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DOCKET
12-BSTD-1
DATE APR 10 2012
RECD. APR 10 2012

California Energy Commission
Attention: Docket No. 12-BSTD-1
Dockets Office
1516 Ninth Street, MS-4
Sacramento, CA 95814

Re: 2013 Building Energy Efficiency Standards
California Energy Commission, Docket No. 12-BSTD-1

Dear Sir/Madam:

The undersigned represents the Institute of Heating and Air Conditioning Industries, Inc. (IHACI). IHACI is a nonprofit trade organization founded in 1948. IHACI is the premiere trade organization of the heating and air conditioning industry in California. IHACI's mission is to represent the needs and concerns of HVAC/R/SM professionals. More than 600 licensed California contractors, manufacturers, distributors and utility companies are members of IHACI. These entities are responsible for the employment of tens of thousands of California residents. As an association, the point of view of IHACI is informed by its unique voice on behalf of contractors, manufacturers, educators and vendors, both non-signatory and union in the heating and air conditioning industries.

Accordingly, our comments on individual items must begin with the overview observation, reflected in part in its formal comments of March 2, 2012 (which are incorporated herein by reference) that the CEC should defer all consideration of acceptance testing criteria in any form until it has fashioned a clear and comprehensive vision of what the post Title 24 standards should be.

A clear sense of who is regulated and how, who is exempted and when, and what specific equipment based standards should be the CEC's only task now.

However, the economic issues that are present in the Acceptance Testing issue, strikingly illustrated by the contention displayed amongst those parties testifying at the March 27th

meeting, make it clear that building in testing based gatekeeper standards is, at this time, simply a bad idea. As some have commented, it may be viewed as an endorsement of sub-rosa market share controls in favor of a portion of the testing community that exceeds the CEC's jurisdictional authority to enact or its pragmatic authority to mediate or resolve.

In this context, we respectfully suggest the CEC consider asking the interested community to provide supplemental comments in light of intervening events and the ongoing workshops and hearings, supplemental to the WET Needs Assessment Study. While useful as an initial academic tool to provoke thought, intervening public comment has demonstrated that it does not provide a record that is presently of critically necessary guidance in implementing Title 24 guidelines through the post-installation testing.

IHACI's specific Title 24 responses follow, with the sections commented on set out in italics.

Page 4 - Item 1. Certificate of Compliance -- For all buildings, the Certificate of Compliance described in Section 10 – 103 shall be signed by the person in charge of the building design who is eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design (responsible person); and submitted in accordance with Sections 10-103 (a) and 10-103 (a) 2 to certify conformance with Part 6...

In addition to our overview comments above, the CEC is asked to clearly affirm that under any standard to be adopted; licensed heating and air conditioning contractors necessarily qualify on both residential and nonresidential projects.

Page 4 – Paragraph 2 – For all Nonresidential buildings, the Design Review Kickoff Certificate(s) of Compliance, and Construction Document Design Review Checklist Certificate(s) of Compliance shall be completed and signed by a licensed professional engineer. For buildings less than 10,000 ft², the licensed professional engineer may be the engineer of record. For buildings greater than 10,000 ft² but less but less than 50,000 ft², the licensed professional engineer shall be a qualified in-house engineer with no other project involvement or a third party engineer. For buildings greater than 50,000 ft² and all buildings with complex mechanical systems serving more than 10,000 ft², the licensed professional engineer shall be a third party.

The CEC is asked to clarify whether the proposed standard applies to "new construction." New construction is perceived as problematic for lack of a universally applicable definition given different kinds of installation that might occur. For example, there is no distinction between "new construction" and "change-out," yet such is required.

Page 116 – Ventilation cont. (e) Design and Control Requirements for Quantities of Outdoor Air. 2. -- All variable air volume mechanical ventilation and space-conditioning systems shall include dynamic controls that maintain measured outside air ventilation rates

within 10% of the required outside air ventilation rate at both full and reduced supply airflow conditions. Fixed minimum damper position is not considered to be dynamic and is not an allowed control strategy.

This language provides no exemption for ductless systems. IHACI requests that mini-split and multi-split systems, as well as variable volume capacity systems, regardless of capacity, be considered exempt in nonresidential applications. Ductless systems are, in some cases, the only way to retrofit a conditioned space. Allowing for the use of an independent make-up air system in this situation would be appropriate. The CEC is asked to clarify that the proposed standard does not apply to residential applications.

Page 116, Section 120.2 – Required Controls for Space-Conditioning Systems (i) (page 119 - i) Economizer Fault Detection and Diagnostics (FDD). All air-cooled unitary direct-expansion units, equipped with an economizer and mechanical cooling capacity at AHRI conditions of greater than or equal to 54,000 Btu/hr, shall include a Fault Detection and Diagnostics (FDD) system in accordance with NA9 – Fault Detection and Diagnostics. Air-cooled unitary direct expansion units include packaged, split-systems, heat pump, and variable refrigerant flow (VRF), where the VRF capacity is defined by that of the condensing unit.

Preliminary research indicates that only one identified manufacturer of economizers (5-tons or more) satisfies this proposed standard. The CEC should not compel consumers to purchase only one product and such a market share limitation discourages technology growth of benefit to the overall Title 24 goals.

Page 185 – 4. Air Economizers and return air dampers on individual cooling fan system that has a design supply capacity over 1,500 cfm and a total mechanical cooling capacity over 45,000 Btu/hr shall have the following features:

The CEC is asked to refer to Page 119 (Fault Diagnostics). There appears to be a discrepancy in the standards. Page 185 indicates 4 tons; Page 119 (Fault Diagnostics) indicates 5 tons. IHACI is requesting clarification and consistency throughout the proposed standards.

Page 185 – 4. A. Warrantee – 5-year performance warranty of economizer assembly.

Preliminary research indicates that only one manufacturer provides a 5-year warranty. Our primary concern is that contractors are unable to provide a 5-year labor warranty. Manufacturers as well as the Department of Insurance have continually spoken against this practice. Contractors are not insurance companies. We would ask that this language be changed to, "Warranty – 5-year manufacturers warranty of economizer assembly."

Page 251 – 6. Duct Labeling – Insulated flexible duct products installed to meet this requirement shall include labels, in maximum intervals of 3 feet, showing the thermal performance R-value for the duct insulation itself (excluding air films, vapor, retarder, or other

duct components), based on tests in Section 150.0 (m) 4 and the installed thickness determined by Section 150.0 (m) 5C.

Page 252 -- Although the proposed language properly states that labeling is the responsibility of the manufacturer, IHACI is requesting confirmation that under no circumstance will the responsibility of "labeling" become the responsibility of the contractor.

Page 252 – 14. HVAC System Bypass Ducts. Bypass ducts that deliver conditioned supply air directly to the space conditioning system return duct airflow shall not be used.

IHACI **opposes** the proposed standard. If properly designed and installed, HVAC system Bypass Ducts are effective, efficient and save energy. If the Bypass system meets the requirements of item 15--Zonally Controlled Central Forced Air System then verification has occurred that the system is working efficiently, thereby eliminating the need for 14. ACCA Manual Zr remains the industry standard for proper zone design, equipment requirements and good practices including specific mention of "Limitations in design applications of bypass air."

Page 266 – 12. Ventilation Cooling. Single family homes shall comply with the Whole House Fan (WHF) requirements shown in Table 150.1-A. When a WHF is required, comply with subsections i through iii below...

The CEC is asked to refer to pages 266, 275 and 281). Requirements for WHF include climate zones 8-14 (vast majority of all climate zones). IHACI **opposes** the proposed standard for the following reasons: 1. Homeowners will not accept the requirements. 2. Health and safety issues. For every square foot of home requiring 120 cubic feet of unfiltered outdoor air being brought into the home, indoor air quality issues could prove catastrophic. The potential for creating a backdrafting situation from gas appliances is too great. CEC is asked to refer to the following excerpts from a study posted on the US EPA website. The full report can be found at http://www.epa.gov/iaq/pdfs/field_climate_change_iaq.pdf.

"Increased use of window or whole house fans that increase the air exchange rates of the home will also increase exposure to outdoor aeroallergens and other air pollutants. Under these conditions, many of the climate change related exposures and health effects are similar to what have been documented and projected for outdoor-related climate change related adverse health."

Concluding Comments:

As noted above, IHACI has commented on the proposed 2013 Title 24 Standards. However, until compliance and enforcement issues are remedied, IHACI does not support adoption of the Standards. In this context, efforts that lack the necessary grounding in the full factual record or which are indirectly influenced by the efforts of interest groups to control the market in their favor through "tinkering" with regulatory details they believe are within the CEC's power should be rejected. We are in an environment where the underground economy is

a growing challenge and all indications are that only three to eight percent of HVAC contractors pull building permits and strive to comply with T24 requirements. Additional standards will not drive energy savings; they will simply drive the underground economy farther underground.

Nearly a decade ago, the CEC made the decision that HVAC systems installed in the retrofit market were a major source of energy inefficiency, and for the good of California and its citizens, this problem needed to be addressed. The path chosen to address the problem was to mandate detailed, costly improvements in the manner systems were installed and to create a third-party system for confirming compliance. At the time, many in the industry and in the enforcement community warned that this path offered hazards. Notably, it posed the risk that many contractors, with the silent or active collaboration of many building occupants, would deem the mandates too costly and too intrusive and instead opt to work within the underground economy, thereby evading all already existing building, energy and safety codes as well as the intended improvements.

In this context, there is no identifiable advantage to beginning this phase of the T24 process by regulating the industry in a fashion that ineluctably places legitimate contactors at an unfair business advantage. Indeed, IHACI maintains its ongoing position that the energy savings the State of California seeks will never be met through the regulatory process, but only when a level playing field exists. Every effort should be made to enforce existing regulations before adding to the already burdensome requirements on existing contractors.

Very truly yours,

ATKINSON, ANDELSON, LOYA,
RUUD & ROMO

By
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Partner

RF/clg