# California Solar Initiative Thermal Program

# Quarterly Progress Report

**(April 1 – June 30, 2013)**

**Published On:**

**August 15, 2013**






# Table of Contents

# List of Tables

# 1. Executive Summary

## 1.1. Introduction

Pacific Gas and Electric Company (PG&E), on behalf of the California Solar Initiative (CSI) Thermal (CSI-Thermal) Program Administrators (PAs)[1], submits this Second Quarter (Q2) 2013 Progress Report for the CSI-Thermal Program (Report), in compliance with California Public Utilities Commission (CPUC or Commission) Decision (D.) 10-01-022, which requires the PAs to submit quarterly progress reports to the CPUC Energy Division.[2]

This report provides an overall qualitative and quantitative review of the CSI-Thermal Program from January 1, 2010 through June 30, 2013. It also highlights the program's progress and achievements for the quarter. The report has been divided into several sections covering topics such as program budget, eligibility requirements, incentive structure, program expenditures, market facilitation activities, and regulatory updates.

## 1.2. Key Report Highlights

A workshop was held at the Public Utilities Commission on April 23, 2013 to discuss and receive industry feedback regarding Performance Based Incentive (PBI) metering requirements and recommendations on the implementation of the solar pool heating component of the CSI-Thermal Program. Manufacturers, installers, and lobbying groups were in attendance.

On May 8, 2013, SCG, on behalf of the PAs, filed proposed recommendations for the implementation of the solar pool heating component of the CSI-Thermal Program, based on the workshop discussions and industry feedback. The proposal included sections on Incentives/Budget, Sizing Requirements, Calculator/Model, Eligibility Requirements, Metering Requirements, and Combination Systems. Similar to the low income component of the program, only natural gas customers of PG&E, SCG and SDG&E are eligible for solar pool heating incentives.

On May 31, 2013, SCG, on behalf of the PAs, filed reply comments to comments filed by the California Solar Energy Industries Association (CALSEIA) and the Division of Ratepayer Advocates (DRA) regarding the proposed implementation of the solar pool heating component. The comments reflected issues regarding incentive rates, pool covers, and system sizing and costs, and operating temperatures.

On June 28, 2013, a proposed decision was issued in R.12-11.005 to direct the implementation of the solar pool heating component, allowing solar pool heating systems at multifamily residential, governmental, educational, commercial and non-profit installations to qualify for incentives under the CSI Thermal Program. Solar pool heating systems in single-family residential installations are not eligible to receive incentives. The proposed incentives for solar pool heating systems will be

[1] The CSI-Thermal PAs are Pacific Gas and Electric Company (PG&E), California Center for Sustainable Energy (CCSE), Southern California Edison Company (SCE), and Southern California Gas Company (SCG).

[2] D.10-10-022, Ordering Paragraph No. 13 and Appendix A.

incorporated into the current CSI Thermal Program incentive budget once a final decision is issued. Solar pool heating incentives begin at $7.00 per estimated annual therm displaced and decline incrementally over the life of the program. Incentive payments will be based on expected annual therms displaced using a modified version of the existing online calculator. The incentive for eligible solar pool heating systems is only available to gas customers who have a final signed-off permit issued by the appropriate permitting agency on or after January 1, 2013. Finally, eligible combination systems that include solar pool heating shall be required to take the Performance Based Incentive. The detailed requirements and rates for solar pool heating will be determined once the final decision is issued. Until then, details regarding solar pool heating are not final.

# 2. Introduction

## 2.1. Program Background

In January 2007, the CPUC launched the CSI, a $2.16 billion ratepayer-funded incentive program with a goal of installing 1,940 megawatts (MW) of new solar generation and creating a sustainable solar industry by 2016.[3] State law allows up to $100.8 million of CSI funds to be used for incentives for solar thermal technologies that displace electricity usage, but the CPUC deferred eligibility for allowing solar water heating (SWH) technologies in the CSI until a pilot program for SWH was conducted in the service territory of San Diego Gas & Electric Company (SDG&E). Starting in July 2007, CCSE administered a $2.59 million pilot program for SWH incentives in SDG&E's service territory (Pilot Program). In D.08-06-029, the Commission extended the Pilot Program until the earlier of December 31, 2009, or when the budget was exhausted.

In 2007, Governor Arnold Schwarzenegger signed Assembly Bill (AB) 1470 (Stats. 2007, ch. 536),[4] which authorized the CPUC to create a $250 million incentive program to promote the installation of 200,000 natural gas-displacing SWH systems on homes and businesses by 2017. AB 1470 required the CPUC to evaluate data from the SWH Pilot Program and determine whether a SWH program was "cost effective for ratepayers and in the public interest" before designing and implementing an incentive program for gas customers.

On January 21, 2010, the CPUC established the CSI-Thermal Program,[5] allocating funds for both natural gas-displacing and electric-displacing SWH and other solar thermal technologies, in the service territories of California's major investor-owned utilities. The CPUC established the incentive structure, the program administration details, and other key CSI-Thermal Program rules. The CPUC designated PG&E, SCG, SCE, and CCSE (for the SDG&E service territory) as the PAs for the CSI-

[3] Public Utilities Code § 2851, enacted by Senate Bill (SB) 1 (Murray), Chapter 132, Statutes of 2006

[4] Public Utilities Code § 2860-2867

[5] D.10-01-022

Thermal Program. The PAs launched the single-family residential program in May 2010 and the commercial/multi-family program in October 2010.

On October 13, 2011, the CPUC issued D.11-10-015, effective on October 6, 2011, which authorized the low-income component of the CSI-Thermal Program. The $25 million budget for CSI-Thermal low-income SWH incentives is funded by collections from gas ratepayers pursuant to AB 1470, as previously established in D.10-01-022. The low-income program was launched in March 2012.

On August 6, 2012, the Commission issued D.12-08-008, effective on August 2, 2012, which modified the incentive structure for the single-family and multi-family/commercial mainstream programs. The new rates were incorporated into the program on October 4, 2012, and were retroactive to projects that were in application review as of July 4, 2012.

## 2.2. Program Goals

The CSI-Thermal Program is designed to significantly increase the adoption rate of SWH technologies in the California marketplace. The program strategy and design principles address the barriers to growth, namely installation costs, lack of public knowledge about SWH, permitting costs and requirements, and a potential shortage of experienced installers. As established in D.10-01-022, the primary goals of the CSI-Thermal Program include the following:

- Significantly increase the size of the SWH market in California by increasing the adoption rate of SWH technologies, including:
    - The installation of natural gas-displacing systems that displace 585 million therms (equivalent to 200,000 single-family residential systems) over the 25-year life of the systems;
    - The installation of electric-displacing SWH systems that displace 275.7 million kilowatt hours (kWh) per year (equivalent to 100,800 single-family residential systems); and
    - An expansion of the market for other solar thermal technologies that displace natural gas and electricity use, in addition to SWH.
- Support reductions in the cost of SWH systems of at least 16 percent through a program that increases market size and encourages cost reductions through market efficiency and innovation;
- Engage in market facilitation activities to reduce market barriers to SWH adoption, such as high permitting costs, lack of access to information, and lack of trained installers; and
- Increase consumer confidence and understanding of SWH technology and its benefits.

### 2.3. Program Budget

The total incentive budget (excluding administrative, marketing, and measurement and evaluation budget allocations) for the CSI-Thermal Program is approximately $280.8 million over the life of the program. Of this total, $180 million is allocated to natural gas-displacing SWH systems, as authorized by AB 1470, and up to $100.8 million may be used to fund electric-displacing systems subject to overall CSI budget availability, as authorized by Senate Bill (SB) 1. There is also an additional $25 million incentive budget dedicated to low-income single-family and multi-family residences in the service territories of PG&E, SCG and SDG&E, as established in D.10-01-022.

In the CSI-Thermal Program, incentive dollars totaling $180 million for natural gas-displacing systems are allocated between two customer classes, single-family residential and multi-family/commercial. In D.12-08-008, the Commission updated the budget allocation as follows:

- 45 percent of the total incentive budget is reserved for single-family residential customer SWH systems; and

- 55 percent of the total incentive budget is reserved for multi-family/commercial SWH systems. Funds may be moved from the multi-family/commercial budget to the single-family residential budget, but not vice versa.

The incentive budget is split proportionately among the PAs based on the size of their respective gas and electric sales.

Table 1 presents the incentive allocation percentage and budget allocated to each PA for the natural gas-displacing SWH systems. Table 2 presents the incentive allocation percentage and budget allocated to each PA for the electric/propane-displacing SWH systems.

The incentive budget for the natural gas-displacing portion of CSI-Thermal Program will operate until the earlier of: (i) allocation of all funds available from the program's incentive budget; or (ii) until January 1, 2018. The incentive budget for the electric/propane-displacing portion of the program is available until the earlier of: (i) the budget caps have been reached; (ii) the CSI General Market Program budget has been exhausted, or (iii) January 1, 2017.

The $25 million natural-gas low-income incentive budget is allocated among CCSE, PG&E, and SCG in the same proportions as the total CSI-Thermal natural gas-displacing program presented in Table 1. Single-family and multi-family projects have no specific low-income incentive allocations. Incentives for low-income projects will be available until the earlier of: (i) the incentive budget is fully expended; or (ii) January 1, 2018. Table 3 displays the incentive allocation percentage and budget for each PA for the low-income natural gas-displacing SWH systems.

Table 1: Incentive Allocation per PA for Natural Gas-Displacing Systems

| PA | Budget Allocation | Total Incentive Budget (in millions) |
|---|---|---|
| PG&E | 39.0% | $70.2 |
| CCSE | 10.0% | $18.0 |
| SCG | 51.0% | $91.8 |
| **Total** | **100.0%** | **$180.0** |

Table 2: Maximum Incentive Allocation per PA for Electric/Propane-Displacing SWH Systems

| PA | Budget Allocation | Maximum Incentive Budget (in millions) |
|---|---|---|
| PG&E | 43.7% | $44.0 |
| CCSE | 10.3% | $10.4 |
| SCE | 46.0% | $46.4 |
| **Total** | **100.0%** | **$100.8** |

Table 3: Low-Income Incentive Allocation per PA for Natural Gas-Displacing SWH Systems

| PA | Budget Allocation | Maximum Incentive Budget (in millions) |
|---|---|---|
| PG&E | 39.0% | $9.75 |
| CCSE | 10.0% | $2.50 |
| SCG | 51.0% | $12.75 |
| **Total** | **100.0%** | **$25.00** |

### 2.4. Incentive Structure

One of the primary goals of the CSI-Thermal Program is to lower the cost of SWH technology for the System Owner through incentives. Incentive rates decline over the life of the program in four steps to facilitate market transformation.

Natural gas-displacing incentives decline from step to step in each service territory when the total incentive amount reserved is equal to the budget allocation for the given step. If a PA receives applications accounting for more dollars than what is left in the budget allocation for a given step, a lottery may determine which projects receive the higher incentive level. Table 4 presents the dollar amount paid per therm displaced in each step and the total program budget allocation per step excluding the low-income budget as noted in Section 2.3 of this report.

Table 4: Total Natural Gas Budget Allocation per Incentive Step

Effective July 4, 2012

| Step | Customer Class | Incentive per annual therm displaced | Maximum Incentive per System |
|---|---|---|---|
| 1 | Single-Family | $18.59 | $2,719 |
| | Commercial/Multi-family | $14.53 | $500,000 |
| 2 | Single-Family | $13.11 | $1,919 |
| | Commercial/Multi-family | $9.88 | $500,000 |
| 3 | Single-Family | $7.69 | $1,125 |
| | Commercial/Multi-family | $6.55 | $500,000 |
| 4 | Single-Family | $3.23 | $474 |
| | Commercial/Multi-family | $3.13 | $500,000 |

As incentives decline under the natural gas-displacing program, a corresponding step reduction occurs in the electric/propane-displacing incentive structure. Table 5 shows the electric- and propane-displacing rates for each of the four steps. Electric- and propane-displacing SWH installations count against the MW trigger in Step 10 of the General Market CSI PV Program. If the Step 10 budget is insufficient, the PAs may use funds from Step 9.

Table 5: Electric/Propane-Displacing System Incentive Steps

Effective July 4, 2012

| Step | Customer Class | Electric/Propane-Displacing Incentive ($/kWh) | Maximum Incentive per System |
|---|---|---|---|
| 1 | Single-Family | 0.54 | $1,834 |
| | Commercial/Multi-family | 0.42 | $250,000 |
| 2 | Single-Family | 0.38 | $1,311 |

| | | | |
|---|---|---|---|
| | Commercial/Multi-family | 0.29 | $250,000 |
| | | | |
| 3 | Single-Family | 0.22 | $752 |
| | Commercial/Multi-family | 0.19 | $250,000 |
| | | | |
| 4 | Single-Family | 0.10 | $329 |
| | Commercial/Multi-family | 0.09 | $250,000 |
| | | | |

Incentive step changes move independently in each program territory[6] and for each customer class. Incentives are paid on a first come, first served basis. The most current information on incentive step status per customer class is posted on www.csithermal.com/tracker.

The Low-Income program has a separate incentive step structure from the mainstream program, as shown in Table 6. The current incentive step level is the same as the current incentive step in the natural gas portion of the mainstream CSI-Thermal Program. Currently, the mainstream natural gas single-family program is in Step 1 for all PA territories; therefore, the low-income single-family program is also in Step 1.

Table 6: Low-Income Single-Family and Multi-family Natural Gas Incentive Steps

| Step Level | Single-Family Low-income Incentive per therm displaced | Incentive Cap for Single-Family Low-income Projects | Multi-family Low-Income Incentive per therm displaced | Incentive Cap for Multi-family Low-income Projects |
|---|---|---|---|---|
| 1 | $25.64 | $3,750 | $19.23 | $500,000 |
| 2 | $20.52 | $3,000 | $15.39 | $500,000 |
| 3 | $15.38 | $2,250 | $11.53 | $500,000 |
| 4 | $9.40 | $1,376 | $7.05 | $500,000 |

[6] SCE incentive step changes will correspond with SCG gas incentive step changes for each customer class.

## 2.5. Program Eligibility

Eligibility for the CSI-Thermal Program is described in detail in the CSI-Thermal Program Handbook.[7] A few key eligibility requirements are highlighted below:

- Customer site must be within the service territories of SCG (for natural gas only), PG&E, SCE (for electric only), or SDG&E.
- Single-family residential SWH systems must have a Solar Rating and Certification Corporation (SRCC) or International Association of Plumbing and Mechanical Officials (IAPMO) OG-300 System Certification.[8]
- Solar collectors used in multi-family/commercial water heating must have SRCC OG-100 Collector Certification.
- All components must be new and unused (with exceptions). All systems must have freeze and stagnation protection.
- For single-family projects, all Domestic Hot Water (DHW) end-uses are eligible.[9]
- For multi-family/commercial projects, SWH applications must directly consume the solar-heated potable water, as opposed to using the solar-heated water as a medium to carry heat for some other end-use. In multi-family/commercial applications, DHW and commercial end-uses are eligible for CSI-Thermal Program incentives.[10] Rebates are available for qualifying natural gas-and electric-displacing systems that were installed within 24 months after the date on the final signed-off permit. Propane-displacing systems are eligible for a CSI-Thermal Program incentive if a final permit was signed-off after June 14, 2011.
- SWH contractor or self-installer must complete a one-day mandatory training offered by the PAs.
- For specific details regarding low-income eligibility requirements, please see the CSI-Thermal Program Handbook.

[7] The CSI-Thermal Handbook is located at http://gosolarcalifornia.org/documents/CSI-Thermal_Handbook.pdf

[8] D.11-11-004 was approved on November 18, 2011 to modify D.10-01-022 regarding certification standards for SWH systems. This decision allows systems certified to the OG-300 standards by IAPMO to be eligible for CSI-Thermal Program incentives along with those certified by SRCC.

[9] DHW is defined as water used, in any type of building, for domestic purposes, principally drinking, food preparation, sanitat ion and personal hygiene (but not including space heating, space cooling, or swimming pool heating).

[10] Examples of eligible DHW end uses in include: apartment buildings with central DHW systems, convalescent homes, hotels and motels, military bachelor quarters, school dormitories with central DHW systems and prisons. Examples of eligible commercial end uses include: commercial laundries, laundromats, restaurants, food processors, agricultural processes and car washes.

# 3. Program Expenditures

From program inception through June 30, 2013, CSI-Thermal Program expenditures totaled $29,662,698. Table 7 illustrates the detailed expenditures by PA followed by a breakdown of expenses specific to the natural gas and electric/propane-displacing programs for the reporting period as represented in Table 8 and Table 9.

Program expenditures consist of, but are not limited to, administration activities, such as application processing, continued enhancement of the statewide online database, mandatory contractor and self-installer training, local and statewide marketing efforts, activities related to potential program expansion, and administrative staffing support.

Table 6: CSI-Thermal Expenditures by PA

| Natural Gas and Electric/Propane<br>CSI-Thermal Program Expenditure Data January 1, 2010 to June 30, 2013 | | | | | |
|---|---|---|---|---|---|
| **Expenditure Type** | **CCSE** | **SCE** | **PGE** | **SCG** | **Total** |
| **Administration** | $1,245,829 | $645,605 | $2,790,025 | $1,767,456 | **$6,448,915** |
| **Market Facilitation** | $707,472 | $539,509 | $4,153,288 | $4,399,507 | **$9,799,776** |
| **Measurement & Evaluation** | $5,614 | $0 | $2,543 | $0 | **$8,157** |
| **Incentives Paid** | $3,062,642 | $47,123 | $6,647,448 | $3,648,638 | **$13,405,851** |
| **Total** | **$5,021,556** | **$1,232,237** | **$13,593,304** | **$9,815,601** | **$29,662,698** |

* This amount also includes total Statewide M&O expenses including allocations to be reimbursed by other Program Administrators.

Table 7: CSI-Thermal Expenditures by PA (Natural Gas)

| Natural Gas<br>April 1 – June 30, 2013 | | | | |
|---|---|---|---|---|
| **Expenditure Type** | **CCSE** | **PG&E** | **SCG** | **Total** |
| **Administration** | $100,726 | $135,473 | $153,499 | **$389,698** |
| **Market Facilitation** | $61,567 | $380,101 | $1,439,474* | **$1,881,142** |
| **Measurement & Evaluation** | $1,586 | $0 | $0 | **$1,586** |
| **Incentives Paid** | $535,694 | $1,078,302 | $1,022,491 | **$2,636,487** |
| **Total** | **$699,573** | **$1,593,877** | **$2,615,464** | **$4,908,914** |

* This amount also includes total Statewide M&O expenses including allocations to be reimbursed by other Program Administrators.

Table 8: CSI-Thermal Expenditures by PA (Electric/Propane)

| Electric/Propane<br>April 1 – June 30, 2013 | | | | |
|---|---|---|---|---|
| **Expenditure Type** | **CCSE** | **PG&E** | **SCE** | **Total** |
| **Administration** | $25,820 | $26,122 | $30,577 | **$82,519** |
| **Market Facilitation** | $15,545 | $106,268 | $84,288* | **$121,813** |
| **Measurement & Evaluation** | $179 | $ 0 | $0 | **$179** |
| **Incentives Paid** | $4,423 | $8,662 | $8,323 | **$21,408** |
| **Total** | **$45,967** | **$141,053** | **$1,231,880** | **$1,418,900** |

* This negative amount reflects a reversal of an accounts payable accrual

## 4. Program Progress

The PAs spent much of Q2 2013 addressing future expansion of the CSI-Thermal Program to include solar thermal applications, such as process heat, solar cooling and space heating. On June 26, 2013 the PAs jointly filed an advice letter outlining the proposed revisions to the CSI-Thermal Program Handbook in compliance with Ordering Paragraph 2 of California Public Utilities Commission Decision 13-02-018.

The CSI-Thermal Program began accepting applications for single-family systems and multi-family/commercial systems on May 1, 2010 and October 8, 2010, respectively. Applications for propane-displacing SWH systems were available on February 7, 2012, while the low-income program began on March 29, 2012. In addition, the CPUC approved an increase in the single-family residential and the commercial and multi-family incentive levels effective July 4, 2012. Tables 10, 12, 14, 16 and 18 present the quantities of applications received by each PA in Q2 2013, as well as the corresponding incentives and energy savings for those applications. Tables 11, 13, 15, 17, 19 & 20 show the average costs of systems for completed projects by PA and customer class since program inception.

Table 9: Summary Data: CSI-Thermal Single-Family Applications by Status (Natural Gas)

| | CCSE | PG&E | SCG | Total |
|---|---|---|---|---|
| | Q2 | Q2 | Q2 | |
| **APPLICATIONS RECEIVED** | | | | |
| **Application (Number)** | 1 | 18 | 72 | **91** |
| **Incentives ($)** | $2,063 | $37,689 | $141,261 | **$181,013** |
| **Capacity (First Year Expected Energy Displaced in therms)** | 111 | 2,295 | 8,023 | **10,429** |

Table 10: Average Cost per Single-Family Project (Natural Gas)

| | CCSE | PG&E | SCG | Overall Average |
|---|---|---|---|---|
| **Average Project Cost per Single-Family Project ($)*** | $7,411 | $10,426 | $8,883 | $8,907 |
| **Average Project Cost per Unit of First Year Energy Displaced ($/therm)*** | $66.75 | $78.21 | $81.88 | $75.61 |

*Since program inception

Table 11: Summary Data: CSI-Thermal Single-Family Applications by Status (Electric/Propane)

| | CCSE* | PG&E | SCE | Total |
|---|---|---|---|---|
| | Q2 | Q2 | Q2 | |
| **APPLICATIONS RECEIVED** | | | | |
| **Applications (Number)** | 5 | 12 | 4 | **21** |
| **Incentives ($)** | N/A** | $9,627 | $6,768 | **$16,395** |
| **Capacity (First Year Expected Energy Displaced in kWh)** | 13,232 | 20,244 | 13,830 | **47,306** |

Legend: Applications Received = All applications that moved to "Application Review" status during the reporting period

* The budgets are currently exhausted for single family residential electric systems in the PG&E and SDG& E (CCSE) territories. Single family electric or propane applications submitted in these territories will be placed on a waitlist.

**All applications are in Waitlist status

## Table 12: Average Cost per Single-Family Project (Electric/Propane)

| | CCSE | PG&E | SCE | Overall Average |
|---|---|---|---|---|
| **Average Project Cost per Single-Family Project ($)*** | $7,403 | $9,898 | $7,863 | **$8,388** |
| **Average Project Cost per Unit of First Year Energy Displaced ($/kWh)*** | $2.63 | $3.34 | $2.40 | **$2.79** |

*Since program inception

## Table 13: Summary Data: Multi-family/Commercial (Natural Gas)

| | CCSE | PG&E | SCG | Total |
|---|---|---|---|---|
| | Q2 | Q2 | Q2 | |
| **APPLICATIONS RECEIVED** | | | | |
| **Application (Number)** | 3 | 10 | 17 | **30** |
| **Incentives ($)** | $355,354 | $1,350,470 | $480,231 | **$2,186,055** |
| **Capacity (First Year Expected Energy Displaced in therms)** | 27,731 | 94,988 | 33,051 | **155,770** |
| **UNDER REVIEW Incentive Claims** | | | | |
| **Application (Number)** | 1 | 11 | 13 | **25** |
| **Incentives ($)** | $81,353 | $782,131 | $331,881 | **$1,195,365** |
| **Capacity (First Year Expected Energy Displaced in therms)** | 5,599 | 55,888 | 22,901 | **84,388** |

Applications Received = All applications that moved to "RR Application Review" status during the reporting period
Under Review Incentive Claims = All applications that moved to "ICF Application Review" status during the reporting period

## Table 15: Average Cost per Multi-family/Commercial Project (Natural Gas)

| | CCSE | PG&E | SCG | Total |
|---|---|---|---|---|
| **Average Project Cost per Multi-family/commercial Project ($)*** | $147,827 | $78,694 | $51,481 | **$92,667** |
| **Average Project Cost per Unit of First Year Energy Displaced ($/therm)*** | $43.73 | $45.74 | $38.71 | **$41.71** |

*Average Project Cost per Multi-family/commercial Project for all completed projects since program inception

## Table 16: Summary Data: Multi-family/Commercial (Electric/Propane)

| | CCSE | PG&E | SCE | Total |
|---|---|---|---|---|
| | Q2 | Q2 | Q2 | |
| **APPLICATIONS RECEIVED** | | | | |
| **Application (Number)** | 2 | 1 | N/A | **3** |
| **Incentives ($)** | $12,880 | $1,275 | N/A | **$14,155** |
| **Capacity (First Year Expected Energy Displaced in kWh)** | 30,666 | 104 | N/A | **30,770** |
| | | | | |
| **UNDER REVIEW Incentive Claims** | | | | |
| **Application (Number)** | 1 | NA | N/A | **1** |
| **Incentives ($)** | $11,440 | NA | N/A | **$11,440** |
| **Capacity (First Year Expected Energy Displaced in kWh)** | 27,237 | NA | N/A | **27,237** |

Applications Received = All applications that moved to "RR Application Review" status during the reporting period
Under Review Incentive Claims = All applications that moved to "ICF Application Review" status during the reporting period

## Table 17: Average Cost per Multi-family/Commercial Project (Electric/Propane)

| | CCSE | PG&E | SCE | Total |
|---|---|---|---|---|
| **Average Project Cost per Multi-family/commercial Project ($)*** | $58,850 | $58,793 | $7,630 | **$41,758** |
| **Average Project Cost per Unit of First Year Energy Displaced ($/kWh)*** | $3.05 | $1.44 | $4.32 | **$2.94** |

*Average Project Cost per Multi-family/commercial Project for all completed projects since program inception

## Table 18: Summary Data: Multi-family Low-income (Natural Gas)

| | CCSE | PG&E | SCG | Total |
|---|---|---|---|---|
| | Q2 | Q2 | Q2 | |
| **APPLICATIONS RECEIVED** | | | | |
| **Application (Number)** | 4 | 22 | 135 | **161** |
| **Incentives ($)** | $47,752 | $468,173 | $3,792,464 | **$4,308,389** |
| **Capacity (First Year Expected Energy Displaced in therms)** | 2,530 | 25,261 | 208,327 | **236,118** |
| | | | | |
| **UNDER REVIEW Incentive Claims** | | | | |
| **Application (Number)** | 12 | 6 | 21 | **39** |
| **Incentives ($)** | $335,163 | $284,625 | $800,383 | **$1,420,171** |
| **Capacity (First Year Expected Energy Displaced in therms)** | 17,476 | 15,046 | 42,732 | **75,254** |

Applications Received = All applications that moved to "RR Application Review" status during the reporting period
Under Review Incentive Claims = All applications that moved to "ICF Application Review" status during the reporting period

## Table 19: Average Cost per Multi-family Low-income (Gas)

| | CCSE | PG&E | SCG | Total |
|---|---|---|---|---|
| **Average Project Cost per Multi-family/commercial Project ($)*** | $78,652 | $60,768 | $68,591 | **$69,337** |
| **Average Project Cost per Unit of First Year Energy Displaced ($/therm)*** | $59.97 | $57.24 | $54.59 | **$57.27** |

*Average Project Cost per Multi-family/commercial Project for all completed projects since program inception

### 4.1 Turnaround Times

The PAs strive to process reservation requests and incentive claim requests within 30 days or less for both single-family residential and multi-family/commercial applications to ensure that projects are moved forward as quickly as possible. Tables 20 through 22 reflect the reporting period from April 1 through June 30, 2013.

Table 21 shows the most recent application processing timeframes (between the "Reservation Application Review" and "Reservation Application Approved" stages) for 2- or 3-step applications. This metric represents the amount of time it took to reserve incentives for a multi-family/commercial project.

Table 22 shows the time from Application Review to Incentive Approval (1-Step – Single-Family Residential). The time measured in the processing time tables includes both PA application processing time and the time taken by the host customer to respond to requests for more information or application corrections.

Table 23 shows the Time from Application to Incentive Approval (2- and 3-Step- Commercial or Multi-Family Residential).

Applications that require the PAs to take more than 60 days to approve typically have outstanding issues that require resolution or input from the Applicant and/or customer. Problems encountered from these applications include, but are not limited to:

- Incorrect project site addresses
- Missing signatures
- Missing or incomplete documentation
- Slow customer/Applicant responsiveness

**Table 20: Multi-family/Commercial Application Processing Times by Program Administrator between "Reservation Application Review" and "Reservation Application Approved" Stages**

| Program Administrator | 30 Days or Less | 60 Days or Less | Greater than 60 Days | Total |
|---|---|---|---|---|
| | Q2 | Q2 | Q2 | |
| **Multi-family/ Commercial** | | | | |
| **CCSE** | 83.33% | 100.00% | 0.00% | 12 |
| **PG&E** | 87.10% | 100.00% | 0.00% | 31 |
| **SCE** | N/A | N/A | N/A | 0 |
| **SCG** | 96.62% | 99.32% | 0.68% | 148 |

Table 21: Processing Time from Application Review to Incentive Approval (1- Step – Single-Family Residential)

| Program Administrator | 30 Days or Less | 60 Days or Less | Greater than 60 Days | Total |
|---|---|---|---|---|
| | Q2 | Q2 | Q2 | |
| **No Inspection: Percentage of applications without inspection with processing time between Incentive: Application Review and Incentive: Approved as described.** | | | | |
| **CCSE** | 100.00% | 100.00% | 0.00% | 2 |
| **PG&E** | 97.74% | 100.00% | 0.00% | 19 |
| **SCE** | 66.67% | 100.00% | 0.00% | 3 |
| **SCG** | 92.06% | 98.41% | 1.59% | 63 |
| **Inspection: Percentage of applications with inspection with processing time between Incentive: Application Review and Incentive: Approved as described.** | | | | |
| **CCSE** | 0.00% | 0.00% | 100.00% | 2 |
| **PG&E** | 62.50% | 100.00% | 0.00% | 8 |
| **SCE** | 100.00% | 100.00% | 0.00% | 2 |
| **SCG** | 66.67% | 80.00% | 20.00% | 15 |
| **Percentage of applications with processing time between Incentive: Application Review and Incentive: Paid as described.** | | | | |
| **CCSE** | 33.33% | 33.33% | 66.67% | 3 |
| **PG&E** | 78.57% | 100.00% | 0.00% | 28 |
| **SCE** | 80.00% | 100.00% | 0.00% | 5 |
| **SCG** | 74.55% | 89.09% | 10.91% | 55 |

Table 22: Processing Time from Application Review to Incentive Approval (2-and 3-Step - Commercial or Multi-Family Residential)

| Program Administrator | 30 Days or Less | 60 Days or Less | Greater than 60 Days | Total |
|---|---|---|---|---|

| Program Administrator | 30 Days or Less | 60 Days or Less | Greater than 60 Days | Total |
|---|---|---|---|---|
| **No Inspection: Percentage of applications without inspection with processing time between Incentive: Application Review and Incentive: Approved as described.** | | | | |
| **CCSE** | 100.00% | 100.00% | 0.00% | 9 |
| **PG&E** | 100.00% | 100.00% | 0.00% | 6 |
| **SCE** | N/A | N/A | N/A | 0 |
| **SCG** | 88.89% | 100.00% | 0.00% | 18 |
| **Inspection: Percentage of applications with inspection with processing time between Incentive: Application Review and Incentive: Approved as described.** | | | | |
| **CCSE** | 85.71% | 85.71% | 14.29% | 7 |
| **PG&E** | 75.00% | 100.00% | 0.00% | 8 |
| **SCE** | N/A | N/A | N/A | 0 |
| **SCG** | 100.00% | 100.00% | 0.00% | 8 |
| **Percentage of applications with processing time between Incentive: Application Review and Incentive: Paid as described.** | | | | |
| **CCSE** | 65.22% | 95.65% | 4.35% | 23 |
| **PG&E** | 75.00% | 100.00% | 0.00% | 8 |
| **SCE** | N/A | N/A | N/A | 0 |
| **SCG** | 75.00% | 100.00% | 0.00% | 20 |

# 5. Market Facilitation

## 5.1 Conclusion of the Two-year Statewide Market Facilitation Plan

The two-year Statewide Market Facilitation Plan undertaken by the four PAs in association with Fraser Communications concluded as scheduled and on-budget in Q2 2013. The overall campaign effort included identifying and procuring the services of Fraser Communications with SCG acting as the Lead Party. A Public Workshop on the proposed Statewide Market Facilitation Plan and the corresponding local market facilitation plans for each PA were presented at the CPUC offices in San Francisco on August 2, 2011. Modifications to the Statewide Plan were made in response to public input, and the resulting Statewide Market Facilitation Plan was approved by Energy Division

effective September 30, 2011. Over the next several months, intensive planning activities and development of program marketing materials took place, with the launch of the Statewide Campaign in April 2012. Over the next five quarters the Plan was implemented and completed its run in June 2013.

### 5.2 Spring Finale Media Plan

The two-year market facilitation campaign wrapped up its activities with a Spring Finale Media Plan that fully utilized the remaining resources in the two-year budget. The Spring Finale Media Plan extended the optimized efficiency of the digital infrastructure buy until the end of Q2, and reinforced it with a strategic four-week traditional media buy around Earth Day in spot TV, spot radio and the "Green is Universal" sponsorship that the Year-End Data Report showed was the most effective buy at the launch. The traditional media buy was embellished with a four-week digital buy on the highly targeted Pandora internet radio and the Huffington Post.

### 5.3 Trade Print Publications

The targeted industry trade print publications placement effort continued through Q2 2013. Ads appeared in:

April/May

- "California School Business" – Spring Issue - Quarterly
- "California Plumbing Heating and Cooling Contractors' Connection" – Spring/Summer Issue

### 5.4 Post-Campaign Awareness Study

One of the elements of the approved statewide market facilitation plan was to conduct a pre-campaign awareness survey to provide baseline data of the level of awareness and understanding of solar water heating and the CSI-Thermal Program in the target markets for both residential and business customers on a statewide basis. The data would then be compared to a post-campaign survey to help measure the effectiveness and reach of the statewide campaign. During Q2 2013, Fraser Communications oversaw the compilation of online responses for the post-campaign awareness survey to provide data for post-campaign levels of:

- Aided and unaided awareness of solar water heating
- Current attitudes and familiarity with solar water heating
- Consideration of installation of solar water heating
- Awareness of the CSI-Thermal Program

The results will be tabulated in Q3 2013.

### 5.5 Statewide Continuation Effort

Understanding that the completion of the two-year Statewide Market Facilitation Plan does not mark the end of local and statewide marketing efforts for the CSI-Thermal Program, PGE, CCSE and SCG included proportionate share funding for a mutual statewide continuation effort in each of their six-month Local Market Facilitation Extension Plans covering Q3 and Q4 2013. The Plans were submitted to the CPUC for approval on April 2, 2013, and approved by Energy Division effective May 2, 2013. SCE declined to include funding for statewide expenses in their six-month Local Market Facilitation Plan that was also approved by the Energy Division, but have indicated to the other PAs their desire to continue to participate in statewide market facilitation efforts. The statewide six-month continuation effort sustains an optimized digital infrastructure approach along with plans for new brochures, a new business internet banner ad and a press release distribution focused on the pending expansion of the Program to include non-single-family residential swimming pools and additional solar thermal technologies for Q3 and Q4 2013, while anticipating the development of a robust mutual statewide effort in the PAs' 2014 Local Market Facilitation Plans that are due on October 1, 2013.

### 5.6 Other Activities

The M&O representatives provided an update during the CSI Public Forum on May 16, 2013, as well as provided marketing updates to Energy Division staff via conference calls on a regular basis during Q2.

### 5.7 Mandatory CSI-Thermal Workshops

Contractors and self-installers are required to attend a designated, no-cost CSI-Thermal Program training workshop. The PAs conduct training courses in their respective service territories. The workshops are publicized on each PA's website as well as the GoSolarCalifornia website. As part of the statewide effort, the PAs coordinated this activity and developed a one-day Contractor and Self-installer curriculum for the training workshop.

The CSI-Thermal Program training workshop is intended to familiarize Applicants (contractors and self-installers) with program rules and requirements. The workshop provides an overview of the CSI-Thermal Program Handbook, application process, program requirements, technical requirements, and additional related resources. Upon completion of this mandatory CSI-Thermal Program training workshop and meeting other requirements, Applicants receive a unique alphanumeric key that allows them to register on the web-based, online statewide application database and be eligible to apply for CSI-Thermal Program incentives in any PA territory.

Table 23 shows the number of workshops held in each service territory during Q2 2013 and the number of attendees. As of July 11, 2013, there are 458 licensed eligible solar contractors statewide.

Table 23: Mandatory CSI-Thermal Workshops Held by Program Administrator

| | Q2 2013 | |
|---|---|---|
| PA | Number of Workshops | Number of Attendees |
| CCSE | 1 | 13 |
| PG&E | 2 | 36 |
| SCE[11] | 0 | 0 |
| SCG[14] | 2 | 30 |
| **Total** | **5** | **79** |

## 5.8 PA-Specific Marketing Efforts

### 5.8.1 Southern California Gas Company

In an effort to increase adoption of SWH systems and increase the number of trained installers, SCG continued its collaboration with SCE and Alternative Energy Systems Consulting (AESC) to provide mandatory contractor and self-installer training courses. To ensure overlapping SCG and SCE service territories were covered by both utilities, training courses alternated every other month between SCE and SCG training facilities. SCG's course was offered at its Energy Resource Center in Downey, California. SCG hosted 2 workshops with 30 attendees during Q2 2013.

SCG also conducted an additional contractor/self-installer training in Bakersfield California, on May 16, 2013 to make the training more accessible for those in Kern and Tulare Counties. The training was supported with an outreach campaign that included:

- E-mail newsletter distributed to a targeted list provided by Reeves Journal on May 7 and May 14, 2013
- Direct Mail piece sent to 248 contractors

In addition to statewide marketing activities, each PA completed territory-specific or local marketing to address the needs of their customer base.

[11] Contractors and self-installers can attend classes offered by either SCE or SCG. SCE and SCG alternate locations each month to cover overlapping service territories. Class scheduled in June 2013 was cancelled due to low enrollment.

## Trade Shows and Events

The CSI-Thermal Program had a presence at the following shows and events during Q2 at which SCG participated as an Exhibitor. At each venue, the statewide brochures as well as promotional items were distributed.

| | | |
|---|---|---|
| 4/2/13 | Grand Park Health Expo | Los Angeles |
| 4/2/13 | LA County Department of Public Health Employee | Los Angeles |
| 4/4/13 | LA County Department of Public Health Public | Los Angeles |
| 4/10/13 | Allergan Earth Day | Irvine |
| 4/13/13 | City of Diamond Bar Birthday | Diamond Bar |
| 4/13/13 | Whittier Earth Day | Whittier |
| 4/13/13 | Children's Fair | El Centro |
| 4/16/13 | El Segundo Boeing Earth Day | El Segundo |
| 4/17/13 | Long Beach Boeing Earth Day | Long Beach |
| 4/17/13 | Cal State Fullerton Earth Day | Fullerton |
| 4/18/13 | Huntington Beach Boeing Earth Day | Huntington |
| 4/18/13 | US Bank Tower Earth Day | Los Angeles |
| 4/18/13 | Cal State Northridge Community Emergency Response Team Expo | Northridge |
| 4/19/13 | LA Business Council Meeting (The Getty) | Los Angeles |
| 4/19/13 | VA Hospital Earth Day | Loma Linda |
| 4/20/13 | Claremont Earth Day | Claremont |
| 4/20/13 | Laguna Beach Earth Day | Laguna |
| 4/20/13 | Visalia Earth Day | Visalia |
| 4/22/13 | Desert Regional Medical Earth Day | Palm Springs |
| 4/22/13 | Neutrogena Earth Day | Los Angeles |
| 4/22/13 | Take A Hike Earth Day | Los Angeles |

| | | |
|---|---|---|
| 4/24/13 | Wells Fargo Center Earth Day | Los Angeles |
| 4/25/13 | Apartment Owners Association Expo | Long Beach |
| 4/25/13 | Sylmar Boeing Earth Day | Sylmar |
| 4/25/13 | City of Costa Mesa Safety Fair | Costa Mesa |
| 4/25/13 | Municipal Green Building Conference | Downey |
| 4/25/13 | Earth Day at St. Joseph's Medical Center | Burbank |
| 4/27/13 | City of Alhambra Eco Fair | Alhambra |
| 5/1/13 | Blythe Food Pantry Health Fair | Blythe |
| 5/2/13 | SoCal Assoc. of Governments JW Marriott Desert Springs Public Affairs event | Desert Springs |
| 5/4/13 | La Puente Saint Stephen's Block Party | La Puente |
| 5/4/13 | South Pasadena Chamber Eclectic Music Festival | Pasadena |
| 5/4/13 | CSUSB Latino Literacy Festival | San Bernardino |
| 5/5/13 | Coachella/ Veteran's Park Cinco De Mayo | Coachella |
| 5/7/13 | Ontario Income and Property Expo | Ontario |
| 5/11/13 | A Dialogue with Black LA | Los Angeles |
| 5/15-16/13 | Anaheim Convention Center So Cal Facilities Expo | Anaheim |
| 5/15/13 | CA Metals Coalition Hyatt Regency Garden Grove | Garden Grove |
| 5/16/13 | Metropolitan's 2013 Spring Green Expo | Los Angeles |
| 5/29/13 | St Francis Medical Earth Day | Lynwood |
| 6/1/13 | City of Hawthorne Public Affairs Provider Fair | Hawthorne |
| 6/1/13 | Emergency Preparedness Expo | Placentia |
| 6/1/13 | Edison's Lamp Exchange | West Covina |
| 6/6-7/13 | Beaumont Cherry Festival | Beaumont |

| | | |
|---|---|---|
| 6/20/13 | Santa Maria Business Tradeshow | Santa Maria |

## Workshops

Six informational workshops were presented during Q2 2013:

- Solar Water Heating Basics for Single-family Residences
  - Santa Maria, California, on April 24, 2013
  - Held at the Historic Santa Maria Inn

- Solar Water Heating Basics for Commercial Customers
  - Santa Maria, California, on April 25, 2013
  - Held at the Historic Santa Maria Inn

- Solar Water Heating Basics for Single-family Residences
  - Bakersfield, California on May 22, 2013
  - Rescheduled from February, 2013
  - Held at the Kern Agricultural Pavilion

- Solar Water Heating Basics for Commercial Customers
  - Bakersfield, California on May 23, 2013
  - Rescheduled from February, 2013
  - Held at the Kern Agricultural Pavilion

- Solar Water Heating Basics for Single-family Residences
  - Downey, California, on June 25, 2013
  - Held at SCG's Energy Resource Center

- Solar Water Heating Basics for Multi-family Dwellings
  - Downey, California, on June 27, 2013
  - Held at SCG's Energy Resource Center

Advance registrations were requested and attendees were able to sign-up via an e-mail response mechanism at www.socalgas.com/solar.

## External Communications

Paid media was utilized during Q2 2013 to embellish the statewide outreach in a micro-targeted approach to build awareness throughout the service territory around workshop availabilities.

In the Santa Maria area, the following paid media was deployed:

- :30 Spot TV
  - Statewide "Green Routine " TV commercial
  - Santa Barbara - Santa Maria – San Luis Obispo Market

    - March 18 – April 14, 2013
- Cable TV –
    - Statewide "Green Routine" TV commercial
    - Santa Maria, San Luis Obispo
    - March 18 – April 14, 2013
- Spot Radio:
    - Santa Maria – March 18 – April 14, 2013
    - Residential-themed Radio Ad – "Polar Bear Club"
    - Business-themed Radio Ad – "Sustainability Manager"
- Print Ads:
    - Santa Maria Times – April 10, 11, 16 and 19, 2013
    - Lompoc Record – April 11, 12, 16 and 18, 2013
    - San Luis Obispo Tribune – April 11, 12, 17 and 18, 2013
    - Pacific Coast Business Times - April 5 and 12, 2013

In Bakersfield, the following paid media was deployed:

- Print
    - Bakersfield Californian – May 2, 8, 9, 15 and 16, 2013
    - Visalia Times-Delta/Tulare Advance-Register – May 2, 8, 9, 13, 15 and 16, 2013
    - Metro Business Monthly, Bakersfield – May 1, 2013

In Downey, the following paid media was deployed:

- Cable TV – May 28 and June 25, 2013
    - Downey, West Los Angeles, South Bay, Pasadena, North Orange County
- NPR Radio – May 28 and June 23, 2013
    - KPCC-FM
    - Support notices included mention of workshop in Downey
- Print
    - LA Times – Westside Central Zone, South Bay/Southeast Zone (Sat) – June 15, 2013
    - Torrance Daily Breeze – June 15, 19 and 20, 2013
    - Long Beach Press Telegram – June 15, 19 and 20, 2013
    - Pasadena Star News, San Gabriel Valley Tribune, Whittier Daily News – June 15, 19 and 20, 2013
    - Burbank Leader – June 12 and 19, 2013
    - Glendale News-Press – June 19 and 20, 2013
    - La Canada Valley Sun – June 13 and 20, 2013
    - Apartment Age – June, 2013
    - Apartment Owners Association News – June, 2013

In addition to paid media, e-mail newsletters promoting the Santa Maria, Bakersfield and Downey commercial and multi-dwelling workshops were sent to targeted SCG business customers in those areas. Workshops were also posted on the "GoSolarCalifornia" community calendar.

Plus, a full-page color ad promoting the Solar Water Heating Basics Workshop for Commercial/Industrial Customers was placed in the April issue of "LA Green Business Journal". Paid media was also deployed to supplement the reach of the statewide Spring Finale Media Plan to cover the entire SCG service territory.

Activity included:

- Spot TV – "Green Routine" TV commercial
    - Bakersfield – April 22 – May 19, 2013
    - Palm Springs – April 15 – May 12, 2013
    - Santa Barbara – April 15 – May 12, 2013
- Spot Radio – Residential and commercial-themed spots
    - Bakersfield – April 22 – May 19, 2013
    - Palm Springs – April 15 – May 12, 2013
    - Santa Barbara – April 15 – May 12, 2013

### Internal Development

During Q2 2013, SCG staff worked to prepare to implement the elements of the Six-month Extension Local Market Facilitation Plan.

### Website Development

SCG updated the workshop and contractor/installer training session availabilities in its dedicated CSI-Thermal Program section: http://www.socalgas.com/solar, during Q2, 2013.

### Customer Contact Center

SCG continued to provide information updates to its Customer Contact Center, 1-800-GAS-2000, in an effort to answer and address SWH questions and program inquiries. Interested participants are also provided information and links to the SCG CSI-Thermal Program webpage in an effort to direct and address the callers' questions. SCG continued to actively monitor its swh@socalgas.com e-mail account for SWH inquiries.

### 5.8.2 California Center for Sustainable Energy

#### Training and Education

During Q2 2013, CCSE continued to educate the community about SWH and its benefits through targeted workshops for homeowners and industry professionals.

A brief synopsis of each workshop/ training offered during Q2 2013 follows:

**Solar Water Heating Basics for Homeowners:**
For residents seeking to learn more about the advantages and economics of SWH technology.

- 2 workshops
- 24 attendees

**How to become an Eligible Contractor in the CSI-Thermal Program:**
Attendance at this contractor and self-installer workshop is a prerequisite for becoming an eligible contractor under the CSI-Thermal Program.

- 1 workshop
- 13 attendees

**Skip's Tips:**
Advanced solar thermal workshop conducted by CCSE's solar water heating technical expert, Skip Fralick.

- 2 workshops
- 37 attendees

**Solar Water Heating Installation and Professional Training:**
CCSE partnered with National Solar Trainers (NST) to offer a five-day comprehensive training geared toward preparing participants to become solar thermal installers, designers, sales and marketing professionals or entrepreneurs.

- 23 attendees

#### Workshop Promotion and Follow up

CCSE promoted its ongoing workshop offerings for both homeowners and contractors through a number of online activities during Q2 2013.

**Direct Email:**

CCSE relied on the targeting capabilities and cost-effectiveness of digital direct mail communications to promote workshops and disseminate important news items. By sending customized e-mail reminders and follow-ups to workshop registrants and attendees, CCSE has been able to entice more people to register for SWH workshops and is also improving the conversion rate between those who register for workshops and those who actually walk through the door.

**Online Promotion:**

CCSE utilized a number of in-house resources to spread the word about CSI-Thermal workshops, including the *Roundup Newsletter*, CSI's *Go Solar, California! Newsletter,* as well as CCSE's online calendar and social media channels (Facebook and Twitter).

A brief synopsis of each communication platform follows:

- *Roundup Newsletter:* CCSE publishes a bi-weekly e-mail calendar called the *Roundup* that features all CCSE workshops offered in the community. This newsletter grew to more than 11,300 subscribers during Q2 2013 and continues to be an effective medium for promoting CSI-Thermal workshops.
- *Go Solar, California! Newsletter:* CCSE leads the production of the Go Solar, California Newsletter and oversees its bi-monthly distribution to approximately 10,500 subscribers. The March-April issue included one CSI-Thermal article, which is summarized below.
    - CPUC Broadens the CSI-Thermal Program (March – April Newsletter): This article covered the recent expansion of the CSI-Thermal Program and introduced three new technologies to the program including process heat, solar cooling technologies, as well as space heating and combination systems. The article also promotes a public workshop held on April 23, 2013.
- CCSE's online calendar*:* Features all of CCSE's events and workshops and is one of the most active pages on CCSE's website.
- Facebook and Twitter*:* CCSE has an active presence on both Facebook and Twitter. These social media channels connect CCSE to a green-minded audience and provide a fruitful platform for engaging with the community as well as sharing program updates, promoting workshops and further spreading awareness of SWH.

**Paid Advertising:**

- Natural Awakenings Magazine – San Diego
  Print ad appeared in the June issue of Natural Awakenings. In addition to running the CSI-Thermal print ad, which encouraged homeowners to attend the next solar water heating workshop, CCSE also posed workshop listings in the community events section of the publication in addition to running an article promoting CCSE's workshops and offerings.

**Solar Water Heating Installation and Professional Training (5-day):**

CCSE continued its partnership with National Solar Trainers during Q2 2013. The following marketing tactics enabled CCSE to fulfill registration for the 5-day training and to continue providing in-depth SWH training programs to fully prepare attendees to enter into the growing solar thermal market.

- Sent direct e-mail to CCSE's database of contacts who had previously attended SWH classes and trainings.

- Partnered with Energy Upgrade California (EUC) to promote the training to home performance contractors and energy raters in the San Diego region.
    - Sent targeted e-mail invites to EUC's list of contacts

### Events and Outreach

During Q2 2013, CCSE participated in the following events to help raise awareness and promote the benefits of solar water heating and the CSI-Thermal program:

- **Income Property Management Expo:** May 7, 2013
- **SDG&E Energy Showcase:** May 8, 2013
- **Plumbing, Heating & Cooling Contractors Assn (PHCC) Annual Tradeshow:** May 18, 2013
- **BOMA Every Building Conference & Expo:** June 23-25, 2013

### Interactive Outreach/ Web Development

CCSE's website devotes several pages to CSI-Thermal Program-specific information at www.energycenter.org/swh. This landing page provides access to CSI-Thermal Program information, as well as general information about SWH technology, how to apply for an incentive, upcoming workshops, program documents, resources for installers, solar thermal vendors, webinars and latest news and legislation on SWH. This information is updated frequently to ensure the CSI-Thermal Program pages remain an engaging, accurate and up-to-date resource for local homeowners and businesses who want to learn more about solar water heating and available rebates.

## 5.8.3 Pacific Gas and Electric Company

The second quarter of 2013 represented a relatively active time for PG&E's local marketing efforts in terms of media, as this Quarter coincides with general awareness of Earth Day, complementing the exposure from the Statewide plan. We know from research that a compilation of efforts garners more incremental awareness overall - the whole is greater than the sum of its parts.

### CSI-Thermal Workshop

As a core part of PG&E's ongoing efforts, PG&E continues to offer monthly CSI-Thermal Program Workshops for contractors and self-installers throughout the service territory. The workshops are vital in conveying program requirements and ultimately help ensure contractors are better prepared to submit CSI-Thermal Program paperwork. All qualifying technologies are covered, as well as some that do not receive incentives, and contractors are instructed on how to use the CSI Thermal database to submit project paperwork and check status. This workshop is required for anyone looking to become an eligible installer within the CSI-Thermal Program.

CSI Thermal Workshops Offered Q2, 2013:

- May 2, 2013: 8 attendees
- June 6, 2013: 28 attendees

## Solar Water Heating Informational Courses

PG&E continues to offer customer education and outreach courses online and in-person at our local training centers. Informational and introductory courses provide details on SWH technology, as well as rebate and market information to individuals looking to get into the business or looking to have a system installed on their property. Many of the classes are offered on Saturdays and via the web to ensure optimal access and that attendees do not have to take time off from their jobs to attend.

PG&E has generally conducted three different SWH courses to cover the basics on the program for residential and multi-family/commercial interest:

- **Solar Water Heating Basics:** This course provides an overview of SWH technologies to individuals looking to gain high level information.
- **Solar Water Heating Systems for Homeowners**: This basic class provides an overview of the design, specification, and installation aspects of SWH systems for residential applications.
- **Solar Water Heating - Advanced Commercial Systems:** This advanced class focuses on key aspects of large-scale SWH systems for commercial applications.

**PG&E conducted the following SWH courses in Q2 2013:**

| | | |
|---|---|---|
| Solar Water Heating Systems | 4/10/2013 | Bakersfield |
| Solar Water Heating Systems | 4/17/2013 | San Franscisco |
| SWH Advanced Commercial Systems | 4/24/2013 | San Franscisco |
| CSI Thermal (Solar Water Heating) Program Workshop | 5/2/2013 | San Franscisco |
| Solar Water Heating Systems | 5/11/2013 | San Luis Obispo |
| Inspecting SWH Systems | 5/30/2013 | San Franscisco |
| Solar Cooling (with SWH) | 6/4/2013 | San Franscisco |
| CSI Thermal (Solar Water Heating) Program Workshop | 6/6/2013 | Stockton |

The total attendance for all of these courses was 192. PG&E felt there was good statewide coverage from the attendees, and the classes covered a variety of topics with beginning and advanced students in attendance. More classes and workshops are scheduled for Q3, 2013.

TV:

In April specifically – to coincide with Earth Day on April 22:

- Spot TV :30's for the month of April in the Sacramento DMA (including El Dorado Hills) – and the San Francisco DMA (including Alamo and San Jose). Both DMA's were previous focuses of our 2012 marketing efforts
- Cable TV :30's for the month of April in the Sacramento DMA (including El Dorado Hills)

Print

In Q2 2013, PG&E placed a 4-color, full-page print ad in targeted demographics including:

1. Alive Magazine (March, April and May issues) – Alamo, Danville, and Walnut Creek, California
2. MNI Luxury Magazines (March, April, June issues) (Including Elle Décor, Food & Wine, O: The Oprah magazine, Real Simple, Travel + Leisure) – Sacramento DMA, including El Dorado Hills
3. Sacramento Magazine (April and May issues) – Sacramento, including El Dorado Hills
4. Luxury Home Magazine (April/ May and June/July issues) – Sacramento, including El Dorado Hills

Out of home:

Again in April specifically – to coincide with Earth Day:

- Digital billboards in the Sacramento DMA

SF Environment Partnership: PG&E has partnered with the SF Department of Environment to promote solar thermal.

**Presented CSI Solar Thermal at the following events:**

| | |
|---|---|
| North Beach Business Association meeting | 4/11/13 |
| SF Chamber of Commerce Small Business Forum, | 5/1/13 |
| Excelsior Action Group meeting | 5/6/13 |
| Potrero Dogpatch Merchants Association meeting | 5/13/13 |

South of Market Business Association (SOMBA) mixer 5/15/13

**Articles in newsletters or publications:**

Potrero Dogpatch Merchants Association newsletter, May 2013

Excelsior Action Group newsletter, June 2013

SF Locally-Owned Merchants Association newsletter, June 2013

### 5.8.4 Southern California Edison Company

SCE continues its efforts to increase adoption of SWH systems and the number of trained installers by offering the monthly CSI-Thermal Program Contractor and Self-Installer Training.

Because SCE and SCG have overlapping service territories, the two utilities offer the monthly training at their respective energy centers on an alternating basis and cross-promote it on their respective websites as well as in the *Go Solar, California* newsletter. For this reporting period, SCE scheduled two CSI Thermal Contractor and Self-Installer Training classes at its Energy Education Center in Irwindale for April 17, and June 19, 2013, but despite confirmed registrations there were no attendees on April 17 and had to cancel June 19 due to low registration.

A brief description of SCE's other class/workshop offerings, which are promoted via direct mail, on SCE's Energy Center calendar and website, and on the Go Solar California Website, follows:

CSI Homeowner Solar Class (HSC) — These hour-long classes are non-technical, easy-to-understand, free sessions offered as Webinars to educate customers about the CSI and CSI-Thermal programs, available rebates and how to "go solar."

SCE held 8 HSC Webinars with a total of 255 attendees in Q2 2013.

Solar Connection Event — These 45-minute-long workshops are non-technical, easy-to-understand free sessions throughout SCE's service territory that educate customers about the CSI and CSI Thermal programs, available rebates and how to "go solar," followed by an opportunity to meet with solar contractors to help determine a home's solar potential.

SCE held eight Solar Connection Events in with 495 attendees in the second quarter of 2013.

CSI Commercial Solar Workshop — These workshops are designed for SCE commercial, government and non-profit customers, and provide an overview of the CSI and CSI-Thermal

programs. Attendees learn about the CSI and CSI-Thermal programs, eligibility requirements, the application and funds reservation process, rebates, and how solar can help customers lower operating costs and demonstrate their company's commitment to environmental stewardship.

During Q2 2013, SCE held 5 Commercial Solar Workshops at its Energy Education Center (EEC) in Irwindale (with a video conference to its EEC in Tulare), and began offering them at the ABC Green Home at The Great Park in Irvine. There were a total of 59 attendees.

## Customer Outreach

SCE participates in conferences, tradeshows and community-based events as a means to further educate customers about the CSI-Thermal Program and provide continuing program exposure and increase customer awareness. In many cases, SCE leverages the M&O opportunities provided by the CSI general market program to also promote the CSI Thermal Program. SCE distributed program fact sheets, bid comparison forms and other related information at the following events:

- 
- 2013 Earth Day Celebration, Frontier Project, Rancho Cucamonga, April 6, 2013
- OC Metro Green Team Event, Long Beach, April 10, 2013
- Arbor Day, Santa Clarita, April 13, 2013
- Earth Day, Santa Barbara, April 20-21, 2013
- L.A. Times Festival of Books, April 20-21, 2013
- Apartment Owners Association of California Trade Show, Lon Beach, April 25, 2013
- City of Alhambra, EcoFair, April 27, 2013
- Asian Pacific American Heritage Celebration, SCE Energy Educ. Center, Irwindale, May, 2013
- Income Property Management Expo, Ontario Convention Center, May 7
- Southern California Facilities Expo, Anaheim, May 14-16
- Community Wellness Day, El Segundo, June 1
- West Coast Energy Management Congress, Las Vegas, June 19-20
- Building Owners & Managers Association (BOMA) International, San Diego, June 23-25
- Culver City Expo, June 27

## Local Market Facilitation Plan

SCE's local market facilitation efforts for 2013 kicked off in high gear in Q2 2013, leveraging the statewide efforts with its own efforts that focused on potentially high-reward geographic and market segments in SCE's service territory, incorporating a variety of media while using pre-existing creative (with minor SCE-specific adjustments) to help limit unnecessary expenditures.

The tactics began the week of April 16, 2013, (to complement the statewide effort) and will end the week of August 19, 2013.

They include:

- Out-of-Home:

- Santa Barbara Hybrid Bus wraps
- Mammoth Lakes :30 cinema ads

- Print (full-page four-color):
  - Apartment Age magazine (San Gabriel Valley, South Bay, Long Beach)
  - Apartment Management Magazine (Orange County, Inland Empire)
  - Apartment News (Orange County)
  - Apartment Owners Association News (San Gabriel Valley, Inland Empire, South Bay, Orange County)
  - Rental Housing Today (Riverside and San Bernardino Counties)
- Sponsorship:
  - OC Metro "Green Team"

Also in Q2, 2013, SCE awarded a $50,000 sponsorship ($40,000 from its CSI Thermal M&O budget and $10,000 from its CSI general market M&O budget) to Victor Valley College (VVC) for its upcoming 12-week, 384-hour Solar Thermal & PV Technician Training Course. There is a clear need for more qualified solar thermal contractors and this class has been directly responsible for doing just that, with a solid track record of results, as 88% of past course graduates are still employed in the solar industry.

In addition, SCE will continue to reach out to its customers who have already installed solar water heating systems in an effort to develop case studies for the program.

### SCE Website

SCE has a dedicated section of its SCE.com website to promoting the CSI-Thermal Program at www.sce.com/solarwaterheating.

The pages include detailed information about the program, recent changes to the program and upcoming Contractor and Self-Installer trainings offered by SCE and SCG.

The recent redesign of SCE.com resulted in separate channels for residential and commercial customers seeking information on the CSI-Thermal Program. With that change, SCE is working closely with SCG (as the lead PA for statewide marketing) to add "radio buttons" on WaterHeatedByTheSun.com for easier channel navigation to SCE.com and expects to have that completed in the very near future.

## 6. Conclusions

The CSI Thermal Program continued to increase customer participation during Q2 2013. Despite certain market influences such as low natural gas prices, solar thermal projects continue to offer a solid business case especially to the low-income multifamily and commercial sector as evidenced by

the strong participation in this category.

On June 28, 2013, a proposed decision was issued in R.12-11-005 to allow solar pool heating systems at multifamily residential, governmental, educational, commercial and non-profit installations to qualify for incentives under the CSI Thermal Program. The PA's provided comments to the proposed decision and are currently awaiting the final decision from the CPUC. Once a final decision has been issued, the PAs will work to update the Program Handbook and implement this important change.

In addition, CCSE Advice Letter 39 / PG&E Advice Letter 3394-G/4240-E / SCE Advice Letter 2917-E / SCG Advice Letter 4508, dated July 26, 2013 and effective July 26, 2013, revised the CSI Thermal Handbook to include commercial process heat, space heating, absorption chilling, and multi-family/commercial combination systems. The PBI payment process will be mandatory for these projects going forward as well for DWH systems >250kWth. The CSI-Thermal PAs have been given 60 days from the effective date of the Advice Letter to implement these program changes.