California Solar Initiative Progress Report Q4 2010 Data Annex

California Solar Initiative CPUC Staff Progress Report, Data Annex - Q4 2010

# Contents

1 Program History and Structure	3
2 Additional CSI Program Demand Statistics	5
2.1 PBI Incentive Demand	5
3 Administrative Statistics	5
3.1 Application and Incentive Processing Times	5
3.2 Installation Time	
3.3 Interconnection Time	
3.4 Incentive Claim Processing	8
4 CSI Program Trainings	
4.1 PG&E Training Offerings	
4.2 SCE Training Offerings	
4.3 CCSE Training Offerings	14
5 Program Dropouts	16
6 Net Energy Metering	18
Question 9	18
List of Figures	
Figure 1. Number of PBI systems by System Size and Program Administrator	5
Figure 2. Residential Reservation Processing	
Figure 3. Non-residential Reservation Processing	
Figure 4. Residential Project Completion Times	
Figure 5. Non-Residential Project Completion Times	
List of Tables	
Table 1. Incentive MW Available by Step, by Program Administrator and Customer Class	1
Table 2. Time from Application to Reservation	7
Table 3. Installation Time	
Table 4. Interconnection Time	-
Table 5. Incentive Claim Processing Times	
Table 6. Payment Time	
Table 7 Number of Trainings by Program Administrator	

Table 7. Number of Trainings by Program Administrator	12
Table 8. CSI MW Dropouts and Dollar Differentials	17

This report was compiled by the California Solar Initiative Program Administrators – Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), and the California Center for Sustainable Energy (CCSE) – pursuant to direction from the California Public Utilities Commission (CPUC).

# **1 Program History and Structure**

The original step allocations and megawatt (MW) goals were divided among the three investor-owned utilities (IOUs) according to the proportion of their respective electricity sales. Table 1 shows the original MW goals of the program allocated to PG&E, SCE, and CCSE (for SDG&E's service territory), separated into residential and non-residential segments. The goals and budgets were determined by each utility's percentage of electricity sales compared to the total of all utility sales. These allocated percentages are:

Program Administrator	Allocated Percent (%)
PG&E	43.7
SCE	46.0
SDG&E	10.3

As each Program Administrator (PA) receives applications for solar incentives, it tracks the total MW reflected in the applications received. Table 1 also shows the actual MW available or used at each step. The "actual" MW amount is different from the "original" MW amount because the "actual" amount takes into account program dropouts and represents the actual number of MW that will be paid at a given step. Finally, the highlighted sections of Table 1 show the current step for each PA and each customer segment, based on CSI Program demand as of December 2010.

Table 1. Incentive MW Available by Step, by Program Adr	Iministrator and Customer Class
---	---------------------------------

		PG&E (MW)			SCE (MW)					CCSE in SDG&E Territory (MW)				SoCalGas (MW)				
	MW	Residenti	al	al Non-Residential		Residential		Non-Resi	Non-Residential		Residential		Non-Residential		Residential		Non-Res	
Ste p	in Step	Original	Actual	Original	Actual	Original	Actual	Original	Actual	Original	Actual	Original	Actual	Origi nal	Actual	Origi nal	Actu al	
1	50	0	0	27.8	11.4	0.1	0	12.4	5.5	0	0	6.4	0.3	0	0	3.3	3.3	
2	70	10.1	11.9	20.5	17.4	10.6	9.3	21.6	21.4	2.4	2.2	4.8	7.5					
3	100	14.4	13.0	29.3	21.7	15.2	14.7	30.8	24.7	3.4	3.3	6.9	4.3					
4	130	18.7	18.0	38.1	28.6	19.7	20.8	40.1	19.9	4.4	4.3	9.0	4.8	SoCal	SoCalGas was a Program			
5	160	23.1	23.1	46.8	52.5	24.3	20.2	49.3	77.3	5.4	5.3	11.0	15.7	Admin	istrator in 2	2006 dur	ing the	
6	190	27.4	28.9	55.6	75.9	28.8		58.6	48.8	6.5	6.6	13.1	14.5		on to CSI, projects th			
7	215	31.0	32.8	62.9	67.2	32.6		66.3	65.8	7.3	7.7	14.8	17.6	-	/1/2007.			
8	250	36.1	5.71	73.2	34.1	38.0		77.1		8.5	0.9	17.3	0.2					
9	285	41.1		83.4		43.3		87.8		9.7		19.7						
10	350	50.5		102.5		53.1		107.9		11.9		24.2						
Subt	otal	252.4		512.3		265.6		539.5		59.5		120.8						
Total	S	764.7			805.1				180.3									
Perce	ent	43.7%				46.0%				10.3%								

Source: CPUC data request to Program Administrators, dated January 7, 2011, and covering data through December 31, 2010.

Notes: (1) Shading in the table denotes Current Step as of December 31, 2010.

(2) The "Actual" MW field in Table 1 denotes the actual amount of MW that are either actively reserved or completed in each step and will be paid out at the given incentive level. The "Actual" MW numbers are equal to the "Original" MW in step less dropouts from that step plus dropouts from previous steps. The "Actual" numbers are current as of December 31, 2010. The "Original" MW amount represents the original number of MW allocated to the step in CPUC decision D.06-12-033, Appendix B, Table 13.

(3) In accordance with CPUC policy decisions that provided for a transition between the Self Generation Incentive Program and the California Solar Initiative, Step 1 was fully reserved in 2006 under the Self Generation Incentive Program, which was only open to non-residential projects. The 50 MW in Step 1 were not allocated across the utilities and were reserved on a first come, first served basis. Although almost all Step 1 MW were reserved by non-residential entities, Program Administrators later reallocated Step 1 dropouts into both residential and non-residential customer segments.

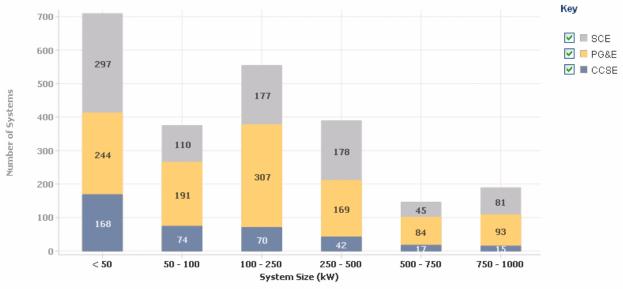
(4) Southern California Gas Company (SoCalGas) is an SGIP administrator and had MWs reserved in 2006 for solar projects at the Step 1 incentive level, but since SoCalGas is not a CSI Program Administrator, it has no CSI MWs reserved after January 1, 2007.

# 2 Additional CSI Program Demand Statistics

All references to capacity are reported as CEC-AC ratings (except Tables 1 and 8, which are reported in CSI rating). Additional CSI Program data and information can be found at the following URL: <u>www.GoSolarCalifornia.ca.gov</u>.

# 2.1 PBI Incentive Demand

The Performance Based Incentive (PBI) path is required of larger projects in the CSI Program. Currently, the CSI Program has 2,362 PBI projects. Figure 1 shows the number of PBI systems by size and PA as of December 31, 2010.



Source: www.californiasolarstatistics.ca.gov

# Figure 1. Number of PBI Systems by System Size and Program Administrator

# **3 Administrative Statistics**

The CPUC continues to track a number of administrative metrics in order to monitor potential program administration issues. In particular, the CPUC is interested in application and payment processing times, including the amount of time needed for moving projects from: application to reservation; application to project completion; and incentive claim request to payment. Additionally, the CPUC monitors the average number of days for interconnection applications to be completed.

The data in this section is responsive to a CPUC data request to the PAs dated January 7, 2011. The data presented is current through December 31, 2010, except as indicated.

# 3.1 Application and Incentive Processing Times

The PAs strive to process reservation requests in 30 days or less for both residential and non-residential customer applications. Table 2 shows the most recent application

processing times, from the date the application paperwork is physically received and time-stamped by the PA to the date that a reservation is granted (either "first reservation reserved" status or "first pending RFP" for non-residential applications or "first confirmed reservation" status for residential applications). This time period includes both PA application processing time and time that the host customer takes to respond to requests for more information or application corrections. Table 2 compares processing times from the most recent quarter (Q4, 2010) to average processing times for the same quarter of the last calendar year (Q4, 2009).

Applications for which the PA takes more than 60 days to grant a reservation typically have a problem. Problems encountered in these applications include, but are not limited to:

- Listed equipment does not match the EPBB printout
- Mailing address is different from the project site address
- Missing signatures
- Missing or incomplete documentation
- Slow customer responsiveness
- Non-Residential 3-step applications have a 60-day period for RFP submittal

Percentage of applications whose processing time between "Application Received" and "Confirmed Reservation" is:											
	15 days or less		30 days	or less	60 days	or less	Greater than 60 days				
	Q4 2010			Q4 2009	Q4 Q4 2010 2009		Q4 2010	Q4 2009			
RESIDENTIAL											
CCSE	80.2%	64.4%	95.4%	93.1%	99.7%	97.5%	0.3%	2.5%			
PG&E	84.0%	88.4%	94.9%	96.9%	99.6%	99.5%	0.4%	0.5%			
SCE	89.2%	38.2%	94.8%	69.9%	98.3%	95.2%	1.7%	4.8%			
NON-RESIDENTIAL											
CCSE	7.1%	40.0%	21.4%	81.8%	92.9%	100.0%	7.1%	0.0%			
PG&E	20.5%	58.9%	43.4%	82.2%	75.1%	96.7%	24.9%	3.3%			
SCE	27.4%	1.7%	50.4%	32.8%	86.7%	65.5%	13.3%	34.5%			

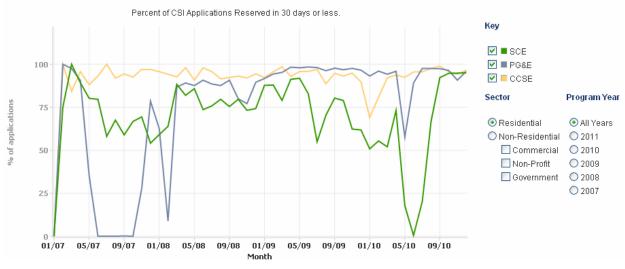
# Table 2. Time from Application to Reservation

**Source:** Based on public export from CA Solar Statistics at www.californiasolarstatistics.ca.gov.

*Notes:* "Q4" includes all applications that were reserved by the Program Administrators between October 1 and December 31 of a specific year.

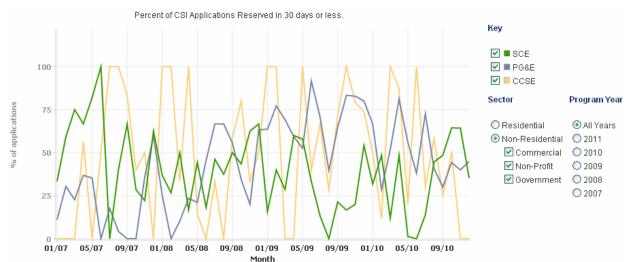
The data in Figures 2 and 3 offer another look at the PAs' progress toward achieving their administrative processing goals. These graphs show the percent of applications that were granted a reservation within 30 days, by month since the program began on January 1, 2007. The data is presented separately for each PA and is divided into residential and non-residential customer sectors. Since March 2008, the PAs consistently processed the majority of residential reservations in 30 days or less.

Analyzing data for non-residential applications is particularly challenging, because the PAs have received far fewer non-residential applications compared to the number of residential applications. As a result, the percentages appear erratic.



### **Figure 2. Residential Reservation Processing**

Source: Based on public export from CA Solar Statistics at www.californiasolarstatistics.ca.gov. Data covers January 1, 2007-December 31, 2010



*Source:* Based on public export from CA Solar Statistics at www.californiasolarstatistics.ca.gov. Data covers January 1, 2007-December 31, 2010

# **Figure 3. Non-Residential Reservation Processing**

#### 3.2 Installation time

The average installation time is determined by the applicant and not the PA. Residential applicants have 12 months and non-residential applicants have 18 months from the date of the confirmed reservation to submit an Incentive Claim Form (ICF). Installation times also vary according to residential and non-residential projects. Table 3 shows the

average number of calendar days between the customer's confirmed reservation date and the date that the ICF was received by the PA, for all applications for which the ICF was received in Q4 2010 and Q4 2009.

	Average Installation Time											
	Residential Q4 2010	Residential Q4 2009	Non-Residential Q4 2010	Non-Residential Q4 2009								
CCSE	105.6	95.6	251.5	266.8								
PG&E	121.2	119.6	224.6	238.2								
SCE	81.0	90.3	207.3	182.3								

# Table 3. Installation time

**Source:** Based on public export from CA Solar Statistics at www.californiasolarstatistics.ca.gov. **Notes:** "Q4" includes all projects whereby ICFs were received by the Program Administrators between October 1 and December 31 of a specific year.

# 3.3 Interconnection Time

The time for interconnection is determined by the date the utility's interconnection department deems the application to be complete (e.g., final single line, final building permit, etc.) and the date that the utility inspects the interconnection and issues the "permission to operate" letter. This time is generally under the utility's control and does not depend on additional inputs from other entities, such as cities, counties, etc. However, exogenous factors, such as customer availability or adverse weather conditions, may impact this process. Table 4 shows the average number of calendar days for the interconnection of residential and non-residential customer projects by IOU, for all projects that have been interconnected in the Q4 2009 and Q4 2010.

	Residential	Residential	Non-Residential	Non-Residential						
	Q4 2010	Q4 2009	Q4 2010	Q4 2009						
PG & E	24.7	7.5	18.4	10.7						
SCE	6.3	6.6	13.5	10.8						
SDG&E	2.9	2.8	4.2	3.5						

#### Table 4. Interconnection Time

Source: Program Administrators and SDG&E

# 3.4 Incentive Claim Processing

For CSI Program participants, incentive claim processing is an extremely important part of the project timeline. Table 5 shows how quickly incentive claims are processed for different types of projects, from the date that the ICF is physically received by the PA and time-stamped (often different than the date the ICF is electronically submitted in PowerClerk) to the date that the application is changed to "pending payment" status. After the ICF is submitted, the PA selects a random number of projects for onsite field inspection, during which inspectors verify that the installed system matches the system identified in the paperwork. As scheduling and inspection times often vary, projects identified in Table 5 are sorted into groups that were or were not inspected. Table 5 compares data from those projects that were identified as "pending payment" in Q4 2010 to those in Q4 2009. The majority of residential incentive claims are processed in 60 days or less. Applications for which the PA takes more than 90 days to process the incentive claim typically have a problem. Problems encountered with applications at the ICF stage include, but are not limited to:

- System not interconnected
- Revised EPBB not submitted to reflect changes in installed equipment
- Missing PMRS documentation
- Missing 10-year warranty for equipment and/or installation
- Incomplete or missing data about Performance Data Provider (PDP)
- Host customer unaware the need for a CSI inspection
- Failed meter or system inspection
- Missing or incomplete documentation

	30 day	s or less	60 day	60 days or less		s or less	Greater than 90 days	
	Q4 2010	Q4 2009	Q4 2010	Q4 2009	Q4 2010	Q4 2009	Q4 2010	Q4 2009
RESIDENTIAL with inspe	ction							
CCSE	4.0%	28.4%	38.0%	70.4%	64.0%	87.7%	36.0%	12.3%
PG&E	1.1%	35.2%	32.2%	89.5%	73.8%	93.8%	26.2%	6.2%
SCE	35.7%	20.6%	70.5%	70.9%	86.2%	83.4%	13.8%	16.6%
RESIDENTIAL without in:	spection							
CCSE	91.2%	86.0%	99.8%	95.8%	99.8%	97.2%	0.2%	2.8%
PG&E	60.6%	84.7%	91.5%	95.4%	97.2%	97.9%	2.8%	2.1%
SCE	83.0%	64.4%	91.3%	82.9%	94.9%	92.7%	5.1%	7.3%
NON-RESIDENTIAL with i	nspection							
CCSE	0.0%	0.0%	55.6%	0.0%	88.9%	100.0%	11.1%	0.0%
PG&E	0.0%	50.0%	25.0%	80.0%	68.8%	90.0%	31.2%	10.0%
SCE	31.8%	0.0%	77.3%	33.3%	95.5%	55.6%	4.5%	44.4%
NON-RESIDENTIAL witho	ut inspection							
CCSE	100.0%	63.2%	100.0%	94.7%	100.0%	94.7%	0.0%	5.3%
PG&E	35.1%	72.7%	64.9%	95.5%	81.9%	98.5%	18.1%	1.5%
SCE	33.3%	41.7%	69.7%	58.3%	81.8%	75.0%	18.2%	25.0%

#### **Table 5. Incentive Claim Processing Times**

Source: Based on public export from CA Solar Statistics at www.californiasolarstatistics.ca.gov.

*Notes:* "Q4" includes all applications that were approved for "Pending Payment" by the Program Administrators between October 1 and December 31 of a specific year.

Table 6 shows the average number of calendar days for an application in "Pending Payment" status to reach "Completed" status (EPBB payments) or "PBI in Payment" status (PBI payments). The time from "Pending Payment" to "Completed" status reflects the amount of time it takes for payment to be made to the applicant for EPBB payments and the time from "Pending Payment" to "PBI in Payment" status reflects the amount of time it takes for the first payment to be made to the applicant for PBI Payments. Timeframes vary according to residential and non-residential projects, but also depend upon whether the project is receiving an EPBB or PBI payment.

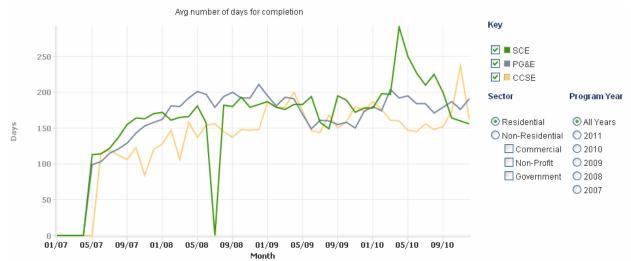
	Average Payment Time											
	Resid	ential	Non-Resi	dential								
	Q4 2010	Q4 2009	Q4 2010	Q4 2009								
CCSE												
EPBB Avg Days	35.5	35.3	32.5	26.3								
EPBB Projects	494	657	6	13								
PBI Avg Days	33.5	16.5	57.6	221.0								
PBI Projects	10	2	15	1								
PG&E												
EPBB Avg Days	11.0	8.5	13.9	8.9								
EPBB Projects	1,844	1,665	54	55								
PBI Avg Days	3.0	88.3	80.8	118.6								
PBI Projects	1	3	8	14								
SCE												
EPBB Avg Days	18.8	33.4	30.6	36.0								
EPBB Projects	1,873	833	44	23								
PBI Avg Days	48.9	53.0	42.4	58.2								
PBI Projects	12	26	26	12								

# Table 6. Payment Time

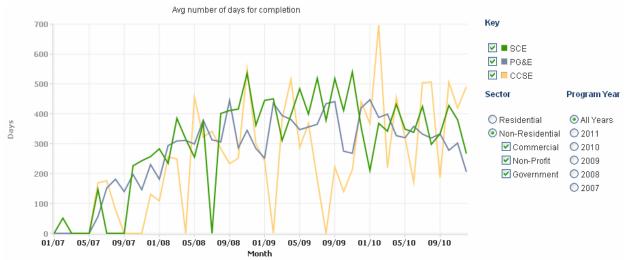
**Source:** Based on public export from CA Solar Statistics at <u>www.californiasolarstatistics.ca.gov</u>. **Notes:** "Q4" includes all ICFs applications that have reached either "PBI-In Payment" or "Completed" status between October 1 and December 31 of a specific year.

Figures 4 and 5 show the end-to-end monthly average project completion times (defined as time between "First Reservation Request Review Date" to either "First Completed

Date" or "First PBI - In Payment Date") in calendar days for all projects completed through December 31, 2010. These times reflect both the PA processing times and host customer responsiveness to inquiries, requests for additional data and inspection scheduling. The data in the figures below are separated by residential and non-residential customer projects completed in each given month, according to PA.



**Source:** Based on public export from CA Solar Statistics at www.californiasolarstatistics.ca.gov. Data covers January 1, 2007- December 31, 2010.



#### Figure 4. Residential project completion times

*Source:* Based on public export from CA Solar Statistics at www.californiasolarstatistics.ca.gov. Data covers January 1, 2007- December 31, 2010.

#### Figure 5. Non-Residential project completion times

# **4 CSI Program Trainings**

Each of the PAs regularly offer training for both customers and solar installers on the CSI Program and the benefits and technical details of solar generally. In Q4 2010, the CSI PAs held 100+ trainings and trained 3000+ attendees.

	PC	GE 🛛	SC	CE	CCSE		
	Q4 2010	Q4 2009	Q4 2010	Q4 2009	Q4 2010	Q4 2009	
Number of attendees at trainings	869	910	460	612	368	233	
Number of CSI Program Trainings held	39	51	10	14	11	7	

# Table 7. Number of Trainings by Program Administrator

**Source:** CSI Program Administrator's Marketing and Outreach departments

Notes: "Q4" refers to the period October 1 through December 31 of a given year.

# 4.1 PG&E Training Offerings

PG&E continues to offer a comprehensive suite of training and education options for consumers, contractors and others interested in solar-related topics and the CSI programs. An overview of these classes can be found on our solar education website, along with the corresponding slides and training materials, at

http://www.pge.com/solareducation. The trainings include classroom sessions which are often webcast, live webinars, and archived on-demand classes. These are funded by both the CSI group and the training centers in San Francisco and Stockton.

# 4.1.1 CSI-Funded Classes

CSI Program Workshops are offered for PV (quarterly) and Thermal (monthly) in both San Francisco and Stockton as well as outlying areas as demand dictates. These classes are intended for contractors and cover all aspects of the CSI programs including incentives, applications, and inspections. The PV version is also webcast.

For homeowners PG&E offers the very popular "Solar Saturday" classes in both PV and Thermal. These classes explain in simple and clear terms the basics of the technologies, how to assess feasibility and finances, and how to proceed in obtaining bids.

### 4.1.2 CSI-Funded Webinars

Our "Solar Noon" series consists of twice-a-week live webinars at noon on Tuesdays and Fridays. These cover a variety of subjects including solar basics, CSI Program basics (MASH, SASH, SGIP, NSHP, etc.), energy efficiency, and maintenance, as well as timely updates on changes in the various programs and handbooks.

### 4.1.3 Energy Center-Funded Classes

The Pacific Energy Center in San Francisco and the Energy Training Center in Stockton have full slate of solar-related classes for both contractors and the general public, in both PV and Thermal. These include beginning, intermediate and advanced, along with classes in solar inspections geared for building officials.

### 4.1.4 Energy Center-Funded On-demand Classes

PG&E is also instigating the development of on-demand (archived) classes in a variety of basic solar topics. These are more than just recorded webinars but are fully indexed, self-paced trainings along with quizzes, with the capability of tracking students' progress. The first modules on Solar Water Heating Basics can be found here: www.pge.com/ondemandenergyclasses.

# 4.1.5 Train-the-Trainer and Other Outreach

PG&E continues its ongoing collaboration with state and community colleges to conduct teacher trainings and share curriculum, being prominent in the Energy Faculty Forum and other similar groups. PG&E is a prominent member of many solar advocacy groups such as CALSEIA and Solartech, often providing speakers as well as financial support at their many events.

# 4.2 SCE Training Offerings

SCE continues to offer classes geared toward contractors as well as non-residential and residential customers. During the fourth quarter of 2010, SCE reached 302 contractors through five "CSI Contractor Solar Classes," two of which were Webinars; 62 commercial customers through one "CSI Commercial Solar Workshop"; and 96 residential customers through four Homeowner Solar Classes (HSC). No Solar Fairs were scheduled during the fourth quarter.

The subject matter SCE presents in its classes is updated as program changes dictate. SCE also makes adjustments based on feedback received from attendees.

#### 4.2.1 Intro to CSI Classes

The "Contractor Solar Class" is a course designed for solar contractors, self-installers, managers and PV owners, and features new and updated information on the CSI Program. During the course discussion, information is given to attendees on the following topics: (i) how to participate in the program; (ii) system basics, including the

different types of solar systems, metering, monitoring, site and equipment requirements; and (iii) PowerClerk. In addition, SCE enhanced the Interconnection information provided during this course beginning in 2009. Contractors can register online at <u>www.sce.com/ctac</u>.

# 4.2.2 Homeowner Solar Classes

SCE's HSC classes are 90-minute, easy-to-understand sessions that provide the basics of how residential customers can "go solar" without the "techy" jargon so often used and confusing to potential solar customers. For more information, please visit <u>www.sce.com/solartraining</u>

# 4.2.3 Commercial Solar Workshop

To help boost commercial CSI applications in 2010, SCE added a new Commercial Solar Workshop to its training curriculum to help explain the CSI programs to SCE's nonresidential customers. Customers can register online at <u>www.sce.com/ctac</u>.

# 4.3 CCSE Training Offerings

In Q4 of 2010, CCSE continued to offer a wide variety of workshops for homeowners, contractors, solar installers, and the general public.

CCSE continued to strengthen its outreach to solar consumers in Q4 of 2010. In addition to the Solar for Homeowners and Solar for Non-Residential Customers workshop series, CCSE offered a two-part Solar Savers workshop that provided a forum for both residential homeowners as well as non-residential building owners to learn about maximizing savings through the combination of energy efficiency measures and solar PV systems.

CCSE also continued its emphasis on solar contractor outreach to improve application processing efficiency, educate contractors on the CSI inspection protocol, and ensure ethical sales and marketing behaviors in the rapidly growing solar market. CCSE offered many workshops for solar contractors in Q4 of 2010 that focused on these topics (see detailed description below).

CCSE continued the new workshop series focusing on the latest technological developments in the solar market called "Solar Technology Series" with two very successful events in Q4. Both events had over 50 participants who were interested in solar PV system performance monitoring and MicroCSP technologies.

CCSE has partnered with various stakeholders and solar experts to run the workshops presented in Q4. They include Trimark Associates, Sopogy, Sun Marketing Solar, and Quick Mount PV.

CCSE's in-house workshops and trainings in Q4 of 2010 included:

# 4.3.1 Solar Technology Series

CCSE continued this bi-monthly workshop series which focuses on existing and emerging solar technologies. The next workshop in the series was held on October 4, 2010 and focused on solar PV monitoring systems and how they relate to the CSI program. The workshop was held by a representative of Trimark Associates. An additional workshop was held on December 9, 2010, which looked at how MicroCSP technologies, which have a small footprint and lightweight design, can provide highly efficient electrical and thermal power generation from a solar energy system. This workshop was held by representatives from Sopogy.

# 4.3.2 Solar Savers Commercial

CCSE held a workshop that presented case studies of commercial buildings to examine the synergy of energy efficiency measures and solar PV. The workshop focused on the possibilities with energy efficiency, where solar PV fits in, and how to finance the project. The workshop was held on October 7, 2010.

# 4.3.3 Solar Savers Residential

CCSE held a workshop that presented case studies of residential buildings to examine the synergy of energy efficiency measures and solar PV. The workshop focused on the possibilities with energy efficiency, where solar PV fits in, and how to finance the project. The workshop was held on October 8, 2010.

# 4.3.4 How to Market Your Solar Business

CCSE held a workshop for solar installers, developers, financiers and other solar companies that outlined ethical marketing and sales practices in the solar industry. The workshop was led by Dr. Mary Beth McCabe from Sun Marketing Solar and was held on October 26, 2010.

# 4.3.5 Solar for Homeowners

CCSE conducts a monthly Solar for Homeowners Workshop that educates homeowners in the San Diego area about how to read their annual electricity usage and properly size a PV system. The workshop also provides an overview of the CSI Program, and explains the financial and environmental benefits of going solar. These workshops were held on October 28, 2010, November 18, 2010, and December 16, 2010.

# 4.3.6 California Solar Initiative (CSI) Application Process

CCSE holds a quarterly workshop focused on the CSI application process and any recent changes to the program. This training session is designed for contractors but is open to the public. This workshop was held on November 2, 2010.

# 4.3.7 California Solar Initiative (CSI) Inspection Protocol

CCSE renamed the regular Solar Shade Workshop to more appropriately capture all aspects of the inspection protocol that are covered. The workshop discusses the CSI Program's shade measurement requirements and inspection protocol. CCSE strongly encourages all installers to attend. This workshop was held on November 17, 2010.

# 4.3.8 Solar Roofing Best Practices

CCSE held a workshop that discussed how to follow important roofing codes in order to maintain roof warranties and protect the roof, as well as installer liability. Johan Alfsen of Quick Mount PV held this workshop on December 2, 2010.

For more information on CCSE's workshops, visit: www.energycenter.org/calendar

# **5 Program Dropouts**

The CPUC hosted a workshop on CSI Program Dropouts and their effects on the CSI Budget in July 2008. Since that time, CPUC staff has continued to monitor and report on both the CSI Program dropout rate and the amount of incentive dollars unreserved when projects and their associated MW drop out of a higher incentive level and are added back in to the program after a step change, at a newer, lower incentive level.

**The CSI dropout rate is currently about 14.7% (CEC AC).** As of December 31, 2010, about 14.7% percent of reserved MW has dropped out of the CSI Program, representing 17.6% of reserved incentive dollars. This average dropout rate was calculated from the Public Data Export, which draws on data from the December 31, 2010, PowerClerk data, and includes *only those applications that have ever been granted a CSI reservation* (non-blank "Reservation Reserved" or "Confirmed Reservation" or "Pending RFP" date for nonresidential projects, and non-blank "Confirmed Reservation" date for residential projects).

The drop-out incentives are estimated to total approximately \$83 million for the CSI Program through December 2010. Additionally, when CSI projects drop out of the program and their associated MW are added in at a lower incentive rate, a small amount of incentive dollars become "unreserved." For example, if a 1 MW commercial project were to be reserved at incentive Step 4, its associated incentive would be \$1.9 million (1 MW x \$1.90/watt incentive). If that project was to drop out, and the MWs were to be added back in at incentive Step 5, the associated incentive would be \$1.55 million (1 MW x \$1.55/watt incentive). That represents a difference of \$350,000 in unreserved incentive. The CPUC requires the PAs to regularly report on the amounts of these unreserved incentives, and publishes the overall sum of these unreserved incentives in the quarterly Staff Progress Reports. Table 8 provides details by Step and PA of the estimated incentives that drop-out from earlier Steps as of December 31, 2010, as reported by the PAs in their responses to the CPUC Data Request dated January 7, 2011.

						· Dropouts unt						
Ste p	PG&E			SCE	SCE					Total		
	Res MW	NonRe s MW	\$million un- reserved									
1	3.3	13.4		0.1	6.9		0.0	6.2		3.4	26.5	
2a	0.0	3.1		0.1	0.1		0.0	0.8		0.1	4.0	
2b	1.4	13.2	\$10,119,745	1.4	5.3	\$2,986,625	0.2	1.8	\$1,772,309	3.0	20.3	\$14,878,679
3	2.0	12.6	\$8,690,970	1.9	9.8	\$6,543,090	1.7	3.7	\$2,810,817	5.6	26.1	\$18,044,877
4	12.2	29.6	\$10,959,629	0.9	23.7	\$8,771,427	1.6	7.8	\$3,293,816	14.7	61.1	\$23,024,872
5	3.5	26.7	\$11,036,580	0.2	5.8	\$4,553,274	0.4	2.4	\$1,900,604	4.1	34.9	\$17,490,458
6	10.2	12.4	\$3,338,090	0.0	11.4	\$5,145,463	0.1	2.6	\$1,096,317	10.3	26.4	\$9,279,870
7	0.5	4.8	\$214,025	0.0	2.3	\$0	0.1	1.8	\$229,788	0.6	8.9	\$443,813
8	0.0	0.8	\$0	0.0	0.0	\$0	0.0	0.0	\$0	0.0	0.8	\$0
Totals	29.8	100.1	\$44,359,039	4.4	58.3	\$27,999,879	4.1	20.1	\$11,103,651	38.3	178.5	\$83,162,569

### Table 8. CSI MW Dropouts and Dollar Differentials

Source: CPUC data request to Program Administrators, dated January 7, 2011 and covering data through December 31, 2010. Notes:

1) The "\$ unreserved" figure is an estimate based on the assumption that all non-residential dropouts are commercial projects. The actual figures may differ slightly based on government & non-profit participation in the steps. The "\$ unreserved" figure does not equal the total amount of incentive money associated with the dropped-out MW. Varying rate structures have an impact on the calculation for unreserved Incentive dollars.

2) Steps 1 and 2a were fully reserved under the Self Generation Incentive Program in 2006, and these applications were subject to different programmatic rules. Therefore, Step 1 and 2a dropout rates are not directly comparable to the rates for Step 2 and beyond, and are not included in the totals row at the bottom of Table 8.

# **Question 9. Net Energy Metering**

PUC Section 2827 establishes net energy metering (NEM) for solar and small wind customer-generators. The answers to these questions should be combined and included in the Data Annex.

 How many total NEM customer generators, pursuant to PUC Section 2827, are interconnected in your service territory as of December 31<sup>st</sup>, 2010?

Service Territory	# of Customers
PG&E	46,733
SCE	18,730
SDG&E	11,777

b. How many NEM customer generators from subsection a. are **solar** customer generators?

Service Territory	# of Customers
PG&E	46,622
SCE	18,459
SDG&E	11,747

c. What is the "total rated generating capacity" (in MW) of all NEM customer-generators pursuant to PUC Section 2827, as of December 31<sup>st</sup>, 2010?

Service Territory	MW
PG&E	406.6
SCE	206.8
SDG&E	90.7

d. What is the "total rated generating capacity" (in MW) of **solar** NEM customer-generators only pursuant to PUC Section 2827, as of December 31<sup>st</sup>, 2010?

Service Territory	MW
PG&E	405.3
SCE	202.0
SDG&E	90.6

e. What percentage of your "aggregate customer peak demand," pursuant to PUC Section 2827(c)(1), is accounted for by all NEM customer-generators, as of December 31<sup>st</sup>, 2010?

Service Territory	Percent
PG&E	1.95%
SCE	0.89%
SDG&E	1.96%