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Response to Comments On SMUD Community Shared Electric Generation System Application

Additional submitted attachment is included below.



November 6, 2019

California Energy Commission
Docket No. 19-BSTD-08
1516 9th Street
Sacramento, CA 95814

**RE: Comments on Community Shared Solar Electric Generation System
Application by the Sacramento Municipal Utility District**

The Sacramento Municipal Utility District (SMUD) is committed to continuing to play a leadership role in the growth of renewable energy. For many years, we have provided vital assistance for the development and expansion of the rooftop solar industry. To date, over 210 megawatts (MW) of customer-owned rooftop solar have been installed in SMUD's service area and its energy portfolio currently includes over 170 MW of utility-scale solar. Over the next three years, SMUD will add nearly 270 MW of new utility-scale solar. SMUD's recently-adopted Integrated Resource Plan projects 550 MW of customer-owned rooftop solar by 2030 and more than 1,500 MW of utility-scale solar over the next 20 years, nearly 1,000 MW of which is to be built locally.

As part of its efforts to promote the use and availability of renewable energy within its service area, in early September 2019, SMUD applied for approval to administer a Community Shared Solar Electric Generation System pursuant to section 10-115 of the 2019 Building Standards.¹ On September 24, 2019, Commission Staff posted SMUD's Application for public comment along with the Commission Staff's review recommending approval of SMUD's Application, which stated:

"Staff finds that SMUD's application as the administrator of their Neighborhood SolarShares Program as a community shared solar electric generation system for achieving compliance with the 2019 Energy Code, meets all of the Part 1, § 10-115 requirements. Staff recommends approval of SMUD's application."²

Several developers and other stakeholders have docketed strong support letters for SMUD's Application. However, several parties have submitted opposition letters recommending that the Commission reject the proposal. For the reasons provided below, SMUD believes that the issues raised in the opposition letters have no merit, and in some cases, may not be considered by the Commission in its review and evaluation of SMUD's Application.

¹ Under Section 10-115, the Commission may approve a community shared solar system as a compliance option to partially or totally meet the onsite solar electric generation system that is otherwise required by Section 150.1(b) of Title 24, California Code of Regulations, Part 6.

² Staff's Notice of Availability and Summary of Staff's Review of SMUD's Application is available at <https://efiling.energy.ca.gov/GetDocument.aspx?tn=229834&DocumentContentId=61282>.

As a threshold matter, the opposing concerns are generally unrelated to the specific requirements set forth in Part 1, Chapter 10, § 10-115 of the 2019 Building Standards. SMUD's Application must be judged against those requirements alone, and as Commission Staff concluded, SMUD's Application fully satisfies those requirements. The Commission cannot impose additional requirements or evaluate SMUD's Application based on criteria outside of the specific 2019 Building Standards requirements -- that would require further rulemaking to change the applicable regulations. This is a general regulatory principle, cemented specifically here by §10-115(c), which states: "Community shared solar electric generation systems ... which demonstrate to the Commission's satisfaction that all of the requirements specified in Section 10-115 will be met, **shall** be approved."³

With this threshold set, the opposition comments raise several points and SMUD addresses each concern below.

Opponents claim that the SMUD SolarShares proposal does not qualify as "community solar."

CALSSA and SEIA suggest that SMUD's proposed resources are too large to conform to the Commission's description of "community-scale" PV systems in the Frequently Asked Questions (FAQs) regarding the 2019 Building Standards, and do not match definitions of "community solar" in other jurisdictions, such as Colorado. They also suggest that one of the resources in SMUD's proposed initial portfolio is too far away to be considered "community solar."

CALSSA and SEIA point the Commission to standards that simply do not exist. Section 10-115 of the Building Standards does not use the term "community-scale," nor does it impose a size limit on resources in the community solar compliance option. The Commission's FAQs are not part of the applicable regulations, nor are the definitions of "community solar" used in other jurisdictions. The references to "community-scale" size descriptions in the FAQs and the references to other jurisdictions are irrelevant for purposes of evaluating and approving any community solar application before the Commission, including SMUD's.

Additionally, as CALSSA and SEIA acknowledge, the regulations do not require that community solar resources be located within a certain distance of a community. To add a proximity requirement now would, again, amount to adding a criterion not found in the applicable regulations. That said, three of four resources in SMUD's proposed portfolio are in Sacramento County, are well within SMUD's service area, provide local network benefits, and together provide more than enough generation to supply the Neighborhood SolarShares program for some time.

³ For example, CALSSA and SEIA also suggest that the CEC should somehow include consideration of SMUD's withdrawn Net Energy Metering (NEM) successor tariff proposed earlier in 2019. Nothing in the Building Standards regulations allow the CEC to consider SMUD's proposed but withdrawn successor tariff when considering adoption of SMUD's Application. The lack of a Virtual Net Energy Metering program at SMUD is another example of information that is not a fact to consider in the approval process for SMUD's Application.

CALSSA and SEIA also comment that the SMUD Application represents a “dangerous precedent” that could result in the buildout of utility-scale solar in rural areas that would be “indistinguishable from increasing California’s Renewable Portfolio Standard mandate.” Vote Solar, while expressing support for the community solar option in the 2019 Building Standards, also suggests that an intermingling of Neighborhood SolarShares and RPS resources is problematic.

These claims are inaccurate. SMUD’s Neighborhood SolarShares (NSS) program generation is explicitly distinguishable from RPS generation. It is an increase in new renewable generation beyond RPS requirements, which is a benefit to all Californians. This is not dangerous or detrimental to California’s clean energy goals. To the contrary, over time, the NSS program can provide increased renewable generation in comparison to rooftop systems, with better maintenance and repair practices and system orientation, yielding higher solar output over time for the same solar capacity.

Nothing in the 2019 Building Standards requires that community solar resources be kept wholly separate from RPS resources. Generation from a large community solar project cannot exactly match allocated energy as participants enter the program over time due to the nature of utility operations. Practically speaking, it’s impossible to turn on “one panel at a time” to match program load. The “surplus-to-SolarShares” generation from the supply resources must be allocated to some other purpose such as the RPS or other SolarShares or Greenenergy programs at SMUD, or the value of that surplus solar generation would be lost. SMUD’s Application explicitly commits to tracking generation through appropriate retirement in WREGIS and auditing by Green-e or the equivalent to count that generation once and only once for any purpose. This explicit separation and external auditing of the resource allocation is common practice at SMUD with our existing SolarShares programs and the RPS, as well as with other voluntary green pricing programs across the State.

Opponents argue the SMUD SolarShares proposal is not “additional.”

CALSSA and SEIA suggest that SMUD’s SolarShares Application fails the “additionality” criterion in the 2019 Building Standards because it relies on part on existing, not new or “additional” resources and because the Application does not affirm that the program will result in additional capacity beyond RPS needs.

The Associations misrepresent the additionality criterion. The language in the Standards and Compliance Manual does not concern the “newness” of resources; instead, it prohibits double use of generation. Section 10-115(a)(5) reads:

115(a)5. Additionality. *The community shared solar electric generation system and/or community shared battery storage system shall provide the energy savings benefits specified in Section 10-115(a)3 exclusively to the dedicated building. Those energy savings benefits shall in no way be attributed to other purposes or transferred to other buildings or property.*

Nothing in this subsection relates to the vintage of a resource. Adding vintage restrictions now would, again, amount to adding criteria not found in the regulation, and would be impermissible.

In addition, the Standards require the community solar resources allocated to participants to be installed and ready for inspection prior to completing construction of the participating homes. This timing requirement means that some existing resources *must* be available as part of the program, to supply homes as participants subscribe to the program. The language reads:

115(a)1. Enforcement Agency. *The community shared solar electric generation system and/or community shared battery storage system **shall be installed and available for enforcement agency site inspection, no later than the point in time the enforcement agency must physically verify compliance of the building**, which would otherwise be required to have an onsite solar electric generation and/or battery storage system, and shall not cause delay in the process of enforcement agency review and approval of that building.[Emphasis added]*

The Compliance Manual reinforces this concept, stating: “The Community Shared Solar Electric Generation System must exist and be available for enforcement agency review “... *early in the permitting process.*” In short, in order to ensure allocations of generation to new participants over time, some existing resources must be available.

Nevertheless, SMUD believes that adding new resources is appropriate and is committed to building new resources to supply the Neighborhood Solar Shares program with new resources, satisfying the Associations’ desire to see new solar. Over one half of SMUD’s proposed supply is local solar resources that are currently under construction. Those new local resources are being built primarily to supply SMUD’s popular SolarShares programs, including the expected uptake for Neighborhood SolarShares.⁴ SMUD’s Application envisions ongoing enrollment being supplied by these new resources – the existing resources in the supply portfolio are simply a “bridge” to the “additional” resources under construction for the program. This is made clear in the Application itself, on page 18:

“...the first 30 resources listed amount to 160 MW of capacity and are currently on-line and available for reallocation to initial participating homes. These resources **ensure the ability to supply initial** enrollment in the program. The remaining two resources are under development today, in part to provide supply for SMUD’s SolarShares programs, and will provide an additional 173 MW of capacity available to the program by 2021 **to ensure supply for ongoing enrollment with new resources.**”

SMUD’s Integrated Resource Plan (IRP) envisions 1,000 MW of new local solar resources over the next 20 years, to supply Neighborhood SolarShares and other programs. Discussions with interested developers are active today.

⁴ For example, an April 2019 presentation to the SMUD Board of Directors stated that the RECs from Rancho Seco II were “... planned to primarily supply the SolarShares program and may supply other SMUD Voluntary and Regulatory programs as required.” And, the agenda item to approve the local Wildflower solar project currently under construction stated: “ RECs for use in SMUD’s SolarShares® Program.”

Finally, the Neighborhood SolarShares program will result in additional solar beyond SMUD's RPS obligations, even if some generation from the supply portfolio is used for the RPS. Any solar generation that is allocated to the NSS program will explicitly *not be available* to meet SMUD's RPS obligations, meaning that other renewable generation *must* be procured to meet those obligations. Growth in the Neighborhood SolarShares program means that other renewable resources must be built to provide that RPS compliance, thus adding additional resources to SMUD's overall renewable portfolio.

Opponents claim the SMUD SolarShares proposal does not provide “equivalent benefits.”

Many commenters (CALSSA, SEIA, Vote Solar, the Solar Rights Alliance and individuals) recommend disapproval of SMUD's Neighborhood SolarShares Application because the proposed community solar option does not provide the benefits available with on-site solar systems. It is true that community solar cannot provide exactly the same benefits as on-site solar, just like on-site solar cannot provide some benefits available with community solar programs. However, this is not a basis for rejecting a community solar application under the six criteria in the 2019 Building Standards.

CALSSA and SEIA, in particular, state that SMUD's NSS program fails to meet an “equivalent benefits” criterion in the 2019 Building Standards, but there is no such criterion. There are six criteria explicitly described in Section 10-115(a). None of those require “equivalent benefits” to on-site installations.⁵ Indeed, only one of the six criteria—Section 10-115(a)(3)—concerns “benefits” to the participant. It, however, expressly concerns “energy *savings* benefits equivalent to the reductions in energy consumption that would have resulted from [onsite solar].” The requirement that the option provide equivalent energy *savings* benefits, of course, differs from a broad (and nonexistent) requirement that the option provide “equivalent benefits”.

Imposing an “equivalent benefits” standard on Section 10-115 applicants could effectively make the community solar alternate compliance option impossible to use. For example, participants in a community solar program are not afforded the potential “resiliency” benefit that customers with on-site solar may receive (if paired with on-site storage).⁶ The Commission cannot have intended to require community solar programs to offer an “equivalent” benefit to this potential on-site benefit.

SMUD's program offers net benefits to participants. Importantly, SMUD's program does meet the “net benefits” requirement set forth in the 2019 Building Standards. Section 10-115(a)(3), which discusses energy savings benefits, requires that the reduction in participant bills be greater than the increase in cost to participants for program participation. This “net benefit” aspect of the criterion is met by the Neighborhood SolarShares guarantee of \$5/kW net benefit to participants each year for 20 years. Section 10-115(a)(3) does not require bill savings equivalent to those that were estimated for on-site systems in the Commission's cost-effectiveness analysis.

⁵ The Compliance Manual includes language regarding “equivalent benefits” for the community solar option. However, the Compliance Manual also states: “This compliance manual supplements and explains California's energy efficiency standards for buildings; it does not replace them.” It remains the six criteria described in the actual 2019 Building Standards language that must be met by an application for the Community Solar option, and as described below, those criteria do not include a requirement for “equivalent benefits.”

⁶ SMUD notes that participants in SMUD's NSS program are still allowed to install on-site storage and PV systems if they desire the resiliency benefit.

On-site solar benefits may or may not match the estimates in the Commission's cost-effectiveness analysis. These benefits are not guaranteed – they will change over time with system performance (inverter failure is a common issue), changing utility rates, and changing electricity usage at the home.

CALSSA and SEIA also assert that the promised net benefits to customers may not occur in the voluntary part of SMUD's program that allows a builder to make up-front payments to SMUD so that a participant will see higher annual net benefits on their bill. This assertion fails to recognize that this option is voluntary and builder-driven and that the up-front payments to SMUD are fully passed on to the participating customer on their bills—this is what is meant by higher annual net benefits. If a builder elects this option, SMUD's Builder Agreement requires the builder to certify that they will not pass on the cost of the buydown in higher home prices. Hence, participants who benefit from a builder buydown will still receive an overall net benefit and the expected net benefit will be higher than without the buydown. SMUD does not include specific buydown amounts in the Application because this is a choice left up to the builder. However, no matter the chosen size of the buydown, net benefits are ensured.

SMUD's program offers distributed generation benefits: CALSSA and SEIA claim the Neighborhood SolarShares program will not provide certain distributed generation benefits, listing various benefits derived from the Commission's FAQs for the 2019 Building Standards. The Solar Rights Alliance also argues that SMUD's Application provides participating customers with lower monetary benefits than provided by new homes with on-site solar, and Vote Solar claims that SMUD's proposed resources do not provide local benefits envisioned under the community solar option such as minimizing distribution system upgrades, providing grid services such as voltage management, increasing the flexible integration of other technologies and providing optionality for new loads such as EVs. Various individual comments state that the Neighborhood SolarShares program provides inferior monetary benefits, prevents mortgage financing of solar, and denies resiliency benefits.

It is true that distributed generation can provide some local benefits, such as avoiding land acquisition to host a solar farm and a potential amount of resiliency at a home in the event of a power outage. However, none of these benefits are within the criteria that are required to be met by a successful community solar application. Additionally, SMUD's NSS program also provides local benefits -- the vast majority of SMUD's resource portfolio is within Sacramento County and one of SMUD's proposed resources will provide vital voltage support in a generation-poor and rapidly growing part of SMUD's territory (Natomas). Other potential benefits from the Neighborhood SolarShares program include better system orientations for maximum solar generation, lower-cost solar installations, better maintenance, faster repairs of system failures, and landscaping choices such as shadier trees that will benefit residents in participating homes over time.

For the participating homeowner, the allocated solar generation is more continuous and stable over time than on-site solar, which may suffer benefit loss due to weather conditions or system failures. In addition, the annual net benefit for participants under SMUD's SolarShares program is guaranteed for 20 years, in contrast to the estimated net benefit that the Solar Rights Alliance is using to compare options. The benefits that come with on-site solar are not guaranteed for any period. They can be substantially

diminished by changes in utility rates, failures in on-site system components, and system degradation over time.

While adding solar through a mortgage may represent the best method for financing solar on-site today, this is not guaranteed over time. In addition, the least cost method of procuring solar is often by cash, avoiding any interest payments. Finally, many systems today on new homes are not included in the mortgage, but rather are paid for through a separate contract with a solar company in the form of either a power purchase agreement or a solar lease program, with payments similar to the program charges on the bills of Neighborhood SolarShares participants.

Finally, SMUD respectfully notes again that the Neighborhood SolarShares program is merely a compliance option for builders, and one that is fully allowed and supported by the 2019 Building Standards. Builders may still elect to install rooftop solar on new homes or participate in an alternative community solar option as those are approved by the Commission. Likewise, existing homes and high-rise apartments may still install rooftop solar as they see fit – thus preserving the local benefits of distributed generation associated with rooftop solar.

The Neighborhood SolarShares proposal's consistency with the 2019 Building Standards and impact on the distributed generation market.

CALSSA and SEIA comment that the SMUD proposal 1) is anticompetitive and will hurt local solar businesses; 2) will inhibit consumers from installing on-site solar in the future; and 3) will have an outsized impact on the multi-family solar market because SMUD has no Virtual Net Energy Metering (VNEM) program in place for these buildings. The Solar Rights Alliance suggests that SMUD's proposal allows builders to "sidestep" the solar homes requirement. SMUD disagrees with each assertion.

First, SMUD's proposal is not anticompetitive; to the contrary, it *adds* choices for builders rather than restricting them, thereby increasing competition. The fact that some builders may use the Community Solar option for compliance rather than rooftop solar is a facet of any Community Solar application under the 2019 Building Standards. Suggesting that the CEC deny SMUD's Application on this basis is, once again, equivalent to suggesting that the CEC deny every application to administer a community solar program.

Second, nothing in SMUD's Application prevents participants from installing on-site solar or on-site storage in the future, nor does it deny homeowners the opportunity to "keep the lights on during blackouts."⁷ Participants in SMUD's SolarShares program can still install on-site solar and storage at their homes to help power critical circuits during an outage or to meet their load. While it is true that participants would be bound to the terms of the program for twenty years to satisfy Section 10-115(a)'s durability requirements, and thus they may not have the same economic incentives to purchase those products, they are not prohibited from doing so.

⁷ Notably, with respect to storage, most homes with on-site solar today do not currently have on-site storage. As a result, those homes lose power during outages and thus do not provide the additional potential "resiliency" benefit alluded to by several commenters. SMUD also notes that the solar mandate within the 2019 Building Standards did not require installation of on-site storage and thus did not guarantee the "resiliency" benefit to homeowners—whether they obtain their solar power from on-site or community solar systems.

Additionally, participation in SMUD's SolarShares program does not limit participants' options with respect to adding new loads such as electric vehicles or electrifying end-uses in the participating homes. As envisioned in the IRP SMUD recently submitted to the CEC, SMUD plans to rapidly expand investments in transportation and building electrification. These plans will proceed independently of developing the SolarShares program option under the 2019 Building Standards.

Finally, the community solar option is a means of achieving compliance, not sidestepping it. On this point, the 2019 Building Standards are clear: a Commission-approved community solar system "*provide[s] partial or total compliance with the onsite solar electric generation system and/or battery storage system required by Section 150.1(b)1 of Title 24, California Code of Regulations, Part 6.*" See Part 1, 10-115(b). Complying with the solar mandate in the 2019 Building Standards with a community solar system rather than on-site solar allows for various benefits, including better integration of renewables in general, greater market diversification, better system orientations for maximum solar generation, lower-cost solar installations, better and more reliable maintenance, faster repairs of system failures, and landscaping choices such as shadier trees that will benefit residents in participating homes over time.

Opponents' additional claims

CALSSA and SEIA claim that there is insufficient information to determine whether the "energy performance" criterion is met because the Application does not address losses. This is incorrect. The energy performance criterion is measured as if the allocated energy was coming from on-site systems.⁸ Any losses that would occur between the underlying portfolio of generation and the participating homes do not reduce the required allocations of generation at the participating homes. Any such losses are the responsibility of SMUD as a whole rather than individual program participants, who receive the full energy allocation required. The energy performance of Neighborhood SolarShares resources and allocations is in practice likely to be superior to the energy performance of on-site systems, for the reasons described above: no degradation of allocated generation over 20-years, no loss of energy due to system failures, and better maintenance.

CALSSA and SEIA also comment that the Neighborhood SolarShares program would be detrimental to energy storage because there would be no "compliance credit" for builders to install storage. While it is true that the 2019 Building Standards do not provide energy performance compliance credits when coupled with an on-site PV system, the availability of that credit is not relevant to whether SMUD has met its obligations under Section 10-115(a). Indeed, the complaint could be made of any community solar program seeking approval from the Commission under Section 10-115. Suggesting that the CEC deny SMUD's Application on this basis is equivalent to suggesting that the Commission deny every application to administer a community solar program.

⁸ The full criterion reads: "**115(a)2. Energy Performance.** The community shared solar electric generation system and/or community shared battery storage system shall 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 and/or battery storage system that would otherwise have been required for the building, computed by compliance software certified for use by the Commission."

Additionally, while the builder participant in SMUD's Application will not have the compliance credit option available when a home is being permitted and constructed, nothing in SMUD's Application nor in the 2019 Building Standards prevents installation of on-site solar by the builder or later by the eventual homeowner(s). Even without an on-site PV system, storage can still be valuable for the builder (e.g., in marketing new homes) and homeowner, allowing some potential resiliency and load shifting to react to time of day rates.

In conclusion, SMUD's Neighborhood SolarShares program meets every criterion set forth in the 2019 Building Standards, it provides an array of benefits to future homeowners and community members, and it furthers the growth and diversification of the renewable energy market in California. SMUD therefore respectfully recommends that the Commission approve its application.

/s/

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