

**INITIAL STATEMENT OF REASONS
FOR
PROPOSED BUILDING STANDARDS
OF THE
OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT**

**REGARDING ADOPTION OF AMENDMENTS TO THE 2010 CALIFORNIA BUILDING STANDARDS
CODE, TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR), PARTS 2, 3, 4, 5 and 6 in TITLE 24,
CCR, PART 11, CALIFORNIA GREEN BUILDING STANDARDS CODE**

The Administrative Procedure Act (APA) requires that an Initial Statement of Reasons be available to the public upon request when rulemaking action is being undertaken. The following information required by the APA pertains to this particular rulemaking action:

STATEMENT OF SPECIFIC PURPOSE AND RATIONALE:

This proposed action by the Office of Statewide Health Planning and Development (OSHPD) adopts voluntary green building standards for health facilities within its authority, building upon a framework of voluntary measures adopted by CBSC in 2008. The intent of the new version of the code continues to be to (1) reduce greenhouse gas (GHG) emissions from buildings; (2) promote environmentally responsible, cost-effective, healthier places to live and work; and (3) respond to the directives in the Governor's legislative veto messages announced at the conclusion of the 2007-2008 legislative session.

(1) GHG reduction has been mandated in recent years by the Governor through executive orders and in his signing into law AB 32 in 2006. AB 32 requires a cap on GHG emissions by 2020, mandatory emissions reporting, and an ongoing market-based compliance program.

Nonresidential green building can make a significant reduction in GHG for the following reasons:

- Nonresidential buildings are projected to account for 37% of electricity and 16% of natural gas consumed in California in the next ten years¹;
- Over the next 25 years, GHG emissions from nonresidential buildings are predicted to grow faster than from any other sector, at 1.8% per year through 2030¹;
- Construction investment in nonresidential buildings in California totaled over \$21 billion in 2006²;
- Buildings have a long lifespan of 50 to 100 years over which they consume energy and produce GHG¹; and
- Technology, construction techniques, and various green building points-based programs, utility incentives, local ordinances, and state agency programs already exist to make substantial reductions in GHG.

(2) Furthermore, GHG emissions reduction and environmental sensitivity by buildings may prove to save builders money, though initial costs may be higher.

- An October, 2003 report to California's Sustainable Building Task Force stated that a 2% increase in upfront costs for green building features would result in savings of 20% of construction costs in 20 years.³
- Studies have shown that improved air quality and thermal comfort results in occupant satisfaction and improved worker productivity, and that giving occupants some control over lighting and acoustics may improve them further.⁴

(3) Green building legislation proposed in the 2007-2008 legislative session (AB 35 concerning state-owned buildings, AB 888 concerning commercial B-occupancy buildings, and AB 1035 concerning residential construction) was vetoed by the Governor. In his veto messages, the Governor expressed his support for development of green building standards, but that they should not be statutory, conflict with current safety standards, and rely on private entities to set standards. The governor directed the California Building Standards Commission to work with state agencies, including OSHPD, to develop standards gleaned from nationally recognized programs⁵, ensuring an open public adoption process, for the 2010 code.

The proposed standards are amendments to Parts 2, 3, 4, 5, and 6 of Title 24 and are being placed into Title 24, Part 11, the California Green Building Standards Code, to provide clarity to users designing or constructing to the green building standards. It is OSHPD's intent to integrate these standards into their respective parts at a future date.

The proposed changes to the building standards with statewide application will lead to substantial environmental benefits through reduction in the use of energy, water, and raw materials; improved public and building occupant health due to improved indoor air quality; and overall reduced detrimental environmental impacts.

Specific Proposed Regulatory Actions: OSHPD proposes to amend the 2007 California Green Building Standards Code (CGBC) in a 2010 edition. The rationale for each adoption by chapter, division, and section is listed below.

CHAPTER 1. ADMINISTRATION

OSHPD is proposing to amend of this chapter as follows:

Section 101.2: In Item 5, delete the word "air" to match the title of the "Environmental Quality" chapters for residential and nonresidential buildings.

Section 101.3: Amendments will provide clarity

Section 101.3.1: Correct a reference to state law, an editorial correction.

Section 101.7: Clarify the intent of the 2010 version of the code to establish minimum mandatory green building standards as directed by the Governor at the close of the 2007-2008 legislative session.

Section 101.7.1: In Item 1, add a sentence clarifying that, when amending the building codes for green building standards, local jurisdictions may consider specific local environmental conditions as climatic findings; and, in Item 4, spell out "Public Resources Code" for clarification.

Section 101.11: Update the effective use of the code to recognize the minimum mandatory standards and voluntary measures, including voluntary tiers, as well as how to use the state agency checklists.

Section 102.1: Incorporate a recommendation by a stakeholder to allow separate submittal of additional construction documents which may be requested by the enforcing agency.

The proposed new language in Chapter 1 is consistent with the standards and format used in other parts of the California Building Standards Code.

CHAPTER 2. DEFINITIONS, Section 202

OSHPD proposes to adopt definitions for "conditioned floor area", "directly" and "indirectly conditioned space", and "process space", derived from the 2007 California Energy Code, at the request of a stakeholder. These additions define terms used in the existing definition for "conditioned space" and provide clarity to the code user. Also, OSHPD proposes a definition for "exfiltration" opposite to an existing definition for "infiltration". OSHPD also proposes new definitions derived from California statute that provide clarity to the code user regarding terms related to construction waste disposal: "disposal", "diversion", "hazardous waste"; "inert solids or inert waste", "recycle or recycling", "re-use", and "solid waste".

CHAPTER 3. GREEN BUILDING, Section 304, VOLUNTARY TIERS

Section 304.1 Purpose: OSHPD is proposing this new California section to provide clarity to the code user regarding the intent of voluntary tiers.

Section 304.1.1 Tiers: This new section describes the use of voluntary measures in Appendix A5, and how they are to be incorporated into tiers to achieve environmental benefits above the minimum standards.

Section 305 CALGREEN TIERS OSHPD is proposing the Tiers 1 and 2 for voluntary building measures for hospital construction based on "Savings By Design, Healthcare Modeling Procedures".

APPENDIX A5 NONRESIDENTIAL VOLUNTARY MEASURES

The following nonresidential new building standards proposed as voluntary for the 2010 version of the code are now found in Appendix A5. Like Chapter 5, this appendix is divided into divisions, each of which covers topics from the 2008 code's chapters 4 through 8, respectively, as well as some from the 2008's Appendix A.

Division 5.2 ENERGY EFFICIENCY

Currently, hospitals and skilled nursing facilities are not required to meet energy requirements of Title 24, Part 6, California Energy Code. OSHPD is proposing to incorporate specific energy efficiency standards from the 2008 California Energy Code into 2010 California Green Building Code as voluntary measures that would be applicable to these health facilities.

OSHPD accepted input and recommendations for these energy efficiency measures from workgroups consisting of architects, design engineers, facility representatives, and energy and hospital regulators. These expert individuals were invited by the Lawrence Berkeley National Laboratory to form several workgroups for the purpose of identifying California Energy Code standards related to electrical, mechanical, and building envelope that may be incorporated into the 2010 California Green Building Code (CGBC) for application in health facilities. The standards selected by the workgroups have been reviewed by the Hospital Building Safety Board (HBSB), which is an advisory board for OSHPD. The HBSB recommended the voluntary energy efficiency measures being proposed by OSHPD for the 2010 CGBC.

Division 5.4 MATERIAL CONSERVATION AND RESOURCE EFFICIENCY

Section A5.407 Water Resistance and Moisture Management sections are renumbered and carried forward from 2008 CGBC Section 707.1 and 707.2.

Section A5.408.1 Construction waste diversion, Section A5.408.3 Construction waste reduction of at least 50% and Section A5.408.4 Excavated soil and land clearing debris are renumbered and carried forward from 2008 CGBC Section 708.1, 708.3 and 708.4 respectively.

Section A5.410.1 Recycling by occupants has been renumbered and carried forward from 2008 CGBC Section 710.1.

Section 5.504.4 Finish material pollutant control 5.504.4.1 Adhesives and sealants, 5.504.4.2 Paints and coatings, Table 5.504.4.1 and Table 5.504.4.2. OSHPD is proposing the adoption of these sections to provide clarity to the code user regarding indoor air quality. Most indoor air pollution comes from sources inside the building. Paints, stains, adhesives, carpeting, upholstery, manufactured wood products, pesticides, and cleaning agents may emit volatile organic compounds (VOCs), including formaldehyde. Research shows that some VOCs can cause chronic and acute health effects at high concentrations, and some are known carcinogens. Low to moderate levels of multiple VOCs may also produce acute reactions. OSHPD is proposing adoption of VOC limits applicable statewide developed by the ARB and is including tables to assist the code user in identification of the VOC limits for adhesives, sealants, paints and other coatings.

Sections: 5.504.4.3 Carpet systems, 5.504.4.3.1 Carpet cushion and 5.504.4.3.2 Carpet adhesive. CBSC is proposing the adoption of these sections to provide clarity to the code user regarding indoor air quality. Most indoor air pollution comes from sources inside the building. Paints, stains, adhesives, carpeting, upholstery, manufactured wood products, pesticides, and cleaning agents may emit volatile organic compounds (VOCs), including formaldehyde. Research shows that some VOCs can cause chronic and acute health effects at high concentrations, and some are known carcinogens. Low to moderate levels of multiple VOCs may also produce acute reactions. CBSC is proposing carpet systems be labeled or documented to meet the Carpet and Rug Institute's (CRI) Green Label Plus program. Green Label Plus carpeting is currently widely available.

Sections: 5.504.4.4 Composite wood products. CBSC is proposing the adoption of this section and subsections to provide clarity to the code user regarding the use of formaldehyde in interior finish materials. In buildings, the most significant sources of formaldehyde are likely to be pressed wood products made using adhesives that contain urea-formaldehyde (UF) resins. Formaldehyde exposure at elevated levels (above 0.1 parts per million) may cause a wide range of health related issues. Pressed wood products made for indoor use include: particleboard (used as sub-flooring and shelving and in cabinetry and furniture); hardwood plywood paneling (used for decorative wall covering and used in cabinets and furniture); and medium density fiberboard (used for drawer fronts, cabinets, and furniture tops). Medium density fiberboard contains a higher resin-to-wood ratio than other UF pressed wood product and is generally recognized as being the highest formaldehyde-emitting pressed wood product. Recent regulations promulgated by ARB are cited for these composite wood products.

Section A5.505.1 Indoor moisture control has been renumbered and carried forward from 2008 CGBC Section 805.1

Section A5.507.5 Acoustical control, 5.507.5.1 Exterior noise transmission, and 5.507.5.2 Interior sound. OSHPD is repealing these sections because mandatory requirements regarding acoustical control and noise transmission for hospitals has been adopted in Section 1224 of Title 24, Part 2, California Building Code.

TECHNICAL, THEORETICAL, AND EMPIRICAL STUDY, REPORT, OR SIMILAR DOCUMENTS:

- ¹ California Energy Demand 2008-1018 Staff Revised Forecast, California Energy Commission, November 2007, CEC-200-2007-015-sf2
- ² California Construction Review, August 27, 2007; reports almost \$21 billion in private nonresidential construction (does not include public sector).
- ³ Third-year report of progress of California's Sustainable Building Task Force in response to Governor Gray Davis' Executive Order D-16-00.
- ⁴ S. Abbaszadeh, L. Zagreus, D. Lehrer, and C. Huizenga (Center for the Built Environment, U.C. Berkeley), Occupant Satisfaction with Indoor Environmental Quality in Green Buildings, 2006
- ⁵ Including LEED NC 2.2, Green Globes, the Collaborative for High Performance Schools, Global Green, draft ASHRAE 189P, NAHB/ICC.
- ⁶ 2008 Building Energy Efficiency Standards for Residential and Nonresidential Buildings, California Energy Commission, December 2008, CEC-400-2008-001-CMF

CONSIDERATION OF REASONABLE ALTERNATIVES

OSHPD considered whether or not to consider mandatory measures for all or part of the proposals as an alternative to voluntary guidelines. Given that the measures are establishing a framework for future green building standards to be developed for the 2009 code adoption cycle, it was agreed to move forward with voluntary measures at this time. This will allow design professionals, builders, health facility representatives, and building inspectors and officials a learning period and flexibility of application.

REASONABLE ALTERNATIVES THE AGENCY HAS IDENTIFIED THAT WOULD LESSEN ANY ADVERSE IMPACT ON SMALL BUSINESS.

No alternatives were identified to lessen the adverse impact on small businesses, because the guidelines are voluntary and can be selected to meet the needs of individual businesses.

FACTS, EVIDENCE, DOCUMENTS, TESTIMONY, OR OTHER EVIDENCE OF NO SIGNIFICANT ADVERSE IMPACT ON BUSINESS.

- The third-year report of progress of California's Sustainable Building Task Force in response to Governor Gray Davis' Executive Order D-16-00 indicates that an increase in upfront construction costs for green features, especially in the energy sector, will be paid back during the life of a building.
- The standards are voluntary and can be selected to meets the needs of individual health facilities.

DUPLICATION OR CONFLICTS WITH FEDERAL REGULATIONS

Federal regulations may be adopted for use in California by those state and local agencies with authority for clean air, clean water, water conservation, energy conservation, and waste management. Those regulations may be cited in the proposed guidelines as they are applied in California.