Decision 07-11-045 November 16, 2007

## BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking Regarding Policies, Procedures and Rules for California Solar Initiative, the Self-Generation Incentive Program and Other Distributed Generation Issues.

Rulemaking 06-03-004 (Filed March 2, 2006)

# OPINION ESTABLISHING SINGLE-FAMILY LOW-INCOME INCENTIVE PROGRAM WITHIN THE CALIFORNIA SOLAR INITIATIVE

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# OPINION ESTABLISHING SINGLE-FAMILY LOW-INCOME INCENTIVE PROGRAM WITHIN THE CALIFORNIA SOLAR INITIATIVE

This decision establishes a \$108 million solar incentive program for low-income homeowners as part of the California Public Utilities Commission's (Commission or CPUC) California Solar Initiative (CSI). The program will provide full subsidies for one kilowatt (kW) solar energy systems to existing owner-occupied households that qualify as extremely or very low income, and partial subsidies for solar energy systems to other qualifying owner-occupied low-income homes. Partial subsidies will range from \$4.75 to \$7.00 per watt depending on the homeowner's federal tax liability and whether the homeowner qualifies for low-income rate assistance. This decision establishes performance and energy efficiency requirements for the program, and directs the Commission's Energy Division to issue a Request for Proposal for a Program Manager to administer the program statewide in the service territories of Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), and San Diego Gas & Electric Company (SDG&E).

The Commission intends to establish a solar incentive program for multi-family low-income housing in a later portion of this proceeding.

# 1. Background

In Decision (D.) 06-01-024, the Commission collaborated with the California Energy Commission (CEC) to establish the CSI to fund rebates for installation of qualifying solar energy systems for customers of PG&E, SCE, and

SDG&E.¹ In that order, the Commission committed \$2.5 billion over a 10-year period for solar incentives and required that 10% of the funds be used for projects for low-income residential customers and affordable housing projects. In March 2006, the Commission opened a new proceeding, Rulemaking (R.) 06-03-004, to handle the implementation details of CSI, including establishing a low income and affordable housing incentive program. In August 2006, the Commission adopted D.06-08-028 containing implementation details for the mainstream portion of CSI, while details surrounding incentives to low income and affordable housing were set for consideration in Phase II of the proceeding. At the same time, the Governor signed Senate Bill (SB) 1² containing a modified budget and other directives regarding CSI for both the Commission and the CEC. The Commission issued a further order in December 2006 modifying CSI to conform to SB 1. (See D.06-12-033.) Significantly, D.06-12-033 adopted a 10-year total CSI budget of \$2.1668 billion and a low-income incentive budget of \$216.68 million. (*Id.*, p. 28.)

Also in 2006, the Legislature passed Assembly Bill (AB) 2723<sup>3</sup> requiring the Commission to ensure that not less than 10% of overall CSI funds are used for installation of solar energy systems on "low-income residential housing," as defined in the bill.

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<sup>&</sup>lt;sup>1</sup> The Commission portion of CSI targets solar facilities on existing homes and new and existing businesses. The CEC portion of CSI targets solar installations in the new home construction market, including solar on newly constructed low-income housing.

<sup>&</sup>lt;sup>2</sup> Statutes of 2006, Chapter 132.

<sup>&</sup>lt;sup>3</sup> Statutes of 2006, Chapter 864.

In a February 5, 2007 ruling, the assigned Commissioner set a schedule for consideration of low-income and affordable housing incentive issues. The ruling directed Commission staff to prepare a proposal for an incentive program targeting existing low-income single-family owner-occupied homes, and it directed the CSI program administrators<sup>4</sup> to work with interested parties and other knowledgeable persons to design an incentive program targeting existing low-income multi-family housing.<sup>5</sup>

On April 17, 2007, the Administrative Law Judge (ALJ) issued a ruling requesting comment on an Energy Division Staff Proposal for solar incentives for existing low-income single-family, owner occupied homes. Energy Division held a workshop to discuss its proposal on April 30, 2007.

Comments on the Staff Proposal were filed on May 11, 2007 by A World Institute for a Sustainable Humanity (A WISH), Californians for Renewable Energy, CCSE, the Division of Ratepayer Advocates (DRA), Golden Sierra Power, Greenlining Institute (Greenlining), Grid Alternatives, PG&E, SCE, and SDG&E. In addition, the Energy Division received letters containing substantive comments from the California Department of Community Services and Development (CSD), Global Green USA, and Southern California Forum (SoCal Forum). Reply comments were filed on May 21, 2007 by A WISH, Californians

<sup>&</sup>lt;sup>4</sup> The CSI program administrators are PG&E, SCE, and the California Center for Sustainable Energy (CCSE, formerly the San Diego Regional Energy Office).

<sup>&</sup>lt;sup>5</sup> An Assigned Commissioner Ruling of February 5, 2007 directed the CSI program administrators to jointly file a proposal for a multi-family housing low income incentive program by July 16, 2007. This decision does not address multi-family low-income housing incentives.

for Renewable Energy, CCSE, DRA, Greenlining, Grid Alternatives, PG&E, SCE, and SDG&E.

The Staff Proposal and comments on specific issues within it are discussed by issue in the sections that follow.

## 2. Low-Income Incentive and Financing Structure

The Energy Division Staff Proposal contains a recommended structure and implementation strategy for a \$108.34 million solar incentive plan for existing single-family, owner-occupied, low-income homes.<sup>6</sup> The single-family low-income incentive plan is targeted at homeowners who meet the definition of low-income residential housing established in Public Utilities Code<sup>7</sup> Section 2852. Specifically, low-income residential housing means those homes financed with low-income housing tax credits, tax-exempt mortgage revenue bonds, general obligation bonds, or local, state or federal loans or grants. Section 2852 also references the definition of low-income households in Health and Safety Code Section 50079.5.<sup>8</sup>

<sup>&</sup>lt;sup>6</sup> The \$108.34 million budget is half of the \$216.68 million the Commission allocated for CSI low-income incentives in D.06-12-033.

<sup>&</sup>lt;sup>7</sup> All statutory references are to the Public Utilities Code unless otherwise noted.

<sup>&</sup>lt;sup>8</sup> Appendix B to this order contains relevant Health and Safety Code sections. Health and Safety Code Section 50079.5 states in pertinent part that:

<sup>(</sup>a) "Lower income households" means persons and families whose income does not exceed the qualifying limits for lower income families as established and amended from time to time pursuant to Section 8 of the United States Housing Act of 1937. The limits shall be published by the department in the California Code of Regulations as soon as possible after adoption by the Secretary of Housing and Urban Development. In the event the federal standards are discontinued, the department shall, by regulation, establish income limits for lower income households

Commission staff estimates that based on enrollment data for the California Alternative Rates for Energy (CARE) 9 program, there may be 50,000 single-family households 10 that comply with the eligibility requirements of Section 2852, although there may be additional households that are not CARE-eligible but also meet the criteria.

Section 2852 defines a solar energy system eligible for subsidy as "a solar energy device that has the primary purpose of providing for the collection and distribution of solar energy for the generation of electricity, that produces at least one kilowatt" of electricity. SB 1 precludes the Commission from collecting CSI funds from gas distribution ratepayers. Thus, the Staff Proposal recommends incentives solely for solar photovoltaic (PV) systems, and not for solar water heating systems, because solar water heating does not meet the definition of solar energy system in Section 2852 and solar water heating most often replaces natural gas usage.

Staff proposes a program goal of providing access to PV systems for qualifying low-income single-family homes to decrease electricity use and

for all geographic areas of the state at 80% of area median income, adjusted for family size and revised annually.

<sup>(</sup>b) "Lower income households" includes very low income households, as defined in Section 50105, and extremely low income households, as defined in Section 50106.

<sup>&</sup>lt;sup>9</sup> The CARE program provides a 20% discount on electric and natural gas bills to qualifying low income households. In addition, CARE participants are not billed for higher rate tiers. To qualify, households must be at or below the income guidelines found at <a href="https://www.cpuc.ca.gov/static/lowincomeprograms.htm">www.cpuc.ca.gov/static/lowincomeprograms.htm</a>.

<sup>&</sup>lt;sup>10</sup> See *Assigned Commissioner's Ruling Revising Schedule for Phase Two*, February 5, 2007, Attachment entitled "Low Income Affordable Housing Fact Sheet," p. 1.

electricity bills without increasing monthly household expenses. The Staff recommends partial subsidies of solar energy systems to maximize both the number of households served and energy bill savings.

Staff proposes an incentive structure to make the economics of solar systems attractive to a wide variety of low-income households that may be eligible under Section 2852. These households may or may not be eligible for the CARE program. Therefore, the recommended incentives are derived from a "sliding scale" that varies in 21 increments based on a household's eligibility for CARE rates and its estimated ability to take advantage of federal solar tax credits. The proposed incentives range from \$4.80 to \$5.80 per watt for non-CARE eligible homeowners, and from \$6.20 to \$7.20 per watt for CARE eligible homeowners. Staff derived these incentive rates by estimating the incentive amount needed to make a solar investment in a 2 kW system with an 18% capacity factor generate an internal rate of return of 10%.<sup>11</sup> For its analysis, Staff assumed that the portion of system costs not covered by an incentive payment would be financed using a 6%, 25-year loan. Staff estimates this loan would cost a low-income solar incentive applicant between \$23 and \$41 per month.

The Staff Proposal envisions a one-time, up-front incentive payment to eligible customers. Moreover, the proposed incentive rates would remain level for the program duration rather than decline on the same schedule as mainstream CSI incentives. However, Staff recommends periodic Commission

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<sup>&</sup>lt;sup>11</sup> Staff also assumed system costs at \$9/watt, and made assumptions for CARE and non-CARE electricity rates, rate escalation of 3% per year, and inverter replacements costs of \$975 after 15 years. (See Staff Proposal, 4/17/07, p. 13.)

assessment of the low-income incentive rates relative to market changes in solar costs, and adjustments if warranted.

In order to finance any gap between incentives and total system cost, Staff recommends that applicants obtain loans through local banks and housing agencies, and that the chosen Program Manager work with private sector banks or city and county housing agencies to provide financing packages and explore flexible loan options. At this time, there appears to be few options for private sector financing of low-income homeowners. Staff proposes that the Program Manager work to identify new private sector financing providers and packages. Staff does not recommend a loan program using CSI funds, citing complications to create and administer a financing program with ratepayer funds.

#### 2.1. Parties' Comments

Several commentors, namely A WISH, Greenlining, and SoCal Forum, do not endorse the incentive schedule proposed by Staff. Instead they recommend low-income solar incentives that subsidize the entire cost of a solar installation for low-income customers. Likewise, PG&E, SDG&E, and CSD question how low-income customers will afford a monthly loan payment as envisioned by Staff's sliding incentive structure. CSD contends the incentives in the Staff Proposal are not high enough because retrofitting expenses need to be anticipated, such as roof repair, electrical wiring, and other pre-existing safety hazards.

If the Commission does not opt for a full subsidy, Grid Alternatives recommends increases to the incentives in the Staff Proposal. Its proposal mirrors the Staff Proposal and declines for those homeowners eligible for federal

tax credits. 12 Grid Alternatives' proposed incentives range from \$7.15 to 7.65 for CARE eligible applicants, and from \$6.00 to \$6.80 for non-CARE eligible applicants. Grid Alternatives contends its incentives provide immediate positive cash flow for low-income clients whereas the incentives in the Staff Proposal lead to negative cash flow in year one. In addition, Grid Alternatives bases its incentives on the proposition that the promise of a future tax credit is generally not a motivating factor for low-income homeowners because they are generally more concerned with monthly cash flow and may not have a large tax liability to offset with a tax credit. Therefore, Grid Alternative's proposed incentive structure provides positive cash flow without relying on a tax credit, but the incentives decrease as potential tax credits increase. SCE objects to some of the assumptions Grid Alternatives uses for its analysis, noting that system size, baseline information and customer usage patterns can greatly impact the economics of a solar installation.

SCE and SDG&E recommend that incentives mirror the mainstream CSI incentive program and decline on the same schedule. SCE claims the incentive structure in the Staff Proposal will be hard to communicate, and customers may find it complex and confusing.

Grid Alternatives, CCSE, A WISH, and Greenlining support the idea of "sweat equity," where incentive recipients are required to make an equity contribution by volunteering their labor, or labor of family and friends, toward the solar installation. SCE opposes "sweat equity" citing customer safety, liability, and performance concerns. SCE contends solar PV systems are

<sup>&</sup>lt;sup>12</sup> *See* Grid Alternatives, 5/11/07, pp. 8-10.

sophisticated and expensive electric generators that may create safety problems for anyone other than a qualified installer.

PG&E cautions that if the low-income program offers subsidies to cover 100% of system costs, system size should be limited, perhaps to 1 kW, to reach more customers. SCE comments that if systems are fully subsidized, the Commission should revisit its decision on renewable energy credit (REC) ownership because ratepayers are fully funding the renewable investment and should derive the REC benefits.

Greenlining suggests giving priority to those ratepayers already eligible and enrolled in the utilities' Low-Income Energy Efficiency (LIEE)<sup>13</sup> programs and families who earn less than 80% of the median income. SDG&E asks whether moderate income customers would be eligible for the CSI low-income incentive program, because the Staff Proposal implies they may qualify.

### 2.2. Discussion

As a threshold matter, we agree with the overall program goal articulated by Staff in its proposal. The goal of the CSI low-income incentive program should be to provide existing owner-occupied single family low-income homes with access to PV systems to decrease electricity usage and bills without increasing monthly household expenses. The program should strive to maximize households served and energy bill savings.

<sup>&</sup>lt;sup>13</sup> LIEE programs are offered by the jurisdictional energy utilities to low income customers that meet the CARE income guidelines. LIEE programs provide for the installation of energy efficiency measures in customer residences. Energy efficiency measures may includes weatherization, lighting, and heating/air conditioning repair or replacement, all offered at no cost to the participating customer. The program also provides customer education about energy use.

In reviewing the comments, we share parties' concerns that an incentive structure that only partially subsidizes solar installations, and requires low-income households to take on loans for the balance, may not be realistic for many low-income households. Instead, we are persuaded that a full subsidy is preferable because it will avoid the need for the lowest income households to take on additional debt. A full subsidy to the most needy low-income households also addresses Greenlining's suggestion to give priority to these households.

Therefore, we will provide a full-subsidy for 1 kW systems to owner-occupied households that qualify as "extremely low income" and "very low income" (i.e., up to 50% of area median income per the Health and Safety Code definitions referenced in Section 2852). We will cap this subsidy at a maximum of \$10,000 per qualifying household, and we will allocate a maximum of 20% of program funds for full-subsidies to qualifying households. A full subsidy to the lowest income households will guarantee this subset of the low-income population has access to the benefits of solar energy. We estimate that if 20% of funds are set aside for this purpose, we can provide 1 kW systems to approximately 1,800 homes. Energy Division shall monitor participation levels in the full subsidy portion of this program and determine whether the \$10,000 cap is appropriate. At any time, Energy Division may recommend to the assigned Commissioner or ALJ of this, or any successor proceeding, adjustments to the full subsidy provisions of the program, or for that matter, any element of

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<sup>&</sup>lt;sup>14</sup> A household that qualifies for a full subsidy can either take the full subsidy for up to a 1 kW system or take a partial subsidy, as described below, for a larger system. But a qualifying full subsidy household cannot take advantage of both options.

the entire low-income solar incentive program. At the discretion of the assignment Commissioner or ALJ, and if the changes require modification of a Commission order, the change will be considered by the full Commission, following notice to parties and an opportunity for comment.

Although several parties suggested requiring applicants to provide "sweat equity" as a condition of receiving solar incentives, we will not make this a program requirement. We agree with SCE and solar industry commentors that this could raise safety concerns. In comments on the proposed decision, PG&E, Greenlining, and A WISH suggest that we encourage the Program Manager to look for ways to provide solar installation training for interested recipients of fully-subsidized systems, or use the low-income solar incentive program as a training opportunity to prepare low-income Californians for employment in solar energy. We agree this is an excellent idea. We strongly encourage entities interested in becoming the Program Manager to incorporate a workforce development and job training plan into their proposed program implementation plan.

Although SCE suggests that we revisit REC ownership for any fully-subsidized systems to low-income homeowners, we see no reason to treat REC ownership for this potentially small number of fully-subsidized low-income systems any differently than subsidies to other solar installations. As the Commission found in D.07-01-018, a solar facility owner shall own all of the RECs produced by his/her facility. In this subsidy program, the system owner is the homeowner.

Other qualifying owner-occupied low-income residential housing would receive a partial subsidy based on a sliding scale that considers an applicant's tax status and CARE eligibility. The Program Manager would seek out low-cost

loans through local government housing agencies or other private sources to cover the gap between the partial subsidy and total system cost. The Program Manager should avoid applicants taking on high interest consumer credit loans. We conclude that we can maximize our program dollars and reach more low-income households by providing partial subsidies to some homes coupled with government loans or other private sector financing to fill the gap. Although a sliding scale of incentives will be more challenging to market than a single incentive amount, it will allow the Commission to maximize the number of households that can benefit from this program. Moreover, because the definitions of low-income residential housing in Section 2852 incorporate a wide range of income levels across the various counties in California, a sliding scale adjusts incentives in keeping with this variety of income levels.

We will adopt a sliding scale based on an applicant's ability to take advantage of federal tax credits for solar installations and whether the applicant qualifies for CARE rate assistance. The adopted incentive rates are similar to those proposed by Staff, but have been simplified from 21 increments to only three. These simplified incentives should be easier for a Program Manager to administer and market. 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, based on the same set of assumptions staff used in developing the rates in the original Staff Proposal Incentive rates are as follows:

Table 1
Partial Subsidy Single-Family
Low-Income Solar Incentives in \$/watt

	Qualifying Low-Income	Qualifying Low-Income
Federal Income	CARE-Eligible	Homeowners not
Tax Liability	Homeowners	eligible for CARE

\$0	\$7.00	\$5.75
\$1 to \$1,000	\$6.50	\$5.25
\$1,001 to \$2,000	\$6.00	\$4.75

These incentive rates reflect a subsidy in the range of 50% to 75% of total system cost, assuming total system installed cost at \$9 per watt. An applicant will be required to submit a federal income tax return from the prior year, so the Program Manager can determine estimated tax liability and CARE eligibility.<sup>15</sup>

By taking this dual approach, i.e., full subsidies to the lowest income households and partial subsidies to remaining low-income qualifying households, we can maximize the number of megawatts installed on low-income homes. If we only provided full subsidies, we would not be able to reach as many homes or install as many megawatts (MWs) of solar to benefit low-income Californians.

We will not pay incentives to "moderate income" households as defined in the Health and Safety Code cited in Section 2852, although this was implied by the Staff Proposal. Upon further review of Section 2852 and its intent to fund incentives for low-income residential housing, we conclude that subsidies under

We note that in February 2007, H.R. 550 and S.590 were introduced in Congress. The bills would remove the \$2,000 cap on residential solar energy systems and allow system owners to receive a federal tax credit for up to 30% of system costs. This means a system owner can claim up to \$5,400 in tax credits for a 2 kW system, assuming system costs equal \$9/watt. This is a significantly larger tax credit than the one that currently exists. If these changes to the federal tax credit are passed by Congress, we will consider adjusting the low income incentive structure accordingly.

this program are intended only for lower income households as defined in Section 2852, and not to moderate income households.

Although SCE and SDG&E ask for the incentives to decline on the same schedule as incentives in the mainstream CSI program, we will not adopt this approach for the low-income incentive program. We prefer to keep incentives at a constant level to avoid customer confusion. In our view, the target low-income population will be harder to identify and reach, and there are likely to be significant barriers to overcome in marketing solar to this group. The Commission can periodically assess the incentive amount for low-income recipients and adjust it based on market changes in solar energy system costs.

To facilitate minor incentive adjustments, we delegate to the assigned ALJ, in this or any successor proceeding, the authority to reduce low-income incentives by up to 10% per year, identical to the process outlined for mainstream CSI incentives in D.06-01-024. Commission Energy Division staff shall provide a written justification for any incentive reduction to the ALJ. The ALJ shall issue a ruling with this justification, allowing all parties an opportunity to comment on the proposed low-income incentive reductions. Following a comment period, the ALJ may issue a ruling reducing low-income incentives. Increases to incentives, or reductions larger than 10% will be handled by Commission order.

We will not limit the program to LIEE enrollees, as suggested by Greenlining. On the other hand, if applicants qualify for LIEE, they must enroll in it prior to receiving incentives (as discussed below in Section 6 on Energy Efficiency).

Finally, SCE comments that the Staff Proposal does not cover incentives for renter-occupied single-family homes. Although the CSI program administrators

filed a proposal in this proceeding for incentives to low-income multi-family housing, <sup>16</sup> there is no provision for incentives to renters of single-family homes. The issues surrounding incentives to renters of single-family homes are probably more similar to the issues we will consider in reviewing the multi-family incentive proposal, particularly issues involving how renters can receive a benefit from an incentive program directed at landlords of multi-family housing. Therefore, in our review of the multi-family incentive proposal, we may consider whether and how to incorporate incentives for renters of single-family homes into that program.

## 3. Budget and Program Timeline

Staff recommends a \$108.34 million budget for low-income solar incentives for single-family homes, or half of the \$216.68 million allocated for low-income incentives in D.06-12-033. The budget would be collected from distribution rates of the three large utilities (i.e., PG&E, SCE, and SDG&E) in the same manner and following the same percentages as the total CSI budget. In other words, the utilities would fund the program as follows:

Table 2
Single-Family Low-Income CSI Program Budget Allocation by Utility
(\$ in millions)

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

<sup>16</sup> See "Joint Proposal of the California Solar Initiative Program Administrators Recommending a Low Income Multi-Family Solar Program," July 16, 2007.

Further, Staff proposes that to implement the program more quickly, the program should run for only five years, and not through 2016 as in the mainstream CSI program.

Staff proposes the following breakdown for the \$108.34 million budgeted for solar incentives to low-income single-family homes:

Table 3
Budget Allocation by Function

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

## 3.1. Parties' Comments

Grid Alternatives and SCE propose that the program run for 10 years, rather than five. According to these parties, a five-year program could compromise the program's effectiveness as the goal will be to spend the money quickly, rather than spending the resources wisely. They contend repairs will be needed first on many low-income homes, which means installation delays.

Grid Alternatives and SCE recommend the Commission budget less than \$108 million for single-family low-income solar incentives so that more funds can be used for multi-family low-income homes. SCE comments that single-family homeowners appear to be a very small percentage of the low-income homeowners eligible based on the definitions in Section 2852. SDG&E recommends flexibility to shift funds between single and multi-family incentive programs based on the how the programs evolve. Greenlining recommends that the CSI low-income incentive budget be tripled to adequately serve the needs of California's low-income population.

Most parties supported the budget allocation in Table 3, although Grid Alternatives urges flexibility to allow for additional resources for marketing and outreach if the need arises. A WISH comments that an artificial lower limit on administration may be premature and the Commission should focus on oversight and meeting program goals instead.

## 3.2. Discussion

We agree with SCE and Grid Alternatives that given potential difficulties of outreach to the appropriate target communities and other aspects of this program, a five-year program timeline may be too abbreviated. We will allow the low-income solar incentive program to operate through December 31, 2015, as set forth in Pub. Util. Code § 2852(c)(3), and any money unspent on January 1, 2016, shall be used for "cost-effective energy efficiency measures in low-income residential housing" as further required by that same code section.

We reject Greenlining's proposal to triple the budget for CSI low-income incentives because we do not want to reduce the funds available for the mainstream program until we have experience with the demand for low-income incentives compared to the demand for incentives in the mainstream CSI program.

We understand the concerns of several parties who caution us to allocate less than 50% of the total low-income budget for single-family owner occupied homes. A multi-family low-income incentive program may require more than \$108.34 million. Conversely, new and innovative finance models that particularly suit multi-family buildings could lead to lower needs for state subsidies. Given that we have not yet considered critical aspects of a multi-family low-income incentive program, we will initially allocate \$108.34 million for single-family low-income incentives, but we may adjust this after considering the budgetary requirements of a multi-family program in a later Commission order. The Commission may reallocate funding between the multi-family low-income program and the single-family low-income program if participation rates and incentive expenditures indicate that such a reallocation is warranted.

Therefore, we adopt the budget allocations proposed by Staff. Specifically, the single family low-income incentive program will be funded by PG&E, SCE and SDG&E according to the percentages in Table 2 above. The Program Manager shall ensure that total program expenditures in each utility's service area over the duration of the low-income incentive program do not exceed the amounts in Table 2. We also direct the Program Manager to adhere to the budget allocations in Table 3 above, wherein 85% of program dollars will go to incentives, 10% to administration, 4% to marketing and outreach, and 1% to evaluation. These functional budget allocations allow more for administration and marketing and outreach than the mainstream CSI program, consistent with higher administration budgets for the Commission's other low-income programs.

## 4. Performance Requirements

Staff recommends that to qualify for incentives, an installation must meet a minimum performance requirement, which is .95 of the Design Factor used to calculate up-front incentive payments, known as Estimated Performance Based Buydown (EPBB) incentives, in the mainstream CSI program. The Design Factor is a reflection of a proposed system's tilt, orientation, shading, equipment efficiency, and other factors compared to an optimally-installed system.<sup>17</sup> Staff proposes this requirement to ensure that systems are properly designed to achieve maximum benefit to the low-income homeowner and ensure program funds are used efficiently.

<sup>17</sup> See D.06-08-028, p. 44, for further explanation of the Design Factor.

Grid Alternatives fears this requirement will prevent participation by homeowners in less sunny parts of the state. Grid Alternatives contends that many houses that are good candidates for solar would be eliminated from the program because they have an orientation or roof pitch slightly less then optimal. Therefore, it recommends dropping the geographic correction built into the Design Factor formula to avoid penalizing applicants based on geography. SCE opposes Grid Alternatives' suggestion to drop the geographic portion of the Design Factor formula, arguing that limited program dollars should not be spent on geographic regions that will not yield optimal system performance.

We will adopt the Staff Proposal to require a minimum performance requirement equal to .95 of the EPBB Design Factor. The overall CSI program intent is to reward high-performing systems and avoid poor installations that would disadvantage the consumer. If we require that systems meet a Design Factor of .95, this provides better assurance of high performing installations for low-income homeowners. In addition, we will remove the geographic correction from the EPBB calculation for low-income applicants, as suggested by Grid Alternatives. We will allow a well-designed system anywhere in the state that meets a Design Factor of .95 to qualify for low-income incentives without the geographic correction required for mainstream CSI applicants. In our view, if an applicant meets the eligibility criteria in Section 2852 and the other Design Factor criteria, we do not want to prevent them from receiving incentives solely based on their geographic location in the state.

Regarding other program requirements that are addressed in the mainstream CSI Program Handbook (including but not limited to warranty, insurance, metering, and interconnection), we will apply all the same program requirements to low-income applicants as to mainstream applicants, unless the

Program Manager can justify to Energy Division staff why a particular requirement should be modified. If the Program Manager seeks a change in a CSI Program Handbook requirement, it should send a letter to the Director of Energy Division, with a copy to the service list of this proceeding, asking for the change. Energy Division shall resolve any requests directly with the Program Manager, unless the change requires modification of a Commission order. In that event, the party seeking the change must file a petition for modification of the relevant Commission order.<sup>18</sup>

### 5. Administration

The Staff Proposal recommends numerous required functions and necessary qualifications for a successful program administrator, or "Program Manager," to oversee the low-income single-family incentive program. Critical functions include establishing contacts with potential qualifying low-income households, partnering with community-based organizations for outreach, implementing the incentive program statewide and collaborating with city and county housing agencies or private lending institutions to create financing packages for applicants. Necessary qualifications include knowledge of the needs of low-income single-family homeowners and experience serving them, experience with solar PV, experience with financing for energy efficiency and solar, and relationships with city and county governments and affordable housing groups to collaborate and partner with them.

In its proposal, Staff analyzed the strengths and weaknesses of five Program Manager options which were (1) a non-profit that serves low-income

<sup>&</sup>lt;sup>18</sup> See Rule 16.4 of the Commission's Rules of Practice and Procedure.

communities, (2) a state agency that serves low-income communities, (3) a consulting firm with experience in solar and affordable housing, (4) a bank that specializes in financing PV systems, and (5) the current CSI program administrators (i.e., PG&E, SCE, and CCSE).

The Staff Proposal recommends outsourcing the statewide administration of the low-income single-family solar incentive program to one organization or agency to maximize the effectiveness of relationships with federal, state, and local agencies and private financing institutions. The Staff Proposal enumerates a Request for Proposal (RFP) process to select the Program Manager. The chosen organization or agency should have experience providing services to low-income communities, be familiar with their needs, and have existing trustworthy relationships within these communities.

#### 5.1. Parties' Comments

Several parties, namely Grid Alternatives, A WISH, CCSE, Greenlining, Californians for Renewable Energy, Global Green U.S.A. and CSD, agree with the Staff Proposal for one statewide administrator. Grid Alternatives supports the selection of a nonprofit organization specifically dedicated to serving low-income communities. It contends that a single administrator would create significant efficiencies in administration, thereby maximizing the percentage of the program budget than can be used on incentives rather than overhead. Moreover, a single administrator would ensure equitable and consistent program administration across the state. Grid Alternatives suggests a non-profit would build a long-term infrastructure to provide ongoing support and education and help ensure the program provides long-term benefits to low-income utility customers.

A WISH supports one Program Manager, but suggests coordination with existing LIEE, Department of Energy Weatherization Assistance program, and the Low-Income Home Energy Assistance Program (LIHEAP) to maximize energy efficiency and solar dollars through program coordination. If utility administrators are used, A WISH recommends they subcontract with community service providers to leverage LIEE and DOE funds and other program benefits.

CCSE also supports statewide administration by a competent non-profit as the preferred option. However, it also recommends that if a single Program Manager cannot be found, the Commission should use the existing CSI program administrators. CCSE contends the key to program success will be strong teams of public, private and non-profit agencies focused on projects at the local level.

Greenlining claims it is imperative that the Program Manager be chosen based on its sensitivity to and experience with the economic, ethnic, and linguistic needs of California's low-income communities. It also suggests that community based organizations play a strong role in serving as outreach and marketing liaisons for the CSI low-income program. Grid Alternatives agrees, claiming this will help overcome skepticism stemming from unfamiliarity with solar PV technology in low-income communities.

Initially, Californians for Renewable Energy supported establishment of low-income incentives administered through existing housing assistance programs at the city, county, and redevelopment agency level. In reply comments, Californians for Renewable Energy amended its position and now recommends the non-profit organization Grid Alternatives as Program Manager, contending Grid Alternatives meets all the relevant criteria, particularly strategic partnerships with city and county low-income home rehabilitation loan programs.

In contrast to these comments, the utilities unanimously favor that they be allowed to administer the low-income solar incentive program in their territories.

SDG&E suggests the Commission consider administration by the three utilities in their respective service territories. SDG&E contends it already has the infrastructure and experience to effectively and efficiently reach the low-income community and process large numbers of project applications. SDG&E argues the utilities can leverage their existing administrative infrastructure and a low-income solar program is a logical complement to their other programs for low-income customers. Moreover, the Commission has found in D.05-01-055 that if energy efficiency was implemented by a third party, the Commission would not have the requisite oversight authority over a third-party administrator to hold it accountable for program implementation. SDG&E raises several contractual questions regarding third-party administration and the utility role in interacting with the administrator. SDG&E contends the Commission will encounter higher administration costs for third-party statewide administration, such as RFP costs, and outreach and marketing costs.

SCE contends it will be time consuming and inefficient for one entity to gear up for a statewide program, and risk inefficient use of ratepayer funds. SCE maintains it has all the necessary experience and expertise to administer the program in its service area. Likewise, PG&E alleges statewide administration could require significant start-up delays whereas the utilities have existing relationships from their work with LIEE and CARE. PG&E believes it satisfies the necessary Program Manager qualifications and could successfully administer the program. PG&E maintains the utilities are in the best position to leverage energy efficiency in solar installations through their administration of LIEE programs.

Similarly, SoCal Forum supports a collaboration of utilities and CSD, noting the utilities have a statewide reach and an established network of service providers.

#### 5.2. Discussion

We agree with the Program Manager functions and qualifications as set forth in Section 4.1 and 4.2 of the Staff Proposal. After considering the comments of parties on the institutional options for program administration, we find that the single-family low-income solar incentive program should be administered by one entity, or "Program Manager," statewide for several reasons.

First, we agree with Grid Alternatives that dedication to and knowledge of the low-income community are critical to program success. If we limit administration to the utilities or to the current CSI administrators, we may unintentionally exclude other organizations, such as non-profits, government agencies, or new combinations of public and private sector entities, that may have unique expertise and experience to offer to the CSI low-income program. We prefer to obtain a Program Manager with specific knowledge of low-income mortgage financing and other methods of integrating solar investment with lowincome housing rehabilitation. Grid Alternatives also points to the potential for a statewide Program Manager to build a long-term infrastructure that extends beyond the 10-year life of the current CSI program for solar education and support to the low-income community. We agree this is an objective worth achieving and we are eager to facilitate it by considering entities beyond the current CSI administrators or the utilities. In choosing the low-income solar Program Manager, we want to consider the potential for that manager to create a model for long-term assistance to the low-income community that can continue beyond 2015 without state support. We encourage entities interested in

becoming the Program Manager to include a workforce development and job training plan for low-income community members in their proposed program implementation plans.

Second, we find a statewide Program Manager with dedication to low-income communities is preferable to existing utility or CSI administration because we see differences in this program from the CARE and LIEE programs the utilities currently administer. We agree with Grid Alternatives that solar installations face a higher consumer hurdle and more skepticism than the decision to use LIEE and CARE services. Thus, a low-income solar program will require the Program Manager to undertake greater and more challenging outreach with potential recipients than LIEE and CARE programs because solar is an unfamiliar, expensive technology, potentially involving financing and tax credit information, as well as other education needs such as roof integrity analysis and system maintenance. LIEE involves cheaper and less complicated technologies, and CARE is primarily a rate assistance program. Although utilities administer CARE and LIEE, their work on those programs does not directly translate into the same skills needed for success with a low-income solar program.

Third, the CSI low-income program is narrower than the mainstream CSI program, aimed at a smaller subset of California's population. The population of low-income utility customers that qualify for LIEE and CARE may not qualify for low-income solar incentives under the stricter definitions in Section 2852. It will be easier for the Commission to ensure consistency and equity in program delivery statewide if one administrator is chosen. The Program Manager will work with a network of service providers, namely solar installers, community-based organizations, and loan providers, to provide service throughout the

territories of the three large investor-owned utilities. We conclude that it will be simpler for both the Program Manager and the Commission to manage a network of service providers statewide than for three utilities to duplicate this effort in each of their service territories. Therefore, it is logical to employ one Program Manager to perform outreach across the state.

Fourth, there will likely be lower overhead cost for one entity than three administrators duplicating outreach and application processing functions. To implement this program, a program manager will likely need to perform extensive follow-through with potential recipients, beyond what is usually needed for the LIEE/CARE programs. The Program Manager should also teach applicants how to understand their energy bill and solar savings and instruct applicants on how to receive federal tax credits for their solar installations. Recipients also should be taught to monitor and maintain their solar system. The utilities will most likely have to outsource these functions to an outside entity, which could drive up administrative costs. A single administrator could potentially provide these same services in-house.

Although the utilities unanimously request the opportunity to administer the low-income portion of CSI along with their role in the mainstream CSI program and their role in CARE and LIEE, we find the reasons articulated above provide a sound basis for statewide administration open to any qualified organization, and not limited to a utility. We are confident that the RFP process described in the Staff Proposal will yield unique program management solutions and open the door to synergies with other low-income housing assistance programs and outreach efforts by groups that may not currently be involved in existing utility low-income programs.

A WISH urges the Commission to coordinate low-income solar incentives with LIEE and LIHEAP as much as possible in order to leverage funds from all assistance programs to the maximum benefit of low-income customers. In our view, it is more likely that one statewide administrator with relevant low-income expertise will gather the knowledge to master this coordination more quickly than relying on three utility administrators to each accomplish this task.

Further, we are not persuaded by SCE's comment that it will be time consuming for a non-utility entity to hire staff, open offices, and establish contacts. The comments indicate that non-utility entities already exist, such as CSD, Grid Alternatives and SoCal Forum, with staff, offices and contacts to handle the proposed program, particularly since the program scope and target population of approximately 50,000 households is much smaller than the mainstream CSI program.

Similarly, we are not convinced that the contractual issues and costs enumerated by SDG&E will thwart the success of a non-utility administrator. SDG&E is concerned with Commission oversight authority over a non-utility administrator. SDG&E also questions how funds collected by the non-contracting utilities will be disbursed. We find that SDG&E's contract with CCSE provides a successful model for third-party administration for the CSI program which can be used as a model for the low-income program. The Commission's Energy Division will direct the Program Manager, and will retain the authority to direct the contracting utility to cancel the contract if the Energy Division is dissatisfied with the Program Manager's performance. Plus, funding concerns can be addressed through co-funding agreements with the contracting utility, and we discuss this in more detail below.

Therefore, we agree with the Staff Proposal and the various parties that the single-family low-income solar incentive program should be administered by a single, statewide Program Manager, and this Program Manager does not need to be one of the existing CSI program administrators or a utility.

The Program Manager will be chosen through a RFP process, as suggested by the Staff Proposal. The details of the RFP process are set forth in Appendix A of this order, and summarized here. Energy Division will develop a draft RFP for the Program Manager and issue it for comment to the parties to this proceeding. The RFP should be consistent with the selection criteria and requirements set forth in this order. The Energy Division will consider the comments, revise the RFP as necessary, and select one investor-owned utility (IOU) to issue the final RFP and ultimately contract with the Program Manager. The selected IOU shall issue the RFP within 30 days after the Energy Division has directed it to do so.

The Energy Division will review the responses to the RFP and will score the proposals based on the selection criteria and requirements in Appendix A. Energy Division will select the Program Manager and direct it to submit a final program implementation plan to the Director of Energy Division for approval. Following this approval, Energy Division will direct the selected IOU to contract with the Program Manager and to renew or extend the contract as appropriate. The Energy Division will oversee the contract between the utility and the Program Manager throughout the life of the program. Energy Division should ensure the mainstream CSI program administrators coordinate with the low-income Program manager to facilitate implementation of the low-income solar incentive program.

The utility contracting with the Program Manager will enter into a co-funding agreement with each of the other utilities specifying how each of the other utilities will fund its share of the cost of program management from its Low-Income Program funds. The contracting utility will then pay the Program Manager. The co-funding agreement will govern all financial transactions among the utilities for the low-income incentive program based on the program budget described in Section 3 of this order.

While the utilities will jointly pay the cost of program management, each utility will pay incentives directly to qualifying applicants in its service territory. Incentives shall only be paid after the Program Manager verifies that installation is complete and the solar energy system is operable. Accordingly, the co-funding agreement mentioned in the preceding paragraph should also describe how the Program Manager will inform each utility which applicants should be awarded incentive payments. In comments on the proposed decision, SCE requests full cost recovery for any payment processing costs it incurs. PG&E and SDG&E agree with SCE, but none of the utilities quantify these potential costs for cutting checks to incentive recipients, as directed by the Program Manager. We anticipate a small number of qualified applicants to this program and we find it highly unlikely that the utilities will need additional staff or equipment to handle paying incentives.<sup>19</sup> Thus, we conclude there will be no significant costs borne by the utility as a result of this program.

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<sup>&</sup>lt;sup>19</sup> We assume the program will fund five to seven thousand partially subsidized 2 kW systems and 2000 full subsidy systems. Thus, we estimate that the program will fund no more than 10,000 total systems statewide over the eight-year course of this program. If recipients are evenly spread throughout the three utilities' service areas, this results in less than 500 checks per year per utility.

Finally, we stress that the RFP should not specify whether the Program Manager is a nonprofit, for-profit or government organization. This is an unprecedented program, and it is unclear who will be able to successfully deliver a program of this scale. We should allow for all options in the proposals. We do not want to preclude the possibility of creative partnerships that introduce new private sector financing or lower solar supply costs through economies of scale. For example, the Program Manager may want to enter into joint partnerships or subcontract with a network of relevant entities (such as housing agencies, lending institutions, solar installers, and community-based organizations) to identify and educate potential program applicants, assist applicants with financing where necessary, subcontract with experienced entities to install systems, deliver incentives to eligible applicants, and provide follow-up services to program recipients. The Program Manager may be able to arrange a single statewide supply contract at discounted rates. We are eager to see these and other innovative ideas that can help reduce the cost of installations in this program, and we will therefore select the Program Manager based on the best qualifications and program implementation approach.

# 6. Energy Efficiency

With regards to energy efficiency requirements, Section 2851(a)(3) directs the Commission, in consultation with the CEC, to require "reasonable and cost-effective energy efficiency improvements" as a condition of receiving solar incentives, although it allows "appropriate exemptions or limitations to accommodate the limited financial resources of low-income residential housing." The CEC is currently considering what energy efficiency improvements should be required as a condition of receiving solar incentives through the mainstream

CSI program. In the interim, the Commission requires mainstream CSI applicants to complete an energy efficiency audit.

For the low-income solar program, Staff recommends all low-income solar incentive applicants complete an energy efficiency audit as part of their application. As in the mainstream CSI program, the applicant may obtain an audit through the variety of free methods offered by utility efficiency programs or from a non-utility provider at the customer's expense. Staff also recommends that if the household is eligible for LIEE and is not enrolled, it must enroll within one year of receiving a solar rebate. Based on audit results, the Program Manager would determine which energy efficiency measures must be undertaken and the appropriate size of the system eligible for incentives. If an applicant is eligible for LIEE, measures will be undertaken through that program. If a household is not eligible for LIEE, the applicant will be required to pay for low-cost energy efficiency measures. The Program Manager will work with the applicant to determine what energy efficiency measures are feasible and affordable. Staff recommends that the Program Manager require implementation of all identified energy efficiency measures that have up to a two-year payback. The maximum system size that can receive incentives would be based on an estimate of the household's annual load assuming all weatherization and energy efficiency measures with a two-year payback or less are undertaken.

Several parties, namely Grid Alternatives, A WISH, SDG&E, SCE, PG&E, SoCal Forum, and CSD, comment that applicants should be required to enroll in LIEE and install energy efficiency measures *before* they receive any solar incentives.

#### 6.1. Discussion

Given that Section 2851(a)(3) allows exemptions from otherwise applicable energy efficiency requirements for low-income housing, we find that Staff's recommendations are generally reasonable and appropriate given the limited financial resources of low-income homeowners. An audit requirement should assist customers and the Program Manager to compare the costs of a solar installation against the estimated savings from energy efficiency improvements, and allow the Program Manager to determine the size of system that should receive incentives. The audit should prevent low-income incentive dollars from being used to fund oversized systems serving energy inefficient households. As PG&E noted, "right-sizing" PV systems means the limited budget for low-income solar incentives can reach as many qualifying customers as possible.

Therefore, we adopt the following energy efficiency requirements for the low-income solar program:

- Applicants must enroll in LIEE, if eligible, and have all feasible LIEE measure installed prior to receiving a solar incentive.<sup>20</sup>
- Applicants must include an energy efficiency audit with their incentive application. The audit can be performed through LIEE, if applicant is eligible, or under the same requirements for audits in the mainstream CSI program.
- The Program Manager will review the audit along with the application to determine the maximum system size that can receive an incentive through the low-income incentive program.<sup>21</sup> The maximum system

<sup>&</sup>lt;sup>20</sup> If the LIEE program has an installation backlog, solar applicants must be on the waiting list for installation.

<sup>&</sup>lt;sup>21</sup> For example, if an audit determines energy efficiency improvements, funded through either LIEE or applicant's resources, could reduce the low-income applicant's

size that can receive low-income solar incentives should be based on customer usage, adjusted based on an estimate of energy savings resulting from either:

- installation of all feasible LIEE measures (for those applicants who qualify), or
- o for applicants who do not qualify for LIEE, installation of all feasible measures that would be covered if they were LIEE eligible. While installation is not required, the Program Manager should assist the applicant to obtain financing for potential installation of energy efficiency measures identified by the applicant's audit along with the solar energy system.

The Program Manager should coordinate with utility LIEE programs wherever possible to identify qualifying low-income homeowners and ensure qualifying households receive LIEE benefits along with solar incentives. We direct our Energy Division to explore methods to expedite LIEE measure installation for low-income solar incentive applicants, to avoid LIEE installation delays from deterring low-income solar applicants.

#### 7. Evaluation

Staff recommends ongoing program evaluation and a formal biennial independent evaluation. The Program Manager would be required to report on program progress on a regular basis. In addition, Energy Division would select an independent evaluator every two years to review both the Program Manager and the incentive program, using Staff's proposed milestones and evaluation criteria. Staff proposes program milestones such as program implementation

consumption and that a 1.5 kW solar system would be adequate to serve the applicant's efficient load, the maximum system size that could receive an incentive would be 1.5 kW.

within the service territories of PG&E, SCE, and SDG&E within 12 months, 1,000 PV systems installed by 2010, and contacts to 100% of the eligible population by 2010.

SDG&E recommends that rather than milestones, the Commission should establish knowledge goals for the program. For example, the Commission should set a deadline for the Program Manager to determine how many qualifying customers exist at various income levels, rather than a system installation milestone. SCE maintains that because so many aspects of this program are uncertain, adoption of strict milestones would be premature. A WISH states that it is more realistic to expect implementation to take 18 months, rather than 12. Grid Alternatives supports the staff's proposed milestones as appropriate and feasible.

We adopt a modified version of the Staff recommendations for evaluation criteria and milestones for the program. The target date for the Program Manager to reach the milestones will now be the end of 2010, which allows approximately two and half years to reach the milestones assuming the program begins by mid-2008. In comments on the proposed decision, several parties suggest the milestones are too aggressive and unrealistic. We make minor modifications to the milestones, but we will leave the target goal of 1,000 PV installations by the end of 2010. We consider this a reach goal that will provide a useful benchmark and a basis to evaluate the program design and outreach efforts. Appendix A contains the evaluation criteria and milestones for the Single-Family Low-Income Incentive Program.

We adopt the Staff Proposal that every two years, Energy Division will select an independent evaluator to review both the Program Manager and the low-income incentive program. The Energy Division will select the evaluator

through an RFP process and will direct one of the utilities to enter into contract with the evaluator. The co-funding agreement described in Section 5 shall also address arrangements between the contracting utility and the other utilities to pay for these evaluation contracts from each utility's CSI Low-Income funds.

In addition, we agree with the Staff Proposal that the Commission needs regular reporting by the Program Manager to the Commission's Energy Division. Thus, we will direct the Program Manager to deliver quarterly reports on progress of the program to the Energy Division. Details on the quarterly reports are set forth in Appendix A of this order.

Finally, we will require the Program Manager to agree to submit to an annual audit of program expenditures. The purpose of the audit is to ensure program funds are paid to legitimate and verified installations of solar energy systems on qualifying homes and that administrative funds are spent in a reasonable and appropriate manner. Energy Division should ensure this audit requirement is part of the Program Manager's contract.

#### 8. Miscellaneous Comments

# 8.1. Transfer of Ownership/Occupant Turnover

The Staff Proposal asked parties to comment on how the Commission could address the risk that owner turnover of single-family low-income homes could result in a non-low-income owner of the solar installation funded through this program.

Upon further review, we find it unnecessary to address this issue because if a home meets the definition of low-income residential housing in Section 2852, i.e., financed with low-income housing tax credit, bonds, or government loans or grants, and subject to deed restrictions, the property by definition will be occupied by a low-income resident. Furthermore, the mainstream CSI Program

Handbook requires a system owner to notify the Program Administrator in writing a minimum of 60 days prior to any change in either the site location of the PV system or ownership of the PV system during the 10-year warranty period. These notification requirements shall apply to all CSI incentive recipients, whether through the mainstream CSI program or the low-income program.

## 8.2. Time of Use (TOU) Pricing Requirements

Section 2851(a)(4) requires TOU pricing for all ratepayers with a solar energy system. However, Section 2851 was modified in June 2007 by AB 1714<sup>22</sup> to allow the Commission to delay implementation of TOU pricing requirements until the effective date of new TOU tariffs in the utilities' next general rate cases.

A WISH and SDG&E express concern that TOU requirements for low-income solar customers could have unintended consequences and actually increase energy costs. A WISH maintains that low-income populations will be disproportionately affected by TOU rates because they are often on fixed incomes, disabled, or home with children.<sup>23</sup> Given the delay in implementation of TOU requirements provided by AB 1714, we do not need to address these comments at this time. Instead, as the Commission develops new TOU tariffs, it should ensure TOU impacts on low-income solar customers are considered.

<sup>&</sup>lt;sup>22</sup> Statutes of 2007, Chapter 11.

<sup>&</sup>lt;sup>23</sup> We understand that SCE and PG&E currently offer optional TOU tariffs for low-income consumers who take service on CARE tariffs. SDG&E is developing a similar TOU tariff for CARE customers.

## 8.3. Marketing and Outreach

Greenlining advocates a "solar literacy" campaign as part of the low-income solar incentive program. A WISH and SoCal Forum agree the program needs a strong education component. We agree that good solar education for all customer types, regardless of income level, is an important element of CSI. The Staff Proposal envisioned the Program Manager developing a narrowly targeted marketing and outreach program for this program, collaborating with housing agencies to find and attract eligible homeowners. We adopt the marketing and outreach recommendations in the Staff Proposal, which we set forth in Appendix A. At the same time, we reiterate our plans as part of our overall CSI program implementation to adopt a general CSI marketing and outreach plan targeted at all ratepayers, to which low-income homeowners will be exposed. Thus, we adopt a targeted marketing plan within the low-income solar program because we will address broader marketing and outreach through the mainstream CSI program, thus preserving the maximum low-income program dollars for incentives to deploy solar installations.

When the Energy Division issues the RFP for a Program Manager, it should explicitly request bidders for Program Manager to outline their plans for solar marketing and outreach. As outlined in Appendix A, any outreach program should include education on the benefits of solar technology, energy efficiency, solar financing and tax credits, and proper system maintenance. The outreach program should include a component geared to populations that are not proficient in English and persons with disabilities.

Grid Alternatives suggests the low-income incentive program should be directly coordinated with existing energy efficiency programs and utilities should share lists of past and current LIEE clients or distribute solar information

in their program materials to current LIEE clients. We agree that the low-income CSI Program Manager should obtain a listing of homeowners enrolled in LIEE from each utility. Since the utilities routinely provide lists of potential LIEE participants to their LIEE contractors, there is precedent for the utilities to provide information on low-income populations to non-utility entities as long as appropriate privacy safeguards are followed.<sup>24</sup>

#### 8.4. Consumer Protection

SCE notes that low-income populations include seniors and those on welfare who need protection from third parties seeking self-profit. SCE recommends the Commission consider protections against program and customer abuse, fraudulent behavior, and improper or flawed installations. SCE specifically suggests prohibiting third-party ownership of low-income solar installations and providing incentives only to low-income homeowners. SDG&E and DRA agree with SCE that the program should not provide incentives to third parties for solar systems on low-income homes.

We agree with SCE that it would be wise to exclude third-party ownership arrangements as part of the low-income single family incentive program until we have further experience with solar incentives to low-income homeowners or more information concerning third-party ownership arrangements for low-income homeowners. We are concerned with ensuring that any third-party ownership arrangements provide long-term benefits to low-income homeowners. In the absence of information concerning adequate protections for

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<sup>&</sup>lt;sup>24</sup> See D.00-07-020 where the Commission found that LIEE customer information could be provided to contractors, subject to confidentiality agreements between the utility and the contractor. (D.00-07-020, 2000 Cal. PUC LEXIS \*166.)

the homeowner, we direct that the Program Manager may only pay low-income solar incentives to a qualifying low-income homeowner who is also the system owner. We will consider modifying this order to allow third-party ownership arrangements for low-income customers if we are presented with a proposal that adequately protects and benefits low-income homeowners in third-party ownership arrangements.

#### 8.5. Maximum System Size

DRA suggests the Commission allow an increase in maximum system size for systems funded through the low-income incentive program. DRA reasons that allowing systems up to 125% of the mainstream CSI size limit will allow surplus production that will more likely zero out the participants' annual electric bill. Many parties oppose DRA's suggestions. Grid Alternatives argues DRA's idea may cause low-income customers to install and pay for larger systems than they actually need and creates a disincentive for energy efficiency. PG&E maintains deliberate over-sizing could make customers ineligible for net metering and could exhaust the limited low-income incentive budget with fewer systems installed. We agree with PG&E and Grid Alternatives that providing rebates to over-sized low-income systems could have negative consequences and we will not adopt this suggestion.

# 8.6. Program Phase-In

The Staff proposal recommended commencing the program in only a few areas of each utility territory, then serving more areas over time. SCE states that a phase-in period would be unnecessary if SCE were to administer the program, because SCE has the existing infrastructure to implement the program throughout its service territory. We will not dictate an outcome on this issue, although we have set aggressive program milestones to be reached by the end of

2010. Interested respondents to the RFP for Program Manager should address their program implementation plan, either phase-in or statewide, in their bid responses. Nevertheless, we reiterate that we intend for this program to be offered to all qualifying low-income homeowners in the territories of PG&E, SCE, and SDG&E.

## 9. Comments on Proposed Decision

The proposed decision of Commissioner Michael R. Peevey in this matter was mailed to the parties in accordance with Section 311 of the Public Utilities Code and Rule 14.3 of the Commission's Rules of Practice and Procedure. Comments were filed by A WISH, CCSE, Disability Rights Advocates, Greenlining, Grid Alternatives, PG&E, SCE, and jointly by the Solar Alliance and the California Solar Energy Industries Association (CALSEIA).<sup>25</sup> Energy Division also received a letter dated November 6, 2007, containing comments from CSD. Reply comments were filed by A WISH, CCSE, Fat Spaniel Technologies Inc., Greenlining, Grid Alternatives, PG&E, SCE, SDG&E and jointly by the Solar Alliance and CALSEIA.

The comments suggested minor adjustments and corrections to the decision, which are incorporated throughout. Where comments reargued earlier positions or attempted to present new arguments or facts, they were not considered.

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<sup>&</sup>lt;sup>25</sup> The Solar Alliance is an alliance of solar manufacturers, integrators, and installers. CALSEIA is a non-profit trade association representing over 200 solar companies doing business in California.

## **Assignment of Proceeding**

Michael R. Peevey is the assigned Commissioner and Dorothy J. Duda is the assigned Administrative Law Judge in this portion of the proceeding.

## **Findings of Fact**

- 1. In D.06-12-033, the Commission adopted a 10-year total CSI budget of \$2.1668 billion and a low-income incentive budget of \$216.68 million.
- 2. Pub. Util. Code § 2852(c) requires that not less than 10% of overall CSI funds are used for installation of solar energy systems on low-income residential housing.
- 3. A full subsidy to the lowest income households that qualify will avoid the need for these households to take on additional debt.
- 4. The population that will qualify for low-income homeowner solar incentives is a smaller subset of California's population than those who currently qualify for CARE and LIEE programs.
- 5. Section 2851(a)(3) requires reasonable and cost-effective energy efficiency improvements as a condition of receiving solar incentives, with appropriate exemptions for low-income residential housing.
- 6. It is unlikely the utilities will need additional staff or equipment to handle paying incentives to qualifying low income solar applicants.

#### **Conclusions of Law**

- 1. It is reasonable to allocate \$108.34 million of the \$216.68 million low-income budget for a single-family low-income solar incentive plan until such time as the Commission addresses a total budget and plan for solar incentives to multi-family low-income housing in the next portion of this proceeding.
- 2. The Commission should adopt the single-family low-income incentive plan described in this order and set forth in Appendix A for existing

homeowners who meet the definition of low-income residential housing in Pub. Util. Code § 2852.

- 3. To maximize the low-income incentive budget, the Commission should provide partial subsidies to existing households that qualify as low-income per Section 2852 but are above 50% of the area median income.
- 4. The low-income solar incentive program should operate through December 31, 2015, and any unspent money on January 1, 2016, shall be used for cost-effective energy efficiency measures in low-income residential housing, as set forth in Section 2852.
- 5. The single-family low-income incentive program should be funded by PG&E, SCE, and SDG&E based on the percentages set forth in Table 2 of this order.
- 6. The chosen low-income Program Manager shall adhere to the budget allocations in Table 3 of this order.
- 7. The program should require a minimum performance requirement equal to .95 of the EPBB Design Factor, without a geographic correction, to provide high performing installations to low-income households anywhere in the three utilities' territories.
- 8. In order to obtain a Program Manager with expertise with low-income communities, the Commission should consider a non-profit organization, government agency, or a combination of public and private sector entities to administer this program, rather than the limiting administration to the utilities or existing CSI program administrators.
- 9. A low-income solar incentive program will require greater and more challenging outreach than the utilities' existing CARE and LIEE programs.

- 10. The single-family low-income solar incentive program should be administered by one entity, or Program Manager, to ensure consistency and equity in program delivery statewide while working with a diverse group of stakeholders and service providers.
- 11. Low-income incentive applicants should obtain an energy efficiency audit, and enroll in LIEE, if eligible, and have all feasible LIEE measures installed or be on the waiting list for installation prior to receiving solar incentives.
- 12. The system size eligible for low-income incentives should be based on an estimate of household load assuming all feasible LIEE measures are installed.
- 13. Energy Division should explore methods for expediting low-income solar incentive applicants' receipt of LIEE benefits.
- 14. The reporting and evaluation requirements set forth in Appendix A should be adopted.
- 15. Energy Division should ensure the Program Manager's contract includes an agreement to submit to an annual audit of program expenditures.
- 16. The Program Manager should obtain information on homeowners enrolled in LIEE from each utility, subject to confidentiality arrangements between the Program Manager and utility to protect customer privacy.
- 17. The Program Manager may only pay low-income incentives to a qualifying low-income homeowner who is also the system owner and occupant of the home.
- 18. Incentives shall only be paid after the Program Manager verifies system installation and operability.
- 19. The program authorized in this decision is unlikely to result in significant costs to PG&E, SCE, or SDG&E.

#### ORDER

#### IT IS ORDERED that:

- 1. The single-family low-income solar incentive program set forth in Appendix A of this order is adopted.
- 2. Within three months of this order, the Energy Division shall develop a draft Request for Proposal (RFP) for the Low-Income Program Manager and issue it for comment to the parties in this proceeding. The Energy Division will consider any comments it receives, revise the RFP as necessary, and select either Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), or San Diego Gas & Electric Company (SDG&E) to issue the final RFP within 30 days after the Energy Division has directed it to do so.
- 3. The Energy Division will review the bids responding to the RFP and select the Low-Income Program Manager. Within 30 days of selection by Energy Division, the Program Manager shall submit a final program implementation plan to the Director of Energy Division for approval. Following this approval, Energy Division will direct one of the three utilities to contract with the Low-Income Program Manager.
- 4. PG&E, SCE, and SDG&E shall provide data on single-family homeowners enrolled in the Low-Income Energy Efficiency program to the Program Manager, subject to confidentiality arrangements to protect customer privacy.
- 5. Two years after the start of the Low-Income program, and every two years thereafter while the program is operational, the Energy Division will draft an RFP for program evaluation, direct either PG&E, SCE or SDG&E to issue the RFP, review the bids received in response to the RFP, and select a Low-Income Program Evaluator. The Energy Division will select one utility to contract with the winning bidder.

- 6. Energy Division shall arrange an annual audit of program expenditures, as specified in the Program Manager's contract.
- 7. The utility selected by Energy Division to contract with the Program Manager shall enter into a co-funding agreement with the other two utilities specifying how each of the other utilities will fund its share of the cost of program management from its CSI low-income program funds, including program evaluation and annual audit costs.
- 8. The existing California Solar Initiative program administrators, namely PG&E, SCE, and the California Center for Sustainable Energy, shall coordinate with the Low-Income Program Manager, as directed by Energy Division.
- 9. The assigned Administrative Law Judge (ALJ) in this or any successor proceeding may issue a ruling to reduce low-income solar incentives by up to 10% per year, following written justification from Energy Division staff issued by ruling with an opportunity for comment by all parties.
- 10. Energy Division may recommend to the assigned Commissioner or ALJ in this, or any successor proceeding, adjustments to any element of the low-income solar incentive program set forth in this order. At the discretion of the assigned Commissioner or ALJ, and if any recommendations require modification of a Commission order, the changes will be considered by the full Commission, after notice and an opportunity for comment by parties.

11. The revenue requirements of PG&E, SCE and SDG&E shall not increase as a result of the solar incentive program we authorize in this order.

This order is effective today.

Dated November 16, 2007, at San Francisco, California.

MICHAEL R. PEEVEY
President
DIAN M. GRUENEICH
JOHN A. BOHN
RACHELLE B. CHONG
TIMOTHY ALAN SIMON
Commissioners

#### APPENDIX A

# California Solar Initiative (CSI) Single-Family Low-Income Incentive Program

The single-family low-income solar incentive program is for homeowners who occupy their homes and meet the definition of low-income residential housing established in Public Utilities Code Section 2852.<sup>1</sup> The program will pay incentives towards a solar energy system that is defined as a solar energy device that has the primary purpose of providing for the collection and distribution of solar energy for the generation of electricity, that produces at least one kilowatt of electricity.

The goal of the CSI low-income incentive program should be to provide existing low-income single family homes with access to photovoltaic (PV) systems to decrease electricity usage and bills without increasing monthly household expenses. The program should strive to maximize households served and energy bill savings.

## **Incentive and Financing Structure**

To qualify for incentives under this program, a property must meet the definition of low-income residential housing in Section 2852 and be occupied by the homeowner.

Households that qualify as "extremely low income" and "very low income" (i.e., up to 50% of area median income per the Health and Safety Code definitions referenced in Section 2852) can apply for a full-subsidy for systems up to 1 kilowatt (kW). The full subsidy is capped at a maximum of \$10,000 per qualifying household and we will allocate a maximum of 20% of program funds for full-subsidies to qualifying households.<sup>2</sup> Other households that qualify but

<sup>&</sup>lt;sup>1</sup> All statutory references are to the Public Utilities Code, unless otherwise noted.

<sup>&</sup>lt;sup>2</sup> A household that qualifies for a full subsidy can either take the full subsidy for up to a 1 kW system or take a partial subsidy, as described below, for a larger system. But a qualifying full subsidy household cannot take advantage of both options.

are not "extremely low income" or "very low income" can receive a partial subsidy based on a sliding scale that considers the applicant's tax status and eligibility for the California Alternative Rates for Energy (CARE) program. Incentive rates are as follows for partial subsidies:

# Partial Subsidy Single-Family Low-Income Solar Incentives in \$/watt<sup>3</sup>

Federal Income Tax Liability	Qualifying Low-Income CARE-Eligible	Qualifying Low-Income Homeowners not	
	Homeowners	eligible for CARE	
\$0	\$7.00	\$5.75	
\$1 to \$1,000	\$6.50	\$5.25	
\$1,001 to \$2,000	\$6.00	\$4.75	

The applicant must submit a federal income tax return from the year prior to the application to support estimated tax liability and CARE eligibility.

The Program Manager should seek low-cost loans through local government housing agencies or other private sources to cover the gap between the partial subsidy and total system cost.

The Program Manager may only pay low-income solar incentives to a qualifying low-income homeowner who is also the system owner and occupant of the home. Incentives shall be paid only after the Program Manager verifies that system installation is complete and the solar energy system is operable.

<sup>&</sup>lt;sup>3</sup> The Administrative Law Judge (ALJ) in Rulemaking (R.) 06-03-004 or any successor proceeding may reduce low income solar incentives up to 10% per year after receiving written justification from Energy Division, which has been issued by the ALJ in a ruling for parties to comment on. Any increases to low income solar incentive levels shall be considered only by the full Commission, based on petition for modification of a decision setting incentive rates.

## **Budget and Program Timeline**

The program budget is \$108.34 million, unless modified by the Commission following review of multi-family low-income solar program proposals.

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:

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

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

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

The program will operate through December 31, 2015, or until budgeted funds are exhausted, whichever is sooner. Any money unspent on January 1, 2016, shall be used for "cost-effective energy efficiency measures in low-income residential housing" as required by Section 2852(c)(3).

# **Performance Requirements**

To qualify for incentives, a system must meet a minimum performance requirement equal to .95 of the EPBB Design Factor, as set forth in D.06-08-028. For purposes of the Low-Income Incentive Program, the Design Factor shall be calculated without the geographic correction.

All other CSI program requirements, as set forth in relevant Commission orders and the CSI Program Handbook, shall apply to low-income solar incentive applicants, unless the Program Manager can justify why a particular requirement should be modified. Changes to program requirements set forth by Commission order must be sought through a petition for modification of the relevant order.

Changes to CSI Program Handbook requirements, if not set by Commission order, may be sought by the Program Manager through a letter to the Director of Energy Division, with a copy to the service list of R.06-03-004 or successor proceeding.

## **Energy Efficiency Requirements**

Applicants must enroll in the Low-Income Energy Efficiency (LIEE) program, if eligible, and have all feasible LIEE measures installed prior to receiving a solar incentive, or be on the waiting list for installation.

Applicants must include an energy efficiency audit with their incentive application. The audit can be performed through LIEE, if applicant is eligible, or under the same requirements for audits in the mainstream CSI program. The Program Manager will review the audit along with the application to determine the maximum system size that can receive an incentive through the low-income incentive program. The maximum system size that can receive low-income solar incentives should be based on customer usage, adjusted based on an estimate of energy savings resulting from either:

- installation of all feasible LIEE measures (for those applicants who qualify), or
- for applicants who do not qualify for LIEE, installation of all feasible measures that would be covered if they were LIEE eligible. While installation is not required, the Program Manager should assist the applicant with financing for potential installation of energy efficiency measures identified by the applicant's audit along with their solar energy system.

The Program Manager shall ensure incentives are not paid until either feasible LIEE measures are installed, the applicant is on a waiting list for LIEE installation, or an energy efficiency audit is completed.

# **Program Management**

The Single-Family Low-Income Solar Incentive Program shall be administered by one entity, or Program Manager, for all applicants within the service territories of PG&E, SCE, and SDG&E. The existing CSI program administrators shall

coordinate with the Low-Income Program Manager, as directed by Energy Division.

## **Program Manager Selection Process**

The Energy Division will develop and issue for comment to the parties in R.06-03-004, or any successor proceeding, a draft Request for Proposal (RFP) for the Low-Income Program Manager. The RFP should be consistent with the selection criteria and requirements set forth below. The Energy Division will consider the comments, revise the RFP as necessary, and direct one of the IOUs to issue the final RFP. The selected IOU shall issue the RFP within thirty days after the Energy Division has directed it to do so.

The Energy Division will review the responses to the RFP and select the Low-Income Program Manager based on the selection criteria and requirements listed below. Within 30 days of Program Manager selection, the Program Manager shall submit a final program implementation plan to the Director of Energy Division for approval. Following Energy Division approval, Energy Division will direct the selected IOU to contract with the Low-Income Program Manager. Energy Division will direct the Program Manager. The Energy Division may direct the selected IOU to renew or extend the contract, as appropriate. The contract shall permit the Energy Division to direct the contracting utility to cancel the contract if the Energy Division determines that the Program Manager's performance is deficient or if there is another breach of the contract. Energy Division shall ensure the mainstream CSI program administrators coordinate with the Low-Income Program Manager to facilitate coordinated program implementation.

The utility contracting with the Program Manger will enter into a co-funding agreement with each of the other utilities specifying how each of the other utilities will fund its share of the cost of program management from its Low-Income Program funds. The contracting utility will then pay the Program Manager. The co-funding agreement will govern all financial transactions among the utilities for the low-income incentive program based on the program budget, including program and annual audit evaluation costs.

While the utilities will jointly pay the cost of program management, each utility will pay incentives directly to qualifying applicants in its service territory. Accordingly, the co-funding agreement between the utilities should also describe

how the Program Manager will inform each utility which applicants should be awarded incentive payments.

## **Program Manager Selection Criteria and Requirements**

RFP responses will be evaluated to determine whether potential the Program Manager is adequately staffed with personnel who have the following qualifications and experience:

- Experience installing and/or designing solar PV systems
- Experience serving low-income populations
- Experience developing marketing strategies directed at low-income communities and accessible communications for persons with disabilities
- Experience creating finance packages appropriate for energy efficiency measures and/or solar energy systems
- Knowledge of the needs of low-income, single-family homeowners
- Language ability for major language requirements of eligible low-income populations
- Knowledge of LIEE and CARE programs
- Experience and knowledge of energy-efficiency measures and energy audits at the residential level
- Widespread city and county government contacts throughout California
- Ability to create partnerships with private sector financing entities
- Existing relationships with affordable housing
- Experience delivering programs through collaboration with multiple stakeholders (i.e., no preexisting constraints on partnering latitude)
- Knowledge of or experience with job training and/or workforce development programs, especially for low-income communities
- Data gathering and analysis skills

The successful bidder for Program Manager must demonstrate the ability to perform the following functions:

- Establish relationships with low-income, single family homeowners
- Establish relationships with community-based organizations that serve low-income homeowners to conduct outreach

- Partner and work with solar installers to install PV on target homes, and partner with appropriate entities to develop " green job" training or other workforce development programs
- Hire multilingual staff to meet language requirements of low-income populations
- Hire staff that can develop communications accessible to persons with disabilities
- Educate low-income customers on solar technology and energy efficiency measures
- Create a marketing plan to attract eligible populations of all qualifying income levels
- Build organizational capacity to meet the demands of a statewide program
- Implement the strategy through a program implementation plan, through either a phase-in or statewide approach, to achieve program milestones
- Collaborate and partner with city and county housing agencies to create in-place, flexible financing packages
- Explore other funding options with corporations and government agencies
- Work with PG&E, SCE, and SDG&E to direct incentive payments to eligible recipients
- Work with the Commission's Energy Division staff and an independent evaluator to monitor and report on the program's progress
- Collaborate with the administrators of the LIEE and CARE programs on delivery strategy
- Provide customer support, including responding to complaints, problems, and maintenance needs

RFP responses will be evaluated based on the qualifications and abilities listed above as well as respondents marketing and outreach plans and program implementation plans. Program implementation plans should address financing approaches and methods for integrating solar investment with low-income housing rehabilitation. We encourage plans to include a workforce development plan that provides solar installer job training for low-income communities.

# **Marketing and Outreach**

The Program Manager should develop a narrowly targeted marketing and outreach program for eligible low-income recipients as defined Section 2852, which meets the following specifications:

- The Program Manager should collaborate with housing agencies to find and attract eligible households and coordinate with utility LIEE programs to identify qualifying low-income homeowners.
- The Program Manager must create outreach materials and a plan to educate low-income customers on solar technology, on topics including but not limited to:
  - Proper inspection and long-term maintenance of the PV system in order to ensure energy bill benefits.
  - Various measures, including behavioral changes, energy efficiency, and solar, that recipients can use to manage their energy usage and bills.
  - o Information regarding where state assistance for energy efficiency measures can be obtained.
  - How to apply for federal tax credits.
- The marketing and outreach plan must align with the language needs of low-income communities, and meet the Dymally-Alatorre Bilingual Services Act of California (1973) that guides the provision of information to Low English Proficiency populations. The plan must also address the accessibility needs of persons with disabilities.

#### Milestones and Evaluation Criteria

The low-income solar program should reach the following milestones:

- 1. Within 12 months of the date of this order, the CSI low-income incentive program shall be implemented in the service areas of PG&E, SCE and SDG&E.
- 2. By the end of 2010, 1,000 PV systems shall be installed on low-income, single-family homes.
- By the end of 2010, the Program Manager shall have made reasonable efforts to identify the eligible population across the state within the PG&E,

SCE and SDG&E territories, and have attempted to contact them about the low-income incentive program.

The Program Manager shall submit quarterly reports to the Director of the Energy Division on progress of the low-income incentive program. The quarterly reports should include the following items, but Energy Division may modify this list as it deems appropriate:

- Number of applications received
- Number of applications accepted
- Size of installations and expected annual output
- Total system cost in \$/kW before subsidy
- Progress of installations
- Geographic areas served
- Incentive dollars paid by each utility
- Installer used (if applicable)
- LIEE/CARE-eligibility of applicants
- Administrative and marketing expenditures

The Program Manager shall submit to an annual audit of program expenditures. The purpose of the audit is to ensure program funds are paid to legitimate and verified installations of solar energy systems on qualifying homes and that administrative funds are spent in a reasonable and appropriate manner. Energy Division should ensure this audit requirement is part of the Program Manager's contract.

Every two years, Energy Division shall select an independent evaluator through an RFP process to review both the Program Manager and the low-income incentive program. Energy Division will direct one of the utilities to enter into a contract with the evaluator. The existing co-funding agreement with the other utilities shall govern how the evaluation contract is funded from each utility's low-income program funds.

The evaluation should include, but is not limited to, the following factors:

- Number of households served
- Cost of program per household (both incentive costs and total costs including program administration)

- Overall cost of program and cost of program components (i.e., administration, marketing, and incentives)
- The average amount energy bill is reduced per household (both in dollars and kWh)
- Whether participating households perform an Energy Audit
- Other, non-solar energy saving measures households have implemented along with their solar installation
- Whether or not the program increased household debt-load
- Customer satisfaction
- Turnover of homeowners in houses served and ongoing residence status of the home
- Languages used in outreach and languages spoken by participating households
- Location of households served
- Location of eligible households not served
- Geographic coverage across the state
- Percent of total CARE/LIEE customers served by program and percent of solar incentive recipients who are CARE/LIEE participants
- The effectiveness of consumer education programs on solar and energy efficiency
- Effectiveness of energy efficiency measures as related to PV systems
- System performance and maintenance adequacy

(END OF APPENDIX A)

#### APPENDIX B

## **Excerpts from the California Health and Safety Code**

Section 50079.5.

- (a) "Lower income households" means persons and families whose income does not exceed the qualifying limits for lower income families as established and amended from time to time pursuant to Section 8 of the United States Housing Act of 1937. The limits shall be published by the department in the California Code of Regulations as soon as possible after adoption by the Secretary of Housing and Urban Development. In the event the federal standards are discontinued, the department shall, by regulation, establish income limits for lower income households for all geographic areas of the state at 80 percent of area median income, adjusted for family size and revised annually.
- (b) "Lower income households" includes very low income households, as defined in Section 50105, and extremely low income households, as defined in Section 50106. The addition of this subdivision does not constitute a change in, but is declaratory of, existing law.
- (c) As used in this section, "area median income" means the median family income of a geographic area of the state.

#### Section 50105.

- (a) "Very low income households" means persons and families whose incomes do not exceed the qualifying limits for very low income families as established and amended from time to time pursuant to Section 8 of the United States Housing Act of 1937. These qualifying limits shall be published by the department in the California Code of Regulations as soon as possible after adoption by the Secretary of Housing and Urban Development. In the event the federal standards are discontinued, the department shall, by regulation, establish income limits for very low income households for all geographic areas of the state at 50 percent of area median income, adjusted for family size and revised annually.
- (b) "Very low income households" includes extremely low income households, as defined in Section 50106. The addition of this subdivision does not constitute a change in, but is declaratory of, existing law.
- (c) As used in this section, "area median income" means the median family income of a geographic area of the state.

#### Section 50106.

"Extremely low income households" means persons and families whose incomes do not exceed the qualifying limits for extremely low income families as established and amended from time to time by the Secretary of Housing and Urban Development and defined in Section 5.603(b) of Title 24 of the Code of Federal Regulations. These limits shall be published by the department in the California Code of Regulations as soon as possible after adoption by the Secretary of Housing and Urban Development. In the event the federal standards are discontinued, the department shall, by regulation, establish income limits for extremely low income households for all geographic areas of the state at 30 percent of area median income, adjusted for family size and revised annually. As used in this section, "area median income" means the median family income of a geographic area of the state.

## Section 50052.5.

- (a) For any owner-occupied housing that receives assistance prior to January 1, 1991, and a condition of that assistance is compliance with this section, "affordable housing cost" with respect to lower income households may not exceed 25 percent of gross income.
- (b) For any owner-occupied housing that receives assistance on or after January 1, 1991, and a condition of that assistance is compliance with this section, "affordable housing cost" may not exceed the following:
- (1) For extremely low households the product of 30 percent times 30 percent of the area median income adjusted for family size appropriate for the unit.
- (2) For very low income households the product of 30 percent times 50 percent of the area median income adjusted for family size appropriate for the unit.
- (3) For lower income households whose gross incomes exceed the maximum income for very low income households and do not exceed 70 percent of the area median income adjusted for family size, the product of 30 percent times 70 percent of the area median income adjusted for family size appropriate for the unit. In addition, for any lower income household that has a gross income that equals or exceeds 70 percent of the area median income adjusted for family size, it shall be optional for any state or local funding agency to require that affordable housing cost not exceed 30 percent of the gross income of the household.

- (4) For moderate-income households, affordable housing cost shall not be less than 28 percent of the gross income of the household, nor exceed the product of 35 percent times 110 percent of area median income adjusted for family size appropriate for the unit. In addition, for any moderate-income household that has a gross income that exceeds 110 percent of the area median income adjusted for family size, it shall be optional for any state or local funding agency to require that affordable housing cost not exceed 35 percent of the gross income of the household.
- (c) The department shall, by regulation, adopt criteria defining, and providing for determination of, gross income, adjustments for family size appropriate to the unit, and housing cost for purposes of determining affordable housing cost under this section. These regulations may provide alternative criteria, where necessary to be consistent with pertinent federal statutes and regulations governing federally assisted housing. The agency may, by regulation, adopt alternative criteria, and pursuant to subdivision (f) of Section 50462, alternative percentages of income may be adopted for agency-assisted housing development.
- (d) With respect to moderate- and lower income households who are tenants of rental housing developments and members or shareholders of cooperative housing developments, or limited equity cooperatives "affordable housing cost" has the same meaning as affordable rent, as defined in Section 50053.
- (e) Regulations of the department shall also include a method for determining the maximum construction cost, mortgage loan, or sales price that will make housing available to an income group at affordable housing cost.
- (f) For purposes of this section, "area median income" shall mean area median income as published by the department pursuant to Section 50093.
- (g) For purposes of this section, "moderate income household" shall have the same meaning as "persons and families of moderate income" as defined in Section 50093.
- (h) For purposes of this section, and provided there are no pertinent federal statutes applicable to a project or program, "adjusted for family size appropriate to the unit" shall mean for a household of one person in the case of a studio unit, two persons in the case of a one-bedroom unit, three persons in the case of a two-bedroom unit, four persons in the case of a three-bedroom unit, and five persons in the case of a four-bedroom unit.

Section 50053.

- (a) For any rental housing development that receives assistance prior to January 1, 1991, and a condition of that assistance is compliance with this section, "affordable rent" with respect to lower income households shall not exceed the percentage of the gross income of the occupant person or household established by regulation of the department that shall not be less than 15 percent of gross income nor exceed 25 percent of gross income.
- (b) For any rental housing development that receives assistance on or after January 1, 1991, and a condition of that assistance is compliance with this section, "affordable rent," including a reasonable utility allowance, shall not exceed:
- (1) For extremely low income households the product of 30 percent times 30 percent of the area median income adjusted for family size appropriate for the unit.
- (2) For very low income households, the product of 30 percent times 50 percent of the area median income adjusted for family size appropriate for the unit.
- (3) For lower income households whose gross incomes exceed the maximum income for very low income households, the product of 30 percent times 60 percent of the area median income adjusted for family size appropriate for the unit. In addition, for those lower income households with gross incomes that exceed 60 percent of the area median income adjusted for family size, it shall be optional for any state or local funding agency to require that affordable rent be established at a level not to exceed 30 percent of gross income of the household.
- (4) For moderate-income households, the product of 30 percent times 110 percent of the area median income adjusted for family size appropriate for the unit. In addition, for those moderate-income households whose gross incomes exceed 110 percent of the area median income adjusted for family size, it shall be optional for any state or local funding agency to require that affordable rent be established at a level not to exceed 30 percent of gross income of the household.
- (c) The department's regulation shall permit alternative percentages of income for agency-assisted rental and cooperative housing developments pursuant to regulations adopted under subdivision (f) of Section 50462. The department shall, by regulation, adopt criteria defining and providing for determination of gross income, adjustments for family size appropriate to the unit, and rent for purposes of this section. These regulations may provide alternative criteria, where necessary, to be consistent with pertinent federal statutes and regulations governing federally assisted

rental and cooperative housing. The agency may, by regulation, adopt alternative criteria, and pursuant to subdivision (f) of Section 50462, alternative percentages of income may be adopted for agency-assisted housing developments.

For purposes of this section, "area median income," "adjustments for family size appropriate to the unit," and "moderate-income household" shall have the same meaning as provided in Section 50052.5.

#### Section 50093.

"Persons and families of low or moderate income" means persons and families whose income does not exceed 120 percent of area median income, adjusted for family size by the department in accordance with adjustment factors adopted and amended from time to time by the United States Department of Housing and Urban Development pursuant to Section 8 of the United States Housing Act of 1937. However, the agency and the department jointly, or either acting with the concurrence of the Secretary of the Business and Transportation Agency, may permit the agency to use higher income limitations in designated geographic areas of the state, upon a determination that 120 percent of the median income in the particular geographic area is too low to qualify a substantial number of persons and families of low or moderate income who can afford rental or home purchase of housing financed pursuant to Part 3 (commencing with Section 50900) without subsidy.

"Persons and families of low or moderate income" includes very low income households, as defined in Section 50105, extremely low income households, as defined in Section 50106, and lower income households as defined in Section 50079.5, and includes persons and families of extremely low income, persons and families of very low income, persons and families of low income, persons and families of moderate income, and middle-income families. As used in this division:

- (a) "Persons and families of low income" or "persons of low income" means persons or families who are eligible for financial assistance specifically provided by a governmental agency for the benefit of occupants of housing financed pursuant to this division.
- (b) "Persons and families of moderate income" or "middle-income families" means persons and families of low or moderate income whose income exceeds the income limit for lower income households.
- (c) "Persons and families of median income" means persons and families whose income does not exceed the area median income, as adjusted by the

department for family size in accordance with adjustment factors adopted and amended from time to time by the United States Department of Housing and Urban Development pursuant to Section 8 of the United States Housing Act of 1937.

As used in this section, "area median income" means the median family income of a geographic area of the state, as annually estimated by the United States Department of Housing and Urban Development pursuant to Section 8 of the United States Housing Act of 1937. In the event these federal determinations of area median income are discontinued, the department shall establish and publish as regulations income limits for persons and families of median income for all geographic areas of the state at 100 percent of area median income, and for persons and families of low or moderate income for all geographic areas of the state at 120 percent of area median income. These income limits shall be adjusted for family size and shall be revised annually.

For purposes of this section, the department shall file, with the Office of Administrative Law, any changes in area median income and income limits determined by the United States Department of Housing and Urban Development, together with any consequent changes in other derivative income limits determined by the department pursuant to this section. These filings shall not be subject to Article 5 (commencing with Section 11346) or Article 6 (commencing with Section 11349) of Chapter 3.5 of Part 1 of Division 3 of Title 2 of the Government Code, but shall be effective upon filing with the Office of Administrative Law and shall be published as soon as possible in the California Regulatory Code Supplement and the California Code of Regulations.

The department shall establish and publish a general definition of income, including inclusions, exclusions, and allowances, for qualifying persons under the income limits of this section and Sections 50079.5, 50105, and 50106 to be used where no other federal or state definitions of income apply. This definition need not be established by regulation.

Nothing in this division shall prevent the agency or the department from adopting separate family size adjustment factors or programmatic definitions of income to qualify households, persons, and families for programs of the agency or department, as the case may be.

(END OF APPENDIX B)