SENATE COMMITTEE ON ENERGY, UTILITIES AND COMMUNICATIONS
Senator Josh Becker, Chair
2025 - 2026 Regular

Bill No:	AB 368	**Hearing Date:**	7/7/2025
Author:	Ward		
Version:	4/7/2025 Amended		
Urgency:	No	**Fiscal:**	Yes
Consultant:	Sarah Smith		

SUBJECT: Energy: building standards: passive house standards

DIGEST: This bill requires the California Energy Commission (CEC) to evaluate the cost-effectiveness of passive house building energy efficiency standards by climate zone and submit a report to the Legislature on its findings.

ANALYSIS:

Existing law:

1) 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)

2) 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))

3) Requires each utility to maintain records of the energy usage data of all buildings to which they provide service for at least the most recent 12 complete calendar months, and to deliver or otherwise provide that aggregated energy usage data for each covered building, as defined, to the owner, as specified. (Public Resources Code §25402.10)

4) 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)

5) Requires the CEC to develop and implement a comprehensive program to achieve greater energy savings in California's existing residential and nonresidential building stock. (Public Resources Code § 25943)

This bill:

1) Requires the CEC to evaluate the cost-effectiveness of passive house building energy efficiency standards by climate zone using metrics adopted by the CEC, such as long-term system cost.

2) Requires the CEC to evaluate the use of two models required for passive house certification when conducting its analysis of the cost-effectiveness of passive house construction when compared to existing residential energy code.

3) Requires the CEC to submit a report to the Legislature by December 31, 2026, on its findings and recommendations from the evaluation required by this bill.

4) Sunsets this bill's reporting requirement on January 1, 2029.

Background

What is a passive house? While no comprehensive definition of a passive house exists, international associations specializing in passive houses generally describe these homes as residential buildings characterized by design standards intended to maximize the building's efficiency by using the building's location, envelope, and other measures that optimize comfort without increasing energy consumption. While most passive house standards do not explicitly restrict the use of natural gas appliances, passive houses tend to be all-electric. Passive house designs may incorporate advanced ventilation controls, automated systems limiting electricity appliance energy consumption, and distributed generation resources. In 2021, the CPUC commissioned a study on the potential grid benefits of passive house design. The study, published in 2025, noted that passive house design standards include measures to achieve the following:

- Continuous insulation,
- No thermal bridging (heat transference resulting from certain building practices),
- Airtight construction,
- High-performance windows and doors, and
- Mechanical ventilation with heat recovery.

Nothing stops homeowners from adopting passive house standards today, but compliance and certification pose barriers. Existing law provides the CEC with the authority to adopt energy code requirements for new buildings, also known as Title 24 regulations. Some energy code requirements are prescriptive and others provide flexible pathways for compliance. Nothing in existing law prevents a consumer from retrofitting or constructing a passive house; however, the pathway for demonstrating compliance with CEC energy codes may not be clear. If a consumer wishes to certify their home as a passive house, independent certification providers can verify that the home's design meets certain passive house standards. In the U.S., Passive Houses are largely certified by two organizations, Passive House Institute and Passive House Institute US. Each of these organizations use different targets to certify a building. According to a list of certifiers provided by the Passive House Institute, only 1 of the 7 certifiers listed in the United States is located in California. While there may be other certifiers capable of certifying passive house designs, it is unclear how many certifiers are located in California or if certifiers are uniformly available throughout the state.

One size does not fit all: climate zones influence the extent to which some passive house standards are appropriate. Regional temperatures substantially impact benefits of certain passive house standards. Currently, passive house construction is most popular in European countries like Germany and Austria. International passive house standards set specific limits on the amount of energy consumed on a per-square-foot basis for heating and cooling a home. It is unclear whether all California climate zones could meet these limits given the variance in average temperatures throughout the state. In order to determine which passive house standards are most effective in California climate zones, the CEC may need to consider more than two passive house standards.

Increasingly, California energy codes have emphasized the role of demand response and distributed generation. Passive house standards generally emphasize measures that reduce or limit energy consumption. While energy efficiency standards remain an important tool in limiting the need for unnecessary generation, recent energy efficiency standards have increasingly emphasized distributed generation, storage, and electrification measures that increase electricity consumption. When coupled with demand response tools that help shift loads in response to grid conditions, increased electrical loads can increase renewable energy consumption and reduce reliance on fossil fuel generation. However, if these loads are not aligned to grid conditions, increased consumption can further strain resources at peak demand periods. Generally, passive house residents see lower energy bills from reduced energy consumption; however, homeowners that optimize energy storage and other load-shifting resources can also reduce their bills regardless of home design.

A report commissioned by the CPUC on potential grid benefits of passive house design noted that while passive house design can help limit over-sizing of distributed rooftop solar, California's energy code already limits oversized rooftop solar. The report stated: "California code requirement for solar integration calls for much smaller solar PV systems than what is being installed on either ZNE homes or Passive Houses in practice and, thus, may not impact sizing." Overall, the CPUC's report indicates that passive house design may provide grid benefits by lowering residential load in a manner that limits the need for additional distribution investments. However, the report notes that the CEC's existing solar requirements generally limit distributed solar backfeed more effectively than passive house standards.

Bill's cost-effectiveness language is vague and may not support comparisons between standards. This bill requires the CEC to assess the cost effectiveness of passive house building standards based on metrics adopted by the CEC. While this bill notes that these metrics could include long-term system cost, the bill does not require the CEC to measure the standards' effectiveness using metrics required under existing law for building standards. Existing law requires building standards to be cost effective when taken in their entirety and when amortized over the economic life of the structure. Existing law also requires the CEC to consider other factors when assessing a building standard's cost effectiveness, including the standard's 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. This bill requires the CEC to compare the cost effectiveness of passive house standards to that of existing residential building code. However, if the CEC does not apply the same cost effectiveness metrics to both sets of standards, it is unclear how the CEC's assessment would accurately compare costs.

Need for amendments. As currently drafted, this bill requires the CEC to assess passive house building standards' cost effectiveness and compare the cost effectiveness of passive house standards to existing building standards. However, this bill does not require the CEC to conduct these assessments using metrics required for all existing building standards. *To ensure that the CEC's assessments provide an effective comparison, the author and the committee may wish to amend this bill to require the CEC to use the cost-effectiveness criteria in existing law to assess and compare passive house standards.*

Prior/Related Legislation

SB 282 (Weiner) of 2025, requires the CEC to develop standardized permitting checklists, create requirements for local agencies, and cap permit fees for the installation of residential heat pump HVAC systems and heat pump water heaters. The bill was held in the Senate Appropriations Committee.

AB 738 (Tangipa) of 2025, provides a limited exemption to the CEC's current PV building requirements until January 1, 2028, for homes damaged or destroyed in a disaster for which the Governor has declared an emergency, provided that certain conditions are met. The bill is currently in the Senate Energy, Utilities and Communications Committee.

AB 2787 (Joe Patterson) of 2024, would have provided an exemption to the CEC's PV building requirements until January 1, 2028, for homes damaged or destroyed in a disaster for which the Governor has declared an emergency. The bill was vetoed.

SB 795 (Stern) of 2023, would have required the CEC to establish online systems to track the sales of HVAC systems and track compliance documents for building energy efficiency standards. The bill was held in the Assembly Appropriations Committee.

SB 1164 (Stern) of 2022, was substantially similar to SB 795 and would have required the CEC to establish a compliance testing registry. The bill was held in the Assembly Appropriations Committee.

AB 1078 (Jim Patterson) of 2022, would have extended from January 1, 2023, to January 1, 2024, a prior exemption to CEC's PV building requirements for residential buildings impacted by disasters for which the Governor issues an emergency declaration. The bill was vetoed.

AB 660 (Levine) of 2019, would have required the CEC to consider establishing additional cool roof requirements as part of building energy efficiency standards established over the next 12 years. The bill was amended into a different subject matter.

AB 178 (Dahle, Chapter 259, Statutes of 2019) exempted, until January 1, 2023, any residential construction intended to "repair, restore, or replace" a residential building that was damaged or destroyed as a result of a disaster in an area in which the Governor has declared a state of emergency, before January 1, 2020, from the

state's recently adopted requirements for solar photovoltaic systems, if certain requirements are met.

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

SUPPORT:

Climate Action California (Sponsor)
American Institute of Architects California
Green Policy Initiative
Passive House California
Passive House Network
StopWaste
US Green Building Council California
An Individual

OPPOSITION:

None received

ARGUMENTS IN SUPPORT: According to the author:

> AB 368 directs the California Energy Commission (CEC) to produce a one-time report, evaluating the use of Passive House (PH) energy models currently required for PH certification and the cost effectiveness of PH construction compared to existing Title 24 construction. PH designs significantly reduce energy consumption and enhance resilience to climate change by utilizing airtight construction, superior insulation, and advanced ventilation systems. By streamlining certification and removing costly barriers, AB 368 will accelerate building decarbonization, improve indoor air quality, and support California's climate goals

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