

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



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Order Instituting Rulemaking to Develop a Successor to Existing Net Energy Metering Tariffs Pursuant to Public Utilities Code Section 2827.1, and to Address Other Issues Related to Net Energy Metering

Rulemaking 14-07-002
(July 10, 2014)

**PROPOSAL OF THE
CALIFORNIA SOLAR ENERGY INDUSTRIES ASSOCIATION
FOR IMPLEMENTATION OF AB 693**

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Pursuant to *Administrative Law Judge’s Ruling Seeking Proposals and Comments on Implementation of Assembly Bill 693* (Ruling), issued at the California Public Utilities Commission (Commission) on July 8, 2016, the California Solar Energy Industries Association (CALSEIA) respectfully submits this proposal and responses to questions for the creation of the Multifamily Affordable Housing Solar Roofs Program (MAHSR program or Program).

1. Introduction

AB 693 was born from a discussion among operators of regulated affordable multifamily housing, convened by Assemblymember Susan Eggman, to figure out how to break through two problems. One is the “split incentives” problem that hinders the ability of renters to take advantage of on-site energy solutions because landlords are not motivated to pay for solar systems that reduce bills paid by tenants. The other is the fact that the subsidized California Alternative Rates for Energy (CARE rates) available to low-income customers make it difficult for qualifying customers to use net energy metering (NEM) bill credits to justify investments in solar.

CALSEIA cosponsored the bill with the California Environmental Justice Alliance. Everyday Energy, which specializes in solar for multifamily housing, gave extensive input on bill provisions. After exploring structures for customer charges that would pay for the solar systems while producing net savings for CARE customers, the bill author instead proposed using Cap-and-Trade funds to pay for solar systems at low-income multifamily housing properties and allowing tenants to receive virtual net energy metering (VNEM) credits for electricity produced by the systems at no cost to the customers. This was considered the most reliable way to stimulate participation in the program.

The general concept was to pay for all of the costs of the portion of a solar system that offsets tenant load and require property owners to pay at least part of the costs of the portion that offsets common area load. There was an acknowledgment that the property owner needs an incentive in order to motivate participation, and language was included in the bill that the solar generation funded by the Program should be “primarily used” to offset tenant load while leaving the door open for part of it to be used for common area load.

There was also a clear decision not to simply extend the Multifamily Affordable Solar Housing (MASH) program. Although that program has been successful at enabling the installation of solar energy systems at low-income multifamily housing properties, the majority of solar generation has been used to offset common area load rather than tenant load. Reforms to the MASH program pursuant to AB 217 (Bradford, 2013) aimed to increase the portion of MASH-funding projects that offset tenant load, but those reforms were only recently adopted when AB 327 was being developed and there was not

sufficient confidence that they would tip the balance enough in the direction of tenant load.

Although the Program does not directly interact with the CARE program, investments made by the Program will reduce the cost of the CARE program. Low-income customers who currently get subsidized rates for all of their electricity usage will be billed for fewer kWh of electricity when they participate in the Program, and the amount of the CARE subsidy will therefore be reduced. Cap-and-Trade funds used by the Program will relieve pressure on the CARE budget. Since Program spending will result in generating assets that last for 25 years or more, upfront investments will have ongoing benefits.

In sum, the major purpose is to make the Program attractive enough to property owners that they want to participate while offsetting as much tenant load as possible. This will be a delicate balance. CALSEIA submits the following proposal to achieve this objective.

2. Proposal

The biggest question in designing a successful program is the incentive structure. CALSEIA proposes:

- Incentive levels set by the Commission for four categories of solar projects.
 - Projects that are not able to leverage the Investment Tax Credit (ITC) or the Low Income Housing Tax Credit (LIHTC).
 - Projects that are able to leverage the ITC but not LIHTC.
 - Projects that are able to leverage LIHTC but not the ITC.
 - Projects that are able to leverage both the ITC and LIHTC.

- Different incentive levels for the portions of a solar system that offset tenant load and common area load.
- A requirement that of the electricity generated by the solar capacity funded by MAHSR funds, at least 70% of that electricity must be used to offset tenant load, and up to 30% may be used for common area load.
- A 5% annual decrease in incentive levels.
- Reconsideration of incentive levels at the first program evaluation in 2019, or earlier if the Commission deems it necessary.

CALSEIA recommends basing the initial incentive level on the MASH program, with some important adjustments outlined below. The revised MASH incentives created in D.15-01-027 have been successful. Most projects are moving forward while some are falling out because they ultimately could not be developed at the available funding level. Although attrition is unfortunate, a small amount of attrition demonstrates that subsidies are not large enough to facilitate marginal projects.

For reference, MASH incentive levels are \$1.80/W-AC for tenant load and \$1.10/W-AC for common area load. It is assumed that these projects will leverage the federal Investment Tax Credit (ITC), as there was much discussion during implementation of AB 217, which extended the MASH program, about getting the rules in place in time for projects to be completed before the expected end of the ITC in December 2016. CALSEIA recommends incentives based on DC capacity, which is a more common metric for the solar industry and does not rely on a calculator maintained by the California Energy Commission. Converting the MASH incentives to DC-Watts

using an 87% derate factor to account for the DC/AC conversion loss produces values of \$1.57/W-DC for tenant load and \$0.96/W-DC for common area load.

Another feature of the MASH program is the ability of property owners to split the savings with tenants. Property owners adjust the utility allowances of tenants such that tenants keep half of the bill reduction but have their rents increased by an amount equal to half of the bill reduction to help pay for the solar system. AB 693 is intended to subsidize all of the cost of the solar capacity that offsets tenant load, and thus any adjustment in the utility allowance is not appropriate. To base the incentive level for the MAHSR program on the MASH program, the Commission needs to back out the value of the tenant contribution in the MASH program.

Assuming that the average customer consumption for apartment tenants is 400 kWh/month¹ and the average MASH system that addresses tenant load offsets 60% of tenant load, the customer's billed consumption is reduced by 240 kWh/month. It requires 1.45 kW-DC of solar capacity at 19% efficiency to offset this amount of consumption.

The average CARE rates for the three IOUs are 11.1 ¢/kWh for Tier 1 and 18.0 ¢/kWh for Tier 2. The average baseline amount is 392 kWh/month. Adding the Tier 1 savings for 232 kWh² and the Tier 2 savings for 8 kWh³ produces a monthly customer savings of \$27.18. Under the shared savings model, the customer's rent increases by half of this value, \$13.59/month. Because the lifetime of the solar system is at least twenty years, there would be at least twenty years of this contribution. At a discount rate of 8%,

¹ According to the responses to data requests to all three IOUs in R.12-06-013, the median consumption for CARE customers in multifamily housing is in the 250-499 kWh range.

² The difference between remaining consumption of 160 kWh and the 392 kWh baseline.

³ The difference between the original 400 kWh consumption and the 392 kWh baseline.

this results in a net present value of the customer contribution toward the cost of the solar system of \$1,601. As noted above, the system size in this scenario is 1.45 kW-DC, which results in a twenty-year customer contribution of \$1.10/W-DC.

Table 1. Calculation of MAHSR Incentive Based on MASH Incentive

| | |
|--------------------------------------------------------|---------|
| Customer Consumption (kWh) | 400 |
| Percentage Offset | 60% |
| Solar Capacity Needed for Customer Offset (kW-DC) | 1.45 |
| Average Tier 1 Rate (\$/kwh) | 0.111 |
| Average Tier 2 Rate (\$/kwh) | 0.180 |
| Average Baseline Amount (kWh/mo) | 392 |
| Customer Contribution (\$/mo) | \$13.59 |
| NPV of Twenty Years of Customer Contribution | \$1,601 |
| NPV of Twenty Years of Customer Contribution (\$/W-DC) | \$1.10 |
| Target Incentive (\$/W-DC) | \$2.54 |

Adding this to the \$1.57/W-DC MASH incentive yields \$2.68/W.⁴ It is reasonable to reduce this incentive amount by 5% due to cost reductions since the MASH rebate levels were put in place, which results in an incentive of \$2.54/W-DC for solar capacity that offsets tenant load and leverages the ITC but not other funding sources. Because AB 693 is intended to create a program that focuses more heavily on tenant load than the MASH program, CALSEIA recommends reducing the incentive for solar capacity that offsets common area load by 25%. This reduces the \$0.96/W-DC MASH incentive to \$0.72/W-DC for solar capacity that offsets common area load.

These incentives must be increased for customers that are unable to use the ITC because they are not-for-profit entities and/or do not wish to sign a power purchase agreement (PPA) due to its increased complexity within the already complicated world of affordable housing financing. The increase should be less than the full 30% tax credit in order to encourage customers to leverage the ITC. CALSEIA recommends a non-ITC

⁴ Does not appear consistent due to rounding.

incentive that is only 20% higher than the incentive for systems using the ITC.⁵ This results in incentives of \$3.18/W-DC for tenant load and \$0.90/W-DC for common area load for projects that do not leverage the ITC.

The incentive level should be reduced if property owners offset the cost of solar with the LIHTC. Because the decision by a developer to seek the LIHTC is based on new construction or major renovations, solar is not a significant motivator in whether or not the LIHTC is leveraged. The incentive should be reduced by the full estimated amount of the LIHTC, which CALSEIA currently estimates to be 22.8%.⁶ The annual LIHTC percentage fluctuates and has been trending downward. This percentage is therefore conservative for now but should be reviewed as part of the three-year review of the Program. There is also a 9% version of LIHTC, but it is highly competitive and normally does not cover the full cost of a property. It is therefore rare that it covers solar. However, for this and other scenarios the Program Administrators (PAs) should develop a formula for ensuring the MAHSR rebate does not cause the applicant to receive financial assistance in excess of the total system cost. Applicants should be required to submit a signed contract with the MAHSR application that includes project cost. The PAs can estimate the ITC and the LIHTC from this cost and reduce the rebate if the combination of the full rebate and other funding sources would exceed the project cost.

⁵ This ten percentage point spread should be maintained in 2020-2021 when the ITC is at reduced levels. In 2020 when the ITC is 26% the non-ITC incentive should be 16% higher than the ITC incentive. In 2021 when the ITC is 22% the difference should be 12%.

⁶ The current LIHTC rate is 3.15% of the cost of the property improvement. Using a discount rate of 8%, the net present value of this annual tax credit over ten years is 22.8%.

Table 2. Recommended Year One Incentive Levels

| Leverage Type | | Incentive \$/W-DC | |
|---------------|-------|-------------------|-------------|
| ITC | LIHTC | Common Area Load | Tenant Load |
| no | no | \$0.90 | \$3.18 |
| YES | no | \$0.72 | \$2.54 |
| no | YES | \$0.69 | \$2.45 |
| YES | YES | \$0.51 | \$1.82 |

Solar projects employing Low Income Weatherization Program (LIWP) funds should not be eligible to receive MAHSR rebates for the same solar system because most projects funded under the recent LIWP rules have been fully subsidized without additional incentives. However, properties that have used LIWP funds for previous projects should not be excluded from installing new solar systems with MAHSR funds. For example, if a property used LIWP funds to install a solar system to cover common area load previously, but would like to use MAHSR funds to install additional solar panels to cover tenant load, that property should be eligible to use MAHSR funds for the new solar project.

If the Program budget contains the fully authorized amount of \$100 million per year, and in the unlikely scenario that customers always use the maximum incentive amount, the Program will result in 400 MW of installed capacity. This structure therefore meets the statutory requirement to design a program that can lead to the installation of at least 300 MW of solar capacity. Because customers will leverage tax credits and install some capacity to offset common area load, the average incentive will certainly be less than the maximum and the target will be exceeded even more than this at full funding. If this occurs, CALSEIA recommends using some Program funding for incentives for energy storage.

Table 3. Minimum Installed Capacity at Full Funding

| Year | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Avg/Total |
|-----------------------------------------------|------|------|------|------|------|------|------|------|------|------|-----------|
| Maximum Incentive (\$/W-DC) | 3.18 | 3.02 | 2.87 | 2.73 | 2.59 | 2.46 | 2.34 | 2.22 | 2.11 | 2.00 | 2.55 |
| Funded Capacity at Maximum Budget Amount (MW) | 31 | 33 | 35 | 37 | 39 | 41 | 43 | 45 | 47 | 50 | 400 |

3. Responses to Questions

1. Section 2870 requires that a property meet the statutory definition of “qualified multifamily affordable housing property” in order to be eligible to receive an incentive from the Program. How should the Program implement this requirement?

The statute is clear that a property is eligible for participation in the Program if it is regulated affordable housing and also satisfies either of the two criteria. It must be located in a disadvantaged community or be a low-income property.

Regulated affordable housing is defined as a rental property in accordance with Section 2852 (a)(3)(A)(i).⁷ In exchange for federal tax credits or other financial incentives, these properties agree to be subject to strict regulation to ensure those incentives truly benefit the low-income renters that are the intended beneficiaries. AB 693 used this definition because this is an existing regulatory framework with enforcement mechanisms that are already in place. It would be very difficult and unnecessary for PAs to replicate this regulatory oversight. Eligible properties should have existing deeds or regulatory agreements that demonstrate they are subject to federal affordable housing regulation.

Disadvantaged communities for the purposes of SB 535 are census tracts designated by the California Environmental Protection Agency (CalEPA) using the

⁷ All references to code sections in these comments refer to the Public Utilities Code unless otherwise stated.

CalEnviroScreen tool. This tool is based strongly on areas that have been historically burdened by air pollution for purposes of targeting funding from California's Cap-and-Trade program.

Although the MAHSR program is in part an air pollution mitigation program because it replaces power from fossil fuels with emission-free power, it is also a program to help customers who have had less opportunity to take advantage of the economic benefits of self-generation because they are renters, have discounted electricity rates, or are unable to obtain financing. The income eligibility criteria in Section 2870 (a)(3)(B) are therefore a necessary option for eligibility.

It is not necessary to create geographic boundaries for eligibility. CalEnviroScreen is a geographic measure based on census tracts and is sufficient for the disadvantaged communities designation for purposes of the MAHSR program, but properties that meet the income eligibility requirements should be eligible no matter where they are located.

2. Should the Program use the CalEnviroScreen tool developed by the California Environmental Protection Agency to determine the boundaries of a disadvantaged community?

Section 39711 was added to the Health and Safety Code by SB 535 of 2012 to direct funding from the Cap-and-Trade program to disadvantaged communities. CalEPA has implemented that statutory requirement with CalEnviroScreen. Section 2870 (a)(3)(A) clearly identifies the designation of CalEPA pursuant to Section 39711 of the Health and Safety Code as the mechanism for designating disadvantaged communities. The Legislature clearly considered CalEnviroScreen to be insufficient as the exclusive mechanism for determining eligibility for the Program by inclusion of Section 2870 (a)(3)(B), but it is very clear that the Legislature intended CalEnviroScreen to be the

mechanism for identifying disadvantaged communities for purposes of this Program.

Because AB 693 explicitly includes both an environmental screen and an income screen, CalEnviroScreen is sufficient for the disadvantaged communities designation for purposes of the MAHSR program.

3. What specific types of documentation should an applicant be required to submit in order to demonstrate that it meets all relevant elements of the eligibility requirements?

To be eligible, properties must satisfy the definition of low-income rental housing in Section 2852 (a)(3)(A)(i). This requires a deed restriction or a regulatory agreement. A regulatory agreement is a formal document that is necessary to qualify for tax credits and some other types of financial assistance. Therefore, every property that qualifies for the MAHSR program will have a deed restriction or a regulatory agreement. The applicant should be required to attach a copy of one of those documents to the application. The PAs should be able to review those documents quickly to determine if a property meets the requirements of Section 2852.

The applicant then must document that the property meets the requirement of either Section 2870 (a)(3)(A) or Section 2870 (a)(3)(B). For subsection (A), the address of the property should be sufficient. PAs can check that address within CalEnviroScreen. For subsection (B), the same deed restriction or regulatory agreement used to document compliance with Section 2852 will contain the information needed to document whether 80 percent of households have incomes at or below 60 percent of the area median income.

4. If some tenants of an otherwise qualified property are customers of community choice aggregators (CCAs), should this affect the eligibility of the property for the program?

Compliance with the Cap-and-Trade program rests with electrical distribution utilities.⁸ Customers of CCAs remain customers of the IOUs for distribution services. CCA customers bear the cost burden of the Cap-and-Trade program in distribution rates. They pay in, so they should be able to receive the benefits. CCA customers should be fully eligible for the MAHSR program.

5. Should the available incentive funding be allocated as a certain percentage to properties that qualify by virtue of location in a disadvantaged community and to those that qualify by virtue of low-income tenant households?

No, there should not be an allocation percentage between disadvantaged communities and low-income households. Section 2870 (a)(3) clearly defines two criteria that determine eligible properties for the Program. It requires that the property “meets one or more” of those criteria, but gives no indication that there should be two separate divisions of the Program.

The findings and declarations of AB 327 also indicate an equal emphasis on low-income households and disadvantaged communities and set a goal for qualifying solar energy systems to be installed “in a manner that represents the geographic diversity of the state.”⁹ This is a further reason that CalEnviroScreen should not be the only measure and that the income screen should not be limited by geography. If one type of customer or geographic area is underserved by the program for any reason, changes can be made during the program assessment after the first three years.

6. Should the 300 megawatt (MW) capacity goal be allocated as a certain percentage to properties that qualify by virtue of location in a disadvantaged community and to those that qualify by virtue of low-income tenant households?

⁸ See Cap and Trade Regulation Section 95870 (d).

⁹ AB 327, Section 1 (e).

Similarly, there should not be an allocation of the MW between disadvantaged communities and low-income properties, following the same rationale as above. It was not the intent of the bill to divide the program. Rather, the intention was to increase eligibility with an either/or option.

It should also be noted that the 300 MW target was set in alignment with full funding of \$100 million per year for ten years. If funding does not reach that level, the capacity target should be revised downward correspondingly. Section 2870 (f)(1) states, “The target of the program is to install a combined generating capacity of at least 300 megawatts on qualified properties.” The last bill analysis before final approval by the California Assembly notes that \$167 million was available for allocation to clean energy programs in 2015.¹⁰ This is greater than the \$100 million annual cap for the Program budget, and would therefore result in full funding of the Program. In 2016, Cap-and-Trade allowance revenue is reduced due to lower auction closing prices. If that continues, the Program budget will be less than \$100 million per year. Because the Legislature set the capacity target with an expectation of full funding, it is reasonable to establish rebate levels based on those expectations and to accept a lower target if less funding materializes.

7. What type of incentive structure should the Commission adopt for the Program?

The incentive structure outlined in our proposal should be adopted for the Program, described in greater detail above. There is no need to completely rethink the incentive levels from the MASH program because they have been effective and solar providers have found them to be a fair middle ground.

¹⁰ California Assembly, Bill Analysis, AB 693, Concurrence in Senate Amendments, September 4, 2015.

The rebate structure should incentivize the use of the federal ITC in order to leverage state dollars even further. But the Program should also allow for the opportunity for property owners without the ability to use the ITC to be able to install solar, and have a higher incentive level for non-ITC-funded projects.

One main difference between the MASH program and the MAHSR program is that property owners using the MAHSR program should not be allowed to adjust the utility allowance of tenants in order to help pay for the solar system.¹¹ The rationale for this is to ensure that tenants receive as much economic benefit from participation in the Program as possible while still motivating property owners to take action. The rebate levels proposed below are modified from the MASH rebate levels by extracting the adjustment of the utility allowance that occurs with MASH projects.

The program should include a requirement that at least 70% of the electricity generated by the solar capacity funded by MAHSR funds must be used to offset tenant load, and up to 30% may be used for common area load. This should not prohibit property owners from adding to the capacity of the system if they want to cover more common area load, but at least 70% of the portion of the system capacity funded by the MAHSR program should be directed to VNEM credits for tenants.

Table 4. Recommended Year One Incentive Levels

| Leverage Type | | Incentive \$/W-DC | |
|---------------|-------|-------------------|-------------|
| ITC | LIHTC | Common Area Load | Tenant Load |
| no | no | \$0.90 | \$3.18 |
| YES | no | \$0.72 | \$2.54 |
| no | YES | \$0.69 | \$2.45 |
| YES | YES | \$0.51 | \$1.82 |

¹¹ This assumes the Commission adopts a rebate structure similar to what CALSEIA proposes.

8. Would a solar energy system paired with a storage device meet the definition in Section 2870(a)(4) of “solar energy system”?

It would be valuable for incentive money for storage to be available to AB 693 projects. AB 693 is a ten-year program, and storage needs to become ubiquitous in that time horizon. Low-income apartment buildings should not be locked into solar-only solutions. However, in order to expedite the launch of the Program it should commence without initially adding storage to the program. The PAs should monitor the Program budget and progress toward the MW target, and should commence the long process of developing storage incentives as soon as possible once the Program is launched if they believe there is room in the budget to do so.

CALSEIA believes that a solar energy system paired with a storage device would meet the definition in Section 2870(a)(4) of a “solar energy system.” The Commission determined in D.14-05-033 that storage devices paired with NEM-eligible solar PV systems, and that meet the definition of an “addition or enhancement” to a NEM-eligible system listed in the California Energy Commission (CEC) *Renewables Portfolio Standard Eligibility Guidebook* (Guidebook), should be treated as part of a solar PV system rather than separate from it. In addition, storage devices are eligible for the federal Investment Tax Credit when paired with solar PV, as long as they meet certain requirements. Therefore, by following the guidance in the Commission decision, CEC Guidebook, and eligibility for the federal ITC, a solar energy system paired with a storage device would meet the definition in Section 2870 (a)(4) and should be part of the MAHSR program.

The current mechanism for providing incentives for energy storage is the Self-

Generation Incentive Program (SGIP). However, Program participants have a low likelihood of securing an SGIP rebate due to the small SGIP budget.

If funds are available in the Program budget beyond what is needed to meet the Program goals, incentives should be developed for energy storage. This may depend on the incentive design and whether the Program target is revised to reflect available funding from the Cap-and-Trade program. If most MAHSR applicants leverage other funding sources and Cap-and-Trade revenue is sufficient to fully fund the Program, there will be space in the Program budget to meet the 300 MW target and also fund storage. If Cap-and-Trade revenue is not sufficient to fully fund the program but the target is lowered correspondingly, there may also be space for storage funding.

Therefore, CALSEIA recommends that the Program commence without storage funding, but the PAs should monitor the budget and progress toward the target and have flexibility to develop incentives for energy storage systems if the Program budget allows it. This could be done shortly after the launch of the Program.

9. If you believe that a solar energy system paired with a storage device meets the Section 2870 definition, should the Commission adopt incentive levels or structures for these projects that differ from the incentive structure that you have recommended in response to Question 7 for systems without storage?

If the Commission chooses to fund storage in the Program, it should develop the structure and incentive levels for solar paired with storage systems at that time.

10. Which, if any, features of the California Solar Initiative (CSI) and Multifamily Affordable Solar Homes (MASH) programs should be continued under the Program?

The listed features of the CSI and MASH programs in Question 10 should all be continued under the Program, with the exception of the requirement that the system size must be between 1 kW and 1 MW. Since the 1 MW size cap was removed from NEM-

eligible systems in D.16-01-044, the Program should also not have a 1 MW cap on system size. All other features of the CSI and MASH programs have worked effectively for implementation of those programs, and for administrative and implementation simplicity for both the PAs and Program participants those existing features should be continued for the MAHSR Program.

11. How should the requirements regarding third-party owned systems set out in Section 2870(f)(3) be implemented?

Additional costs cannot be passed on to tenants whether the system is installed via a cash purchase or a PPA. If property owners charged tenants a fee to cover PPA payments, it would be a utility expense that would need to be counted toward the utility allowance. The MAHSR program should not allow additional tenant costs either through increased rent payments or a separate PPA fee. Both of these limitations can be enforced by an attestation on the application together with random audits.

Third party providers should be required to provide a performance guarantee, either as part of the contract or separately. There are two components that should be included in a standard performance guarantee:

- A kWh production guarantee throughout the term of the contract;
- A monetary payment made to the host customer that is associated with any underproduction.

Applicants should be required to submit a signed copy of the performance guarantee as a project milestone similar to the requirement for submittal of the PPA in the MASH program. Meeting these production requirements will ensure that third party providers are performing the appropriate operations and maintenance of the system. Having the third party provide a monetary payment to the host customer in the case of

underproduction, coupled with the requirement that the utility allowance cannot be adjusted when receiving incentives from the Program, will help ensure that no additional costs are passed on to low-income tenants.

12. What types of local hiring requirements should be adopted?

The training requirements for the MAHSR program should follow those of the MASH program, with several modifications. First, the requirement should allow for a single individual to be provided with an increased number of hours of training based on the size of the solar energy system, rather than having multiple individuals each receiving no more than eight hours of training per the current MASH requirements. This would put an emphasis on quality of training rather than the quantity of trainees. One individual working a full week gets more experience, has more interactions with the installation team, and gains more transferrable skills, all of which leads to stronger letters of recommendation and potential for future employment.

Secondly, the MASH job training affidavit should be revised to include the types of skills that were developed by the trainee, in addition to simply “reporting the type of MASH installation work and assistance performed by the job trainee.”¹² This will help clearly show skill transfer to the trainee and enable that trainee to directly show the type of work performed in the training program.

Thirdly, the Commission should explore options for giving priority to training and hiring individuals meeting the criteria of Section 2870 (a)(3), which would provide additional opportunities and economic development in disadvantaged communities and people with low incomes. This is similar to the Housing and Urban Development (HUD)

¹² PG&E, SCE and SDG&E, “Multifamily Affordable Solar Housing Program Job Training Requirement Affidavit” at p. 2.

Section 3 program, which gives priority for training and employment opportunities to persons in public and assisted housing, persons in the area where the HUD financial assistance is expended, participants in HUD Youthbuild programs, and homeless persons.¹³ This is precedent for those who receive incentives to also prioritize providing opportunities for individuals in those communities receiving funds.

In order to help connect these individuals with job opportunities from solar installation companies, the MAHSR program should consider developing and supporting a job board managed by a third party. Such a resource developed within the MAHSR program could also be used by other clean energy programs with job training elements. If a willing partner is found, this could be expanded to a staffing agency that would work with community colleges and other training programs across the state and help connect them with solar providers. In addition, since the staffing agency will have developed a relationship with the trainee and will be tracking their progress throughout the program, the agency can help ensure proper skills transfer to the trainee that can be taken to future jobs, and can track where they end up after each training experience.

While a job board or a staffing agency would help make the job-training element of the MAHSR program more impactful, there are many details that would need to be discussed and developed. At this time it is premature to require this as a component of the Program. CALSEIA recommends that the Commission convene a workshop to explore the concept.

13. How should the Commission implement the requirement that the electricity generated by incentivized systems “be primarily used to offset electricity usage by low-income tenants”?

¹³ See portal.hud.gov/hudportal/HUD?src=/program_offices/fair_housing_equal_opp/section3/section3brochure.

A fundamental purpose of AB 693 was to create a program that addresses tenant load with solar energy systems at multifamily housing properties. Initially, most installations under MASH were designed primarily to offset common area load. More recently, MASH projects have been increasingly designed to address tenant load, but it is still uncertain how universal this trend is. Common area load typically constitutes 15% - 30% of the total demand of a multifamily housing property, with the remaining 70% - 85% for tenant load.

Another important concept related to solar and regulated affordable housing is the utility allowance. In exchange for tax credits used to build or renovate a property, property owners abide by limits on the amount that tenants can be made to pay for housing. The calculation of this limit is based on affordability and includes rent plus the utility allowance, which is determined based on the size of the units and local utility rates. If estimated utility expenses are lower, landlords can charge more rent and stay within the affordability cap. When a landlord installs a solar system that is sized to offset tenant load, the tenants' estimated utility expenses are decreased and landlords can correspondingly increase rents to help pay for the solar system.

Both of these scenarios – solar capacity that offsets common area load and solar capacity that offsets tenant load with corresponding adjustments to the utility allowance – have very real tenant benefits by improving the financial viability of low-income housing and enabling the property owner to make other improvements to the property. Meeting housing needs for low-income tenants is a tremendous challenge, and ensuring that affordable housing stays affordable beyond existing deed restrictions is valuable in that effort. Also, many affordable housing property owners are mission-driven not-for-profit

organizations that use long-term savings to help meet other needs at the property. However, these benefits are indirect. Bill reductions that are not offset by utility allowance adjustments would have a more direct tenant benefit. The reforms to the MASH program resulting from AB 217 of 2013 aimed to increase direct tenant benefits. D.15-01-027 created a “shared savings” approach requiring that rent increases can be no more than half of estimated bill savings from solar.

CALSEIA expects that this reform will have a positive impact on encouraging property owners to install solar systems that offset part of tenant load. However, AB 693 aims to increase direct tenant benefits even more than the MASH program reforms in D.15-01-027. Rather than extending the MASH program with additional funding, the Legislature chose to create a new program. There was an acknowledgement that the best way to encourage solar for direct tenant benefit is to fully pay for the solar capacity that offsets tenant load. At the same time, some incentive must be given to property owners to encourage them to go through the hassle of installing solar systems.

Applicants should submit their NEM interconnection applications with their Program application. This form contains the allocation of VNEM credits. Those credits result in direct offsets of electricity usage by tenants. The Program application should require the applicant to attest that it is not seeking an adjustment of the utility allowances of participating tenants. The application should also clearly state that systems funded by the Program may be subject to audits by the PAs in conjunction with the utilities and the California Tax Credit Allocation Committee (TCAC).

As long as customers get VNEM credits and do not have adjustments to their utility allowances, it is a clear direct economic benefit to the tenant. This is consistent

with the requirements of the Low Income Weatherization Program (LIWP). Such consistency will keep overall administration costs of the program down, and ease operations for solar developers and building owners who are already familiar with the operations of that program.

The Commission should also establish a minimum percentage offset of the load of each participating tenant. Tenants participating in the Program will be subject to the VNEM successor tariff, including mandatory participation in time-of-use (TOU) rates. This could increase the bills of customers compared to block rates. Applicants should therefore be required to offset a minimum percentage of tenant load to counteract this potential negative impact. If VNEM credits only offset 1% of a tenant's kWh consumption, the negative impact of being on mandatory TOU could be stronger than the benefit of the free VNEM credits. CALSEIA estimates that in most cases for small users mandatory TOU will increase monthly energy charges by 1%-6%. To be safe, CALSEIA recommends that property owners set VNEM percentages and Program participation such that tenants receive VNEM credits offsetting at least 15% of their consumption.

13d. Which utility tariffs and credits should qualify as meeting the requirements of Section 2870(g)(1)?

The statute points to “virtual net metering tariffs designed for MASH program participants.” Because the NEM successor tariff was being developed during consideration of AB 693, however, the Legislature could not assume that the MASH VNEM rate schedule would be available for Program participants. The legislation therefore also allowed the Commission to use “other tariffs that may be adopted by the Commission pursuant to Section 2827.1.” Since passage of AB 693, in D.16-01-044, the Commission preserved a virtual net metering tariff designed for MASH program

participants. Hence, there is no need to use other tariffs for implementation of AB 693. Each utility's current MASH VNEM tariff simply needs to be modified to expand eligibility to MAHSR program participants. The Commission should also verify that master metered properties are eligible for the tenant incentive for that portion of the solar system that is designed to offset tenant load.

14. How should the Commission address the requirements of Section 2870(g)(2)?

There was concern during consideration of AB 693 that participating customers who are on CARE rates would see their overall benefits reduced by participation in the Program. This was not a specific concern with examples based on current tariffs. It was a general concern about potential future tariffs, such as TOU rates with structures so sharply unfriendly to solar that it would overpower the benefit of getting free VNEM credits. The language in Section 2870 (g)(2) was included in the legislation to direct the Commission to maintain a residential rate structure available to MAHSR Program participants that leads to bill savings. This may be an issue to consider in future rate cases.

Any residential TOU rate option that is available to Program participants could satisfy this requirement. Currently, the primary residential TOU tariffs for residential solar customers are E-TOU-A for PG&E customers, TOU-D for SCE customers, and DR-SES for SDG&E customers. The current structures of those rate schedules satisfy the requirement in Section 2870 (g)(2). However, proposed changes such as the changes to DR-SES proposed by SDG&E in its current general rate case, A.14-05-012, must be analyzed to ensure that customers participating in the MAHSR Program achieve bill savings.

Also, similar to our answer for Question 13, in order to ensure that the tenants are receiving a clear direct economic benefit and verifiable decrease in their utility bills, the Commission should establish clear rules that property owners are not allowed to adjust utility allowances for solar systems funded by the Program.

15. Should the Program include a limit on the amount of incentive payments that can be paid to projects developed by any one third-party owner, supplier or installer of qualified solar energy systems?

There should be no limit on the total incentives received by any one party. This is in contrast to a recent decision on changes to SGIP, D.16-06-055. The reason for the difference is that SGIP is a market transformation program. There are many emerging energy storage companies that should all have the opportunity to get a boost from SGIP. Although we certainly want and expect there to be healthy competition among companies providing solar to low-income multifamily housing properties, MAHSR is intended more for helping multifamily housing customers participate in solar energy solutions than to develop the industry of solar providers targeting that segment.

16. Should the Program include a limit on the number of MW for which projects developed by any one third-party owner, supplier or installer of qualified solar energy systems may be paid with Program incentives?

Similar to the answer to Question 15, there should be no developer cap by MW in the Program. AB 693 is a tenant benefit program, and to ensure efficiency and lowest cost, there is no reason to impose restrictions on the market. We need all companies to bid for projects, including in geographic locations where few companies are currently serving the multifamily market.

17. What program administration structure should be adopted?

The Program should be operated as efficiently as possible to have as much of the funding as possible directed to actual installations that help low-income customers save

money and reduce strain on the CARE budget. It would be unfortunate to have a full ten percent of the Program budget go to administration. Economies of scale would be possible by consolidating program administration statewide. CALSEIA sees less benefit to dividing the administration of this limited program among separate administrators rather than having one program administrator.

Having a third-party administrator would also facilitate participation by PacifiCorp and Liberty Utilities. These IOUs have no experience administering this type of program in California. With a smaller total Program budget they would have to spend a high percentage of funds on administration if they are part of the Program and administer it themselves.

The drawback to this is that selecting a statewide administrator would create another step in the process of launching the MAHSR program.

18. Should PG&E, SCE, SDG&E, Liberty, and PacifiCorp all be required to contribute GHG allowance proceeds to fund the Program? Should incentives from the Program be available to eligible projects in the service territories of all five utilities?

Yes, all should be required to pay in, and customers from all IOUs should be eligible. Pacificorp and Liberty can hire an existing PA to administer the Program for them.

19. CALSEIA does not respond to this question at this time, but may provide information in reply comments.

20. CALSEIA does not respond to this question at this time, but may provide information in reply comments.

21. CALSEIA does not respond to this question at this time, but may provide information in reply comments.

22. How should energy efficiency requirements be determined? What documentation should applicants be required to provide of compliance with the requirements set in accordance with Section 2870(f)(7)?

AB 693 set the energy efficiency requirement equal to the requirement that has already been established for the MASH program for ease of administration. That requirement was much debated during implementation of AB 217. There is no need to repeat that work. The statute is clear. It requires energy efficiency requirements “equal to the energy efficiency requirements established for the program described in Section 2852.” Those requirements have been established and this Program only needs to mirror them.

23. Should the Commission establish interim targets for the installation of capacity under the Program?

Specific interim goals are not necessary, especially since the program will have a review three years into the Program about how it is making progress towards achieving the Program target.

24. What types of data collection and reporting requirements should the Commission adopt for the Program?

The Program does not change any aspects of D.14-11-001, which created the rules for the Currently Interconnected Data Set and the Interconnection Applications Data Set, available through the California Solar Statistics website. That decision included consideration of projects using the VNEM tariffs and projects funded through the MASH program. Both data sets include a field to indicate whether a project is VNEM (MASH), NEM-V (market rate virtual net metering), or NEM-Aggregation. The only needed modification is to allow a separate value in that field to indicate if a project is funded by the MAHSR Program. It would be useful for program tracking to differentiate these projects from MASH projects even though they will be using the same tariff. There is no reason why MASH projects and MAHSR projects should be accounted for in one combined category.

25. What safety issues should be considered in the implementation of the Program?

No additional safety requirements need to be established for this incentive program as existing safety considerations for solar are already in effect.

26. Please identify and, if relevant, comment on any additional topics related to implementation of the Program that are not addressed in the questions above.

There is one important data access problem that needs to be resolved for effective implementation of AB 693. Solar providers have been unable to obtain energy usage data for multifamily housing properties without getting the consent of every tenant. Solar providers request aggregated data for the building as a whole in order to determine the optimal size of a solar system. Utilities have refused to provide this data, citing customer privacy concerns even when the request is for aggregated data that cannot be traced back to individual customers.

It is not realistic to get the consent of all customers in a large apartment building. It would be wasteful and impractical to hire someone who speaks many languages to knock on doors at various times of the day until everyone is found at home. Instead, solar providers often currently use square footage information and past experience to guess at the right size for a solar system on an apartment building. This is unfair to customers and property owners. To maximize the effectiveness of the Program, solar providers must have access to aggregated data on building energy consumption.

Last year, the Legislature passed AB 802 (Williams) to create a building energy benchmarking program. This bill includes requirements to improve data availability. Public Resources Code Section 25402.10 states, “beginning no later than January 1, 2017, each utility shall, upon the request and written authorization or secure electronic

authorization of the owner, owner’s agent, or operator of a covered building, deliver or otherwise provide aggregated energy usage data for a covered building to the owner, owner’s agent, building operator, or to the owner’s account in the ENERGY STAR Portfolio Manager.” This appears to address the data availability need for the MAHSR program. However, because AB 802 was designed for energy benchmarking, CALSEIA asks that the Commission clarify in the instant proceeding that the requirement applies in the context of the MAHSR program as well.

4. Conclusion

CALSEIA appreciates the opportunity to offer these comments and urges the Commission to adopt the recommendations herein.

DATED at Sacramento, California, this 3rd day of August, 2016,

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