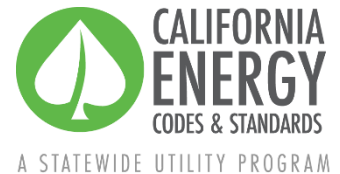


Proposal Summary



2022 California Energy Code (Title 24, Part 6)

Multifamily Indoor Air Quality – Mandatory Requirement for Heat or Energy Recovery Ventilation in Select Climate Zones

Updated: March 23, 2020

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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 March 25, 2020. The Statewide Utility Codes and Standards Enhancement (CASE) Team is seeking input and feedback. To provide your comments, email info@title24stakeholders.com.

Measure Description

This proposed measure builds off existing language in the 2019 Title 24, Part 6 standards which require that all new construction multifamily units either provide balanced ventilation or meet a leakage requirement. For projects following the balanced ventilation path, the proposed requirement for the 2022 Title 24, Part 6 code cycle adds HRV or ERV in California Climate Zones 1-2 and 11-16. The proposed requirement specifies that the HRV or ERV equipment must have a sensible heat recovery effectiveness of at least 67 percent, and that HRV or ERV equipment serving multiple dwelling units must include a bypass function whereby the intake air bypasses the heat exchanger and the equipment functions similar to an economizer.

Draft Code Language

The Energy Commission plans to create a multifamily chapter for inclusion in 2022 Title 24, Part 6. The multifamily chapter will draw from the appropriate sections of the 2019 residential and nonresidential Standards. The Statewide CASE Team uses the language and section numbering from residential and nonresidential Standards and Reference Appendices to show the proposed changes 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**.

Draft language for high-rise multifamily buildings:

Section 120.1(b)2Aivb



The mechanical ventilation system shall comply with one of the following subsections 1 or 2 below. When subsection 2 is utilized for compliance, all dwelling units in the multifamily building shall use the same ventilation system type.

- i. A balanced ventilation system shall provide the required dwelling-unit ventilation airflow. In Climates Zones 1-2 and 11-16, dwelling units shall be provided with an outdoor air heat or energy recovery ventilation system with a minimum sensible heat recovery effectiveness of 67 percent at design conditions. Heat or energy recovery ventilation systems serving multiple dwelling units must have a bypass function to permit air economizer operation. Or.
- ii. Continuously operating supply ventilation systems, or continuously operating exhaust ventilation systems shall be allowed to be used to provide the required dwelling unit ventilation airflow if the dwelling-unit envelope leakage is less than or equal to 0.3 cubic feet per minute at 50 Pa (0.2 inches water) per ft² of dwelling unit envelope surface area as confirmed by field verification and diagnostic testing in accordance with the procedures specified in Reference Nonresidential Appendix NA7.18.2.

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Additions would need to follow proposed language for new construction. The Statewide CASE Team proposes to add "or ventilation" system in the new multifamily chapter to the list of newly installed equipment that must meet requirements.

141.0(a) Additions

(a) Additions. Additions shall meet either Item 1 or 2 below.

1. **Prescriptive approach.** The envelope and lighting of the addition; any newly installed space-conditioning **or ventilation** system, electrical power distribution system, or water-heating system; any addition to an outdoor lighting system; and any new sign installed in conjunction with an indoor or outdoor addition shall meet the applicable requirements of Sections 110.0 through 120.7, 120.9 through 130.5, and 140.2 through 140.9.

2. **Performance approach.**

A. The envelope and indoor lighting in the conditioned space of the addition, and any newly installed space-conditioning **or ventilation** system, electrical power distribution system, or water-heating system, shall meet the applicable requirements of Sections 110.0 through 120.7, 120.9 through 130.5; and

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Alterations would NOT need to follow proposed requirement, unless newly installed ventilation equipment is installed. The Statewide CASE Team proposes to add "ventilation" system in the new multifamily chapter to the list of newly installed equipment that must meet requirements.

141.0(b) Alterations

(b) Alterations. Alterations to components of existing nonresidential, high-rise residential, hotel/motel, or relocatable public school buildings, including alterations made in conjunction with a change in building occupancy to a nonresidential, high-rise residential, or hotel/motel occupancy shall meet item 1, and either Item 2 or 3 below:

1. **Mandatory Requirements.** Altered components in a nonresidential, high-rise residential, or hotel/motel building shall meet the minimum requirements in this Section.

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2. **Prescriptive approach.** The altered components of the envelope, or space conditioning, **ventilation**, lighting, electrical power distribution and water heating systems, and any newly installed equipment serving the alteration, shall meet the applicable requirements of Sections 110.0 through 110.9, Sections 120.0 through 120.6, and Sections 120.9 through 130.5.

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3. **Performance approach.**

A. The altered envelope, space-conditioning system, **ventilation**, lighting and water heating components, and any newly installed equipment serving the alteration, shall meet the applicable requirements of Sections 110.0 through 110.9, Sections 120.0 through 120.6, and Sections 120.9 through 130.5.

Draft language for low-rise multifamily buildings:

Section 150.0(o)E

E. Multifamily attached dwelling units shall have mechanical ventilation airflow provided at rates in accordance with Equation 150.0-B [ASHRAE 62.2:4.1.1], and comply with one of the following subsections i or ii below. When subsection ii below is utilized for compliance, all dwelling units in the multifamily building shall use the same ventilation system type.

- i. A balanced ventilation system shall provide the required dwelling-unit ventilation airflow. In Climates Zones 1-2 and 11-16, dwelling units shall be provided with an outdoor air heat or energy recovery ventilation system with a minimum sensible heat recovery effectiveness of 67 percent at design conditions. Heat or energy recovery ventilation systems serving multiple dwelling units must have a bypass function to permit air economizer operation. Or.
- ii. Continuously operating supply ventilation systems, or continuously operating exhaust ventilation systems shall be allowed to be used to provide the required dwelling unit ventilation airflow if the dwelling-unit envelope leakage is less than or equal to 0.3 cubic feet per minute at 50 Pa (0.2 inches water) per ft² of dwelling unit envelope surface area as confirmed by field verification and diagnostic testing in accordance with the procedures specified in Reference Residential Appendix RA3.8.

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Additions would need to follow proposed language for new construction. No changes are needed to the language in Section 150.2, since 150.0(o) is already listed as a requirement.

Alterations would NOT need to follow proposed requirement, unless newly installed ventilation equipment is installed. No changes needed to language in Section 150.2(b).