

EXECUTIVE SUMMARY

CEC 01-15

SUBJECT:

The California Energy Commission's adopted changes to the Green Building Standards in the California Code of Regulations (CCR), Title 24, Part 11 (also known as CALGreen) regarding updates to voluntary "Reach" standards for building additions and alterations, as well as newly constructed buildings, for both residential and non-residential occupancies. Additionally, the Energy Commission requested that the CBSC's Green Building Code Advisory Committee (CAC) comment on the Energy Commission's proposed energy related amendments to the triennial edition of the 2016 California Green Building Standards Code, Title 24, Part 11. The CAC provided input but no committee actions were taken.

ADOPTING STATE AGENCY

California Energy Commission (CEC), 1515 Ninth Street, MS-37, Sacramento, California 95814

SUMMARY OF PROPOSED BUILDING STANDARDS

The 2016 Standards focus on several key areas to (1) improve the energy efficiency of newly constructed buildings as well as additions and alterations to existing buildings, (2) help reduce electricity demand reductions during critical peak periods, and (3) enable simple and efficient future solar system installations.

The most significant efficiency improvements to the residential Standards are proposed for envelope insulation (high performance attics and walls), lighting, water heating, and include clarification of requirements for the testing of heating, ventilating, and air-conditioning (HVAC, basically furnaces, air conditioners, and ducts) systems.

The most significant efficiency improvements to the nonresidential Standards are proposed for envelope insulation and lighting, and generally align California's requirements for nonresidential buildings with the specifications in ASHRAE 90.1. New standards are added for elevators, for escalators and moving walkways in public transit areas such as airports and bus stations, and for interlock controls for doors and windows. The Standards also include clarifying and streamlining changes to commissioning requirements, Acceptance Test Technician Certification Providers (ATTCPs), and to the requirements for lighting and power distribution systems.

The 2016 Standards also include updates to the voluntary "Reach" standards in Part 11, which is the subject of this action. In order for buildings to be able to advertise that they meet those standards, a set of prerequisites has been established. The Reach Standards require additional energy efficiency or on-site renewable electricity generation to meet a specific threshold of expected electricity use; this update adds the ability to use an Energy Design Rating to show that residential buildings meet these thresholds, and also provides a specification for Zero Net Energy Design residential buildings that can be used by local jurisdictions considering Zero Net Energy ordinances. The updates also remove language from both the residential and nonresidential Reach Standards relating to lighting requirements that would otherwise overlap

new mandatory requirements in Part 6. Both the residential and nonresidential Reach Standards include specifications for building additions and alterations as well as new construction.

BACKGROUND:

The Global Warming Solutions Act (Assembly Bill (AB) 32, Núñez, Chapter 488, Statutes of 2006) has been the foundation of California's efforts over the past five years to reduce greenhouse gas emissions (GHG); AB 32 requires that by 2020 the state reduce its GHG emissions to the level that existed in 1990. *Improving the energy efficiency of existing residential and commercial buildings is the single most important activity to reduce greenhouse gas emissions that result from electricity and natural gas use.* The Energy Commission's 2007 Integrated Energy Policy Report (IEPR), which is California's official statement of the state's energy policy, concludes that climate change is the single most important environmental and economic challenge of the century, that greenhouse gas emissions are the largest contributors to climate change, and that and California's ability to slow the rate of greenhouse gas emissions will depend first on energy efficiency.

Similarly, the California Long-Term Energy Efficiency Strategic Plan (2008) adopted by the California Public Utilities Commission (CPUC) identifies the importance of the Energy Commission's Building Energy Efficiency Standards in reaching the State's goal of having new homes be "zero net energy" buildings by 2020 and of having commercial buildings be "zero net energy" buildings by 2030 . The Energy Commission's Integrated Energy Policy Report (2013) includes an energy efficiency chapter that emphasizes the zero net energy policy goals for the state's residential and nonresidential buildings. It articulates how the Building Energy Efficiency Standards, including Reach Standards, will be updated periodically to attain the aggressive levels of energy efficiency required to make zero net energy buildings cost-effective for consumers.

FINDINGS:

As required by the California Public Resources Code, Section 25402.2, the California Energy Commission submitted its adopted energy related building standards to the California Building Standards Commission for review and approval as provided for in Section 18930 of the Building Standards Law, California Health and Safety Code. Additionally, as required by Section 18930(b), the commission is required to consider only the record of the proceedings of the adopting agency, in this case the California Energy Commission.

Staff's review of the record of proceedings and submitted rulemaking documents reveals that the proposed submittal appears compliant with the Administrative Procedure Act and Building Standards Law.

Enclosed for commission consideration are the following documents:

- Express Terms [building standard(s)];
- Final Statement of Reasons;
- Nine-Point Criteria Analysis;
- Updated Informative Digest; and
- Fiscal and Economic Impact Statement.

COMMISSION ACTION:

A nine-point analysis prepared in accordance with Health and Safety Code Section 18930 must, to the satisfaction of the commission, justify the approval of the adopted or proposed building standards. The commission must give great weight to the determination and analysis of the proposing agency on each of the nine points.

Any factual determination of the adopting or proposing agency shall be considered conclusive by the commission unless the commission expressly finds, and sets forth its reasons in writing, that the determination of the adopting or proposing agency is arbitrary and capricious, or substantially unsupported by the evidence. If there is such a finding, the commission may return the proposal to the adopting or proposing agency for re-examination of the disputed facts.

The commission may take any one of the following actions on this item:

- **Approve**
- **Disapprove**
- **Approve as Amended**
- **Further Study**