SENATE COMMITTEE ON ENERGY, UTILITIES AND COMMUNICATIONS
Senator Steven Bradford, Chair
2023 - 2024 Regular

Bill No:	AB 2787	**Hearing Date:**	6/4/2024
Author:	Joe Patterson		
Version:	2/15/2024 Introduced		
Urgency:	No	**Fiscal:**	Yes
Consultant:	Nidia Bautista		

SUBJECT: Energy: building standards: photovoltaic requirements

DIGEST: This bill exempts, until January 1, 2028, from the Solar Mandate, as part of the state's building standards, residential construction to repair or replace a residential building destroyed or damaged as a result of a disaster, where the Governor has declared a state of emergency, and instead requires residential construction to comply with the state's requirement for photovoltaic (PV) systems that were in effect at the time the building was originally constructed.

ANALYSIS:

Existing law:

1) Authorizes the State Energy Resources Conservation and Development Commission (CEC) to prescribe, by regulation, lighting, insulation, climate control system, and other building design and construction standards that increase efficiency in the use of energy and water for new residential and new nonresidential buildings, and energy and water conservation design standards for new residential and new nonresidential buildings. Under this authority, the CEC has established regulations for the installation of PV systems meeting certain requirements for low-rise residential buildings built on or after January 1, 2020. (Public Resources Code §25402)

2) Requires the CEC to establish building design and construction standards that increase the efficiency in the use of energy and water for new residential and new nonresidential buildings. The CEC must periodically update the standards. Six months after the CEC certifies an energy conservation manual, cities, counties, and state agencies are prohibited from issuing a building permit for a building that does not comply with the current standards created by the CEC. (Public Resources Code §25402(a)(1))

3) Requires the CEC and the Department of Housing and Community Development to issue a joint finding that a building water efficiency standard is

equivalent or superior in performance, safety, and for the protection of life, health, and general welfare to existing standards. The finding must also ensure that the standard does not unreasonably or unnecessarily impact Californians' ability to purchase or rent affordable house by taking into account the overall benefit derived from the standard. (Public Resources Code §25402(a)(2))

4) Requires the CEC's building efficiency standards to be cost-effective when taken in their entirety and amortized over the economic life of the structure compared with historic practice. When determining cost-effectiveness, the CEC must consider the value of the water or energy saved, impact on product efficacy for the consumer, and the life-cycle cost of complying with the standard. The CEC must consider other relevant factors, including, but not limited to the standards' cost on house costs, the total statewide costs and benefits of the standard over its lifetime, economic impacts on California businesses, and alternative approaches and their associated costs. (Public Resources Code §25402(b)(3))

5) Requires electric utilities to procure 60 percent of their retail sales of electricity from renewable energy by 2030. This is known as the Renewable Portfolio Standard (RPS). (Public Utilities Code §399.11 et seq.)

6) Requires every electric utility (other than a local public owned utilities (POU) that serves more than 750,000 customers and that also conveys water to its customers) to offer net-energy metering (NEM) to eligible customer-generators, upon request, on a first-come-first-served basis until the total rated generating capacity used by eligible customer-generators exceeds five percent of the electric utility's aggregate customer peak demand. (Public Utilities Code §2827)

7) Directs the California Public Utilities Commission (CPUC) to develop a standard tariff or contract, known as the "successor tariff," for eligible customer-generators with a renewable electrical generation facility no later than December 31, 2015. Requires, for each large electrical corporation, using the successor tariff, to continue to offer NEM to its customers on July 1, 2017, or upon reaching the five-percent NEM program limit, whichever is earlier. (Public Utilities Code §2827.1)

This bill:

1) Requires, until January 1, 2028, residential construction intended to repair, restore, or replace a residential building damaged or destroyed as a result of a disaster in an area in which a state of emergency has been proclaimed by the

Governor to comply only with the requirements regarding PV systems pursuant to the regulations, if any, that were in effect at the time the damaged or destroyed residential building was originally constructed and would not require that construction to comply with any additional or conflicting photovoltaic system requirements in effect at the time of repair, restoration, or replacement.

2) Applies only if all of the following conditions are met:

   a) the residential building owner's income is at or below the median income for the county in which the building is located, as determined by the Department of Housing and Community Development state income limits.
   b) the square footage of the residential building after the new construction will not exceed the square footage of the residential building at the time it was damaged or destroyed
   c) the location of the new construction is the same as the residential building that was damaged or destroyed.
   d) the owner of the residential building that was damaged or destroyed did not have upgrade insurance coverage at the time the building was damaged or destroyed.

3) Because a local agency would be required to determine whether any older applicable photovoltaic requirements are met, this bill would impose a state-mandated local program.

Background

California's building energy efficiency standards. California's building energy efficiency standards are updated on roughly every three years cycle. The CEC adopted the 2019 Building Energy Efficiency Standards, which went into effect on January 1, 2020. The standards are the first in the nation to require solar photovoltaic systems for new construction. The standards also include improved thermal building envelope standards (i.e., insulating the interior), residential and nonresidential ventilation requirements, and nonresidential lighting requirements. For residential buildings, according to the CEC, the standards will result in about 53 percent less energy use than under the 2016 standards. The CEC further estimates that the new standards will reduce greenhouse gas emissions by 700,000 metric tons over three years. CEC's energy efficiency standards are adopted by Building Standards Commission as part of the *California Building Standards Code*, which serves as the basis for building and construction in California. The CEC first adopted building energy efficiency standards in 1977. The CEC reports that the energy efficiency building standards have saved Californians billions of dollars since their first adoption, avoided the need for powerplants and

transmission lines, and helped keep California's per-capita energy consumption flat. The CEC has since adopted the 2022 Building Energy Efficiency Standards which, after January 1, 2023, require newly constructed residential buildings to be electric-ready (including 240-volt outlets and space for electric appliances to replace installed gas appliances). The 2022 standards also allow exceptions to the solar PV standards when roof area is not available. The standards also establish combined solar PV and battery storage standards for select businesses. The CEC is currently updating the standards for 2025 Energy Code which is scheduled to take effect January 1, 2026.

Statute requires that CEC's standards must be "cost-effective." CEC estimates that based on a 30-year mortgage, the new standards will add about $40 per month in costs and result in about $80 per month in reduced energy costs. According to the CEC, on average, a solar system adds about $9,500 to the cost of a new home and will result in a savings of $19,000 in energy costs over 30 years (largely based on pre-COVID numbers). Current prices are tend to range in $15,000 to $20,000 based on news reports. The up-front costs for solar have decreased over the past several years, but experienced some increases since COVID. The CEC established a few exemptions to the new solar requirement. Primarily, homes that are shaded by trees, hills, other structures, etc. are not required to install solar. This may exclude a number of homes impacted by fires in wooded areas. Homeowners in areas with community solar programs are also exempt from the requirement. Additionally, reduced system size is permitted for low-rise residential with two stories and for low-rise multifamily or single-family homes with three or more stories. As noted above, the CEC made additional changes in the 2022 Energy Code Update.

Emergency declarations. Unfortunately, California has been no stranger to disasters in recent years. The governor has made well over three dozen emergency declarations in recent years. Many of these are in response to wildfires which have destroyed homes in many communities, including the 2017 Tubbs Fire in Sonoma County, the 2018 Camp Fire in Butte County, and the 2021 Caldor Fire in El Dorado, Alpine, and Amador Counties.

Incentives for residential solar and storage. The state Legislature and Governor have budgeted $630 million over three years to fund incentives for low-income residents to install solar and storage. The program is administered by the CPUC and funding may be affected by state budget negotiations.

Comments

Exemptions from solar requirements. This bill would provide that homes that are being rebuilt due to a disaster will not be required to install the rooftop solar if all the condition are met, including: that the homeowner's income is below the county's average median income (AMI), the homeowner lacked code upgrade insurance coverage, the home is being built on the same location as the home that was destroyed, and the size of the new home is the same as the destroyed home. With regards to the AMI, the California Department of Housing and Community Development establishes the annual state income limits. The AMI for each county varies, as an example the AMI for Lassen County is $87,900 for a four-person household and $186,600 in Marin County. This bill would require the local building permit agency to account for these requirements. In the case of the size of the home and whether the new home is on the same land as the destroyed home, the building permit agency could easily verify this information. However, in the case of the income and lack of insurance coverage for code upgrades, the building permit agency would likely need to provide a self-certification document for the resident to attest to the information.

Cost-effectiveness depends on many variables. As noted above, the costs of solar had been declining rather dramatically over the past 10 years or so. However, more recently, COVID supply constraints, federal tariff issues, and labor costs may have increased the costs. The continued decline on the price of solar installations will depend on variables including national trade tariffs policy, marketing and permitting costs, and the costs of the labor and hardware. It is widely assumed that solar installations on new residential construction can be less expensive as compared to on an existing home. However, these savings may be more limited if installed on individual new residential construction, not afforded the economies of scales of a housing development with multiple new homes. Additionally, savings from solar installations may also depend on the NEM tariffs afforded by the respective utility which allow solar customers to sell excess energy to the grid, as well as any fees or charges on the systems. The NEM tariff rates have been declining in compensation from the original tariffs which were more generous as they were intended to help spur the solar market.

Protecting victims. This bill attempts to reduce the burden on victims of disasters when they rebuild or repair their homes. As the author notes, there are many challenges for victims to rebuild their homes after a disaster. Although previous related bills provided that victims only meet one of the four conditions to forgo the solar requirement, this bill more narrowly requires all four conditions are met before the local permitting agency can allow a residential building owner to rebuild without the solar requirement. While the solar PV installation may provide savings

to the resident in the long term, the initial costs would increase the costs to rebuild by about $10,000 (and likely more). As such, it seems reasonable to provide these victims with the option to forgo these costs as they attempt to rebuild their lives, while still preserving the building owner's option to install solar PV.

Prior/Related Legislation

AB 1918 (Wood) exempts a building constructed in the service territory of the Trinity Public Utility District from the building standards requirements that such a building be solar-ready or have photovoltaic and battery storage systems installed. The bill is pending before this committee.

AB 704 (Jim Patterson, 2023) was substantially similar to this bill. AB 704 was held in the Assembly Committee on Appropriations.

AB 1078 (Patterson, 2022) would have extended the exemption established by AB 178 for one year, until January 1, 2024. The bill was vetoed.

AB 178 (Dahle, Chapter 259, Statutes of 2019) exempted, until January 1, 2023, residential construction from complying with the solar requirements in the recently adopted building standards when the construction is in response to a disaster in an area in which a state of emergency has been proclaimed by the Governor.

AB 693 (Eggman, Chapter 582, Statutes of 2016) created the Multifamily Affordable Housing Solar Roofs Program, to provide financial incentives–up to $100 million annually, for qualified solar installations at multifamily affordable housing properties funded from IOU greenhouse gas allowances.

AB 217 (Bradford and De León, Chapter 609, Statutes of 2013) extended the low-income programs of the California Solar Initiative from 2016 until 2021, authorizes the collection of an additional $108 million for these programs, and adds additional standards to the program, as specified.

AB 327 (Perea, Chapter 611, Statutes of 2013) restructured the rate design for residential electric customers and revised the NEM program.

SB 1 (Murray, Chapter 132, Statutes of 2006) established the electric portion of the CSI with a 10-year budget of $2.2 billion collected from ratepayers.

FISCAL EFFECT: Appropriation: No Fiscal Com.: Yes Local: Yes

SUPPORT:

Pioneer Community Energy

OPPOSITION:

California Solar & Storage Association, unless amended

ARGUMENTS IN SUPPORT: According to the author:

> In 2021, Governor Gavin Newsom declared a state of emergency in four counties impacted by the destructive Caldor Fire located in the Sierra Foothills of California. The wildfire burned a total of 221,835 acres and destroyed 782 homes. While some Californians were fortunate enough to restore or rebuild their homes, others could not afford the exorbitant construction costs, forcing them to relocate or live in trailers for months or years. Individuals without code upgrade coverage on their homeowners insurance are stuck adding solar when rebuilding despite not having solar on their homes in the first place. By waiving solar home-building requirements for those who did not have solar prior to losing their home, and subject to income limitations, wildfire victims would be presented with the opportunity to rebuild their home.

ARGUMENTS IN OPPOSITION: The California Solar & Storage Association opposes the bill unless it is amended to include language that residential building owner does not have access to a financial incentive program that would cover a majority of photovoltaic system installation costs. CSSA states:

> Currently, the state provides SGIP [Self Generation Incentive Program] funds available for low income customers. We would urge customers who have the availability to access these funds not be exempt from the requirement. We do appreciate the narrowing of the bill from previous versions.

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