CALIFORNIA ENERGY COMMISSION

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NINE-POINT CRITERIA ANALYSIS

PROPOSED BUILDING STANDARDS OF THE CALIFORNIA ENERGY COMMISSION:

CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 1 and PART 6 (CALIFORNIA ENERGY CODE)

CALIFORNIA ENERGY COMMISSION DOCKET NUMBER 12-BSTD-2: NONRESIDENTIAL ACCEPTANCE TESTING CERTIFICATION

DECEMBER 17, 2012

Building standards submitted to the California Building Standards Commission (CBSC) for approval are required, by Health and Safety Code section 18930, subdivision (a), to be accompanied by an analysis which will, to the satisfaction of the CBSC, justify their approval. This document is the required analysis for the California Energy Commission's proposed updates to its energy and water efficiency standards in Parts 1 and 6 of Title 24, which were adopted by the Energy Commission on December 12, 2012.

Summary of the Adopted Standards

Existing provisions of the Building Energy Efficiency Standards (California Code Regulations, Title 24, Part 6) require that specific equipment and controls installed in nonresidential buildings be tested according to Energy Commission adopted "acceptance testing" protocols to demonstrate their proper installation before the building is approved for occupancy. Compliance documentation must be signed by both the Field Technician who completed the acceptance testing and the licensed person who is legally responsible for the installation under the Business and Professions Code. The current Standards do not specify qualifications or training that the Field Technician must meet to be authorized to complete the acceptance testing.

These Nonresidential Acceptance Testing Certification regulations create an independent third party certification and training program to ensure Field Technicians and their employers acquire minimal level of training and skill to verify nonresidential lighting controls and mechanical systems comply with existing energy efficiency building standards. 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 Energy Commission adopted these standards under the authority given by Public Resources Code sections 25218, subd. (e), 25402, 25402.1, 25402.4, 25402.5, 25402.5.4, 25402.8, 25910, and 25943, and Health and Safety Code sections 18930.5 and 18941.5, to implement, interpret and make specific Public Resources Code sections 25402, subds. (a)-(c),

25402.1, 25402.4, 25402.5, 25402.5.4, 25402.8, 25910, and 25943, and Health and Safety Code sections 18930.5 and 18941.5.

The development of these Nonresidential Acceptance Testing Certification regulations followed the larger overall development process for the California Energy Code in Part 6 and the associated administrative regulations in Part 1 of Title 24 of the CCR. Those standards in Parts 1 and 6 are collectively called the "2013 Building Energy Efficiency Standards" (or 2013 Standards), and were adopted by the Energy Commission at a May 31, 2012, public hearing.

On September 19, 2012, the Energy Commission published a Notice of Proposed Action regarding these proposed regulations. As stated in the Notice of Proposed Action and associated Initial Statement of Reasons, the Energy Code requires that specific equipment and controls installed in nonresidential buildings be tested according to Energy Commission-adopted "acceptance testing" protocols to ensure their proper installation before the building is approved for occupancy. Compliance documentation must be signed by both the Field Technician who completed the acceptance testing and the licensed person who is legally responsible for the installation under the Business and Professions Code. The current Standards do not specify qualifications or training that the Field Technician must meet to be authorized to complete the acceptance testing.

Studies and stakeholder comments provided to the Energy Commission indicate that acceptance testing occurring in the field is currently inadequate. Because of inconsistent levels of training, Field Technicians as a whole are not providing the assurances necessary that the installed systems are delivering the energy efficiencies and monetary savings expected by building owners and which are required by state law. The proposed regulations create an independent third party certification and training program to ensure Field Technicians and their employers acquire minimal level of training and skill to verify nonresidential lighting controls and mechanical systems comply with existing energy efficiency building standards.

The proposed language was made available for public comment for 45 days as required by law. The proposed language was also known as the "45-Day Language" or "45-Day Express Terms." The Notice of Proposed Action also stated that the Energy Commission may decide to make substantive changes to the Express Terms through 15-Day Language, in which case the public hearing would be continued to a later noticed date, and an additional public comment period would be held and explained how interested persons could participate.

Along with the Notice of Proposed Action, the Energy Commission published the Economic and Fiscal Analysis (Form 399) and the Initial Statement of Reasons, which presented the rationales for the proposed Standards. The Notice of Proposed Action, Form 399 and Initial Statement of Reasons were submitted to the California Building Standards Commission and subsequently to the Office of Administrative Law, which published notice of these regulations in the California Regulatory Notice Registry on September 21, 2012.

The Energy Commission also provided the Notice of Proposed Action 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 Energy Commission's Efficiency and Building Standards electronic mail list-servers, and

- Every person who had requested notice of such matters.

In response to comments received on the proposed regulations, on November 1, 2012, the Energy Commission published a Notice of Postponement of Hearing setting a new date for consideration of proposed regulations for Nonresidential Acceptance Testing Certification for December 12, 2012. On November 26, 2012 a Notice of Hearing and Availability was published, announcing the availability of the revised Express Terms and establishing a 15-day public comment period for proposed changes to the 45-Day Language that was initially proposed. These notices were also published on the Energy Commission's website.

The following is a high level summary of the 15-Day Language changes made to the 45-Day Language of the Nonresidential Acceptance Testing Certification:

- Reduced the number of Acceptance Test Technicians (ATTs) that need to be certified before the regulations require that specific nonresidential acceptance tests be performed by certified ATTs;
- Added requirements for Acceptance Test Technician Certification Providers (ATTCPs) to document the specifics of their training and certification procedures;
- Reduced the hours required for the one-day class requirement for Acceptance Test Employers;
- Added a requirement that each ATT, upon certification, receive a unique certification number and include it in the Title 24 compliance documentation filed with the enforcement authorities;
- Added a requirement that each ATTCP provide an explanation of curricula changes to the Energy Commission prior to the effective date of adopted updates to the Building Energy Efficiency Standards;
- Clarified that all potential ATTCPs must apply to the Energy Commission no less than six months prior to the effective date of new or amended Building Energy Efficiency Standards (starting with the 2013 Standards).

In addition to these substantive changes, the 45-Day Language was clarified in several places by removing redundancies and adding specificity.

Documents additional to those identified in the Notice of Proposed Action upon which the Energy Commission is relying in consideration of the 15-Day Language or which were incorporated by reference in the regulations were identified in the Notice of Availability and were made available on the Energy Commission web site or upon request. These changes to the proposed regulatory test are called "15-day language" because they are sufficiently related to the 45-day language and thus only subject to an abbreviated15-day notice requirement. The 15-day language was made available for public comment for 15 days, through December 11, 2012.

On December 12, 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 Energy Provisions of CALGreen, and to consider their adoption.

1) The proposed 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 state 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). Nothing in the record shows otherwise.

The 2013 Standards were found not to conflict with, overlap or duplicate other building standards. The requirements of the Nonresidential Acceptance Testing Certification will provide for better, more reliable implementation of the 2013 Standards and do not, on their own, conflict with, overlap or duplicate other building standards or that address these kinds of testing and training requirements for Field Technicians.

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

The California Energy Commission has statutory authority under Public Resources Code sections 25213, 25402, 25402.1, 25402.4, 25402.5, 25402.8, and 25910 to promulgate and update energy efficiency standards for residential and nonresidential buildings, including both newly constructed buildings and additions and alterations to existing buildings. The Energy Commission is the only state agency with the authority to set efficiency standards for buildings. No commenter suggested otherwise.

The requirements of the Nonresidential Acceptance Testing Certification will provide for better, more reliable implementation of the 2013 Standards and do not exceed the authority of the Warren-Alquist Act.

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

The Warren-Alquist Act requires the Energy 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. Moreover, as we have discussed at length in the Nine-Point Criteria Analysis submitted to the Building Standards Commission in support of the overall 2013 Building Energy Efficiency Standards, the extensive public record 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. The requirements of the Nonresidential Acceptance Testing Certification will provide for better, more reliable implementation of the 2013 Standards and are therefore similarly in the public interest.

4) The proposed building standards are not unreasonable, arbitrary, unfair, or capricious, in whole or in part.

The record of the Energy Commission's rulemaking proceeding demonstrates that the proposed building standards are not unreasonable, arbitrary, unfair, or capricious, in whole or in part. The Building Energy Efficiency Standards respond to the mandates of the

Warren-Alquist Act, the Global Warming Solutions Act of 2006, California's Energy Action Plan 2008 Update, the California Energy Efficiency Long-Term Strategic Plan, the 2011 Integrated Energy Policy Report, the California's Clean Energy Futures Initiative, and Governor Brown's Clean Energy Jobs Plan.

As stated in the Nine-Point Criteria Analysis submitted to the Building Standards Commission in support of the overall 2013 Building Energy Efficiency Standards,

> Not only the content of the 2013 Standards, but also the process through which they were adopted (including the voluminous comments, both supporting the proposed Standards and suggesting edits which were incorporated into the final proposal), show that this criterion was met. Some comments challenged, or proposed modifications to, various provisions of the proposed measures (although rarely using the statutory terms "unreasonable, arbitrary, unfair, or capricious"). The Energy Commission either accepted those comments or determined that they were invalid.

The requirements of the Nonresidential Acceptance Testing Certification will provide for better, more reliable implementation of the 2013 Standards. These requirements have been publicly vetted and supported by those that would be most impacted by them. Therefore, this clearly demonstrates that these requirements are not unreasonable, arbitrary, unfair or capricious, in whole or in part.

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

The record overwhelmingly demonstrates that the 2013 Standards are cost-effective. The added construction costs that the Standards will impose are reasonable based on the economic, environmental, and other benefits that are derived from the Standards and that will substantially outweigh the costs.

The 2013 Standards will reduce the energy use of typical new buildings by around 25 percent compared to buildings constructed under the current standards. Buildings constructed pursuant to the 2013 Standards are projected to:

- Save $1.60 billion in energy over 30 years;
- Save 200 million gallons of water per year; and
- Avoid more than 155 thousand metric tons of greenhouse gas emissions per year.

The Energy Commission estimates average increases in construction costs of $45,000 for a 15,000 square foot commercial building. This is less than 2 percent of typical construction costs for typical nonresidential buildings and, of course, as we just described above, these increases will be more than recouped by the reduced energy costs to operate the buildings.

Businesses, including small businesses that inspect and verify the operational performance of lighting controls or mechanical systems in nonresidential buildings will be required by the Nonresidential Acceptance Testing Certification requirements to gain additional certification of their ability to complete the Title 24, Part 6 installation inspections and acceptance testing

for these systems. The costs to become certified for these businesses are expected to be a one-time cost of approximately $2,000 for each technician and $500 for each employer overseeing technicians. The Energy Commission anticipates that these costs will be passed on to the building owners requiring the services of these businesses through increased fees for these inspection services.

The Nonresidential Acceptance Testing Certification requirement will provide building owners with a higher quality of verification of the energy saving features of their building lighting and mechanical components, thereby helping ensure the building owner is obtaining the benefits of their investment in various technologies. The costs that directly affect private persons and businesses are completely offset by the resulting energy bill savings, which are far in excess of the cost of compliance. The people of California benefit as less energy is used, reducing the need for developing additional generation capacity and the environmental damage associated with such energy projects, including greenhouse gas emissions.

In addition, by developing a rigorous training and certification program, the state will benefit by increasing the awareness among the building industry of the economic and environmental value of energy efficiency that may lead to overall gains in energy efficiency in other areas of building systems.

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

The Energy Commission made many changes to the draft proposals to ensure their clarity. There were no comments on the 15-Day Language for the Nonresidential Acceptance Testing Certification requirements regarding unnecessary ambiguity or vagueness.

7) The applicable national specifications, published standards, and model codes have been incorporated into the proposed Building Standards as required by 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 Nonresidential Acceptance Testing Certification requirements.

There are no national specifications, published standards, or model codes, beyond those which were previously included in the 2013 Standards, which are applicable to the Nonresidential Acceptance Testing Certification requirements.

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

The Nonresidential Acceptance Testing Certification requirements 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 obtained the approval of the State Fire Marshal of the 2013 Standards. The requirements of the Nonresidential Acceptance Testing Certification will provide for better, more reliable implementation of the 2013 Standards and, of themselves, do not address fire and panic safety as defined by the State Fire Marshal.