

State Solar Program Spotlight California Solar Initiative: Single-family Affordable Housing Program

This case study is part of a series prepared by Clean Energy Group for the Department of Energy's Solar America Initiative - Solar State Technical Outreach Partnership Project. This and other case studies of innovative state solar programs can be found on the States Advancing Solar website at www.statesadvancingsolar.org.

California Solar Initiative:

Establishing an Effective State Solar Program

On January 12, 2006, the California Public Utilities Commission (CPUC) committed to set aside 10 percent of the overall California Solar Initiative (CSI) funds for low-income customers and affordable housing projects. This decision, and as further clarified by Senate Bill 1 signed by the Governor on August 21, 2006, directs the CPUC to implement a solar incentive program that addresses the non-residential and existing housing markets in the investor-owned utility service areas of Pacific Gas and Electric (PG&E), Southern California Edison (SCE), and San Diego Gas & Electric (SDG&E). In December of 2006, the Commission ordered a 10-year total CSI budget of \$2.166 billion, and a low income incentive budget of \$216.68 million.

"Through the Single-Family Low-Income Incentive Program...our goal is to provide low-income homeowners access to solar photovoltaic systems, to decrease electricity usage and reduce bills without increasing monthly expenses...By enabling low-income households to purchase photovoltaic systems, this program will help ensure that all Californians have an opportunity to avail themselves of the benefits provided by the clean energy technologies this Commission so ardently supports, including solar."

CA PUC President Michael R. Peevey
November 16, 2007

Overall Program Approach

With Decision 07-11-045 on November 16, 2007, California Public Utilities Commission adopted an innovative \$108.34 million dollar program to provide incentives to low-income, single-family, owner-occupied homes in investor-owned utility territories. The goal of the Single-Family Low-Income Incentive Program is to provide low-income homeowners in California access to solar photovoltaic systems and to decrease electricity usage and reduce bills without increasing monthly expenses. The name of this program has been recently changed to the Single-Family Affordable Housing (SASH) Program. This program does not provide incentives for solar water heating systems.

The CSI SASH Program provides fully-subsidized 1 kW PV systems to very low-income households, and highly subsidized systems to other low-income households. The Commission expects approximately 1,800 households to qualify for fully-subsidized 1 kW systems. These systems are targeted towards households that cannot afford to take out loans to cover even part of the cost of a solar PV system. An additional 5,000 households are expected to be eligible for highly subsidized systems, whose owners also can take advantage of incentives, tax credits and other financing mechanisms.

Setting Guidelines for Applications

All SASH applicants must meet the legal definition of "low income residential housing" in Public Utilities Code 2852 to qualify for the program. Eligibility is limited to households

who financed their homes with low-income housing tax credits, tax-exempt mortgage revenue bonds, general obligation bonds, or local, state or federal loans or grants. In this program, the system owner must be the homeowner.

To qualify for a fully-subsidized 1 kW PV system, homeowners must first meet the eligibility requirements per Public Utilities Code 2852 and have household incomes at or below 50 percent of the area median income. The subsidy is capped at a maximum of \$10,000 per qualifying household, and a maximum of 20% of program funds will be used for full subsidies.

This program will also service those homeowners who qualify under Public Utilities Code 2852, but whose household income is over 50 percent of the area median income. These families will receive partial subsidies for the installation of their PV system; the size of the subsidy will depend upon their federal tax liability. The CSI program has agreed to subsidize between 50% and 75% of the PV systems installed on these houses and to facilitate low-interest loans for the remainder of the cost.

The electricity generated by homeowners will be re-directed into the electrical grid they are on, and at the end of the year, any electricity generated will be subtracted from the cost of their total consumption. However, homeowners will not be paid for any excess energy generated during the year—Go Solar California urges people to contact their state legislator if they would like to change California’s Net Metering Law that does not obligate Utilities to pay their clients for excess energy generated and re-entered into the grid from personal solar PV systems.

Program Incentives

Residential systems generating PV electricity will be credited between \$4.75 and \$7.00 per watt for the electricity they produce, based on a sliding scale that reflects the homeowner’s federal income tax liability. In order to support the lowest economic echelon, this program has been designed in such a fashion that “the incentive rates are intended to provide a homeowner who has no federal tax liability with a positive cash flow in the first year of the installation.” The CPUC has decided that it prefers “to keep incentives at a constant level to avoid customer confusion” as this particular population sector will be hard to reach and market solar energy to in the first place, but it may consider adjusting the incentives later in the program based on market changes in solar energy costs. Lump-sum incentives will be provided at the following per-watt rates:

Figure 1. Incentive Rates for Highly Subsidized Systems

Federal Income Tax Liability	Qualifying Low-Income CARE-Eligible Homeowners	Qualifying Low-Income Homeowners not eligible for CARE
\$0	\$7.00 per watt	\$5.75 per watt
\$1 to \$1000	\$6.50 per watt	\$5.25 per watt
\$1001 to \$2000	\$6.00 per watt	\$4.75 per watt

Funding for this program is being collected from distribution rates of the three primary utilities in California, PG&E, SCE and SDG&E, who are all paying a percentage of the budget based on the same percentages as the total CSI budget.

Figure 2. Percentage of Utility Funding

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

Concerns have been raised regarding the geography necessary for optimal energy production. In order to qualify for the incentives presented by CSI, “an installation must meet a minimum performance requirement, which is .95 of the Design Factor used to calculate up-front incentive payments.” While there was debate over the effect that this restriction would have on low-income homeowners in the less sunny areas of the state, the restriction has been put in place in order to help ensure that high-performing PV systems are installed on low-income homes, which is a goal of this program.

Program Management

To govern this program throughout the state of California, the PUC has decided to select a single “Program Manager” to oversee the low-income homeowner incentive program. After much discussion between the parties involved, CSI has decided that the Program Manager should be a non-profit organization dedicated to helping and serving the low-income community. By having only a single Program Manager team, it will be possible to save money on administration and put more of it into PV systems and outreach programs.

Prior to being regarded as eligible for a PV solar system, applicants must enroll in the LIEE (low-income energy efficiency) program (if eligible) and complete an energy efficiency audit to determine what size system would be appropriate to create maximum efficiency in their particular house. Appli-

cants may obtain a free energy efficiency audit through utility efficiency programs. Once the audit has been completed, it will be reviewed by the Program Manager who may require some “reasonable and cost-effective energy efficiency improvements” in order for the PV system to function at maximum output.

The Program Manager will work with the homeowner to determine whether applicants are eligible for the program, or whether they qualify for the full subsidies or incentives that partially subsidize the PV systems. Further, the Program Manager will help incentive recipients to find loans, other grants, and tax credits to cover any remaining costs of the system. Though each utility will pay incentives directly to qualifying applicants in its service territory, incentives will only be paid after the Program Manager verifies that installation is complete and the solar PV system is operable. It is expected that once systems have been installed, the payback period will be up to two years and the systems will remain under warranty for 10 years.

After a system has been installed, it will remain under the surveillance of the Program Manager and be subject to a formal biennial independent evaluation. In addition, the Program Manager will be similarly evaluated every two years by an independent evaluator to ensure that the program and PV systems are functioning efficiently and correctly.

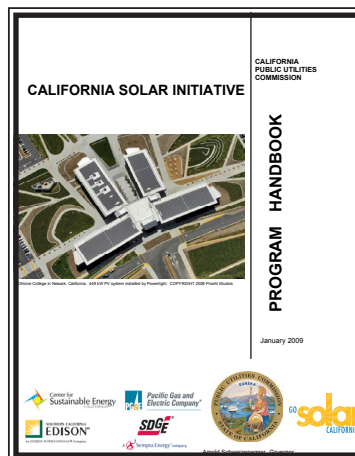
Conclusion

By implementing the Single-Family Affordable Housing Program, the California Solar Initiative hopes to install 1,000 PV energy systems within the territory of PG&E, SCE and SDG&E by the end of 2010, and to have established contact with every eligible homeowner in these territories. Other states have already begun to follow suit, as is demonstrated by the recently implemented State Rebate Program for Low-Income residences in Connecticut, funded by Connecticut Clean Energy Fund.

For the most update information on the CSI program, please visit:

http://www.cpuc.ca.gov/PUC/energy/Solar/070424_csilowincome.htm

http://www.gosolarcalifornia.ca.gov/csi/low_income.html



http://www.gosolarcalifornia.ca.gov/documents/CSI_HANDBOOK.PDF

The CPUC Decisions on the Single-Family Affordable Housing Program can be downloaded at:

http://docs.cpuc.ca.gov/word_pdf/FINAL_DECISION/75400.pdf

http://docs.cpuc.ca.gov/word_pdf/FINAL_DECISION/93687.pdf

http://docs.cpuc.ca.gov/word_pdf/FINAL_DECISION/99026.pdf

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