

Decision 08-10-036 October 16, 2008

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

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

Rulemaking 08-03-008  
(Filed March 13, 2008)

**DECISION ESTABLISHING MULTIFAMILY AFFORDABLE SOLAR HOUSING  
PROGRAM WITHIN THE CALIFORNIA SOLAR INITIATIVE**

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**DECISION ESTABLISHING MULTIFAMILY AFFORDABLE SOLAR HOUSING PROGRAM WITHIN THE CALIFORNIA SOLAR INITIATIVE**

**1. Summary**

This decision establishes a \$108 million solar incentive program for Multifamily Affordable Solar Housing (MASH) as part of the California Solar Initiative (CSI) overseen by the California Public Utilities Commission. The MASH program will provide solar incentives to qualifying affordable housing developments, as defined in state law. Incentive levels depend on whether the solar installation provides power to common areas of the affordable housing complex or directly to tenant units, with incentive levels of \$3.30 per watt for systems offsetting common area load, and \$4.00 per watt for systems offsetting tenant load. Applicants for MASH incentives may also apply for higher incentive levels through a competitive application process.

This decision establishes MASH program budget and evaluation details and specifies that the program will be administered by the existing CSI Program Administrators 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 details of the MASH program are set forth in Appendix A of this order.<sup>1</sup>

In order to encourage solar installations on multitenant affordable housing properties through the MASH program, this decision directs PG&E, SCE, and

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<sup>1</sup> It is important to note that building owners of multitenant properties with tenants of any income level may participate in the general market CSI program, as established in D.06-08-028 and subsequent orders, regardless of the status of the MASH program adopted herein.

SDG&E to file tariffs for a “virtual net metering” program. Virtual net metering will allow the electricity produced by a single solar installation to be credited to the benefit of multiple tenants in the building without requiring the system to be physically connected to each tenant’s meter.

## **2. Background**

In 2005 and 2006, the California Public Utilities Commission (Commission) and the California Energy Commission (CEC) collaborated to establish the CSI to fund rebates for installation of solar energy systems for customers of PG&E, SCE, and SDG&E.<sup>2</sup> (See Decision (D.) 06-01-024 and D.06-08-028.) In D.06-01-024, the Commission required that a minimum of 10% of program funds be applied to projects installed by low-income residential customers and affordable housing projects. (D.06-01-024, p. 27.) Shortly thereafter, the Legislature passed Senate Bill (SB) 1<sup>3</sup> and Assembly Bill (AB) 2723,<sup>4</sup> both pertaining to solar incentive programs. SB 1 sets forth specific CSI program requirements regarding program budget, conditions for solar incentives and eligibility criteria, and AB 2723 codified the requirement that not less than 10% of overall CSI funds be used for

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<sup>2</sup> The Commission portion of CSI targets solar facilities on existing homes and new and existing businesses. The CEC portion of CSI is known as the New Solar Homes Partnership (NSHP) and targets solar installations in the new home construction market, including solar on newly constructed low-income housing.

<sup>3</sup> Chapter 132, Statutes of 2006.

<sup>4</sup> Chapter 864, Statutes of 2006.

installation of solar energy systems<sup>5</sup> on “low-income residential housing,” as defined in the bill.

Following passage of these bills, the Commission modified its earlier decisions to conform CSI to SB 1 and AB 2723. In so doing, the Commission adopted a 10-year CSI budget of \$2.1668 billion, with 10% of that budget, or \$216.68 million, dedicated to a low-income solar incentive program.

(See D.06-12-033.)

In designing a low-income and affordable housing solar incentive program, the Commission opted to design a program for qualifying low-income single family homeowners separately from a program for multifamily affordable housing. The Commission’s Energy Division staff issued a proposal in April 2007 for a solar incentive program for low-income homeowners. Following comments by parties on that proposal, the Commission issued D.07-11-045, which established a \$108 million Low-Income Single Family (LISF) solar incentive program for low-income homeowners to provide partial, and in some cases, full subsidies for solar energy systems on existing owner-occupied low-income households.

With regard to multifamily affordable housing, the assigned Commissioner directed the CSI Program Administrators to develop a proposal

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<sup>5</sup> AB 2723 set forth a definition of a “solar energy system,” codified in Pub. Util. Code § 2852, 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, and except for a solar energy device for a nonprofit building, produces not more than five megawatts, alternating current rated peak electricity, and that meets or exceeds the eligibility criteria established by the [CEC].”

for a solar incentive program.<sup>6</sup> The Program Administrators' proposal was filed on July 16, 2007, and a workshop to discuss the proposal was held on August 15, 2007. After reviewing the Program Administrators' proposal, the Commission's Energy Division incorporated elements of it, plus additional research, into a new multifamily affordable housing Staff Proposal, which was issued for comment in a February 29, 2008 Administrative Law Judge (ALJ) ruling. The Energy Division held a workshop to discuss its proposal and answer questions from interested stakeholders and parties on March 17, 2008.

Comments on the Staff Proposal were filed on March 26, 2008 by A World Institute for a Sustainable Humanity (A WISH), Brobeck Solar Energy LLC (Brobeck), Californians for Renewable Energy (CARE), California Center for Sustainable Energy (CCSE), the Commission's Division of Ratepayer Advocates (DRA), jointly by Bay Area Local Initiatives Support Corporation and the Nonprofit Housing Association of Northern California (LISC/NHA), PG&E, SCE, SDG&E, and Sunfund Corporation (Sunfund). Reply comments were filed on April 4, 2008 by A WISH, CARE, CCSE, Global Green USA (Global Green), PG&E, jointly by the Solar Alliance and the California Solar Energy Industries Association (the "Joint Solar Parties"), SCE, and SDG&E. In addition, the Energy Division received correspondence from Marin Environmental Housing Collaborative, which has been included in the correspondence file of this proceeding.

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

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<sup>6</sup> See R.06-03-004, "Assigned Commissioner Ruling," February 5, 2007.

### **3. Program Overview and Goals**

The Energy Division Staff Proposal contains a recommended incentive structure and implementation strategy for a \$108 million solar photovoltaic (PV) incentive plan for qualified existing affordable multifamily housing developments.<sup>7</sup> The MASH program is targeted at existing multifamily affordable housing that meets the definition of low-income residential housing set forth in Pub. Util. Code § 2852.<sup>8</sup> Specifically, this means multifamily housing financed with low-income housing tax credits, tax-exempt mortgage revenue bonds, general obligation bonds, or local, state or federal loans or grants. The housing must also meet the definition of low-income households in Health and Safety Code § 50079.5.

According to a study for the Commission on the characteristics of the low-income population in California, approximately 50% of low-income households in the state, or approximately two million households, live in multifamily dwellings. (See KEMA Phase II Low Income Needs Assessment, October 12, 2007, pp. 4-8.) It is unclear what percentage of these multifamily dwellings meets the definition of low-income residential housing in § 2852.

The proposed program is designed to substantially subsidize solar energy systems in multifamily housing, which will, in combination with energy efficiency measures, offset energy loads and provide economic benefits for both affordable housing property owners and managers and building occupants.

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<sup>7</sup> Newly constructed affordable housing may apply to the CEC's NSHP for solar incentives.

<sup>8</sup> All statutory references are to the Public Utilities Code, unless otherwise noted.

The Staff Proposal recommends incentives solely for solar PV systems that generate electricity because CSI is funded solely by electric ratepayers in accordance with SB 1, which precludes the Commission from collecting CSI funds from gas distribution ratepayers.

The Staff Proposal is designed to provide incentives for solar power installation, coupled with energy efficiency, which will improve the energy utilization of affordable housing properties in California, with benefits accruing to both owners and tenants. With that mind, the Staff proposes the following goals for the program:

- Stimulate adoption of solar power in the affordable housing sector;
- Improve energy utilization and overall quality of affordable housing through application of solar and energy efficiency technologies;
- Decrease electricity use and costs without increasing monthly household expenses for affordable housing building occupants; and
- Increase awareness and appreciation of the benefits of solar among affordable housing occupants and developers.

In comments on the Staff Proposal, most parties agree with the overall program goals, but differ with the details of how to implement the program goals and strategy. We will adopt the basic program goals as set forth in the Staff Proposal. We will address suggested modifications to program details in the sections below as we consider the various program topics.

#### **4. Incentive Structure**

The Staff Proposal contains a two-track incentive structure, allowing program applicants – namely affordable housing building owners or operators – to opt for either a fixed, up front solar incentive or the opportunity to apply for a



higher incentive if applicants can prove their solar installations will provide a quantifiable benefit to tenants, e.g., lower their monthly electricity bills or monthly expenses.

Specifically, Track 1 would provide fixed, up front rebates for qualifying solar energy systems, using the Expected Performance Based Buydown (EPBB) methodology applied in the general market CSI program to estimate solar system performance based on system orientation and design.<sup>9</sup> The proposed incentive rates would vary as follows, depending on whether the system offsets common area loads or tenant loads:

Table 1: Proposed Track 1 Incentive Rates

Track 1A: PV System Offsetting Common Area Load	Track 1B: PV System Offsetting Tenant Load
\$3.00/watt	\$4.00/watt

Staff proposes incentives for systems that offset common area load based on the theory that incentives for these types of systems can reduce building operating costs, thereby making it possible for affordable housing developers to better serve more low-income tenants. Staff’s proposed incentives are based on an analysis of the economics of incorporating solar during the federal Low Income Housing Tax Credit (LIHTC) refinancing “window,” in which many affordable housing projects participate. According to Staff, the proposed incentives are intended to make solar cost-effective for as many affordable

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<sup>9</sup> See D.06-08-028, Section III.C, for further explanation of the EPBB incentive methodology.

housing developments as possible, and in some case, the incentives combined with other financing sources could cover 100% of PV system costs.

For Track 2, Staff essentially proposes a grant program, wherein applicants may receive a higher incentive level than Track 1 provides, if they can justify the need for a higher incentive and prove the system will provide a “direct tenant benefit.” The Staff Proposal defined the term “direct tenant benefit” as “any operating cost savings from solar that is shared with tenants of affordable housing buildings through a recurring payment or financial credit.” (Staff Proposal, p. 18.) Moreover, staff suggested that applicants for Track 2 funds must prove the extent and duration of the direct tenant benefit. The total direct tenant benefit must exceed 70% of the additional incentive sought above Track 1 levels and must occur in no more than five years. (Id., p. 19.)

We adopt the basic incentive structure proposed by Staff, i.e., a two-track approach, with Track 1 providing up front incentives to systems that offset either common area or tenant load, and Track 2 providing an opportunity to compete for higher incentives through a grant program. Parties generally supported this approach, although they provided detailed comments about the incentives levels and other program details for Track 1 and Track 2, which we address below. Track 1 and Track 2 incentives are designed to be paid in a lump sum, up front payment at the time of verified system installation. Track 1 incentives are based on an estimate of system performance, using the same EPBB methodology used in the general market CSI program. Track 2 incentives will be assessed based on a competitive application process, described in further detail later in this order.

Only a few parties provided different proposals for the overall program structure. SDG&E proposes an “Energy System Pilot Program” wherein the Commission would allow SDG&E to install, own and operate solar energy

systems on multifamily affordable housing buildings as a pilot program. These systems would be included in SDG&E's rate base and would not receive incentives otherwise due to owners of CSI solar generation systems. SDG&E suggests this approach could enhance the market for solar in its service territory and achieve synergies with SDG&E's energy efficiency programs. A WISH opposes SDG&E's proposal because it fails to explain how residents of multifamily affordable housing units would benefit from the proposal or how the idea comports with SB 1.

CARE and SDG&E each propose enhancement of the Staff Proposal to include loans to multifamily affordable housing developments for solar installations. SDG&E proposes on-bill financing for such a program. CARE proposes low-interest loans to affordable housing owners, in partnership with financial institutions, and further suggests building owners could collect a "solar surcharge" from tenants. In response, A WISH urges careful scrutiny of loan schemes to ensure affordable housing residents, who do not have discretionary income to pay back loans, are not impacted by on-bill financing and placed at risk. SCE opposes CARE's loan proposal, arguing further details are needed.

We decline to adopt SDG&E's Energy System Pilot, or the loan concepts suggested by both SDG&E and CARE at this time. SDG&E describes its Energy System Pilot proposal only briefly, and does not explain how solar installations owned and operated by the utility would benefit affordable housing owners, developers, or tenants. Section 2852 requires us to use at least 10% of CSI funds for incentives to low-income residential housing, including multifamily affordable housing, as defined in that section. Under SDG&E's pilot concept, the utility would not receive any CSI incentive funds. Thus, it appears we would still need to design a program that uses at least 10% of CSI funds to pay

incentives to low-income residential housing. Moreover, the CSI program was specifically designed to provide incentives to qualifying solar technologies “except those owned or operated by investor- and publicly-owned gas and electric distribution utilities.”<sup>10</sup> Therefore, we will maintain our focus on a non-utility incentive program as opposed to solar owned and installed by the utility.<sup>11</sup> We decline to adopt the loan proposals suggested by SDG&E and CARE because neither concept is proposed in sufficient detail. Moreover, we foresee complications surrounding administration of a loan program which require further scrutiny. We agree with A WISH that loan programs require careful monitoring to ensure affordable housing tenants are not negatively impacted by such programs. We prefer to establish our incentive program first and pursue financing concepts if needed, depending on the demand for and participation in this multifamily affordable housing incentive program.

#### **4.1. Track 1 Incentives**

We now turn to the specific incentive levels and other details of Track 1 incentives. First, several parties suggest the incentives for Track 1 in the Staff Proposal should be increased. LISC/NHA<sup>12</sup> comment the proposed incentives are too low because assumptions in the Staff Proposal concerning the availability of housing tax credits and the financing structure for affordable housing,

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<sup>10</sup> D.06-01-024, Appendix A, p. 2.

<sup>11</sup> SDG&E has since filed Application 08-07-017 requesting approval of a utility owned solar project, which is currently pending before the Commission in that proceeding.

<sup>12</sup> LISC is a national nonprofit organization which partners with community development organizations to transform distressed communities. NHA is a nonprofit association comprised of members who support, build, and finance affordable housing.

including investment tax credits, have changed in recent months and may not be accurate. According to the experience of LISC/NHA, only a very small number of properties are appropriate candidates for the program as written because very few affordable housing projects will take advantage of tax credit financing. They contend it is more reasonable to assume that new solar energy systems on existing properties will be purchased and owned by a third party. (LISC, p. 8.) LISC/NHA assert the proposed incentives are too low for properties without access to investment tax credit financing.

PG&E recommends the Commission raise incentives offered under the MASH program to match either CSI incentives to low-income homeowners or the CEC's NSHP incentive levels. The Commission established a program for CSI incentives to low-income homeowners in D.07-11-045, and these incentives range from \$4.75 to \$7.00 per watt, depending on a homeowner's income. The CEC's NSHP offers affordable housing properties incentives of \$3.30 per watt for common area installations and \$3.50 per watt for systems that offset tenant load. Global Green, Sunfund, and the Joint Solar Parties echo the comment that Track 1A incentives for common areas of affordable housing complexes should mirror those under the NSHP.

SCE suggests gaming could occur between the MASH and NSHP programs if MASH incentives for offsetting tenant load are higher than NSHP incentives, causing applicants to seek out the highest possible incentive. A WISH proposes the Commission adopt a larger differential between incentives for common and tenant areas. It also proposes that all incentives under this program be higher, at least 125% of the general market CSI incentive levels. CARE echoes these comments by suggesting substantially higher incentives for systems that offset tenant load.

PG&E/SCE and Joint Solar parties recommend the Commission reserve the option to adjust incentives later, both the dollar amount and the amount allocated to each Track. Global Green contends incentives should decline at least 7% per year as mandated in SB 1 and in keeping with the general market CSI program.

We will adopt a Track 1A incentive level of \$3.30 per watt, the same as the NSHP, and a Track 1B incentive level of \$4.00 per watt, as proposed by staff. We agree with those parties who suggest matching the NSHP incentive for common area installations under Track 1A. We find it reasonable to offer common area incentives that at least match the NSHP levels, given that costs for solar on a retrofit are unlikely to be less than solar costs for new construction. For Track 1B incentives to systems offsetting tenant load, we find the \$4.00 per watt rate proposed by staff reasonable because it is based on an Energy Division Staff analysis, described in the Staff Proposal, which reviewed the costs of retrofitting existing multifamily affordable housing and recognizes the unique financial constraints of affordable housing developments. (Staff Proposal, pp. 16-17.) All Track 1 incentives will be paid up front, using the same EPBB calculator as in the general market CSI program.

Although LISC/NHA contend the Staff analysis only applies to a small subset of properties, we will rely on it to set these Track 1A and 1B rates while acknowledging that these incentives will benefit some affordable housing properties, but perhaps not all. We are not experts in affordable housing financing, and we accept the contention from LISC/NHA that Track 1 incentives may be too low for some properties. For this reason, we offer a Track 2 incentive program to allow developers to submit proposals for higher incentives in line

with their financing needs. If Track 2 experiences more demand than Track 1, we can realign the program accordingly.

In response to gaming concerns expressed by several parties and because our Track 1B incentives for tenant systems are higher than the incentives offered by NSHP, we will adopt SCE's suggestion to require qualifying affordable housing properties to have an occupancy permit for at least two years prior to applying for MASH incentives.

We decline to adopt a trigger for automatic incentive reductions for MASH incentives. Instead, we commit to reassessing incentive levels periodically. We interpret the mandate in SB 1 that incentives decline 7% per year as applying to the CSI program overall. In our assessment, decreases in incentives in the general market program, which have been greater than 7% per year, achieve the overall intent of statute. Furthermore, we committed in D.06-12-033 to evaluating the average incentive reductions in CSI to ensure we conformed to the mandates of SB 1. (D.06-12-033, pp. 9-10.) Thus, rather than automatic incentive declines on a calendar basis or volume of application basis, we reserve the option to revisit these incentive levels and adjust as needed based on solar costs or other relevant market factors. In D.07-11-045, where we adopted our LISF incentive program, we described a process for minor incentive reductions. We adopt the same process here. We delegate to the assigned ALJ, in this or any successor proceeding, the authority to reduce MASH incentive levels by up to 10% per year, using the same process outlined in D.07-11-045 and D.06-01-024. Increases to incentives, or reductions larger than 10%, will be handled by Commission order.

SCE and Global Green recommend the Commission set a minimum amount of tenant load that a system must offset to qualify for the higher

Track 1B incentives. SCE is concerned a building owner can qualify for the higher Track 1B incentive by only offsetting 1% of tenant load. Global Green suggests a system must offset 50% of tenant load to qualify for Track 1B incentives. We herein clarify that a building may receive both Track 1A and 1B incentives for the same project if the project will offset both common area and tenant load. Track 1 incentives, which are capacity-based and determined using the EPBB calculator according to the general market CSI program rules, will be apportioned between Track 1A and Track 1B according to how the system provides electricity. For example, if a 100 kilowatt (kW) solar installation offsets both common area and tenant load, and 60% of the electricity output of the system is dedicated to common area load and 40% of the electricity output is dedicated to tenant load, the applicant will receive Track 1A incentives for 60 kW, and Track 1B incentives for 40 kW.

To implement Track 1 incentives as soon as possible, we will require the Program Administrators to jointly file an advice letter within 60 days of this order with proposed amendments to the CSI Handbook to incorporate the MASH program. The handbook should address Track 1 incentives and all elements of the MASH program necessary for implementation of Track 1, as set forth in this order. The filing does not need to address Track 2 incentives or a Virtual Net Metering (VNM) tariff, which we will discuss later in this order and implement on a different timeline.

#### **4.2. Track 2 Incentives**

Only a few parties provided comments specific to Track 2. CCSE maintains that the Commission will need strong guidelines to prevent program abuse in Track 2. For example, CCSE suggests applicants could inflate alleged



project costs to appear eligible for a larger grant. CARE comments that the term “direct tenant benefits” is not well defined.

For Track 2, we adopt the concept specified in Staff Proposal, with a few alterations. In our view, the concept of allowing applicants to tailor incentives to their financing needs while at the same time requiring them to share enhanced incentives through “direct tenant benefits” is appealing. CARE criticizes the staff’s original definition of direct tenant benefits, but does not propose specific enhancements to it. We adopt the Staff’s proposed definition of direct tenant benefits as “any operating cost saving from solar that is shared with tenants of affordable housing buildings through a recurring payment or financial credit.” We clarify that these operating cost savings may include energy efficiency investments or upgrades provided to tenant units.

Although we adopt this definition, we will not adopt Staff’s suggested requirement that an applicant pass on 70% of any increased incentives to tenants within five years. Instead, we will establish Track 2 as a competitive application process, managed by each Program Administrator in its service area, where applicants will compete for heightened incentives over Track 1. Program Administrators should evaluate applications on the basis of the incentive level sought, the amount of direct tenant benefit to be shared (i.e, tenant bill credits, tenant bill reduction or energy efficiency investments to benefit tenants), the method and timing to provide direct tenant benefits, outreach and training, and the reasonable use of program funds. In our view, a competitive process is the best way to encourage innovative models for solar on affordable housing by forcing applicants to compete for limited program funds.

Applications for Track 2 incentives should provide total system costs and explain why incentives greater than those under Track 1 are sought. Applicants

may seek Track 2 incentives to cover capital costs of the project as well as ongoing operation and maintenance costs. Each Program Administrator will review applications every six months for projects in its service area, and award Track 2 incentives from its individual program budget.

To ensure the Program Administrators apply consistent criteria to evaluate Track 2 applications, we will require them to coordinate to develop a standardized statewide Track 2 application and review process as well as the handbook changes necessary to implement Track 2, which they should jointly file as an advice letter, within ninety days of this order. In developing this statewide application and review process, the Program Administrators should seek advice and input from members of the affordable housing community and other interested parties to this proceeding.

We will not mandate a time period or maximum percentage of benefit sharing. In place of prescriptive mandates, a competitive application process should mitigate the concern expressed by CCSE that applicants could inflate project costs to achieve higher incentives. Moreover, a competitive process should encourage applicants to design creative benefit sharing proposals in order to win additional incentives for their projects, and to seek only as much incentive funds as they need without claiming inflated project costs. Nevertheless, we think CCSE's concern is legitimate and we will require close monitoring of average system costs and incentives under Track 2 as part of MASH program evaluation.

Finally, because Track 2 proposals will be considered every six months, each Program Administrator may award no more than 20% of its Track 2 budget in each cycle. Program administrators may file an advice letter if they want to deviate from this budget limit. Energy Division may authorize deviations from

the 20% limit if the advice letter demonstrates how the proposed deviation will further the goals of the MASH program.

**5. Budget and Program Timeline**

The Staff Proposal suggests a \$108.34 million program budget, allocated between the three large utilities by the same formula used in the general market CSI program. The proposed budget, by utility, is as follows:

Table 2: Proposed MASH Budget by Utility Territory

<b>Utility</b>	<b>Percent of MASH Budget</b>	<b>Budget</b>
PG&E	43.7%	\$47,344,580
SCE	46.0%	\$49,836,400
SDG&E	10.3%	\$11,159,020
<b>Total</b>	<b>100%</b>	<b>\$108,340,000</b>

Staff proposes that the program budget will be available until all funds are exhausted or until December 31, 2015, whichever occurs first. Any program funds that are unspent as of January 1, 2016 shall be used for Low-Income Energy Efficiency (LIEE)<sup>13</sup> programs as set forth in § 2852(c)(3). Staff does not propose an annual allocation of funds or annual megawatt (MW) goals for this program. Rather, if funds are exhausted before the end of the general market

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<sup>13</sup> LIEE programs are offered by the jurisdictional energy utilities to low-income customers that meet certain income guidelines. LIEE programs provide for the installation of energy efficiency measures in customer residences. Energy efficiency measures may include 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.

CSI program, multifamily affordable housing properties may apply for funding through the general market CSI program.

We adopt the \$108.34 million program budget, with the allocation suggested by Staff, as shown in Table 2 above. We will continually monitor participation in both the MASH program and the LISF incentive program adopted in D.07-11-045. If participation rates warrant a different budget allocation, we can adjust either program budget accordingly. In D.07-11-045, we established a process to facilitate program adjustments such as this. Specifically, we said that at any time, Energy Division may recommend program adjustments to the assigned Commissioner or ALJ of this or any successor proceeding. The assigned Commissioner and/or ALJ will determine if suggested program changes require modification of a Commission order, and if so, the change would be considered by the full Commission, following notice to parties and an opportunity to comment. We adopt the same process here for adjustments to the MASH budget or any elements of MASH program design.

SCE recommends the Commission consider an annual cap on program incentive payments, to avoid a “first-come, first served” program where funds could be exhausted before the solar technology experiences significant cost reductions. We reject SCE’s proposal for an annual budget cap. We want to provide maximum flexibility for innovative proposals to receive funding without regard to annual program limits. If the program funds are exhausted early and many MWs of solar on affordable housing are installed before 2015, we will consider this a success. Moreover, annual budget limits could impede the ability of affordable housing developments to take advantage of solar incentives during their refinancing windows. We prefer to avoid an arbitrary annual budget cap from preventing a housing development from taking advantage of this program.

### **5.1. Administrative Budget**

With regard to the administrative budget for the MASH program, the Staff Proposal recommends that 88% of each Program Administrator's budget be reserved for incentives, and 12% of funds go toward administrative purposes. Staff further suggests that the 12 % reserved for administration be further allocated as follows: 4% for marketing and outreach, 2% for evaluation, and 6% for other administration. The Program Administrators would track administrative funds for the MASH program separately from general market CSI administrative expenses, and track the subcategories identified above.

PG&E and SCE both comment that the administrative portion of the budget should be increased. SCE suggests a 15% total administrative budget, consistent with the 15% administrative budget allowed in the LISF program. This 15% budget would allow 9% for administration, 5% for marketing and outreach, and 1% for evaluation. SCE maintains the complexity of administering Track 2 incentives warrants additional administrative funds. A WISH opposes SCE's administrative budget request, claiming that the administrators have not made a showing that an increase is needed over the general market program. CCSE requests flexibility in how it spends the total administrative budget between the marketing, evaluation and general administrative categories.

We will allow an administrative budget of 12% of program funds, as proposed by Staff. We reject suggestions by SCE and PG&E to allow 15% of funds for administration. We allowed a higher administrative budget for the LISF program because of unique characteristics of that program, mainly the necessity for outreach to individual homeowners and complex financing needs. In the MASH program, applicants are not typically the affordable housing tenants, but building owners and/or operators. The general market CSI has a

10% administration budget cap. In our opinion, it is sufficient to allow 12% for this program, which bears more resemblance to the general market CSI than the LISF program.

Furthermore, we will allow some flexibility to each Program Administrator in how they spend their 12% administrative budget, as suggested by CCSE. Program administrators must spend 2% on evaluation, but they can choose how to split the remaining 10% between general administration and marketing and outreach. We clarify, based on comments by PG&E, that administrative costs to inspect and verify systems should be considered part of evaluation activities.

As suggested by Staff, we will require semi-annual administrative expense reports detailing administrative expenditures incurred by category (i.e., marketing and outreach, evaluation, and other administration), with separate accounting from the general market CSI program. The Program Administrators should submit this report as part of their semi-annual administrative expense report under the general market CSI program. (*See* D.07-05-047, Appendix A, p. 4.) All MASH program expenditures should be separately delineated from general market CSI expense reporting.

## **5.2. Incentive Budget**

A final budget issue involves whether to dictate an allocation of program funds between Track 1 and Track 2 incentives, and an allocation between Track 1A and 1B. Staff proposes that of the 88% of total program funds apportioned for incentives, the Commission reserve \$20 million for Track 2 grants. Staff does not propose an allocation between Track 1A and 1B, but suggests that the Program Administrators not allow either Track 1A or 1B to consume more than 90% of the budget for Track 1.

DRA recommends the Commission allocate more of the MASH funds to incentives that provide tenant benefits. Therefore, it suggests 50% of the budget go to Track 1B incentives. A WISH supports this idea. Similarly, CCSE suggests we limit Track 1A incentives to only 30% of budget, or in the alternative, make common areas apply for incentives from the general market program. Global Green suggests a different budget split, with 50% for Track 1A, 25% for Track 1B and 25% for Track 2 incentives.

We understand parties' concerns that a larger portion of the budget be reserved for projects that provide direct tenant benefits. At the same time, we consider Staff's suggestion to reserve \$20 million for Track 2 a good starting point. Budget adjustments can always be made at a later date, after we have some program experience, and after we can assess participation rates for the various Tracks. We will not increase Track 2 over \$20 million at this time because we prefer to allocate a larger portion of the incentive budget to Track 1 to maximize the MWs that will be installed with CSI funds. Similar to the minor incentive adjustment process we have already described in the section above on Track 1 incentives, the ALJ can adjust the Track 2 allocation by ruling, following a recommendation from Energy Division and notice to parties and an opportunity for them to comment, with the restriction that total Track 2 incentives cannot exceed \$30 million. If the Track 2 allocation is increased above \$20 million, any increase will correspondingly reduce Track 1 incentives as the total MASH budget is fixed at \$108.34 million.

We conclude it is reasonable to take the remaining Track 1 budget, and allow the Program Administrators a high degree of flexibility in awarding incentives to either common area or tenant area systems, or systems that serve both. Staff proposed such flexibility, with no budget parameters for Track 1

other than the limitation that no more than 90% of funds be used for Track 1A or 1B. We modify this suggestion only slightly. We will direct the Program Administrators to ensure that awards for either Track 1A or Track 1B do not consume more than 80% of the Track 1 budget. This reserves at least 20% of the Track 1 budget for projects that generate direct tenant benefits, in response to the parties’ concerns, while at the same time preserving program flexibility.

In summary, we adopt the following the MASH budget for Tracks 1, 2 and administration:

**Table 3: Adopted MASH Budget**

	PG&E	SCE	CCSE	Total
Budget %	43.7%	46%	10.3%	
Track 1A and 1B	32,923,230	34,656,032	7,759,938	75,339,200
Track 2	8,740,000	9,200,000	2,060,000	20,000,000
Administration (12%)	5,681,350	5,980,368	1,339,082	13,000,800
<b>Total</b>	<b>47,344,580</b>	<b>49,836,400</b>	<b>11,159,020</b>	<b>108,340,000</b>

**6. Administration**

The Staff Proposal recommends that the Program Administrators of the general market CSI program, namely PG&E, SCE, and CCSE, serve as Program Administrators for the MASH program because they have the expertise to work successfully with affordable housing developers and building owners. Staff proposes separate administration from the LISF program because participants in the two programs will be very different, with the LISF program focused on homeowners and the MASH program focused on affordable housing owners and property managers. Staff reasons that the multifamily affordable housing sector



has characteristics that make it similar to the commercial and nonprofit sectors in the general market CSI program. Staff also reasons that using the existing CSI program managers will expedite program implementation.

The current CSI Program Administrators agree that they should administer the MASH program, for the reasons stated in the Staff Proposal. Global Green supports this idea as well, but only for Track 1 incentives. For Track 2 incentives, Global Green suggests the Commission select a single statewide entity to administer these incentives funds as a pool. In the alternative, if the Commission rejects this idea, Global Green suggests a statewide advisory committee for Track 2 incentives that would work with the Program Administrators to develop a common application, review proposals, and conduct outreach.

CARE recommends the Commission consider integrating MASH with existing affordable housing efforts, and using local housing authorities to administer MASH. SCE and Global Green oppose this suggestion, noting there is no evidence that local housing authorities either want to or have the resources to accept this administrative commitment.

We agree with the Staff Proposal that the multifamily affordable housing sector has similarities to the commercial and nonprofit sectors served by the general market CSI program. These sectors all involve building owners seeking to lower operating costs for their businesses or nonprofit endeavors with solar installations, in contrast to the LISF program aimed at low-income homeowners. Although we have chosen to administer LISF through a single statewide administrator, we did so based on the specific financing and outreach needs of a program targeted at low-income homeowners. The outreach and administrative work we expect with the MASH program, aimed at the owners of affordable

housing, will differ significantly from the LISF program. Therefore, we will require the existing CSI Program Administrators to undertake administration of the MASH program in their territories. We agree with staff this will expedite program implementation because the Program Administrators can incorporate the MASH incentive program into their existing administrative structures. Nevertheless, we will still require the Program Administrators to coordinate with the Program Manager for LISF to ensure consistency in marketing and outreach activities, where applicable, and take advantage of any synergies that may exist in Program Administration.

We reject CARE's suggestion to use local housing authorities to administer MASH because this approach would require further exploration to determine interest by local housing agencies and consider other legal questions. This would cause unnecessary program delay.

At the same time, although we will use the existing CSI Program Administrators to administer this program, we agree with Global Green's suggestion to obtain the expertise of the affordable housing sector in administering this program. Although we will not adopt Global Green's idea of separate administration for Track 2, we will require the Program Administrators to conduct marketing, outreach, and education services for both Track 1 and Track 2 of the MASH program in cooperation with or under contract with entities with experience in affordable housing. In addition, A WISH asks us to incorporate "green job" creation into this program. We agree, and therefore, we direct the Program Administrators to work with community stakeholders to develop training strategies for reaching disadvantaged communities, in order to incorporate green job creation into the MASH program.

Because marketing and outreach for the MASH program will likely require coordination with the general market CSI program, we will require the approval process and timeline for MASH marketing and outreach plans to mirror that of the general market CSI program. In keeping with general market CSI requirements, as set forth on an interim basis in D.07-05-047, the Program Administrators should submit MASH marketing and outreach budgets and plans along with general CSI marketing plans, although MASH information should be separately stated in the plan. The MASH marketing plan should contain a description of the proposed budget and plans for marketing and outreach services and green job creation strategies, including the entities the Program Administrator expects to contract with and for what services.

## **7. Energy Efficiency Requirements**

Section 2851(a)(3) requires the Commission, in consultation with 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.” Consistent with this statute, Staff recommends all program applicants obtain an energy efficiency audit as part of the application process, to allow applicants to compare the costs of solar installation against the savings from energy efficiency measures.

Staff also recommends applicants enroll in an investor-owned utility (IOU) energy efficiency program, unless there is no suitable program. Staff does not recommend the Commission require participation in LIEE because it may be an undue burden to require building owners to identify LIEE eligible tenants and mandate their participation. Instead, Staff proposes that applicants be required to provide LIEE information to their tenants. Finally, staff recommends that

applicants whose buildings meet Title 24 standards be exempt from the above energy efficiency requirements beyond the audit.

The Joint Solar parties and CCSE support the staff proposal for audits and participation in existing IOU EE programs, coupled with no mandate for LIEE participation. They comment that energy efficiency requirements for MASH should be consistent with the General Market CSI program, which does not currently require energy efficiency improvements before incentives are paid. DRA agrees that an energy audit should be required, as well as “all measures deemed feasible by the property owner.” DRA suggests coordination with LIEE, and encouraging all eligible tenants to take part in the program. Global Green contends participation in LIEE should only be required for tenants in projects applying for Track 1B and Track 2 funds, which apply to installations that offset tenant load. LISC/NPH suggest that energy efficiency upgrade costs resulting from the audit should be allowed as part of program expenses.

In contrast, PG&E, SCE, SDG&E, and A WISH contend the Commission should require LIEE participation before paying incentives under this program. A WISH contends the energy efficiency requirements in the staff proposal are deficient because energy efficiency must be maximized before adding generation retrofits with ratepayer subsidies. PG&E comments that there should be specific integration of energy efficiency programs and low-income programs in tandem with solar incentives. PG&E suggests the Commission require the development of no cost field audits of the entire building, both tenant and common areas, as part of the LIEE program. PG&E does not agree with Staff’s suggestion that applicants must enroll in a utility energy efficiency program. Global Green supports PG&E recommendations, as long as the energy efficiency activities suggested by PG&E are not paid for out of MASH funds.

SCE maintains the Commission should adopt the Program Administrators' original proposal for energy efficiency requirements. That proposal recommended coordination with LIEE programs to provide energy efficient upgrades funded from LIEE budgets, where tenants qualified. For tenants that do not meet LIEE eligibility requirements, the Program Administrators' proposal recommended coordination with utility energy efficiency programs to fund measures to reduce electricity load. In addition, the property would be required to undergo an energy efficiency audit, undertake basic weatherization, and undertake energy efficient upgrades that have up to a two-year payback before receiving solar incentives. (*See Program Administrators' Proposal, 7/16/07, pp. 3-10.*)

We agree with several commentors that energy efficiency investments can play an important role in affordable housing property management. Pairing solar installations with energy efficiency may help building owners realize additional cost savings, which owners could potentially pass on to tenants. Nevertheless, we do not want to apply more stringent energy efficiency requirements to the affordable housing sector than we require for low-income homeowners in our LISF program or incentive recipients in the general market CSI program. Although A WISH urges us to maximize energy efficiency prior to installation of a solar energy system, LISC/NPH suggest that the costs of energy efficiency be funded by the MASH program, which would effectively limit the MWs of solar we can fund through MASH.

We prefer at this time to adopt the same energy efficiency requirements for MASH applicants as we require for applicants to the general market CSI program. Currently, general market CSI applicants must obtain an energy efficiency audit, as described in D.06-12-033 and further delineated by the CEC

in their December 2007 guidelines for solar incentive programs.<sup>14</sup> According to the CEC Guidelines, existing residential buildings must comply with energy audit, information, and disclosure requirements, unless they have complied with Title 24 requirements for newly constructed buildings in the past three years.

If a building owner/developer receives MASH incentives, we will not require tenants to enroll in LIEE. In our view, a requirement to participate in LIEE would be difficult to enforce and places a building owner in the difficult position of asking tenants to sign up for an assistance program, or actively opt out, before the owner can receive solar incentives. It might also be a problem if building owners receive MASH funds while a building is unoccupied during refurbishment. Instead, we will require building owners to provide LIEE information to tenants to encourage their participation and we will require building owners to allow eligible and willing tenants to participate in LIEE programs to the extent feasible.

We are currently reviewing whether to augment our general market CSI energy efficiency requirements. If a Commission order modifies them at some future point, we will then consider, by further Commission order, whether to apply any revised energy efficiency requirements to MASH applicants.

## **8. Metering Issues**

The Staff Proposal solicited comments on two metering suggestions to help the program overcome challenges that multifamily affordable housing

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<sup>14</sup> See D.06-12-033 p. 15, and the CEC's "Guidelines for California's Solar Electric Incentive Programs Pursuant to Senate Bill 1," (CEC Guidelines) issued December 2007.

development may face installing solar – a submetering proposal and a concept the Staff dubs “virtual net metering.”

### **8.1. Submetering**

Staff proposes the Commission offer an exemption from submetering rules to allow building owners in master metered buildings to submeter tenants in order to facilitate the direct transfer of energy savings benefits to tenants.<sup>15</sup> Staff suggests this exemption might increase tenant benefits from solar by allowing building owners to size solar systems to meet total building load on a single master meter, and pass energy savings directly to tenants through sub-metering.

CARE and Sunfund support the proposal for an exemption to allow submetering in master metered buildings. PG&E and SCE oppose submetering, commenting it could allow landlords to pass on the costs of submetering to their tenants. LISC/NPH claim the idea is not efficient because submetering requires extra project costs, and most building owners/developers will likely size solar solely for common areas rather than tenant load. PG&E claims that an exemption is not needed as it already exists, as explained by the Commission in D.05-05-026.

PG&E is correct that in D.05-05-026, the Commission clarified that existing master meter buildings, constructed prior to July 1, 1982, may convert to submetering. Thus, what staff proposes is already allowed.

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<sup>15</sup> Section 780.5 states that the Commission shall require “every residential unit in an apartment house or similar multiunit residential structure, condominium, and mobilehome park for which a building permit has been obtained on or after July 1, 1982...to be individually metered for electrical and gas service.” In other words, only residential units with building permits before July 1, 1982 are master metered.

## **8.2. Virtual Net Metering (VNM)**

In a related proposal, Staff recommends the utilities provide “virtual net metering” to program participants. There are economic and technical challenges to installing one solar energy system in a multifamily housing complex where each tenant’s unit has a separate meter. This is true for affordable housing, as well as any multitenant environment. The VNM concept is designed to overcome the challenge of allocating benefits from a single solar energy system to tenants in multifamily housing whose units are individually metered.

Under VNM, a single solar energy system sized to offset part or all of a building’s total load can be installed for the entire complex, but electricity produced by the system can be credited to individually metered tenants and to common areas of the building.<sup>16</sup> Essentially, the electricity produced by the system would be net-balanced against total building electricity consumption, as if the building had a single, or “virtual,” master meter. Credits for solar energy system production would be allocated to all units (both tenant units and common areas) in a predetermined proportion. Staff recommends VNM credits could be allocated proportionally between tenant and common areas based on historical load data, and then allocated equally between tenants. The portion of the solar system that offsets common area load would receive Track 1A incentives, and the portion that offsets tenant load would receive Track 1B incentives.

The Staff’s VNM proposal is similar to and derived from ideas first contained in an Advice Letter filed in 2007 by SDG&E. In Advice Letter 1895-E,

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<sup>16</sup> VNM would only apply to buildings where tenants are individually metered utility customers.



filed May 7, 2007, SDG&E requested approval of a new Photovoltaic Purchase and Credit (PVPC) program.<sup>17</sup> In its PVPC Advice Letter, SDG&E suggested a method to apply credits from a single PV generator to individual tenants and common areas of an affordable housing property. SDG&E would meter the PV generator output separate and apart from metering of individual tenant and common area consumption.

Comments on the Staff's VNM proposal were diverse. A WISH, CCSE, and Sunfund express support for the VNM proposal. SDG&E recommends that instead of the VNM proposal, the Commission reconsider SDG&E's PVPC Advice Letter, which it suggests has advantages over VNM because it allows the size of a tenant unit in square footage to determine bill credits. In addition, under SDG&E's proposal, credits would be granted according to the same rules that apply to net energy metering (NEM) programs and credits would be given at the applicable low-income assistance program rate. CCSE and Global Green echo support for the SDG&E's PVPC concept as "worthwhile" and "elegant."

In contrast, PG&E and SCE oppose Staff's VNM proposal due to alleged cost, legal and technical barriers to the proposal. They share concerns that VNM could be costly to implement both for utilities and landlords, and this could ultimately flow through to increased tenant costs. PG&E states that many affordable housing complexes have monthly rent payments set by the local Housing Authority, and rent is reduced by an allowance for utilities. Therefore, PG&E suggests that reducing the utility costs for tenants would not necessarily reduce the total rent payment for a tenant because a building owner could

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<sup>17</sup> Advice Letter 1895-E was withdrawn on August 9, 2007.

appeal to the Housing Authority for a reduction in the utilities allowance and an accompanying increase in monthly rent.<sup>18</sup> Further, PG&E and SCE claim VNM may be prohibited by net energy metering statutes, namely § 2827(b)(2), while Brobeck contends § 780.5 prohibits VNM. SCE, Brobeck Solar, and CARE express concern that VNM will not encourage tenants to conserve energy.

We will adopt the Staff's VNM proposal, with some modifications, because it facilitates the flow of benefits to tenants from a solar energy system installed by a building owner on an affordable housing complex. The VNM concept allows the output of a single solar energy system to be shared with tenants in multifamily housing, without master metering hardware or site-specific infrastructure upgrades, which may be cost prohibitive. The VNM proposal is similar to and improves upon the PVPC program proposed by SDG&E in Advice Letter 1895-E, mainly by ensuring compliance with § 2827.

We will modify the Staff's VNM proposal by allowing the building owner to determine the percentage of output to allocate between common and tenant areas. Based on comments by PG&E, we will require this allocation to remain fixed for five years. This is similar to SDG&E's PVPC proposal, and allows the building owner to fully offset common area load. Secondly, we clarify that the portion of solar output allocated to individual tenants will be allocated between tenants based on the relative size of a tenant's unit, consistent with the manner in which affordable housing rents are established.

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<sup>18</sup> In comments on the proposed decision, LISC/NHA suggest property owners who receive MASH incentives could state they will not request utility allowance adjustments for five years. While affordable housing rents and utility allowances are outside this Commission's jurisdiction, we encourage creative proposals, such as the one suggested by LISC/NHA, to flow operating cost savings from solar to building occupants.

We disagree with the claims by PG&E and SCE that VNM may be prohibited by net energy metering statutes. Their claim focuses on § 2827(b)(2) and their interpretation that VNM would treat electricity produced at one location (the building's common area account) as if it were produced at other locations (the individual tenant's account). We conclude it is reasonable to allow a solar energy generating facility on a multifamily affordable housing property to offset usage by tenants through VNM. Section 2827(b)(2) defines an "eligible customer-generator" for purposes of net energy metering as a customer "who uses" a solar or a wind generating facility "that is located on the customer's owned, leased, or rented premises...and is intended primarily to offset part or all of the customer's own electrical requirements." In our view, the affordable housing tenant meets the definition of an eligible customer-generator because the tenant uses a solar generating facility on property she rents to offset her electricity usage.

We also disagree with the contention by Brobeck that § 780.5 prohibits VNM. The VNM tariff would not alter in any way the requirement in § 780.5 that newly constructed residential units install individual meters to measure energy consumption. Indeed, VNM can only work when tenants are individually metered. A VNM tariff would allow the utilities to monitor production of a single solar energy system in order to provide net energy metering benefits to tenants in multifamily affordable housing complexes. Under VNM, the utility would be required to meter solar system output separate and apart from metering of individual tenant and common area consumption.

In response to comments by PG&E and SCE that VNM could be costly to implement and ultimately raise costs for affordable housing tenants, we find the utilities' cost claims are vague and unsupported and their claims of increased

costs to tenants are speculative. Most of the cost information was provided in comments to the proposed decision, which prevented thorough examination of the asserted costs. On the other hand, it is reasonable to assume there will be some costs, although the exact amount is unknown, for each utility to modify its billing system to accommodate VNM. Although the VNM tariff concept has similarities to current net energy metering programs, there are some distinctions that will require additional work by the utilities, particularly in allocating credits to the individual bills of multiple building tenants.

Therefore, we will allow the utilities to recover their reasonable costs for implementation of VNM, but we agree with CCSE and SDG&E that VNM implementation costs should be recovered from the administrative budget for the general market CSI program, and not limited to the MASH program budget. VNM is a concept that could have wide applicability, although we do not prejudge here whether we will implement it more broadly. Nevertheless, it is reasonable to use the larger pool of CSI funds to pay for developing this program in the event it is applied elsewhere.

In comments on the proposed decision, the utilities' cost estimates to implement VNM range from approximately \$600,000 to just over \$1,000,000. The Program Administrators are currently required to submit semi-annual administrative expense reports to Energy Division under the general market CSI program. We will require these reports to include expenditures for VNM implementation and we expect expenditures to be in line with these estimates. SDG&E is not a program administrator, but since it will implement VNM in its territory, it should also file an administrative expense report showing VNM implementation expenses. If Energy Division questions the reasonableness of VNM implementation expenditures, it may request the Assigned Commissioner

or ALJ to initiate further proceedings to examine, and potentially disallow, any disputed expenditures.

In adopting the VNM proposal, we reject the arguments by two parties that we reconsider a Power Purchase Agreement (PPA)<sup>19</sup> solution in lieu of Staff's VNM concept. First, PG&E requests reconsideration of the PPA structure contained in a Program Administrator filing of July 16, 2007 (the PA proposal), where the utility would agree to buy all of the power produced by a solar facility on multifamily affordable housing at the Market Price Referent (MPR), which is the price established by the Commission under the Renewable Portfolio Standards (RPS) program to estimate the long-term market price of electricity for use in evaluating bid products received during RPS power solicitations.<sup>20</sup> Second, Brobeck suggests a different PPA approach involving third-party ownership of solar energy systems on affordable housing, with output sold to the utility under a PPA. Brobeck contends this arrangement could generate additional funds that a system owner could use to fund energy efficiency improvements to directly benefit the tenants. Brobeck envisions these additional

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<sup>19</sup> The PPA model described in the CSI Program Administrators' July 16, 2007 proposal, and by Brobeck in its March 26, 2008 comments, refers to an agreement whereby a utility agrees to purchase all of the electricity produced by a solar system installed on an affordable housing property. The PPA is between the utility and the system owner, which might be the property owner, or could be a third party. The term PPA is also commonly used to refer to a different arrangement whereby a third party owns and operates a solar system on a utility customer's property, and the utility customer agrees to purchase all of the power produced by that system. In the latter case, the agreement is between the utility customer and the third-party solar system owner.

<sup>20</sup> The most recently adopted MPR relative to a 20-year contract for a baseload resource that begins operation in 2009 is \$0.09696/kilowatt hour (nominal dollars). (See Resolution E-4118, October 4, 2007.)

funds could be returned to tenants in the form of a debit card that tenants could use to purchase smaller scale energy efficiency improvements.

Joint Solar Parties support the proposal by Brobeck, stating that third party ownership should be allowed, consistent with the general market CSI program. Marin Environmental Housing Collaborative opposes third-party ownership arrangements, such as PPAs, in the MASH program, claiming that private investors behind PPAs should not be eligible for the higher level of funding under the MASH program.

We decline to adopt the PPA proposals suggested by the Program Administrators and Brobeck in lieu of VNM for the MASH program. The MASH program is intended to fund solar energy systems that offset building load, in keeping with Public Resources Code § 25782(a)(2).<sup>21</sup> We find that net energy metering programs, such as VNM, are an appropriate mechanism to support this purpose. In contrast, the PPA approaches suggested by the Program Administrators and Brobeck focus on selling system output to the utility, rather than offsetting customer load through net energy metering. The PPA proposal involves purchase of system output at the MPR price, which is lower than net energy metering rates. Payments based on the MPR would not provide as much financial incentive to invest in solar as the VNM proposal. The Commission has already established tariffs and standard contracts through which solar facilities, including any located on affordable housing in the service territory of SCE and

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<sup>21</sup> Public Resources Code § 25782(a) states that eligibility criteria for solar energy systems receiving ratepayer funded incentives shall include the requirement that “the solar energy system is intended primarily to offset part or all of the consumer’s own electricity demand.”

PG&E, can use a PPA to sell power at the MPR pursuant to § 399.20, although solar facilities using this arrangement are not eligible for CSI or distributed generation incentives.<sup>22</sup> Finally, the Brobeck model proposes no limits on PV system size, which conflicts with CSI eligibility criteria.<sup>23</sup>

With regards to other types of PPA arrangements between customers and third party solar system owners, we will not preclude multifamily affordable housing property owners from installing solar through PPA arrangements with third parties, as long as those arrangements comply with all existing statutes governing the production and sale of electricity. We recognize that many innovative models, including third-party ownership, may facilitate the deployment of solar energy in affordable housing, thereby providing benefits to affordable housing tenants.

In conclusion, we will require PG&E, SCE, and SDG&E to each file an advice letter, within 120 days of this order, proposing a VNM tariff applicable to multifamily affordable housing properties that install a solar energy system through the MASH program. In reviewing the proposed tariffs, Energy Division should strive for consistency across the three utilities in their implementation of VNM. Each utility's VNM tariff must comply with § 2827 and at a minimum:

- Allow for the allocation of net energy metering benefits from a single solar energy system to all meters on an individually metered multifamily affordable housing property, without adversely impacting building tenants.

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<sup>22</sup> See D.07-07-027 which established tariffs under § 399.20, pursuant to AB1969. The tariffs are commonly referred to as the Small Renewable Generator Tariffs.

<sup>23</sup> See Public Resources Code § 25782(a)(2) stating systems are intended to offset part or all of the customer's own electricity demand.

- Allow the building owner/manager to determine the percentage of solar energy credits allocated to common area meters versus individual tenant meters, and this allocation shall remain fixed for at least five years.<sup>24</sup>
- The annual solar energy credits allocated to the common area and to each of the tenant meters may not exceed the associated estimated load (in kilowatt hours) for the coming year.
- The percentage of solar energy credits (in kilowatt hours) allocated to individual tenant meters should be credited across all individual meters based on the relative size of the tenant's unit. Credits (in dollars) should be applied at the otherwise applicable rate for each meter.
- The building owner/manager shall be responsible for, and shall bear all costs associated with, installing a generator output meter capable of recording solar energy system output in fifteen minute increments, if required, to insure appropriate customer credits.
- Excess credits should be carried forward monthly according to standard NEM rules, as set forth in § 2827.
- The VNM tariff may not apply any additional charges or administration fees on tenants who benefit from the VNM tariff.

Although we direct a filing date for a VNM tariff by the utilities, we note that implementation of the MASH program is not tied to introduction of the VNM tariff. All other elements of the MASH program can begin implementation prior to approval of the VNM tariff.

The VNM tariff concept could be expanded to apply to any multitenant property that installs a solar energy system, such as a shopping mall or apartment complex. There is precedent for utilities linking multiple meters on a

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<sup>24</sup> For example, the owner could decide to split the solar energy credits between tenant and common areas in a 30/70 proportion, or 50/50.



single property for purposes of sharing NEM credits, as the utilities currently aggregate meters on agricultural properties for biogas digester customer-generators under § 2827.9. Therefore, we will consider expanding VNM to all multitenant properties, not just affordable housing. We herein direct the ALJ to issue a ruling to take comment on the idea in this proceeding.

## **9. Program Evaluation and Milestones**

As part of its evaluation plan, Staff proposed program milestones, reporting requirements, and evaluation criteria. The proposed milestones center around implementation of the MASH program within four months from the date of the Commission order approving the program, a goal of 50 completed affordable housing solar installations funded by MASH by 2012, and outreach to the target affordable housing community by 2010. For reporting, Staff proposes both ongoing reporting by Program Administrators, where Program Administrators would submit quarterly progress reports to the Energy Division, and biennial evaluations where Energy Division would select an independent evaluator through a Request for Proposal (RFP) process. Staff proposes evaluation criteria for both quarterly reports from the Program Administrators to Energy Division, and for the evaluation performed by an independent evaluator. Finally, Staff proposes that the Program Administrators be required to integrate data from the MASH program into the general market CSI database, and make the data available to Energy Division and the public as appropriate.

There were few comments on this area of the Staff Proposal. SCE supports the Staff Proposal for evaluation and milestones, while PG&E recommends a time frame longer than four months for program implementation.

We will adopt a modified version of the Staff recommendations for Program Evaluation, as set forth in Appendix A of this order. First, with regard

to program milestones, we will adopt the four-month implementation timeline proposed by Staff, with the exception that more time may be needed for full implementation of VNM. We have chosen the general market CSI Program Administrators to run the MASH program based on our understanding that they would be able to implement this program quickly, building on their existing administrative infrastructure. In our view, the Program Administrators should be able to provide applications for Track 1 incentives to the public and create a statewide application for Track 2 incentive proposals, within four months of this order. As more time may be needed for full implementation of VNM, we do not include it in the four-month expectation.

Second, we adopt Staff's reporting and evaluation recommendations, which include regular progress reports and biennial independent evaluations. The Program Administrators shall submit semi-annual progress reports to the Director of Energy Division, as set forth in Appendix A. Third, we adopt the evaluation criteria and process in the Staff Proposal. Energy Division will select an independent evaluator every two years to review the program as set forth in Appendix A. 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. A co-funding agreement between the utilities shall address an arrangement between the contracting utility and the other utilities to pay for this evaluation from each utility's CSI MASH program funds.

In addition to the evaluation factors set forth in Appendix A, the evaluation should compare program participation levels within Track 1A and 1B and Track 2 to assess whether the incentive levels and budget allocations are appropriate for each incentive track.

With regard to program data, we will require the Program Administrators to add all projects that apply for Track 1 incentives to the public CSI database. Program administrators shall separately monitor and track data regarding Track 2 projects.

Finally, we will require the Program Administrators to submit to an annual audit of program expenditures. The purpose of this audit is to ensure program funds are paid to legitimate and verified installations of solar energy systems on qualifying affordable housing properties, as defined in § 2852, and that administrative funds, including VNM implementation expenses, are spent in a reasonable and appropriate manner. Energy Division should ensure that each Program Administrator submits to an audit annually, which it forwards to the Energy Division Director on an annual basis beginning one year after the first MASH applications are available.

#### **10. Other Program Requirements**

We herein clarify that unless specified otherwise in this order, we will apply all the same program requirements to MASH program applicants as apply to the general market program, including but not limited to warranty, insurance, metering, and interconnection requirements. As we stated in D.07-11-045 relating to LISF, the MASH Program Administrators may seek exemptions from general market CSI requirements, as set forth in the CSI Handbook, by justifying the need for the change through an advice letter filing with Energy Division. Energy Division shall resolve any requests through the advice letter process, 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.

Finally, CCSE, the Joint Solar parties, and A WISH express the view that time variant, or “time-of-use” (TOU) tariff requirements should not apply to MASH incentive recipients. On September 28, 2008, the Governor signed Assembly Bill 2768<sup>25</sup> which amends § 2851(a)(4) regarding TOU tariffs requirements for CSI. The section, prior to this recent amendment, had required CSI incentive recipients to take service on TOU rates. Thus, TOU tariffs are no longer mandatory for CSI incentive recipients and the concerns expressed by these parties are moot.

#### **11. MASH Implementation Plan**

In this section, we summarize the key actions and submittals that we require by the Program Administrators to implement the MASH program. A complete description of MASH program requirements can be found in Appendix A.

- Within 60 days of this order, the Program Administrators shall jointly file an advice letter with proposed amendments to the CSI Handbook to incorporate the MASH program. The handbook should address Track 1 incentives and all elements of the MASH program necessary for implementation of Track 1.
- Within 90 days of this order, the Program Administrators shall jointly file an advice letter with a standardized statewide Track 2 application and review process as well as the handbook changes necessary to implement Track 2.
- Each Program Administrator shall submit to Energy Division, as part of its semi-annual administrative expense report under the general market CSI program, a semi-annual administrative expense report detailing MASH administrative expenditures incurred by category (i.e., marketing and outreach, evaluation,

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<sup>25</sup> Chapter 541, Statutes of 2008.

and other administration), with separate accounting from the general market CSI program. The report should also describe VNM implementation expenses. SDG&E shall submit its own administrative expense report describing VNM implementation expenses.

- Each Program Administrator shall augment its current CSI marketing plan filings, submitted to Energy Division every six months, to include MASH marketing and outreach budgets and plans. The MASH marketing plan should contain a description of the proposed budget and plans for marketing and outreach services and green job creation strategies, including the entities the Program Administrator expects to contract with and for what services.
- PG&E, SCE, and SDG&E shall each file an advice letter, within 120 days of this order, proposing a VNM tariff applicable to individually metered multifamily affordable housing properties that install a solar energy system through the MASH program. Each utility's VNM tariff must comply with § 2827 and Appendix B of this order.
- The Program Administrators shall submit semi-annual progress reports to the Director of Energy Division, as set forth in Appendix A.
- Each Program Administrator shall submit to an annual audit of program expenditures, to ensure program funds are paid to legitimate and verified installations of solar energy systems on qualifying affordable housing properties, as defined in § 2852, and that administrative funds, including funds to implement VNM, are spent in a reasonable and appropriate manner.

## **12. Comments on Proposed Decision**

The proposed decision of Commissioner Michael R. Peevey in this matter was mailed to the parties in accordance with § 311 of the Public Utilities Code and comments were allowed under Rule 14.3 of the Commission's Rules of Practice and Procedure. Comments were filed on September 29, 2008 by

A WISH, CCSE, LISC/NHA, PG&E, SCE, and SDG&E. Reply comments were filed on October 6, 2008 by CCSE, Ecoplexus, the Interstate Renewable Energy Council (IREC), PG&E, SCE, and SDG&E. Where the comments suggested minor adjustments or clarifications to the decision, these clarifications and adjustments have been incorporated throughout. Where comments reargued earlier positions or present new arguments or facts, they were not considered.

A few comments merit discussion. A WISH expresses concern that MASH incentive recipients might be required to take service on TOU tariffs. The decision has been revised to reflect the fact that recent legislation modified the Pub. Util. Code with regard to TOU tariffs for solar incentive recipients. Thus, A WISH's concerns are now moot.

The utilities and CCSE raise several concerns with regard to cost recovery to implement VNM. PG&E and SCE request a larger administrative budget to cover these costs. CCSE suggests that if the Commission considers making VNM available to all multitenant properties, not just affordable housing, the cost of developing VNM should be borne by the entire CSI program and not limited to the MASH program. The decision has been revised to allow cost recovery for VNM implementation expenses through the general market CSI administrative budget.

PG&E and SDG&E raise several concerns with what they consider implementation complexities of VNM. Based on PG&E's comments, the decision has been revised to clarify that a building owner/manager will bear the costs for any additional meter necessary for VNM. The other questions raised by PG&E and SDG&E, including but not limited to issues surrounding the annual net metering true-ups, unoccupied units, and VNM credits to non-low income

building tenants, are all questions that we delegate to Energy Division to resolve in its review of the utilities' advice letter filings for VNM.

LISC/NHA request the Commission modify the definition of "direct tenant benefits" to include expanded services that a building owner could offer to building residents, such as community service referrals, financial literacy training, and after school programs. We will not adopt an expanded definition at this time because we prefer tenant benefits funded through MASH to be focused on reducing a consumer's electricity bill or reducing energy usage, in keeping with our stated MASH program goals. In addition, LISC/NHA request MASH program implementation by January 1, 2009. We find that the timelines set in this decision for program implementation are reasonable and we will not shorten them.

### **13. Assignment of Proceeding**

President Michael R. Peevey is the assigned Commissioner and Dorothy J. Duda is the assigned ALJ for this portion of the proceeding.

#### **Findings of Fact**

1. Section 2852 of the Public Utilities Code requires that not less than 10% of overall CSI funds be used for installation of solar energy systems on low-income residential housing.
2. In D.06-12-033, the Commission adopted a CSI budget of \$2.1668 billion, and dedicated \$216.68 million to a low-income solar incentive program.
3. The multifamily affordable housing sector has similarities to the commercial and nonprofit sectors served by the general market CSI program.
4. Marketing, outreach, and administrative work under the MASH program will differ from those efforts in the LISF program, because the MASH program is

targeted at property owners and managers of multifamily affordable housing rather than single family low-income homeowners.

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. In D.05-05-026, the Commission clarified that existing master meter buildings, constructed prior to July 1, 1982, may convert to submetering tariffs.

7. There are economic and technical challenges to installing one solar energy system in a multifamily affordable housing complex where each tenant's unit has a separate meter.

8. Section 2827(b)(2) defines eligible customer-generators for purposes of net energy metering.

9. Under a VNM tariff, the utility would meter solar system production separately from tenant and common area electricity consumption.

10. VNM can overcome the challenge of allocating benefits from a single solar energy system to tenants in multifamily housing whose units are individually metered.

11. VNM allows bill credits for the output of a single solar installation to be shared with tenants in multifamily housing, without physical master metering or site-specific infrastructure upgrades.

12. The Commission has established tariffs and standard contracts through which solar facilities can use a PPA to sell power pursuant to § 399.20, but such facilities are not eligible for CSI or distributed generation incentives.

13. The CEC's NSHP affordable housing solar incentive rate is \$3.30 per watt.



### **Conclusions of Law**

1. The Commission should adopt the \$108.34 million MASH program, as set forth in Appendix A of this order, to comply with the mandates of § 2852.

2. It is reasonable to adopt MASH program incentive levels of \$3.30 per watt for systems that offset common area usage and \$4.00 per watt for systems that offset tenant usage, based on Energy Division's analysis of the economics of federal LIHTC financing and the CEC's NSHP incentive rates.

3. The MASH program should involve either up front incentives at the rates set in this decision (Track 1), or the opportunity to compete for higher incentives through a grant program (Track 2).

4. Applicants to the MASH program should have an occupancy permit for at least two years prior to applying for MASH incentives to avoid improper gaming of the MASH and NSHP programs.

5. Applications under Track 2 of the MASH program should be reviewed through a competitive application process, with applications reviewed by the Program Administrators every six months, to encourage innovative models for solar energy systems on affordable housing properties.

6. The MASH Program Administrators should coordinate to develop a standardized statewide Track 2 application and review process, with standardized reviewing criteria which includes but is not limited to incentive level sought, amount of direct tenant benefit to be shared (i.e., tenant bill credits, tenant bill reduction, or energy efficiency investments to benefit tenants), the method and timing to provide direct tenant benefits, outreach and training, and reasonableness of the proposed use of program funds

7. It is reasonable to reserve \$20 million of program funds for Track 2 incentives until further information on program participation is available.

8. The Program Administrators should limit awards for Track 1A or 1B incentives to not more than 80% of the Track 1 budget.

9. An administrative budget of 12% of program funds is reasonable, with 2% dedicated to program evaluation (which includes inspection and verification of installation), and the remaining 10% allocated between administration, marketing and outreach at the Program Administrators' discretion.

10. The MASH 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 § 2852.

11. The MASH program should be funded by PG&E, SCE, and SDG&E based on the percentages set forth in Table 3 of this order.

12. Although the MASH and LISF programs each have a budget of \$108.34 million, we should monitor participation in both programs, and consider adjusting the allocation of the \$216.68 million in total low-income solar program funds if warranted based on participation.

13. The Program Administrators of the general market CSI program should administer the MASH program because of target market similarities.

14. MASH program implementation will be expedited if the existing CSI Program Administrators can incorporate multifamily affordable housing incentives into their existing administrative structure.

15. The MASH Program Administrators should conduct marketing, outreach, education, and green job creation in cooperation or under contract with entities experienced in multifamily affordable housing.

16. We should not adopt more stringent energy efficiency requirements for the affordable housing sector than we require for low-income homeowners in our LISF program, or for the general market CSI program.

17. Applicants for MASH incentives should meet the same energy efficiency requirements that are required for the general market CSI program.

18. Owners and managers of multifamily affordable housing who receive MASH incentives should provide LIEE information to their tenants and allow eligible and willing tenants to participate in LIEE to the extent feasible.

19. The utilities should file VNM tariff proposals which allow the building owner to determine the percentage of solar energy credits allocated between common and tenant areas, and allocate solar energy credits to tenant areas based on the relative size of a tenant's unit. The VNM tariff should specify that the portion of the system offsetting common area load would receive Track 1A incentives, and the portion offsetting tenant load would receive Track 1B incentives.

20. The building owner/manager should be responsible for, and bear all costs associated with, installing a generator output meter capable of recording solar energy system output in 15-minute increments, if required, to insure appropriate customer credits.

21. VNM does not conflict with § 2827(b)(2) because eligible customer-generators will use a solar generating facility to offset their electricity usage.

22. It is reasonable to allow the utilities to recover their reasonable costs for implementation of VNM from the administrative budget for the general market CSI program.

23. Multifamily affordable housing property owners may install solar facilities through power purchase agreements with third parties, as long as those agreements comply with all existing statutes governing the production and sale of electricity.

24. The Commission should consider expanding VNM to all multitenant properties, not just affordable housing.

25. The Program Administrators should apply the same program requirements to MASH applicants as apply to general market CSI applicants, unless otherwise specified in this order.

26. It is reasonable to adopt the milestones and program evaluation plan as set forth in Appendix A of this order.

27. MASH program evaluation should include close monitoring of average system costs and incentives paid under Track 2.

28. Energy Division should ensure that the Program Administrators each submit to an annual audit of program expenditures.

## **O R D E R**

### **IT IS ORDERED** that:

1. The Multifamily Affordable Solar Housing (MASH) program set forth in Appendix A is adopted as part of the California Solar Initiative (CSI).

2. Within 30 days of this order, San Diego Gas and Electric Company (SDG&E) shall revise its contract with the California Center for Sustainable Energy (CCSE) to specify that CCSE will act as Program Administrator for the MASH program.

3. Within 60 days of this order, Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), and CCSE (collectively, the Program Administrators) shall jointly file an advice letter with proposed amendments to the CSI Handbook to incorporate the MASH program and to implement Track 1 incentives.

4. Within 90 days of this order, the Program Administrators shall jointly file an advice letter with a standardized statewide Track 2 application and review process as well as the handbook changes necessary to implement Track 2.

5. Within 120 days of this order, PG&E, SCE, and SDG&E shall each file an advice letter with a proposed Virtual Net Metering (VNM) tariff, applicable to multifamily affordable housing properties that install a solar energy system through the MASH program, and each utility's proposed tariff shall comply with the requirements set forth in Appendix B of this order.

6. The Administrative Law Judge (ALJ) assigned to this proceeding shall issue a ruling to explore expansion of the VNM tariff to all multitenant properties that install solar energy systems.

7. As part of the semi-annual administrative expense reports under the general market CSI program, each Program Administrator shall submit to Energy Division a semi-annual administrative expense report detailing MASH administrative expenditures, including VNM implementation expenses, as set forth in Appendix A. SDG&E shall submit to Energy Division a semi-annual administrative expense report on VNM implementation expenses. Energy Division shall monitor these expense reports and may request the Assigned Commissioner or ALJ to initiate further proceedings to examine, and potentially disallow, any disputed expenditures.

8. As part of CSI marketing plan filings currently submitted to Energy Division, each Program Administrator shall include MASH marketing and outreach budgets and plans as set forth in Appendix A.

9. Each Program Administrator shall submit a semi-annual progress report on the MASH Program to the Director of Energy Division, as set forth in Appendix A.

10. Two years after the start of the MASH program, and every two years thereafter while the program is operating, the staff of the Commission's Energy Division will draft a Request for Proposals (RFP) for an independent program evaluator and direct either PG&E, SCE, or SDG&E to issue the RFP. Energy Division shall review the bids, select a MASH program evaluator, and select one utility to contract with the winning bidder.

11. The utility selected by Energy Division to contract with the program evaluator shall enter into a co-funding agreement with the other two utilities specifying how each utility will fund its share of the cost of the program evaluation from its MASH program funds.

12. Energy Division shall arrange an annual audit of program expenditures by each Program Administrator, at the Program Administrator's expense.

13. PG&E, SCE, and CCSE shall coordinate with the Low Income Single Family program manager, as directed by Energy Division.

14. The ALJ in this or any successor proceeding may issue a ruling to reduce MASH program incentives by up to 10% per year or to allocate an additional \$10 million to Track 2 incentives, following written justification from Energy Division issued by ruling with an opportunity for comment by all parties.

15. Energy Division may recommend to the assigned Commissioner or ALJ in this, or any successor proceeding, adjustments to any element of the MASH 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.

16. Rulemaking 08-03-008 remains open.

This order is effective today.

Dated October 16, 2008, at San Francisco, California.

MICHAEL R. PEEVEY

President

DIAN M. GRUENEICH

JOHN A. BOHN

RACHELLE B. CHONG

TIMOTHY ALAN SIMON

Commissioners