



VOTE SOLAR

October 9, 2019

California Energy Commission
1516 9th Street
Sacramento, CA 95814

Docket number: 19-BSTD-08

Subject: SACRAMENTO MUNICIPAL UTILITY DISTRICT (SMUD) APPLICATION TO ADMINISTER A COMMUNITY SHARED SOLAR SYSTEM

Dear Commissioners:

Vote Solar submits these comments in response to the Sacramento Municipal Utility District's (SMUD) request to have the Commission approve their proposed SolarShares program as meeting the requirements of the 2019 Building Energy Efficiency Standards ("Title 24 Standards") including the requirement that new homes include solar energy.¹ As the Commission is well aware the Title 24 Standards offer homebuilders a Community Shared Solar Electric Generation System or Community Shared Battery Storage System compliance option to offset on-site solar requirements.²

¹ Section 150.1(b)1 of Title 24, California Code of Regulations, Part 6.

² 2019 Building Energy Efficiency Standards, Section 10-115. Pages 42-43.

The Commission has the discretion to approve a community shared solar and/or battery system as a compliance option to partially or totally meet the onsite solar electric generation system and/or battery storage system that is otherwise required. SMUD's SolarShares proposal marks the first application the Commission has received for a community solar compliance option. Vote Solar believes that a Commission decision on SMUD's proposal will set an important and possibly damaging precedent as to the types of community solar compliance options that are acceptable under the Title 24 Standards. We, therefore, urge you to carefully consider the consequences of adopting SMUD's request to the important public purposes that have guided the Commission in your adoption of the updated Title 24 Standards in the first place.

Over a year ago, when the Commission updated the Title 24 Standards, Commissioner Andrew McAllister stated, "Under these new standards, buildings will perform better than ever, at the same time they contribute to a reliable grid. The buildings that Californians buy and live in will operate very efficiently while generating their own clean energy. They will cost less to operate, have healthy indoor air and provide a platform for 'smart' technologies that will propel the state even further down the road to a low emissions future."³ Vote Solar concurs with every word of this eloquent statement of the Commission's purpose in adopting these standards. We particularly embrace the concept of creating a platform for the adoption and coordination of smart technologies at the grid's edge.

California energy policy makers have adopted aggressive greenhouse gas reduction goals that require major changes to the way electricity will be produced, delivered, and used in the years ahead. To meet our climate goals an increasing proportion of electric load needs to be "flexible" — that is, consumers must be able to shift and shape their power consumption to match variable power supplies and limited grid delivery capabilities. Integration of flexible

³ May 9, 2018 Energy Commission press release.
<https://www.energy.ca.gov/news/2018-05/energy-commission-adopts-standards-requiring-solar-systems-new-homes-first>

demand with local solar and storage can and should become a critical component of the energy portfolios of every load serving entity in California. Likewise, distribution utilities need to improve their capabilities to manage and optimize a fleet of distributed energy resources (DERs) adopted at multiple locations across the distribution system to create smart and clean options for customers.

Utilities like SMUD know that customers are eager to adopt clean technologies like electric vehicles, electric water heaters and heat pumps that can be used productively to integrate increasing quantities of renewable energy affordably and efficiently. In fact, SMUD was one of the first utilities in the United States to integrate multiple technologies into a zero net energy community in midtown Sacramento almost five years ago.⁴

In the evaluation of SMUD's pilot it was found that customers, with appropriately designed rates, were able to shift their loads during peak conditions by 1) storing solar power generated mid-day and sending it to the grid during on-peak periods, 2) lowering the cooling set point prior to the on-peak period to pre-cool the house, 3) raising the cooling set point during the on-peak period to reduce air conditioning use and 4) using remotely switchable outlets to turn off power to selected loads. Surely this is the type of innovation, sometimes called creating a virtual power plant, must have been what the Commission had in mind when it embraced a flexible approach for compliance with Title 24 Standards. The SMUD virtual power plant certainly matches what Commissioner McAllister stated about buildings contributing to a more reliable grid. It is easy to envision how this type of creative project can be adapted to enable efficient optimization of electric vehicle charging as electric vehicles become more prevalent.

Unfortunately, SMUD's innovative zero net energy community pilot is not what SMUD is proposing as a community shared solar electric generation system compliance option. Instead,

⁴ 2500 R Street Integrated Management Use Case Report submitted to the Sacramento Municipal Utility District, December 22, 2014.
<https://www.smud.org/-/media/Documents/Corporate/About-Us/Energy-Research-and-Development/research-2500-R-Street-integrated-energy-evaluation.ashx>

they are proposing to allocate portions of projects that they built or are building for compliance with California's Renewable Portfolio Standard ("RPS") as a way of also enabling homebuilders to comply with the Title 24 Standards. These large SMUD projects would almost certainly be completed regardless of the Commission's decision as a way of moving SMUD towards the 60% RPS mandate required by SB 100.

SMUD may be able to make a technical argument that they can account for the output from these remote utility-scale projects so that the energy that is used for compliance with Title 24 Standard is counted separately from the output that is used for RPS compliance. Surely, this accounting legerdemain cannot be what the Commission had in mind when it approved the community shared solar electric generation compliance option. SMUD's RPS-like proposal does not provide any of the envisioned local benefits that a genuine community solar project would provide - minimizing distribution upgrades, providing other grid services like voltage support, increasing flexible system integration and providing optionality for new loads like electric vehicle charging.

The root of the dilemma that the Commission finds itself in is that the Title 24 Standards do not define the meaning of a "community shared electric generation system" or a "community shared battery storage system" in a precise manner. The Commission, understandably, wanted to encourage community solar programs and not be overly prescriptive on how they were to be implemented. However, that desire for flexibility in compliance has created a loophole that could completely eviscerate the goals of the updated Title 24 Standards in promoting zero net energy buildings. If SMUD's request is approved it is likely that other load-serving entities that have RPS compliance requirements will propose something similar. If the Commission had simply wanted new buildings to use utility-scale solar then it certainly would have not gone through the detailed deliberations that resulted in the zero net energy requirement for new buildings.

Vote Solar is eager to work with the Commission to resolve this implementation dilemma. We encourage the Commission to use SMUD's proposal as an opportunity to open up a dialogue with all stakeholders on how more precise definitions of community shared solar, community shared battery storage and combined hybrid systems can advance the Commission's laudable goals. We believe that a broadly shared vision of community solar and storage can be beneficial for consumers, homebuilders, local communities, the solar and storage industries as well as for local economic development.

Thank you for your consideration of our comments.

About the Vote Solar:

Sincerely,

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