

<b>DOCKETED</b>	
<b>Docket Number:</b>	19-BSTD-08
<b>Project Title:</b>	Community Shared System Applications
<b>TN #:</b>	231994
<b>Document Title:</b>	Keyes and Fox LLP Comments - CALSSA Comments Regarding SolarShares Noncompliance with Title 24 §10-115(a)(2), (3) and (4)
<b>Description:</b>	N/A
<b>Filer:</b>	System
<b>Organization:</b>	Keyes and Fox LLP
<b>Submitter Role:</b>	Public
<b>Submission Date:</b>	2/7/2020 4:45:46 PM
<b>Docketed Date:</b>	2/7/2020

*Comment Received From: Keyes and Fox LLP  
Submitted On: 2/7/2020  
Docket Number: 19-BSTD-08*

**CALSSA Comments Regarding SolarShares Noncompliance with Title 24  
Â§10-115(a)(2), (3) and (4)**

*Additional submitted attachment is included below.*

February 7, 2020

California Energy Commission  
1516 9th Street  
Sacramento, California 95814  
docket@energy.ca.gov**Re: Docket Number 19-BSTD-08 – Comments on Behalf of California Solar and Storage Association Regarding SolarShares Noncompliance with Title 24 §10-115(a)(2), (3) and (4)**

Dear Chair Hochschild and Commissioners,

The California Solar and Storage Association (“CALSSA”) greatly appreciates the Commission’s sound exercise of its discretion at its November 13, 2019 meeting to not approve SMUD’s Neighborhood SolarShares® Program (“SolarShares”). CALSSA members share the concern expressed by Chair Hochschild and so many deeply concerned stakeholders who spoke out against SolarShares at the meeting regarding the value to new homeowners who will be forced to participate in SolarShares. On behalf of CALSSA, we are writing to explain why SMUD’s application – even as most recently revised – does not satisfy three of the explicit requirements of Title 24:

- 1) SolarShares does not allocate energy savings benefits to participating homes in a manner that is equivalent to reductions in energy consumption that would have resulted from onsite solar as is required by §10-115(a)(3).
- 2) SolarShares does not provide the same or better energy performance of onsite solar as required by Title 24, §10-115(a)(2) because it doesn’t account for line losses.
- 3) Because SolarShares relies on existing solar facilities, it does not meet the requirement that the community shared solar systems be “designed and installed to provide the energy savings benefits” to the dedicated buildings as required by §10-115(a)(4).

Due to these and other significant deficiencies and concerns raised by SolarShares, CALSSA urges the Commission to exercise its clear authority to reject this misguided application once and for all and to ensure the integrity of its new solar homes mandate.

**I. SolarShares Does Not Satisfy Title 24, §10-115(a)(3) Because It Provides Dramatically Lower Energy Savings Benefits to Participating Homes Compared to the Benefits of Onsite Solar.**

**A. Title 24's Equivalency Requirement**

One of the six enumerated requirements necessary for a community shared solar system to be approved by the Commission to meet the onsite solar requirement otherwise required by Section 150.1(b)1 of Title 24 is equivalent energy savings benefits. Section 10-115(a)(3) requires:

The energy savings benefits shall be allocated from the total resource of the [community shared solar system] in a manner demonstrated to be equivalent to the reductions in energy consumption that would have resulted from the onsite solar electric generation system and/or battery storage system that is otherwise required by Section 150.1 of Title 24.

The Commission's 2019 Residential Compliance Manual reiterates the equivalent energy savings benefits requirement. In Section 7.4.1 thereof, it requires:

For these offsets to become available, entities who wish to serve as administrators of a proposed Community Shared Solar Electric Generation System must apply to the Energy Commission for approval, demonstrating that several criteria specified in Section 10-115 of the Standards are met, **to ensure that the Community Shared Solar Generation System provides *equivalent benefits* to the residential building expected to occur if photovoltaics or batteries had been installed on the building site.**

(emphasis added). Per the explicit language in the Commission's regulations, the community shared solar system must "provide energy saving benefits directly to the building that would otherwise have been required to have an onsite solar electric generation system and/or battery storage system" (i.e. each newly-built home in SMUD territory). Title 24, §10-115(a)(3) (emphasis added).

Section 10-113(a)(3) provides three options for the form the "energy savings benefits" allocated to the building may take:

- A. actual reductions in the energy consumption of the dedicated building;
- B. utility energy reduction credits that will result in virtual reductions in the building's energy consumption that is subject to energy bill payments; or
- C. payments to the building that will have an equivalent effect as energy bill reductions.

Thus, the energy savings benefits can be provided to the participating home via actual reductions in energy consumption, or, they can be in the form of either utility energy reduction credits that have the effect of reducing the amount of energy usage of the dedicated building subject to utility energy charges, or payments to the dedicated building that will have an equivalent effect as such utility energy reduction credits mentioned in option B. In all three cases, these amounts must be equivalent to the reductions in energy consumption that would otherwise have resulted from an onsite solar electric generation system. See Exhibit A and Exhibit B attached hereto for a visual depiction of this equivalency requirement. With respect to option C, where the energy savings benefit is provided to the participating building as a dollar value rather than as kilowatthours, the payments to the dedicated building must have “an equivalent effect as energy bill reductions” that would otherwise have resulted from an onsite solar electric generation system.

Putting all of this together, “[p]ayments to the building *that will have an equivalent effect as energy bill reductions*” means payments to the participating building must have an equivalent *value* to the value of the reductions in energy consumption that would otherwise have resulted from the onsite solar. See Exhibit B, which illustrates this Title 24 requirement.

#### **B. SolarShares Credits Do Not Have An Equivalent Effect as Energy Bill Reductions From Onsite Solar.**

SolarShares does not satisfy Section 10-115(a)(3) of Title 24 because it does not allocate energy savings benefits in a manner that is “equivalent” to the reductions in energy consumption that would have resulted from an onsite solar electric generation system otherwise required by Title 24. SolarShares is structured to provide the type of energy savings benefit enumerated in §10-115(a)(3)(C) above (payments to the participating building).<sup>1</sup> Applying the equivalency requirement in Section 10-115(a)(3) to the SolarShares structure, Title 24 requires the SolarShares Credits to have an equivalent effect as energy bill reductions expected to occur if the participating building had onsite solar. As explained above, **the SolarShares Credits must have a value to the participating building that is equivalent to the value of the reductions in energy consumption that would otherwise have resulted from onsite solar.** See Exhibit B.

Energy bill reductions that would have resulted from onsite solar can be estimated based on the estimated annual production of an average 4kW rooftop solar system. A typical residential rooftop solar system of this capacity at an average location in SMUD territory is expected to generate 6,680 kWh of electricity over the course of a year.<sup>2</sup> Assuming the customer participated in SMUD’s RT02 tariff, in 2020, such a system would be expected to save a typical SMUD net

<sup>1</sup> See, Community Shared Solar Electric Generation System Application *Neighborhood SolarShares Program* (December 2019) (“Revised SolarShares Application”) at 22. While SMUD explains that the form of energy savings benefits provided in SolarShares is “Option B or C”, SMUD has structured SolarShares as a dollar-based credit to the participating building, rather than “virtual reductions in the building’s energy consumption” as per Option B. See Revised SolarShares Application at pp. 27, 28 (sample SolarShares bill showing SolarShares Credit as a dollar credit, not a reduction in the building’s energy usage in kilowatthours for that month.). See Exhibit B hereto demonstrating why SolarShares has not been structured to allocate energy savings benefits to participating homes as required by Option B and what an Option B utility energy reduction credit would otherwise look like.

<sup>2</sup> Modeled using HelioScope for a typical 4kW system in SMUD.

metering customer under time-of-use rates \$822.<sup>3</sup> See Exhibit C for the annual modeled energy bill savings to a SMUD customer for such a system over a 20-year period.

**Yet SMUD’s SolarShares Application never compares the monthly or annual utility bill credits (SolarShares Credits) for each participating building to the value of the reduction in energy consumption that would otherwise have flowed to such building if it installed onsite solar.** Instead, SMUD merely compares the value of SolarShares Credits to the cost of SolarShares Charges and provides a net \$10/kW/year benefit.<sup>4</sup> In comments following the Commission’s decision to not approve SMUD’s application, SMUD went so far as to baldly and erroneously deny that the equivalency requirement exists.<sup>5</sup>

Moreover, SMUD’s methodology for calculating SolarShares Credits does not comply with §10-115(a)(3). SMUD explains that it multiplies “the same base cents/kWh amount with which SolarShares Charges begin” by “the allocated energy in each time period for the participating home.”<sup>6</sup> The SolarShares Charge is calculated by “establishing an initial base cents per kWh amount to recover energy and program costs and a variety of ancillary and fixed costs as in SMUD’s standard retail rates.”<sup>7</sup> SMUD is *not* multiplying its standard retail TOU rates under its RT02 tariff by the generation expected from an onsite solar system that would otherwise have been required under Title 24 for the participating building (taking into account time of generation). Yet, in order to calculate a payment to the participating building “that will have an equivalent effect as energy bill reductions” per §10-115(a)(3)(C), SMUD should be multiplying energy reductions in kWh that would otherwise have resulted from onsite solar (calculated using the CEC-approved compliance software) by the modeled time of energy production of onsite solar under its RT02 tariff. Instead, SMUD is creating a its own blackbox SolarShares Charge rate per kWh. **This methodology does not adequately credit each participating building with a payment that “will have an equivalent effect as the energy bill reductions” that would have resulted from onsite solar generation.** See Exhibit B for a visual depiction of this lack of equivalency.

SMUD’s burden of proof<sup>8</sup> cannot be satisfied merely by demonstrating that customers will receive a greater energy bill reduction than the costs allocated to them as a result of participating in SolarShares.<sup>9</sup> While Section 10-115(a)(3) adds at the end that the reduction in the building’s energy bill must be “greater than the added cost to the building resulting from the

<sup>3</sup> *Id.* Net annual energy bill reduction modeled by applying SMUD RT02 tariff, 3% electricity escalation rate and 0.5% PV degradation rate.

<sup>4</sup> Revised SolarShares Application at 22.

<sup>5</sup> SMUD letter to Commissioners (November 20, 2019) at 2.

<sup>6</sup> Revised SolarShares Application at 29-30.

<sup>7</sup> *Id.* at 29.

<sup>8</sup> Title 24 §10-115(b) (“The application shall demonstrate to the Commission’s satisfaction that each of the requirements specified in Section 10-115(a)1-6 will be met and shall include detailed explanation of the actions that will be taken by the applicant to ensure that each requirement is met over the period of time specified in Section 10-115(a)4 for each building for which a partial or total offset is used to demonstrate compliance. All applicants have the burden of proof to establish that their application should be granted. The Commission shall have the authority to not approve any application that the Commission determines to be inconsistent with the requirements of Section 10-115.”).

<sup>9</sup> SMUD cites the \$10/kW net benefit relative to the cost per customer to participate in SolarShares as the justification for its purported satisfaction of §10-115(a)(3). Revised SolarShares Application at 22.

building’s share in the community shared solar or battery system,” this cost-effectiveness requirement is only an *additional* minimal requirement that does not negate the previous specific (and very different) sentence in Section 10-115(a)(3) providing that the energy savings benefits must be equivalent to the *reductions in energy consumption* that would have resulted from onsite solar otherwise required under Title 24. The prior sentence relates to the value of the utility bill reduction to a home resulting from participating in the community shared solar system as compared to the value that would be expected if the home had onsite solar, whereas the last sentence of Section 10-115(a)(3) requires the value of the utility bill reduction be greater than the cost of participation. Unfortunately, the Commission staff report’s analysis continues to adopt SMUD’s misconstrual of the Commission’s regulations in applying the equivalency requirement in §10-115(a)(3).

Even if the Commission were to compare the more conservative estimate it provided that an average solar system would provide California customers \$420 per year in *net* utility bill savings,<sup>10</sup> SolarShares does not provide payments to participating buildings that would have an equivalent effect as energy bill reductions. Even as revised in this third proposal, SolarShares would only provide participating customers approximately \$40 in net utility bill energy reduction credits per year.<sup>11</sup> This is patently not equivalent and thus SMUD has not met its burden of proof to establish that its application should be granted.

CALSSA believes the difference between Title 24’s equivalency requirement and its cost effectiveness requirement for community shared solar systems may be at the heart of a misunderstanding amongst staff and other stakeholders regarding the application of Title 24’s community solar exception to SolarShares.<sup>12</sup> We urge the Commission to take a hard look at SolarShares in light of the clear requirements it adopted in Section 10-115(a)(3) of Title 24. It is clear that SMUD has not demonstrated the equivalency required for Commission approval of this exception to its onsite solar requirement.

Title 24’s equivalency requirement is one of the primary reasons so many SMUD customers and other California stakeholders have expressed strident outrage against SolarShares and its potential evisceration of the landmark new solar homes mandate required in Section 150.1(b)(1). Because of the 20-year requirement and reality that residential homebuilders will be less likely to choose to add solar systems to new rooftops rather than opting for the far cheaper SolarShares option, if available, SolarShares would essentially force many SMUD customers

<sup>10</sup>*Frequently Asked Questions 2019 Building Energy Efficiency Standards* at 2 (estimating \$35/month in energy bill reductions resulting from having onsite solar, net of the estimated increase in mortgage payment associated with a home that has onsite solar). Available at:

[https://ww2.energy.ca.gov/title24/2019standards/documents/Title24\\_2019\\_Standards\\_detailed\\_faq.pdf](https://ww2.energy.ca.gov/title24/2019standards/documents/Title24_2019_Standards_detailed_faq.pdf).

<sup>11</sup> See Revised SolarShares Application at 3, 11, 22 (providing for \$10/kW/year minimum net benefit). SMUD assumes an average participation per home of 4kW to derive the \$40 annual utility bill credit SolarShares customers would be likely, on average, to receive. *Id.* at 11.

<sup>12</sup> While the Revised SolarShares Application and the staff report also described the inclusion of an optional process for builders to “buy-down” a portion of the charge to participate in SolarShares to increase the net energy bill benefit, this option was explicitly “voluntary.” Moreover, staff’s analysis never compared the energy bill credit to participating customers to the energy bill reductions (i.e. the *value* of the reductions in energy consumption) that such customers otherwise would have received if their home had onsite solar. Again, SMUD and staff only compared the costs to participate in SolarShares (SolarShares Charges) to the benefits (SolarShares Credits). This is not the equivalency Title 24 requires.

buying homes purchased after the effective date of SolarShares to participate. SolarShares would take hundreds of dollars per year in energy savings benefits out of the pockets of SMUD customers who will live in homes built after it goes into effect. Moreover, the precedent that would be set by the Commission's approval of this application could rob customers across California of the benefits of onsite solar, swallowing the new solar homes rule you so boldly and rightly adopted.

## **II. SolarShares Does Not Satisfy the Requirements of Title 24, §10-115(a)(2) Because It Doesn't Account for Line Losses.**

Title 24, §10-115(a)(2) requires the community shared solar system to “be demonstrated to provide the same or better energy performance equal to the partial or total compliance with the energy performance of the onsite solar electric generation...system that would otherwise have been required for the building, computed by the compliance software certified for use by the Commission.”

SMUD's SolarShares proposal does not discuss if or how SMUD will account for line loss of electricity during transmission and distribution. While we do not have a figure for line loss in SMUD, the estimated statewide line loss is 5.72 percent.<sup>13</sup> Thus, even if SMUD “believes the performance of SolarShares participating home resource portfolios will generate more TDV Energy compared to onsite PV systems,”<sup>14</sup> by failing to account for line losses caused by the transmission and distribution of electricity from utility-scale projects, SMUD has failed to “demonstrate” that the community shared solar systems provide the same or better energy performance of onsite solar.

## **III. By Utilizing Generation from Existing Solar Facilities, SolarShares Does Not Satisfy the Requirements of Title 24, §10-115(a)(4).**

Title 24, §10-115(a)(4) requires that the community shared solar system “be designed and installed to provide the energy savings benefits to the dedicated building...for a period of no less than twenty (20) years.” Yet, even in its Revised SolarShares Application, SMUD again proposes to rely on existing solar facilities.<sup>15</sup> Any such existing facilities are not “designed and installed” to provide energy savings benefits to the dedicated, specified homes participating in SolarShares. Instead, these facilities were designed and installed for other, general RPS/FIT compliance purposes. For this additional reason, the Commission should reject SMUD's revised proposal as noncompliant with Title 24.

<sup>13</sup> Information on how to calculate line loss in California is available at U.S. Energy Information Administration, *Frequently Asked Questions: How much electricity is lost in electricity transmission and distribution in the United States*, available at <https://www.eia.gov/tools/faqs/faq.php?id=105&t=3>.

<sup>14</sup> See Revised SolarShares Application at 21.

<sup>15</sup> *Id.* at Appendix B, p. 32 (explaining that SMUD will apply RECs from SMUD's existing FIT resources until its Wildflower project comes online, and if “there is program demand that cannot be met from [new build under 20 MW] resources at a particular point of time.”).

#### **IV. The Commission Should Reject the SolarShares Proposal.**

We are grateful for Chair Hochschild's and the Commissioners' thorough examination of SMUD's SolarShares revised proposal in light of the language you adopted in Title 24 and the significant policy concerns at issue here. SolarShares is a grave threat to the Commission's bold and necessary new solar homes mandate. We urge you to stay the course and consider the implications of backsliding on this policy for California and the planet. Thank you for your consideration of these comments.

Sincerely,

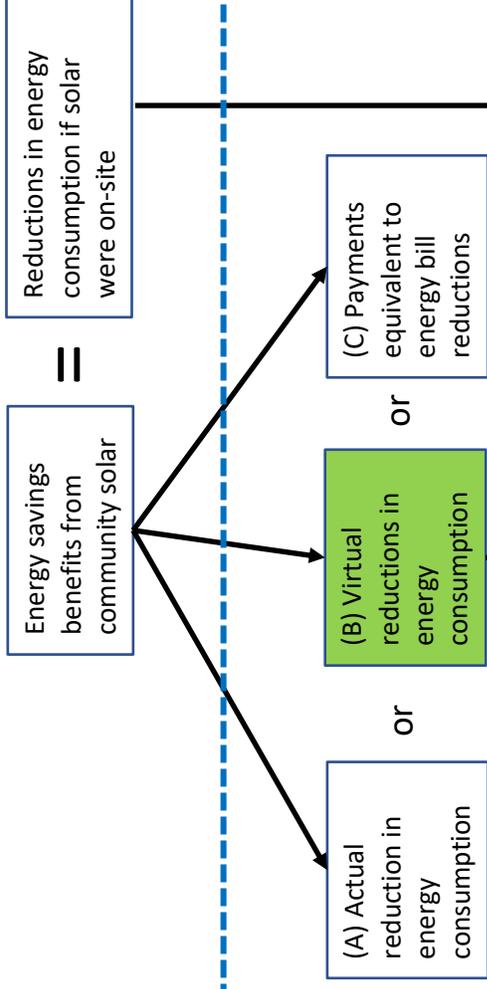
A handwritten signature in cursive script that reads "Sheridan J. Pauker". The signature is fluid and elegant, with the first letters of the first and last names being capitalized and prominent.

Sheridan J. Pauker  
Partner  
Keyes & Fox LLP  
spauker@keyesfox.com

**EXHIBIT A**

# SolarShares Does Not Satisfy Title 24 §10-115(a)(3)(B)

## Title 24 Requirements for Community Shared Solar



There are three ways the energy savings benefits from community solar can be allocated to participating buildings:

SMUD claims that SolarShares uses option (B) or (C). This flowchart assumes option (B).

The left box reflects how SolarShares appears to allocate energy savings benefits to participating buildings.

The image of the energy bill on the right is an example of how utility energy reduction credits that will result in virtual reductions in the building's energy consumption if solar were onsite.

SolarShares is not structured to comply with §10-115(a)(3)(B).

Item	Usage	Type	Rate	Amount
Electricity Usage	487	Summer Off Peak kWh @	0.122100	59.6
Electricity Usage (12pm-12pm)	300	Summer Peak kWh @	0.168800	60.3
Electricity Usage (5-8pm)	130	Summer Super Peak kWh @	0.297000	38.7
System Infrastructure Fixed Charge*				20.30
Sacramento City Tax*				15.16
State Surcharge*				0.53
<b>A) TOTAL ELECTRIC SERVICE CHARGES/CREDITS</b>				<b>\$199.51</b>

Usage -180 = 307 kWh  
 300 -250 = 50 kWh  
 130 -30 = 100 kWh

~~\$40~~  
~~\$10~~  
~~\$25~~  
~~\$110~~

Cost to "recover energy and program costs and variety of ancillary and fixed costs"

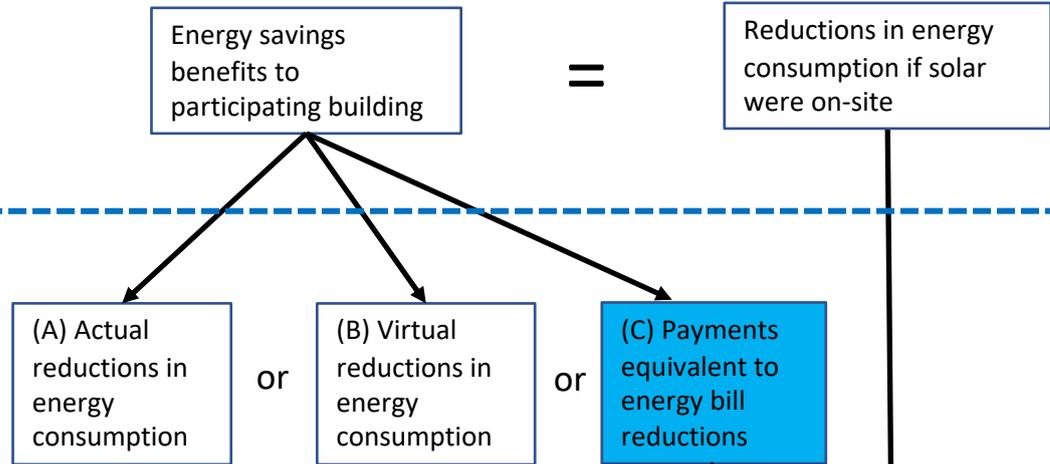
≠

## **EXHIBIT B**

# SolarShares Does Not Satisfy Title 24 §10-115(a)(3)(C)

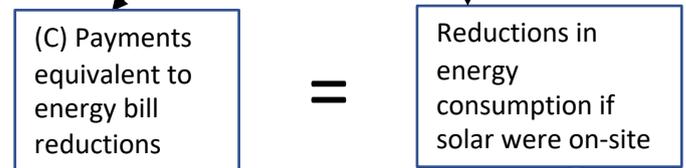
## Title 24 Requirements for Community Shared Solar

There are three ways the energy savings benefits from community solar can be allocated to participating buildings:



SMUD claims that SolarShares uses option (B) or (C). This flowchart assumes option (C).

"[p]ayments to the building that will have an equivalent effect as energy bill reductions" means payments to the participating building must have an equivalent *value* to the value of the reductions in energy consumption that would otherwise have resulted from the onsite solar.



cents/kWh amount to "recover energy and program costs and variety of ancillary and fixed costs."

≠

Year	Savings
2020	\$822
2021	\$843
2022	\$864
2023	\$885
2024	\$907
2025	\$929
2026	\$952
2027	\$976
2028	\$1,000
2029	\$1,025
2030	\$1,050
2031	\$1,076
2032	\$1,102
2033	\$1,129
2034	\$1,157
2035	\$1,185
2036	\$1,214
2037	\$1,244
2038	\$1,274
2039	\$1,305

The left box reflects how SolarShares appears to allocate energy savings benefits to participating buildings.

The table on the right is a modeled estimate of the value of reductions in energy consumption if solar were on-site, assuming a net metered 4kW rooftop solar system in SMUD territory.

The two are not equal. SMUD does not comply with Title 24 in its allocation of energy savings benefits to participating buildings.

## EXHIBIT C

### Projected Energy Bill Reductions from Onsite Solar in SMUD Territory, 2020-2039 (Modeled 4 kW system, RT02 Tariff)

Year	Savings
2020	\$822
2021	\$843
2022	\$864
2023	\$885
2024	\$907
2025	\$929
2026	\$952
2027	\$976
2028	\$1,000
2029	\$1,025
2030	\$1,050
2031	\$1,076
2032	\$1,102
2033	\$1,129
2034	\$1,157
2035	\$1,185
2036	\$1,214
2037	\$1,244
2038	\$1,274
2039	\$1,305