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Compliance Improvement Team Comments-- Sections 150 and 110

Additional submitted attachment is included below.

May 2, 2024

Re: 2025 45 Day Title 24 Part 6 Energy Standards (CEC Docket: 24-BSTD-01)

Dear Commissioner McAllister and Building Standards Office staff,

Thank you for the opportunity to participate in the 2025 Energy Code (Title 24, Part 6) update process. On behalf of the Compliance Improvement (CI) Team, we extend our appreciation to the California Energy Commission (CEC) for considering our proposed changes in this crucial effort. We acknowledge and commend the many simplification measures and cleanup efforts submitted thus far. The Compliance Improvement (CI) Team is submitting this letter to address concerns and suggestions to ensure clarity and enforceability in the final language of the 2025 Title 24, Part 6 Energy Standards.

The CI Team's aim is to reduce roadblocks for industry professionals in the compliance supply chain. The CI Team is dedicated to bridging the gaps between development and implementation of the Energy Code. We welcome collaborative discussions so we can understand any concerns and resolve outstanding issues to achieve clear and enforceable requirements that will lead to sustained energy savings and GHG reductions.

Included in this letter are 4 recommendations that address discrepancies and inconsistencies to ensure clarity and coherence within the Energy Code. These recommendations seek to streamline compliance efforts and enhance understanding among stakeholders, ultimately facilitating more effective implementation of energy efficiency standards. Below is a summary of the highest priority issues. Marked-up language is provided in Appendix A: Recommendations - Express-45-Day Terms Review.

Markup Language to Section 150.0: We noticed a discrepancy in the reference to Section 150.0(r), which seems to end prematurely. Specifically, the reference should extend to Section 150.0(v) for comprehensive coverage and consistency. This correction is crucial for ensuring clarity and coherence within the Energy Code.

Suggested changes:

NOTE: The requirements of Sections 150.0(a) through 150.0(~~r~~)(v) apply to newly constructed buildings. Sections 150.2(a) and 150.2(b) specify which requirements of Sections 150.0(a) through 150.0(~~r~~)(v) also apply to additions or alterations.

Markup Language to Section 150.0(a)1: Our review of this section has brought to light an opportunity to enhance clarity and inclusivity. While we acknowledge the intent outlined in the Final Statement of Reasons (FSOR), we propose an explicit extension of the exception to ductless systems. Extending this exception aligns with the overarching goal of promoting energy efficiency across diverse building systems, ensuring equitable standards for all stakeholders.

Suggested Changes:

Exception 1 to Section 150.0(a)1:

- i. The space-conditioning system air handler and ducts are located entirely in conditioned space below the ceiling separating the occupiable space from the attic; or

- ii. The space-conditioning system air handler is located in unconditioned space and has 12 linear feet or less of supply duct, including the length of the air handler and the plenum, located in unconditioned space, with all other portions of the supply ducts located in conditioned space below the ceiling separating the occupiable space from the attic.

Note: Ductless systems shall qualify for this Exception.

Markup Language to Section 150.0(c)5: We've identified two compliance issues within this section that warrant attention. Firstly, the current language refers to "Masonry walls," which is not formally defined in the standards, and the relationship between masonry and mass walls is ambiguous. We recommend adding definitions in section 100.1 to clarify these categories and their relationships¹. Secondly, the mandatory requirement references a prescriptive table, which frustrates legibility and leads to confusion. Generally, mandatory requirements should never refer to Prescriptive language.

Proposed changes

Section 100.1 Definitions

Mass Wall, Light is wall with a heat capacity of at least 7.0 Btu/ft²-oF and less than 15.0 Btu/ft²-oF.

Mass Wall, Heavy is wall with a heat capacity of at least 15.0 Btu/ft²-oF.

Masonry Wall is a wall of built-up construction or combination of building units or materials of clay, shale, concrete, glass, gypsum, stone or other approved units bonded together with or without mortar or grout or other accepted methods of joining.

Glass unit masonry is masonry composed of glass units bonded by mortar.

Plain masonry is masonry in which the tensile resistance of the masonry is taken into consideration and the effects of stresses in reinforcement are neglected.

Reinforced masonry is masonry construction in which reinforcement acting in conjunction with the masonry is used to resist forces.

Solid masonry is masonry consisting of solid masonry units laid contiguously with the joints between the units filled with mortar.

Unreinforced (plain) masonry is masonry in which the tensile resistance of masonry is taken into consideration and the resistance of the reinforcing steel, if present, is neglected.

150.0(c)5

5. ~~Masonry~~**Mass** walls shall be insulated to ~~meet the wall insulation requirements of Table 150.1-A.~~achieve an overall assembly U-factor not exceeding 0.077 in Climate Zones 1-15, and 0.059 in Climate Zone 16 when rigid insulation is placed on the interior surface if the wall, or an overall assembly U-factor not exceeding 0.125 in

¹ Note 1 of Table 140.3-C references 100.1 definitions, but we can find no such definitions.

Climate Zones 1-15, and 0.077 in Climate Zone 16 when rigid insulation is placed on the exterior surface if the wall.

Markup Language to Table 110.2-A-1: Our review has identified a discrepancy in the naming convention of Table 110.2-A-1 compared to the rest of Part 6. This inconsistency may lead to confusion among stakeholders and hinder effective implementation. To mitigate potential confusion and maintain uniformity, we recommend renumbering the table to Table 110.2-M, aligning it with existing naming conventions within the Energy Code.

In conclusion, we believe that addressing these identified discrepancies and inconsistencies will not only enhance the clarity and coherence of the Energy Code but also streamline compliance efforts and facilitate more effective implementation of energy efficiency standards. We appreciate your attention to these items and remain committed to collaborating with you in advancing the goals of sustainability and energy efficiency in California's building industry.

Sincerely,

Compliance Improvement (CI) Team

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