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Rooftop Community Solar and Reliability, Comments of Dimension Renewable Energy and Solar Landscape

Additional submitted attachment is included below.

Clean Energy Reliability Investment Plan
Dimension Renewable Energy and Solar Landscape Comments to CEC
February 2, 2023

California Energy Commissioners and Staff,

Thank you for the opportunity to submit specific recommendations for how to allocate public funding to rapidly deploy community solar + storage generation via the Clean Energy Reliability Investment Plan. Dimension Renewable Energy ("Dimension") and Solar Landscape are community solar developers with expertise in locating projects on large roofs. Solar Landscape is a developer, owner, and operator of community solar and behind-the-meter solar in a number of states across the country; we focus on siting our community solar projects on large commercial and industrial rooftops, such as warehouses. Dimension Renewable Energy is a leading community solar developer with projects under development in 13 states. Similarly to Solar Landscape, Dimension sites community solar projects on large commercial rooftops, and we also develop ground mounted community solar projects. Our companies are both members of the trade association the Coalition for Community Solar Access (CCSA).

SB 846 (Dodd, 2022) directed that $1 billion be made available during the next three years to support a Clean Energy Reliability Investment Plan (CERIP). SB 846 requires the California Energy Commission to submit a plan for these funds to the Legislature by March 1, 2023. In previous filings in this docket, CCSA and allies have argued that a substantial portion of the $1 billion in funds should be allocated as incentives for the new community solar + storage program that CPUC is developing in A.22-05-022, because community solar + storage (referred to sometimes here as community solar for brevity) is one of the most shovel-ready clean resources that California can deploy to improve reliability. In these comments, we focus specifically on why CEC should approve incentive adders for rooftop-located community solar as the best way to bring community solar online quickly in 2024 or 2025.

The CPUC is considering CCSA's NVBT proposal in A.22–05-022

Spurred by AB 2316 (Ward, 2022) and the unprecedented availability of Federal incentives through the Inflation Reduction Act, the CPUC has moved with alacrity in proceeding A.22-05-022 to examine existing community solar programs and whether they should be replaced. In that proceeding, CCSA has introduced the Net Value Billing Tariff ("NVBT") proposal[1] which would:

- Create a paired, solar+storage community solar program with projects required to reserve 51% of their capacity for low-income subscribers.
- Base project compensation on the CPUC's Avoided Cost Calculator, creating a compelling economic incentive for projects to deliver energy during the evening peak in summer months. Paired energy storage will be essential for project economics.
- Require projects to interconnect on the utilities' distribution system, speeding the interconnection and permitting processes and avoiding many of the supply chain

[1] Please see CCSA's testimony January 20, 2023 CPUC testimony at https://drive.google.com/drive/folders/1O6ft5TnLfnBgyIHxAYyp3VESJ2v7zJDZ

constraints that imperil the development timelines for very large renewable and storage projects.

Assigned Commissioner Reynolds issued a scoping memorandum[2] setting forth the schedule for A.22-05-022 and calling for a proposed decision in the third quarter of this year. Allowing time for the investor-owned utilities to file compliance tariffs, it is reasonable to expect a new, ACC-based community solar-plus-storage tariff to become available before the end of 2023.

Recognizing California's near-term reliability needs, our companies asked what it would take to accelerate community solar and have a significant amount of megawatts on line for the summers of 2024 and 2025. Rooftop deployments are often faster, but more expensive, than ground-mounted deployments. Working with NREL's Cost of Renewable Energy Spreadsheet Tool (CREST) model and industry-standard cost assumptions, we believe the CEC could use targeted incentives, described below, to bring on new, incremental reliability resources in 2024, certainly by 2025. The CEC has the opportunity to leverage the NVBT proposal to deploy solar + storage where it is needed in the grid, and to do so through a CPUC-regulated program that will support low-income ratepayers and promote energy equity.

Rooftop Community Solar is Positioned to Meet California's Near-Term Reliability Needs

CCSA described in its November 30, 2022 RFI response how the NVBT will support a wide range of types of community solar projects across the state. We expect that the new ACC-based tariff will generate enough revenue to support development of ground mounted community solar + storage projects without state-funded incentives. However, rooftop-located projects, particularly those located in urban areas, are more expensive, due to the cost of leasing large roofs, the inability to use tracking systems to increase energy production, and higher engineering, procurement and construction ("EPC") costs. CCSA noted in its November 30 RFI response, based on public data run through NREL's CREST model, that rooftop-located community solar projects require several more cents per kWh compared to ground mounted community solar projects.

A meaningful challenge for rooftop community solar is finding building owners willing to execute leases. Most building owners, whether they are REITs or private individuals, do not typically view their roof as a source of income. Rooftop solar leases must be executed at rates much less than landlords typically receive for their covered space, and there are complexities involved in guaranteeing rooftop access for the life of the project, as well as risks to landlords including disruption from construction, potential water damage from construction or roof penetrations, roof warranties, potential loss of parking for a battery site, ensuring the building can be sold to new ownership, etc. Our companies' experiences in California and in New Jersey tells us these negotiations are typically overcome through education and offering an attractive lease rate.

[2] Please see CPUC's December 2, 2022 scoping memo at https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M499/K459/499459323.PDF

Due to often faster permitting and interconnection, rooftop-located community solar projects can be fully developed in a year or less, while ground mounted projects may take much longer. Since CEC intends to use the funding in the Clean Energy Reliability Investment Plan to support rapid deployment of resource adequacy, it is very appropriate that CEC allocate rooftop-focused incentives so that the state can benefit from rooftop-located projects' accelerated development timeline.

Rooftop Community Solar Will Also Bring Additional Ratepayer and Societal Benefits to California

Beyond faster development times, rooftop community solar + storage can also bring significant added value to Californians. Some of these ratepayer and societal benefits include:

- Avoided transmission and distribution investments, operation and management costs
- Reduced Resource Adequacy requirements in urban areas via net load reduction
- Public health benefits in disadvantaged/polluted communities that come from reducing pollution from gas-fired power plants
- New jobs created in urban areas
- Opportunities for greater grid resiliency within our cities, e.g. possibilities for electric vehicle and device charging during blackouts

Therefore, allocating incentives to ensure rooftop community solar projects can be built will create a wide range of additional benefits, some of them difficult to quantify, for the state.

Illustrative Incentives Proposal

California has led the nation in designing thoughtful and effective incentive programs to encourage solar and energy storage deployment. The California Solar Initiative, for example, generated a strong, focused response and could provide a blueprint for rapid deployment of community solar resources that support grid reliability and use funds efficiently. The CEC has another opportunity to reestablish California's energy leadership.

In CCSA's RFI response dated November 30, CCSA examined the potential to deploy community solar paired with storage to support California's reliability requirements. CCSA estimated that as much as a gigawatt of solar matched with storage could be deployed by the Summer of 2025, providing energy during peak evening hours over the summer months. Rooftop community solar could be deployed even more rapidly, thanks to shorter interconnection and permitting timelines (please see pages 8 and 15 of CCSA's 11/30/22 RFI response).

A simple incentive structured to encourage rooftop development would incentivize rapid deployment of reliability resources where they are most needed. The table below illustrates the order of magnitude for a cents/kW incentive. The lower incentive for larger rooftops would adequately support rapid deployments on warehouses and other large commercial and industrial roofs, while the higher incentive for smaller roofs would support

the smaller community solar projects sponsored by non-profits and other community-based organizations.

Funding Option	Illustrative Incentive Range
Rooftops (1-5MW)	$0.40-0.60/W DC
Rooftops (250-1000kW)	$0.60-0.80/W DC

Diversity of Project Types Reduces Risk

The diversity of providers and the smaller project sizes compared to large, utility-scale reliability projects helps mitigate concentration and supply chain risks. Successful deployment of community solar projects under NVBT is not contingent on any one company; even if several fail to bring forward projects, there will be others bringing forward their competing projects.

Supply chain issues are a serious consideration in any reliability solution. Although there have been issues, particularly due to the FTC Tariff investigation last year, community solar projects are currently able to secure PV panels and batteries. While equipment suppliers are justifiably nervous when they are asked to commit a significant portion of their annual production to a handful of large projects and perhaps only a few counterparties, a community solar project represents a much smaller portion of a producer's output of PV or batteries. The diversity of the community solar industry is its strength when it comes to mitigating supply chain risks.

Conclusion

California's history with solar and storage deployment shows that markets respond when properly incentivized. The new community solar + storage program currently under development at the CPUC is designed to bring generation to the grid when it is most needed. Rather than asking disadvantaged communities to bear yet another burden, the NVBT supports low-income ratepayers and promotes energy equity. The NVBT will bring a diversity of developers to meet the needs of California's diverse populations and the CEC can use targeted incentives to bring on new, incremental reliability resources in 2024 and 2025 where they are needed on the grid. We look forward to discussing this proposal with you further.

Sincerely,

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