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*Your Home
Is Our
Business*

January 25, 2010

To: Louis J. Free, Chair, & Members
Codes Amendment Subcommittee, State Codes and Standards Committee

From: Bill Ethier, CAE, Chief Executive Officer

Re: 2009 IECC and CFE's/ENE's Proposed Amendments

Thank you for the opportunity to comment on the 2009 IECC and, specifically, Connecticut Fund for the Environment's (CFE) and Environment Northeast's (ENE) proposals to amend the 2009 IECC, received by the Department on December 31, 2009. Unfortunately, due to a prior conflict I will be unable to be at your meeting on January 27, 2010. We offer these comments in lieu of our verbal testimony.

The Home Builders Association of Connecticut, Inc. (HBACT) represents approximately 1,100 member companies throughout the state, employing tens of thousands of CT's citizens, who work in all aspects of residential development, new home construction and remodeling. We estimate that our members build 70% to 80% of all new single-family and multifamily housing units across CT.

General Comments:

We have specific comments on CFE's/ENE's twenty-one (21) proposed amendments (below), but first offer a general response to CFE's/ENE's introduction and stated purpose of its proposals. The introduction asserts that the proposals "will assist in meeting some of the requirements of Public Act 09-192" and "help the state meet its mandatory greenhouse gas reduction targets pursuant to Public Act 08-98" We fail to see how the proposed amendments meet the requirements of PA 09-192 or how the 2009 IECC on its own, unamended, fails to meet the requirements of PA 08-98.

Regarding PA 09-192, the statute clearly states that on or after July 1, 2010, the State Building Code shall be revised to,

"include provisions requiring certain buildings of or over a specified minimum size ... to meet or exceed optimum cost-effective building construction standards concerning the thermal envelope or mechanical systems, including, but not limited to, indoor air quality and water conservation, and the lighting and electrical systems of the building. Such provisions shall reference nationally accepted green building rating systems, including, but not limited to, ... [LEED rating system, the Green Globes USA design program, the National Green Building Standard or an equivalent rating system]."

We question whether many of CFE's/ENE's proposed amendments to the 2009 IECC are "optimum cost-effective" construction standards as required by the statute. We also question whether some of the proposals that deal with water conservation would be more appropriately considered as amendments to other model codes within the ICC family when those codes are considered at a later time.

Most importantly, without undertaking an exhaustive review of the LEED and Green Globes rating systems and the NGBS and any equivalent rating system that might be approved by the Codes and Standards Committee, as stated in the statute, we do not know whether any of the twenty-one proposals derives specifically from such rating systems or NGBS. **We would respectfully request the Code Amendment Subcommittee to ask the proponents** of the amendments to specifically identify the section or sections of such rating systems or the NGBS from which each of their proposals is derived. If any proposal does not specifically come from any of the rating systems or the NGBS or an equivalent rating system approved by the CSC, then it cannot, by definition, be offered to meet the requirements of PA 09-192. They can rest only on the motivations or goals of the proponents, but not on the green building code legislation.

We recognize that green building rating systems and programs are not drafted in regulatory code language and as written present huge enforcement issues for building officials. **Therefore, in our view, PA 09-192 contemplates that the Codes and Standards Committee would review the green building rating systems and the NGBS and any equivalent rating system and exercise its discretion to adopt code provisions in the State Building Code that it deems to be the best "cost-effective building construction standards concerning the thermal envelope or mechanical systems"**

The 2009 IECC on its own, unamended, may very well serve the statute's language and purpose since the increased energy efficiency the 2009 IECC achieves in homes is equivalent to the NGBS Bronze level standard (and may or may not exceed the minimum LEED rating system). Moreover, PA 09-192, section 1, requires that the 2012 IECC, which increases energy efficiencies even further than the 2009 IECC, must be adopted by the state within 18 months after its publication. It makes no sense to amend the 2009 IECC to ratchet up its requirements when the legislature has already determined that we will accomplish that goal within 18 months after publication of the 2012 IECC. If the legislature had intended to move up that level of energy efficiency to 2010, it would not have adopted section 1 of PA 09-192.

Regarding the global warming legislation, PA 08-98, it is an impossible stretch for the proponents to state that their amendments to the 2009 IECC will help meet the state's "mandatory greenhouse gas reduction targets" contained in PA 08-98. Those mandatory targets state in PA08-98 that greenhouse gas emissions shall be reduced: "(1) Not later than January 1, 2020, to a level at least ten percent below the level emitted in 1990; and (2) Not later than January 1, 2050, to a level at least eighty percent below the level emitted in 2001." It is fair to say that the IECC will be revised and adopted in CT numerous times before reaching those target reduction dates.

Most importantly, we assert that any marginal increase, if any, in energy efficiency from the proposed amendments to the 2009 IECC on multifamily housing units will have an insignificant, at best, impact on the total greenhouse gas emission reduction targets in the state. Greenhouse gas emissions include emissions from autos and other transportation facilities, from all existing buildings, from all industrial and commercial operations, as well as all other human activities. **Studies show that the contribution to CO2 emissions from all existing residential uses amounts to 21.1%**, while industrial uses equal 30%, transportation equals 31.2% and commercial uses equal 17.7%. And, of all residential uses, most of the CO2 emissions come from single family and multifamily housing built prior to 1991. **All housing built between 1991 to 2001 contributed 2.5% of the total fossil fuel consumption in the nation, which can be roughly correlated to contributions toward CO2 emissions.**

Energy consumption in homes has steadily and significantly been decreasing over time. The average energy consumption per home (in California where the study was conducted) has steadily decreased with each decade. Homes built in the 1970s had an average energy consumption of over 160 kBTU/sqft-year, while the average for all homes built in the 1980s was 80 kBTU/sqft-year, in the 1990s was just over 60 kBTU/sqft-year, and the 2000s has been 40 kBTU/sqft-year. **Energy consumption by new housing that will be built under the 2009 IECC is, of course, unknown but it will clearly be improved over the housing built in the 2000s and will clearly be much less than the 2.5% of all fossil fuel consumption experienced by housing built between 1991 – 2001.** Thus, the contribution to CO2 emissions and fossil fuel consumption by new housing that will be impacted by the 2009 IECC is simply insignificant. Moreover, the effects of occupant behavior on energy consumption can be significant regardless of the building code requirement, which could marginalize further any marginal gains in energy efficiency achieved by the proposed amendments.

Finally, the building code provisions that were in the original global warming legislation were stripped by an amendment on the House floor on 4-28-08 by a vote of 134-13 and PA 08-98 was adopted without any building code provisions. The proponents of the amendments to the 2009 IECC now seek to adopt by regulation requirements that were not mandated by the legislature and seek to make a building code connection to greenhouse gas emissions that was specifically amended out of the global warming bill. Therefore, we urge you to reject the purported statutory grounds for adopting the amendment proposals.

Comments on Specific Proposals:

We strongly urge the Committee to consider the costs to housing from adopting the proposed amendments, especially in our current fragile economy and very tenuous economic and housing recovery. Again, we remind the Committee that PA 09-192 provides you authority to meet or exceed “optimum cost-effective” standards. The legislature, therefore, was clearly cognizant of cost in promoting reasonable goals of energy efficiency. We have not had time to do extensive research into the costs of

CFE's/ENE's proposals given that the submittal was received just three weeks ago and we did not know they were coming. Therefore, silence on any proposal should not be taken by us as acquiescence or agreement to the proposal and we specifically reserve the right to oppose any such proposal as the process progresses. However, a few of our members did provide estimated cost figures for some of these proposals. The proposals below are in order of the numbering system stamped on them (1 to 21).

Comments on Specific Proposals:

Proposal 1 This will add an estimated \$1,500 to \$2,000 per heating/cooling zone.

Proposal 2 This will add \$100 to \$200 per toilet. The proposal for low flow toilets ignores human behavior that results in 2 to 3 flushes to get it to do what it's supposed to do. Moreover, this proposal seems out of place for the IECC.

Proposal 3 Are there uses for which a higher flow rate or pressure is warranted? Is it not more appropriate to allow people to use the water they want at the rate/pressure they want? Without knowing the existing flow rates and pressures of existing equipment, and the full range of people's needs, and the availability of equipment that meets the proposal, this could be an unnecessary and expensive restriction on how people live in their homes.

Proposal 4 This will add \$2,000 to \$3,000 for inspections and one to two weeks to the construction schedule. There is also no clarification on who would do the certifications.

Proposal 5 Are these products readily available?

Proposal 6 Section 404.2.5: We feel this is acceptable; however, there are concerns about cost and the ability of current companies to service these types of products.

Proposal 7 Moisture sensor controllers or rain delays on lawn irrigation systems are acceptable, and required by PA 09-32.

Proposal 8 This is a reasonable and acceptable proposal.

Proposal 9 The focus should be placed on improving air sealing as opposed to focusing on the R-Value.

Proposal 10 There should be analysis done to see how much costs will increase versus how much energy is saved.

Proposal 11 Sections 403.2.1 and 403.2.3 are acceptable. However, regarding section 403.2.2, are there costs estimates for doing these tests? We also object to the code language, "Where required by the code official ..." as this will lead to varying interpretations and could establish a precedent that moves us away from a single State Building Code.

Proposal 12 Who will verify information and at what cost? Self-certification opens up a builder or designer to potential liability problems, which plaintiffs attorneys will not hesitate to pursue. This would be difficult to enforce.

Proposal 13 403.4.1: Are there estimates of the added costs? For section 403.4.2, will this require additional water heaters in larger homes? Are there estimates for the added costs?

Proposal 14 Our understanding is that this is already an EPA rule.

Proposal 15 Section 402.4.1: While generally a good idea, this proposal lacks detail and would likely require a full-time inspector on site. Section 402.4.2: Generally, air sealing confirmed by a blower door test could be beneficial if the air change standard was reasonable. Section 402.4.2.1: We are concerned about the wording that states a building official has to approve who is used to perform the test. Table 402.4.2: This appears to discourage the use of fiberglass batt insulation and will likely add costs.

Proposal 16 There should be analysis done to see how much costs will increase versus how much energy is saved.

Proposal 18 We feel this is acceptable.

Proposal 19 How does this differ from ENERGYSTAR standards?

Proposal 20 We feel this is acceptable.

Proposal 21 We feel this is acceptable.

Again, thank you for the opportunity to comment of the proposals to amend the 2009 IECC.