

Date of Hearing: April 26, 2023

ASSEMBLY COMMITTEE ON UTILITIES AND ENERGY

Eduardo Garcia, Chair

AB 1181 (Zbur) – As Amended March 23, 2023

**SUBJECT:** Multifamily Affordable Housing Solar Roofs Program

**SUMMARY:** Requires the California Public Utilities Commission (CPUC) to improve interconnection of energy storage systems in multifamily properties participating in virtual net energy metering. Also, increases financial incentives for eligible affordable multi-family homes that install solar and battery technologies under Self-Generation Incentive Program (SGIP) and Solar on Multifamily Affordable Housing (SOMAH) program.

Specifically, **this bill:**

- 1) Requires distributed generation resources made available to include an efficient means of interconnecting energy storage systems and properties participating in virtual net energy metering.
- 2) Requires the CPUC to ensure that electrical corporation tariff structures enable the installation of solar storage technology on qualified multifamily affordable housing properties participating in the Multifamily Affordable Housing Solar Roofs Program in a manner that does not reduce the value of the program and eligible installations qualify for the self-generation incentive program.
- 3) Requires the CPUC to additionally evaluate the overall success and impact of the SGIP based on its ability to provide equitable program access to all ratepayers.

**EXISTING LAW:**

- 1) Authorizes the CPUC with regulatory authority over public utilities, including electrical corporations. (Public Utilities Code § 701)
- 2) Creates a Multifamily Affordable Housing Solar Roofs Program to provide financial incentives for qualified solar installations at multifamily affordable housing properties funded from investor-owned utility's (IOUs) greenhouse gas (GHG) allowances. Requires the CPUC to authorize \$100 million for the program through June 2026. (Public Utilities Code § 2870)
- 3) States the intent of the Legislature that the self-generation incentive program (SGIP) increase deployment of distributed generation and energy storage systems to facilitate the integration of those resources into the electrical grid, improve efficiency and reliability of the distribution and transmission system, and reduce emissions of GHG, peak demand, and ratepayer costs and provides direction to the CPUC in administering the program. Authorizes the CPUC to require the IOUs to collect funds, up to \$166 million annually, from ratepayers, through December 31, 2024, to be used to provide incentives, under SGIP, for distributed energy resources the CPUC, in consultation with California Air

Resources Board (CARB), determines will achieve reductions in emissions of GHGs. (Public Utilities Code § 379.6)

- 4) Creates statutory guidance for the CPUC to implement SGIP via a general fund appropriation, including making SGIP incentives available to publicly owned utility customers. (Public Utilities Code § 379.10)
- 5) Requires the CPUC to determine appropriate targets, if any, for load-serving entities (LSEs) to procure energy storage systems. Requires LSEs to meet any targets adopted by the CPUC by 2015 and 2020. Requires Publicly Owned Utilities (POUS) to set their own targets for the procurement of energy storage and then meet those targets by 2016 and 2021. (Public Utilities Code § 2835 et seq.)
- 6) Directs the California Energy Commission (CEC) and the CPUC, where feasible, to authorize procurement of resources to provide grid reliability services that minimize reliance on system power and fossil fuel resources and, where feasible, cost effective, and consistent with other state policy objectives, increase the use of large- and small-scale energy storage. (Public Utilities Code § 400)

**FISCAL EFFECT:** Unknown. This bill is keyed fiscal and will be referred to the Committee on Appropriations for its review.

#### **BACKGROUND:**

*The California Solar Initiative (CSI)* – The California Public Utilities Commission (CPUC) launched CSI in 2007 with the purpose of increasing customer use of solar power by providing incentives for solar technologies in the IOU territories. CSI had historical programs that provided incentives to low-income customers installing solar photovoltaic (PV) systems, and to all utility customers installing solar water heating systems:

- The Single-family Solar Affordable Solar Housing (SASH) Program was established in 2006, and required a minimum of 10% of CSI funds be set aside for programs assisting low-income households in IOU service territories.<sup>1</sup>
- The Multifamily Affordable Solar Housing (MASH) Program was established in 2008 to provide solar incentives on qualifying affordable housing multifamily dwellings.

AB 217, Bradford (Chapter 609, Statutes of 2013) provided \$108 million to SASH and MASH programs, and extended their operations to 2021. As of 2022, the SASH program has installed 30.6 MW of capacity, while MASH has installed 57.2 MW.<sup>2</sup> Both the SASH and MASH programs are closed to new applicants in all IOU territories, with remaining projects coming online soon.

*The Solar on Multifamily Affordable Housing Solar Roofs Program* – AB 693 (Eggman, Chapter 582, Statutes of 2015) created the Multifamily Affordable Housing Solar Roofs Program, which

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<sup>1</sup> AB 2723, Pavley, Chapter 864, Statutes of 2006

<sup>2</sup> Pg. 6, CPUC, 2022 *California Solar Initiative Annual Program Assessment*, June 2022; <https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/office-of-governmental-affairs-division/reports/2022/2022-csi-apa.pdf>

confusingly is called by CPUC the Solar on Multifamily Affordable Housing Program (SOMAH).<sup>3</sup> SOMAH is funded at \$100 million annually from the IOUs share of GHG auction proceeds. Although the SOMAH program shares many features with the MASH program that ended in 2021, CPUC delineated SOMAH as a different program and required new rules and procedures to be developed.

*Challenges Installing Solar PV Systems on Multifamily Housing* – Multi-tenant buildings with individual electric meters for each tenant have historically faced challenges installing distributed solar PV systems because it’s difficult to assign the benefits of the generation to each tenant account. For instance, a solar system can be easily connected to a common area load (such as a lobby or laundry facility) or to an individual tenant, but if it was connected directly to multiple loads, it is difficult to ensure equitable distribution of the generation and potentially some tenants would benefit more than others. On the contrary, installing multiple solar systems, one for each tenant is usually cost prohibitive or technically infeasible.<sup>4</sup> The CPUC designed the VNEM tariff to attempt to address these challenges.

*California’s NEM Program* – In 1997, the Legislature enacted California’s NEM program which allows customers who install eligible renewable electrical generation facilities to serve onsite energy needs and receive credits on their electric bills for surplus energy sent to the electric grid.<sup>5</sup> Most customer-sited, grid-connected solar in California is interconnected through NEM tariffs.<sup>6</sup> In 2011, SB 489 (Wolk, Chapter 593, Statutes of 593) expanded technologies eligible under the NEM tariff to include all Renewables Portfolio Standard-eligible technologies. In 2013, the CEC clarified the conditions under which a storage device may be considered an addition to a renewable generation facility.<sup>7</sup> To ensure the integrity of the NEM program, the CPUC issued a decision in 2013 that placed certain limitations on storage sizing and implemented metering requirements.<sup>8</sup> The integrity of NEM is about ensuring any energy exports to the grid are produced by a NEM generator and not battery storage systems. These metering requirements imposed also helped differentiate between NEM and non-NEM generation and ensure only NEM-eligible customers receive NEM credits.

*Virtual Net Energy Metering Tariff (VNEM Tariff)* — As previously mentioned, CPUC designed the VNEM tariff to address challenges in installing solar PV systems on multifamily housing. This tariff arrangement allows a multi-meter property owner to allocate the property's solar system's energy credits to tenants. The generated electricity from the solar system does not flow directly to any tenant meter but feeds directly back onto the grid. The participating utility then allocates the kilowatt-hours from the energy produced by the solar PV generating system to both the building owner's and tenants' individual utility accounts, based on a pre-arranged allocation

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<sup>3</sup> D.17-12- 022

<sup>4</sup> ibid

<sup>5</sup> SB 656, Alquist, Statutes of 1995

<sup>6</sup> CPUC; “Customer-Sited Renewable Energy Generation”; <https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/demand-side-management/net-energy-metering>

<sup>7</sup> Public Utilities Code § 25741(a)(1)

<sup>8</sup> D.14-05-033

agreement.<sup>9</sup> Simply, a utility provides a meter that monitors the amount of energy generated by the solar system installed on a property, and this metering is referred to as virtual because the individual meter used to measure the energy use of your unit is not connected directly to the building's solar energy system. The building owner predetermines a percentage of solar-generated electricity and allocates it to all units (e.g., households and common areas or businesses) within a building.

The difference between the electricity a household uses and the percentage of solar-generated energy allocated by the building owner is referred to as net energy, which is recorded on a monthly bill. If, in any given month, a household or a business has more solar credits allocated to them than what they actually use, the credits apply toward their future charges which will be reconciled on the annual 12th month "True-up" bill.<sup>10</sup> The goal of VNEM is to help tenants receive the direct benefits of the building's solar system, rather than the building owner receiving all the benefits. First piloted through the MASH program, the VNEM provides benefits of the solar system to low-income tenants in affordable housing complexes.<sup>11</sup> Importantly, all SOMAH projects are on the VNEM tariff.

*NEM vs VNEM Tariffs* – In 2017, the CPUC was informed of conflicts between portions of NEM tariffs relating to NEM-paired energy storage systems and those related to VNEM. In August 2017, CPUC opened a rulemaking describing the conflict between these tariff provisions and solicited feedback through staff proposals to modify these provisions and make paired storage more accessible to customers on VNEM.<sup>12</sup> Customers that pair storage to their NEM generation system qualify for NEM tariff. On the other hand, when VNEM is combined with a storage system, the NEM-paired storage system is only allowed to export to the grid rather than serve any load at the multi-tenant, multi-metered property. As such, exporting the energy to the grid allows VNEM customers to be compensated higher which is grossly unfair and compromises the integrity of NEM. As stated previously, the integrity of NEM is about ensuring any energy exports to the grid are produced by a NEM generator and not battery storage systems. Currently, including storage on VNEM tariff is prohibited.

*CPUC Proposal* — The CPUC staff proposed adjusting the NEM tariff such that, the VNEM generator and the storage device would be located behind the same output meter to ensure any energy exports to the grid are only produced by the NEM generator, therefore, affirming the integrity of NEM. In December 2017, the CPUC found it reasonable to give customers an economic incentive to install both solar and storage and specifying VNEM generator and the storage device would be located behind the same output meter. This proposal seemed easier and cheaper to implement and ensured energy exports to the grid are only produced by the NEM generator.<sup>13</sup> The CPUC then directed a public workshop focused on implementation of this proposal and for stakeholders to identify and consider opportunities to address potential risks.

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<sup>9</sup> CPUC; "Virtual Net Energy Metering"; <https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/demand-side-management/net-energy-metering/virtual-net-metering>

<sup>10</sup> PG&E; "Understanding the Virtual Net Energy Metering Program"; <https://www.pge.com/includes/docs/pdfs/mybusiness/save/solar/VNEM-Brochure.PDF>

<sup>11</sup> CPUC; "Virtual Net Energy Metering"; <https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/demand-side-management/net-energy-metering/virtual-net-metering>

<sup>12</sup> R. 14-07-002

<sup>13</sup> D.17-12-005

*Recent Update* — On February 2023, the CPUC facilitated a workshop on the VNEM tariff and the IOUs and industry representatives each presented their perspectives on the mechanics of the current VNEM tariff. Later in the same month, CPUC issued a ruling to solicit feedback regarding questions on expanding eligibility under the VNEM tariff to storage, charging from the grid, and potential grid benefits.<sup>14</sup> On March 2023, the CPUC issued a decision to partially modify the incentive methodology for the SOMAH program but deferred from modifying incentives for properties in disadvantaged communities to an anticipated future decision in 2023.<sup>15</sup>

## COMMENTS:

- 1) *Author's Statement.* According to the author, “Combining solar power and battery storage is important for creating energy resilience and reliability. The Solar on Multifamily Affordable Housing (SOMAH) program and the Self Generation Incentive Program (SGIP) incentivize solar and battery installations for low-income residents, but battery storage is vastly under-utilized. AB 1181 reduces barriers to battery installation for SOMAH participants and modifies technical requirements of the program to expand eligibility for certain extremely low-income residents. Overall, this bill will reduce electricity costs for people living in affordable and multi-family housing.”
- 2) *Complexity of VNEM Paired Storage* — Under NEM paired storage, customers that pair energy storage to their NEM generation system qualify for the NEM-Paired Storage of the NEM tariff. Conversely, pairing storage with VNEM is not allowed because under VNEM requirements, when VNEM is paired with storage then it must only export to the grid rather than serve any load at the multi-tenant, multi-metered property. Maintaining the integrity of the NEM tariff is about ensuring customers are receiving credit for exported power to the grid that came from the customer's renewable generator and not their battery system. It is deemed unfair if the power is coming to the battery from the grid, and then exported back because in such a case, customers would be compensated higher for electricity that came from their battery and not their generator.
- 3) *Purpose of Bill* — This bill proposes including storage on the VNEM tariff, which is currently prohibited. As eluded to earlier, the CPUC opened a rulemaking to describe the problem of a VNEM solar system being combined with a paired storage system. With such a configuration, the storage system can only be allowed to export the energy rather than serve any load at a multi-tenant, multi-metered property leading to higher compensation rates for these customers. This bill requires the CPUC to pair storage with VNEM solar systems, without addressing the complexities inherent in such a requirement. The CPUC anticipates issuing another decision in 2023 that could address this issue. *As such, the author and committee may wish to consider amendments to strike the contents of the bill, and instead require, on or before January 1, 2025, the CPUC, as part of a new or existing proceeding, to evaluate various program or tariff improvements, including the ability to pair energy storage with multifamily installations of hybrid resources.*

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<sup>14</sup> R. 20-08-020

<sup>15</sup> D.23-03-007

4) *Related Legislation.*

AB 1664 (Friedman, 2023) requires the CPUC to establish a block grant structure for administering a portion of SGIP funded by the General Fund to allow investments for eligible residential customers, including those of POUUs and California Indian tribes. Status: *pending hearing* in the Assembly Committee on Appropriations after passage in this Committee on April 12, 2023 by a 15-0- vote.

SB 355(Eggman, 2023) expands specified requirements in the SOMAH Program to include properties in which at least 66% of the households have incomes at or below 80% of the area median income, properties located in California Indian country, as defined, and rental housing properties owned by public housing agencies or authorities. The bill would also extend the requirement that the CPUC award monetary incentives for those solar energy systems through December 31, 2034. Status: *pending hearing* in the Senate Committee on Energy, Utilities, and Communications.

SB 851 (Stern, 2023) requires the CPUC to establish a block grant structure and associated guidelines within the SGIP for California Indian tribes, community-based service providers, local publicly owned electric utilities, and community choice aggregators to apply for grants on behalf of eligible low-income residential households. Status: *pending hearing* in the Senate Committee on Energy, Utilities, and Communications.

5) *Previous Legislation.*

AB 2667 (Friedman, 2021) would have established a program at the CEC to provide incentives for commercially available distributed energy resources, specifically, behind-the-meter energy storage systems or self-generation systems paired with energy storage. Would have established the Integrated Distributed Energy Resources Fund as a special fund in the State Treasury, the moneys in which would be available to the CEC, upon appropriation by the Legislature, for purposes of the bill. The bill would have required the CEC to administer the fund in consultation with the CPUC and CARB to provide incentives for eligible resources to support statewide customer adoption of clean distributed energy resources. Status: failed passage on the Senate Floor in 2021.

SB 700 (Wiener) makes various programmatic changes to SGIP, including extending the sunset date by five years, requiring the CPUC to adopt requirements for storage systems to ensure that they reduce GHG emissions, and prohibiting generation technologies using non-renewable fuels from obtaining SGIP incentives as of January 1, 2020. Status: Chapter 839, Statutes of 2018.

AB 693 (Eggman) Created the Multifamily Affordable Housing Solar Roofs Program, funded at up to \$100 million annually from the investor-owned utilities' share of greenhouse gas (GHG) auction proceeds. Status: Chapter 582, Statutes of 2015.

AB 217 (Bradford) Extends funding beyond 2016 for the California Solar Initiative low-income programs, including the SASH and MASH Programs. An additional \$108 million

was made available through 2021, or until the budget is fully expended (whichever occurs first). The bill also set a goal of installing an additional 50 megawatts (MW) of solar generation through these programs. Status: Chapter 609, Statutes of 2013.

**REGISTERED SUPPORT / OPPOSITION:**

**Support**

California Democratic Party Renters Council  
California Environmental Voters (formerly CLCV)  
California Housing Partnership

**Opposition**

None on file.

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