Date of Hearing: March 13, 2024

ASSEMBLY COMMITTEE ON UTILITIES AND ENERGY
Cottie Petrie-Norris, Chair
AB 1918 (Wood) – As Introduced January 24, 2024

SUBJECT: State building standards: solar-ready requirement: exemption

SUMMARY: Exempts a building that is constructed in the service territory of a public utility district and that receives all of its carbon-free electricity pursuant to a preference right adopted and authorized by the United States Congress from the building standards requirement that new residential and commercial buildings be solar ready, as adopted by the California Energy Commission (CEC) and the California Building Standards Commission.

EXISTING LAW:

1) Requires state agencies that adopt or propose adoption of any building standard to submit the building standard to the California Building Standards Commission for approval and adoption. (Health & Safety Code § 18930)

2) Requires the CEC to adopt and update Building Energy Efficiency Standards (Energy Code) for most residential and non-residential buildings in the state of California every three years. (Public Resources Code § 25402)

3) Requires the CEC to adopt the building energy efficiency standards that are cost-effective when taken in their entirety and when amortized over the economic life of the structure. The CEC shall also consider other relevant factors, as required by Sections 11346.5 and 11357 of the Government Code, including, but not limited to, the impact on housing costs, the total statewide costs and benefits of the standard over its lifetime, economic impact on California businesses, and alternative approaches and their associated costs. (Public Resources Code § 25402(c))

4) Modifies the 2022 Building Energy Efficiency Standards (2022 Energy Code) to require solar photovoltaic (PV) systems and battery storage for newly constructed commercial buildings. (2022 Building Energy Efficiency Standards: Section 110.10 (b) through 110.10 (d))

5) Requires the CEC to assess the potential for the state to reduce greenhouse gas (GHG) emissions from the state's residential and commercial building stock by at least 40% below 1990 levels by January 1, 2030. (Public Resources Code § 25403)

6) Requires the CEC to develop, and publish on the commission's internet website, guidance and best practices to help building owners, the construction industry, and local governments overcome barriers to electrification of buildings. (Public Resources Code § 25233.5)

7) Requires every retail supplier that makes an offering to sell electricity that is consumed in California shall disclose its electricity sources and the associated greenhouse gas emissions intensity for the previous calendar year. (Public Utilities Code § 398.4)

8) Deems a public utility district that receives all of its electricity pursuant to a preference right adopted and authorized by the United States Congress pursuant to Section 4 of the Trinity River Division Act of August 12, 1955 (Public Law 84-386) as compliant with the energy procurement requirements of the Renewables Portfolio Standard. (Public Utilities Code § 399.30 (g))

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

BACKGROUND:

Energy Code – Adopted in 1976 and updated every three years by the CEC, the building energy efficiency standards for residential and non-residential buildings, otherwise known as the Energy Code or Title 24, Part 6, entails energy and water efficiency standards for newly constructed buildings, additions to existing buildings, and alterations to existing buildings. These standards are updated to ensure that builders use the most energy-efficient technologies and construction, save energy, increase electricity supply reliability, increase indoor comfort, and help preserve the environment.[1] The standards vary by building type and climate zone and are listed in the California Code of Regulations. Conversely, the energy code does not apply to all buildings in the state. Some industrial or agricultural buildings may be exempt from certain provisions of the energy code. Additionally, a building may be exempted if it incurs substantial increases in costs as it works to implement provisions of the energy code. The CEC reports that the energy efficiency building standards have saved Californians billions of dollars since their first adoption, avoided the need for power plants and transmission lines, and helped keep California's per-capita energy consumption flat.

Solar Requirements in the Energy Code – In May of 2018, the CEC adopted the 2019 Building Energy Efficiency Standards, which went into effect on January 1, 2020. The standards were the first in the nation to require solar PV systems for new construction. These 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% less energy use than under the 2016 standards. The CEC further estimated that the new standards will reduce GHG emissions by 700,000 metric tons over three years.

As noted above, statute requires that the CEC standards must be "cost-effective." The CEC estimated that based on a 30-year mortgage, the 2019 standards will add about $40 per month in costs and result in about $80 per month in reduced energy costs. However, since the adoption of the 2019 standards, both the up-front costs for solar installation and the compensation for customer-owned solar generation have decreased. Should the CEC calculations for "cost-effectiveness" not hold for particular buildings – given differing rates, system costs, interconnection fees, or other factors in utility service territories – the PV requirements would not apply. The CEC also established a few outright exemptions to the new solar requirement. Primarily, homes that are shaded by trees, hills, other structures, etc. are not required to install solar. 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.

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[1] Title 24 Express, "What is 24?" https://www.title24express.com/what-is-title-24/

In August 2021, the CEC updated and adopted the 2022 Energy Code standards for newly constructed residential and commercial buildings, as well as additions and alterations to existing buildings set to go into effect January 1, 2023 with a focus on four primary areas:[2]

- Requiring solar PV and battery storage systems for newly constructed nonresidential and high-rise multifamily buildings[3].
- Requiring the use of electric heat pumps for space heating and water heating.
- Establishing electric-ready requirements for all buildings, including single-family homes.
- Reinforcing and strengthening ventilation standards to improve the quality of indoor air quality.

Concurrently, section 10-109(k) of the 2022 Energy Code permits the CEC to determine that the solar PV and/or battery storage system requirements of Section 140.10, applicable to non-residential buildings, and Section 170.2, applicable to multi-family homes with more than three habitable stories, shall not apply if the CEC finds that its cost-effectiveness conclusions regarding solar PV and battery storage requirements are unreasonable for such buildings.

Exemptions to the CEC Solar Mandate – Through a determination process, the CEC may, upon written application or its own motion, determine that the PV or battery storage rules do not apply to particular buildings or service territories. A public agency[4] is required to provide information regarding the differences between its rules regarding utility system costs and revenue requirements, and the cost-effectiveness determinations that the CEC made in adopting the PV and battery storage requirements. The CEC may request additional information to enable a full review of the application. Applications from the public agencies must be submitted to the CEC only after public review within the jurisdiction of the agency or service area of the utility. Once the CEC receives the application from the public agency and deems it as complete, the CEC allows a 60-day public comment period. The CEC may again request additional information to evaluate the application. The CEC then proceeds to make a recommendation on the application and any additional information considered to the business meeting calendar for the full Commission to consider. The average timeline for this determination process may be closer to a year.

Trinity County Demographics – Trinity County is located midway between Redding in Shasta County and the Northern Redwood Coast. The County is home to about 15,000 residents. In 2023, the County reported only 17% of the Trinity County population had adequate access to a supermarket compared to 51% in California. The communities are small and rural. The percentage of Trinity residents living below the Federal Poverty Level was about twice as high as for California overall (23% compared to 12%).[5] In 2023, Trinity County was reported to have the highest childcare cost burden among all California counties.[6] Trinity Public Utilities District[7]

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[2] Pg. iv, CEC; " 2022 Building Energy Efficiency Standards for Residential and Nonresidential Buildings," August 2022

[3] High-rise multifamily buildings are multifamily buildings that have four or more habitable stories

[4]Government code § 20056 defines public agency as any city, county, district, other local authority or public body of or within the State of California

[5] Pg.2, Trinity County Public Health, "Equity Assessment". July, 3, 2023

[6] Ibid

[7] In 1981, Trinity Public Utilities District (TPUD) was formed to serve the residents of Trinity. Public Utility Districts are independent special districts governed under the Public Utility District Act. A PUD may be authorized to acquire, construct, own, operate, control, or use works for supplying light, water, power, heat, transportation,

is the main service electricity provider serving about 7,200 customers.[8] It is reportedly one of the poorest counties in the state of California, and its remote location makes building construction in that geographic area more expensive than many other places in the state.

Power Source – In 1955, Congress passed the Trinity River Act providing dams, reservoirs, and power plants on the Trinity River for the Central Valley Project (CVP).[9] The Central Valley Project (CVP) is a 400-mile complex, multi-purpose network of dams, reservoirs, canals, hydroelectric power plants and other facilities. The CVP reduces flood risk for the Central Valley, and supplies the valley with domestic and industrial water. The U.S Bureau of Reclamation operates the CVP. To compensate Trinity County residents, Congress granted first preferential rights to 25% of the net electricity generated by these power plants to electricity users in Trinity County and subsequently TPUD service area has low rates. The generating capacity of approximately 233 MW[10]of electricity provided by Trinity Public Utilities District to its customers is 100% carbon-free hydropower. Given its unique zero-carbon portfolio, Trinity Public Utilities District (TPUD) is exempt from the Renewables Portfolio Standard (RPS).[11]

COMMENTS:

1) *Author's Statement*. According to the author, "Trinity Public Utility District is unique in that it is the only Publicly Owned Utility District in the state that generates and distributes 100% hydropower. The Renewables Portfolio Standard is written to exclude the utility district because it is completely carbon-free. Unfortunately, the Building Energy Efficiency Standards enforced by the California Energy Commission do not take a similar approach. Instead, the CEC requires the utility district to apply for an exemption every three years to re-certify that it has not procured any carbon-generating power sources, even though the utility district has operated on 100% hydropower since TPUD formed in 1982. Because TPUD uses a fraction of the hydropower to which it is legally entitled, there are no circumstances in which TPUD will ever need another energy resource. The process of recertifying for an exemption takes a year and a half, is costly, and an immense burden for a small utility district made up of only 25 employees, only six of whom are administrators. Exempting the Trinity Public Utility District from this redundant exercise will allow both the CEC and utility district to devote time and resources to where they are truly needed."

2) *Why this bill?* In August 2021, the CEC adopted the 2022 Building Energy Efficiency Standards (2022 Energy Code), which include new solar PV system and battery storage system requirements for all newly constructed nonresidential and high-rise multifamily buildings. TPUD applied for an exemption given that the 2022 Energy Code states that an exemption may be applied if cost-effectiveness does not apply for particular buildings. In

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telephone service, or other means of communication, or means for the disposal of garbage and sewage. For decades, the District has spent working to maximize power allocation, protect first preference rights, expand transmission infrastructure, and improve reliability and cost of service to District customers.

[8] Pg.1, "Revised Staff Review and Analysis of Trinity Public Utility District's Application for a Solar Photovoltaic and Battery Storage Cost Effectiveness Determination for Nonresidential Buildings." August 2023

[9] Pg. 2, "Trinity PUD Report". Filed April 13, 2012

[10]Pg 21, "Trinity Public Utility District's Application for a Solar Photovoltaic and Battery Storage Cost-Effectiveness Determination for Nonresidential Buildings." June 2023

[11] PUC § 399.30(g)

this case, TPUD receives its power from a long-standing federal contract for hydroelectric power, making the resource reasonably inexpensive. As a result, CEC staff performed a cost-effectiveness analysis and determined that it would not be cost-effective for TPUD service area to include solar PV system and battery storage system requirements in new buildings.[12] TPUD received an exemption from the 2022 Energy Code. In the effort to get this exemption, TPUD stated it took a year and a half. TPUD also had to retain an attorney to ensure its application was properly filed.

TPUD notes this year-plus timeline was not unique to the 2022 Energy Code exemption; they note a similar timeline when seeking an exemption from the 2020 Energy Code. Given the long timelines with the CEC determination process, TPUD has been seeking to get a permanent exemption from PV system and battery storage system requirements from the CEC. However, the CEC has to date not provided an outright exemption to TPUD.

3) *Power Content Label (PCL).* Energy suppliers are required to annually disclose to their retail customers the mix of resources used to provide electricity service during the previous calendar year.[13] The CEC uses this information, in part, to generate California's total system power mix, known as "Total California System Electricity." These disclosures provide the public with clear information about what energy is being provided by their retail supplier, in an effort to increase customer transparency. As stated by the author, TPUD claims to be "100% hydropower" since forming in 1981. However, the last publicly available PCL for TPUD was in 2017. While the PCL did show TPUD as being 100% hydropower, the lack of disclosure over the subsequent seven years provides little transparency into TPUD's resource claims. While it is likely, given TPUD's longstanding federal contracts, that its resource mix has remained unchanged over this period, the lack of transparency overlaid with TPUD's seeking an exemption from solar PV rules via this measure raises scrutiny. In conversations between TPUD and this committee, TPUD has agreed to update its PCL as soon as possible. *As such, the author and committee may wish to include language that a permanent exemption to the solar ready requirements of the Building Standards, as this bill provides, shall be realized only upon TPUD filing its annual PCLs.*

4) *Prior Legislation*

AB 178 (Dahle) exempts, until January 1, 2023, residential construction from complying with the solar requirements in the 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. Status: Chapter 259, Statutes of 2019.

AB 3232 (Friedman) requires the CEC, by January 1, 2021, to assess the potential for the state to reduce GHG emissions from the state's residential and commercial building stock by 40% below 1990 levels by January 1, 2030. Status: Chapter 373, Statutes of 2018.

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[12] Pg.13, "Revised Staff Review and Analysis of Trinity Public Utility District's Application for a Solar Photovoltaic and Battery Storage Cost Effectiveness Determination for Nonresidential Buildings." August 2023
[13] Public Utilities Code § 398.4

5) *Double Referral.* This bill is double-referred; upon passage in this Committee, this bill will be referred to the Assembly Committee on Business and Professions.

REGISTERED SUPPORT / OPPOSITION:

Support

Trinity Public Utilities District

Opposition

None on file.

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