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**Center for Biological Diversity Comments re SMUD Application for
Community Solar**

Additional submitted attachment is included below.



December 19, 2019

California Energy Commission
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Re: Center for Biological Diversity’s Comments on Sacramento Municipal Utility District’s Application to Administer a Community-Shared Solar System (19-BSTD-08)

Dear California Energy Commissioners:

On behalf of the Center for Biological Diversity (“the Center”) and our over 100,000 members and supporters in California, we submit these comments in response to the Sacramento Municipal Utility District’s (“SMUD”) request to have the California Energy Commission (“CEC” or “the Commission”) approve its proposed SolarShares program under the requirements of Section 10-115 of the 2019 Building Energy Efficiency Standards. As a threshold matter, the Center commends the Commission for passing the landmark California solar mandate under Section 150.1(b)(1) of Title 24, California Code of Regulations, Part 6 (herewithin “Section 150.1(b)(1)”), which sets a national—and international—gold standard of requiring the installation of onsite photovoltaic PV systems on new homes (“California solar mandate”).

As an exception to the requirement for installing on-site solar, Section 10-115 of the 2019 Building Energy Efficiency Standards (herewithin, “Section 10-115”) offers homebuilders the alternative compliance option of establishing a CEC-approved community shared solar electric generation system or community shared battery storage system for residential projects that may not be conducive to on-site solar. The SMUD SolarShares proposal seeks to obtain such an approval from the Commission. However, SMUD’s application raises several issues that both contradict the spirit of the California solar mandate and do not deliver the benefits of the community solar model. As SMUD’s proposal is the first application for the Commission to test the Section 10-115 community solar requirements, the Commission’s decision on whether to approve the application sets an important—and potentially dangerous—precedent. The Commission did not make a decision on the application at its November or December 2019 meetings. At this time, we urge the Commission to reject SMUD’s application for failure to comply with Section 10-115 and consider further requirements for assessing community solar applications that conform with the spirit of the California solar mandate and community solar generally.

I. The Climate Emergency and Necessity of Distributed Energy Resources

Amidst tragic wildfires, record heat waves, devastating sea level rise, and the recent power grid failures, there is no question that Californians are in the midst of the climate emergency. Combatting the

climate crisis requires not only transitioning the state away from fossil fuels to be powered by 100% clean and renewable energy, but also revolutionizing the way electricity is produced and consumed, and structured through a just and equitable transition. The current energy system, consisting primarily of centralized power, regulated monopolies of investor-owned utilities, and business models that incentivize the development of central-station fossil fuel plants, has resulted in the state's heavy reliance on fossil fuels and the disproportionate pollution of low-income communities and communities of color, who neither have a choice in purchasing dirty energy.

As we address the climate emergency and make the urgently-needed energy shifts, it is critical that the new energy paradigm not only be powered by clean and renewable energy, but also pioneer electricity structures that distribute wealth, power, and decision-making about energy choices equitably.¹ The development of renewable energy is a critical component of efforts to reduce greenhouse gas emissions, avoid the worst consequences of the climate emergency, and assist California in meeting its ambitious emission reductions goals. The Center strongly supports the development of renewable energy production, and the generation of electricity from solar power, in particular. However, like any project, proposed solar power should be thoughtfully implemented. Only by maintaining the highest environmental standards can renewable energy production be truly sustainable.

Renewable distributed energy resources ("DERs"), including onsite rooftop and locally-sited community solar, play a vital role in this energy transition. They not only promote deeper renewable penetration, but also advance fundamental goals of equal access to clean energy, social justice, and biodiversity protection. With minimal water use, no emissions from generation, and minimal land use impacts, distributed solar is the most sustainable energy source currently in production.² Community solar is both a vital technological alternative to onsite rooftop solar where not appropriate, as well as a critical political alternative to the centralized power system.³

II. Objectives of California's PV Solar Mandate and Community-Shared Solar

Objectives of California's Solar Mandate

The Commission's passage of the solar mandate is critical to achieving this just and equitable energy transition in California to fight the climate emergency and make California's air and water cleaner for all communities. As stated by the Commission, "the state is pursuing a diverse set of energy and

¹ See, e.g., Al Weinrub and Denise Fairchild, *Energy Democracy: Advancing Equity in Clean Energy Solutions*, (2018) available at https://islandpress.org/sites/default/files/9781610918510_excerpt.pdf.

² See Wisner, R. et al., "The environmental and public health benefits of achieving high penetrations of solar energy in the United States," *Nature Energy* Vol. 113, pp. 472-486 (2016); see also Hernandez, R.R., Hoffacker, M.K. and C. Fields, "Efficient Use of Land to Meet Sustainable Energy Needs," *Nature Climate Change*, Vol. 5: 353-358, (2015).

³ Across the United States, between 50 and 75 percent of residential rooftops are unsuitable for solar systems. Community-based solar energy systems are a promising way to give those customers access to renewable energy. GTM Research, *The Vision for U.S. Community Solar* (2018), available at: <https://votesolar.org/policy/policy-guides/shared-renewables-policy/csvisionstudy/#reportdownload>.

environmental policies to simultaneously save energy and reduce greenhouse gas emissions,” and “onsite PV systems” are part of “achiev[ing] these policy goals.”⁴ Specifically, the Commission emphasized that the benefits of onsite PV systems include: (1) “contribut[ing] to CO2 reduction from building loads”; (2) “not requir[ing] land acquisition or additional transmission and distribution infrastructure because the system is close to the load it serves”, in contrast to utility-scale systems; (3) “enhanc[ing] grid reliability and resilience”; (4) “providing ancillary services . . . and improved reliability during grid failures, natural disasters, and wildfires; (5) “reduc[ing] the grid’s overall vulnerability to cyberattacks”; and (5) “allow[ing] building occupants to save each month on their utility bills, making home ownership more affordable.”⁵

As is the subject of these comments, the Commission carved out one exception to onsite PV systems: community-scale PV systems, which serve as “alternative renewable resource to onsite PV systems” for “specific instances in which a house may be built in an area of insufficient solar availability or where electricity rates are uncommonly low.”⁶ This alternative compliance option is intended to “partially or totally meet the onsite solar electric generation system and/or battery storage system that is otherwise required” by Section 150.1(b)(1) of Title 24 of the California Code of Regulations. Cal. Code Regs., Tit. 25, §10-115(a). Specifically, the Commission in Section 10-115(a)(1)-(6) provided six criteria that a proposed community-shared solar project must meet in order to be approved by the Commission: (1) Enforcement Agency; (2) Energy Performance; (3) Dedicated Building Energy Savings Benefits; (4) Durability; (5) Additionality; and (6) Accountability and Recordkeeping. *Id.*

It bears emphasis that the Commission differentiated both onsite solar PV and community-shared solar from utility-scale PV systems. While the Commission noted the benefits of utility-scale solar as “reduc[ing] system-wide CO2 emissions,” it also expounded on utility-scale PV’s challenges, including “acquiring large plots of land, long transmission distribution and transformation infrastructure”, requiring “time-consuming and expensive environmental impact reports,” and potentially “negatively impact[ing] sensitive wildlife habitats.”⁷

Benefits of Community-Shared Solar

While the 2019 Building Energy Efficiency Standards did not elaborate on other intended benefits of community solar, it is important to place the concept of community-shared solar in the greater lexicon of its development in California. As defined by the National Renewable Energy Lab, community solar is “a solar-electric system that, through a voluntary program, provides power and/or financial benefit to, or is owned by, multiple community members.”⁸

⁴ California Energy Commission, “Frequently Asked Questions: 2019 Building Energy Efficiency Standards” (2019), 3-4, available at: https://ww2.energy.ca.gov/title24/2019standards/documents/Title24_2019_Standards_detailed_faq.pdf (“CEC FAQ”).

⁵ *Id.* at 4.

⁶ *Id.* at 3.

⁷ *Id.* at 4.

⁸ J. Coughlin et al., National Renewable Energy Lab, *A Guide to Community Solar* (2010), available at: <https://www.nrel.gov/docs/fy11osti/49930.pdf>, at 2.

While community solar projects can share similarities with utility-scale solar projects (e.g. large capacity size and frequently ground-mounted systems), they are generally considered distributed solar due to the direct benefits they provide communities and their proximity to where electricity is used.⁹

Specifically, community solar is both a vital technological alternative to onsite rooftop solar where not appropriate, as well as a critical political alternative to the centralized power system.¹⁰ Distributed community solar installations, when well-designed, can provide:

1. **Grid benefits:** improved energy security, reliability and resilience.¹¹ Community solar boosts climate resilience and grid safety and efficiency the same way that onsite rooftop solar does.
2. **Ecological benefits:** climate regulation, reduced water use, land sparing, erosion prevention, and no decreases in habitat for species.¹² Like onsite rooftop solar, community solar also slashes greenhouse gas emissions as an alternative to fossil fuel use, but also avoids the negative land and water use effects and potential adverse species impacts that utility-scale renewable energy, when not sited properly, may entail.
3. **Electricity affordability benefits:** bill savings and predictability for ratepayers.¹³ Homeowners often seek to gain control of their rising energy bills. Community-shared solar programs, often in the form of cooperatives, traditionally afford families the opportunity to be part of a system that is not shareholder-driven, whereby communities make a choice about rates and how any profits will be invested.
4. **Public health benefits:** reduced air and water pollution, and urban temperature regulation.¹⁴ Community solar, like onsite rooftop solar, displaces traditional fossil fuel power generation, thereby resulting in cleaner air and water for communities.
5. **Local economic, community, and energy democracy benefits:** job creation and training, and local control and participation in energy decision-making.¹⁵ Specifically, community solar affords important opportunities for energy democracy, whereby low-income communities and communities of color, along with their allies, can take control of energy

⁹ S. Patel and G. Ryan, Center for Biological Diversity, *The Wildlife-Friendly Community Power Toolkit* (April 2019), available at <https://www.choosewildenergy.org/pdfs/CommunityPowerToolkit.pdf>.

¹⁰ See Green Tech Media Research, *The Vision for U.S. Community Solar* (2018), available at: <https://votesolar.org/policy/policy-guides/shared-renewables-policy/csvisionstudy/#reportdownload>.

¹¹ See R. Hernandez et al., "Techno-ecological synergies of solar energy for global sustainability," *Nature Sustainability*, Vol. 2 (2019), at 663.

¹² *Id.*

¹³ See J. Farrell, "Community Solar Power: Obstacles and Opportunities," *The New Rules Project*, (2010), available at <https://ilsr.org/wp-content/uploads/files/communitysolarpower2.pdf>.

¹⁴ *Id.*

¹⁵ See NAACP Environmental and Climate Justice Program, "Just Energy Policies and Practices Action Toolkit: Starting Community-Owned Clean Energy Projects" (2017), 8-10, available at: https://www.naacp.org/wp-content/uploads/2014/03/Module-4-Starting-Community-Owned-Clean-Energy-Projects-JEP-Action-Toolkit_NAACP.pdf. See also Institute for Local Self-Reliance, "Minnesota's Solar Gardens: The Status and Benefits of Community Solar" (2019), 16-9, available at <https://ilsr.org/minnesotas-solar-gardens-the-status-and-benefits-of-community-solar/>.

resources and decision-making from the corporate energy establishment and use those resources to empower their communities and direct funding and profit to serve local needs.¹⁶

Overall, democratizing energy through community solar represents a significant opportunity to make a just transition from a fossil-fuel-based economy to a regenerative energy economy grounded in principles of economic and social justice.

III. SMUD's Application Contravenes the Objectives of the California Solar Mandate and Does Not Deliver Community Solar Benefits

SMUD's application contravenes the objectives of California's solar mandate and the traditional benefits of community-shared solar in several ways.

1. SMUD's application fails the additionality requirement.

As stated by the Commission, a primary objective of the California solar PV mandate is to "contribute to" the reduction of greenhouse gas ("GHG") emissions.¹⁷ Logically, this means that the solar PV mandate should drive greater amounts of installed solar onto the grid than would otherwise exist in order to increase GHG emissions reductions. In capturing this policy goal, Section 10-115(a)(1)(5) specifically provides that any application for community solar must meet the following requirement:

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) 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.

However, SMUD's application fails to meet this requirement of additionality because it includes projects that are not additive to installed solar capacity in the state. In fact, the opposite is true: the proposal seeks to count the following projects in fulfillment of the additionality requirement: (1) 29 already-existing feed-in tariff projects, whose output is allocated to SMUD's RPS and existing SolarShares programs¹⁸; (2) the 160 MW Rancho Seco II project, which is currently under development and would be completed regardless of the California solar mandate¹⁹; (3) the inclusion of panels on already-existing solar farms to offset the installation of rooftop solar on new homes; and (4) the allocation of portions of projects that SMUD has built or are building for compliance with California's Renewable Portfolio Standard ("RPS").

¹⁶ See, e.g., Local Clean Energy Alliance, "Energy Democracy", available at: <http://www.localcleanenergy.org/EnergyDemocracy>.

¹⁷ CEC FAQ, at 4.

¹⁸ SMUD Application, 18-19.

¹⁹ *Id.* at 20.

SMUD claims that these projects meet this additionality requirement because they will be retired from fulfilling the RPS mandate and instead redirected to meet the California solar mandate, thus avoiding double-counting.²⁰ But SMUD fatally confuses double-counting with additionality. California's RPS mandate is itself a primary driver of compelling utilities to increase installed solar capacity across the state. Separately, the California solar mandate serves as an independent and additive policy to increase installed solar capacity beyond the RPS. Allowing a project that was developed to fulfill one policy but then redirect that project to fulfill another additive policy undermines the additionality and complementarity of two different policies that both serve to together reach the state's GHG emissions reductions targets. The Commission should reject SMUD's allegation that the two policies should, in effect, cancel the other one out.

The Commission should amend the "Additionality" requirement under Section 10-115(a)(5) to make this point clear: eliminating double-counting does not render a project additive.

2. SMUD's application does not maximize the community-solar benefits of enhanced grid reliability and resilience.

The community-solar alternative to onsite solar is intended to fulfill many of the enumerated benefits of onsite PV solar. Specifically, the Commission articulated several benefits of onsite PV solar that equally apply to genuine community solar projects: (1) "enhanc[ing] grid reliability and resilience"; (2) "providing ancillary services . . . and improved reliability during grid failures, natural disasters, and wildfires; and (3) "reduc[ing] the grid's overall vulnerability to cyberattacks."²¹

Indeed, one of the primary benefits of community solar is that it is located relatively near the community, and will thus be more resilient in grid failures, natural disasters, and wildfires. Such locally-placed projects minimize distribution system upgrades, and provide other grid services like voltage management, increasing flexible system integration of other technologies, and the provision of optionality for new loads like electric vehicle charging.

SMUD's application does not maximize these local grid reliability and resilience benefits for communities. Many of SMUD's projects in the application are not located near the communities they serve. For example, the Great Valley Solar 2 (60 MWs belonging to SMUD) project is located 135 miles outside of SMUD's service area, clearly sits outside communities that are served.²² Other SMUD utility-scale solar plants, which are part of SMUD's application, are even hundreds of miles away from the communities they serve.²³ Under SMUD's application, the vast distance from solar generation sites to the communities such sites serve fail to deliver the traditional community solar resilience benefits of distributed generation.

²⁰ California Energy Commission Staff, "Notice of Availability and Summary of Staff's Review of SMUD's Application" (Sep. 24, 2019), at 3.

²¹ *Id.* at 4.

²² SMUD Application, at 21.

²³ *Id.*

3. SMUD's application does not yield the community solar benefits of enhancing energy democracy and local economic activity.

One of the most important benefits of community-shared solar is enhancing energy democracy and increasing local economic activity. While SMUD is the administrator of this proposed community-solar program, the application does not allow for opportunities for community governance or pathways whereby profits from the community-shared solar may be reinvested back into the community or may generate local jobs. Models do exist where a municipal utility sponsors a community-shared solar program but the program still allows for third-party management and community governance.

Moreover, SMUD's application consists of projects that are largely already completed. One main benefit of community solar is that the project is placed within the community, and jobs and other new economic development are derived from that injection of activity there. However, because SMUD's application includes existing solar resources, it does not provide any new economic development activities in the communities in SMUD's territory.

IV. Consideration of Section 10-115 Application Requirements

The cause for debate about whether SMUD's application should be granted is rooted in the lack of definition of the terms "community shared electric generation system" and "community shared battery storage system" in Section 10-115. These missing definitions make the application approval process unclear for all stakeholders—including homebuilders, utilities, homebuyers, and solar and climate advocates—and results in uncertainty that ultimately harms the solar market and solar deployment. In addition, the failure to define the terms also increases the Commission's workload, as better definition of the terms could help eliminate unnecessary application review by the Commission.

Therefore, we urge the Commission to consider adopting additional language in Section 10-115 that further defines the terms "community shared electric generation system" and "community shared battery storage system," as well as amending in further approval requirements that include the benefits that the Commission seeks to achieve through promoting community-shared solar solutions. We note that the California Public Utilities Commission, other California agencies, and the State Legislature have adopted or are in the process of adopting definitions of community-shared solar²⁴, and we encourage the Commission to reference these definitions in the Building Standards in order to achieve consistency across state departments and efficiency in terms of building off existing work completed in other parts of the California government.

²⁴ See, e.g., California Public Utilities Commission, CPUC Community Solar Green Tariff Program, <https://www.cpuc.ca.gov/SolarInDACs/#CSGT>; California Department of Community Services and Development, Community Solar Pilot Program (Aug. 1, 2018), <https://www.csd.ca.gov/Shared%20Documents/Community-Solar-Program-Guidelines.pdf>; California Senate Bill 43, An act to add and repeal Chapter 7.6 (commencing with Section 2831) of Part 2 of Division 1 of the Public Utilities Code, relating to energy, Sep. 28, 2013, available at: https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201320140SB43.

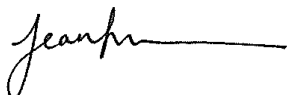
California Energy Commission
Re: Comments on SMUD's Application
December 19, 2019

Finally, the Commission, when developing additional criteria, should engage in deep stakeholder engagement where many stakeholders already in this process, including energy democracy leaders, solar and climate advocates have designed robust criteria for community solar to fulfill community needs.²⁵

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In sum, thank you for your consideration of these comments. We urge the Commission to reject SMUD's application because it fails to achieve the objectives of the California solar mandate and community solar generally. If you have any questions, please feel free to contact us directly.

Sincerely,



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²⁵ See, e.g., Vote Solar, "Community Solar Checklist," available at: <https://votesolar.org/files/2515/4224/5005/CommunitySolarChecklist.pdf>; S. Patel and G. Ryan, *supra* n.9; Solar Energy Industries Association, Community Solar (2019), available at: <https://www.seia.org/initiatives/community-solar>; California Environmental Justice Alliance, "Energy Democracy Vision," available at: https://caleja.org/wp-content/uploads/2014/03/CEJAEnergyVision_updated-030814.pdf; Sustainable Economies Law Center, "Community-owned Renewable Energy," available at <https://www.theselc.org/community-renewable-energy>; Grid Alternatives, "Low Income Solar Policy Guide," available at <https://www.lowincomesolar.org/>.