

**CALIFORNIA ENERGY COMMISSION**

1516 Ninth Street Sacramento, California 95814

Main website: [www.energy.ca.gov](http://www.energy.ca.gov)**NOTICE OF PROPOSED ACTION****REVISIONS TO THE CALIFORNIA GREEN BUILDING STANDARDS CODE**

**2016 CALGREEN EFFICIENCY STANDARDS**  
**California Energy Commission**  
**DOCKET NO. 15-CALG-01**  
**FEBRUARY 13, 2015**

California Energy Commission

**DOCKETED****15-CALG-01****TN # 74436****JAN 30 2015****INTRODUCTION**

Notice is hereby given that the California Energy Commission proposes to adopt changes to the Building Energy Efficiency Standards contained in the California Green Building Standards Code, California Code of Regulations (CCR), Title 24, Part 11 (also known as CALGreen). The proposed amended standards, if adopted, will go into effect on January 1, 2017.

The Energy Commission has prepared this Notice of Proposed Action (NOPA) and an Initial Statement of Reasons (ISOR) regarding the need for the proposed revisions. The Energy Commission has also published the Express Terms (45-Day Language) of the proposed amendment language. These documents can be obtained from the contact persons designated below or from the Energy Commission website at: [www.energy.ca.gov/title24/2016standards/rulemaking/](http://www.energy.ca.gov/title24/2016standards/rulemaking/).

**PUBLIC COMMENT PERIOD AND HEARINGS**

The Energy Commission's Energy Efficiency Lead Commissioner will hold public hearings to receive public comments on the proposed action. At these hearings, any person may present statements or arguments relevant to the proposed regulatory action summarized below. The proposed language (45-Day Language Express Terms) is posted on the Energy Commission's website at: [www.energy.ca.gov/title24/2016standards/rulemaking/](http://www.energy.ca.gov/title24/2016standards/rulemaking/).

The 45-Day Language Express Terms are also available from the Energy Commission's Building Standards Office (contact persons are listed later in this NOPA). The Energy Efficiency Lead Commissioner Hearings to discuss the 45-Day Language are scheduled as follows:

**March 2 and March 3, 2015**

9:00 a.m.

CALIFORNIA ENERGY COMMISSION

Art Rosenfeld Hearing Room (formerly Hearing Room A)

1516 Ninth Street

Sacramento, California

(Wheelchair Accessible)

The Energy Efficiency Lead Commissioner Hearing will be held on the first date listed. The Energy Efficiency Lead Commissioner Hearing may continue on the second date listed, as necessary.

Audio for the Energy Efficiency Lead Commissioner Hearings will be broadcast over the internet. For details, please go to: [www.energy.ca.gov/webcast](http://www.energy.ca.gov/webcast).

If you have a disability and require assistance to participate in these hearings, please contact Lou Quiroz at (916) 654-5146 at least 5 days in advance.

A hearing before the full Energy Commission, for possible final adoption of the 45-Day Language Express Terms will be held on the date below; however, if the Energy Commission decides to make substantive changes to the Express Terms through 15-Day Language, the public hearing may be continued to a later noticed date.

**PROPOSED ADOPTION DATE – FULL ENERGY  
COMMISSION HEARING**

**APRIL 8, 2015**

10 a.m.

CALIFORNIA ENERGY COMMISSION  
Art Rosenfeld Hearing Room (formerly Hearing Room A)  
1516 Ninth Street  
Sacramento, California  
(Wheelchair Accessible)

Audio for the April 8, 2015, ENERGY COMMISSION HEARING will be broadcast over the internet. For details, please go to: [www.energy.ca.gov/webcast](http://www.energy.ca.gov/webcast).

If you have a disability and require assistance to participate in these hearings, please contact Lou Quiroz at (916) 654-5146 at least 5 days in advance.

If the Energy Commission decides to propose 15-Day Language modifications to the Express Terms, a separate notice of the adoption hearing for the 15-Day Language will be provided.

**The public comment period for the 2016 Building Energy Efficiency Standards will begin February 13, 2015, and end at 5:00 p.m. on March 30, 2015.** Any interested person may submit written comments on the proposed amendments. Regarding the Energy Efficiency Lead Commissioner and Adoption Hearings, the Energy Commission appreciates receiving written comments at the earliest possible date: for the March 2 and 3, 2015 hearing, please provide written comments by March 17, 2015. However, written comments will still be accepted at the adoption hearing if they are received by 5:00 p.m. on March 30, 2015. Written comments must be emailed to [Docket@energy.ca.gov](mailto:Docket@energy.ca.gov) or mailed or delivered to the following address (emailing is preferred):

CALIFORNIA ENERGY COMMISSION  
Attention: Docket No. 15-CALG-01  
Dockets Office  
1516 Ninth Street, MS-4  
Sacramento, CA 95814

**All written comments must contain the official number of the proceeding “Docket No. 15-CALG-01,”** prominently displayed on the first page. When comments are emailed on behalf of an organization, the comments should be a scanned copy of the original on the organization’s letterhead and include a signature of an authorized representative.

Written comments may also be filed electronically by emailing [adrian.ownby@energy.ca.gov](mailto:adrian.ownby@energy.ca.gov) or faxing them to (916) 654-4304, as long as they are received no later than March 30, 2015 at 5:00 p.m.

**Oral comments may be made at the Energy Efficiency Lead Commissioner hearing(s).** In addition, oral comments may be made at the April 8, 2015, Full Commission Adoption Hearing.

**POTENTIAL POST-HEARING MODIFICATIONS TO THE TEXT OF THE  
REGULATIONS**

Interested persons should be aware that any of the provisions of the amendments under consideration by the Energy Commission could be substantively changed as a result of public comment, staff recommendations, or discussions at the Energy Efficiency Commissioner or Full Commission Hearings.

The proposed regulations could be changed, withdrawn, or replaced with different proposals. If the Energy Commission makes substantive changes to the 45-Day Language Express Terms that a reasonable person could have anticipated could be made as within the scope of this NOPA, the Commission will make the full text of the modified amendments available to the public at least 15 days before adoption, as required by Government Code 11346.8. (Changes outside the scope of the NOPA must be made in new 45-Day Language.)

**To be notified of any modifications, please sign-up on the Building Standards list-serve to be informed of ongoing activities regarding the 2016 Update.** You can sign up for this list-serve here: <http://www.energy.ca.gov/efficiency/listservers.html>.

## **AUTHORITY AND REFERENCE**

The Energy Commission proposes to adopt the Express Terms under the authority granted by Public Resources Code Sections 25213, 25402, subdivisions (a)-(b), 25402.1, 25402.4, 25402.5, 25402.8, 25910, 25942, and 25943.

The Energy Commission proposes to adopt the Express Terms in order to implement, interpret, or make specific Public Resources Code Sections 25402, subdivisions (a)-(b), 25402.1, 25402.4, 25402.5, and 25910.

## **INFORMATIVE DIGEST**

### **A. Summary of Existing Laws and Regulations; Policy Overview**

Public Resources Code Sections 25402 and 25402.1 were enacted in the 1970s as part of the enabling legislation establishing the Energy Commission and its basic mandates. These sections require the Energy Commission to adopt, implement, and periodically update energy efficiency standards for both residential and nonresidential buildings. In addition, Public Resources Code Section 25910 directs the Energy Commission to adopt standards for the minimum amount of additional insulation installed in existing buildings. Senate Bill (SB) 639 (Statutes of 1993) added Section 25402.5, which expressly directs the Energy Commission to consider both new and replacement, and both interior and exterior, lighting devices when adopting building standards. SB 5X (Statutes of 2001) added subsection (c) to Section 25402.5 to clarify and expand the Commission's authority to adopt standards for outdoor lighting.

The Global Warming Solutions Act (Assembly Bill 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); this Act 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 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<sup>1</sup>.

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<sup>1</sup> "A Zero-Net-Energy Code Building is one where the net amount of energy produced by on-site renewable energy resources is equal to the value of the energy consumed annually by the building, at the level of a single "project" seeking development entitlements and building code permits, measured using the California Energy Commission's Time Dependent Valuation (TDV) metric. A Zero Net Energy Code Building meets an Energy Use Intensity value

Governor Brown's Clean Energy Jobs Plan (2010) combines existing state energy policy with economic recovery and growth goals by focusing on developing renewable energy and energy efficiency technologies and creating more than half a million green jobs. In the area of building efficiency, the Governor's Plan calls for:

- Adopting stronger appliance standards for lighting, consumer electronics, and other products;
- Creating new efficiency standards for new buildings;
- Increasing public education and enforcement efforts so that the gains promised by California's efficiency standards are realized;
- Adopting a plan for achieving "zero net energy" homes and businesses;
- Making existing buildings more efficient, especially the half of California homes that were built before the advent of modern building standards; and
- Providing information to commercial investors and homebuyers by disclosing building energy consumption prior to building sale.

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.

The 45-Day Language Express Terms described in this NOPA are designed to comply with and meet all of these state laws and policies. The proposed amendments take a crucial step in meeting the 2020 and 2030 net energy goals: if adopted, they will provide a specification of a zero net energy residential building in the Part 11 CALGreen regulations.

## **B. Summary of Existing Regulations**

The Energy Commission's Building Energy Efficiency Standards are contained in two parts of Title 24 of the California Code of Regulations. Administrative regulations, such as how the standards' requirements are integrated with local governments' building permit processes, are in Part 1 of Title 24, and the substantive requirements for building construction are in Part 6 of Title 24. In addition, voluntary, or "reach" guidelines for sustainable building practices that are more protective of the environment than the minimum standards are in Part 11 of Title 24, the California Green Building Standards. The Energy Commission is responsible for the Energy Chapters (separate chapters are published for residential and nonresidential buildings) of the California Green Building Standards.

The Green Building Standards in Part 11 of Title 24 are composed of several chapters, some of which apply to all buildings and all types of construction, while others apply to specified subsets. Part 11 is further divided into mandatory measures that must be met by a qualifying building (primarily specifying the other Parts and Sections of Title 24 that apply) and voluntary or "reach" measures that are not mandatory unless adopted by a local jurisdiction. The Energy Commission is responsible for adopting both mandatory and voluntary energy provisions in Part 11 of Title 24 with other state agencies being responsible for approving and adopting the other portions of Part 11.

The Energy Commission is responsible for adopting the energy provisions found in the following sections of Part 11:

Chapter 4, Division 4.2, Section 4.201 states that the Energy Commission will adopt mandatory standards for residential green buildings through its adoption of Part 6 of Title 24.

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designated in the Building Energy Efficiency Standards by building type and climate zone that reflects best practices for highly efficient buildings." 2013 Integrated Energy Policy Report, p.5.

Chapter 5, Division 5.2, Section 5.201 states that the Energy Commission will adopt mandatory standards for nonresidential green buildings through its adoption of Part 6 of Title 24.

Appendix A4, Division A4.2 describes the voluntary energy provisions for residential buildings that may only become mandatory when adopted by a local jurisdiction.

Appendix A5, Division A5.2 describes the voluntary energy provisions for nonresidential buildings that may only become mandatory when adopted by a local jurisdiction.

The amendments proposed as a part of this rulemaking are solely to the voluntary provisions in Appendices 4 and 5.

### **C. Summary of the Proposed Regulations**

#### Overview

The proposed changes to Title 24, Part 11, formally acknowledge California's path to zero net energy buildings by establishing a third tier of efficient residential buildings in the voluntary CALGreen provisions, following the existing Tier 1 and Tier 2. This tier pairs the current requirements for Tier 2 with sufficient renewable energy to offset the building's energy use, and explicitly designates such a building as a zero net energy design building.

In addition, the Energy Commission has engaged in a code cleanup review of the voluntary energy efficiency provisions in the CALGreen code, with the anticipated benefits of clearer, more consistent, and more streamlined code language.

***IMPORTANT NOTE: These proposed changes are discussed in more detail in the Initial Statement of Reasons that is being published simultaneously with this NOPA.***

#### Specific Benefits anticipated from the Proposed Standards

The proposed standards will help residential buildings to reach California's zero net energy goals and assist local jurisdictions considering zero net energy related ordinances by providing a clear and specific definition of a zero net energy design building. In addition, clearer phrasing and presentation of the CALGreen regulatory language will aid its effectiveness and implementation.

As these updates to CALGreen concern the voluntary provisions, there is no direct monetary benefit that can be attributed to the regulations. Instead, CALGreen results in indirect benefits and cost savings by acting as a model for local energy efficiency ordinances.

### **COMPARABLE FEDERAL STATUTES OR REGULATIONS**

There are no federal energy standards applicable to nonfederal buildings.

### **CONSISTENCY AND COMPATIBILITY WITH EXISTING STATE REGULATIONS**

There is no inconsistency or incompatibility with existing state regulations.

### **OTHER MATTERS PRESCRIBED BY STATUTE APPLICABLE TO THE ENERGY COMMISSION, OR TO ANY SPECIFIC REGULATION OR CLASS OF REGULATIONS PROPOSED FOR ADOPTION**

All of the laws applicable to the proposed Standards, primarily Public Resources Code Sections 25402 and 25402.1, are discussed above.

## POTENTIAL MANDATES ON LOCAL AGENCIES OR SCHOOL DISTRICTS

The Energy Commission has determined that the proposed regulatory action would not impose a new mandate on local agencies or school districts. The amended provisions are part of the voluntary provisions of Title 24, Part 11, and add a new, additional efficiency tier without altering the existing tiers or their requirements.

## ESTIMATE OF COSTS OR SAVINGS

See the Economic and Fiscal Analysis (Form 399), published simultaneously with this NOPA, for complete details. To summarize:

- A. **Total statewide costs and benefits:** There are no estimated statewide costs associated with this update to the voluntary appendices. The benefit of this update is that it aligns CALGreen's voluntary provisions with California's current zero net energy policies, and makes it easier for local jurisdictions to consider local and regional zero net energy programs.
- B. **Cost or savings to any state agency:** There are no estimated statewide costs to state agencies associated with this update to the voluntary appendices.
- C. **Cost to any local agency required to be reimbursed under Part 7 (commencing with Section 17500) of Division 4 of Title 2 of the Government Code:** The updates to the voluntary appendices do not result in new mandates to local agencies.
- D. **Cost to any school district required to be reimbursed under Part 7 (commencing with Section 17500) of Division 4 of Title 2 of the Government Code:** The updates to the voluntary appendices do not result in new mandates for schools.
- E. **Other nondiscretionary cost or savings imposed on local agencies:** No costs or savings are imposed on local agencies by the updates to the voluntary appendices. Local agencies may use the provisions in these appendices as templates or examples for drafting of local ordinances, however agencies are not required to adhere to the specific language or requirements in these appendices.
- F. **Cost or savings in federal funding to the state:** No costs or savings in federal funding to the state are created by the updates to the voluntary appendices.

## INITIAL DETERMINATION OF NO SIGNIFICANT STATEWIDE ADVERSE ECONOMIC IMPACT ON BUSINESSES, DECLARATION OF EVIDENCE

The Energy Commission has completed an Economic and Fiscal Analysis and made an initial determination that the adoption of the proposed amendments to the voluntary appendices to Part 11 will not have a significant statewide adverse economic impact on businesses, including the ability of California businesses to compete with business in other states. Comments on this determination (as on everything in this NOPA) are welcome.

- A. **Identification of the types of businesses that would be affected.**

The proposed amendments to the voluntary provisions would have no effect on California businesses.

- B. **A description of the projected reporting, record keeping, and other compliance requirements that would result from the proposed action.**

The proposed amendments to the voluntary provisions would not result in new or increased reporting, record keeping, or other compliance requirements or activities.

- C. **Evidence relevant to the Energy Commission's initial determination that the adoption of**

***the proposed Standards will not have a significant statewide adverse economic impact.***

The proposed amendments to the voluntary provisions do not create economic impacts of any kind, due to their voluntary nature. To the extent that actions taken by local agencies may include, modify, or not include all or part of the voluntary provisions, those actions would be subject to existing laws relating to the evaluation and disclosure of impacts of actions by those local agencies. Consideration of potential actions taken by local agencies in the future is speculative and therefore not included as an impact of the amendments.

## **COST IMPACT ON REPRESENTATIVE PRIVATE PERSONS OR BUSINESSES**

Given that the portions of Part 11 that the Energy Commission proposes to modify are voluntary provisions, the Energy Commission has determined that there are no monetary costs or savings associated with these changes.

## **ASSESSMENT OF THE EFFECTS OF THE PROPOSED STANDARDS ON JOBS AND BUSINESS EXPANSION, ELIMINATION, OR CREATION**

The Energy Commission has made a preliminary assessment on whether, and if so to what extent, the proposed Standards will affect the following:

**A. *The creation or elimination of jobs within the State of California.***

Jobs will not be created or eliminated by the proposed updates to the voluntary appendices.

**B. *The creation of new businesses or the elimination of existing businesses within the State of California.***

Businesses will not be created or eliminated by the proposed updates to the voluntary appendices.

**C. *The expansion of businesses currently doing business with the State of California.***

Businesses will not be expanded by the proposed updates to the voluntary appendices.

**D. *Benefits of the proposed standards to the health and welfare of California residents, to worker safety, and to the state's environment.***

The proposed updates to the voluntary appendices will have no direct effect health, welfare, worker safety, or the environment. The updates may encourage consideration and adoption of local ordinances relating to energy efficiency in buildings, and such ordinances, if adopted, can be expected to have the positive impacts on health, welfare, and the environment known to result from energy efficiency. However, as such impacts are speculative they are not considered in this rulemaking.

As noted, while local agencies may use the provisions in these appendices as templates or examples for drafting of local ordinances, such agencies are not required to adhere to the specific language or requirements in these appendices. Consideration of potential future actions taken by local agencies is therefore speculative and is not included in the assessment of the effects of the proposed standards.

## **INITIAL DETERMINATION OF SIGNIFICANT EFFECT ON HOUSING COSTS**

The Energy Commission has made an initial determination that amending the voluntary appendices to Part 11 will not have a significant effect on housing costs. As no new requirements are imposed on new or existing housing by the proposed updates, these updates will have no effect on housing costs.

## **CONSIDERATION OF ALTERNATIVES**

The Energy Commission has made a preliminary determination that no reasonable alternative considered by it, or that has otherwise been identified and brought to its attention, would be more effective in carrying out the purpose of the proposed Standards or would be as effective (and cost-effective) as, and less burdensome to affected private persons than, the proposed amendments.

A rulemaking agency must determine in the Final Statement of Reasons that no reasonable alternative considered by the agency or that has otherwise been identified and brought to the attention of the agency would be more effective in carrying out the purpose for which the action is proposed, would be as effective and less burdensome to affected private persons than the proposed action, or would be more cost-effective to affected private persons and equally effective in implementing the statutory policy or other provision of law.

## **AVAILABILITY OF RULEMAKING DOCUMENTS**

All of the information on which the proposed Standards are based is contained in the rulemaking file, which is available for public review at the Energy Commission's Dockets Office, by contacting the persons named below, or on this website: <http://www.energy.ca.gov/title24/2016standards/>.

If the proposed Standards are adopted, then interested parties may obtain a copy of the Final Statement of Reasons once it has been prepared by going to this website, or by making a written request to the contact person named below.

## **ENERGY COMMISSION CONTACT PERSON FOR PROCEDURAL AND ADMINISTRATIVE QUESTIONS**

Questions on procedural and administrative issues should be addressed to:

Adrian Ownby  
CALIFORNIA ENERGY COMMISSION  
1516 Ninth Street, MS-25  
Sacramento, CA 95814  
(916) 651-2915  
Email: [adrian.ownby@energy.ca.gov](mailto:adrian.ownby@energy.ca.gov)

## **CONTACT PERSON FOR SUBSTANTIVE AND TECHNICAL QUESTIONS**

Maziar Shirakh  
CALIFORNIA ENERGY COMMISSION  
1516 Ninth Street, MS-37  
Sacramento, CA 95814  
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Email: [maziar.shirakh@energy.ca.gov](mailto:maziar.shirakh@energy.ca.gov)

or

Peter Strait  
CALIFORNIA ENERGY COMMISSION  
1516 Ninth Street, MS-37  
Sacramento, CA 95814  
(916) 654-2817  
Email: [peter.strait@energy.ca.gov](mailto:peter.strait@energy.ca.gov)

## **PUBLIC PARTICIPATION**

For assistance in participating in the rulemaking proceeding, please contact the Energy Commission's Public Adviser's Office, at (916) 654-4489, toll free at (800) 822-6228, or by email at [publicadviser@energy.ca.gov](mailto:publicadviser@energy.ca.gov).

If you have a disability and require special accommodations to attend or participate in a hearing, please contact Lou Quiroz at (916) 654-5146 five days before the hearing.

Media inquiries should be sent to the Media and Public Communications Office at [Mediaoffice@energy.ca.gov](mailto:Mediaoffice@energy.ca.gov) or (916) 654-4989.



## **FINAL STATEMENT OF REASONS**

If the proposed amendments are adopted, the Energy Commission will prepare a Final Statement of Reasons. This document will update the Initial Statement of Reasons and respond to public comments. It will be posted on the Energy Commission's website for this proceeding described below, and will be distributed to interested persons subscribed to the Building Standards list-server described above. This document may also be obtained after the conclusion of the rulemaking by contacting Adrian Ownby at (916) 651-2915 or by email at [adrian.ownby@energy.ca.gov](mailto:adrian.ownby@energy.ca.gov).

## **WEBSITE INFORMATION**

This NOPA, the Initial Statement of Reasons, the Express Terms, any 15-Day Language issued subsequently, and all other relevant rulemaking documents can be accessed at the Energy Commission's website at: <http://www.energy.ca.gov/title24/2016standards/>

Mailing Date: February 13, 2015