

Proposal Summary



2022 California Energy Code (Title 24, Part 6)

Single Family Enhanced Air-to-Water Heat Pump Compliance Options

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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 October 10, 2019. The Statewide Utility Codes and Standards Enhancement (CASE) Team is seeking input and feedback. To provide your comments, email info@title24stakeholders.com by October 24, 2019.

Measure Description

This measure will evaluate the 2019 Residential Alternative Calculation Method modeling approach for air-to-water heat pumps and to utilize recently available field data to better characterize performance and accommodate emerging strategies for these products. Air-to-water heat pumps are currently not a mainstream HVAC technology in the California residential market due to a variety of market factors and a historical reliance on widely available natural gas for space and water heating.

All-electric space conditioning is an emerging area of interest as the state is moving towards an increasingly decarbonized future and many energy efficiency advocates are promoting all-electric solutions for the residential market. This effort will include the following submeasures:

AWHP and Three Function Heat Pump Modeling

Improving the performance characterization for both air-to-water heat pumps and three function heat pumps (heat pumps which provide water heating as well as space conditioning) within the 2019 Residential Alternative Calculation Method. The current plan is to differentiate performance between fixed speed and variable speed AWHP equipment.

Hydronic Radiant Delivery

Incorporate radiant ceiling panels as an alternative recognized hydronic distribution system option.



Draft Code Language

The proposed changes to the Standards and Reference Appendices are provided below. Changes to the 2019 documents are marked with red underlining (new language) and ~~strikethroughs~~ (deletions). Expected sections or tables of the proposed code (but not specific changes at this time) are highlighted in yellow.

Standards

As this is a compliance option, no changes to the standards are planned.

Reference Appendices

HERS field verification changes to the reference appendices are being considered, but are not being proposed at this time.