

California Solar Initiative Thermal Program

Quarterly Progress Report

(April 1 – June 30, 2014)

Published On:

August 15, 2014



Center for
Sustainable Energy™



Table of Contents

1. Executive Summary	4
1.1. Introduction.....	4
1.2. Key Report Highlights	4
2. Introduction.....	5
2.1. Program Background	5
2.2. Program Goals	6
2.3. Program Budget.....	7
2.4. Incentive Structure	8
2.5. Program Eligibility.....	10
3. Program Expenditures	11
4. Program Progress	14
4.1 Turnaround Times	20
5. Market Facilitation	22
5.1 Statewide Market Facilitation Plan for 2014.....	22
5.2 Other Activities	23
5.3 Mandatory CSI-Thermal Workshops	23
5.4 PA-Specific Marketing Efforts.....	24
5.4.1 Southern California Gas Company	24
5.4.2 Center for Sustainable Energy	26
5.4.3 Pacific Gas and Electric Company.....	30
5.4.4 Southern California Edison Company.....	32
6. Conclusions.....	34

List of Tables

Table 1: Incentive Allocation per PA for Natural Gas-Displacing Systems	8
Table 2: Maximum Incentive Allocation per PA for Electric/Propane-Displacing SWH Systems.....	8
Table 3: Low-Income Incentive Allocation per PA for Natural Gas-Displacing SWH Systems	8
Table 4: Total Natural Gas Budget Allocation per Incentive Step	9
Table 5: Electric/Propane-Displacing System Incentive Steps.....	9
Table 6: Low-Income Single-Family and Multifamily Natural Gas Incentive Steps.....	10
Table 7: CSI-Thermal Expenditures by PA	12
Table 8: CSI-Thermal Expenditures by PA (Natural Gas).....	13
Table 9: CSI-Thermal Expenditures by PA (Electric/Propane)	13
Table 10: Summary Data: CSI-Thermal Single-Family Applications by Status (Natural Gas).....	14
Table 11: Average Cost per Single-Family Project (Natural Gas).....	15
Table 12: Summary Data: CSI-Thermal Single-Family Applications by Status (Electric/Propane)	15
Table 13: Average Cost per Single-Family Project (Electric/Propane)	16
Table 14: Summary Data: Multifamily/Commercial Non-Pool (Natural Gas)	16
Table 15: Average Cost per Multifamily/Commercial Project Non-Pool (Natural Gas)	16
Table 16: Summary Data: Multifamily/Commercial Solar Pool Systems (Natural Gas).....	17
Table 17: Average Cost per Multifamily/Commercial Solar Pool Project (Natural Gas)	17
Table 18: Summary Data: Multifamily/Commercial (Electric/Propane).....	17
Table 19: Average Cost per Multifamily/Commercial Project (Electric/Propane).....	18
Table 20: Summary Data: Multifamily Low-income (Natural Gas)	19
Table 21: Average Cost per Multifamily Low-income (Natural Gas).....	19
Table 22: Multifamily/Commercial Application Processing Times by Program Administrator between "Reservation Application Review" and "Reservation Application Approved" Stages.....	20
Table 23: Processing Time from Application Review to Incentive Approval (1- Step – Single-Family Residential).....	21
Table 24: Processing Time from Application Review to Incentive Approval (2-and 3-Step - Commercial or Multifamily Residential)	22
Table 25: Mandatory CSI-Thermal Workshops Held by Program Administrator.....	24

1. Executive Summary

1.1. Introduction

The Center for Sustainable Energy (CSE), formerly known as the California Center for Sustainable Energy (CCSE), on behalf of the California Solar Initiative (CSI) Thermal (CSI-Thermal) Program Administrators (PAs),¹ submits this Second Quarter (Q2) 2014 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, 2014. 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

The second quarter of 2014 has continued to be eventful. The PAs and engineers continued to spend much of Q2 2014 addressing questions and issues regarding the new solar pool heating system subprogram. The industry, including the California Solar Energy Industries Association (CALSEIA) and other individuals, expressed concern about the state of the program, so the PAs held meetings at the CPUC on April 23, 2014 and June 12, 2014 to discuss. Much of Q2 has been spent discussing the issues brought up at these meetings and editing the CSI-Thermal Program Handbook and inspection checklist to clarify the program requirements.

Additionally, the PAs have been working with CALSEIA to draft a Petition to Modify (PTM) two CPUC Decisions regarding the CSI-Thermal Program³ partially in response to the CPUC report released on January 29, 2014, titled "Review of the Incentive Levels and Progress of the California Solar Initiative – Thermal Program". The PAs, CPUC, and industry realize that the CSI-Thermal Program has not been as successful as expected and the PTM is intended to help make the program more successful. The changes under consideration include increasing the incentive rate for single family and commercial/multifamily applications, reallocating specific subprogram budgets, and allowing the PAs to make future changes to the program through the filing of a Tier 2 Advice Letter.

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

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

³ D.12-08-008 and D.13-08-004.

2. Introduction

2.1. Program Background

In January 2007, the CPUC launched the CSI program, a \$2.16 billion ratepayer-funded incentive initiative with a goal of installing 1,940 megawatts (MW) of new solar generation and creating a sustainable solar industry by 2016.⁴ State law allows up to \$100.8 million of CSI funds to be used for incentives for solar thermal technologies that displace electricity usage; however, the CPUC deferred eligibility for solar water heating (SWH) technologies under the CSI until a pilot program for SWH technologies was conducted in the service territory of San Diego Gas & Electric Company (SDG&E). Starting in July 2007, CSE 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),⁵ 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,⁶ allocating funds for both natural gas-displacing and electric-displacing SWH systems and other solar thermal technologies, in the service territories of California's major investor-owned utilities. The CPUC established the incentive structure, program administration details, and other key CSI-Thermal Program rules. The CPUC designated PG&E, SCG, SCE, and CSE (for the SDG&E service territory) as the PAs for the CSI-Thermal Program. The PAs launched the single-family residential program in May 2010 and the commercial/multifamily 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 multifamily/commercial mainstream programs. The new rates were incorporated into the program on October 4, 2012, and were applied to projects that were in application review as of July 4, 2012.

⁴ Public Utilities Code § 2851, enacted by Senate Bill (SB) 1 (Murray), Chapter 132, Statutes of 2006

⁵ Public Utilities Code § 2860-2867

⁶ D.10-01-022

On March 6, 2013, the CPUC issued D.13-02-018, effective February 28, 2013. This decision modified the CSI-Thermal Program to provide incentives to process heat applications, solar cooling technologies, space heating technologies and systems that combine multiple applications. In addition, this decision modified the way rebates are paid to certain systems under the program by creating a performance-based incentive system that will pay rebates based on actual metered energy delivered to the facility.

On August 19, 2013, the CPUC issued D.13-08-004, effective August 15, 2013. The decision modified the CSI-Thermal Program to provide incentives for solar pool heating systems for all applications with exception to single-family residential systems. The decision required the PAs to develop a pool calculator based on the TRNSYS Type 344 model and incorporate the solar pool heating program into the existing commercial/multifamily incentive budget.

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 multifamily 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 multifamily/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 multifamily/commercial SWH systems. Funds may be moved from the multifamily/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 natural gas-displacing SWH systems. Table 2 presents the incentive allocation percentage and budget allocated to each PA for 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) 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 CSE, PG&E, and SCG in the same proportions as the total CSI-Thermal natural gas-displacing program presented in Table 1. Single-family and multifamily 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
CSE	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
CSE	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
CSE	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 January 1, 2013

Step	Customer Class	Incentive per annual therm displaced	Maximum Incentive per System
1	Single-Family	\$18.59	\$2,719
	Commercial/Multifamily	\$14.53	\$500,000
	Solar pools	\$7.00	\$500,000
2	Single-Family	\$13.11	\$1,919
	Commercial/Multifamily	\$9.88	\$500,000
	Solar pools	\$7.00	\$500,000
3	Single-Family	\$7.69	\$1,125
	Commercial/Multifamily	\$6.55	\$500,000
	Solar pools	\$5.00	\$500,000
4	Single-Family	\$3.23	\$474
	Commercial/Multifamily	\$3.13	\$500,000
	Solar pools	\$3.00	\$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/Multifamily	0.42	\$250,000
2	Single-Family	0.38	\$1,311
	Commercial/Multifamily	0.29	\$250,000
3	Single-Family	0.22	\$752
	Commercial/Multifamily	0.19	\$250,000
4	Single-Family	0.10	\$329
	Commercial/Multifamily	0.09	\$250,000

Incentive step changes move independently in each program territory⁷ 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 Multifamily Natural Gas Incentive Steps

Step Level	Single-Family Low-Income Incentive per therm displaced	Incentive Cap for Single-Family Low-Income Projects	Multifamily Low-Income Incentive per therm displaced	Incentive Cap for Multifamily 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

2.5. Program Eligibility

Eligibility for the CSI-Thermal Program is described in detail in the CSI-Thermal Program Handbook.⁸ 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) Standard-300 System Certification.⁹
- Solar collectors used in multifamily/commercial water heating must have SRCC or IAPMO Standard-100 Collector Certification.
- All components must be new and unused (with exceptions). All systems must have freeze and stagnation protection.

⁷ SCE incentive step changes will correspond with SCG gas incentive step changes for each customer class.

⁸ The CSI-Thermal Handbook is located at http://gosolarcalifornia.org/documents/CSI-Thermal_Handbook.pdf.

⁹ 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.

- For single-family projects, all Domestic Hot Water (DHW) end-uses are eligible.¹⁰
- For multifamily/commercial projects, eligible end uses include domestic hot water, commercial process heat, space heating, absorption chilling, pool heating applications, and combination systems.¹¹ Rebates are available for qualifying natural gas-, electric-, and propane- displacing systems that were installed within 24 months after the date on the final signed-off permit.
- 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.

3. Program Expenditures

From program inception through June 2014, CSI-Thermal Program expenditures totaled \$42,663,211. 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.

¹⁰ DHW is defined as water used, in any type of building, for domestic purposes, principally drinking, food preparation, sanitation and personal hygiene (but not including space heating, space cooling, or swimming pool heating).

¹¹ 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.

Table 7: CSI-Thermal Expenditures by PA

Natural Gas and Electric/Propane					
CSI-Thermal Program Expenditure Data January 1, 2010 to June 30, 2014					
Expenditure Type	CSE	SCE	PGE	SCG	Total
Administration	\$1,541,516	\$758,044	\$3,653,570	\$2,462,033	\$8,415,163
Market Facilitation	\$1,312,560	\$746,965	\$4,763,795	\$5,581,737*	\$12,405,057
Measurement & Evaluation	\$10,633	\$0	\$4,556	\$0	\$15,189
Incentives Paid	\$4,595,443	\$62,997	\$8,942,153	\$9,890,727	\$23,491,320
Total	\$7,460,152	\$1,568,006	\$17,364,074	\$17,934,497	\$44,326,729

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

Table 8: CSI-Thermal Expenditures by PA (Natural Gas)

Natural Gas				
April 1 – June 30, 2014				
Expenditure Type	CSE	PG&E	SCG	Total
Administration	\$51,717	\$248,061	\$174,336	\$474,114
Market Facilitation	\$79,534	\$3,945	\$854,968*	\$938,447
Measurement & Evaluation	\$211	\$94	\$0	\$305
Incentives Paid	\$1,022,264	\$304,020	\$1,888,783	\$3,215,067
Total	\$1,153,726	\$556,120	\$2,918,087	\$4,627,933

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

Table 9: CSI-Thermal Expenditures by PA (Electric/Propane)

Electric/Propane				
April 1 – June 30, 2014				
Expenditure Type	CSE	PG&E	SCE	Total
Administration	\$10,991	\$81	\$22,067	\$33,139
Market Facilitation	\$19,881	\$3,568	\$525	\$23,974
Measurement & Evaluation	\$53	\$26	\$0	\$79
Incentives Paid	\$0	\$0	\$1,295	\$1,295
Total	\$30,925	\$3,675	\$23,887	\$58,487

4. Program Progress

The PAs spent much of Q2 2014 working on improving the solar pool heating system program. After more discussion with industry and the first handful of applications being submitted, it became clear that changes needed to be made to this portion of the program. The PAs continue to work on this and intend on filing an Advice Letter requesting a change in the incentive levels for solar pool heating systems and updating some of the requirements for solar pool heating systems.

The CSI-Thermal Program began accepting applications for single-family systems and multifamily/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 multifamily incentive levels effective July 4, 2012. On August 15, 2013 the CPUC approved current incentive levels for solar pool heating systems. Tables 10, 12, 14, 16, 18 and 20 present the quantities of applications received by each PA in Q2 2014, as well as the corresponding incentives and energy savings for those applications. Tables 11, 13, 15, 17, 19 and 21 show the average costs of systems for completed projects by PA and customer class since program inception.

Table 10: Summary Data: CSI-Thermal Single-Family Applications by Status (Natural Gas)

	CSE	PG&E	SCG	Total
	Q2	Q2	Q2	
APPLICATIONS RECEIVED				
Application (Number)	2	17	68	87
Incentives (\$)	\$2,629	\$ 33,971	\$101,742	\$138,342
Capacity (First Year Expected Energy Displaced in therms)	157	2,028	5,941	8,126

Table 11: Average Cost per Single-Family Project (Natural Gas)

	CSE	PG&E	SCG	Overall Average
Average Project Cost per Single-Family Project (\$)*	\$7,271	\$10,014	\$9,802	\$9,029
Average Project Cost per Unit of First Year Energy Displaced (\$/therm)*	\$66.62	\$74.90	\$106.95	\$82.82

*Since program inception

Table 12: Summary Data: CSI-Thermal Single-Family Applications by Status (Electric/Propane)

	CSE*	PG&E*	SCE*	Total
	Q2	Q2	Q2	
APPLICATIONS RECEIVED				
Applications (Number)	N/A	N/A	N/A	N/A
Incentives (\$)	N/A	N/A	N/A	N/A
Capacity (First Year Expected Energy Displaced in kWh)	N/A	N/A	N/A	N/A

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

* The budget is currently exhausted for single-family residential electric- and propane-displacing systems in CSE, PG&E, and SCE territories. Waitlists have been closed in all territories.

Table 13: Average Cost per Single-Family Project (Electric/Propane)

	CSE	PG&E	SCE	Overall Average
Average Project Cost per Single-Family Project (\$)*	\$7,376	\$8,213	\$7,979	\$7,856
Average Project Cost per Unit of First Year Energy Displaced (\$/kWh)*	\$2.64	\$2.95	\$2.48	\$2.69

*Since program inception

Table 14: Summary Data: Multifamily/Commercial Non-Pool (Natural Gas)

	CSE	PG&E	SCG	Total
	Q2	Q2	Q2	
APPLICATIONS RECEIVED				
Application (Number)	0	12	11	23
Incentives (\$)	\$0	\$152,218	\$339,363	\$491,581
Capacity (First Year Expected Energy Displaced in therms)	0	13,899	23,356	37,255
UNDER REVIEW Incentive Claims				
Application (Number)	0	3	17	20
Incentives (\$)	\$0	\$219,292	\$838,091	\$1,057,383
Capacity (First Year Expected Energy Displaced in therms)	0	15,247	57,680	72,927

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 Multifamily/Commercial Project Non-Pool (Natural Gas)

	CSE	PG&E	SCG	Total
Average Project Cost per Multifamily/commercial Project (\$)*	\$155,835	\$182,891	\$67,200	\$135,309
Average Project Cost per Unit of First Year Energy Displaced (\$/therm)*	\$42.25	\$41.92	\$37.52	\$40.56

*Average Project Cost per Multifamily/commercial Project for all completed projects since program inception

Table 16: Summary Data: Multifamily/Commercial Solar Pool Systems (Natural Gas)

	CSE	PG&E	SCG	Total
	Q2	Q2	Q2	
APPLICATIONS RECEIVED				
Application (Number)	23	12	56	91
Incentives (\$)	\$347,991	\$179,753	\$847,962	\$1,375,706
Capacity (First Year Expected Energy Displaced in therms)	49,923	25,812	122,868	198,603
UNDER REVIEW Incentive Claims				
Application (Number)	1	1	17	19
Incentives (\$)	\$4,893	\$3,696	\$284,872	\$293,461
Capacity (First Year Expected Energy Displaced in therms)	699	528	40,696	41,923

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 Multifamily/Commercial Solar Pool Project (Natural Gas)

	CSE	PG&E	SCG	Total
Average Project Cost per Multifamily/commercial Project (\$)*	\$24,299	\$9,714	\$20,878	\$18,297
Average Project Cost per Unit of First Year Energy Displaced (\$/therm)*	\$11.15	\$18.40	\$8.20	\$12.58

*Average Project Cost per Multifamily/commercial Project for all completed projects since program inception

Table 18: Summary Data: Multifamily/Commercial (Electric/Propane)

	CSE	PG&E	SCE	Total
	Q2	Q2	Q2	
APPLICATIONS RECEIVED				
Application (Number)	0	0	0	0
Incentives (\$)	\$0	\$0	\$0	\$0
Capacity (First Year Expected Energy Displaced in kWh)	0	0	0	0

UNDER REVIEW Incentive Claims				
Application (Number)	0	0	0	0
Incentives (\$)	\$0	\$0	\$0	\$0
Capacity (First Year Expected Energy Displaced in kWh)	0	0	0	0

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 Multifamily/Commercial Project (Electric/Propane)

	CSE	PG&E	SCE	Total
Average Project Cost per Multifamily/commercial Project (\$)*	\$6,440	\$34,146	\$7,630	\$16,072
Average Project Cost per Unit of First Year Energy Displaced (\$/kWh)*	\$3.05	\$2.28	\$4.32	\$3.22

*Average Project Cost per Multifamily/commercial Project for all completed projects since program inception

Table 20: Summary Data: Multifamily Low-Income (Natural Gas)

	CSE	PG&E	SCG	Total
	Q2	Q2	Q2	
APPLICATIONS RECEIVED				
Application (Number)	20	16	10	46
Incentives (\$)	\$485,871	\$359,413	\$510,864	\$1,356,148
Capacity (First Year Expected Energy Displaced in therms)	25,445	18,983	26,566	70,994
UNDER REVIEW Incentive Claims				
Application (Number)	7	1	11	19
Incentives (\$)	\$45,383	\$39,579	\$495,082	\$580,044
Capacity (First Year Expected Energy Displaced in therms)	2,545	2,079	25,990	30,614

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 21: Average Cost per Multifamily Low-Income (Natural Gas)

	CSE	PG&E	SCG	Total
Average Project Cost per Multifamily/commercial Project (\$)*	\$71,357	\$51,911	\$78,311	\$67,193
Average Project Cost per Unit of First Year Energy Displaced (\$/therm)*	\$56.71	\$24.97	\$47.47	\$43.05

*Average Project Cost per Multifamily/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 multifamily/commercial applications to ensure that projects move forward as quickly as possible. Tables 22 through 24 reflect the reporting period from April 1 through June 30, 2014.

Table 22 shows the most recent application processing timeframes (between the "Reservation Application Review" and "Reservation Application Approved" stages) for 2- or 3-step multifamily/commercial project applications. This metric represents the amount of time it took to reserve incentives for a multifamily/commercial project.

Table 23 shows the time from Application Review to Incentive Approval for 1-step – Single-Family Residential project applications. 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 24 shows the Time from Application to Incentive Approval for 2- and 3-step-multifamily/commercial project applications.

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. Issues encountered from these applications include, but are not limited to:

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

Table 22: Multifamily/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
	Q4	Q4	Q4	
Multifamily-Commercial				
CSE	75.00%	100.00%	0.00%	20
PG&E	51.85%	96.30%	3.70%	27
SCE	N/A	N/A	N/A	0
SCG	70.37%	94.44%	5.56%	54

Table 23: 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
	Q4	Q4	Q4	
No Inspection: Percentage of applications without inspection with processing time between Incentive: Application Review and Incentive: Approved as described.				
CSE	100.00%	100.00%	0.00%	1
PG&E	59.09%	100.00%	0.00%	22
SCE	0.00%	100.00%	0.00%	1
SCG	96.08%	100.00%	0.00%	51
Inspection: Percentage of applications with inspection with processing time between Incentive: Application Review and Incentive: Approved as described.				
CSE	0.00%	100.00%	0.00%	1
PG&E	36.36%	63.64%	36.36%	11
SCE	N/A	N/A	N/A	0
SCG	45.83%	54.17%	45.83%	24
Percentage of applications with processing time between Incentive: Application Review and Incentive: Paid as described.				
CSE	33.33%	66.67%	33.33%	3
PG&E	16.00%	76.00%	24.00%	25
SCE	0.00%	100.00%	0.00%	1
SCG	79.49%	84.62%	15.38%	78

Table 24: Processing Time from Application Review to Incentive Approval (2-and 3-Step - Commercial or Multifamily Residential)

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.				
CSE	100.00%	100.00%	0.00%	12
PG&E	50.00%	100.00%	0.00%	2
SCE	N/A	N/A	N/A	0
SCG	100.00%	100.00%	0.00%	25
Inspection: Percentage of applications with inspection with processing time between Incentive: Application Review and Incentive: Approved as described.				
CSE	100.00%	100.00%	0.00%	3
PG&E	33.33%	100.00%	0.00%	3
SCE	N/A	N/A	N/A	0
SCG	38.89%	88.89%	11.11%	18
Percentage of applications with processing time between Incentive: Application Review and Incentive: Paid as described.				
CSE	16.00%	80.00%	20.00%	25
PG&E	20.00%	60.00%	40.00%	5
SCE	N/A	N/A	N/A	0
SCG	69.77%	90.70%	9.30%	43

5. Market Facilitation

5.1 Statewide Market Facilitation Plan for 2014

The 2014 Statewide Market Facilitation Plan was submitted to the CPUC for approval on October 1, 2013 and was approved on November 12, 2013.

Paid Search Campaign – WHBTS.COM

The paid search campaign for waterheatedbythesun.com (WHBTS.com) landing page launched on March 3, 2014. To date, the conversion rate of customers visiting the landing page and converting to the respective PA's website is 23%.

TV Creative – Everything Changes

The TV execution, "Everything Changes", launched on a statewide level on May 21, 2014. This execution takes a complex technology and makes it relatable to our target segment by highlighting the everyday activities that can take advantage of our technology: washing dishes, showering, laundry, etc. Since the launch of the TV spot, landing page visits have increased 83%, from an average of 52 to 95 daily visitors.

2014 Statewide Communication Media Plan

Currently, the PAs are evaluating the possible extension of TV, on a statewide level, to extend the reach and awareness of our program. The proposed flight term will cover September through October 2014.

The M&O representatives finalized the production of the additional statewide marketing mediums (social paid advertisement, digital, mobile), and these were launched in the market. Performance metrics will be provided in the Q3 2014 progress report.

5.2 Other Activities

The M&O representatives provided an update during the CSI Public Forum on June 12, 2014, as well as provided marketing updates to Energy Division staff via conference calls on a regular basis during Q2 2014.

5.3 Mandatory CSI-Thermal Program 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 program territories. The workshops are publicized on each PA's website as well as the GoSolarCalifornia website.¹² 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.

¹² <http://gosolarcalifornia.org/>.

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 25 shows the number of workshops held in each service territory during Q2 2014 and the number of attendees. As of June 30, 2014, there are 546 licensed eligible solar contractors statewide.

Table 25: Mandatory CSI-Thermal Workshops Held by Program Administrator

	Q2 2014	
PA	Number of Workshops	Number of Attendees
CSE	1	13
PG&E	2	30
SCE ¹³	0	0
SCG ¹⁴	2	18
Total	5	61

5.4 PA-Specific Marketing Efforts

5.4.1 Southern California Gas Company

To increase adoption of SWH systems and expand the number of trained installers, SCG continued providing mandatory contractor and self-installer training courses in collaboration with SCE and Alternative Energy Systems Consulting (AESC). To ensure coverage by both SCG and SCE in overlapping service territories, training courses alternated every other month between facilities of the two utilities. SCG’s course was offered at its Energy Resource Center in Downey, California. SCG hosted two workshops with 18 attendees during Q2 2014.

¹³ 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.

Trade Shows and Events

SCG showcased the CSI-Thermal Program and other company programs at the following events during Q2 2014. At each venue, statewide brochures and promotional items were distributed.

Solar Participated as a co-sponsor with other SCG Programs

4/4-6/14	Home Show Dessert Living	Palm Springs
4/12/14	Healthy RC Earth Day Celebration	Rancho Cucamonga
4/22/14	Earth Day	Los Angeles
5/8-9/14	41st Annual Metal Working Industry Conf.	Garden Grove
5/10/14	Castaic Lake Water Agency Annual Open House	Castaic Lake
5/17-18/14	California Strawberry Festival	Oxnard
5/21-22/14	SoCal Facilities Expo	Anaheim
6/5-8/14	Beaumont Cherry Festival	Beaumont
6/14/14	Gardena Customer Appreciation Day	Gardena
6/28-29/14	Riviera Village Summer Festival	Redondo Beach

Local Market Facilitation Plan

During Q2 2014, SCG worked with Phelps Total Market (Phelps) to begin implementation of the 2014 local communication strategy within the SCG service territory.

Solar Microsite

SCG worked with Phelps to produce a microsite for local solar marketing efforts. The microsite will be the online destination for customers to engage with SCG through 2014, in lieu of traditional workshops. During the Q2 2014 timeframe, the microsite received 30,487 visits.

Solar Mobile Unit Event Participation

Our SCG walk-in/interactive mobile unit, which was showcased at the events listed below in our service territory during Q2 2014, encourages consumers to experience SWH firsthand. Consumers who visited the mobile unit interacted with our solar street team, saw and felt the actual components that make up SWH systems, and learned about our program. Plus, they were entered in a sweepstakes for a chance to win a residential SWH system at no cost!

6/7-8/14	Palos Verdes Street Fair & Music Festival	Oxnard
6/14/14	Santa Monica Festival	Santa Monica
6/20-22/14	Santa Barbara Summer Solstice	Santa Barbara

Solar RD Spot “Baby”

- Our SCG Solar local RD 30-second execution, “Baby,” went live in the market on May 26, 2014. The RD flight was scheduled to run through July and played on the creativity established by our TV execution, “Everything Changes.” “Baby” ran on the following RD stations: 101.1 FM Jack FM, K-Earth 101 FM, 106.7 KROQ FM, KNX 1070 Newsradio, AMP’s 98.7 FM and Pandora

Solar Print

Solar Print ads were placed in the following Business Journals, targeting our Business segment:

- Orange County Business Journal: 6/16/14 and 6/23/14
- Los Angeles Business Journal: 6/16/14 and 6/30/14

CSD Effort – Low-Income Segment

SCG deployed two email blasts targeting two different eligible CSD consumers groups. This was the second “touchpoint” of this effort, following the direct mail piece from earlier in the year.

- Email deployment dates: 6/9/14 and 6/23/14

5.4.2 Center for Sustainable Energy

Training and Education

CSE conducted the following SWH workshops in Q2 2014. A brief description of each workshop follows.

Workshop Title	Date	Attendees
Solar Water Heating Basics for Homeowners	4/17/14	23
Skip's Tips	4/29/14	13
How to Become an Eligible Contractor in the CSI-Thermal Program	5/13/14	13
Solar Water Heating Basics for Homeowners (Scripps Ranch)	5/14/14	4*
NST Solar Thermal Installation Training (5-day)	6/9/14 - 6/13/14	10
Skip's Tips	6/24/14	12
<i>*Attendance adversely affected due to San Diego fires</i>		

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.

[NST Solar Thermal Installation Training \(5-day\)](#)

CSE continued its partnership with National Solar Trainers (NST) by offering a five-day comprehensive training geared toward preparing participants to become solar thermal installers, designers, sales and marketing professionals or entrepreneurs.

[Skip's Tips](#)

Led by CSE's solar water heating technical expert, Skip Fralick, this workshop covers advanced solar thermal topics. The format of this workshop has been updated to include a spotlight on a different commercial segment each month, such as breweries and industrial laundries.

[Solar Water Heating Basics for Homeowners](#)

This workshop is for residents seeking to learn more about the advantages and potential benefits of SWH technology.

[Industry-targeted marketing](#)

CSE focused commercial marketing efforts on the multifamily and brewing industries during Q2 2014.

[Multifamily](#)

Case Study

CSE produced a case study on a 10-unit apartment building in San Diego. This resource was presented during a multifamily webinar on April 22, 2014, printed on large display board for the SDCAA Annual Expo, and is also accessible on CSE's website.

San Diego County Apartment Association (SDCAA) Expo – April 22, 2014

CSE participated in the SDCAA annual expo, which convened apartment owners and property managers from across San Diego. In addition to a CSI-Thermal Program booth property, Sarah Smith (CSI-T Program Manager) also participated in the "Energy Game" panel, where she discussed solar thermal technology and its unique value proposition within the multifamily sector.

Multifamily Webinar – May 22, 2014

CSE produced a live webinar targeted to multifamily property owners and managers. This webinar provided an introduction to SWH and shed light on the technology's unique value proposition within a multi-tenant setting. An archived webinar is now available on CSE's website (energycenter.org/multifamily) and continues to be promoted to this industry target.

Multifamily Landing Page

CSE created a dedicated landing page tailored to multifamily property owners. CSE's future campaigns will direct multifamily customers to this page.

Advisor Newsletter (San Diego County Apartment Association)

CSE placed banner ads in SDCAA's bi-weekly email newsletter distributed to over 4,000 local property owners and management companies in San Diego. (Run dates: 4/16/14, 4/30/14, 5/15/14, 6/4/14, and 6/18/14)

Rental Owner Magazine (San Diego Apartment Owners Association)

CSE placed half-page ads promoting SWH and the upcoming and archived multifamily webinar in the April, May and June issues.

Apartment Owners Association Magazine

CSE placed half-page ads promoting SWH and the upcoming and archived multifamily webinar in the April, May and June issues.

1/4 Page Webinar Promotional Flyer

CSE created a promotional flyer to encourage attendees to register for the upcoming multifamily webinar. This flyer was made available among other CSI-Thermal Program collateral at the SDCAA Annual Expo.

6x9 Direct Mail to Multifamily Properties in SDG&E Territory

CSE sent over 7,200 direct mail pieces to targeted property owners to promote upcoming webinar.

SWH Retractable Banner for Expo Booth

CSE created a retractable banner advertising SWH value proposition to a multifamily audience. This banner will accompany the CSE booth property at future events.

Breweries

"Business of Beer" Event – May 6, 2014

- Hosted by the San Diego Brewer's Guild
- CSI-Thermal Program co-sponsored with the Self-Generation Incentive Program (SGIP)
- Booth property delivered integrated messaging on the potential of SWH and combined heat and power applications for breweries
- Opportunity to address Guild members and deliver a brief presentation on SWH applications as well as information on rebates available through the CSI-Thermal Program
- Promoted a new "self-assessment" tool available on CSE's website, which allows facilities managers to conduct an initial screening of their property and speak with an energy engineer at no cost. The screening incorporates SWH into its logic and is a useful lead generation mechanism for the CSI-Thermal Program.

San Diego Brewers Guild General Membership Meeting – May 13, 2014

- CSI-Thermal Program co-sponsored with the SGIP

- Opportunity to address Guild members and deliver a brief presentation on SWH as well as information on rebates available through the CSI-Thermal Program
- Booth property with CSI-Thermal Program collateral available
- CSI-Thermal Program sponsorship noted in San Diego Brewer's Guild newsletter

Residential

Workshop Promotion and Follow-up

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

Paid Media

CSE launched an array of paid and earned media marketing tactics during Q2 2014 to bolster awareness of SWH in the San Diego region and encourage homeowners to register for workshops.

- **Radio**
 - KPBS
 - 15-second radio sponsorships
 - 42 total spots aired between 3/31/14 – 4/14/14
- **Digital**
 - KPBS.org (3/31/14 – 4/14/14)
 - 250 x 300 digital banner execution
 - 160 x 600 home page skyscraper
 - Facebook (5/8/14 – 5/13/14)
 - News feed ads
 - Promoted May 14, 2014 (Scripps Ranch) workshop
- **Newspaper/ Print**
 - San Diego Business Journal
 - Collaborative ½ page print ad

Other Events & Outreach

During Q2 2014, CSE participated in the following events to help raise general awareness of SWH and available CSI-Thermal Program rebates:

Earth Fair in Balboa Park – April 27, 2014

CSI-Thermal Program collateral and staff were available at CSE's booth property at this year's annual Earth Fair in Balboa Park. San Diego's Earth Fair is one of the largest Earth Day celebrations in the country and draws environmentally conscious community members from all over the region.

SDG&E Energy Showcase – May 13, 2014

CSI-Thermal and SGIP shared a booth property at the 2014 annual energy showcase. SWH collateral was available to attendees as well as program staff to answer any questions about SWH technology, rebates and potential applications.

Other Marketing Activities

In addition to the paid media tactics above, CSE also leveraged the following in-house communication platforms during Q2 2014 to help promote SWH and available workshops.

- *Roundup Newsletter*: CSE publishes a bi-weekly e-mail calendar that features all CSE-hosted workshops offered in California. This newsletter is sent to over 14,500 subscribers and continues to be an effective medium for promoting CSI-Thermal Program workshops.
- *CSE's online calendar*: Features all of CSE's events and workshops and is one of the most active pages on CSE's website.
- *Facebook, Twitter and LinkedIn*: CSE has an active presence on Facebook, Twitter and LinkedIn. These social media channels connect CSE 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.

Web Development

CSE's website devotes several pages to CSI-Thermal Program-specific information at www.energycenter.org/swh. These pages are updated frequently to ensure CSE's CSI-Thermal Program website remains an engaging, accurate and up-to-date resource for local homeowners and businesses who want to learn more about SWH and available rebates.

5.4.3 Pacific Gas and Electric Company

CSI-Thermal Program Workshops

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 its 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 Program 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.

PG&E scheduled one CSI-Thermal Contractors and Self-Installer Workshop during Q2 2014: May 9, 2014. Q1 2014 featured two Contractors Workshops and Q3 2014 will feature two Contractors Workshops as well; scheduling has been based on level of interest and attendance at past workshops.

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 2014:

Solar Water Heating; Adv. Commercial Systems; 23 students	4/16/2014	San Francisco
Solar Water Heating Inspections; 9 students	5/1/2014	San Francisco
Contractor and Self Installer Workshop	5/9/2014	San Francisco
Solar Water Heating Basics Webinar; 12 students	6/10/2014	Online

Customer and Industry Events

Marketing Events Showcasing Solar Water Heating and the CSI-Thermal Program

This event featured the products and services of hundreds of green and sustainability-driven companies. PG&E's presence was targeted towards schools in PG&E's service territory. Also, PG&E offered marketing materials to promote the CSI-Thermal Program, including information for single family, multi-family and commercial customers, and provided case studies of successful commercial projects installed in PG&E territory. Further, PG&E met with its liaison at the CA Community Services & Development Department, with whom it is collaborating to promote the installation of 1000 low-income single family projects, in an effort to improve and ramp that program. PG&E's presence consisted of a solar heating focused booth at the Exposition as well as a presentation at one of the event's breakout sessions on SWH and the CSI-Thermal Program.

Customer and Contractor Research

In an effort to increase enrollment in the CSI-Thermal Program, PG&E conducted research with both business customers and contractors that have participated in the program. The objective of the research with customers was to understand the motivation to install SWH among current PG&E commercial customers and their decision-making process, measure satisfaction with SWH, and identify ways to increase awareness/interest in SWH.

The objective with active contractors was to explore the opinions and issues among SWH contractors, including understanding to whom to market (including motivation, market size, etc.), how they sell SWH (product/program positioning), sales barriers, where SWH resides in the energy management customer journey (before, with or after EE, DG, etc.) and ways to help increase their success. This contractor and customer outreach is intended to inform marketing activities for the rest of the year. Although it meant deploying more resources to research and market intelligence and less towards visible ads and campaigns, this research will contribute to the success of future marketing efforts.

2014 Campaign

The focus of Q2 2014 has been in the target market analysis and the strategic planning phase for 2014 marketing and outreach efforts. PG&E is currently in creative development of the various components of the campaign and expects to be in-market dates by August 2014.

5.4.4 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 canceled the May class due to no enrollment.

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 three HSC Webinars, with a total of 24 attendees in Q2 2014.

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 six Solar Connection Events, with 204 attendees in Q2 2014.

CSI Commercial Solar Workshop and Webinars — These workshops and webinars 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 2014, SCE held two Commercial Solar Workshops at its Energy Education Center (EEC) in Irwindale and two in the City of Irvine, with a total of 61 attendees. There were three webinars with 10 attendees.

Customer Outreach

SCE participates in conferences, tradeshow, 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:

- Los Angeles Times Festival of Books, Los Angeles/USC, 4/12-13/14
- SBC Industry Achievement Awards, Santa Monica, 4/22/14
- SEPA Utility Solar Tour, Ontario/Irvine, 4/28-30/14
- Asian Pacific American Heritage, SCE Energy Edu. Center, Irwindale, 5/3/14
- Apartment Owners Association, Long Beach, 5/15/14
- DOE Grand SunShot Summit, Anaheim, 5/19-21/14

- Southern California Facilities Expo, Anaheim, 5/21-22/14

Local Market Facilitation Plan

SCE's local market facilitation efforts leveraged the statewide efforts and 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. SCE is evaluating what future marketing efforts to pursue that will be most beneficial and cost effective.

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.

6. Conclusions

Through Q2 2014, the CSI-Thermal Program has demonstrated a commitment towards improvement and balancing the complex needs of ratepayers, customers, industry, and the marketplace. The PAs continue to advance the tools of the Program, implementing changes when appropriate and when there are scientific or market-based reasons to do so. The PAs held several calls and meetings with industry and CALSEIA during Q2 2014 and are developing stronger relationships and greater collaboration for the benefit of the market and the Program. In Q2 2014, the program has seen increased participation in the solar pool heating system program, and there has been great success in the low-income portion of the program. Notably, in CSE territory, all low-income funds have been paid or reserved, and a waitlist has been started.