California Solar Initiative
California Public Utilities Commission Staff Progress Report
Data Annex
October 2008

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This California Solar Initiative CPUC Staff Progress Report Data Annex contains additional program data and administrative processing information. This data is provided as a supplement to the October 2008 Progress Report.

1 Program Data

1.1 Incentives Available and Reserved by Step

The original step allocations and megawatt goals were divided among the three investor-owned utility according to a relative proportion of electricity sales. Table 1shows the original MW goals of the program divided by PG&E, SCE, and CCSE, as well as residential and non-residential. The goals (and budgets) were divided by utility territory based on a relative percentage of electricity sales, and they are PG&E - 43.7%, SCE - 46.0%, SDG&E - 10.3%.

As each Program Administrator receives applications for solar incentives, it tracks the total MWs reflected in the applications received. Table 1 also shows the actual MW available or used at each step. The "actual" MW amount is different than the "original" MW amount because the actual amount takes into account Program dropouts, and represents that actual number of MW that will be paid out at a given step.

Finally, Table 1 shows in highlight the current step for each Program administrator and each customer segment, based on CSI Program demand as of May 31st, 2008. PG&E and SCE are both in Step 5 for Non-Residential, for example.

Table 1. Incentive MW Available by Step, by Program Administrator and Customer Class

Step	MW in Step	PG&E (MW)				SCE (MW)				CCSE in SDG&E Territory (MW)				SoCalGas (MW)			
		Residential		Non-Residential		Residential		Non-Residential		Residential		Non-Residential		Residential		Non-Res	
		Original	Actual	Original	Actual	Original	Actual	Original	Actual	Original	Actual	Original	Actual	Original	Actual	Original	Actual
1	50	0	0	27.8	11.5	0.07	0	12.4	5.5	0	0	6.4	0.3	0	0	3.3	3.3
2	70	10.1	9.7	20.5	20.6	10.6	10.6	21.6	22.6	2.4	2.4	4.8	8.1	SoCalGas was a Program Administrator in 2006 during the transition to CSI, but has no role in CSI projects that started since 1/1/2007.			
3	100	14.4	14.6	29.3	26.3	15.2	15.3	30.8	30.6	3.4	3.4	6.9	7.3				
4	130	18.7	19.2	38.1	38.1	19.7		40.1	37.3	4.4		9.0	10.5				
5	160	23.1		46.8	62.8	24.3		49.3	58.2	5.4		11.0					
6	190	27.4		55.6		28.8		58.6		6.5		13.1					
7	215	31.0		62.9		32.6		66.3		7.3		14.8					
8	250	36.1		73.2		38.0		77.1		8.5		17.3					
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					
Subtotal		252.4		512.3		265.6		539.5		59.5		120.8					
Totals		764.8				805.0				180.3							
Percent		43.7%				46.0%				10.3%							

Source: CPUC data request to Program Administrators, dated June 9th, 2008, and covering data through August 31st, 2008.

Table Notes:

(1) Shading Denotes Current Step as of Sept 24, 2008.

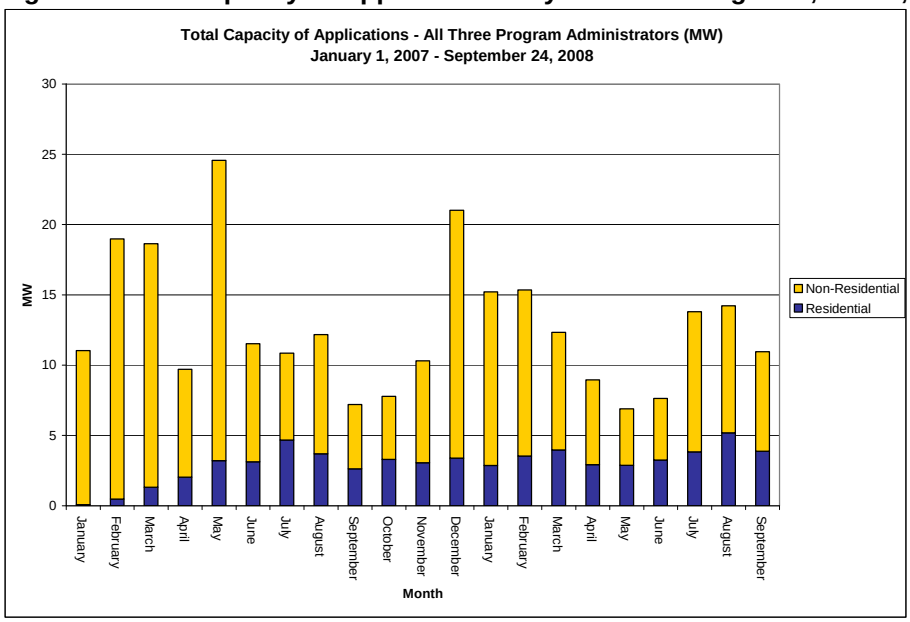
(2) The "Actual" MW field in Table 3 denotes the actual amount of MW that are either actively reserved or completed in each step and will be paid out at the given incentive level. The "Actual" MW numbers are equal to the "Original" MW in step less dropouts from that step plus dropouts from previous steps. The "Actual" numbers are current as of 05/31/2008. 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 therefore 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 categories.

(4) SoCalGas is an SGIP administrator, and therefore has MW reserved in 2006 at the Step 1 incentive level, but is not a CSI Program Administrator and has not reserved any CSI MW after 1/1/07.

1.2 Program Application Capacity by Customer Segment

Figure 1. Total Capacity of Applications - By Customer Segment, Jan. 1, 2007 – Sept. 24, 2008

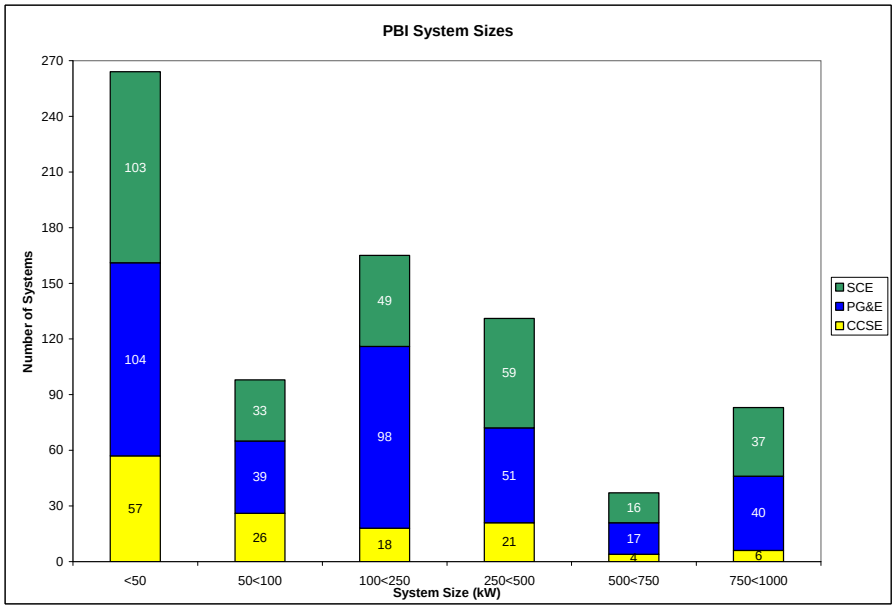


Source: CSI PowerClerk Online Database, September 24, 2008. Note: Total does not include cancelled or withdrawn projects.

1.3 PBI Incentive Demand

There are currently 778 PBI projects, that when installed will bring online an estimated 189 MW of new solar PV capacity. Figure 2 shows the number of PBI systems by size and program administrator.

Figure 2. Number of PBI Systems by System Size by Program Administrator, Jan. 1 – Sept. 24, 2008



Source: CSI PowerClerk Online Database, September 24, 2008.

1.4 Voluntary Opt-In to PBI System

The CPUC is also monitoring the extent to which customers are taking the PBI incentive payment even if they are not required to do so. This information will help inform the planned phase-down of PBI to 30 kW systems by 2010. The PBI incentive was required of all systems 100 kW and greater in 2007, and it is required of all systems 50 kW and above as of 2008. Customers that opt-in to PBI should be sure to understand the costs and rigor of the PBI monitoring and metering requirements. As shown in Table 2 and Table 3, the PBI incentive path is being taken by about 3% of customers that do not need to take PBI in 2007, and 2% of those customers in 2008.

Table 2. 2007 CSI Projects Below 100 kW that Opt into PBI

System Size	CCSE	PG&E	SCE	Total
<30kW	20	67	34	121
30<50kW	0	9	4	13
50<100kW	14	15	27	56
Total	**34**	**91**	**65**	**190**
# of Systems <100kW	*574*	*5024*	*1365*	*6963*
%of Systems <100kW in PBI	*5.9%*	*1.8%*	*4.8%*	*2.7%*
% of Systems <100kW in EPBB	*94.1%*	*98.2%*	*95.2%*	*97.3%*

Source: CSI PowerClerk Online Database, September 24, 2008.

Table 3. 2008 CSI Projects Below 50 kW that Opt into PBI

System Size	CCSE	PG&E	SCE	Total
<30kW	36	20	61	117
30<50kW	1	8	4	13
Total	**37**	**28**	**65**	**130**
# of Systems <50kW	*636*	*4177*	*1975*	*6788*
%of Systems <50kW in PBI	*5.8%*	*0.7%*	*3.3%*	*1.9%*
% of Systems <50kW in EPBB	*94.2%*	*99.3%*	*96.7%*	*98.1%*

Source: CSI PowerClerk Online Database, September 24, 2008.

2 Administrative Statistics

The CPUC continues to track a number of administrative metrics in order to monitor program administration and operational effectiveness issues. In particular, the CPUC is interested in application and payment processing times, including the amount of time from application to reservation, for project completion and interconnection and from incentive claim request to payment.

The data in this section is drawn from a CPUC data request to the Program Administrators dated August 28th, 2008. The data presented is current through August 31st, 2008, except where noted.

2.1 Application and incentive processing times

The Program Administrators strive to process reservation requests in 30 days or less for both residential and non-residential applications. Table 4 below shows the most recent application processing times, from the date the application paperwork is physically received and time-stamped by the Program Administrator to the date that a reservation is granted (either “reservation reserved” status for non-residential applications or “confirmed reservation” status for residential applications). It is important to

note that this time includes both Program Administrator application processing time and time that the host customer takes to respond to requests for more information or application corrections. Table 4 compares processing times from the most recent quarter to average processing times for the 2008 calendar year.

Applications that take more than 60 days to be granted a reservation can be assumed to have some sort of problem. Some of the most common problems encountered in these applications include:

- Listed equipment does not match EPBB printout
- Mailing address different than project site address
- Missing signatures
- Other missing or incomplete documentation
- Slow customer responsiveness

Table 4. Time from application to reservation

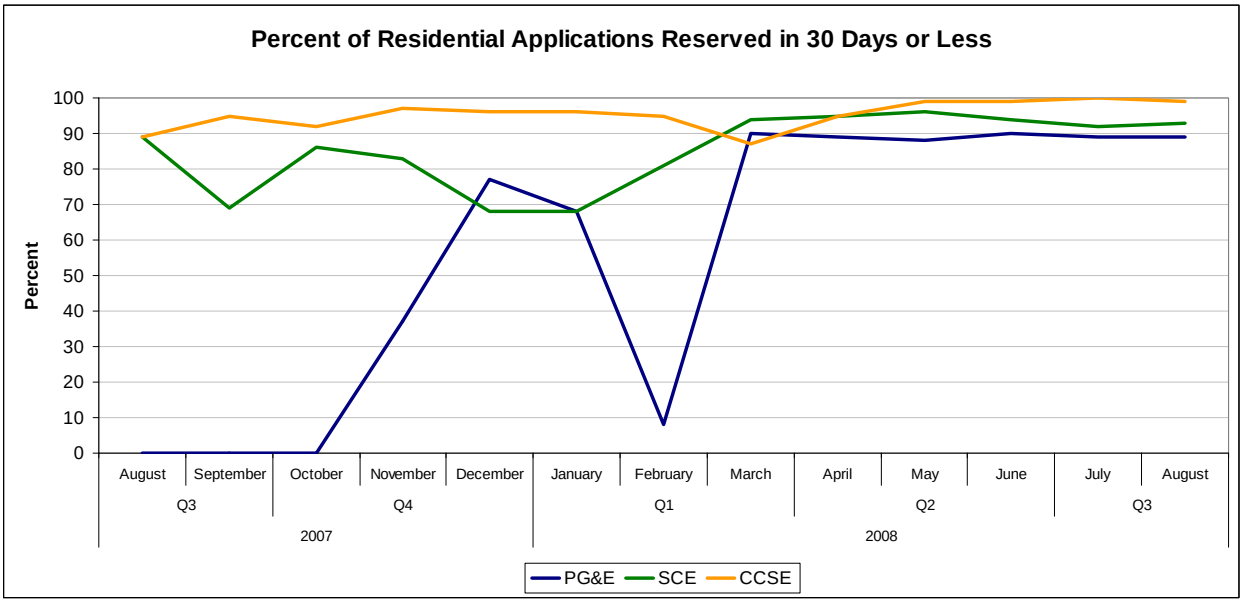
Percentage of applications whose processing time between "Application Received" and "Confirmed Reservation" is:										
	15 days or less		30 days or less		60 days or less		Greater than 60 days		Not yet reserved	
	Jun. – Aug.	2008	Jun. – Aug.	2008	Jun. – Aug.	2008	Jun. – Aug.	2008	Jun. – Aug.	2008
RESIDENTIAL										
PG&E	19%	21%	85%	79%	91%	93%	1%	2%	8%	5%
SCE	44%	53%	73%	83%	77%	87%	0%	0%	23%	13%
CCSE	85%	89%	95%	95%	95%	97%	0%	0%	5%	3%
NON-RESIDENTIAL										
PG&E	21%	11%	59%	34%	79%	63%	1%	22%	20%	15%
SCE	17%	19%	34%	52%	43%	74%	0%	2%	57%	24%
CCSE	36%	61%	72%	74%	84%	82%	4%	8%	12%	10%

Source: CPUC data request to Program Administrators, dated Aug 28th, 2008, and covering data through Aug 31st, 2008.

Table Notes: "Jun. – Aug." includes all applications that were received by the Program Administrators between Jun 1st, 2008, and Aug 31st, 2008. "2008" refers to all applications received by Program Administrators between January 1st, 2008, and Aug 31st, 2008. Please note that columns are additive.

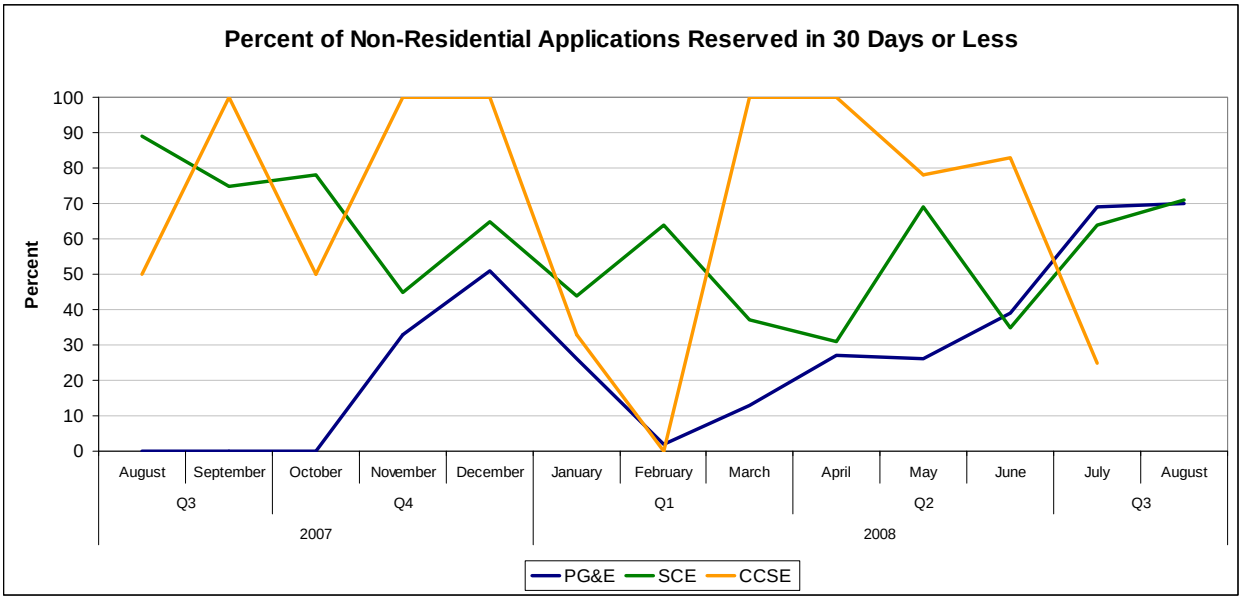
Figure 3 and Figure 4 offer another look at our progress towards achieving administrative processing goals. These graphs show the percent of applications granted a reservation within 30 days each month for the past year. The data is separated by Program Administrator and by residential and non-residential applications. Since March of 2008, the Program Administrators have been able to consistently process nearly 90 percent of residential reservations in 30 days or less. Data for non-residential applications is particularly challenging to track as far fewer non-residential applications have been submitted to the program when compared to the number of residential applications submitted. Due to the lower overall application volumes, the percentage numbers appear erratic – and one month may vary significantly from the next month, as shown in Figure 4.

Figure 3. Residential Reservation Processing



Source: CPUC data request to Program Administrators, dated Aug 28th, 2008, and covering data through Aug 31st, 2008.

Figure 4. Non-Resiodential Reservation Processing



Source: CPUC data request to Program Administrators, dated Aug 28th, 2008, and covering data through Aug 31st, 2008.

2.2 Installation time

The average installation time is determined by the applicant, not the Program Administrator. Residential and commercial applicants have 12 months from the date of their confirmed reservation to submit an Incentive Claim Form (ICF). Installation times also vary according to residential and non-residential projects. Table 5 below shows the average number of calendar days between confirmed reservation date

and the date that the Incentive Claim Form was received by the Program Administrator, for all applications where the ICF was received in 2008.

Table 5. Installation time

	RESIDENTIAL 2008	NONRESIDENTIAL 2008
PG&E	127 days	187 days
SCE	63 days	174 days
CCSE	105 days	130 days

Source: CPUC data request to Program Administrators, dated Aug 28th, 2008, and covering data through Aug 31st, 2008.
Table Notes: "2008" refers to all applications where ICF was received by Program Administrators between January 1st, 2008, and Aug 31st, 2008. Time is shown in calendar days.

2.3 Interconnection time

The time for interconnection is based upon the date the utility interconnection department deems the application to be complete (final single line, final building permit, etc.) to the date where the interconnection inspection is performed and the permission to operate letter is issued. This time is generally under the utility's control, and not dependent on additional inputs from cities, counties, etc. However, exogenous factors such as customer availability or adverse weather conditions may impact this process. Table 6 shows the average number of calendar days for the interconnection of residential and non-residential projects by program administrator, for all projects that have been interconnected in 2008.

Table 6. Interconnection time

	RESIDENTIAL 2008	NONRESIDENTIAL 2008
PG&E	7 days	9 days
SCE	4 days	8 days
CCSE	~ not available ~	~ note available ~

Source: CPUC data request to Program Administrators, dated Aug 28th, 2008, and covering data through Aug 31st, 2008. The Interconnection time data was unavailable for this report in SDG&E's service territory and it will be included in future reports.
Table Notes: "2008" refers to all projects that were interconnected between January 1st, 2008, and Aug 31st, 2008. Time is shown in calendar days.

2.4 Incentive claim processing

For CSI Program participants, incentive claim processing is an extremely important part of the project timeline. Table 7 below shows how quickly incentive claims are processed for different types of projects, from the date that the Incentive Claim Form is physically received and time-stamped (often different than the date the ICF is electronically submitted in PowerClerk) by the Program Administrator to the date that the application is changed to "pending payment" status. Normally, once the ICF is submitted, the Program Administrators select a random number of projects for onsite field inspection, where inspectors verify that the installed system matches the system identified in the paperwork. As scheduling and inspection times often vary, projects identified in Table 7 are sorted into groups that were or were not inspected. Table 7 compares data from those projects that were identified as "pending payment" in the last quarter to those projects whose claims were processed in 2008. The majority of residential incentive claims are processed in 60 days or less.

Applications that take more than 90 days for incentive claim processing can be assumed to have some sort of problem. Some of the most frequent types of problems encountered with applications at the incentive claims stage include:

- 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 of CSI inspection need
- Other missing or incomplete documentation

Table 7. Incentive claim processing

Percentage of applications whose processing time between "Incentive Claim Form Received" and "Pending Payment" stage is:										
	30 days or less		60 days or less		90 days or less		Greater than 90 days		Not yet in "Pending Payment" Stage	
	Jun. – Aug.	2008	Jun. – Aug.	2008	Jun. – Aug.	2008	Jun.– Aug.	2008	Jun. – Aug.	2008
RESIDENTIAL with inspection										
PG&E	26%	15%	78%	64%	83%	80%	0%	12%	17%	9%
SCE	17%	19%	78%	59%	93%	79%	0%	8%	7%	13%
CCSE	84%	88%	88%	92%	88%	94%	0%	0%	12%	6%
RESIDENTIAL without inspection										
PG&E	79%	68%	89%	87%	90%	91%	0%	3%	9%	6%
SCE	64%	69%	69%	79%	71%	82%	0%	2%	29%	16%
CCSE	85%	91%	88%	93%	88%	94%	0%	0%	12%	6%
NON-RESIDENTIAL with inspection										
PG&E	24%	13%	53%	47%	82%	72%	12%	23%	6%	5%
SCE	0%	4%	75%	52%	100%	70%	0%	17%	0%	13%
CCSE	100%	57%	100%	86%	100%	86%	0%	14%	0%	0%
NON-RESIDENTIAL without inspection										
PG&E	56%	53%	73%	71%	75%	79%	0%	3%	25%	17%
SCE	22%	20%	34%	35%	34%	42%	0%	7%	66%	51%
CCSE	60%	63%	70%	69%	70%	75%	0%	0%	30%	25%

Source: CPUC data request to Program Administrators, dated Aug 28th, 2008, and covering data through Aug 31st, 2008.
Table Notes: "Jun. – Aug." includes all applications that were received by the Program Administrators between Jun 1st, 2008, and Aug 31st, 2008. "2008" refers to all applications received by Program Administrators between January 1st, 2008, and Aug 31st, 2008. Please note that columns are additive.

Table 8 below shows the average number of calendar days for an application in "pending payment" status to reach "completed" status. The time from "pending payment" to "completed" status reflects the amount of time it takes for payment to be made to the applicant. Timeframes vary according to residential and non-residential projects, but also depend upon whether the project is receiving an EPBB or PBI payment.

The Program Administrators have made relatively few PBI payments, so the average number of days for first payment on these projects is expected to decrease with increased volume and a larger universe of data.

Table 8. Payment time

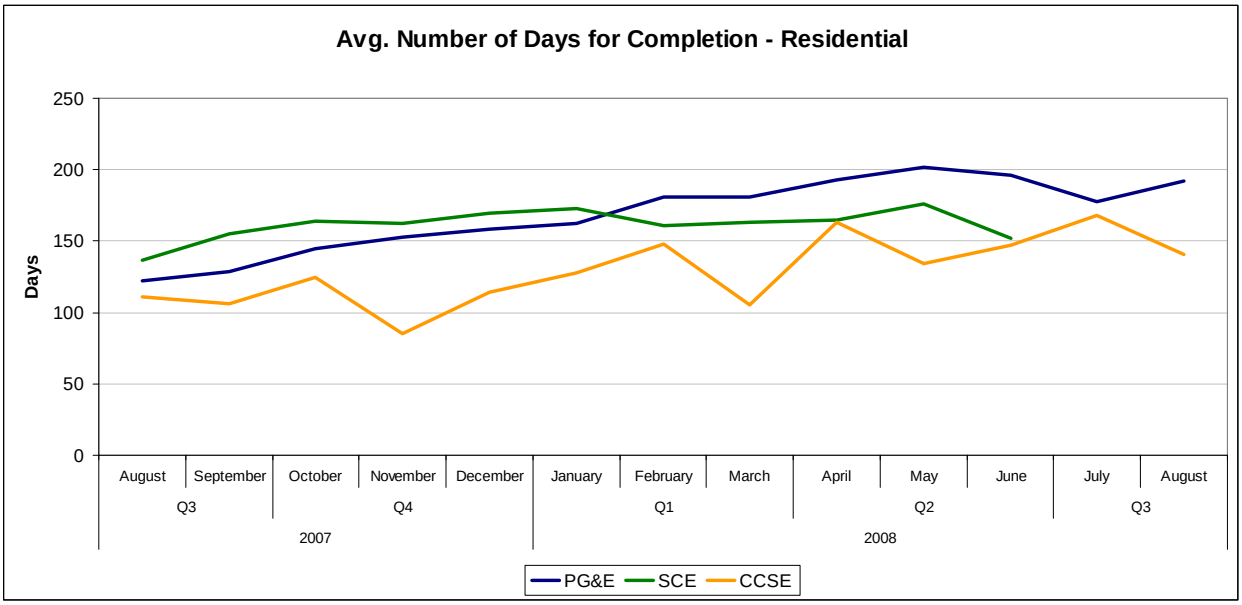
	Residential 2008		Non-Residential 2008	
	EPBB	PBI	EPBB	PBI
PG&E				
Avg. number of days	13 days	32 days	20 days	18 days
No. processed	3,575	19	84	21
SCE				
Avg. number of days	23 days	40 days	29 days	23 days
No. processed	993	30	37	38
CCSE				
Avg. number of days	17 days	31 days	19 days	21 days
No. processed	360	11	13	5

Source: CPUC data request to Program Administrators, dated Aug 28th, 2008, and covering data through Aug 31st, 2008.
Table Notes: "2008" refers to all projects where check issue date is between January 1st, 2008, and Aug 31st, 2008. Time is shown in calendar days.

2.5 End-to-end project completion times

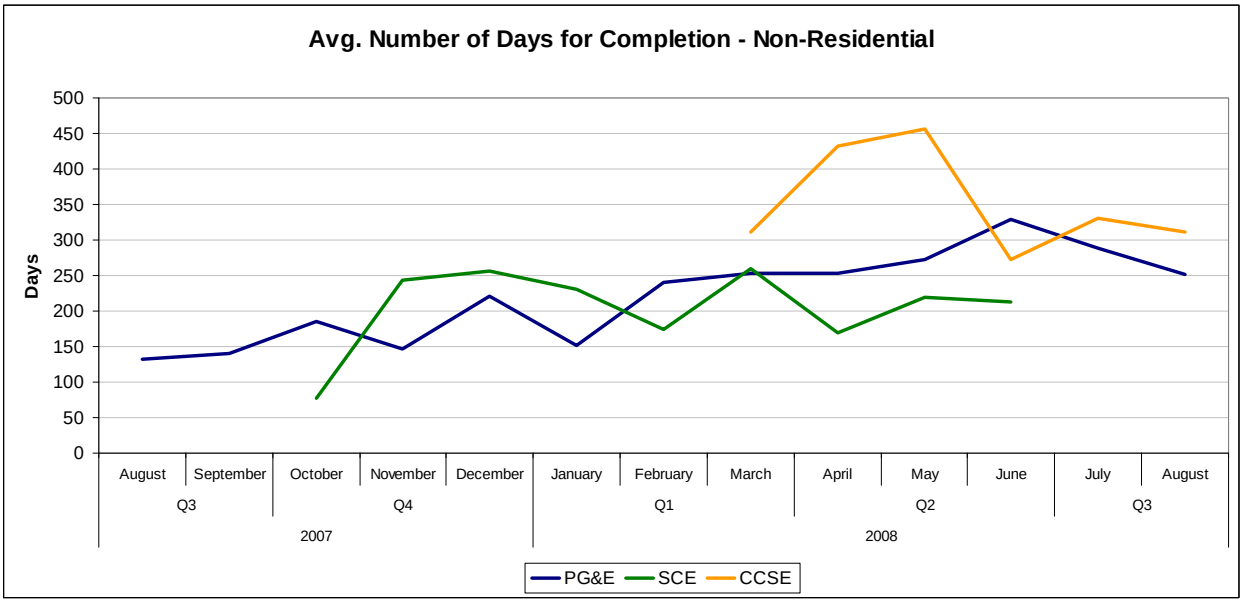
Figures 5 – 6 show both the number of projects completed and the end-to-end project completion times for the past year, in calendar days. It is important to note that these times reflect both the Program Administrator processing times and host customer responsiveness to inquiries, requests for additional data and inspection scheduling. The data in the figures below are separated by residential and non-residential projects completed in each given month, according to Program Administrator. As the CSI Program is relatively young and projects are given at least 12 months to complete, little data exists for early- and mid- 2007, particularly for non-residential projects. As we move through the second year of this ten-year program, we will continue to amass data on end-to-end completion times, and will monitor the progress of applications in the CSI Program.

Figure 5. Residential Project Completion Times



Source: CPUC data request to Program Administrators, dated Aug 28th, 2008, and covering data through Aug 31st, 2008.

Figure 6. Non-Residential Project Completion Times



Source: CPUC data request to Program Administrators, dated Aug 28th, 2008, and covering data through Aug 31st, 2008.
Table Notes: CCSE data provided only for those months where non-residential projects were completed.

2.6 Installer trainings

Each of the Program Administrators regularly offers training for both customers and solar installers on the CSI Program and the benefits and technical details of solar generally. Thus far, the CSI Program has held 33 trainings in 2008 and has trained at least 1,664 attendees.

Table 9. Installer trainings

	Number of CSI Trainings Held in 2008	Number of Attendees at Installer Trainings in 2008
PG&E	33	1,475
SCE	14	711
CCSE	12	532
Total	59	2,718

Source: CPUC data request to Program Administrators, dated Aug 28th, 2008, and covering data through Aug 31st, 2008. ***Table Notes:*** "2008" refers to all trainings held between January 1st, 2008, and Aug 31st, 2008.

PG&E has hosted at least six different training courses at its Pacific Energy Center in San Francisco and elsewhere throughout its service territory. These courses include CSI introductory, solar basics and more advanced solar installations trainings with content of interest to residential customers, installers, engineers, architects and other interested groups. For more information on PG&E trainings, call (415)973-2777 or visit www.pge.com/solar.

SCE has added new information on interconnections to its training seminars. SCE trainings also include information on participation in the CSI Program, including siting and equipment requirements and assistance with completing CSI forms. For more information on SCE's solar programs, visit the SCE website at http://www.sce.com/rebateandsavings/californiasolarinitiative?form=csi

CCSE offers two primary solar courses, "Solar for Homeowners" and "The Financial Case for Solar". Both workshops include information relevant to installers and homeowners. For more information, visit www.EnergyCenter.org and click "Events & Workshops".

2.7 Program dropouts

As the CSI Program continues, some systems have either dropped out or decreased in overall size (MW). As ordered in Commission decision D.07-05-007, these "dropout" MWs are added in to the current step at the time they drop out. This creates a dollar differential in terms of the incentive scheduled for a certain number of MW. The same number of MWs are incented, but some are shifted to a lower incentive tier, so the direct budget impact is reduced. Staff estimates the current dollar differential from dropouts to be approximately $16.13 million. Table 10 shows the dropout MW for the CSI Program, by Program Administrator. More detailed dropout data is available in the Appendix B of this report.
"MW" represents the number of MW that dropped out from that step and were either added back into their original step or added in to the step in which they dropped out. Step 1 was fully reserved under the SGIP in 2006, and these applications were subject to different programmatic rules. Therefore, Step 1 dropout rates are not directly comparable to the rates for Steps 2 and beyond, and are not included in the totals row at the bottom of Table 10.

Table 10 shows an overall program dropout rate of 8% of all MW that have ever been reserved. For projects that are older than 12 months and should have either reached completion or dropped out, the dropout rate is 9% of all MW, although a significant number of projects and MW remain incomplete in the non-residential sector even though they are past the 12 month marker. The rates are different for residential and commercial projects, with 3% of residential MW dropping out by 12 months and 10% of commercial MW dropping out by 12 months. A summary of completed, active and dropout projects by application, MW and incentive dollars is available in Table 10. On July 14, 2008, the CPUC hosted a public workshop to further examine the dropout problem and consider what action, if any, should be taken to deter program dropouts.

Table 10. CSI MW dropouts and dollar differentials

Step	PG&E			SCE			CCSE			All		
	Res MW	NonRes MW	$million un-reserved	Res MW	NonRes MW	$million un-reserved	Res MW	NonRes MW	$million un-reserved	Res MW	NonRes MW	$million un-reserved
1		16.62			7.01			6.16			29.79	
2a		3.10			3.44			0			3.10	
2b	0.57	10.07	$5.73	0.13	0.52	$0.51	0.04	1.01	$2.80	0.74	11.60	$9.04
3	0.38	7.89	$3.49	0.02	4.33	$2.24	1.44	0.70	$1.91	1.84	12.92	$7.64
4	0.05	19.91	$4.03		6.80	$1.89		1.30	$0	0.05	28.01	$5.92
5		0.35	$0		0.32	$0					0.67	$0
Totals	1.00	38.22	$13.25	0.15	11.97	$4.64	1.48	3.01	$4.71	2.63	53.20	$22.60

Source: CPUC data request to Program Administrators, dated Aug 28th, 2008, and covering data through Aug 31st, 2008.
Table 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 MWs. (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 10. (3) The amount of dropout MWs shown on this chart differs from that shown in Table 4 in the main Progress Report because this data includes MW changes from system downsizing.

2.8 Transition from SGIP to CSI

In 2006, the CPUC provided a transition between SGIP and the CSI. The most important aspects of this transition was that the CPUC (1) funded the SGIP program to meet a sharp rise in the demand for solar incentives and (2) set declining incentive declines based on the CPUC adopted CSI "step table" approved in advance of the actual program launch on January 1, 2007.

In 2006, nearly 97 MW of solar PV projects were reserved under the Self-Generation Incentive Program (SGIP). The first 50 MW of projects reserved in 2006 are considered "Step 1" of the CSI Trigger Tracker, and received incentive payments of $2.80 per watt for all customer classes. The Step 1 projects were based on "first come first serve" in all four SGIP Program Administrator territories. (SGIP has a fourth Program Administrator, Southern California Gas Company.) After these first 50 MW were reserved, the incentive levels declined to Step 2. In May 2006, projects began receiving "Step 2" level incentives of $2.50 per watt for residential & commercial customers and $3.25 per watt for government & non-profit customers. Although we originally expected to fund all of the "Step 2" MW from the CSI budget, a portion of these MW- those that were reserved in 2006- were paid out of SGIP funds.

Any unspent funds in the 2006 SGIP solar budget were transferred to the CSI balancing accounts on December 31st, 2006. Starting on January 1, 2007, all funds committed under the CSI are subject to the statutory budget limits expressly set for solar incentives from January 1, 2007 through 2016, as well as the budgetary detailed guidance provided by the CPUC.