

California Solar Initiative Thermal Program

Quarterly Progress Report

(July 1 – September 30, 2015)

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Table of Contents

1. Executive Summary	4
2. Introduction.....	4
2.1. Program Background.....	4
3. Program Expenditures.....	6
4. Program Progress	8
4.1 Turnaround Times	9
5. Market Facilitation	11
5.1 Statewide Marketing Facilitation Effort	11
5.2 Mandatory CSI-Thermal Program Workshops	12
5.3 PA-Specific Marketing Efforts.....	13
5.3.1 Southern California Gas Company	13
5.3.2 Center for Sustainable Energy	15
5.3.3 Pacific Gas and Electric Company.....	18
5.3.4 Southern California Edison Company.....	21
6. Conclusions.....	21

List of Tables

Table 1: CSI-Thermal Expenditures by PA	7
Table 2: CSI-Thermal Expenditures by PA (Natural Gas)	7
Table 3: CSI-Thermal Expenditures by PA (Electric/Propane)	7
Table 4: Multifamily/Commercial Application Processing Times by Program Administrator between "Reservation Application Review" and "Reservation Application Approved" Stages	9
Table 5: Processing Time from Application Review to Incentive Approval (1- Step – Single-Family Residential).....	10
Table 6: Processing Time from Application Review to Incentive Approval (2-and 3-Step - Commercial or Multifamily Residential)	11
Table 7: Mandatory CSI-Thermal Workshops Held by Program Administrator	12

1. Executive Summary

Southern California Gas (SCG) Company, on behalf of the California Solar Initiative (CSI) Thermal (CSI-Thermal) Program Administrators (PAs),¹ submits this Third Quarter (Q3) 2015 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 July 1, 2010 through September 30, 2015. 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.

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 2016.³ State law allows up to \$100.8 million of CSI funds to be used for incentives for solar thermal technologies that displace electricity usage; 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),⁴ which authorized the CPUC to create a \$250 million incentive program to promote the installation of 200,000 natural gas-displacing SWH systems on homes and businesses by 2017. AB 1470 required the CPUC to evaluate data from the SWH Pilot Program and determine whether a SWH program was "cost effective for ratepayers and in the public interest" before designing and implementing an incentive program for gas customers.

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 13 and Appendix A.

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

⁴ Public Utilities Code § 2860-2867.

On January 21, 2010, the CPUC established the CSI-Thermal Program,⁵ 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 SDG&E's 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.

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 the exception of 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.

On January 29, 2015, the CPUC issued D.15-01-035, effective January 29, 2015. The Decision modified the CSI-Thermal Program to raise incentive rates for single-family, multifamily, commercial, and low-income applications. Additionally, it increased the maximum rebate allowed for multifamily/commercial applications; reallocated the incentive budget to 10% single-family, 60% multifamily/commercial and 30% solar pools; placed a 50% incentive cap on solar pool systems; and allowed the PAs to make future program changes through the filing of a Tier 2 Advice Letter rather than a Petition for Modification.

⁵ D.10-01-022.

On August 14, 2015, the PAs submitted an Advice Letter to revise the CSI-Thermal Handbook and update the state agency that oversees Targeted Employment Areas, and include Qualified Census Tracts as an option for a presumed resale restriction. The Handbook also updated the definitions and criteria for onsite field inspection processes, including infractions, failures, probation, suspension, and disqualification from the program. The revised Handbook became effective September 13, 2015.

On October 1, 2015, the CPUC issued D.15-10-004 modifying D.11-10-015 and allowing for expansion of the CSI-Thermal Low-Income Program to include customers participating in the Low-Income Weatherization Program (LIWP) and Low-Income Home Energy Assistance Program (LIHEAP).

The CSI-Thermal Program is designed to significantly increase the adoption rate of SWH technologies in the California marketplace. The budget, as noted above, was authorized by AB 1470 and by Senate Bill (SB) 1. One of the primary goals of the CSI-Thermal Program is to lower the cost of SWH technologies for the System Owner through incentives. Incentive rates decline over the life of the program in four steps to facilitate market transformation.

Additional information regarding program goals, budgets, incentive structures, and eligibility can be found in detail in the CSI-Thermal Program Handbook.⁶

3. Program Expenditures

From program inception through September 30, 2015, CSI-Thermal Program expenditures totaled **\$71,060,765**. Table 1 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 2 and Table 3.

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.

⁶ The CSI-Thermal Handbook is located at http://gosolarcalifornia.org/documents/CSI-Thermal_Handbook.pdf.

Table 1: CSI-Thermal Expenditures by PA

Natural Gas and Electric/Propane					
CSI-Thermal Program Expenditure Data January 1, 2010 to September 30, 2015					
Expenditure Type	CSE	SCE	PGE	SCG	Total
Administration	\$1,912,963	\$902,623	\$4,853,468	\$3,338,777	\$11,007,831
Market Facilitation	\$1,951,914	\$902,314	\$7,322,164	\$8,757,098*	\$18,933,490
Measurement & Evaluation	\$21,686	\$1,427	\$14,218	\$0	\$37,331
Incentives Paid	\$6,603,001	\$62,997	\$13,458,430	\$20,957,685	\$41,082,113
Total	\$10,489,564	\$1,869,361	\$25,648,280	\$33,053,560	\$71,060,765

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

Table 2: CSI-Thermal Expenditures by PA (Natural Gas)

Natural Gas				
July 1 – September 30, 2015				
Expenditure Type	CSE	PG&E	SCG	Total
Administration	\$58,421	\$274,990	\$177,349	\$510,760
Market Facilitation	\$48,838	\$196,775	\$468,844*	\$714,457
Measurement & Evaluation	\$585	\$5,385	\$0	\$5,970
Incentives Paid	\$1,033,833	\$872,627	\$2,853,599	\$4,760,059
Total	\$1,141,677	\$1,349,777	\$3,499,792	\$5,991,246

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

Table 3: CSI-Thermal Expenditures by PA (Electric/Propane)

Electric/Propane				
July 1 – September 30, 2015				
Expenditure Type	CSE	PG&E	SCE	Total
Administration	\$10,568	\$0	\$25,320	\$35,888
Market Facilitation	\$12,209	\$0	\$0	\$12,209
Measurement & Evaluation	\$146	\$59	\$0	\$205
Incentives Paid	\$0	\$0	\$0	\$0
Total	\$22,923	\$59	\$25,320	\$48,302

4. Program Progress

The CSI-Thermal Program has a solar thermal statistics website, which can be found at <http://csithermalstats.org/>. This website provides vital program statistics in easy-to-read charts and graphs, offers access to the program’s master data set, and includes resources for customers to find a local contractor.

When contractors or homeowners apply for incentives from the CSI-Thermal Program, they provide data about their residence or business and the solar thermal system they will install. California Solar Thermal Statistics analyzes selected data expected to be of greatest interest to the public. The data is updated every other week.

The View Solar Thermal Statistics menu provides the following program data: Program Totals, Statistics by Application Status, Quarterly Series Comparisons, Statistics by County, Statistics by Climate Zone, Cost by System Size, Applications by Sector, Savings Distribution, Budget Reports, and Data Annex. The dynamic filters on each figure allow you to slice and dice the program data to suit research and evaluation needs.

Data from past quarterly reports can be recreated and tracked with current data using the CSI-Thermal Statistics site, including, but not limited to, program budgets, costing data, and incentive step levels.

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 4 through 6 reflect the reporting period from July 1 through September 30, 2015.

Table 4 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 5 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 6 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 4: 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
	Q3	Q3	Q3	
Multifamily-Commercial				
CSE	60.00%	100.00%	0.00%	15
PG&E	94.29%	100.00%	0.00%	35
SCE	0.00%	0.00%	0.00%	0
SoCalGas	68.75%	87.50%	12.50%	32

Table 5: 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.				
CSE	33.33%	100.00%	0.00%	3
PG&E	100.00%	100.00%	0.00%	11
SCE	0.00%	0.00%	0.00%	0
SoCalGas	25.71%	37.14%	62.86%	35
Inspection: Percentage of applications with inspection with processing time between Incentive: Application Review and Incentive: Approved as described.				
CSE	0.00%	33.33%	66.67%	3
PG&E	83.33%	100.00%	0.00%	6
SCE	0.00%	0.00%	0.00%	0
SoCalGas	33.33%	66.67%	33.33%	9
Percentage of applications with processing time between Incentive: Application Review and Incentive: Paid as described.				
CSE	0.00%	50.00%	50.00%	8
PG&E	64.29%	100.00%	0.00%	14
SCE	0.00%	0.00%	0.00%	0
SoCalGas	22.50%	32.50%	67.50%	40

Table 6: Processing Time from Application Review to Incentive Approval (2- 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	95.45%	100.00%	0.00%	22
PG&E	100.00%	100.00%	0.00%	12
SCE	0.00%	0.00%	0.00%	0
SoCalGas	97.78%	100.00%	0.00%	45
Inspection: Percentage of applications with inspection with processing time between Incentive: Application Review and Incentive: Approved as described.				
CSE	0.00%	60.00%	40.00%	10
PG&E	36.36%	100.00%	0.00%	11
SCE	0.00%	0.00%	0.00%	0
SoCalGas	22.92%	68.75%	31.25%	48
Percentage of applications with processing time between Incentive: Application Review and Incentive: Paid as described.				
CSE	37.50%	84.38%	15.63%	32
PG&E	44.44%	100.00%	0.00%	27
SCE	0.00%	0.00%	0.00%	0
SoCalGas	27.27%	59.09%	40.91%	110

5. Market Facilitation

5.1 Statewide Marketing Facilitation Effort

CSI-Thermal Statewide Working Group

The CSI-Thermal Statewide Working Group executed monthly meetings during the third quarter to collaborate and exchange ideas for continuing to utilize diverse marketing and outreach channels to promote SWH.

5.2 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.⁷ As part of the statewide effort, the PAs coordinated this activity and developed a one-day Contractor and Self-installer curriculum for the training workshop.

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

Table 7 shows the number of workshops held in each service territory during Q3 2015 and the number of attendees. As of September 30, 2015, there are 590 licensed eligible solar contractors statewide.

Table 7: Mandatory CSI-Thermal Workshops Held by Program Administrator

	Q3 2015	
PA	Number of Workshops	Number of Attendees
CSE ⁸	1	3
PG&E	2	15
SCE	0	0
SCG	2	15
Total	5	33

⁷ <http://gosolarcalifornia.org/>.

⁸ CSE did not complete a second scheduled workshop due to no-shows.

5.3 PA-Specific Marketing Efforts

5.3.1 Southern California Gas Company

In Q3 2015, SCG continued collaborating with Alternative Energy Systems Consulting (AESC) to provide mandatory contractor and self-installer training courses (Two Courses with 15 attendees). SCG's course was offered at its Energy Resource Center in Downey, California.

Trade Shows and Events

SCG promoted the CSI-Thermal Program as an exhibitor at the following shows and events during Q3 2015. At each venue, brochures and promotional items were distributed.

Solar co-sponsored with other SCG Programs:

July 09, 2015	Arcadia Summer Concerts in the Park, Arcadia
July 09, 2015	Twilight Concerts at the Santa Monica Pier, Santa Monica (Experiential Unit)
July 11 – 12, 2015	Camarillo Fiesta and Street Fair, Camarillo
July 17 – 19, 2015	Ontario Home & Backyard Show, Ontario (Experiential Unit)
July 17, 2015	Green Living Expo & Concert, South Pasadena
July 23 – 26, 2015	Orange County Fair, Costa Mesa (Experiential Unit)
July 25 – 26, 2015	20th Annual Central Avenue Jazz Festival, Los Angeles
July 28 – 30, 2015	2015 Every Building Conference & Expo, Los Angeles (Experiential Unit)
August 1 – 2, 2015	International Surf Festival, Hermosa Beach (Experiential Unit)
August 4, 2015	Pasadena Water & Power Drought Update, Pasadena
August 5 – 6, 2015	Ventura County Fair, Ventura (Experiential Unit)
August 13, 2015	Cal Construction Expo, Long Beach (Experiential Unit)
August 21, 2015	Net Zero Energy Building Conference, Irwindale (Experiential Unit)
August 21 – 23, 2015	Anaheim Home & Garden Show, Anaheim (Experiential Unit)
August 22 – 23, 2015	Wings Over Camarillo, Camarillo
August 26, 2015	CAA Connect Southern California Rental Housing Conference & Expo, Anaheim (Experiential Unit)

September 4 – 06, 2015	Orange International Street Fair, Orange (Experiential Unit)
September 15 – 17, 2015	Solar Power International, Anaheim (Experiential Unit)
September 19, 2015	Route 66 Crusin’ Reunion, Ontario (Experiential Unit)
September 19, 2015	Green Expo, , Newport Beach
September 26, 2015	Simi Valley Green Living Expo

Local Market Facilitation Plan

Throughout Q3 2015, SCG finalized the commercial aspect of the local marketing campaign for the SWH program.

In the month of August, the entire residential and commercial campaign was officially in market.

SCG drafted and awarded the Local Post-Wave Research RFP in the month of September. During September, SCG also finalized the 2016 Marketing & Outreach plan and Advice Letter for CPUC review.

Solar Microsite

The SCG microsite, solarwaterheating101.com, continues to be a valuable resource for residential and commercial consumers. They can use it to find the latest information on different types of systems and rebates. The microsite has seen a dramatic increase in visitor traffic as a result of the regional television and radio advertising currently in market.

2015 CSI-Thermal Local Media Plan

The Solar Champion, UCLA video went into market during August. Since that time, UCLA has coordinated promotional efforts with SCG to build exposure around the video via, email and various social media platforms.

During Q3 2015, the “Solarista” experiential unit was present at 13 events within four counties to generate awareness of the technology.

CSI-Thermal Statewide Working Group

The CSI-Thermal Statewide Working Group met on three occasions to collaborate and exchange ideas for continuing to utilize diverse marketing and outreach channels to promote SWH.

5.3.2 Center for Sustainable Energy

Summary

Q3 2015 leveraged the marketing and outreach momentum of the previous quarters at CSE. Among some of the primary market facilitation-related tasks were monitoring and refining an integrated digital marketing campaign including digital advertising (individual properties and ad networks), pay-per-click and social advertising, and content marketing.

Training and Education

CSE conducted the following SWH workshops in Q3 2015. A brief description of each workshop follows.

Workshop Title	Date	Attendees
Solar for Homeowners	7/07/2015	31
How to Become an Eligible Contractor in the CSI-Thermal Program	7/23/2015	3
Solar Water Heating Basics for Homeowners	7/28/2015	15
Solar for Homeowners	8/8/2015	140
How to Become an Eligible Contractor in the CSI-Thermal Program	9/8/2015	5
Solar for Homeowners	9/10/2015	30

Solar Water Heating Basics for Homeowners

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

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.

Solar for Homeowners

This integrated workshop is for residents seeking to learn more about both SWH and solar photovoltaics (PV).

Workshop Promotion

CSE leveraged the following in-house communication platforms during Q3 2015 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 CSI-Thermal Program updates, promoting workshops and spreading awareness of SWH. In addition to occasional posting about solar thermal and upcoming workshops, CSE continued pay-per-click digital advertising during Q3 2015.

Marketing Activities by Tactic

Events:

During Q3 2015, the CSI-Thermal Program team engaged multifamily property owners and managers as a participant at a reverse tradeshow sponsored by the San Diego County Apartment Association (SDCAA). Brochures and promotional items were distributed at this venue. The CSI-Thermal Program team was also able to provide feedback to industrial professionals at the Intersolar North America conference in San Francisco.

- San Diego County Apartment Association (SDCAA) Reverse Tradeshow (multifamily) – 7/21/2015
- Skip Fralick Intersolar Presentation (50 attendees) – 7/14/15

Paid Advertising:

Homeowners

CSE has long recognized the challenging economics of SWH adoption within the residential market and during Q3 2015 focused narrowly on workshops and pay-per-click digital advertising (Google AdWords and Bing Ads) for this target sector.

- Google AdWords: 47,111 impressions; 260 clicks
- Bing Ads: 17,844 impressions; 132 clicks

Multifamily

With nearly half of San Diego County's three million residents currently living in rental housing, the multifamily market remains a promising opportunity for SWH adoption in San Diego.

Recognizing continued interest by contractors in the multifamily sector and the potential of recently increased rebates to further enhance the value proposition of SWH among this market segment, CSE has continued to actively engage and conduct targeted advertising to the multifamily market throughout Q3 2015.

San Diego Count Apartment Association (SDCAA):

SDCAA Advisor Newsletter Digital Banner Ads:

The SDCAA Advisor newsletter is distributed twice per month to over 4,200 members (multifamily apartment owners and managers) in San Diego County. According to Multibriefs, the organization that handles the SDCAA Advisor email distribution, the newsletter generally receives a 33.33% open rate and provides an average of 1,454 impressions per issue.

During Q3 2015, the SDCAA Advisor email newsletter provided a relatively low-cost means to reach the highly desirable multifamily target audience.

During Q3 2015, CSE ran six (6) ads resulting in 42 clicks to CSE's multifamily landing page for an average click-through rate of 0.58% (up from 0.36% in Q2 2015) and a total of 7,375 impressions. Creative is being refreshed every few advertisements and is assumed to be the reason for the uptick in click-through rates.

Commercial

Almost every business uses hot water, whether it is for hand sinks and showers or high-volume commercial dishwashers, heavy-duty laundries, pools or industrial processes. The focus of Q3 2015 marketing efforts for commercial solar thermal consisted of furthering exploratory research efforts with the goal of identifying promising target industries in San Diego.

San Diego Business Journal (SDBJ):

During Q3 2015, the CSI-Thermal Program placed an article and half-page print ad in the July 20 "Sustainable San Diego" section of the San Diego Business Journal (SDBJ). The July 20 article was titled, "Solar Water Heating Offers Energy and Cost Savings for Multitenant Property Owners and Occupants" and the call-to-action for the article and ad was to visit the solar water heating pages on the CSE website.

In addition to the print submission, a digital banner ad ran on SDBJ.com for the month of July with 15,000 guaranteed impressions, and a banner ad was distributed on the SDBJ email newsletter. As a result of this targeted marketing to SDBJ, the unique page views to the solar water heating for business pages for the month of July increased 71.76% over June's web traffic.

Commercial/ Industrial Lead Generation

The CSI-Thermal Program participated in the development of the Clean Energy Assessment tool, a free online assessment that assists commercial property owners/managers in discovering which clean energy technologies (including solar thermal) are most favorable for their business operations. During Q3 2015, the CSI-Thermal Program promoted the tool to facilities managers, property managers and energy engineers, and a few high quality assessments received in Q3 2015 enabled energy engineers and program staff to speak with interested commercial customers about SWH for their properties.

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, available rebates and how to find a contractor.

CSE Website Optimization

In addition to routine updates to CSI-Thermal Program web content (e.g., news, program updates, SEO improvements, etc.), during Q3 2015 the contractor page web updates were updated (July/August). The unique pageviews to the solar water heating for contractors pages for the month of July increased 61.82% over June's web traffic.

5.3.3 Pacific Gas and Electric Company

Q3 2015 represented a very active marketing period for PG&E with the launch of the direct to customer outreach targeting Residential and Commercial customers as well as multifamily property owners and managers. The key activities that were in-market this past quarter, as described in detail below, were:

- Education and Training
- Direct to Customer Outreach
 - Direct Mail
 - Email
- Telemarketing
- Social Media
- Content Marketing
- Digital/Paid Media
- Partnership with PG&E Representatives for Stakeholder Outreach

CSI-Thermal Program Workshops

PG&E's CSI-Thermal Program held two Contractors and Self-Installers Workshops in Q3 2015. The workshops were administered by the PG&E Program Administrator and the lead partnering Professional Engineer, leveraging the facilities of the Pacific Energy Center in San Francisco. All qualifying technologies are covered, in detail, and contractors were instructed how to access and properly use the CSI-Thermal Program tools, as previously outlined in section 5.2. The workshops continue to be important elements to convey program requirements and to ensure all installers are well prepared to engage successfully with the CSI-Thermal Program. Licensed contractors, self-installers and interested members of local governments have leveraged our Workshops, and the format continues to be an important tool for education, outreach and engagement with the solar community as a whole.

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 of the CSI-Thermal Program for residential and multifamily/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.

Customer Outreach

PG&E launched a multi-touch, multi-channel direct mail and email campaign to approximately 150,000 residential customers, 30,000 commercial customers, and 10,000 property owners and managers. The key messaging objectives were to highlight the increased incentives, provide a better understanding of SWH and its benefits (financial and environmental) and foster interest to learn more. The primary call to action was to request a solar water heating kit, a suite of in-depth information to help customers take the next step of finding an eligible contractor. Through these combined efforts, PG&E has generated a significant amount of traffic, approximately 8,000 unique visitors, to its solar water heating webpages. When appropriate, PG&E participates in webinars, conferences and tradeshows that are intended to educate customers, professional organizations and the extended community about the CSI-Thermal Program and its benefits.

- July 13-16 Intersolar, Sponsor and CALSEIA area member
- August 11 California Advanced Homes Program webinar

Telemarketing

In an effort to nurture leads, i.e. customers who have expressed interest in SWH by requesting a kit, PG&E has deployed telemarketing to guide them through the purchase process. PG&E conducted telemarketing as a follow-up to ensure customers have a trusted resource available and

to answer any questions about the technology or program. The overall objective is to help convert them to the next step of contacting a contractor. PG&E has seen a very positive outcome from the effort with approximately 50% of successfully reached residential customers and 70% of successfully reached business and multifamily customers indicating they are researching or actively reaching out to SWH contractors.

Social Media

PG&E launched a social media test on Facebook targeting the same audience that is part of the direct to customer outreach. Over a period of a week, the post reached over 16,000 customers and generated approximately 500 clicks to the SWH website. PG&E will take these learnings to optimize for a more robust social media campaign in 2016.

SWH Content for Businesses

PG&E has continued to serve up business relevant content with valuable resources for key small and medium commercial customers. Through search engine marketing and email follow-up, PG&E has been able to foster engagement of SWH content on our Business Resource webpage. This content (e.g., articles, eBooks, infographics) was developed to increase awareness and understanding of SWH as a viable energy management option and drive downloads of the SWH kit (presented as an eBook). The overall effort has achieved a conversion rate of 7.17%, with open rates of 37-58% for the follow-up emails and click-through rates of 11-27%.

Digital Media

The primary objective of the local digital media effort—(banners ads, native and search engine marketing)—has been to drive engagement among the target audience and drive traffic to PG&E’s SWH webpages for more information. PG&E has also been continued fostering engagement by remarketing ads to customers who have visited the site but have yet to take the desired action of downloading a SWH kit or searching for a contractor.

PG&E has found that digital media to be a proven way to promote SWH content with customers. Thus far in the 2015 campaign, the digital media is generating approximately 50% of the traffic to the SWH webpages on pge.com accounting for almost 40,000 unique website visits, over 34 million impressions and achieved a click-through rate of up to 0.23%.

Partnership with PG&E Representatives for Stakeholder Outreach

PG&E has been working with its internal sales team to leverage their relationships with business customers as has been done successfully for energy efficiency programs. A small, concentrated pilot was launched with PG&E account representatives in the Central Valley to conduct outreach to key decision makers within the Food and Beverage Processing industry. The account representatives were able to reach approximately 12% of the identified customers in the area to promote SWH. For many, this outreach led to additional meetings and discussions about the viability of SWH and the available rebates. Additional follow-up efforts will be conducted in Q1 2016 to try to drive customers to further engagement with the content and find a SWH contractor.

5.3.4 Southern California Edison Company

Since SCE and SCG have overlapping service territories, we are directing interested contractors and self-installers to SCG's monthly training center. Since CSI-Thermal Program rebates are no longer available in our territory, there is low to no interest for training.

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 SCG.

6. Conclusions

Through Q3 2015, 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 and where appropriate and when scientific or market-based reasons to do so exist. Since program inception, more than 3,047 projects have been completed as of the morning of October 25, 2015, accounting for over \$41.8 million in statewide incentive payments and annual savings in excess of 2.98MM therms and 920 MWh.