California Solar Initiative Thermal Program

Quarterly Progress Report

(July 1, 2011 – September 30, 2011)

Published On:

November 15, 2011

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1. Executive Summary

1.1. Introduction

Southern California Gas Company (SCG), on behalf of the California Solar Initiative Thermal (CSI-Thermal) Program Administrators (PAs)[1], submits this Quarter 3, 2011 Progress Report for the CSI-Thermal Program, 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 July 1, 2011 through September 30, 2011. The report has been divided into several sections covering topics such as program budget, eligibility requirements, incentive structure, program expenditures and market facilitation activities. This report highlights the program's progress and achievements to ensure the successful administration of the CSI-Thermal Program.

1.2. Key Report Highlights

Since the last progress report was published, there have been several significant updates that have resulted in immediate as well as future program impact. This report will focus on the details surrounding these changes. In mid-July, EchoFirst filed a petition to accept equipment certified to the OG-300 and OG-100 standards by any Nationally Recognized Testing Laboratory (NRTL) or American National Standards Institute (ANSI) accredited laboratory such as the International Association of Plumbing and Mechanical Officials (IAPMO). The Commission issued a Proposed Decision that agreed in part with the EchoFirst petition where they would allow IAPMO as a certifying entity along with the Solar Rating and Certification Corporation (SRCC). All other entities wishing to participate would have to apply for approval. The Proposed Decision was approved by the Commission at its November 10, 2011 business meeting.

The PAs filed a revised CSI-Thermal Handbook, which was approved on September 28, 2011 by the Energy Division. The amendments to the Handbook were results of further program refinement and stakeholder feedback to improve the program design.

In early August, a public workshop was held to allow the public to comment on the proposed local and Statewide marketing plans. After receiving feedback from the Energy Division and those who attended, the PAs filed the Statewide and Local Market Facilitation Plans on August 31, 2011, with a requested effective date of September 30, 2011.

With $1,967,543 in statewide incentives paid through September 30, 2011, the CSI-Thermal Program continues to show signs of increased participation and consumer awareness.

[1] CSI-Thermal PAs are PG&E, Southern California Edison Company (SCE), California Center for Sustainable Energy (CCSE), and Southern California Gas Company (SCG).
[2] D.10-10-022, Ordering Paragraph No. 13 and Appendix A.

2. Introduction

2.1. Program Background

In January 2007, the CPUC launched the California Solar Initiative (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 allowing solar water heating (SWH) technologies to be eligible for CSI until after a pilot program for SWH was conducted in San Diego Gas & Electric Company (SDG&E) service territory. Starting in July 2007, CCSE administered a $2.59 million pilot program for SWH incentives in the SDG&E service territory. In D.08-06-029, the Commission made minor modifications to the pilot to allow it to run until December 31, 2009, or until the budget was exhausted, whichever occurred first.

In 2007, Governor Arnold Schwarzenegger signed Assembly Bill (AB) 1470 (Huffman, 2007)[4] authorizing the CPUC to create a $250 million incentive program to promote the installation of 200,000 SWH systems on homes and businesses that displace the use of natural gas 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 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-Thermal Program. The PAs launched the single-family residential program in May of 2010 and the commercial/multi-family program in October of 2010.

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 will 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 laid out in D.10-01-022, the primary goals of the CSI-Thermal Program include the following:

[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

- Significantly increase the size of the SWH market in California by increasing the adoption rate of SWH technologies, including:
    - Achieving 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;
    - Achieving 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
    - Achieving 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 (not including low-income incentives[6]), 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. Incentive dollars for natural gas-displacing systems will be allocated between two customer classes, single-family residential and multi-family/commercial, as follows:

- 40 percent of the total incentive budget is reserved for single-family residential customer SWH systems; and
- 60 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.

[6] D.10-01-022 sets aside $25 million for low-income customers. However, to implement the CSI-Thermal Program in early 2010, the Commission decided to address the detailed comments by parties on the design of a low-income CSI-Thermal Program in a separate decision.

The incentive budget is split proportionately among the PAs based on the percentages the investor-owned utilities use to collect the Public Goods Charge from customers in their respective service territories.
Table 1 below displays the incentive allocation percentage and budget amount by PA for the natural gas-displacing SWH systems. Table 2 below displays the incentive allocation percentage and budget amount by PA for the electric-displacing SWH systems.

The incentive budget for the natural gas-displacing portion of CSI-Thermal Program will operate until all funds available from the program's incentive budget have been allocated or until January 1, 2018, whichever occurs first. The incentive budget for the electric-displacing portion of the program is available until the budget caps have been reached, the CSI General Market Program budget has been exhausted, or January 1, 2017, whichever occurs first.

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-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**

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 will decline over the life of the program in four steps to facilitate market transformation.

Natural gas-displacing incentives will decline from step to step when the total incentive amount reserved is equal to the budget allocation for the given step in each service territory. 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 3 below displays the dollar amount per therm in each step and the total program budget allocation per step.

Table 3: Total Natural Gas Budget Allocation per Incentive Step

Step	Incentive per therm displaced	Total Program Budget Allocation (in millions)
1	$12.82	$50
2	$10.26	$45
3	$7.69	$45
4	$4.70	$40

As incentives decline under the natural gas-displacing program, a corresponding step reduction occurs in the electric-displacing incentive structure. Table 4 below shows the electric rates at each of the four steps. Electric-displacing SWH installations will count against the MW trigger in Step 10 of the General Market CSI Program. If the Step 10 budget is insufficient, the PAs may use funds from Step 9.

Table 4: Electric-Displacing System Incentive Steps

Step Level	Electric-Displacing Incentive ($/kWh)
1	0.37
2	0.30
3	0.22
4	0.14

Incentive step changes will move independently in each program territory[7] and for each customer class. Incentives will be paid on a first come, first serve basis. The most current information on incentive step status per customer class is posted on www.csithermal.com/tracker.

[7] 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 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) OG-300 System Certification.
- Solar collectors used in multi-family/commercial water heating shall 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 systems that were installed after July 15, 2009. Note that a customer must apply for their incentive 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.

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

[9] 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).

[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 September 30, 2011, CSI-Thermal Program expenditures totaled $5,648,233. Table 5 below illustrates the detailed expenditures by PA since program inception followed by a breakdown of expenses specific to the natural gas and electric-displacing programs for the reporting period in Tables 6 and 7.

Expenses during this reporting period reflect program administration activities, including application processing, continued enhancement of a statewide online database, mandatory contractor and self-installer training, local marketing efforts, activities related to potential program expansion, and administrative staffing support.

Table 5: CSI-Thermal Expenditures by PA

Natural Gas and Electric CSI-Thermal Program Expenditure Data January 1, 2010 to September 30, 2011					
Expenditure Type	**CCSE**	**PG&E**	**SCE**	**SCG**	**Total**
Administration	$628,899	$1,393,905	$277,611	$507,558	**$2,807,973**
Market Facilitation	$371,254	$317,172	$25,754	$155,994	**$870,174**
Measurement & Evaluation	$0	$2,543	$0	$0	**$2,543**
Incentives Paid	$728,825	$1,143,232	$9,259	$86,227	**$1,967,543**
Total	**$1,728,978**	**$2,856,852**	**$312,624**	**$749,779**	**$5,648,233**

Table 6: CSI-Thermal Expenditures by PA (Natural Gas)

Natural Gas July 1, 2011 – September 30, 2011				
Expenditure Type	**CCSE**	**PG&E**	**SCG**	**Total**
Administration	$52,713	$154,071	$96,096	**$302,880**
Market Facilitation	$10,603	$96,929	$63,734	**$171,266**
Measurement & Evaluation	$0	$0	$0	**$0**
Incentives Paid	$403,806	$265,603	$12,627	**$682,036**
Total	**$467,122**	**$516,603**	**$172,457**	**$1,156,182**

Table 7: CSI-Thermal Expenditures by PA (Electric)

Electric July 1, 2011 – September 30, 2011				
Expenditure Type	**CCSE**	**PG&E**	**SCE**	**Total**
Administration	$20,123	$37,544	$53,697	**$111,364**
Market Facilitation	$3,840	$24,881	$7,460	**$36,181**
Measurement & Evaluation	$0	$0	$0	**$0**
Incentives Paid	$4,993	$5,794	$3,159	**$13,946**
Total	**$28,956**	**$68,219**	**$64,316**	**$161,491**

4. Program Progress

The PAs spent much of Q3 2011 analyzing various methods for enhancement to the application submittal process and the multi-family/commercial incentive calculator. The Handbook was subsequently updated to reflect the enhancements. Once the Handbook was approved by the CPUC, coordinating and testing the database configuration changes followed. There was also a considerable amount of time spent discussing and filing public comments related to propane, low income program and the Echofirst petition to modify (see "Section 6 Regulatory Update" for details).

4.1 Applications Received, Installation Costs and Incentives Paid

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. Since then, the PAs have seen improvements in the completeness of applications that are submitted. Tables 8, 10, 12 and 14 represent the amount of applications received by each PA in Q3, 2011, as well as the corresponding incentives and systems capacity for those applications. Tables 9, 11, 13 and 15 show the average costs of systems for completed projects by PA and customer class since program inception.

Table 8: Summary Data: CSI-Thermal Single-Family Applications by Status (Natural Gas)

	CCSE	PG&E	SCG	Total
	Q3	Q3	Q3	
APPLICATIONS RECEIVED				
Application (Number)	22	13	4	**39**
Incentives ($)	$30,349	$19,714	$6,515	**$56,578**
Capacity (First Year Expected Energy Displaced in therms)	2,484	1,650	518	**4,652**

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

Table 9: Average Cost per Single-Family Project (Natural Gas)

	CCSE	PG&E	SCG	Overall Average
Average Project Cost per Single-Family Project*	$7,313	$10,295	$6,984	**$8,197**
Average Project Cost per Unit of First Year Energy Displaced ($/therm)*	$66.02	$76.25	$54.18	**$65.48**

*Since program inception

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

	CCSE	PG&E	SCE	Total
	Q3	Q3	Q3	
APPLICATIONS RECEIVED				
Applications (Number)	3	7	1	**11**
Incentives ($)	$3,086	$6,777	$1,263	**$11,126**
Capacity (First Year Expected Energy Displaced in kWh)	8,498	18,733	3,722	**30,953**

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

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

	CCSE	PG&E	SCE	Overall Average
Average Project Cost per Single-Family Project*	$6,400	$7,518	$8,247	**$7,388**
Average Project Cost per Unit of First Year Energy Displaced ($/kWh)*	$2.30	$2.84	$2.62	**$2.59**

*Since program inception

Table 12: Summary Data: Multi-family/Commercial (Gas)

	CCSE	PG&E	SCG	Total
	Q3	Q3	Q3	
APPLICATIONS RECEIVED				
Application (Number)	7	19	11	**37**
Incentives ($)	$272,568	$596,233	$234,535	**$1,103,336**
Capacity (First Year Expected Energy Displaced in therms)	21,261	47,127	18,324	**86,712**
UNDER REVIEW Incentive Claims				
Application (Number)	5	8	2	**15**
Incentives ($)	$247,594	$100,054	$28,441	**$376,089**
Capacity (First Year Expected Energy Displaced in therms)	19,313	7,911	2,248	**29,472**

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 13: Average Cost per Multi-family/Commercial Project (Gas)

	CCSE	PG&E	SCG	Total
Average Project Cost per Multi-family/commercial Project ($)*	$302,404	$48,658	$60,222	**$137,095**
Average Project Cost per Unit of First Year Energy Displaced ($/therm)*	$74.95	$37.74	$41.29	**$51.33**

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

Table 14: Summary Data: Multi-family/Commercial (Electric)

	CCSE	PG&E	SCE	Total
	Q3	Q3	Q3	
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

During Q3 2011, CCSE, PG&E and SCE did not receive electric displacing Commercial/Multi-family projects. Note that due to an exhausted commercial budget within the general market CSI program, PG&E and CCSE did not have any available incentives for non-residential electric displacing SWH systems.

Table 15: Average Cost per Multi-family/Commercial Project (Electric)

	CCSE	PG&E	SCE	Total
Average Project Cost per Multi-family/commercial Project ($)*	$0	$0	$7,630	**$7,630**
Average Project Cost per Unit of First Year Energy Displaced ($/kWh)*	$0	$0	$4.32	**$4.32**

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

4.2 Turnaround Times

The PAs strive to process reservation requests and incentive claim requests in 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. Table 16 below shows the most recent application processing times between "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 17, shows the time from Application Review to Incentive Approval (1 Step – Single-Family Residential). The time period being measured in the processing times tables includes both PA application processing time and time that the host customer takes to respond to requests for more information or application corrections. Table 18, shows the Time from Application to Incentive Approval (2 and 3 Step - Commercial or Multi-Family Residential).

Applications that take the PAs more than 60 days to approve an application 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 16: 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
	Q3	Q3	Q3
Multi-family/Commercial			
CCSE	100.00%	100.00%	0.00%
PG&E	100.00%	100.00%	0.00%
SCE	0.00%	0.00%	0.00%
SCG	66.67%	100.00%	0.00%

Table 17: 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
	Q3	Q3	Q3	
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	100.00%	100.00%	0.00%	13
SCE	0.00%	0.00%	0.00%	0
SCG	100.00%	100.00%	0.00%	4
Inspection: Percentage of applications with inspection with processing time between Incentive: Application Review and Incentive: Approved as described.				
CCSE	100.00%	100.00%	0.00%	4
PG&E	0.00%	60.00%	40.00%	5
SCE	0.00%	0.00%	0.00%	0
SCG	0.00%	0.00%	0.00%	0
Percentage of applications with processing time between Incentive: Application Review and Incentive: Paid as described.				
CCSE	16.00%	100.00%	0.00%	25
PG&E	73.68%	84.21%	15.79%	16
SCE	100.00%	0.00%	0.00%	1
SCG	0.00%	0.00%	0.00%	0

Table 18: Processing Time from Application 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
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%	1
PG&E	100.00%	100.00%	0.00%	5
SCE	0.00%	0.00%	0.00%	0
SCG	100.00%	100.00%	0.00%	4
Inspection: Percentage of applications with inspection with processing time between Incentive: Application Review and Incentive: Approved as described.				
CCSE	100.00%	100.00%	0.00%	4
PG&E	50.00%	100.00%	0.00%	2
SCE	0.00%	0.00%	0.00%	0
SCG	0.00%	0.00%	0.00%	0
Percentage of applications with processing time between Incentive: Application Review and Incentive: Paid as described.				
CCSE	0.00%	100.00%	100.00%	5
PG&E	50.00%	100.00%	0.00%	4
SCE	0.00%	0.00%	0.00%	0
SCG	0.00%	0.00%	100.00%	1

5. Market Facilitation

During the past several months, the four PA Marketing and Outreach (M&O) representatives have been working diligently on several key statewide initiatives. Each marketing activity is outlined in the following sections along with individual local efforts.

5.1 Statewide Market Facilitation Plan and Public Workshop

During the month of July, the M&O representatives of the four PAs (with the SCG representative acting as liaison) worked with Fraser Communications to develop a Statewide Market Facilitation Plan, designed to achieve a consistency in messaging and strategy statewide, that included goals, target markets, tactics by category and budget by category. Fraser staff

designed a PowerPoint presentation of the Plan for use in the Public Workshop scheduled for August 3, 2011.

The M&O representatives and Energy Division Staff held a conference call a week before the Public Workshop to review the details including the structure, sequence of events, and question and answer periods. CCSE volunteered to provide a WebEx link so that members of the public who could not be present at the workshop, but were listening to the conference call, could also view the PowerPoint Presentations.

Renee Fraser of Fraser Communications presented the proposed Statewide Market Facilitation Plan to CPUC staff and the public at the CPUC Public Workshop held at CPUC offices in San Francisco. Ms. Fraser entertained questions and took input from staff and the public following her presentation.

The four PA M&O representatives held a conference call with Energy Division staff the following week to gather additional input on the Statewide and Local Market Facilitation Plans. The feedback from Energy Division staff was generally very positive about the approach taken by the PAs in the Public Workshop. The PAs agreed that as a way of providing stakeholder input, adding focus group sessions with contractors and installers would be valuable to the proposed research in the Statewide Plan.

The total two-year campaign management contract of up to $4.5 million will be all inclusive of development, implementation, administrative and incidental costs. Table 19, below, notes the co-funding contribution by each PA. The percentage contributions are consistent with the market facilitation budget allocation set forth in the CSI-Thermal decision.

Table 19: Budget Contributions for Two-Year Statewide Market Facilitation Campaign

Budget Allocation by PA		
PA	**% Allocation**	**Cost Share**
SCG	40.80%	$1,836,000
PG&E	39.94%	$1,797,300
CCSE	10.06%	$452,700
SCE	9.20%	$414,000
Total	**100%**	**$4,500,000**

Following the public workshop and conference, modifications were made to the Statewide Market Facilitation Plan during the month of August as a result of input that was received. Focus group sessions with contractors/installers were added to the Plan as a way of receiving additional insights into the marketing of the CSI-Thermal Program from those who have been involved in marketing solar water heating before and since the Program began.

5.2 Filing Statewide Marketing Facilitation Plan Advice Letter

On August 31, SCG submitted Joint Advice Letter 4274, et al., on behalf of itself and the other three PAs for the Statewide Market Facilitation Plan, in compliance with D.10-01-022 and the Energy Division Guidance Memo of November 4, 2010, with a requested effective date of September 30, 2011.

5.3 Implementation

While awaiting approval of the Advice Letter during September, SCG filed Statewide Marketing and Outreach Approval Request Forms (MOARFs)[11] with Energy Division Staff to continue moving elements of the Plan forward on schedule, specifically the focus group sessions with contractors/installers and the 3Q media planning activities.

Upon approval of the first MOARF for the focus group sessions, Fraser Communications proceeded with arrangements, one in Northern California and one in Southern California, with a target date of the first week of October 2011. Fraser staff consulted with California Solar Energy Industries Association (CALSEIA) staff for suggested participants, and the four PAs provided lists of potential participants for their consideration. Fraser staff then sought a diverse group of participants that represented large and small companies and those with experience in residential, multifamily, commercial and industrial installations.

Per Energy Division staff's request, a copy of the working draft of questions for the sessions was provided to them on September 29, 2011. Energy Division staff's comments on the questions were relayed to SCG, and they were forwarded to Fraser Communications.

Upon approval of the second MOARF for the Q3 Media Planning, Fraser staff met with the SCG M&O representative as liaison for the four PAs on September 26, 2011, to answer questions about the media elements of the Statewide Plan, and the media planning process was begun.

5.4 Mandatory CSI-Thermal Workshops

Contractors and self-installers are required to attend a designated no-cost CSI-Thermal Program training workshop. The PAs conducted training courses in their respective service territories. The workshops are publicized on each PA 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 Workshop 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-

11 MOARFs must be submitted for Approval to the Energy Division when marketing plans are not yet approved.

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 20 shows the number of workshops held in each service territory for Q3 2011 and the number of attendees. As of November 2, 2011, there are 350 licensed eligible solar contractors statewide. Approximately 16 additional contractor companies are registered to participate in the program compared to the previous CSI-Thermal Quarterly Progress Report.

Table 20: Mandatory CSI-Thermal Training Workshops Held by Program Administrator

	Q3 2011	
PA	**Number of Workshops**	**Number of Attendees**
PG&E	3	65
CCSE	7	83
SCE[12]	1	14
SCG[12]	2	24
Total	**13**	**186**

5.5 PA-Specific Marketing Efforts

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

5.5.1 California Center for Sustainable Energy

Training and Education

In Q3 2011, CCSE conducted two Homeowners workshops and two Contractor and Self-Installer trainings. A total of 22 homeowners and 24 contractors were trained on Solar Water Heating (SWH) technology and its benefits at these workshops. Skip's Tips, an advanced solar water heating workshop that focuses on technically sophisticated discussions with CCSE's Energy

[12] 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.

Engineer, Skip Fralick, had three workshops in Q3, with 37 attendees. Skip's Tips is held monthly and discussion topics in Q3 focused on Glycol, Direct Forced Circulation, and Drainback Systems.

In August, CCSE held its fourth Department of Energy-funded "Train the Trainer" event at Cuesta College in San Luis Obispo, California. The workshop was attended by 13 faculty members of community colleges and regional outreach programs. The event trained faculty members on how to implement and teach a solar thermal course, including topics such as the fundamentals of solar water heating systems, installation procedures, and instruction techniques. The intention of the training is to assist teaching faculty in establishing training programs at their schools as a means of developing the SWH marketplace. In addition, CCSE developed Cuesta's solar thermal lab by purchasing over $20,000 of training equipment through the Department of Energy grant. Information on the CSI-Thermal Program was incorporated in the lesson plan to inform faculty of the financial and career opportunities available for their students.

Solar Thermal Public Relations & Media

In July, CCSE collaborated with the Mission Heights Homeowner Association to arrange press coverage for the first CSI-Thermal multifamily/commercial installation in SDG&E territory. CCSE created Solar Thermal Partner Award Certificates for Mission Heights Home Owners Association and Hill N Dale Home Owners Association to recognize their accomplishments in being the first two multifamily solar thermal installations in SDG&E service territory. CCSE presented a check for $72,523 to the homeowners association of Mission Heights Condominiums as the first multifamily solar water heating system rebate awarded in San Diego County from the CSI-Thermal Program. A "switching on" and CSI-Thermal rebate check presentation ceremony was held, activating the system that supplies hot water to 116 residences at an annual energy cost savings of nearly $11,000. Following the ceremony was a public tour of the large-scale SWH system installation. City of San Diego Mayor Jerry Sanders as well as CCSE Executive Director, Irene Stillings, both spoke at the event.

Solar Thermal Homeowner Workshop Promotion

The ongoing workshop trainings both for homeowners and contractors were promoted in the quarterly workshop calendar, the monthly California Solar Initiative Newsletter, CCSE website workshop calendar, and publicized to 1,500 people through the CCSE monthly newsletter.

SWH homeowners workshops were posted on a total of 27 free online community calendars: Voice of San Diego, signonsandiego.com, delmartimes.net,carlsbad.org/Events-Calendar, ramonasentinel.com, sdchamber.org, sandiegoreader.com,mylocalnews.com, pomeradonews.com, sandiegomagazine.com, bizsandiego.com, sdres.org, sdnews.com, coronadonewsca.com, lajollalight.com, thecoastnews.com, ranchosfnews.com, goldenhillcdc.org, lajollavillageneighbors.com, ramonasentinel.com, eventful.com, yelp.com, visittheplace.com, sdcitybeat.com, kpbs.org, and sdhortsoc.org.

Program Promotion

CCSE promoted the CSI-Thermal Program through additional marketing channels such as:

- Energy Connection Newsletter (monthly)
- SWH Train the Trainer Event Flyer (August event)
- Solar Thermal Library Resource Flyer

- Promotional Tote Bags at Homeowners and Contractors workshops
- Carlsbad Chamber of Commerce
- City of Palo Alto Utilities Solar Water Heating Program

Bundled Outreach

In August, CCSE spoke at the Carlsbad Chamber of Commerce "Sustainable Committee" meeting, detailing the growth of the solar water heating industry and the benefits the CSI-Thermal Program provides for business owners.

In September, CCSE had a booth at the Carlsbad Chamber of Commerce Business Expo. Members of the CSI-Thermal team worked at the booth to perform outreach for the CSI-Thermal Program. In the city of Carlsbad, all new construction single-family homes built after 1981 are pre-plumbed for SWH. This provided a targeted opportunity to speak with both home and business owners about the benefits of solar technologies and rebate programs available to businesses and homeowners. The Expo was attended by over 800 stakeholders in the Carlsbad business community.

In September, CCSE attended the Solar Tech Permitting and Interconnection Workshop in San Jose, California. The workshop gathered subject matter experts to present on key challenges and hurdles facing solar photovoltaic (PV) and thermal permitting projects throughout California. Topics focused on identifying next steps to breaking down permitting barriers. Discussion focused on PV/Thermal projects (residential/commercial) and the proposed possible solutions to help drive adoption and reduce permitting costs.

Interactive Outreach/ Web Development

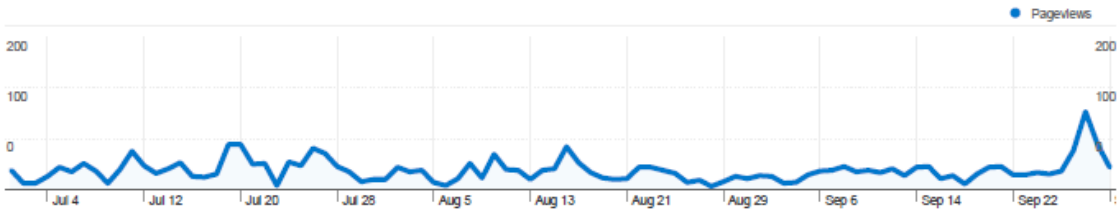
CCSE's website has several pages dedicated to CSI-Thermal Program specific information: http://www.energycenter.org/swh. This landing page contains links to CSI-Thermal FAQs, as well as information on how to apply for an incentive, upcoming workshops, program documents, resources for installers, solar thermal vendors, webinars and latest news on SWH. This information is updated frequently to maintain current information.

Website Highlights:

- CCSE updated the CSI-Thermal main webpage with information on the Q1 SWH business development and installation training.
- Throughout Q3 2011, CCSE attracted over 1,800 visitors to the pages referring to "solar water."

www.energycenter.org
Content by Title

Jul 1, 2011 - Sep 30, 2011
Comparing to: Site



40 page titles were viewed a total of 2,294 times

Filtered for page titles containing "Solar Water"

Content Performance

Pageviews	Unique Pageviews	Avg. Time on Page	Bounce Rate	% Exit	$ Index
2,294 % of Site Total: 1.07%	1,860 % of Site Total: 1.13%	00:01:41 Site Avg: 00:01:26 (17.93%)	60.08% Site Avg: 48.50% (23.87%)	36.88% Site Avg: 30.19% (22.15%)	$0.10 Site Avg: $0.02 (466.04%)

Page Title	Pageviews	Unique Pageviews	Avg. Time on Page	Bounce Rate	% Exit	$ Index
CSI-Thermal Program (Solar Water Heating)	1,003	801	00:01:48	56.27%	37.09%	$0.01
Solar Water Heating Basics for Homeowners	358	290	00:01:09	61.79%	32.12%	$0.30
Solar Water Heating Contractor and Self-Installer Training	343	271	00:01:50	50.91%	27.70%	$0.29
Vendor List for Solar Water Heating Equipment	124	110	00:01:59	88.24%	52.42%	$0.01
Solar Water Heating Systems	121	102	00:01:40	72.22%	47.93%	$0.01
Solar Water Heating FAQs	87	68	00:02:07	55.56%	33.33%	$0.01
Solar Water Heating Information for Permitting Officials	37	29	00:03:25	55.00%	59.46%	$0.17
Solar Water Heating Program 2011	35	29	00:02:00	61.54%	42.86%	$0.10
Solar Water Heating	20	17	00:00:40	0.00%	0.00%	$0.00
Solar Water Heating Installation Training (2-4 days)	20	15	00:00:38	57.14%	35.00%	$0.00

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5.5.2 Pacific Gas & Electric

CSI-Thermal Workshop

PG&E continues to offer monthly CSI-Thermal Program Workshops for contractors and self-installers. This workshop is required for anyone looking to become an eligible installer within the CSI-Thermal Program. During the Q3 2011 period, PG&E conducted three total workshops.

The workshops continue to be vital in conveying program requirements. As a result, contractors are better prepared to submit CSI-Thermal Program paperwork.

Solar Water Heating Informational Courses

In addition to the CSI-Thermal Program Contractor and Self-Installer Workshop, PG&E also continues to offer informational and introductory SWH courses at various locations throughout the service territory. These courses provide SWH technology 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 so that attendees do not have to take time off from their jobs to attend.

Online Updates and Training Courses

PG&E conducted three different SWH online-based courses in Q3 2011:

- **CSI-Thermal Program Overview and Updates:** This course is intended to provide a general overview of the CSI-Thermal Program. Because the program has changed since its inception, this class also provides specific updates to industry members who have already participated in the CSI-Thermal Program Contractor and Self-Installer Workshop.
- **Solar Water Heating Basics:** This course provides an overview of SWH technologies to individuals looking to gain high level information.
- **Guide to Completing your CSI Thermal Application (using the database and avoiding common mistakes):** This course provides a demonstration of how to successfully submit a CSI-Thermal Incentive Application.

Online courses have proven to be an efficient way to deliver content to PG&E customers. These two courses will continue to be a staple in the portfolio of PG&E solar classes.

United States Green Building Council (USGBC) Event

On July 12, 2011, PG&E participated in the United States Green Buildings Council (USGBC): Silicon Valley Branch event titled *Solar Thermal: Some Like it Hot, Some Like it Cold!* PG&E was one of three speakers at the event, which focused on the solar thermal market.

Intersolar

On July 13, 2011, PG&E partnered with the California Solar Energy Industries Association (CALSEIA) to organize a speaking session at Intersolar North America. The session was titled *Solar Water Heating in California: A View from All Angles* and featured three different speakers including a solar water heating contractor, a solar water heating manufacturer, and PG&E on behalf of the CSI-Thermal Program.

In addition, visitors to the GoSolarCalifornia booth featured at InterSolar July 12-14 had the option to interact with a brief presentation created by PG&E featuring Solar PV and Solar Water Heating web links, videos and contacts to reach out to at each utility for more information.

Local Market Facilitation Plan Development and Presentation

On August 3, 2011, PG&E presented its two year market facilitation plan at the CPUC for public comment and feedback. The plan covered marketing and outreach activities for Residential and Business customers along with contractors within the PG&E service territory. The plan included tactics, high-level timing for implementation and budget breakouts to present a transparent picture of how PG&E would work in conjunction with the statewide campaign to promote SWH. The plans were received well and on August 31, 2011, PG&E filed the final plans for approval.

Power a Brighter Future Event

The Power a Brighter Future mobile tour debuted at the Indy Grand Prix of Sonoma at Infineon Raceway on August, 27 2011 and was featured at 15 other events in the PG&E territory between August and October 1, 2011 with over 133,000 attendees. The tour continued through October 2011.

Using digital content, signage and in-person representatives, Power a Brighter Future is an interactive customer experience that includes videos, touch screen games and an iPad app to educate customers on the SmartGrid and its benefits. In the section on Renewables, there was a SWH call out to help customers understand its benefits while engaging with the event.

Tour staff was available to speak with customers and answer questions in English, Spanish and Chinese.

Contractor Visits

During Q3 2011, PG&E began to visit SWH contractors at their respective facilities. These visits provide a unique opportunity to speak one-on-one with the contractors doing business in PG&E's service territory to gain insight into what challenges they face and recommendations they have for the program. PG&E plans to continue these visits into Q4 2011 and Q1 2012 with contractors and manufacturers.

Web Updates

PG&E's new web pages promoting SWH and other distributed generation technologies (Solar, Wind, Fuel Cell) launched in late July 2011. In addition to increasing the accessibility and prominence of SWH information, the upgrades provide visitors more information on the benefits of green energy and resources available to them throughout the investigation and installation process.

Marketing Surveys

In Q3 2011, PG&E launched a post-web update online survey delivered to visitors of the updatd solar pages on PGE.com. The objective of this survey is to help gauge the impact of the newly implemented updates on the user experience with solar and renewable pages on PGE.com. The results of the post-study will be compiled and compared to the survey results that were secured prior to the new web page launches to ensure that customer satisfaction and usability have improved.

5.5.3 Southern California Edison Company

Training and Education

SCE partners with SCG to offer monthly CSI-Thermal Program Contractor and Self-Installer Training in the service territory. For this reporting period, SCE held one class at the SCE training facility with 14 participants in attendance.

Additionally, SCE continues to leverage existing solar trainings, such as CSI Homeowner Solar Class (HSC), CSI Contractor Solar Class, and CSI Commercial Solar Workshops to promote the CSI-Thermal Program. The CSI-Thermal Program is marketed in these trainings to provide exposure to the program to two key audiences – homeowners and solar contractors.

Bill "Onsert" Messaging

SCE included CSI Thermal Program messaging on its September 2011 residential customer bills using "onbill" (onsert) messaging. Customers were informed about the rebates available for SWH systems and homeowners were invited to attend a series of Homeowner Solar classes to learn more about the program.

Bundled Outreach

SCE promoted the CSI-Thermal Program at several events to provide continued program exposure and outreach. Program information and fact sheets were distributed at each of these events:

- SolarSUNday, July 17, 2011
- Westminster Green Expo, August 11, 2011
- SCE Water Conference, August 26-28, 2011

SCE also incorporated the CSI-Thermal Program into the solar fair events and classes that are held throughout its service territory. Solar fairs are non-technical, easy-to-understand free sessions that educate customers about the CSI, available rebates and how to "go solar." The solar fairs were held at the following locations in SCE service territory:

- Torrance, July 20, 2011
- Pomona, August 9, 2011
- Santa Monica, August 27, 2011
- Long Beach, September 17, 2011
- Westlake Village, September 22, 2011

SCE Website

The CSI-Thermal Program website continues to be updated with current information about the program including upcoming Contractor and Self-Installer trainings offered by SCE and SCG.

5.5.4 Southern California Gas Company

Training and Education

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 two workshops with 24 attendees during Q3.

Media Events, Public Forums and Workshops

In conjunction with the development of the Statewide Plan, SCG developed its Local Market Facilitation Plan that built upon the approach and tactics of the Statewide Plan to achieve a synergy and efficiency with its implementation. SCG prepared a PowerPoint presentation for the workshop using the same structure and design template as the Statewide Plan to help illustrate the cohesion between the Plans.

On August 3, 2011, the SCG M&O representative presented the Statewide Market Facilitation Plan to CPUC staff and the public at the CPUC Public Workshop held at CPUC offices in San Francisco. The representative entertained questions and took input from staff and the public following the presentation.

Modifications were made to the SCG plan to reflect the changes made to the Statewide Plan, and on August 31, 2011, SCG submitted Advice Letter 4098-A: "Supplemental: Solar Water-Heating Market Facilitation Plan and Budget in Compliance with Decision (D.) 10-01-022", with a requested effective date of September 30, 2011.

Solar Water Heating Demonstration Unit

SCG commissioned the creation of a SWH Demonstration Unit that was completed in August, 2011. The compact Demo Unit, 6½ feet high by 40 inches wide, is a non-working example using flat-plate solar collectors in a closed-loop glycol system. Cutaway mini-collectors were used to show how they are constructed of copper tubing covered by insulation and topped by a black panel under a plate of glass. Yellow-colored tubing complete with a Grundfos pump illustrated the glycol solution flow between the solar collectors and the copper tubing heat exchanger located in a small-scale cutaway model of a solar water tank. Red and blue-colored tubing illustrated the hot and cold water flows between the solar water tank and the back-up conventional tank. A temperature mixing valve and shut-off valves were incorporated to aid in the comprehension of the water flows. An explanatory sign was included so the demo unit could function effectively as a display in a variety of settings.

LA County Fair

The CSI-Thermal Program was one of the key underwriters of the SCG booth at the LA County Fair held in Pomona, California from September 1, 2011, to October 2, 2011. Nearly 1.5 million people attended the fair, and the Program was prominently featured in the SCG booth by exhibiting the new SWH Demonstration Unit to the public, distributing the CSI-Thermal Program Fact Sheet, and giving away approximately 15,000 promotional items.

Website Development

SCG updated the content for its dedicated CSI-Thermal Program pages: http://www.socalgas.com/solar, during the quarter.

Customer Contact Center

SCG continued to provide fact sheets and 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 email account for SWH inquires.

Account Executive Collaboration

SCG continues to hold meetings and provide updates to its Account Executives to educate staff on the CSI-Thermal Program. Discussions focus on addressing specific hot water loads for residential and large commercial applications.

6. Regulatory Update

Since the last quarterly progress report, the program has been impacted by the following regulatory activities:

On July 7, 2011, the CPUC issued a Staff Workshop Report on the Other Thermal Technologies workshop that was held in February. The report reviews the issues addressed in the workshop and summarizes the discussion among the parties as well as the post-workshop written comments.

A public workshop was hosted by the CPUC on August 3, 2011 to allow the Energy Division and interested parties to hear the statewide and local marketing facilitation activities that the PAs would be filing. On the same day, SCG filed proposed amendments to the CSI-Thermal Handbook on behalf of the PAs which was subsequently approved by the CPUC on September 28, 2011.

Statewide and local market facilitation plans were filed by the PAs on August 31, 2011. SCG filed the statewide plan on behalf of all the PAs with a requested effective date of September 30, 2011. Approvals were still pending at the end of the quarter.

In response to EchoFirst's petition to accept equipment certified to the OG-300 and OG-100 standards by any Nationally Recognized Testing Laboratory (NRTL) or American National Standards Institute (ANSI) accredited laboratory such as the International Association of Plumbing and Mechanical Officials (IAPMO), SCE on behalf of the PAs filed a joint response on September 6 to allow IAPMO but require other entities to apply for approval. As mentioned in the Key Report Highlights section of the report, the Commission issued a Proposed Decision that agreed in part with the EchoFirst petition to allow IAPMO as a certifying entity along with the Solar Rating and Certification Corporation (SRCC). All other entities wishing to participate would have to apply for approval. The Proposed Decision was approved by the Commission at its November 10, 2011 business meeting.

On September 30, 2011, CCSE filed a joint PA request with the CPUC Executive Director to cancel the quarterly public forum for Q4 2011 to the following quarter when more definitive information and updates on pending issues will be available to share with stakeholders. This request was was granted on October 26, 2011

As of the writing of this report, a Decision on the low income component of the CSI-Thermal program was established in early October. In addition, a Proposed Decision to allow payment of incentives to SWH systems that displace propane usage for electric customers of PG&E, SCE and SDG&E was also issued on October 10. The Proposed Decision was approved by the Commission at its November 10, business meeting.

7. Conclusions

In the upcoming months there are several likely changes that will result in further expansion of the CSI-Thermal Program. The PAs are working very hard to anticipate and prepare for a busy time ahead.

Current program activity, while somewhat lower than anticipated, should continue to increase as a result of various changes and the launch of the statewide M&O campaign in early 2012.