



Single-family Affordable Solar Homes (SASH) Program

Q1 2010 Program Status Report

April 20, 2010



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Single-family Affordable Solar Homes

1. Program Summary

The Single-family Affordable Solar Homes (SASH) Program is one of the California Solar Initiative's two low-income programs. GRID Alternatives, a non-profit solar contractor, is the statewide Program Manager for the SASH Program. The SASH PV-solar incentive is available to qualifying low-income homeowners in the Pacific Gas and Electric (PG&E), Southern California Edison (SCE), and San Diego Gas and Electric territory (SDG&E) service territories.

The SASH Program is uniquely designed to be a comprehensive low-income solar program. In addition to providing aggressive incentives, SASH is structured to promote and to provide energy efficiency, workforce development, green jobs training, and broad community engagement with low-income communities. There is no other low-income solar program in California that has such a diverse range of benefits for low-income communities. It is truly a first-of-its-kind solar program.

The SASH incentive provides low-income families with free or low-cost PV-solar systems which significantly reduces household energy expenses and allows families to direct those savings toward other basic needs. GRID Alternatives' volunteer-based installation model has proven to be a highly efficient and low-cost model that makes solar even more affordable for low-income homeowners. In addition to being the primary installer for SASH, GRID provides education on and access to energy efficiency programs which further reduces a household's energy consumption and expenses.

In implementing the SASH Program, GRID Alternatives provides opportunities for local volunteers to assist with installations, to engage their communities, and to share their diverse experiences. Currently, GRID has thousands of volunteers statewide to help promote and install solar in low-income communities. GRID requires its volunteers to participate in a solar orientation program that educates these potential solar adopters about PV-solar and energy efficiency. This basic consumer education program will help further the broader CSI goals of promoting the use of PV-solar technology statewide and helping build broad-based community support for solar electric technologies and energy efficiency.

Finally, SASH provides a foundation for promoting and building a sustainable solar industry in California by incorporating a workforce development and job training component into the SASH Program. GRID partners with local job training programs to give their trainees an opportunity to get on-the-roof, hands-on experience installing PV-solar. The SASH Program also promotes partnerships between solar contractors and local workforce development programs by including a job training requirement for all sub-contracted SASH projects. This becomes a double benefit to low-income communities since many green-collar job trainees come from the same communities that the SASH Program aims to serve.

2. Q1 2010 Overview

In Q1 2010, the SASH Program experienced incredible structural growth and made significant progress in key areas including: launching the Sub-Contractor Partnership Program; increasing marketing and outreach efficiency; building partnerships with volunteers and job training/workforce programs; broadening the affordable housing client database; and successfully completing all third-party field and application inspections. GRID Alternatives expanded its outreach capacity in the Inland Empire region by adding outreach staff to serve communities in this region.

By the end of Q1 2010, 117 PV-systems have been installed and interconnected, 40 projects have been reserved and awaiting installation or interconnection, and another 116 applications statewide are under review by either the third-party Application Inspector or by GRID's construction staff to determine if a system design meets the 95% Design Factor requirement. Fifteen percent of all accepted applications are reviewed by a third-party Application Inspector. To date 100% of the applications have passed inspection. Third-party Field Inspectors inspected and passed 100% of the completed SASH installations.

Twenty-five projects qualified for the fully subsidized 1kW system. Because GRID Alternatives is a mission based non-profit organization with strong ties to the low-income communities that SASH aims to serve, we have listened to the needs of families and responded to the downturn in the economy by making nearly all 117 completed SASH installations free to the homeowners. GRID accomplished this by leveraging funding from local jurisdictions, project sponsorships, and general fundraising. Since the SASH incentive does not cover 100% of installation costs, identifying gap financing remains critical to achieving the long term goals of SASH.

3. Administrative Budget

The SASH Program budget is \$108.34 million. The program will be funded by Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), and San Diego Gas & Electric Company (SDG&E) according to the following percentages:

Table 1: SASH Budget Allocations by Utility Territory

	PG&E	SCE	SDG&E	Total
Budget %	43.7%	46%	10.3%	100%
Total Budget (\$ in millions)	47.34	49.8	11.2	108.34

The Program Manager shall ensure that the \$108.34 million is allocated as follows across program functions:

Table 2: SASH Budget Allocations by Program Functions

Administration	10%
Marketing and Outreach	4%
Evaluation	1%
Incentives	85%

The following table breaks down SASH administrative expenses through Q1 2010 by Task:

Task 1 (Administration): Develop & Implement a final program implementation plan

Task 2 (Administration): Identify, establish, and generate partnerships with stakeholders

Task 3 (Marketing & Outreach): Create & execute a targeted marketing and outreach campaign

Task 4 (Evaluation): Develop and update a system for program monitoring and evaluation.

Table 3: SASH Program Expenses per Quarter

	Q4 2008	Q1 2009	Q2 2009	Q3 2009	Q4 2009	Q1 2010	Totals
Administration	\$26,770	\$97,681	\$185,865	\$254,453	\$216,015	\$267,848	\$1,048,633
Marketing & Outreach	\$1,203	\$33,610	\$21,488	\$39,371	\$84,049	\$51,964	\$231,683
Evaluation	\$2,376	\$7,765	\$7,857	\$13,642	\$39,118	\$53,938	\$124,696
Subtotal	\$30,348	\$139,056	\$215,210	\$307,467	\$339,181	\$373,750	\$1,405,012
Incentives Paid			\$42,192	\$197,873	\$778,951	\$656,827	\$1,675,843

4. Applications, Installations, Incentives

The table below summarizes the status of all SASH applications through Q1 2010.

Table 4: SASH Applications by Status and Service Territory

Application Status	Number of Applications				Total kW, (CEC-AC)	Total Incentive	Avg # Days from current step to Step 3
	PG&E	SCE	SDG&E	Totals			
STEP 1: Applications under review	101	56	9	166	N/A*	N/A*	105
STEP 2: Confirmed Applications/Reservations	30	7	3	40	126.25	\$813,857	50
STEP 3: Completed/Installed	62	27	28	117	265.05	\$1,745,400	

Data collected 4/13/10

* System designs are not completed until the Applicant is confirmed to meet all other program requirements.

Chart 1: Completed Projects per Month

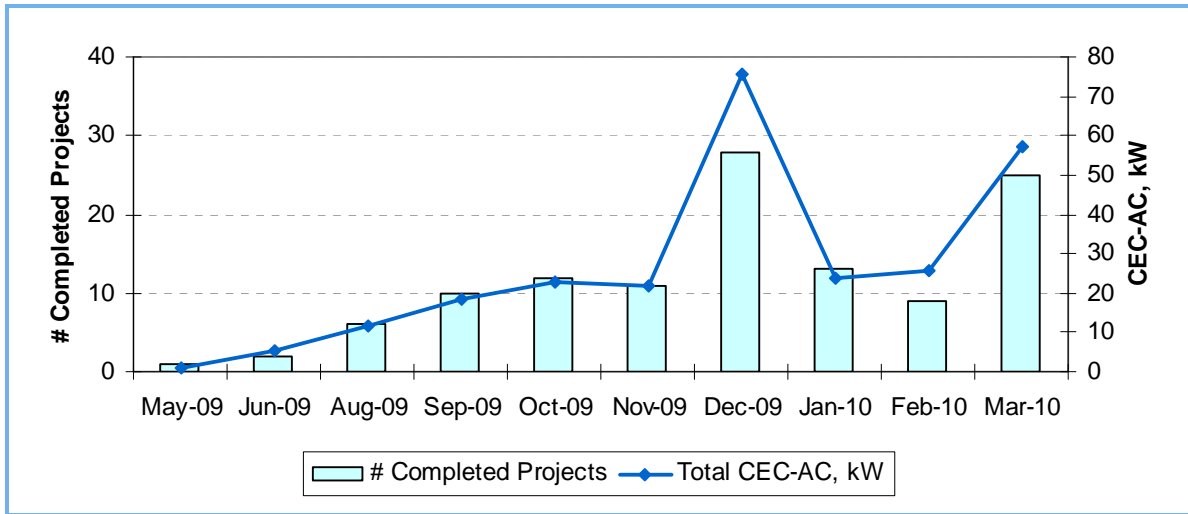


Table 5: SASH Incentive Rates, \$/W

Federal Income Tax liability	CARE-eligible	Not CARE-eligible
\$0	\$7.00	\$5.75
\$1 to \$1,000	\$6.50	\$5.25
>\$1,000	\$6.00	\$4.75

Table 6: Completed Projects by Incentive Level

	Incentive level, \$/W	PG&E				SCE				SDG&E			
		Total Count	Avg size, kW CEC-AC	Avg Installed cost, \$	Avg Installed Cost, \$/W	Total Count	Avg size, kW CEC-AC	Avg Installed cost, \$	Avg Installed Cost, \$/W	Total Count	Avg size, kW CEC-AC	Avg Installed cost, \$	Avg Installed Cost, \$/W
Non-CARE	\$4.75	7	2	\$13,000	\$6.50					1	1.5	\$11,803	\$7.87
	\$5.25	1	2.1	\$13,600	\$6.48								
	\$5.75	1	3.3	\$18,415	\$5.58								
CARE	\$6.00	13	2.5	\$15,036	\$6.01	3	2.45	\$14,600	\$5.96	6	2.2	\$13,000	\$5.91
	\$6.50	8	2.2	\$14,318	\$6.51	5	3	\$19,700	\$6.57	3	2.2	\$15,113	\$6.87
	\$7.00	25	2.9	\$18,493	\$6.38	14	2.6	\$17,807	\$6.85	6	2.4	\$16,200	\$6.75
	Free 1kW	8	1.1	\$10,100	\$9.18	5	1.1	\$10,300	\$9.36	12	1.1	\$10,215	\$9.29

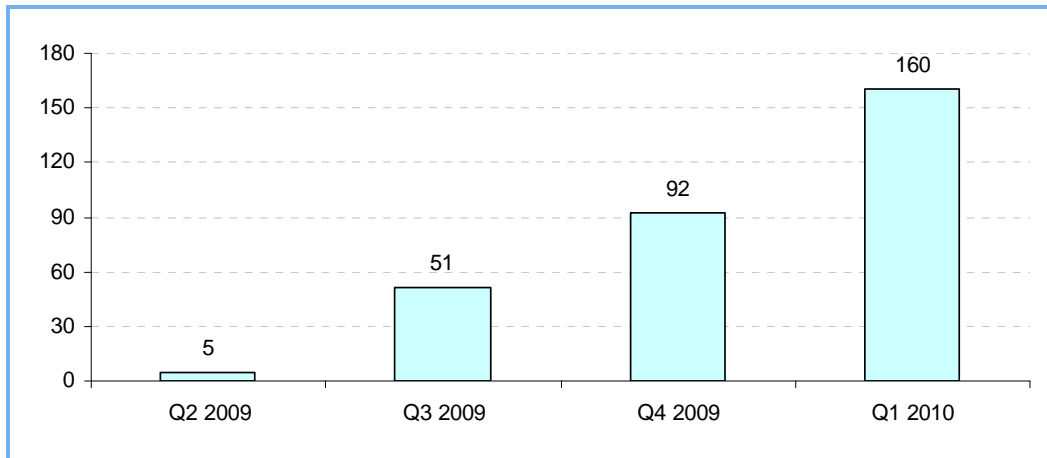
Table 7: Reserved Projects by Incentive Level

		PG&E				SCE				SDG&E			
Incentive level, \$/W		Total Count	Avg size, kW CEC-AC	Avg Installed cost, \$	Avg Installed Cost, \$/W	Total Count	Avg size, kW CEC-AC	Avg Installed cost, \$	Avg Installed Cost, \$/W	Total Count	Avg size, kW CEC-AC	Avg Installed cost, \$	Avg Installed Cost, \$/W
Non-CARE	\$4.75	2	2	\$13,900	\$6.95								
	\$5.25	1	2.7	\$18,000	\$6.67								
	\$5.75	1	3.7	\$23,600	\$6.38								
CARE	\$6.00	4	2.5	\$19,600	\$7.84	3	2.1	\$15,250	\$7.26				
	\$6.50	6	3.3	\$24,150	\$7.32	1	3.6	\$22,200	\$6.17				
	\$7.00	21	3.7	\$25,500	\$6.89	5	2.7	\$20,850	\$7.72	3	2.1	\$16,000	\$7.62
	Free 1kW	1	1.1	\$11,800	\$10.73					2	1.1	\$11,560	\$10.51

5. Marketing and Outreach

GRID currently has four offices located in Oakland, Carson, San Diego, and Fresno. In Q1 2010, GRID’s outreach capacity in the Inland Empire region expanded through the hiring of outreach personnel to serve that region. In Q1 2010, GRID received 160 applications which doubled the total number of applications received for the program to date. This increase can be attributed, in part, to the most recent changes to P.U. Code 2852 affordable housing requirements (discussed below). GRID also worked with local housing departments and low-income housing developers to do more targeted marketing to qualified P.U. Code 2852 homes.

Chart 2: Applications Received per Quarter



6. Sub-Contractor Partnership Program

GRID Alternatives continued developing the Sub-Contractor Partnership Program (SPP) in Q1 2010 and has created a strong foundation for the future of the program. Contractors can apply to the SPP program through GRID's website. In Q1 2010, GRID began bidding out over 40 SASH projects to SPP contractors which are anticipated to be installed in Q2 2010. GRID anticipates steady growth in sub-contracted projects throughout 2010.

During the SPP process GRID Alternatives will be responsible for all marketing, outreach, application inspection, coordination of third-party system inspection, homeowner training and follow-up. The sub-contractor will be responsible for the PV-solar system design and installation, warranties, permitting and building inspection, and utility interconnection.

The SPP program promotes partnerships between solar contractors and local workforce development programs by incorporating a job training requirement for all sub-contracted SASH projects. This becomes a double benefit to the low-income community since many solar job trainees come from the same communities that the SASH Program aims to serve.

7. Volunteer and Workforce Development

Volunteers, job training and workforce development programs are the backbone to GRID Alternatives and to the overall success of the SASH program. GRID reserves 20% of its in-house installations exclusively for workforce development programs, and the SASH Program has provided over 2,200 hours of hands-on experience to solar job trainees, further strengthening California's solar industry. While the volunteer labor is crucial to keeping installation and homeowner out-of-pocket costs at a minimum, there is also an inherent experiential and educational value that this volunteer experience gives to these potential solar adopters and passionate solar advocates.

GRID's statewide volunteer pool is currently over 9,000 individuals, with over 4,200 completing GRID's volunteer/solar orientation. Since the inception of the SASH Program, over 1500 volunteers participated in GRID's educational solar orientation program and worked directly on SASH installations. The orientation program allows GRID to promote solar energy and educates volunteers on solar technologies, the importance of energy efficiency, and the CSI incentive programs.

The Sub-Contractor Partnership Program requires all contractors to use current or recent solar job trainees on each sub-contracted SASH installation. We hope this will continue to propel the California solar industry forward and provide long lasting benefits beyond the scope of the CSI and SASH programs' lifecycles.

8. Energy Efficiency

Energy efficiency (EE) remains an important part of the SASH program and the overall mission of GRID Alternatives. We have improved our energy efficiency audit practices and now deliver a comprehensive report based on the EE audit tools provided by the IOUs. The audit is conducted regardless of the clients' enrollment into CARE or LIEE. GRID continues to work with the IOUs to streamline LIEE enrollment for SASH clients. The following table summarizes the number of homeowners that qualified and were enrolled into the LIEE programs.

Table 8: LIEE Enrollment

Utility	Total
PG&E	113
SCE	68
SDG&E	34

Though not a requirement for SASH, GRID is also investigating ways to ensure every SASH system is installed on a client's home that has received or will receive energy efficiency services. This effort will include developing partnership with EE contractors, LIHEAP providers, and non-profit organizations to help deliver services to non-LIEE eligible clients.

9. Affordable Housing Database

Developing a statewide affordable housing database is a unique challenge for SASH. GRID Alternatives and the California Housing Partnership Corporation (CHPC) have made significant progress with collecting this information given our strong ties and history working with the affordable housing community, non-profit organizations, and affordable housing developers throughout California.

In October 2009, the California Legislature revised the affordable housing requirements for the SASH and MASH programs (AB 1551) which broadened the definition of SASH-qualifying homes (P.U. Code 2852). Over the past five months, GRID has collected affordable housing data to measure the impact of these changes on SASH's long term goals. The changes adopted by the Legislature are projected to generally have a positive impact on the short-term (1-2 year) implementation of SASH; however, the overall pool of P.U. Code 2852 qualified homes may still be low with respect to the longer-term objectives of the SASH Program.

The SCE service territory has been our test-bed for gauging the effectiveness of 2852-changes since we were able to cover the entire territory prior to the change. Under the original definition, SCE had 500 qualifying addresses. Under the new definition (post legislative change), ~2200 qualifying addresses have been identified in the SCE territory. There are potentially ~2000 more addresses that may qualify and we are working to acquire the proper documentation to confirm their eligibility. This would give the program a total pool of 4200 addresses for SCE. GRID does not know how many of these addresses will be converted into actual installations but it is not likely that this pool would yield the ~2500 projects needed to serve SCE. GRID will work with Energy Division Staff to develop a strategy to address this challenge.

To date every jurisdiction in SCE and SDG&E territories has been asked to provide GRID/CHPC with P.U. Code 2852 eligible addresses. Under the original (pre-November 2009) P.U. Code 2852, only 1,400 addresses were identified as meeting the affordable housing requirement. Currently, the total number of eligible addresses is 5,440, nearly quadrupling the total from Q3 2009; SCE(2239), PG&E(2809), SDG&E(392). This increase is in large part due to the updated P.U. Code 2852 requirements which took effect in October 2009. GRID focused Q1 2010 efforts on collecting addresses from jurisdictions in SCE and SDG&E territories, as well as, conducting targeted outreach to jurisdictions in the PG&E territory.

Table 9: Affordable Housing Data

Closed Contacts				
Cities replied to GRID/CHPC request for addresses				
Territory	Total Jurisdictions in Territory	Total Jurisdictions Contacted	% Jurisdictions reporting data	Number of 2852-eligible Addresses
SCE	184	184	73%	2239
SDG&E	20	20	30%	392
PG&E	218	67	10%	2809
Total	422	271		5540