

## DOCKETED

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# 2019 Building Energy Efficiency Standards Lead Commissioner Hearing For 45-Day Language

California Energy Commission  
Hearing Room A  
(Arthur Rosenfeld Room)

February 5 & 6, 2018

Michael Shewmaker  
Danny Tam  
Jeff Miller, P.E.

Subchapter 9  
Section 150.2 & Appendix 1-A



## **SUBCHAPTER 9**

# **LOW-RISE RESIDENTIAL BUILDINGS – ADDITIONS AND ALTERATIONS TO EXISTING LOW-RISE RESIDENTIAL BUILDINGS**

## **§ 150.2 – ENERGY EFFICIENCY STANDARDS FOR ADDITIONS AND ALTERATIONS TO EXISTING LOW-RISE RESIDENTIAL BUILDINGS**

### **§150.2(a) – Additions**

#### **§150.2(a)1Aiii – Prescriptive approach (> 700 square feet)**

Changes made to clarify that additions in which the existing siding is not being removed/replaced, cavity insulation shall be installed and continuous insulation is not required.



## §150.2 (a)– (CONTINUED)

### §150.2(a)1B – Prescriptive approach ( $\leq 700$ square feet)

- Changes made to clarify the ceiling insulation and radiant barrier requirements
- Change made to require cavity insulation in a 2x6 wall extension.
- Changes made to clarify that enclosed rafter ceilings shall only be required to meet the mandatory minimum insulation requirement of §150.0.
- Added a line to clarify that QII is not required for additions less than or equal to 700 ft<sup>2</sup>.
- Changes made to clarify that additions in which the existing siding is not being removed/replaced, cavity insulation shall be installed and continuous insulation is not required.



## **§150.2(b) – Alterations**

### **§150.2(b)1B – Replacement Fenestration**

- Changes made to improve readability
- Changes made to clarify what constitutes a fenestration replacement versus a repair



## §150.2(b) – Alterations

### §150.2(b)1D – Altered Duct Systems – Duct Sealing

- Entirely New or Complete Replacement Duct System
  - Add duct leakage compliance targets for multifamily dwellings – these target values were moved to this location from RA3.1.

### §150.2(b)1F – Altered Space Conditioning Systems – Mechanical Cooling

- Small Duct High Velocity Systems
  - Added minimum airflow rate requirement for refrigerant charge verification - 250 cfm/ton.



## §150.2(b) – Alterations

### §150.2(b)1H – Domestic Water-Heating Systems Alteration

- Add new prescriptive alteration option for heat pump water heaters
  - Require additional photovoltaic system capacity of 1kW
- Add new prescriptive alteration option heat pump water heater that meets NEEA Advanced Water Heater Specification Tier 3 or higher.
  - Will meet prescriptive alteration requirement for CZ 1 through 15



## §150.2(b) – Alterations

### §150.2(b)1I - Roofs

- Changes made to clarify that adding a new surface layer on top of the existing exterior surface shall be required to meet the requirements of §110.8

### Table 150.2-C – Standard Design For An Altered Component

- Added a row to define the standard design for an altered door both with, and without, third party verification





## §150.2(b)2 – Performance Alterations

### §150.2(b)2A – Altered Components

- Clarify Mandatory Requirements for Altered Components
  - Clarify that compliance with 150.0(m)12 and 150.0(m)13 air filter and fan efficacy requirements apply to:
    - ❖ entirely new or complete replacement space conditioning systems
    - ❖ entirely new or complete replacement duct systems



## §150.2(b)2 – Performance Alterations

### Table 150.2-C Standard Design for Altered Component

- Clarify the basis for the standard design with and without third party verification of existing conditions
- Space Heating and Space Cooling Systems
  - Table 150.1-A or B for equipment efficiency
  - Section 150.2(b)1C for entirely new or complete replacement systems
  - Section 150.2(b)1F for refrigerant charge verification
- Air Distribution Systems
  - Sections 150.2(b)1D and 150.2(b)1E



## Appendix 1-A

### Standards and Documents Referenced In The Energy Efficiency Regulations

- Updated reference versions
- Removed references not used in the Standards or Joint Appendices



## How to submit written comments

- **We strongly encourage submitting written comments via e-file.** Comments on the proposed 2019 Energy Code can be submitted to: <https://efiling.energy.ca.gov/EComment/EComment.aspx?docketnumber=17-BSTD-02>.
- Comments on the proposed 2019 CALGreen can be submitted to: <https://efiling.energy.ca.gov/EComment/EComment.aspx?docketnumber=17-BSTD-03>.
- Comments can also be submitted physically or by e-mail, here:

California Energy Commission  
Dockets Office, MS-4

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