substantial experience managing a large complex utility with an annual budget of $100 million. The Program Executive is a seasoned professional with fiscal responsibility for NCI and responsibility for overall program oversight. Senior managers with directly relevant expertise will be assigned to direct each of the major program areas.
- **Expected Number/Percent Inspections -** The number/percent of inspections will vary in accordance with the specific program goals and objectives. For example, energy efficiency measures that are installed in retrofit programs are inspected and verified before incentives and subsidies are released. For very large projects in which there are multiple units of like kind (e.g., large subdivisions), a sampling approach would typically be employed.

**16. Marketing Activities**

One major portion of marketing and outreach will be to help SoCalGas develop and promulgate the value proposition for early adoption of sustainability best practices. Alliance partners are uniquely well positioned to help refine the value message and inculcate it via multiple layers of activities, including:

- Industry associations, conferences, seminars, journals, trade press and educational webcasts
- Schools and universities, including incorporation into university degree programs
- Federal, state and local government awards, rewards and recognition programs
- Competitive grants, subsidies and awards to innovative projects that convey prestige as well as technical and funding support

All of these types of activities and more will be included in the marketing and outreach portfolio.

Cultivating groups of early adopters is a key requirement for achieving market transformation. The general protocol for cultivating early adopters is to first identify credible partners that (a) have inculcated a high organizational value for early adoption, (b) have a proven track record, and (c) are already recognized leaders among their peers. The Alliance will help SoCalGas identify these types of partners and build strong, long-term mutually beneficial partnerships.

Thereafter, the Alliance will work with SoCalGas to develop replicable programs for widespread adoption of sustainability best practices. Implementation may

include phased incentives to encourage adoption by the next generation, until such time as these technologies and practices become mainstream.

**17. CPUC Objectives**

This program meets the CPUC's objectives in the following important respects:

- Under the state's Energy Action Plan 2 (EAP2), energy efficiency is the state's first priority, followed by demand response and then renewable energy. Natural gas efficiency meets the 1st and 3rd priorities under EAP2.
- The CPUC places a high value on cost effectiveness, which is an essential component to protecting ratepayer interests. The Alliance's structure and approach are superior in this respect, leveraging the resources and assets of multiple entities to increase market penetration and adoption on a cost-shared basis with non-energy entities.
- This program minimizes lost opportunities in several important respects.
  - Alliance partners will continually leverage SoCalGas and Alliance resources and assets for the benefit of all. By delivering a portfolio of comprehensive options (of which energy is but one element) via the Alliance's superior networks and channels, SoCalGas has opportunities to influence decisions made by a variety of stakeholders that it would otherwise not have had.
  - By conferring actively with its customers and stakeholders to identify potential innovative solutions, SoCalGas will work collaboratively with its customers and Alliance partners to identify opportunities that are presently below their radar.
  - This proposed program is but one activity under a comprehensive scope being undertaken by the Alliance to implement holistic sustainable planning and development. Each of the Alliance's other activities (including statewide Sustainable Communities, New Homes and Advanced Homes programs that the Alliance proposes to bring under a single marketing, technical assistance, education and outreach infrastructure) presents opportunities to promote adoption of new and emerging technologies, processes, practices, new business models, etc. identified through this program as beneficial.
  - The portfolio development and implementation program itself will employ a structured approach to identifying and qualifying opportunities on an on-going periodic basis, specifically targeting identification of opportunities that are currently being lost.
- This program reduces air emissions and greenhouse gases by increasing efficient utilization of natural gas. To the extent that SoCalGas' program can also include commercialization of emerging clean energy conversion technologies such as fuel cells to displace combustion of biogas and/or natural gas, these environmental benefits can be increased. Further, to the extent that this program includes increased production of biogas through

utilization of innovative biofeedstocks (e.g., dairy manure), the state can already realize other environmental benefits.

As discussed earlier, by linking the energy efficiency message to the more comprehensive goal of "sustainability", the following significant benefits accrue:

- More channels are accessible to promote the energy efficiency message, thereby increasing the frequency of delivering the energy efficiency message, as well as its value to targeted adopters (i.e., by identifying additional potential value streams)
- Bundling energy efficiency with other complementary goals provides access to additional programs, resources and assets that help sell the entire bundle

Sharing channels, resources and assets reduces the marketing and outreach cost per participant and per program. Costs of providing technical assistance and developing and conducting training are also reduced.

| | SCG3533 3P Alliance Partners Program | |
|---|---|---|
| **BUDGET** | | |
| | | |
| **Administrative Costs** | **$** | **180,000** |
| Overhead and G&A | | |
| Other Administrative Costs | $ | 180,000 |
| **Marketing/Outreach** | **$** | **660,000** |
| **Direct Implementation** | **$** | **2,430,000** |
| Total Incentives and Rebates | | |
| User Input Incentive | $ | - |
| Direct Install Rebate | $ | - |
| Direct Install Labor | $ | - |
| Direct Install Materials | $ | - |
| Activity | $ | 2,430,000 |
| Installation | $ | - |
| Hardware & Materials | $ | - |
| Rebate Processing & Inspection | $ | - |
| **EM&V Costs** | **$** | - |
| **Budget** | **$** | **3,270,000** |
| **Costs recovered from other sources** | **$** | - |
| **Budget** (plus other costs) | **$** | **3,270,000** |
| | | |
| **PROGRAM IMPACTS** | | |
| **Program Reductions for Measures installed through 2008** | | |
| User Entered kW (kW) | | - |
| Net Jul-Sept Peak (kW) | | - |
| Net Dec-Feb Peak (kW) | | |
| Net NCP (kW) | | |
| Net CEC (kW) | | - |
| Annual Net kWh | | - |
| Lifecycle Net kWh | | - |
| Annual Net Therms | | - |
| Lifecycle Net Therms | | - |
| | | |
| **Cost Effectiveness** | | |
| **TRC** | | |
| Costs | $ | 3,270,000 |
| Electric Benefits | $ | - |
| Gas Benefits | $ | - |
| Net Benefits (NPV) | $ | (3,270,000) |
| BC Ratio | | - |
| | | |
| **PAC** | | |
| Costs | $ | 3,270,000 |
| Electric Benefits | $ | - |
| Gas Benefits | $ | - |
| Net Benefits (NPV) | $ | (3,270,000) |
| BC Ratio | | - |
| | | |
| **Levelized Cost** | | |
| **Levelized Cost TRC ($/kWh )** | | |
| Discounted kWh | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |
| **Levelized Cost PAC ($/kWh)** | | |
| Discounted kWh | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |
| **Levelized Cost TRC ($/therm)** | | |
| Discounted Therms | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |
| **Levelized Cost PAC ($/therm)** | | |
| Discounted Therms | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |

# 2006-2008 Energy Efficiency Programs
# SoCalGas Non-Resource Program Portfolio of the Future Concept Paper

**BIDDER NAME**

***Navigant Consulting, Inc. (NCI)*** and the ***Global Energy Center for Community Sustainability (GEC)*** on behalf of the ***California Sustainability Alliance (the Alliance):***

Other Alliance Partners: Craig Sheehy; Christine Ervin; Build It Green; California Urban Water Conservation Council, Flex Your Power; Inland Empire Utilities Agency; Kiley and Associates; Los Angeles Department of Water and Power; Metropolitan Water District of Southern California; Nexant, Inc.; Public Sustainability Partnership (PSP); Resource Action Programs; U.S. Department of Housing and Urban Development.

**PROGRAM CONCEPT**

A comprehensive statewide "sustainability" program. Because of the structure of the individual utilities' energy efficiency procurements, this statewide program is being proposed to SCE, SDG&E, SoCalGas and PG&E in multiple pieces which, when combined, will comprise the Alliance's scope of energy efficiency activities. The scope of the Alliance's proposed assistance with respect to SoCalGas' "Portfolio of the Future" includes the following:

1. Develop a dynamic "Emerging Technologies and Best Practices Program"
2. Inventory, characterize, assess and rank opportunities for development of new technologies, products, services and best practices
3. Facilitate partnering with a wide variety of stakeholders
4. Develop an initial portfolio of pilot opportunities
5. Develop a roadmap, investment plan and implementation plan

## 1. Projected Program Budget

| | 2006 | 2007 | 2008 |
|---|---|---|---|
| Administration | | | |
| Administrative Overheads | $ - | $ - | $ - |
| Administrative Other | $ 60,000 | $ 60,000 | $ 60,000 |
| Marketing & Outreach | $ 60,000 | $ 110,000 | $ 195,000 |
| Direct Implementation | | | |
| Activity | $ 920,000 | $ 770,000 | $ 670,000 |
| Installation | $ - | $ - | $ - |
| Hardware & Materials | $ - | $ - | $ - |
| Procurement | $ - | $ - | $ - |
| Incentives | $ - | $ - | $ - |
| EM&V | $ - | $ - | $ - |
| *Total* | *$ 1,040,000* | *$ 940,000* | *$ 925,000* |

## 2. Projected Program Impacts

| 2006 | | | 2007 | | | 2008 | | |
|---|---|---|---|---|---|---|---|---|
| Net kWh | Net kW | Net Therms | Net kWh | Net kW | Net Therms | Net kWh | Net kW | Net Therms |
| - | - | - | - | - | - | - | - | - |

The Alliance bid the Portfolio of the Future as a non-resource program, on the presumption that the initial SoCalGas R&D portfolio would need to be selected based on criteria recommended by the Alliance and accepted by SoCalGas before program impacts could be reasonably estimated. However, Alliance members have identified an initial proposed portfolio that could commence promptly upon program implementation, while development of the long-term portfolio strategy commences in parallel

**3. Program Cost Effectiveness**

N/A

The program, however, is really designed to provide long-term benefits from the more commercialization and adoption of emerging technologies and sustainability practices. These long-term benefits, attained, in part through leveraging the resources of multiple entities (as well as the Alliance's multi-prong strategy of building market awareness, providing technical support, and developing pilots and commercialization projects) will dwarf the direct energy savings from the individual pilots.

Following are the benefits of the Alliance's approach:

- Market transformation efforts are more effective if the majority of a regional market is included
- Many of the organizations targeted for adoption of sustainability practices have activities throughout the state
- Alliance partners bring considerable resources and assets to help SoCalGas develop and implement a robust portfolio, and to share the risks, costs and benefits
- There are significant opportunities to dovetail the statewide activities of the Alliance with other statewide initiatives with complementary goals to further leverage resources and assets
- The scope of many of the Alliance partners' programs are also statewide
- Program management and administrative costs are largely fixed, allowing the program to be cost effectively expanded for modest incremental cost
- Leveraging ratepayer funds to share costs and leverage the combined resources and assets of all parties will enable a more robust program, increasing opportunities for adoption

**4. Program Descriptors**

| | |
|---|---|
| **Market Sector:** | Natural Gas, Cross-Cutting (all customer classes - residential, commercial, industrial; new and retrofit) |
| **Program Classification:** | Statewide |
| **Program Status:** | New |
| **Geographic Area:** | Statewide, gas service (SoCalGas and PG&E territories); could also have a parallel statewide program for electric |

measures (especially with regard to evaluating tradeoffs between substituting natural gas for electricity, and vice versa)

**Percentage of Market:** Variable (depends on the specific measure being tested for wider application/dissemination)

## 5. Program Statement

Historical volatility in natural gas prices and supplies, including recent experiences such as the 2000/01 California power crisis and supply disruptions resulting from both natural and man-made causes, have highlighted California's extreme vulnerability to natural gas shortages. To reduce risks to ratepayers, the CPUC has established aggressive goals for reduced reliance on natural gas. The 2000/01 California power crisis dedicated significant resources to harvesting as much low hanging energy efficiency fruit as quickly as possible to alleviate risks of blackouts and adverse economic impacts of unprecedented price volatility. While the savings achieved were significant and important, this has created a circumstance in which the bar needs to be set higher to order to maintain comparable levels of energy savings.

In order to meet these challenges, the utilities must be at the forefront of technological changes that offer significant promise. Further, in order to assure that such opportunities are adopted quickly by customers, the utilities must take become proactive in identifying, qualifying and promoting attractive opportunities on an accelerated basis.

## 6. Program Rationale

The Alliance's program accomplishes these goals by assisting SoCalGas in developing and implementing an agile "Emerging Technologies and Best Practices Program". The proposed program structure includes the following primary elements:

- Strengthening networks and relationships with other entities with complementary goals and objectives
- Leveraging the joint resources and assets of SoCalGas, other utilities, Alliance partners, potential R&D partners, the utilities' customers, other state and federal agencies, local government, etc.
- Proactively identifying promising opportunities that can reduce reliance on volatile natural gas supplies
- Helping to prove the technology and benefits, build the market infrastructure, and promote and encourage early adoption by concurrently providing incentives and building the sustainability value proposition
- Assertively assisting SoCalGas customers in adapting the learnings from pilots to their own circumstances

The approach identifies near-term opportunities that can help SoCalGas meet its 2006-2008 program objectives while positioning itself for building a portfolio structured to meet future challenges.

**7. Program Outcomes**

At the end of this comprehensive program, SoCalGas will have all of the methods, tools, resources and relationships needed to manage and continually update its portfolio and program to meet future needs. The detailed list of milestones and deliverables are provided under Questions 9 and 10.)

**8. Program Strategy**

The key program strategies include the following:

- Non-residential technology commercialization
- Non-residential targeted marketing
- Residential technology commercialization
- Residential targeted marketing

**8.1.1. Program Strategy Description**

The program provides an integrated approach to the above four program strategies. Commercialization goes hand-in-hand with these strategies. The Alliance is focused upon accelerating market acceptance of the most promising technologies. Pilot recommendations will include both residential and non-residential technologies. Pilot sponsors will be selected based on their market segment leadership position as well as their willingness and ability to disseminate results and build market awareness.

- Technology Commercialization (both non-residential and residential) – to address the issues associated with:
  - Emerging technologies represent tremendous opportunity to improve energy efficiency
  - Commercialization of emerging technologies typically takes a long time
  - SoCalGas (and California) need the emerging technologies in order to meet their aggressive energy efficiency goals

The Alliance will:

- Continually scan the marketplace for promising emerging technologies
- Employ proven portfolio assessment tools and methodologies to select technologies for commercialization

  - Develop pilot programs and/or venturing strategies for accelerating the commercialization, particularly by partnering with organizations that are opinion leaders and/or directly influence a large portion of a market

- Targeted marketing (both non-residential and residential) – Conduct a diverse portfolio of marketing activities to raise awareness for energy efficiency and sustainability.
  - Enrolling and getting commitments from opinion leaders
  - Co-operative advertising and outreach efforts with Flex Your Power (an Alliance partner) and SoCalGas
  - Active, direct outreach to targeted customers , including the use of community based organizations and industry associations
  - Awards and public recognition for exemplary achievements

Marketing activities specific to the portfolio of the future include:

- Selection of pilot partners based on (a) their leadership position within their market segment and/or their direct influence upon a significant portion of the market; and their commitment to help publicize and disseminate results, and engage in other activities to raise market awareness and assist in commercialization
- Targeted seminars
- Case studies, tools and information resources maintained at the web-site

### 8.1.2. Program Indicators

- Expected therm savings from pilots
- Market potential (and average cost per therm) within SoCalGas (and California) for the emerging technologies selected for pilot and/or commercialization activity
- Pilots and other commercialization activities undertaken, including:
  - » Potential market size
  - » Therm savings
  - » Net TRC benefits
- Participation in pilots and commercialization projects by other entities (i.e. resource leverage)
- Number of attendees from targeted groups participating in training seminars.

## 9. Program Objectives

The primary anticipated milestones and deliverables are described below.

**Portfolio Design, Development and Implementation**

- Program Goals and Objectives (short term and long term)
- Portfolio Design Specifications (goals and objectives for each targeted market and customer sectors)
- Portfolio Evaluation and Ranking Criteria
- Identification of key stakeholders needed for adoption in each customer sector
- Identification of Potential Partners in Portfolio Development
- Identification of Potential Pilot Hosts (market leaders by customer sector)
- Identification of complementary programs, technical and funding resources, models, tools etc. that could be leveraged for SoCalGas' program
- Stakeholder workshops and working groups to facilitate portfolio development
- Documented process for incorporating new elements into "living" portfolio
- Training in portfolio development and management
- Long-Term (5 year) portfolio with ranked measures and strategies by targeted market and customer sectors

**Pilot Program Management**

- Initial Inventory of Pilot Candidates
- Initial Ranked Inventory of Proposed Portfolio Elements and Activities
- Partners/participation structure for each pilot
- Executed agreements and participation terms for each pilot, e.g.:
    - Identification of participants in each pilot
    - Definition of roles and responsibilities of the parties
    - Documentation of resources and assets contributed by each party
    - Needs/ownership and interests/benefits (if any) that accrue to each party
    - Amount of SoCalGas incentives needed/requested
    - Terms for payment of incentives (e.g., direct subsidy vs. performance based)
    - Ownership of data and pilot results
    - SoCalGas access to facilities and data
    - Rights (if any) to technology or products developed through the pilot(s)
    - Terms and conditions for termination of pilot(s)

- Bases for determining pilot(s)' "success"

- Pilot organizational structure (designation of technical team assigned to manage each project and assigned roles and responsibilities)
- Schedules and milestones (a) for each pilot, and (b) for the pilot program overall
- Technical plans (for each pilot and for program overall) that specify the type(s), level(s) and frequency(s) of testing, data capture, monitoring, measurement and reporting
- Defined reporting types, forms, intervals, protocols (including case studies and detailed technical reports reporting results and lessons learned, and factors needed for successful implementation)

**Marketing, Education and Outreach**

- Potential energy savings for each measure adopted into portfolio (estimated energy savings by measure, magnitude of targeted market/customer sector)
- Key stakeholders deemed essential to successful adoption of each measure
- Mapping of SoCalGas, Alliance partners, and other entities' resources, assets, channels and relationships to targeted stakeholders to identify points of leverage
- Specifications and guidelines of new or emerging technologies, processes, practices, new business models selected for deployment through targeted customers, market/customer sectors, widespread deployment
- Tailored incentive programs designed to attain targeted level of adoption
- New technology marketing and deployment plans
- Marketing, outreach, training and educational materials, and media plans (leveraging unique resources and assets of Alliance partners and other identified opportunities wherever possible)
- Workshops, seminars, direct technical assistance to targeted adopters
- Design and implementation of value proposition campaign, including meetings; workshops; policy memoranda; awards, rewards and recognition programs; other activities designed to build and reinforce the value proposition

**10. Program Implementation**

The program will consist of three primary components. The activities anticipated under each of these components are described under Question 9 – Program Objectives above.

***General Approach***

- Proactive development of SoCalGas' portfolio of opportunities, actively seeking out new and emerging technologies and best practices, and assuring that SoCalGas establishes a network of relationships and communications channels that will continually refresh its database of potential opportunities.

- Build upon existing knowledge and data from multiple sources (e.g., SoCalGas; other utilities, both municipal and investor-owned; Alliance partners; public R&D organizations (e.g., U.S. Department of Energy and National Laboratories, California Energy Commission, etc.)).

***Market Assessments***

Building upon existing market data with knowledge and data from Alliance partners and others, an initial inventory of opportunities will be quickly developed. That initial inventory will then be characterized through existing studies and reports to identify near term opportunities suitable for inclusion in a pilot portfolio for program period 2006-2008 while longer term opportunities are qualified and brought into the long term portfolio. Proposed measures for inclusion in the long term portfolio will be developed through a structured R&D portfolio development process.

***Work Plan***

A two-phase R&D portfolio development process that provides a quick start to early results while developing the long-term portfolio.

Phase 1

1. Assist SoCalGas in developing its vision and priorities that will guide development of the ranking criteria applied to its R&D portfolio
2. Identify priority R&D opportunities (technologies, processes (software and business) and new business models)
3. Develop inventory of opportunities from a wide variety of sources, including discussions with SoCalGas and its customers, other stakeholders that are investigating similar areas (e.g., GEC/GTI, DOE, CEC), and Alliance partners
4. Proactively reach out and discuss potential opportunities with key stakeholders, including SoCalGas customers, to identify early adopters and key issues
5. Score and rank R&D opportunities
6. Document significant data gaps identified during the process of assembling the initial portfolio that indicate need for further study during Phase 2

**PHASE 1 DELIVERABLES**

1. Initial Inventory of R&D Opportunities
2. Ranking criteria and decision-making framework
3. Estimated energy and demand savings potential:
   a. By R&D opportunity
   b. By market and customer sector
4. Ranked Phase 1 Water-Energy R&D Opportunities

5. Phase 1 Report (summary of surveys and interviews, method by which initial inventory was assembled, bases for screening and ranking criteria, description of decision making framework, assessments of R&D needs and gaps, ranked Phase 1 R&D Opportunities, recommendations)

**PHASE 2**
The initial scope will include studies and analyses indicated by Phase 1 findings of additional work needed to refine, corroborate or otherwise validate estimated energy and demand savings for each potential measure. The ultimate goal of this phase will be development of a SoCalGas R&D Roadmap and long-term portfolio (five years) of projects that meet the goals and objectives established during Phase 1 for this program.

## 11. Customer Description

The scope of the program is comprehensive; i.e., all customer sectors (residential, commercial, industrial; both new and retrofit) are targeted. The portfolio criteria will seek to identify opportunities to reduce natural gas consumption in each of these sectors.

## 12. Customer Interface

There are two primary points of customer interface anticipated in this program:

- Requests to customers to host one or more pilots, and
- Marketing and outreach to encourage other customers to incorporate proven new and emerging technologies, processes, practices and/or business models into their systems and operations.

The Alliance will work closely with SoCalGas' account representatives to identify potential pilot hosts and potential adopters. Once identified, the Alliance will identify those targeted SoCalGas customers that could more effectively be accessed and encouraged to adopt through Alliance or other partners' channels.

In addition to direct meetings with targeted customers, the program will include print advertising and marketing, education through workshops and seminars, meetings with industry leaders and associations, and other points of interface.

## 13. Energy Measures and Program Activities

As discussed under Question 2, Projected Program Impacts, this is a non-resource program.

Primary non-energy activities performed under this program include:

- Portfolio design, development and implementation
- Marketing, outreach, education, training
- Development of R&D, pilot and outreach partnerships

These non-energy activities are identified in more detail under Questions 9 and 10 above.

**14. Subcontractor Activities**

The members of the Alliance are listed on page 1. NCI will act as overall Program Manager for the Alliance and for design/ development of the SoCalGas "Emerging Technologies and Best Practices Program". GEC/GTI will play a lead role in technical evaluations and measurement/documentation of program results. Other Alliance partners will participate in pilot projects and lend other types of assistance, consistent with their own unique mix of resources, assets, needs and interests. Some of the major types of assistance by subcontractors and Alliance partners are described below.

- ***GEC/GTI.*** GEC/GTI will lead the technical evaluations of pilot projects. GTI has several on-going activities that are directly relevant to this proposed SoCalGas program. These include:
  - Sustainable Energy Planning Office
  - Distributed Energy Test Center
  - Residential/Commercial Appliance Group
  - GTI Engineered Software Team

GEC/GTI has agreed to make all of these activities resources available to this project.

- ***LADWP, MWD and IEUA*** will identify opportunities to leverage complementary water and energy programs, resources and assets.
- ***GEC/GTI, LADWP and HUD*** will assist in testing new and emerging technologies and best practices in affordable housing projects, both single and multi-family.
- ***Craig Sheehy, Christine Ervin and Kiley and Associates*** will bring participation of key stakeholders into this program. In addition, they will help build the value proposition to increase participation by customers and other key stakeholders.
- ***GEC/GTI and Nexant*** will play a lead role in measuring, verifying and documenting pilot project results.

The Alliance will bring in other partners to round out the participation of key stakeholders needed for successful development and implementation of this program, as well as other Alliance activities, all of which are dedicated to accelerating adoption of comprehensive sustainable planning and development.

## 15. Quality Assurance and Evaluation Activities

- **Data Security & Integrity -** Data for this project will be stored on secure networks that are fire-wall protected with full spam and virus protection; and, where appropriate, have full password and encryption protection.
- **Quality Assurance/Quality Controls -** All pilot projects will be carefully monitored and managed; and, where necessary, independently assessed. The results will be meticulously and objectively documented, so that proposed technologies and best practices can be evaluated in context of cost vs. benefit and ranked relative to other technologies and practices being considered.
- **Program Management -** The selected Program Manager has substantial experience managing a complex water and power utility with an annual budget of $100 million. The Program Executive is a seasoned professional with fiscal responsibility for NCI and responsibility for overall program oversight. Senior managers with directly relevant expertise will be assigned to direct each of the major program areas.
- **Expected Number/Percent Inspections -** Inasmuch as this is a technology development effort, data acquisition, measure and analytical needs are very high. Sampling approaches may be used for certain types of activities; but every pilot project will have its own monitoring, measurement and evaluation protocols and procedures that are designed to validate the performance claims of the technologies, processes, practices and business models being tested.

## 16. Marketing Activities

Marketing will occur at several levels:

- Identifying potential partners for collaboration on new and emerging technologies, practices and business models
- Identifying and developing participation in pilot projects (i.e., SoCalGas customers to serve as pilot hosts)
- Once ready for adoption, developing participation and adoption among other SoCalGas customers in new or emerging technologies, practices and/or business models

SoCalGas customers that are also market leaders will be targeted for participation in pilot projects. During adoption of new technologies and practices, broader participation will be sought. Techniques for selecting pilot hosts could range from targeted identification of market leaders to competitive solicitations. Some may be structured via direct negotiations that define SoCalGas' level of funding and other participation; others could be R&D projects developed and funded by SoCalGas for the benefit of its ratepayers, in which case a pilot host may need to be compensated or otherwise rewarded for participation.

One of the key strategies that differentiates the Alliance's approach from any other effort undertaken thus far is the level of commitment of Alliance partners to build the value proposition at a policy level, and to widely promulgate that value proposition via multiple influential relationships and channels. As noted previously, the Alliance includes thought leaders Craig Sheehy and Christine Ervin who can inspire market participants to become early adopters through their superior relationships with high ranking managers within multiple market sectors. The strong messages carried by these leaders will be supported by other Alliance partners who have the ability to incorporate these new technologies and best practices into their own portfolios.

Alliance partners will help build the value proposition to ready the market for adoption of these new and emerging technologies and best practices once they are proven. Thereafter, the Alliance will work with SoCalGas to develop replicable programs for widespread adoption of these new technologies and best practices. Implementation may include phased incentives to encourage adoption by the next generation, until such time as these technologies and practices become mainstream.

**17. CPUC Objectives**

This program meets the CPUC's objectives in the following important respects:

- Under the state's Energy Action Plan 2 (EAP2), energy efficiency is the state's first priority, followed by demand response and then renewable energy. Natural gas efficiency meets the 1st and 3rd priorities under EAP2.
- The CPUC places a high value on cost effectiveness, which is an essential component to protecting ratepayer interests. The Alliance's structure and approach are superior in this respect, leveraging the resources and assets of multiple entities to increase market penetration and adoption on a cost-shared basis with non-energy entities.
- This program minimizes lost opportunities in several important respects:
  - Alliance partners will continually leverage SoCalGas and Alliance resources and assets for the benefit of all. By delivering a portfolio of comprehensive options (of which energy is but one element) via the Alliance's superior networks and channels, SoCalGas has opportunities to influence decisions made by a variety of stakeholders that it would otherwise not have had.
  - By conferring actively with its customers and stakeholders to identify potential innovative solutions, SoCalGas will work collaboratively with its customers and Alliance partners to identify opportunities that are presently below their radar.
  - This proposed program is but one activity under a comprehensive scope being undertaken by the Alliance to implement holistic sustainable planning and development. Each of the Alliance's other activities (including statewide Sustainable Communities, New Homes and Advanced Homes programs that the Alliance proposes to bring under a single marketing, technical assistance, education and outreach infrastructure) presents opportunities to promote

adoption of new and emerging technologies, processes, practices, new business models, etc. identified through this program as beneficial.

- The portfolio development and implementation program itself will employ a structured approach to identifying and qualifying opportunities on an on-going periodic basis, specifically targeting identification of opportunities that are currently being lost.

- This program reduces air emissions and greenhouse gases by increasing efficient utilization of natural gas. To the extent that SoCalGas' program can also include commercialization of emerging clean energy conversion technologies such as fuel cells to displace combustion of biogas and/or natural gas, these environmental benefits can be increased. Further, to the extent that this program includes increased production of biogas through utilization of innovative biofeedstocks (e.g., dairy manure), the state can already realize other environmental benefits.

| | SCG3530 3P Portfolio of the Future | |
|---|---|---|
| **BUDGET** | | |
| | | |
| **Administrative Costs** | **$** | **180,000** |
| Overhead and G&A | | |
| Other Administrative Costs | $ | 180,000 |
| **Marketing/Outreach** | **$** | **365,000** |
| **Direct Implementation** | **$** | **2,360,000** |
| Total Incentives and Rebates | | |
| User Input Incentive | $ | - |
| Direct Install Rebate | $ | - |
| Direct Install Labor | $ | - |
| Direct Install Materials | $ | - |
| Activity | $ | 2,360,000 |
| Installation | $ | - |
| Hardware & Materials | $ | - |
| Rebate Processing & Inspection | $ | - |
| **EM&V Costs** | **$** | - |
| **Budget** | **$** | **2,905,000** |
| **Costs recovered from other sources** | **$** | - |
| **Budget** (plus other costs) | **$** | **2,905,000** |
| | | |
| **PROGRAM IMPACTS** | | |
| **Program Reductions for Measures installed through 2008** | | |
| User Entered kW (kW) | | - |
| Net Jul-Sept Peak (kW) | | - |
| Net Dec-Feb Peak (kW) | | |
| Net NCP (kW) | | |
| Net CEC (kW) | | - |
| Annual Net kWh | | - |
| Lifecycle Net kWh | | - |
| Annual Net Therms | | - |
| Lifecycle Net Therms | | - |
| | | |
| **Cost Effectiveness** | | |
| **TRC** | | |
| Costs | $ | 2,905,000 |
| Electric Benefits | $ | - |
| Gas Benefits | $ | - |
| Net Benefits (NPV) | $ | (2,905,000) |
| BC Ratio | | - |
| | | |
| **PAC** | | |
| Costs | $ | 2,905,000 |
| Electric Benefits | $ | - |
| Gas Benefits | $ | - |
| Net Benefits (NPV) | $ | (2,905,000) |
| BC Ratio | | - |
| | | |
| **Levelized Cost** | | |
| **Levelized Cost TRC ($/kWh )** | | |
| Discounted kWh | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |
| **Levelized Cost PAC ($/kWh)** | | |
| Discounted kWh | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |
| **Levelized Cost TRC ($/therm)** | | |
| Discounted Therms | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |
| **Levelized Cost PAC ($/therm)** | | |
| Discounted Therms | | - |
| Cost | $ | - |
| Benefits | $ | - |
| Benefit-Cost | $ | - |

# Attachment 6

# Southern California Gas Company

# Peer Review Group Report

# Peer Review Group Assessment of Southern California Gas Company's Proposed Compliance Filing

**Submitted to the California Public Utilities Commission**

*Prepared by*
*The Southern California Gas Company Peer Review Group:*
Devra Wang, Natural Resources Defense Council
Cynthia Mitchell, Consultant for The Utility Reform Network
Michael Messenger, California Energy Commission
Cheryl Cox, Office of Ratepayer Advocates, CPUC
Peter Lai, Energy Division, CPUC

January 30, 2006

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## Executive Summary

As directed in Commission Decisions 05-01-055 and 05-09-043, this Peer Review Group (PRG) respectfully submits its assessment of the Southern California Gas Company's (SoCalGas) bid solicitation process and final program plans.

Ordering Paragraph No. 9 in D. 05-01-055 state that:

> *"For 2006 and beyond the IOUs shall submit compliance filings for Commission approval of final programs and make public all winning bids, as described in this decision. Written assessments of the PRGs shall be appended to these filings. If the PRG and IOU reach consensus in support of the proposed compliance plans, the IOU may file an advice letter. If consensus is not reached, the IOUs shall file supplemental compliance applications in the same docket that they filed their program planning applications. The IOUs shall file these compliance filings as soon as practicable after the Commission issues its approval of program plans and after completion of the peer review process described in this decision."*

This PRG has reached consensus with SoCalGas in its proposed compliance plans, and supports the utility's advice letter compliance filing.

The PRG assessment covers the following five topics:

1. Review and assessment of the third party bid process, including consideration and treatment of statewide bids.
2. Review of final local government partnership programs.
3. Review of statewide marketing and outreach.
4. Review of statewide coordination plans.
5. Review of changes made to utility programs since June 1st filing and resulting changes in demand and energy savings and cost effectiveness of portfolio. Finding that we support changes or not/ or that they seem reasonable.

While the PRG provides recommendations for how the solicitation process could be improved in the future, we conclude that this competitive solicitation process was fair overall, and that SoCalGas should file an advice letter for Commission approval of its program selections, consistent with D.05-01-055. In addition, the PRG makes the following observations regarding the bid process:

- The competitive solicitation process was open and transparent to potential bidders. SoCal distributed the RFPs widely, accepted and considered any completed proposals, provided the CPUC-approved

criteria for evaluating bids in the RFPs, and appeared to be careful not to provide individual bidders with any information that might influence the outcome of the bid selection process.

- The PRG asked questions about SoCalGas' application of the criteria, and discussed the utility's scores and proposed selections. By the end of the process the PRG had no remaining questions or concerns about SoCalGas' application of the CPUC-approved selection criteria.
- The PRG continues to believe that the process for considering statewide bids was suboptimal and should be improved going forward.
- The competitive solicitation process has made the overall portfolio more innovative.

The PRG has determined that SoCalGas has done a reasonable job of continuing existing partnerships. SoCalGas represents that for existing partnerships there will be no gaps in funding or disruption in services. Because most of the SoCalGas partnerships are with one or more utility, contracts are on a joint basis with co-funding agreements. The PRG recommends that the Commission approve the utility's partnership budgets as filed, after making the PRG suggested modifications to establish therm savings targets for all partnerships.[1] The PRG notes that it would like to discuss further with SoCalGas the trend in the annualized data reflecting reduced budgets and therm saving targets the local partnerships.

Marketing and Outreach is a critical component to successful penetration of positive energy efficiency behavior statewide. In this regard, the PRG has an interest in ensuring that statewide marketing and outreach programs determine goals and strategies for their campaigns that achieve this desired outcome. While the PRG does not expect information-only programs to be directly linked to energy savings, the PRG does expect these marketing and outreach programs to develop success indicators for the program linked to measurable changes in customer and or market actor behavior.

The Southern California Edison (SCE) PRG has made an overall analysis of statewide marketing and outreach programs for energy efficiency in its January 2006 assessment of SCE's portfolio compliance filing. In that document, the PRG stated its expectation that each of the marketing entities (Flex Your Power [FYP], Staples,

[1] See PRG finding/recommendation #1.

Runyon/Saltzman) and each of the IOU Administrators – collectively known as Joint Marketing (JM) - are responsible as a statewide unit for the goals and accomplishments of statewide marketing for energy efficiency programs. In this statewide assessment, the PRG expressed its concerns regarding the lack of detail in statewide marketing plans that it had been seeking since the submission of the June 2005 IOU energy efficiency portfolio applications. In an effort to ensure that Joint Marketing is on track to effectively promote the universal adoption energy efficiency throughout California, the PRG marketing assessment outlined several key areas to be addressed:

1) Implementation of a Statewide Marketing Sub-committee of the PAG to act as a forum for communication on the process of development, coordination, and implementation, and evaluation of statewide marketing across energy efficiency as well other related statewide programs including Demand Response, the Green Building Initiative (GBI), and Greenhouse Gas (GHG) programs.

2) Development of Detailed Marketing Plans to be discussed with the PRGs that articulate campaign or program goals based upon measurable objectives.

3) Development of Statewide FYP Brand in White Paper that fully articulates the themes to be packaged in the FYP brand to be presented to the PAG sub-committee.

4) Implementation by Energy Division of EM&V Marketing Studies that will measure pre and post indicators of awareness, knowledge and customer actions in the market place.

The PRG believes that it should work with Joint Marketing to help improve these plans and the FYP brand. This areas activity should go a long way in creating an effectively coordinated statewide marketing program for energy efficiency and related programs.

Statewide coordination of marketing and outreach and competitive solicitations are addressed in this report. One of the most important elements of statewide coordination is to ensure that product specifications are consistent across territories (and in some cases, nationally) in order to most effectively influence manufacturers' and suppliers' production, stocking, and promotional decisions. At the August 2005 statewide PAG meeting, the utilities demonstrated that they are working together effectively to make product specifications and rebate levels consistent across measures offered in statewide programs.

The PRG compared SoCalGas' proposed compliance filing to its June 2005 Application to consider whether the compliance filing improves the likelihood that the 2006-2008 proposed portfolio will satisfy near-term savings targets and is cost-effective. In addition, we consider the associated environmental benefits and the savings by end-use in this section.

The data reflect that SoCalGas continues to be generally on track to meet or exceed the CPUC established energy savings target values. Moving from June application to February following conclusions are apparent:

- 2006 -2008 projected natural gas savings in the June Application are 106% of target, and 119% of target in the February compliance filing. There continues to be a sufficient margin of error in therm savings.
- Overall cost-effectiveness stays the same, with the TRC ratio from Application to Compliance 1.41 and 1.40. The PAC ratio improves from 1.80 to 2.22, while the cost per (PAC) therm saved increases $0.1666 to $0.2604.
- Projected emission reductions of CO2, and NOx increased somewhat from application to compliance filing.
- February Compliance portfolio is somewhat more balanced between space cooling/heating and water heating end uses than the June Application portfolio.
- Relative shares of savings between the residential and nonresidential categories remain unchanged, at less than 20% residential, and nearly 70% nonresidential (New construction shares not shown.).

## Section 1: Review and Assessment of the Third Party Bid Process

In Decision 05-01-055, one of the responsibilities given to the Peer Review Groups (PRG) was to "observe the IOUs' bid selection process to ensure that the criteria are applied properly."[2] The Commission further directed that the utilities discuss the proposed results of their bid review process with the PRGs before finalizing their selections. The Commission required the utilities to make the bids available to the PRGs along with "any other bid evaluation information that the PRGs may request." The Commission further directed that the PRG "have an opportunity to ask questions about how the criteria were applied and provide feedback on the selection process, and otherwise help to ensure that the bid process is fair."[3]

In D.05-09-043, the Commission further clarified its expectations for the PRG review of the bid process, requiring that the utilities "establish a process that allows the PRG members (including Energy Division's consultant, if applicable) to monitor both Stage 1 and Stage 2 selections." The Commission further stated that "[w]hether that involves physically being 'in the same room' or setting up a process whereby the utilities present all the abstracts to PRG members and discuss the proposed selection of those that will go on to Stage 2 (for example), will be left up to the utilities and PRGs to work out to their mutual satisfaction."[4]

In this Section, we summarize Southern California Gas Company's (SoCalGas) competitive solicitation process, discuss the process the PRG used to assess the bid process, and present the PRG's conclusions regarding whether the utility conducted a fair and open solicitation and whether it properly applied the Commission-approved bid selection criteria.

### 1. Summary of Bid Areas, Funding, and RFP Distribution

In D.05-09-043, the Commission approved the areas for which SoCalGas proposed to solicit competitive bids and the overall funding level for the bids. Table 1,

[2] D.05-01-055, p. 110
[3] Ibid.
[4] D.05-09-043, p. 116

which was developed by SoCalGas, provides a summary of these bid areas and the funding and savings proposed in the utility's compliance filing.

## Table 1: Summary of SoCalGas Bid Areas, Funding, and Savings

**Table 1**

| Program | Budgeted | | | | Proposed in Advice Letter | |
|---|---|---|---|---|---|---|
| | Bid Amount (annually) | Bid Amount Projected Budget | Expected Energy Savings, Annual Therms (net) | Expected Energy Savings, Therms 3 Years (net) | Proposed Amount (1) | Expected Energy Savings, Therms (net) (2) |
| **Targeted Area** | | | | | | |
| Affordable Housing Innovative Outreach & Measure | $250,000 | $750,000 | 150,000 | 450,000 | $1,123,133 | 33,935 |
| Mobile/Manufactured Home Innovative Outreach & Measure Installation | $250,000 | $750,000 | 150,000 | 450,000 | $4,572,000 | 679,930 |
| Residential Upstream Central Heating Replacement & Midstream Duct Testing/Sealing/Quality Assurance | $2,000,000 | $6,000,000 | 800,000 | 2,400,000 | $6,019,189 | 406,596 |
| Residential Advanced Home Remodeling/Renovation Program | $50,000 | $150,000 | 200,000 | 600,000 | No Selection | |
| School Based Residential Energy Efficiency Program | $200,000 | $600,000 | 160,000 | 480,000 | $985,500 | 557,136 |
| Used Equipment Education and Incentive Program | $100,000 | $300,000 | Non Resource | | No Selection | |
| Small-Medium Industrial Customer Process Improvement | $120,000 | $360,000 | 30,000 | 90,000 | No Selection | |
| Comprehensive Coin-Operated Commercial Clothes Washer Replacement | $1,000,000 | $3,000,000 | 700,000 | 2,100,000 | $7,707,056 | 3,439,657 |
| Comprehensive/Innovative Upstream/Midstream/Downstream Water Heating Replacement | $550,000 | $1,650,000 | 400,000 | 1,200,000 | No Selection | |
| Portfiolio of the Future | $500,000 | $1,500,000 | Non Resource | | $2,905,000 | Non-Resource |
| Energy Efficiency Kiosk Pilot | $300,000 | $900,000 | Non Resource | | $900,000 | Non-Resource |
| Energy Efficient Equipment Exchange Program | $500,000 | $1,500,000 | 350,000 | 1,050,000 | No Selection | |
| Natural Gas Air Conditioning Replacement Program (4) | $266,667 | $800,000 | 133,333 | 400,000 | $944,582 | 761,460 |
| Energy Efficient Ethnic Outreach | $500,000 | $1,500,000 | Non Resource | | $455,181 | Non-Resource |
| | | | Non Resource | | $2,915,629 | Non-Resource |
| **Subtotal** | **$6,586,667** | **$19,760,000** | **3,073,333** | **9,220,000** | **$28,527,270** | **5,878,714** |
| **Innovative Area (3)** | | | | | | |
| Non-Resource | | | Non Resource | | $3,270,000 | Non-Resource |
| Resource | | | | | $3,225,000 | 1,355,424 |
| **Subtotal** | **$4,674,776** | **$14,024,327** | **746,667** | **2,240,000** | **$6,495,000** | **1,355,424** |
| **Totals (5)** | **$11,261,442** | **$33,784,327** | **3,820,000** | **11,460,000** | **$ 35,022,270** | **7,234,138** |

Notes:
(1) These values are based on the recent engineering review. Adjustments may have been made to the original bid proposal
(2) These values are based on the recent engineering review, and do not necessarily reflect the proposal.
(3) There were no specific budgets and savings forecasted for these areas.
(4) PY06: 100,000 therms at $200,000; PY07 & PY08: 150 therms at $300,000 annually
(5) SoCalGas has yet to negotiate the final budgets for these programs. SoCalGas expects to achieve significant cost efficiens for programs that will be implemented together with SCE, SDG&E and/or PG&E.

As is illustrated in Table 1, SoCalGas committed to award approximately $33.8 million in third party contracts over the three-year program period. This represents 20 percent of the total energy efficiency budget. In this compliance filing, SoCalGas requests approval for the full amount of approximately $33.8 million. Although SoCalGas' current program selection amounts to $35 million, it is the PRG's understanding that the utility intent to negotiate down the proposal budgets for programs that are going to be offered in both SCE and SoCalGas' joint service territories due to administration cost efficiencies.

The Commission also approved SoCalGas' proposal to solicit bids using a two stage process, under which bidders would first submit an abstract and those who were selected based on the Stage 1 review criteria would be invited to submit a full proposal in response to the Stage 2 Request for Proposal (RFP).

SoCalGas distributed the Stage 1 RFPs widely through Commission service lists, contact lists from prior competitive solicitations, and featured the RFP prominently on the utility's website. SoCalGas reports that it distributed the Stage 1 RFPs to more than 138 potential bidders, of which 57 registered with its electronic bid management system. The utility ultimately received 92 qualified responses to the Stage 1 RFPs. Of these, 73 proposers were invited to Stage 2, including 42 resource proposals (20 targeted and 22 innovative) and 31 non-resource proposals (9 targeted and 22 innovative). Only those bidders selected through the Stage 1 process were provided the Stage 2 RFPs requesting detailed proposals.

## 2. Discussion of Stage 1 Selection Process

The PRG reviewed summary information about the bids and SoCalGas' scoring, and asked questions and discussed SoCalGas' scores and proposed selections. The utility provided a confidential matrix containing all bidders' proposals. The PRG also had access to the full bidder proposals if the need arose. In general, the PRG was *not* physically 'in the same room' during the scoring nor did the PRG review the details of every bid received.

At the meeting, SoCalGas described its scoring process and how its scoring teams had applied the Stage 1 criteria to the bids. In general, bids first went through a process to determine if they were responsive, and then were scored using the Stage 1 criteria by several interdisciplinary teams. The teams reached consensus on each proposal that would be recommended not to pass Stage 1; the portfolio manager made the final decision based upon the bid's score and additional portfolio-level criteria.

One problem was immediately apparent from the PRG review of the materials provided by SoCalGas. Many of the proposals were deemed "non-responsive" by the review teams since the bidder had not supplied required information, such as the abstract. Further analysis of these "non-responsive" bids indicated that the bidders had not meant to submit a proposal in many of the specific areas and were likely confused by the electronic submission process. After allowing for this problem, the PRG continued its review.

SoCalGas' portfolio managers discussed the areas of strengths and weakness for the bids. The PRG reviewed each bid's description, score, other pertinent information, and the utility's decision on whether to approve the bid for Stage 2. The PRG requested clarification from SoCalGas on some bid scores, program descriptions, and discussed SoCalGas' rationale for approval or disapproval. There was also substantial discussion regarding (1) situations in which key uncertainties regarding the details of a proposal were missing (for example, the abstract sounded interesting but contained insufficient detail), (2) the importance of innovation, and (3) other portfolio needs, such as area-specific savings (for example, therms) and demand response.

SoCalGas was receptive to the PRG's feedback throughout the process and at the end the PRG and the utility were in consensus regarding which bids should be approved for Stage 2.

### 3. Discussion of Stage 2 Selection Process

The PRG re-convened to review the Stage 2 results. SoCalGas indicated that they had received 72 proposals, of which 58 passed the responsiveness review. The utility provided the PRG with detailed information on the scoring process (characteristics/qualifications of the review teams, the evaluation criteria, the engineering

and program review components). The PRG also had access to the full bidder proposals if the need arose. In general, the PRG did *not* review full bidder proposals or determine whether the PRG would have produced identical scores as SoCalGas for individual bids.

There was also an extensive discussion of the sub-criteria for scoring. Unfortunately, SoCalGas and the PRG had not discussed this information prior to the meeting. As a result, much of the meeting was spent raising questions about certain scores (including scores that appeared to be inconsistent with other information about the bids), requesting clarification on the sub-criteria SoCalGas used to apply particular criteria, and identifying missing information. In retrospect, it is apparent that the process would have been much faster and smoother if SoCalGas and the PRG had discussed the sub-criteria in advance of the utility's scoring process. Much of the discussion pertained to the validity of the bidders' savings or cost-effectiveness claims. Some of the scores initially appeared to be inconsistent because some bidders' claims were likely exaggerated or misestimated. And initially, the PRG did not have enough information to assess how the validity of the bidders' claims had affected the scores.

The remainder of the meeting was spent discussing two items. First, we discussed the scoring sub-criteria and modifications to SoCalGas' scoring algorithm. In particular, SoCalGas' original sub-criteria seemed to over emphasize energy savings in that if the proposal was judged to not be able to achieve two-thirds of its proposed energy savings then it received a zero score for cost effectiveness. The SoCalGas PRG agreed that the new scoring algorithm agreed upon by the SDG&E PRG was appropriate for use by SoCalGas as well. SoCalGas then implemented this new system and reported the results at the next meeting of the PRG.

Second, we also discussed in general the relative value of using an inflexible cutoff score (e.g., 70) or allowing for a more flexible cutoff based on portfolio needs or available budgets. The advantage of an inflexible minimum cut of score is that it minimizes potential complaints about relative fairness. However, this path also skews the process towards only approving selections in the most cost-effective targeted bid areas, and therefore would likely result in the need for another solicitation. The advantage of a more flexible cutoff is that it: (i) recognizes that the targeted bid areas were identified as part of the portfolio planning process to fill an important role in the portfolio, (ii) that

portfolio-level considerations are essential to providing a comprehensive portfolio, (iii) allows for negotiation between SoCalGas and potential vendors, when scores are close to the cutoff and (iv) minimizes the need for re-bidding the solicitations. The PRG strongly recommended using a flexible cutoff, the use of contract flexibility, and individualized negotiations to reduce overall project cost and improve the associated cost-effectiveness, and to use portfolio-level criteria in selecting the final bids. In particular, the PRG discussed the opportunity to leverage programs that have been selected by Southern California Edison Company (SCE) to provide electric savings, and to thereby achieve economies of scale (particularly on administrative costs) and improve program cost-effectiveness. SoCalGas then discussed opportunities to partner with SCE on programs.

SoCalGas presented the results of its revised scoring (using the new protocol) and its discussions with SCE. Initially, SoCalGas proposed splitting the compliance filing into two phases, based on a concern regarding how long it would take to negotiate final contracts with bidders. SoCalGas proposed submitting a first compliance filing with the top ranked bidders, and then a second filing sometime later with the additional bidders, to provide additional time for negotiations. The PRG urged the utility to accelerate negotiations and to sign MOUs with all selected bidders with the key metrics (contract dollar amounts, savings, etc.), to file one compliance filing with the CPUC, and to finalize contracts with bidders after receiving CPUC approval.

SoCalGas requested and received CPUC permission for a modest delay in this compliance filing, and was able to complete its negotiations with bidders in order to present a complete set of proposed bid selections to the Commission in this filing. The utility's final selections ended up being heavily influenced by the opportunity to take advantage of economies of scale by partnering with SCE. The PRG recommends that SoCalGas and SCE work together in future RFPs to offer a joint solicitation, rather than having SoCalGas rely on SCE's selections after the fact.

The end result of the Stage 2 process is summarized below in Table 2 provided by SoCalGas. In general, the PRG supports the solicitation process and corresponding results. However, it should be stated that the process was somewhat difficult. In particular, the lack of prior discussion regarding the sub-criteria, the widely divergent claims of some of the bidders, the apparent multitude of bidder errors, the short time

frame, etc. all contributed to the overall frustration and slowed the PRG's review process. We strongly suggest that future selection processes allow enough time for SoCalGas to conduct quality control on the information received from bidders and provided to the PRG. Eventually, SoCalGas was able to satisfactorily clarify all of the issues raised by the PRG.

In addition the process did not result in the selection of third party bids in two important targeted areas: (1) achieving savings from more efficient water heating, and (2) industrial process applications. PRG members recommended that SoCalGas work with potential bidders to improve their proposals in these areas and eventually develop programs in these areas. SoCalGas concurred that there was a need to develop effective programs in these areas and planned to work with parties to seek to develop workable approaches in these areas of high savings potential as identified in the KEMA-Xenergy Energy Savings Potential studies of 2001 and 2002.

**Table 2: Summary of Proposed SCG Third Party Programs**

| | Proposed Amount (1) | Expected Energy Savings, Therms (net) (2) |
|---|---|---|
| **Targeted Resource Area** | **$21,351,460** | **$5,878,714** |
| **Innovative Resource (3)** | **$3,225,000** | **1,355,424** |
| **Nonresource Targeted Area** | **$ 7,175,810** | **$ -** |
| **Non-Resource (3)** | **$3,270,000** | **Non-Resource** |
| **Totals (3)** | **$ 35,022,270** | **7,234,138** |

**Notes:**
(1) These values are based on the recent engineering review. Adjustments may have been made to the original bid proposal
(2) These values are based on the recent engineering review, and do not necessarily reflect the proposal.
(3) SoCalGas' current program selection exceeds the $33.4 million budget. However, it is SoCalGas intent to negotiate down the proposal budgets for programs that are going to be offered in both SCE and SoCalGas' joint service territories due to administration cost efficiencies.

## Conclusions of the PRG Assessment

### 1. Was the competitive solicitation process open and transparent to all potential bidders?

In general, the PRG found the competitive solicitation process to be fair and open to potential bidders. SoCalGas distributed the RFPs widely and accepted and considered any completed proposals. The utility provided the CPUC-approved criteria for evaluating bids in the RFPs.

### 2. Were the selection criteria applied properly?

Yes, in most cases, but there were some delays in the process due a lack of discussion about how sub criteria would be applied. The PRG did not independently score bids or determine whether it believed that individual scores were appropriate. Instead, the PRG asked questions and discussed SoCalGas' scores and proposed selections. It took substantially more time than was initially anticipated for the PRG to assess whether the selection criteria were applied properly, in large part because there had been no advance discussion of the sub-criteria, especially those criteria applicable to energy savings and cost-effectiveness. In addition, there was insufficient prior discussion of the use of inflexible cutoffs (e.g., strictly 70 points or above) versus flexible cutoff values, and the relative importance of portfolio level criteria (e.g., partnering with SCE). For example, the disposition of a proposal that received a score below the qualifying score (for example a 70) but it was the highest scoring proposal in a targeted area or had other valuable characteristics was not addressed prior to their actual occurrence.

Finally the PRG recommended changes in the weighting schemes used for energy savings and cost effectiveness scores during the review process led to changes in the final proposal score rankings and in some cases seemed counterintuitive to PRG members. Fundamentally PRG members were not sure why some proposals were judged to be infeasible or not cost effective, particularly in some targeted areas such as water heating programs. However, the PRG did concur that the proposals selected by SoCalGas seemed both reasonable and cost effective, and that the decision to conduct another round of bidding seemed prudent given the disagreements about other proposals not selected in this process.

By the end of the process the PRG had no remaining questions or concerns about SoCalGas' application of the CPUC-approved selection criteria. However, the process could have been much improved with some preliminary discussions related to how the actual proposal scoring would occur. In addition, the PRG recommends that SoCalGas contact Pacific Gas & Electric Company and SCE program managers to discuss the possibility of contracting with some of their winning " industrial program " third parties in those service territories to achieve additional gas savings in the SoCalGas service territory.

### 3. Did the competitive solicitation encourage program innovation overall?

The competitive solicitation process has made the overall portfolio somewhat more innovative. For example, the addition of time of sale home audit and retro-commissioning programs will spur innovation in these markets. While many of the program proposals (or components of proposals) have been implemented previously in California, some new ideas also emerged from the process and we believe that the portfolio will benefit as a result. In addition, SoCalGas and the PRG were disappointed that the utility did not receive viable bids in a few targeted bid areas; these areas will likely need to be re-bid. Better quality bids and innovation would likely be heightened if the response time was extended and more outreach was conducted. We provide recommendations below regarding how SoCalGas could reach out to bring in even more bidders and new ideas in future solicitations, but overall we believe this solicitation has met the Commission's goal of providing an avenue for program innovation.

### 4. Was the competitive solicitation process fair overall?

While the PRG provides recommendations below for how the solicitation process could be improved in the future, we conclude that this competitive solicitation process was fair overall, and that SoCalGas should file an advice letter for Commission approval of its program selections, consistent with D.05-01-055.

### 5. Recommendations to Improve Future Bid Processes

The PRG found that SoCalGas personnel were extremely diligent, flexible, and responsive to input from the PRG. SoCalGas adopted many of the suggestions offered by PRG members. However, the PRG still believes that the process can be improved for future solicitations. In this section, we provide our recommendations for improvement, in no particular order.

1. **Discuss sub-criteria scoring with PRG at beginning of process.** The PRG was not aware of the specific sub-criteria that SoCalGas was using until after the bids were received and scored. In the future, the utility should share and discuss the criteria, sub-criteria, and scoring protocol with the PRG before sending out bidding material. This will help make the PRG's assessment faster and more efficient and help to ensure fairness and transparency.
2. **Provide clearer description of portfolio-level criteria.** The Commission approved portfolio-level criteria for use by each utility. These criteria were used after bids had been scored according to the CPUC-approved Stage 2 criteria, in the "portfolio integration" stage of bid selection.[5] SoCalGas used its portfolio-level criteria to supplement the results of the quantitative bid scoring process based on a desire to round out the portfolio. Applying the portfolio-level criteria is ultimately based on informed judgment, and requires more discussion than applying the quantitative criteria. While the PRG supported these judgment calls, the PRG recommends that the utility further improve its process for the next round of bids. SoCalGas should develop a more detailed description of how portfolio-level considerations will be used in making the final bid selection and communicate this more effectively to the Commission, bidders, and the PRG.
3. **Improve statewide program bidding process.** Bidders who requested the opportunity to run a statewide program were not given adequate information on what criteria were needed to qualify as a statewide bid and whether they would

[5] D.05-09-043, Attachment 6, p. 6. SCG's approved criteria stated: "SCG and SoCalGas will work with their respective PRGs to ensure that the overall portfolio remains cost effective and will provide long term savings. In addition, the utilities will ensure that all market sectors have programs to serve its customers, avoiding overlaps between programs, address policy rules/needs. SCG and SoCalGas will present and discuss with their respective PRGs the short list of selected proposals prior to making its final selection to obtain their feedback on the selection."

need to file multiple bid applications with separate utility administrators to win the bid. The current process requires a statewide bidder to be selected in each utility's process and then the administrators get together to decide if the program should be turned into a statewide process. Simply aggregating multiple utility-specific bid filings for statewide consideration is not reasonable because it negates possible economies of scale and scope. The PRG would like SoCalGas and the other administrators to develop a better statewide bid process, with input from potential bidders and all parties.

4. **Conduct process evaluation of bid process.** Many lessons can be learned from this bid process to help improve future competitive solicitations. The PRG understands that Energy Division Consultant, TecMarket Works, will conduct an evaluation of this round of the bid process to systematically identify opportunities for improvement. We recommend hiring a process evaluation contractor to review and critique future proposed bid process up-front to continuously improve the process.
5. **Expand participation in the competitive solicitation.** Some PRG members and SoCalGas program managers were concerned that the bids received in the Stage 2 process were very similar to many bids received in the 2004/2005 process. In addition, the utility did not receive viable bids in a few targeted areas such as medium to small industrial customers. PRG members suggest that SoCalGas consider using an expanded marketing or outreach campaign to reach and recruit more bidders. We suggest that future bids include longer lead-times to allow SoCalGas to better market the upcoming RFP and to build interest and specifically recruit participation from firms with the type of experience necessary to qualify.
6. **Ensure quality of data and scoring records before holding full PRG meetings.** Much of the information SoCalGas initially provided to the PRG required substantial checking before the PRG could conduct its assessment. The PRG recommends that the utility schedule additional meetings with the PRG and/or with Energy Division's consultants prior to in-person PRG meetings and that meeting documents be provided well in advance of meetings. These

measures should be useful in identifying some of the holes/inconsistencies in the information *prior* to the in-person meeting to discuss the overall selection choices. In the future, SoCalGas should ensure that all problems with the data submitted by bidders and scores from the host utility have been identified and corrected before holding an in-person meeting, in order to ensure that everyone's time is used most effectively.

7. **Improve the electronic submission process.** As detailed above, it seemed that SoCalGas' electronic submission process was somewhat confusing to potential bidders given that some of the bidders expressed a desire to "bid" in multiple areas and then failed to submit an accompanying abstract. In the next solicitation, the PRG recommends that the electronic submission process be subjected to detailed quality control testing and that there be error messages displayed when bidders fail to comply with directions.
8. **Coordinate future bid processes with SCE upfront.** SoCalGas' final bid selections ended up being heavily influenced by the opportunity to take advantage of economies of scale by partnering with SCE on the bids that SCE had selected. Rather than having SoCalGas "tag along" with SCE, after SCE has already made its selections, the PRG recommends that SCE and SoCalGas explicitly coordinate future bids upfront and allow bidders to propose combined gas and electric programs, where appropriate.
9. **Work with Potential Bidders to educate them on the proper use of the E3 calculators.** Many bidders failed to include all of the inputs required by the E3 calculators or did not understand what was required. We recommend SoCalGas consider holding pre-bidding training workshops or perhaps sending out a detailed file template that could be filled out by the bidder but actually run by SoCalGas personnel.

## Section 2: Review of final Local Government Programs

**D. 05-09-043, Section 4.1.6 Partnership Programs, Page 29:**

> *"The utilities plan to continue their history of partnering with local governments and other entities in order to effectively tap the energy savings potential in local communities. The partnerships are already defined in some instances, and in others they will be finalized once the competitive bid solicitations are completed."*

### Introduction

This section provides the PRG review and assessment of SoCalGas' Compliance Filing for the Local Government Partnerships (LGP) for 2006-2008. The PRG has determined that SoCalGas has done a reasonable job of continuing existing partnerships. SoCalGas represents that for existing partnerships there will be no gaps in funding or disruption in services. Because most of the SoCalGas partnerships are with one or more utility, contracts are on a joint basis with co-funding agreements. The PRG was concerned that most if not all of the LPG narratives read very similar to the SCE LGP narratives. While some duplication was expected, the PRG has requested that SoCalGas provide specifics to distinguish these as gas efficiency versus electric programs. SoCalGas has included this information in the first section of its filing. The PRG recommends that the Commission approve the partnership budgets as filed, after making the PRG suggested modifications to establish therm savings targets for all partnerships.[6]

The PRG notes that it would like to discuss further with SoCalGas the trend in the annualized data reflecting reduced budgets and therm saving targets the local partnerships: -- annual budgets dropping by 21% and proposed therm targets dropping by 66%.

### Overview of Existing and Proposed Partnerships

As shown in Table 3, performance results for SoCalGas's 2004-2005 LGPs (state and local combined) show reported to target therm savings at 69%; with the UC/CSU

[6] See PRG finding/recommendation #1.

statewide partnership showing reported therm savings exceeding the target, and local partnerships reported at 58% target therm savings. [7]

SoCalGas represents that the reason why the actual dollars spent look so low is because the utility has not finished the inter-utility budget reconciliation. Since the table is based on the Monthly Reports, which are based on actual accounting data, the dollars just don't show on the books yet. In reality, SoCalGas represents that it spending is close to the actual budgeted amount.

**Table 3: SoCalGas Current 2004-2005 (as of 11/05) and Proposed 2006-2008 Partnership Programs**

| | | 2004-2005 | | | | 2006-2008 | |
|---|---|---|---|---|---|---|---|
| Partnership Category | status | budget (millions) | recorded | Therm goal | Therm reported | budget (millions) | therm goal |
| *SoCalGas Statewide* | | | | | | | |
| UC/CSU Partnership | existing | $2.04 | $1.30 | 425,945 | 443,289 | $3.06 | 856,800 |
| CA Community Colleges (CCC) | new | | | | | $2.00 | 559,200 |
| CA Depart. Corrections & Rehabilitation | new | | | | | $0.63 | 175,200 |
| Subtotal Statewide | | **$2.04** | **$ 1.30** | **425,945** | **443,289** | **$5.69** | **1,591,200** |
| *SoCalGas Local* | | | | | | | |
| CUWCC | new | | | | | $1.30 | 2,541,909 |
| Energy Coalition Partnership | existing | $1.22 | $0.33 | 917,440 | 768,394 | $0.46 | 68,000 |
| Energy Coalition Partnership – Peak | existing | | | | | $1.37 | |
| LA County Partnership | existing | $0.65 | $0.04 | 402,428 | **410,000 | $1.50 | 456,000 |
| Bakersfield & Kern County Energy Watch | existing | $0.50 | $0.00 | NA | NA | $0.75 | 144,000 |
| Ventura County Partnerhsip | existing | $0.38 | $0.02 | NA | NA | $0.42 | NA |
| South Bay Partnership | existing | $0.18 | $0.05 | NA | NA | $0.36 | NA |
| Joint SCE Retro-Commissioning Program | new | | | NA | NA | $0.15 | 72,000 |
| Subtotal Local | | **$2.94** | **$0.44** | **1,319,868** | **1,178,000** | **$6.31** | **3,281,909** |
| Total Project Stwd, & Local | | **$ 4.98** | **$ 1.74** | **1,745,813** | **1,621,289** | **$12.00** | **4,873,109** |

**410,000 therms committed LA County as of December 2005

Table 4 provides a comparison of the existing partnerships current and proposed budgets and savings targets on annualized basis. The data show that the UC/CSU partnership budget and savings targets are being held constant. The local partnerships Community Energy and Los Angeles County budgets and savings goals are shrinking --

[7] Note these are reported results that have not yet been verified by evaluation, measurement and verification studies.

with annual budgets dropping by 21% and proposed therm targets dropping by 66%. In looking at the data, it is difficult to trace any logical rhyme or reason. For example, the Energy Coalition budget is being cut by 75%, with the therm target being dropped by 95%. LA County is getting a 50% cut in budget, and a 24% cut in therm target. The Bakersfield-Kern partnership will have therm targets for the first time in 06-08, while continuing LGPs Ventura County and South Bay are going forward without targets, with Ventura's budget being dropped by 26% and South Bay's being increased by 33%.

**Table 4: SoCalGas Existing LGPs: Comparison of Current & Proposed Budgets & Savings Targets, Annualized Basis**

| Partnership Category | status | 2004-2005 budget (millions) | Therm goal | 2006-2008 budget (millions) | therm goal |
|---|---|---|---|---|---|
| *SoCalGas Statewide* | | | | | |
| UC/CSU Partnership | existing | $1.02 | 212,973 | $1.02 | 212,215 |
| Subtotal Statewide | | **$1.02** | **212,973** | **$1.02** | **212,215** |
| *SoCalGas Local* | | | | | |
| Energy Coalition Partnership | existing | $0.61 | 458,720 | $0.15 | 22,667 |
| LA County Partnership | existing | $0.33 | 201,214 | $0.50 | 152,000 |
| Bakersfield & Kern County Energy Watch | existing | $0.25 | NA | $0.25 | 48,000 |
| Ventura County Partnerhsip | existing | $0.19 | NA | $0.14 | NA |
| South Bay Partnership | existing | $0.09 | NA | $0.12 | NA |
| Subtotal Local | | **$1.47** | **659,934** | **$1.16** | **222,667** |
| Total Project Statewide and Local | | **$ 2.49** | **872,907** | **$2.18** | **434,882** |

## Findings and Recommendations

To the extent applicable, the PRG recommends that its findings and recommendations regarding SCE's LGPs be considered here as well. For the reader's convenience, these finding and recommendations are as listed below:

1. Energy and demand targets should be set for all partnerships. Recognizing the varying levels of partnership experience, skills, and resources, in some instances modest phased-in goals may be appropriate.

2. SCE's proposed new $5 million entity to manage, oversee, and disperse additional LGP funds -- "Local Government Energy Action Resources Program" – should be coordinated with similar other entities proposed by the other IOUs. These LGP

management and oversight groups should be monitored by the PRGs with periodic reports on current activities and proposed next steps.

3. Part of the LGEAR functions should be to develop a process/schedule for periodic LGP face-to-face meetings and workshops, along with other communication venues, such as a LGPs best practices link on the Best Practices website, and LGPs links with program details and contact information through the CA Energy Efficiency web site.

4. Given SCE's (and the other IOUs') recent decision to delay the implementation of the California Department of Corrections & Rehabilitation's partnership until possibly 2007, SCE should consider applying a portion of the CDC's redirected funds to existing very successful LGPs such as Los Angeles County and the Community Energy Partnership program.

5. Information and data on the statewide partnerships should be provided on an aggregate basis with IOU-share breakout of budget, demand and energy savings. There needs to be a discussion of how the IOUs will manage and coordinate the statewide partnerships. Also, distinct regional/local energy efficiency issues, including lessons learned, current activities, and proposed next steps should be described.

6. Similarly, information and data on the multi-IOU City of Bakersfield and Kern County Partnerships should be provided on an aggregate basis, along with the SCE, PG&E, and SoCalGas-specific breakout of budget, and demand and energy savings. A discussion of how these three utilities will manage and coordinate this partnership should be provided, along with a description of utility-specific programs and activities.

7. Also, all SCE-SoCalGas joint partnerships should be presented as such, with aggregate and IOU-specific breakout of budget, and demand and energy savings. As with the other joint partnerships, discussion of partnership management and coordination should be provided, along with a description of utility-specific programs and activities.

8. All partnerships should include as part of the program description a more thorough discussion of market sectors, end-uses, and efficiency measures and services. Partnership energy and demand savings data should also be tracked on a customer (or market segment) basis by key end uses. Partnership delivery approach, such as outreach/marketing of SCE programs, and/or design/delivery distinct LGP programs, should also be more thoroughly described.

9. Breakout of partnership budgets and expenditures should be provided in enough detail to distinguish incentives and direct install costs from administrative and other cost categories.

10. Derivation of the local partnership budgets and savings goals should be explained. Providing a rationale for holding most of the local partnerships -- most particularly the apparently very successful Los Angeles County and Community Energy partnerships -- annual budgets constant would be useful. Discussion on planned coordination and leveraging with SCE and third party programs and activities would also be helpful**.**

11. There are many numbers of "lessons learned" that should be shared across partnerships. "Lessons learned" should be systematically tracked and monitored, with periodic follow-ups to ensure that the information is being fully disseminated. Metrics should also be developed to assess the extent to which the "lessons learned" are taking hold. A LGP link should be added to the "Best Practices" website.

12. There are also new technologies that appear ripe for consideration in other efficiency programs and projects. For example, UC/CSU partnership's 2006-08 proposal to include monitoring-based commissioning (MBCx) equipment to insure a comprehensive built-in M&V capability, sounds like a real winner that should be considered as soon as possible for possible application in other commissioning projects (be it IOU, 3rd party, or LGP). A "punch-list" of all potentially transferable measures should be developed.

13. Because the California Community College system is embarking on a major construction cycle, (with SCE's $9 million share to the partnership representing 20% of its total LGP budget), additional statewide PRG review and discussion with the IOUs is warranted to ensure that there are sufficient technical and project management expertise (SCE and 3rd parties), and financial resources, real-time M&V, devoted to this new partnership.

## Section 3: Statewide Marketing and Outreach

The SCE PRG has made an overall analysis of statewide marketing and outreach programs for energy efficiency in its January 2006 assessment of SCE's portfolio compliance filing (for the reader's convenience, this is included as Appendix 1). In that document, the PRG stated its expectation that each of the marketing entities (Flex Your Power [FYP], Staples, Runyon/Saltzman) and each of the IOU Administrators – collectively known as Joint Marketing (JM) - are responsible as a statewide unit for the goals and accomplishments of statewide marketing for energy efficiency programs. In this statewide assessment, the PRG expressed its concerns regarding the lack of detail in statewide marketing plans that it had been seeking since the submission of the June 2005 IOU energy efficiency portfolio applications. In an effort to ensure that Joint Marketing is on track to effectively promote the universal adoption energy efficiency throughout California, the PRG marketing assessment outlined several key areas to be addressed:

1) Implementation of a Statewide Marketing Sub-committee of the PAG to act as a forum for communication on the process of development, coordination, and implementation, and evaluation of statewide marketing across energy efficiency as well other related statewide programs including Demand Response, the Green Building Initiative (GBI), and Greenhouse Gas (GHG) programs.

2) Development of Detailed Marketing Plans to the PRGs articulating goals based upon measurable objectives.

3) Development of Statewide FYP Brand in White Paper that fully articulates the consistent FYP brand to be presented to the PAG sub-committee.

4) Implementation by Energy Division of EM&V Marketing Studies that will determine certain baseline measurements and other marketing impacts as recommended by their evaluator.

The PRG believes that it should work with Joint Marketing to help improve these plans and the FYP brand. This areas activity should go a long way in creating an effectively coordinated statewide marketing program for energy efficiency and related programs.

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## A. BACKGROUND

The PRG requested SoCalGas to describe its current role in the statewide marketing and coordination process as well as what expectations SoCalGas has of the statewide marketing process going forward. In response to this data request, the utility prepared a document for the PRG that outlined its role and other issues of concern in the statewide marketing process.

### 1. SCG Contribution of Resources to Statewide Marketing

#### a) Staff Participation

Currently, SoCalGas has one primary staff person who spends 10% of their time working on day-to-day statewide marketing program coordination. Several other staff spend a smaller percentage of their time as needed supporting statewide marketing in such areas as management, customer communications, and legal support in providing review and feedback of creative materials; consistency of message and SoCalGas brand; policy development; and coordination of statewide marketing issues both internally and externally with other IOUs and FYP. In general, SoCalGas staff has participated in regular steering committee meetings related to overarching direction and policy of programs but have had no involvement with specific campaign details such as marketing materials, advertising or other communication vehicles. The utility is interested in its staff playing a more active participant role in day-to-day statewide marketing activities.

#### b) Budget

SoCalGas is contributing $6,039,129 (or 3.5%) of its 2006-2008 Energy Efficiency program budget (excluding EM&V) to the statewide marketing and outreach budget. This amount of over six million dollars constitutes 9.8% of the total statewide marketing and outreach budget.

### 2. SoCalGas' Participation in the Marketing Process

In the past, statewide marketing and outreach efforts have been largely focused on reducing electric peak demand with some focus on natural gas appliance advertising. More recently, however, SoCalGas participated for the first time with an active role in developing and implementing a statewide marketing campaign directed at high gas rates in California for fall/winter 2005-06. SoCalGas worked directly with the statewide marketing agencies as well as Pacific Gas &Electric Company (PG&E) and San Diego Gas & Electric Company (SDG&E) to develop the campaign allowing it to have direct input into the statewide marketing process and by its estimation receiving greater value in return for its marketing dollar investment. Specifically, SoCalGas provided the marketing agencies with input on natural gas energy efficiency priorities, utility tactical plans, and how they could be supported through mass communications. To ensure consistency in messaging, SoCalGas coordinated with its utility colleagues at PG&E and SDG&E.

Typically, in most statewide marketing efforts, SoCalGas does not receive or participate in detailed media plans from the statewide marketing entities, but receives concepts and creative copy to be reviewed by SoCa.Gas Customer Programs and then obtain internal input from Customer Communications and Legal. SoCalGas divisions review the marketing materials for content, appropriate use of SoCalGas brand, and to ensure there is consistency of message and targets without duplications. The utility's marketing point person then provides this feedback to the statewide marketing entities.

SoCalGas' programs are marketed on a statewide basis through such vehicles as the FYP website with some mass market promotion through TV, radio and print advertising targeted to residential rebate programs and brochures targeted the business rebate and incentive programs. SoCalGas believes that the most influential of these outreach methods have been through the mass market approach using simple, straight-forward and specific messages to consumers about specific programs. SoCalGas is currently working to update its program information on the FYP website as well as prioritizing natural gas messages to be communicated statewide through mass market channels.

**3. SoCalGas' Expectations in the Marketing Process**

SoCalGas would like to build on its participation in the 2005/06 fall/winter natural gas campaign by becoming more of a partner in the development process for statewide marketing campaigns going forward. SoCalGas expresses the need to have IOUs and statewide marketing agencies meet as soon as possible to have a planning meeting that will identify and prioritize statewide marketing issues for 2006 and beyond. In particular, SoCalGas would like to be involved with statewide marketing in the following ways:

- To partner with statewide marketing agencies and IOUs to collaborate on optimal statewide energy efficiency messages promoting consistency and cost-effectiveness in building greater awareness of importance and benefits of energy efficiency for Californians.
- Repeat fall/winter natural gas campaign on an annual basis.
- Participation of day-to-day staff leads in regular statewide marketing steering committee meetings discussing strategy and details of campaign plans including development, implementation, and evaluation and testing of messages to ensure they are having the desired effect.
- To be a partner in the annual planning process and to follow-up with quarterly meetings that keep them advised of progress and make adjustments to campaign as needed.
- To promote energy efficiency programs through mass market advertising such as television, radio, print; web and e-newsletters; collateral; PR; executive breakfasts, ethnic communications, retailer partnerships, and statewide events.
- Greater participation in the development of regional events and partnerships in which SCG has much to offer with established relationships.
- To be kept up-to-date on schedules and key planning dates through emails, and conference calls between meetings.

- To achieve agreed upon marketing objectives to be measured by EM&V efforts in order to demonstrate a return on ratepayer investment supported by the contribution of each IOU to the statewide marketing effort. SoCalGas suggests that such impact could be measured in various ways including research of advertising awareness, audit of reach and frequency, web hits to SCG online material, tracking of brochure and e-newsletter distribution, press releases that result in actual media, and tracking of attendees reached at events.
- To explore how related statewide programs such as Demand Response, Green Building Initiative, and Greenhouse Gas programs will be integrated into statewide outreach efforts.

**B. DISCUSSION**

The PRG agrees wholeheartedly with SoCalGas' desire to more fully participate in the statewide marketing and outreach process and believes that this expectation dovetails well with the recommendations made in the SCE PRG assessment of statewide marketing and outreach programs. Participation by each of the Program Administrators allows the IOUs to both lend their expertise to an important program and in return receive increased value on their investment of ratepayer funds. Such participation benefits from the IOUs' collective experience and established relationships in the community. An inclusive process fosters communication and an open dialogue that can only improve marketing programs and take them to the next level. The participation of such key players in the development of a marketing campaign is essential. In this regard, the PRG makes the following recommendations for action that should be taken in the area of statewide marketing and outreach for California energy efficiency programs.

**C. NEXT STEPS**

In addition to the next steps recommended in the attached SCE statewide marketing assessment, the PRG recommends that the statewide marketing process incorporate SoCalGas and the other IOUs' involvement in the following ways as partners with the marketing agencies:

- Soliciting input on the development and implementation of marketing plans, pre-testing of campaigns, and evaluation through participation in regular steering committee meetings; quarterly progress meetings that provide updates and revisions as needed to marketing plans; and updates and participation as necessary through phone and electronically between meetings.
- Providing detailed plans and schedules to IOU partners in advance.
- Utilizing SoCalGas experience and relationships in local markets in the development and implementation of regional events and partnerships to optimize local effectiveness.
- Establishing agreed upon objectives to measure marketing campaign effectiveness and work with EM&V evaluators to implement measurement processes.

The PRG requests the following information from the statewide marketing agencies no later than the end of February 2006:

- FYP/Staples/Runyon: a percentage allocation breakdown of the SoCalGas $6 million dollar contribution by various promotional vehicles, e.g., website, print by type, radio, TV, collateral, other.
- FYP: an evaluation of its website hits related to SoCalGas including: 1) number of hits received on FYP web pages for SoCalGas information broken down as appropriate by SoCalGas subject matter; 2) stats/data for website traffic driven from FYP site to SoCalGas website. This is evaluation data that is easily tracked online that can provide instantaneous value to SoCalGas for its marketing contribution.

SoCalGas should work together with statewide marketing entities to organize and present updates to PAG marketing sub-committee, Statewide PAG meetings, and to keep their PRG regularly informed on the progress of statewide marketing and outreach.

The PRG agrees with SoCalGas' assessment that time is of the essence in laying out a detailed marketing plan and schedule for statewide marketing and outreach. In its statewide marketing assessment, the PRG called on the IOUs to put together a sub-committee of the PAG by the end of January in order to jump-start the marketing process.

While no such plans have yet been put into action, the PRG would suggest the following timetable:

- By February 10, 2006 – Initial Formation of PAG marketing subcommittee
  Joint Marketing work together to identify key participants in their organizations, PAG, PRG, evaluators, and other statewide program participants as - but not limited to - noted here and begin to identify an agenda, a venue, and dates in late February for a first meeting.
- By end February 2006
  Set first meeting of PAG marketing subcommittee (PAGette) as a forum for open dialogue on statewide marketing issues to result in a scoping document, timetable, and coordination process amongst all interested parties. A first meeting at the end of February supports the urgency of implementing a marketing campaign as soon as possible yet allows for all portfolio compliance filings to be made, so that full IOU participation is possible.
- By end of March 2006
  Follow-up meeting of PAGette to be coordinated with the quarterly statewide PAG meeting where the marketing entities with IOU support will present a draft of their 2006-2008 marketing campaign with suggested campaign details and rationale of how and why it will achieve stated objectives. Further Marketing PAGette meetings will be set as part of the overall marketing schedule.

This does not preclude the IOU administrators and marketing entities from commencing an ongoing dialogue in the interim to share information and devise coordination plans that can be presented at the first PAGette meeting. In fact, the PRG would encourage IOU representatives and marketing entities to plan a steering-committee call right away and set in motion the process for devising a coordinated partnership as described above.

## Section 4: Review of Statewide Coordination Plans

Decision 05-09-043 directs the utilities to include in their compliance filings additional program detail to reflect statewide coordination efforts identified in the joint case management statement (CMS) as not complete. Attachment 8 to the Decision provides a planning schedule for the coordination of the following six statewide activities:

1. Marketing and outreach.
2. Manufacture/distribution/and retail programs and customer incentives.
3. Integration of energy efficiency/demand response/self generation-distributed generation (EE/DR/SGDG).
4. Emerging technology program planning.
5. Codes and standards, program participation agreements.
6. Competitive solicitations.

The Decision specifies the following five policy goals that are to guide the statewide coordination efforts:

1. Ensure that all firms with a footprint or facilities in multiple service areas should have easy and consistent access to all statewide programs.
2. Develop consistent rebate levels and participant rules for products promoted in statewide programs for use in negotiating with manufacturers and suppliers.
3. Leverage private advertising dollars for more savings impact.
4. Reinforce energy efficiency investments with positive statewide message.
5. Protect the utilities' abilities to reduce the competition among utility service territories or among programs within the same service territory.

To the extent applicable, the PRG recommends that its findings and recommendations regarding SCE's statewide coordination be considered here as well. For the reader's convenience, these recommendations are included as Appendix 3.

## Section 5: Review of changes made to utility programs since June 1st Application filing and resulting changes in energy savings and cost effectiveness of portfolio

The PRG compared SoCalGas' proposed compliance filing to its June 2005 Application to consider whether the compliance filing improves the likelihood that the 2006-2008 proposed portfolio will satisfy near-term savings targets and is cost-effective. In addition, we consider the associated environmental benefits and the savings by end-use in this section.

The data reflect that SoCalGas continues to be generally on track to meet or exceed the CPUC established target values. Moving from June application to February following conclusions are apparent:

- 2006 -2008 projected natural gas savings in the June Application are 106% of target, and 119% of target in the February compliance filing. There continues to be a sufficient margin of error in therm savings.

**Table 5: Comparison of SCG 2006-2008 EE Portfolio June 2005 Application and January 2006 Compliance Filing**

| | | 2006 | | 2007 | | 2008 | | 2006-2008 | |
|---|---|---|---|---|---|---|---|---|---|
| | | Total | % of 2006 Goal | Total | % of 2007 Goal | Total | % of 2008 Goal | Total | % of 2008 Goal |
| **JUNE** | Annual Net Therm Savings ((MTh/yr) | 15,790 | 107% | 20,621 | 107% | 24,285 | 104% | 60,696 | 106% |
| **JANUARY** | Annual Net Therm Savings ((MTh/yr) | 18,127 | 123% | 23,306 | 121% | 26,673 | 114% | 68,106 | 119% |
| | CPUC Peak Demand Target (MW) | 14,700 | 0% | 19,300 | 0% | 23,300 | 0% | 57,300 | |

The Table 6 shows projected portfolio cost-effectiveness for both the June Application and February Compliance Filing. The data indicate that the overall cost-effectiveness stays the same, with the TRC ratio from Application to Compliance 1.41 and 1.40. The PAC ratio improves from 1.80 to 2.22, while the cost per therm saved (using the PAC Test) increases $0.1666 to $0.2604. PRG members would like to better understand why the PAC cost effectiveness indicator is getting better while the cost of conserved energy indicator is getting worse.

| **Table 6: Costs and Benefits*** | **APPLICATION** | **COMPLIANCE** |
|---|---|---|
| Total costs to billpayers (TRC) | $ 225,381,390 | $ 276,497,157 |
| Total savings to billpayers (TRC) | $ 318,003,849 | $ 385,412,289 |
| Net benefits to billpayers (TRC) | $ 92,622,459 | $ 108,915,131 |
| TRC Ratio | 1.41 | 1.39 |
| PAC Ratio | 1.80 | 2.22 |
| Cost per therm saved ($/therm) (PAC) | $0.1666 | 0.01736 |

The Table 7 shows that projected emission reductions of CO2, and NOx increased somewhat from application to compliance filing.

| **Table 7: Environmental Benefits** | **APPLICATION** | **COMPLIANCE** |
|---|---|---|
| Lifecycle CO2 Emission Reductions (tons) | 4,845,055 | 5,546,887 |
| Lifecycle NOx Emission Reductions (lbs) | 6,485 | 6,745 |

Finally, consider the projected savings by end-use, which is presented in Table 8.

**Table 8: Projected Savings by End-use**
2006-08 Projected % of Total MTh

| | June Application | January Compliance |
|---|---|---|
| *Total* | | |
| Space Cooling/Heating | 53% | 36% |
| Water Heating | 17% | 35% |
| Other | 30% | 30% |
| *Residential* | 17% | 18% |
| Space Cooling/Heating | 7% | 4% |
| Water Heating | 3% | 12% |
| Other | 7% | 1% |
| *Nonresidential* | 68% | 69% |
| Space Cooling/Heating | 31% | 18% |
| Water Heating | 14% | 22% |
| Other | 23% | 29% |

| Other End-use Projected Savings Breakdown | |
|---|---|
| | MTh |
| Cooking | 1,679.32 |
| Process Optimization | 1,195.68 |
| Equip Modernization/Replacement | 7,850.23 |
| Third Party Program | 745.59 |
| Partnership | 2,331.20 |
| Other | 5,659.92 |
| Total | 19,461.94 |

- The February Compliance portfolio is somewhat more balanced between space cooling/heating and water heating end uses than the June Application portfolio.

- The relative shares of savings between the residential and nonresidential categories remain unchanged, at less than 20% residential, and nearly 70% nonresidential (New construction shares not shown.)

## Appendix 1

### PRG's WRITE-UP ON STATEWIDE MARKETING AND OUTREACH IN SCE'S COMPLIANCE ASSESSMENT REPORT

### I. INTRODUCTION

Marketing is a critical component to successful penetration of positive energy efficiency behavior statewide. In this regard, the PRG has an interest in ensuring that statewide marketing and outreach programs determine goals and strategies for their campaigns that achieve this desired outcome. Accordingly, the PRGs have been seeking details of such plans since the filing of the June 1 application (see attached history of marketing process) to understand:

- What vehicles and strategies marketers will use to influence positive behavioral change and/or investment in energy efficiency and the rationale behind those strategies.
- How marketers will reach out to a mass California market yet target and influence a varied consumer audience.
- How those varied messages will be shaped.
- How IOU Program Administrators will coordinate regional and statewide marketing efforts, including efforts related to Demand Response, Green Building Initiative, Greenhouse Gas, etc.
- Whether marketing budgets are being utilized in a reasonable and effective manner.

The Commission recognized the importance of these issues when it directed the IOUs in the formation of the administrative structure to form a sub-group of their PAGs to "closely collaborate and coordinate on statewide programs" including statewide marketing and outreach.[8] Over the past several months, the PRG has encouraged the formation of such a sub-committee and has sought out details of marketing plans in order to understand how statewide marketers intend to support energy efficiency programs. It has been difficult to get the marketers, and SCE as administrator of the statewide marketing programs, to engage in such a dialogue beyond high-level briefings such as

[8] D.05-01-055, p. 93

their Program Implementation Plan (PIP) and a comparable power point presentation to the November 9 statewide PAG meeting. Based on receiving only broad marketing materials from SCE, the PRG finds that in order to have confidence in the statewide marketing programs going forward, several key refinements need to be made regarding communication of plan details as well as in the approach to designing their overall marketing plans. The PRG would like to ensure that the Efficiency Partnership (EP – which is comprised of all marketing organizations and the IOU administrators) work together to do the following:

1. Articulate measurable goals that reflect the objective of influencing consumer behavior to invest in energy efficiency.
2. Implement strategies that promote the State's larger goals of motivating action while clearly delineating sub-goals of education and awareness.
3. Identify sub-targets of the mass market and direct the appropriate strategies and messages to these target audiences.
4. Develop outreach strategies for the mass market beyond the traditional marketing vehicles of television, radio, and print to begin to reflect the changing trends in how people consume media.
5. Develop and evaluate marketing campaign messages and creative materials using research methods including surveys and focus groups, throughout the marketing process to promote campaign effectiveness (for example, building upon Flex Your Power's initial plans for February focus groups for both pre- and post-measurement.
6. Energy Division/Joint Staff should implement objective EM&V studies that will set a current status baseline and then follow-up at regular intervals to clearly measure the changes in consumer behavior and provide feedback to marketing organizations and IOU Administrators to improve the success of programs.
7. Submit to the PRG a detailed marketing and outreach plan in response to previous data requests that addresses the above issues while working with an ongoing sub-committee of the PAG.

At present, the PRG can only make an assessment based upon the high-level proposal and background materials received to date. These materials largely give the perception that because marketing programs are recognized as information-only programs, they need only build an advertising awareness campaign, and are not required to produce any actual measurable results demonstrating their programs have been effective in motivating consumer behavior. The PRG finds that solely building energy

efficiency awareness is not sufficient as the ultimate goal of the statewide marketing campaign. Rather, the goal of statewide marketing must be to influence consumers to take energy efficiency action with the ultimate goal to encourage consumers to embrace energy efficiency through all of California.

## II. DISCUSSION

For the purpose of this assessment, the PRG requested that all statewide marketing entities provide detailed marketing plans. In our view, marketing plans need to include the following elements: goals, target audiences, sub-goals, schedule, budget, description of all activities including evaluation, rationale of those activities as they relate to reaching targets and achieving goals, and how those activities will be coordinated on a statewide basis. Staples (targeted to the Hispanic population) and Runyon/Saltzman (targeted to rural communities) have essentially complied with the request to provide rationale and strategy that have been useful in making an assessment of their programs. FYP (mass market campaign), however, has provided few details of its 2006–08 marketing and consequently the PRG assessment can only be based on materials that we've received. These programs are addressed below individually.

### A. Flex Your Power

SCE provided two FYP documents upon which this assessment is based: 1) the Program Implementation Plan (PIP) from its June Application with minimal December 2005 updates; and 2) a power point presentation to the statewide PAG on November 9, 2005 on "2006-08 Marketing, Outreach & Informational Programs." While the November 9 presentation did provide an educational overview of statewide marketing and FYP's December 2005 PIP did contain a few updates based on input from the PAG meeting, both documents are very high level and often theoretical in nature providing no expected details of the 2006-08 campaign's development, implementation, or a reasonable articulation of goals supported by strategy or rationale. In our view, these documents are not responsive to the request for detailed marketing plan as outlined above.

In these documents, FYP broadly addresses issues of both marketing and outreach and branding.

*1. Marketing and Outreach*

In both its PIP and its November 9 presentation to the PAG, FYP invokes as a goal the refrain "call to action".[9] The PAG presentation further states FYP's intention of "motivating energy efficiency behavioral change."[10] However, in the same PAG presentation, FYP reverts to the notion that their goals are simply to implement a statewide awareness campaign.[11] And in its PIP, FYP indicates that the marketing campaign seeks as program outcomes: consumer education, support of energy efficiency programs, and coordination with other marketing through the state.[12] While the PRG supports building awareness as a sub-goal to achieve the larger goal of motivating behavior, FYP needs to ensure that its goals and sub-goals are not competing with one another and be able to articulate multiple goals as measurable objectives. Creating awareness is merely a tool to achieve the goal of motivating consumers, not the goal itself and therefore implementation of advertising and outreach are not an acceptable program outcome. On this point, the clear articulation of goals is confused with strategy and needs further refinement before implementation. Accordingly, given the mixed messages on goals in these two documents, it is not clear to the PRG whether FYP is advocating increasing energy awareness as the sole program goal.

Until goals and strategies are more clearly delineated, it is impractical to implement any promotional vehicles. Once FYP refines its goals, it should then determine its sub-target audiences and use focus groups as a key part of understanding those target audiences to inform the development of messages and strategies. FYP indicates its program strategy is based on flexibility in order to take advantage of new opportunities.[13] While it is understandable that some flexibility is needed in order to take

[9] Flex Your Power's power point presentation to Statewide PAG on November 9, 2005, p. 10

[10] Ibid, p. 17

[11] Ibid., p. 18

[12] SCE December 2005 Portfolio Application filing, Statewide Marketing and Outreach section, p.3

[13] SCE December 2005 Portfolio Application filing, Statewide Marketing and Outreach section, p.4

advantage of opportunistic events or to change-up a plan that is not working (and, hence, the need for ongoing evaluation), the PRG also expects that a majority of the campaign would be pre-planned with only a small percentage of the funds set aside for unknown opportunities that may arise. Flexibility cannot be a substitute for developing a detailed marketing plan. Conversely, during the statewide PAG meeting, FYP explained that many of its activities require long-lead times. At a minimum, it is logical to assumer that there must be many events and programs that have been regularly planned in the past on an annual basis that have proven effective in recent campaigns and in which FYP intend to participate and can convey examples of such activities in their marketing plans. The majority of the statewide marketing campaign cannot be unplanned and built around opportunistic events.

To summarize, the PRG expect FYP to articulate a detailed marketing plan for 2006-08 by first addressing the following issues:

a) Goals - broad goals should be more clearly articulated in the following manner:

- Motivation of California consumers to take action with energy efficiency either by 1) changing behavior or 2) investing in measures
- Determine measurable objectives, such as increasing penetration awareness and behavior by a given percentage per year (more on evaluation below)

b) Target - although this is a mass market statewide campaign, different groups of consumers will be motivated by different types of messages and strategies:

- Various target audiences should be determined based on motivations of finance, environment, geographic, etc.
- Various target audiences should be arranged into focus groups to inform and determine effective messages and strategies for reaching for each target group in advance of developing messages or campaign and then evaluate again once messages and materials have been developed to ensure they are on target.
- Focus groups must be targeted and unbiased in order to be truly representative and effective.

c) Once the goals and target elements have been resolved, FYP should proceed with implementing strategic uses of media placement based on the results of its pre-production research

In its PAG presentation, FYP displays a theoretical model of developing a marketing campaign, but has not correlated any actual campaign specifics for 2006 –

2008. While the PAG presentation includes a schedule indicating focus groups planned for February, it is unclear what they plan to achieve with this research: does FYP plan to test messages, creative materials, etc? It also appears that FYP has made media buy commitments without having developed a strategy as outlined above. Moreover, in its PIP, FYP simply lists the type of media vehicles that it will utilize, but does not provide any details or address how and why they expect those vehicles to best reach their various target audiences/markets. The types of media FYP lists include traditional forms of outreach such as television, radio, and print, but these choices do not seem to reflect the changing trends in media toward new technologies or niche mediums. For example, the PRG is concerned that at nearly 50% of the FYP budget, television advertising may be a very expensive statewide purchase given the relatively small marketing budget with mandate to reach the entire state. Considering the generally accepted rule of thumb that a viewer must see an ad at least three times before it even registers and with increased technology that allows viewers to skip commercials, such a large expenditure on television is of great concern.

In its updated PIP, FYP acknowledges this concern and indicates that it will re-visit the media mix. The PRG strongly encourages FYP to review its media mix would like FYP to follow-up on this issue with the PAG statewide marketing sub-committee before finalization of a marketing plan. Beyond television advertising, FYP should explore development of new and innovative approaches to its ad campaign beyond such standard mass market advertising vehicles including radio and print. Consumers are increasingly receiving their media from niche media formats. FYP should address this new trend in its media mix in recognition of such new technological developments of TIVO, podcasts, imbedded advertising, and the new internet trends. Although other more traditional outlets should be explored as well that may reach niche targets including genre cable, billboards, various public transportation vehicles, and viral marketing. These are advertising vehicles that may be more targeted, more cost-effective and reach a mass audience in a more effective way.

While FYP claims successful past campaigns, it did not provide specific marketing plan examples to explain why certain strategies have been or might be expected to be successful. The PRG expects that a marketing plan must be able to link its

chosen strategies back to the desired outcomes and to justify those strategies based on research and metrics. For instance, simply achieving "reach and frequency" through advertising placement cannot be a goal in and of itself, but is a strategic media buy to help achieve campaign goals.

*2. Branding*

The PRG concurs with FYP that continuing to build a trusted statewide energy efficiency brand can be invaluable to promoting both awareness and behavioral change in California. The intended coordination of the brand consistently across all partners is a positive step in maximizing awareness and promoting accessibility of energy efficiency. With investment over time in FYP, the state of California will benefit from a well-defined brand for which value will increase with its visibility and statewide penetration. To ensure that value and recognition in FYP continues to grow, the PRG recommends:

a) Energy Division should determine undertake a baseline survey using the EM&V protocols to ensure a scientific unbiased approach that measures the current level of recognition of FYP and other energy efficiency information programs with respect to awareness, perception, and brand influence. This study should be updated on a regular basis to ascertain progress. The studies of brand value presented to the PAG were dated and seemed mostly to benefit from recognition during the energy crisis.[14]

b) FYP should develop a white paper discussing different ways to enhance its FYP brand and present it to the statewide PAG. In that paper FYP should:

- Describe the brand and its elements and be more well-defined in terms of its intangible qualities beyond a "call to action," invoking its more emotional qualities such as trust, quality, etc., as this is a typical and crucial element to brand image that should evoke a positive visceral response from consumers. This was not addressed in the FYP PAG presentation on branding.
- Refine the use of brand tagline needs to remain consistent over a period of time in order to not be confusing and dilute the brand by appearing to lack consistency and focus in its message. To date, the brand taglines have apparently changed every year.[15]
- Refine the new sub-brand of Flex Your Power Now! It appears to be confusing in how it differs from its parent FYP brand. More

[14] Flex Your Power's power point presentation to Statewide PAG on November 9, 2005, p. 9

[15] Flex Your Power's power point presentation to Statewide PAG on November 9, 2005, p. 9

work is needed in defining individual brand attributes as well as when and how each will be utilized.

**B. Staples**

Staples manages a very targeted marketing and outreach program geared toward the Hispanic population in California. Their PIP and campaign materials do a good job of describing their target audience and why it is a critical community to reach. They have provided logical rationale as to why television and community marketing will best target and influence the Hispanic audience. However, like FYP, Staples lists its program outcomes as placing advertising or holding events. The PRG perceives such vehicles to be a means to an end – but not the end goal. Going forward, the PRG would like the Staples goals revised and resubmitted to the PRG. We expect that Staples would also participate in keeping a statewide marketing sub-committee of the PAG up-to-date on its marketing and outreach activities such as new developments and presenting samples of creative materials being used for its various campaigns.

**C. Runyon Saltzman**

Runyon also manages a very targeted marketing and outreach program geared toward the rural/hard-to-reach population in California. They have done a reasonable job of describing their target audience and provided logical rationale as to why radio, print, and community outreach will be effective in motivating this audience. However, they have not provided a specific schedule of activities and like the other two statewide marketing entities lists its objectives as placing advertising which should be re-worked to describe a change in behavior as the achievable goal. Runyon should make adjustments to its marketing plans accordingly and resubmit its plan to the PRG.

As energy efficiency programs have already entered the new funding round when the PRG expects that new statewide marketing campaigns would be up and running, the PRG would like to see revisions to marketing and outreach goals re-worked and resubmitted to the PRG in a timely manner as outlined in the recommendation section below.

## D. Summary

While the PRG does not expect information-only programs to be directly linked to energy savings, the PRG does expect these marketing and outreach programs to have some element of measurability for influencing consumer behavior. Statewide marketing groups should revise/communicate their program rationale to justify budget expenditures for the purpose of best meeting the objective of motivating consumers to take energy efficiency actions. Accordingly, the PRG recommends that the following action be taken as outlined below.

## III. RECOMMENDATIONS

The PRG realizes that the marketing entities may find the collaborative process of the new administrative structure different from the manner in which they have conducted activities in the past. Yet this is the benefit of the new structure that was designed to ensure that input from a wide variety of expert industry participants utilizing the PAG process would optimize and leverage elements of statewide programs. The PRG expects that this assessment will serve as the foundation to continuing a dialogue that will implement ongoing communication for marketing and outreach issues. Moving forward the PRG recommends:

1) Implement a Statewide Marketing Sub-committee of the PAG

The statewide marketing groups and the IOU administrators should provide regular updates to a PAG sub-committee on statewide marketing to be formed by the IOU administrators with the goal of creating a two-way communication process on the development, coordination, and implementation of statewide marketing (to be formed and meet no later than the end of January 2006):

- Include knowledgeable industry participants in such coordinated efforts as demand response (DR), etc.
- Develop best practices to optimize coordination and success of statewide marketing programs.

2) Submission of Detailed Marketing Plans to the PRGs

Each marketing organization should submit/resubmit detailed marketing plans to the PRG as outlined in their respective sections above articulating goals based upon measurable objectives (to be resubmitted no later than the end of January 2006):

- FYP should integrate forward thinking in advertising vehicles beyond traditional methods that reflect new trends in advertising.
- FYP should clearly articulate its research and evaluation processes with focus groups, surveys, etc. to indicate how these will be used throughout the marketing process to support campaign strategies delineating a schedule, methodologies, and the activities they support.

3) Articulation of Statewide FYP Brand in White Paper

FYP should develop a brief white paper describing key elements to the "FYP" brand - and addressing, at a minimum, issues outlined above - to be presented to the PAG sub-committee (no later than end of February 2006).

4) ED to Implement EM&V Marketing Studies

Energy Division should implement an EM&V study that will determine certain baseline measurements regarding marketing impacts as recommended by their evaluator (to be implemented by March 15, 2006) putting plans in place for future evaluation to measure growth progress:

- These are data that will not only help to set and measure goals, but to support marketing and outreach programs in refining their strategies. This is a study that should be undertaken by an objective third party hired by ED and not performed by marketing groups. Not only will this give the data more authenticity through its independence, but will not tie-up marketing dollars better spent on actual marketing, whereas EM&V already has a budget set aside for this type of study.

In the private sector, marketing communications efforts that support business goals are required to produce metrics to ensure that marketing dollars are positively affecting a company's messages and goals. This is true whether either tangible results or intangible qualities of branding are being measured. Likewise, statewide marketing and outreach programs for energy efficiency should have that same accountability. The intention of ongoing analysis of marketing programs is to optimize their impacts and ensure their success in the same way that analysis of energy efficiency programs utilizes fund shifting to obtain the most successful programs. Accordingly, it is critical that

marketing set achievable goals and be given the tools to be successful in meeting those goals.

## Appendix 2

### PRG HISTORY WITH STATEWIDE MARKETING & OUTREACH PROCESS

January 27, 2005 – The Commission published D.05-01-055 implementing the new administrative structure for energy efficiency programs and states that program administrators should create a process for statewide marketing:

We direct the IOUs and their PAGs to also address statewide programs and consistency issues, bringing in national expertise as appropriate to consider these issues. For this purpose, the IOUs should form a subgroup of their PAG members who will closely collaborate and coordinate on statewide programs that cut across IOU service territories.[16]

June 1, 2005 - SCE submitted to the Commission a section on statewide marketing and outreach plans as part of its portfolio application filing. The marketing section described a broad overview of statewide marketing, but provided no details of how the 2006-2008 marketing campaign would be implemented or coordinated with IOU programs, third parties, or local government. In order to fully understand how statewide marketing would integrate and support energy efficiency programs throughout the state, the PRG requested a detailed 2006-08 marketing plan and budget that would provide such details and demonstrate how marketers planned to proceed in motivating California consumers to take action with energy efficiency.

July 12 & 13, 2005 – As part of the planning process to resolve issues and outline the status of prioritized issues in phase 1, the IOUs convened a statewide PRG meeting in San Diego. That meeting resulted in a Case Management Statement (CMS) that contained language for moving forward on the coordination of statewide activities. The joint IOUs submitted the following plan and timeline for statewide marketing:[17]

[16] D.05-01-055, p. 93

[17] Originally attachment to Joint IOU Case Mgt. Statement; now appended to Decision 05-09-043 as Attachment 8

| Item | | Background | | Tasks | Due Dates |
|---|---|---|---|---|---|
| 1 | Statewide marketing and outreach. | The IOUs and Efficiency Partnership should submit a joint plan on statewide marketing and outreach initiatives. Currently that is a general lack of knowledge and confusion on how the IOUs local marketing and outreach efforts will integrate without duplicating or confusing statewide activities. A joint statewide plan would help mitigate these problems. The plan should address issues including: co-branding with 3rd party programs, coordination with both IOU and non-IOU program-specific marketing activities (particularly for non-resource programs), and marketing targeted at hard-to-reach segments (this includes the activities carried out by Runyon Saltzman & Einhorn and Univision Television Group funded in the 2004-05 program cycle). | 1 | IOU Coordination – general marketing strategy/coordination and identify top 3 programs/measures for SW promotion. | 7/7/05 |
| | | | 2 | Implementer Coordination - Discussion and agreement with IOUs and implementers on overarching plan | 6/28-7/26 |
| | | | 3 | Prepare and present SW plans at SW PAG meeting. | 8/2/05 |
| | | | 4 | Respond to all PAG/PRG recommendations, if any, in coordination with all IOUs/implementers. | 8/5/05 |
| | | | 5 | Incorporate additional program detail in Compliance filing. | various dates |

August 2 & 3, 2005 – The IOUs held a statewide PAG meeting in San Diego in order for the Efficiency Partnership (EP) to provide details of its statewide marketing campaign, as noted above. Instead, FYP, Staples, and Runyon/Saltzman presented examples of creative media from past 2004-05 marketing campaigns. No 2006-08 marketing plans were presented.

August 2005 – PRG requests that SCE institute a PAG sub-committee to address issues of statewide marketing and outreach. SCE doesn't see the need for a sub-committee (but finally agrees to a single statewide PAG meeting the following November).

September 1, 2005 – The PAG submitted to the IOUs the following statement as part of its list of follow-up action items from the August PAG meeting:[18]

> Statewide Marketing Plans- The PAG members believed that the statewide marketing and outreach presentations provided by the three firms did not fulfill the tasks delineated under Item 1: Statewide Marketing and Outreach" of the July 27, 2005 Statewide Planning Schedule. The presentations were an overview of past efforts and stated successes. The Program Administrators and the statewide marketing firms still need to develop and present a joint plan on statewide marketing and outreach initiatives per the statewide planning schedule. This should include budgets, timelines, delineation of tasks, etc. *(Action item: The Program Administrators and the Statewide marketing and outreach firms should begin now to develop statewide marketing plans, provide drafts to PAG members*

[18] Action item 23

*and schedule presentation, etc. allowing for modification and finalization in the late fall after third party programs are selected.)*

September 22, 2005 – The Commission published its interim opinion Decision 05-09-043 approving phase 1 for 2006 – 2008 portfolio plans and fund. The decision contained direction for IOU administrators as they moved forward to complete their portfolios reflecting agreement that the PRG and IOUs had come to as part of the CMS process.[19] The Decision contained the agreement, described in the above table and is listed as Attachment 8 in the decision. Yet no marketing plans had been submitted to the PRG by the time of that decision.

October 4, 2005 – In order to fulfill its information needs to make a complete assessment of the SCE portfolio, the PRG submitted a detailed data request to SCE and the Efficiency Partnership requesting another statewide PAG meeting on statewide marketing that would address issues of the 2006-08 marketing plan including goals, targets, strategies, activities, schedule, and budget.

November 9, 2005 – Statewide PAG meeting in San Francisco. While the presentation was educational and provided a good deal of information and allowed a forum for dialogue, it was very high level and academic and did not provide any campaign or budget details for a specific implementation plans for 2006-08 that the PAGs and PRGs had requested.

November 17, 2005 - As SCE prepared to finalize its compliance filing, the PRG once again requested of SCE the same marketing materials as part of an overall list of clarifying questions in preparation to complete the PRG portfolio assessment. The request was provided to SCE more than a month in advance of their original compliance deadline with a due date for the following materials by November 30:

A. Detailed marketing plan with specific list of marketing activities.
B. Detailed plan schedule with activity dates and milestones.
C. Proposed plan and draft schedule for working with PRG to keep apprised and get input on strategy and creative for future campaign(s).

[19] D. 05-09-043, p. 72

D. Detailed Program Budget including all program budget lines including salaries Organizational chart showing coordination and integration with: Efficiency Partnership (EP) other marketing firms' under contract with EP, staff, title, job responsibilities; utility staff; other key private and public sector market actors.

E. Statewide marketing and outreach plans for HVAC quality installation.

December 2, 2005 – SCE provided Program Implementation Plans (PIPs) for each of the marketing entities, which were largely the same information that had been provided as part of the June 1 application. While the Staples and Runyon PIPs address some issue of targeting and strategy, their program outcomes don't seem reasonable.

December 15, 2005 – SCE submitted matrices from all marketing groups. Staples matrix complied in being responsive, Runyon was somewhat responsive. FYP was non-responsive to the request and basically re-submitted the same high-level information.

## Appendix 3

### SCE-PRG STATEWIDE COORDINATION FINDINGS AND RECOMMENDATIONS

Statewide coordination of marketing and outreach and competitive solicitations are addressed in earlier sections of this report. Though the PRG has had only limited discussions with SCE and the other utilities on items 3 through 5, we make recommendations in the respective sections for how these matters can be addressed by the IOUs on a coordinated basis in the early part of 2006.

The PRG believes that SoCalGas and the other utilities are on the right track with some elements of addressing item 2 (statewide coordination of manufacture/distribution/and retail programs and customer incentives), and is less certain that the utilities are on track with other elements of item 2. One of the most important elements of statewide coordination is to ensure that product specifications are consistent across territories (and in some cases, nationally) in order to most effectively influence manufacturers' and suppliers' production, stocking, and promotional decisions. At the August 2005 statewide PAG meeting, the utilities demonstrated that they are working together effectively to make product specifications and rebate levels consistent across measures offered in statewide programs.

Discussions and IOU written responses to questions from the August and November 2005 statewide PAG meetings indicate that home improvement and big box retailers interest and participation in point of sale or point of purchase (POS or POP) high efficiency equipment and appliance discounts and rebates is not consistent across service territories and somewhat spotty throughout the state. It appears that each IOU employs a local level solo approach to discussions and contracts with home improvement and big box national retailers such as Sears, Home Depot, Lowe's, Costco, Ace, Tru Value, and regional (or California-specific) Western and Howard's Appliances, Orchard Supply, Dixieline, Pacific Sales, and Yardbirds.

It is not clear to the PRG the extent to which statewide coordination and use of concerted/organized market leverage would foster a higher retailer participation rate. Because much of California's mass market electric (and to a lesser extent natural gas) energy use is from off the shelf/out of the box equipment and appliances, it behooves the

IOUs to develop a strategy and approach to determine the extent to which coordinated market leverage at the statewide level would improve retailer participation in the IOUs' POS or POP mail-in and/register (check-out) rebate programs. The PRG does note that working at minimum at the state level may be instrumental in getting certain retailers to modify registers to include mail-in or "instant" check-out rebates/discounts. Working at the statewide level to develop better statewide coverage may also help to minimize current point of sale barriers such as reasonable assurance that rebates are going to customers of the IOU funding the rebate.

The PRG recommends that during the first quarter of 2006, the IOUs should form a retailer-wholesaler coordinating committee that meets quarterly to discuss whether a local or statewide approach is more effective for specific incentive programs. The IOUs should include interested PAG/PRG members on this committee. The committee should gather information and investigate how to get the highest percentage of home improvement and big box retailers participating in the IOUs' POS/POP programs. Part of this research should analyze the extent to which upstream equipment and appliance discounts are being passed on in full or part to consumers. This effort could also be handled as a higher priority M&V project to determine or demonstrate that the price a consumer pays for high efficiency equipment and appliances is equal (or near) the IOU upstream discount. Given the PRG's understanding that working with retail corporate offices at the state level is the preferred approach used by the Efficiency Partnership in its Flex Your Power marketing activities, the PRG also suggests that the IOUs collaborate with the EP on this matter.