

Proposal Summary



2022 California Energy Code (Title 24, Part 6)

Single Family Passive House Prescriptive Path

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Introduction

The document summarizes proposed revisions to the California Energy Code (Title 24, Part 6) that will be discussed during a utility-sponsored stakeholder meeting on November 12, 2019. The Statewide Utility Codes and Standards Enhancement (CASE) Team is seeking input and feedback. To provide your comments, email info@title24stakeholders.com by December 5, 2019.

Measure Description

The purpose of this measure is to investigate and develop an alternative prescriptive compliance path for homes certified by Passive House (PH). The California Energy Commission and the Title 24, Part 6 Standards embrace many of the goals behind the Passive House Standard. That means optimized envelopes utilizing smaller heating, cooling and generation systems, and minimizing building energy use.

The guiding principles behind the PH Standard and Certification embrace the ongoing goals and intent of Title 24, Part 6. The intent of this research measure is to determine if buildings built to the PH Standard could potentially satisfy requirements under the 2022 California Energy Code, and could buildings certified under the PH Standard qualify as equivalent to the prescriptive requirements for residential buildings.

The Statewide CASE Team will investigate whether any barriers or challenges exist to ensure enforceability, identify whether a home built to the Passive House Standard can meet the prescriptive code requirements, what, if any, measures may be required to meet equivalency, and review key elements in Passive House that are not adequately addressed in the ACM.

While PH certified projects can comply with Title 24, Part 6 using the performance approach, providing a prescriptive compliance path for PH certified projects can allow for higher adoption in both single family and multifamily construction, which can further reduce energy use in buildings resulting in significant energy savings and greenhouse gas (GHG) reductions.

Draft Code Language

The proposed changes under consideration for the Standards and Reference Appendices are provided below. Changes to the 2019 documents are marked with red underlining (new language) and ~~strikethroughs~~ (deletions).



Standards

Section 150.1 - Performance and Prescriptive Compliance Approaches For Low-Rise Residential Buildings

(a) **Basic Requirements.** Low-rise residential buildings shall meet all of the following:

1. The applicable requirements of Sections 110.0 through 110.10.
2. The applicable requirements of Section 150.0 (mandatory features).
3. Either the performance standards or the prescriptive standards set forth in this section for the Climate Zone in which the building is located. Climate zones are shown in Reference Joint Appendix JA2 – Weather/Climate Data.

EXCEPTION 1 to Section 150.1(a)3: If a single contiguous subdivision or tract falls in more than one Climate Zone, all buildings in the subdivision or tract may be designed to meet the performance or prescriptive standards for the Climate Zone that contains 50 percent or more of the dwelling units.

NOTE: The Commission periodically updates, publishes, and makes available to interested persons and local enforcement agencies precise descriptions of the Climate Zones, as specified in Reference Joint Appendix JA2 – Weather/Climate Data.

EXCEPTION 2 to Section 150.1(a)3: A building complies if it meets the Passive House performance criteria using Passive House Institute (“PHI”) or Passive House Institute US (“PHIUS”) Approved Software. Buildings meeting compliance with Passive House certification shall also meet the requirements of the following prescriptive sections:

- Section 150.1(c)1B – Walls in Climate Zone 8 only
- Section 150.1(c)1E – Field Verification of Quality Insulation Installation (QII)
- Section 150.1(c)3A – Fenestration U-factor and SHGC requirements. SHGC requirements can be met with exterior shading per Section 150.1(c)4.
- Section 150.1(c)6 and Section 150.1(c)7 - Space Heating and Cooling Systems
- Section 150.1(c)8 – Domestic Water-Heating Systems
- Section 150.1(c)9B – Space Conditioning Distribution Systems, Ducts and air handlers located in conditioned space
- Section 150.1(c)14 – Photovoltaic Requirements

Reference Appendices

Alternative Calculation Method Reference Manual

N/A