

STATE OF CALIFORNIA

STATE ENERGY RESOURCES CONSERVATION
AND DEVELOPMENT COMMISSION

2013 Title 24 Building Energy Efficiency)	
Standards Rulemaking Proceeding)	
California Code of Regulations, Title 24,)	
Parts 1, 6, and 11)	
_____)	

Docket No. 12-BSTD-1

**[Proposed] ORDER ADOPTING PROPOSED REGULATIONS AND NEGATIVE
DECLARATION**

I. INTRODUCTION

The California Energy Commission hereby adopts additions and amendments to its energy and water efficiency standards for buildings. These standards apply to residential, nonresidential, high-rise residential, and hotel and motel buildings. The standards are in Part 6 (also known as the California Energy Code) and associated administrative regulations in Part 1 of Title 24 of the California Code of Regulations ("CCR"). The standards are called the "2013 Building Energy Efficiency Standards" (or 2013 Standards), as proposed on May 15, 2012, for a 15-day review period and as revised pursuant to our decisions at the May 31, 2012, public hearing, as reflected in Appendix A. The 2013 Standards will go into effect on January 1, 2014, following approval of the California Building Standards Commission.

Pursuant to the California Environmental Quality Act (CEQA),¹ the Energy Commission also approves the Initial Study, as supplemented, analyzing the environmental impacts of the 2013 Standards. Based on this analysis, the Energy Commission finds that:

- (1) there is no substantial evidence, in light of the whole record, that adopting the 2013 Building Energy Efficiency Standards, in Parts 1 and 6 of Title 24 of the California Code of Regulations, will have a significant effect on the environment and
- (2) the Negative Declaration reflects the Energy Commission's independent judgment and analysis.

And the Energy Commission adopts the Negative Declaration.

¹Public Resources Code § 21000 et seq.

The Energy Commission takes this action under the authority given by Public Resources Code sections 25218, subd. (e), 25402, 25402.1, 25402.4, 25402.5, 25402.5.4, 25402.8 and 25910, to implement, interpret and make specific Sections 25402, subd. (a)-(c), 25402.1, 25402.4, 25402.5, 25402.5.4, 25402.8 and 25910.

II. HISTORY OF THE PROCEEDING

To develop the 2013 Standards, the Energy Commission conducted an open, transparent, and extensive public process. Between November 2010 and today, the Commission has held over 15 workshops and other public events. We began with a presentation of the overall plan and schedule for this rule-making, and the fundamental building blocks that would be used in the Standards. Subsequent workshops addressed various aspects of the 2013 Standards in detail. During this process, more than 45 stakeholder groups assessed, analyzed, discussed, and helped to improve numerous versions of the proposed Standards, and the Commission staff responded to more than 1,000 public comments.

On February 7, 2012, the formal rule-making phase was initiated when the Commission (1) filed with the California Building Standards Commission ("CBSC") and the Office of Administrative Law ("OAL"), and (2) published, the following:

- ☐ A Notice of Proposed Action ("NOPA"), which described the proceeding, summarized the proposed Standards, and explained how interested persons could participate;
- ☐ Economic and Fiscal Analysis (Form 399);
- ☐ An Initial Statement of Reasons ("ISOR"), which presented the rationales for the Standards; and
- ☐ Proposed Express Terms ("45-day language") of the 2013 Standards.

OAL published the NOPA in the California Regulatory Notice Register on February 24, 2012.²

The Commission also provided the NOPA to:

- ☐ every contact on the Energy Commission's mailing lists for: *The Blueprint* (a Title 24 newsletter), appliance efficiency standards, nonresidential and residential building energy efficiency standards, city and county building officials, and county clerks,
- ☐ the Commission's *Efficiency* and *Building Standards* electronic mail list-servers, and

²California Regulatory Notice Register, Feb. 24, 2012, vol. no. 8-Z, p. 228.

□ every person who had requested notice of such matters.

As stated in the NOPA, p. 3, the Commission welcomed comments on any of the proposed provisions – and, as we have noted above, many were received. Accordingly, the Commission on May 15, 2012, published proposed changes to the 45-day language (and identified additional documents beyond those identified in the NOPA upon which it is relying in adopting the 2013 Standards). These changes are called “15-day language” because they are sufficiently related to the 45-day language and thus only subject to an abbreviated 15-day notice requirement. The 15-day language was made available for public comment for 15 days, through May 30, 2012.³

The NOPA, the ISOR, and the 45-day and 15-day language were also timely posted on the Energy Commission's website.⁴

On May 31, 2012, the Energy Commission held a public hearing, pursuant to Government Code section 11346.8 and Public Resources Code section 25402, to accept both oral and written final comments on the 2013 Standards, and to consider their adoption.

Also, as discussed in detail below, the Commission considered at this hearing adopting the Negative Declaration prepared pursuant to CEQA.

III. FINDINGS AND CONCLUSIONS

Several different statutory schemes govern the Commission's adoption of building standards: the Warren-Alquist State Energy Resources Conservation and Development Act,⁵ the Administrative Procedure Act,⁶ and the Building Standards Law.⁷ Pursuant to these statutes, the Commission has reviewed the entire record of this proceeding, including public comments, reports and other documents, transcripts of public events, and all other materials that have been filed in this proceeding (Docket No. 12-BSTD-1). Based on that record, the Commission makes the following findings and conclusions.

A. The Warren-Alquist Act

1. Public Resources Code Sections 25402, subd. (a)-(b)

The Standards we adopt today satisfy the requirements of Public Resources Code section 25402, subdivisions (a) and (b). Those provisions require the Commission to adopt building design and construction standards that increase the efficiency in the use of energy and water for new residential and new nonresidential buildings, and

³ Gov. Code § 11346.8; Cal. Code Regs., tit. 1, § 42.

⁴ See <http://www.energy.ca.gov/title24/2013standards/rulemaking/documents/>.

⁵ Pub. Resources Code § 25000 et seq.

⁶ Gov. Code § 111340 et seq.

⁷ Health & Safety Code § 18901 et seq.

energy and water conservation design standards. By law, these standards must be “cost effective when taken in their entirety, and when amortized over the economic life of the structure when compared with historic practice.”

The 2013 Standards fulfill these directives. They increase the efficiency of and conserve the use of energy and water. Moreover, they are cost-effective.

Buildings constructed pursuant to the 2013 Standards are projected to:

- ☐ save \$1.60 billion in energy over a 30-year life;
- ☐ save 200 million gallons of water per year, and;
- ☐ avoid more than 155 thousand metric tons of greenhouse gas emissions per year.

To further illustrate the anticipated savings, in the residential context, the 25 percent efficiency improvement in the 2013 Standards will provide a 2½:1 return on a typical homeowner’s investment. If factored into a 30-year mortgage, the standards will add approximately \$11 per month to the cost of the average home, but will save approximately \$27 on monthly heating, cooling, and lighting bills. On average, the 2013 Standards will increase the cost of constructing a new residential building by \$2,290 but will return more than \$6,200 in energy savings over 30 years.

For complete details of the Energy Commission’s fiscal and economic analysis of the 2013 Standards, see the Economic and Fiscal Analysis (Form 399), previously published with the NOPA.

Therefore, we find and conclude that the 2013 Standards are cost effective.

5. Public Resources Code Section 25402.8.

Section 25402.8 of the Warren-Alquist Act directs the Commission, when adopting new building energy conservation standards to “include in its deliberations the impact that those standards would have on indoor air pollution problems.”

The Commission must take into account both the indoor air quality concerns embodied in Section 25402.8 and the mandate to achieve cost-effective energy conservation in Sections 25402(a) and (b). This alone requires a delicate balancing of issues and concerns because, among other reasons, by improving indoor air quality through increased ventilation, energy use will increase, which means that the adverse health impacts of outdoor air pollution may also increase.

In developing the 2013 Standards, the Energy Commission coordinated with other agencies with expertise in indoor air quality, including the California Air Resources

Board, California Department of Industrial Relations, Division of Occupational Safety and Health (better known as Cal/OSHA), and the California Department of Health Care Services.

The 2013 Standards:

- ☐ Ensure adequate outdoor air ventilation;
- ☐ require that the minimum outdoor air quantities be provided during regular and pre-occupancy periods; and
- ☐ require documentation showing that ventilation systems provide the minimum outdoor air quantities.

We find and conclude that such provisions are reasonably necessary to carry out the mandate of Section 25402.8, and that they strike an appropriate balance between the requirements of this Section and the energy-savings and cost-effectiveness mandates of Sections 25402, subd.(a)-(b).

B. The Administrative Procedure Act

The California Administrative Procedure Act (“APA”) requires all state agencies to take certain steps and assess several matters when adopting regulations. Many of these matters, analyses and findings are required to be addressed in the ISOR prepared as part of the NOPA, or in the Final Statement of Reasons that is required to be prepared after the regulations are adopted. In support of those documents, the Commission makes the following findings and determinations here in adopting the 2013 Standards.

1. Government Code section 11346.3

In addition to the economic analysis required by Section 11346.3 of the APA, discussed further below, subdivision (c) of this statute mandates that agencies that require the preparation of reports by businesses find that such reports are necessary to protect the health, safety or welfare of the people of California.

The 2013 Standards require completion of certain reports, called compliance documentation, regarding the efficiency measures incorporated into buildings. The reports collect the information necessary for local building officials, building owners and occupants, and contractors to ensure that the measures are properly installed and operating correctly, so that the anticipated energy, environmental and cost benefits will actually be achieved. Accordingly, we find and conclude that it is necessary that these reporting requirements apply to businesses, in order to protect the health, safety and welfare of the people of California, as required by Government Code section 11346.3, subdivision (c).

2. Government Code section 11346.45

State agencies must “involve parties who would be subject to the proposed regulations in public discussions regarding those proposed regulations, when the proposed regulations involve complex proposals or a large number of proposals that cannot easily be reviewed during the comment period.” As described above, the Energy Commission conducted extensive outreach with industry and other stakeholders, over the course of the past 18 months on the structure and contents of the regulations. We therefore find and conclude that the Energy Commission has complied with Government Code section 11346.45.

3. Government Code sections 11346.3, 11346.5 and 11346.9

Sections 11346.3, 11346.5, and 11346.9 of the APA require State agencies to assess various potential economic and fiscal impacts of proposed regulations potential alternatives. Briefly stated, the Commission finds that the 2013 Standards:

- a) Will not result in a significant statewide adverse impact directly affecting business (including small businesses), including the ability of California businesses to compete with businesses in other states, and job creation;
- b) Will not have significant impacts on housing costs;
- c) Do not have alternatives that would be more effective in carrying out the purposes of the Warren-Alquist Act without increasing burdens, or that would be as effective and less burdensome to affected private persons in carrying out the purposes; and
- d) Will not impose any direct costs or direct or indirect requirements on state agencies, local agencies, or school districts, including but not limited to costs that are required to be reimbursed under Part 7 (commencing with Section 17500) of the Government Code.

These matters are discussed below.

a. No Significant Economic Impact on Businesses and Job Creation

The Energy Commission has determined that adopting the 2013 Standards will not have a significant statewide adverse economic impact on businesses, including the ability of California businesses to compete with business in other states.

The Standards will require energy efficiency measures for all new nonresidential and residential construction, and for certain additions and alterations to existing buildings as well. However, those measures are cost-effective, so businesses will experience a positive economic impact. In addition, the Standards will indirectly require changes in practice, and the retraining of employees, in businesses that are involved in the design and construction of buildings, in compliance analysis and documentation, and

in field verification. Any costs attributable to such changes and retraining would be short-term in nature, since the incremental cost increases for new technologies will not persist once these technologies become mainstream, and building practice changes requiring retraining will not result in ongoing cost increases. In any case, these incremental construction cost increases would ultimately be borne by the beneficiaries of the Standards: the people and businesses benefitting from reduced energy bills.

In addition, new jobs may be created as a result of the new compliance procedures, or to provide compliance-related services and energy-efficiency products. The Energy Commission estimates that the 2013 Standards may create up to 3,500 new jobs in the building industry. Also, because the Standards will save hundreds of millions of dollars in energy costs, there will be more money in the economy that can be used for job creation.

For the same reasons, the Commission finds that the 2013 Standards will not have any significant adverse impact on small or other businesses or other affected persons. By making compliance with the standards easier, the proposed regulations will help building designers, architects, contractors, and similar professionals. Most importantly, by causing overall reductions in the costs of owning and operating residences and buildings, the 2013 Standards will reduce costs for all businesses and persons throughout the state.

b. Impact on Housing Costs

The 2013 Standards will affect housing costs. By requiring the installation of energy efficiency measures that would otherwise not be included in buildings, the 2013 Standards will result in small increases in the initial cost of housing. The Energy Commission estimates that an average of \$3,300 in additional costs for single family residential buildings will result from the 2013 Standards, and an incremental construction increase of \$45,000 for a 15,000 square foot building (such as a multi-family residential building), less than 2% of typical construction costs for this building size. As described above, these increases will be recouped by the reduced energy costs to operate the buildings. Further, this estimate is likely more than what will be realized, since it does not account for volume pricing or reductions in technology costs once these technologies are provided to a mass market. Therefore, we find and conclude that there will be no significant increase in housing costs.

c. Consideration of Alternative Proposals: Necessity

The 2013 Standards are the result of a process that lasted eighteen months, involved more than a dozen publicly-noticed hearings and workshops, relied upon input from numerous representatives of all aspects of the building industry and from building of-

ficials, and produced detailed and sophisticated technical analyses. Moreover, the resultant 2013 Standards carefully harmonize the statutory requirements of energy conservation, cost-effectiveness, and other aspects of the public health and welfare.

Many alternatives suggested to the Commission have been included in the Standards; those that are not either (1) were more expensive than the proposed Standards, (2) were infeasible, or (3) would save less energy than the proposed Standards. Discussions of all the specific alternatives considered are in the public comments and reports in the record of this rulemaking proceeding, and will be discussed in more detail in the FSOR prepared after adoption.

Therefore, the Energy Commission has determined that (1) no reasonable alternative considered by it or that has otherwise been identified and brought to its attention (a) would be more effective in carrying out the purposes of the Warren-Alquist Act, (b) would be as effective and less burdensome to affected private persons than the adopted regulations, or (c) would be more cost-effective to affected private persons and equally effective in implementing the Warren-Alquist Act; and (2) the 2013 Standards are necessary to carry out the purposes for which they are proposed—cost-effective energy savings and environmental improvements—because without the Standards, those purposes will not be achieved.

d. Mandates and Costs on State or Local Agencies and School Districts

By requiring new or improved energy efficiency measures to be installed, the 2013 Standards will result in small increases in the cost of new construction. However, those construction costs will be more than offset by reductions in energy costs, so that over the life of a building, total costs will be reduced. Therefore, although the 2013 Standards will result in direct costs (for construction) and savings (in energy bills) for local and state agencies and school districts (to the extent that those agencies and districts construct buildings or pay energy bills), the Commission finds that they will not impose a mandate on local agencies or school districts or impose increased or new costs that are reimbursable by the state under Part 7 (beginning with section 17500) of Division 4 of the Government Code. In addition, because the 2013 Standards will make enforcement easier, local and state agencies responsible for enforcing the building 2013 Standards are likely to enjoy savings.

As required by Government Code section 11346.9, subd. (a)(2), the Commission finds and concludes that there will be no costs or savings to local or state agencies or school districts. Finally, we find and conclude that there will be no costs or savings to federal agencies, and no costs or savings in federal funding to the State.

For complete details of the Energy Commission's fiscal and economic analysis of the 2013 Standards, see the Economic and Fiscal Analysis (Form 399), previously pub-

lished with the NOPA.

C. The State Building Standards Law (Health & Safety Code Section 18930).

The Building Standards Law requires that state agencies adopting building standards submit to the California Building Standards Commission both their adopted building standards and a justification of how the standards meet the criteria in Section 18930 of the Health and Safety Code. For the reasons described below, we find, determine, and conclude that the 2013 Standards comply with each one of the applicable criteria. Additional supporting analysis will accompany the 2013 Standards when they are submitted for approval to the Building Standards Commission.

1. The building standards do not conflict with, overlap, or duplicate other building standards

There is no overlap or duplication with other regulations because the Energy Commission is the only agency authorized to set efficiency standards for buildings, and for the same reason there should be no conflict with other building standards (i.e., no situation in which it is impossible to comply with both an Energy Commission standard and another building standard).

2. The building standards are within the parameters established by enabling legislation and are not expressly within the exclusive jurisdiction of another agency

The “enabling legislation” for the 2013 Standards is the Warren-Alquist Act; compliance with its “parameters” is discussed above. The Warren-Alquist Act gives to the Energy Commission, and not to any other agency, the exclusive jurisdiction to set energy standards for buildings.

3. The public interest requires the adoption of the building standards

The Warren-Alquist Act requires the Commission to adopt and “periodically update” its building standards, which indicates that the Legislature itself deems adoption of cost-effective building standards to be in the public interest.⁸ Moreover, as we have discussed at length above, the extensive public record of this proceeding demonstrates that the 2013 Standards will save substantial amounts of energy and money, and will reduce adverse environmental impacts, all of which are in the public interest.

4. The building standards are not unreasonable, arbitrary, unfair, or capricious, in

⁸Pub. Resources Code, § 25402, subd. (a)(1).

whole or in part

Not only the content of the 2013 Standards, but also the process through which they were adopted (including the voluminous comments both supporting and suggesting edits which were incorporated into the 2013 Standards) show that this criterion was met.

5. The cost to the public is reasonable based on the overall benefit to be derived from the building standards

As described herein, the 2013 Standards are cost-effective. The costs which are imposed are reasonable based on the economic, environmental and other benefits to be derived.

6. The building standards are not unnecessarily ambiguous or vague, in whole or in part

Throughout the one-and-a-half-year rulemaking process, the Commission made many changes to draft proposals to ensure their clarity. There were no comments on the 15-Day Language regarding unnecessary ambiguity or vagueness.

7. The applicable national specifications, published standards, and model codes have been incorporated in the standards as provided in the State Building Standards Law, where appropriate

There are no federal laws applicable to nonfederal buildings in their entirety, so nothing in this realm could have been incorporated into the 2013 Standards. However, the adopted Standards do incorporate (as previous editions of the Standards have for decades incorporated) federal energy standards for particular appliances that may be installed in buildings.

There are several different types of national and model standards that could be applicable to the Energy Commission's building standards. The Commission included model and national codes and specifications wherever appropriate. For example, heating and cooling system design loads shall be determined in accordance with the procedures described in the ASHRAE Handbook, Fundamentals Volume, or as specified in a method approved by the Commission.⁹

8. The format of the building standards is consistent with that adopted by the California Building Standards Commission

⁹ 2013 Standards, Title 24, Part 6, § 140.4(b)2.

The 2013 Standards continue to use the format of the other building standards in the State Building Code.

9. The proposed building standards, if they promote fire and panic safety as determined by the State Fire Marshal, have the written approval of the State Fire Marshal

The 2013 Standards are not intended to promote fire and panic safety. Nevertheless, the Energy Commission has coordinated with the State Fire Marshal to ensure any necessary approvals are obtained. We understand that following adoption, the Fire Marshal will file with the Commission written approval of the 2013 Standards.

D. The California Environmental Quality Act (Public Resources Code Section 21000 et seq.)

The California Environmental Quality Act (“CEQA”) requires that state agencies consider the environmental impact of their discretionary decisions, including the adoption of regulations. The Energy Commission began its compliance with CEQA’s mandate by preparing an “Initial Study”. (See Cal. Code Regs., tit. 14, §§ 15060 - 15065.) The Initial Study, addressed matters such as air emissions, water use, indoor air pollution, and the use of materials such as wood, glass, aluminum, copper, fiberglass, mercury, lead, steel, plastic silicon, gold, and titanium.

As CEQA requires, the Commission then published a Notice of Intent to adopt a Negative Declaration.¹⁰ The Notice, Initial Study and the Proposed Negative Declaration were made available through the Statewide Clearinghouse at the Office of Planning and Research to the following responsible agencies:¹¹

- The California Air Resources Board,
- The Department of Housing & Community Development,
- The Office of School Construction,
- The California Public Utilities Commission,
- The California Resource Agency,
- The California Department of Resources Recycling and Recovery,
- The California Department of Toxic Substance Control
- The California Department of Water Resources, and
- The California State Fire Marshal.

¹⁰See Public Resources Code sections 21091, 21092 and 21092.3, and 14 CCR section 15072(g).

¹¹ 14 CCR Section 15073(d).

The Notice of Intent was also sent to all 58 county clerks in California as well as to over 10,000 people and entities that had previously requested such notice.¹² Finally, a legal notice was published on or near March 28, 2012, in:¹³

- The San Diego Union Tribune
- The San Jose Mercury News
- The San Francisco Chronicle
- The Los Angeles Times

The Energy Commission provided a comment period on the Initial Study and Proposed Negative Declaration beginning on March 26, 2012 and ending May 15, 2012 (a total of 48 days).¹⁴

Moreover, when the 15-Day language was published, the Energy Commission undertook a further review to determine if any of the changes from the 45-Day Language required recirculation of the Proposed Negative Declaration. The Commission found that the changes did not result in any new, significant, avoidable environmental effects, and therefore issued a Supplement to the Initial Study and Proposed Negative Declaration that so indicated.¹⁵

There were no comments received on the Initial Study or Proposed Negative Declaration, either in their original form or as supplemented, whether from any state agencies or the public.

Accordingly, the Energy Commission finds¹⁶ that:

- (1) In light of the whole record, there is no substantial evidence that the 2013 Building Energy Efficiency Standards in Parts 1 and 6 of Title 24 of the California Code of Regulations, will have a significant effect on the environment and
- (2) the Proposed Negative Declaration reflects the Energy Commission's independent judgment and analysis.

IV. ADOPTION OF AMENDMENTS TO REGULATIONS, AND OF NEGATIVE DECLARATION; DELEGATION TO EXECUTIVE DIRECTOR

¹² 14 CCR Section 15072(a).

¹³ 14 CCR Section 15072(b)(1).

¹⁴ 14 CCR Section 15073(a).

¹⁵ 14 CCR Section 15073.5.

¹⁶ Public Resources Code section 21082.1.

The California Energy Commission adopts the amendments in the 15-day language dated May 15, 2012, in Title 24, Parts 1 and 6, of the California Code of Regulations, as revised by the document titled "Modifications to 15-day Language", May 15, 2012, and as further revised at the May 31, 2012, public hearing (the latter revisions are set forth in Appendix A).

The California Energy Commission adopts the Negative Declaration dated March 26, 2012.

The California Energy Commission directs the Executive Director to take, on behalf of the Commission, all actions reasonably necessary to have the adopted regulations approved by the California Building Standards Commission and go into effect, including but not limited to preparing and filing all appropriate documents and correcting typographical and other nonsubstantive errors, such as the Final Statement of Reasons and the Notice of Determination of a Negative Declaration.

APPENDIX A