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Energy Efficiency and Sustainable Design Standards for New Federal Buildings

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Thank you for providing time for our testimony today. We are pleased to be able to provide new information regarding the regulation of green construction, involving tools backed by six pre eminent national organizations that are now available to address federal goals as well as meet the needs of state and local jurisdictions. To begin, I would like to give some background on the ICC itself.

The International Code Council is a membership association dedicated to building safety, fire prevention, and energy efficiency. Our International Codes, or I Codes, provide state of the art basic safeguards for people at home, at school and in the workplace. Our model building codes benefit public safety and support the industry's need for one set of codes without regional limitations. The International Code Council publishes the International Energy Conservation Code (IECC), which is referenced in the Energy Independence and Security Act of 2007, and is a national requirement in section 410 of the American Recovery and Reinvestment Act of 2009. Fifty states and the District of Columbia have adopted the I Codes at the state or jurisdictional level. The IECC in particular is in use or adopted in 45 states, the District of Columbia, and the U.S. Virgin Islands. Federal agencies including the Architect of the Capitol, General Services Administration, National Park Service, Department of State, U.S. Forest Service and the Veterans Administration also enforce the I Codes. The Department of Defense references the International Building Code for constructing military facilities, including those that house U.S. troops, both domestically and abroad.

The International Code Council (ICC) was established in 1994 as a non profit organization dedicated to developing a single set of comprehensive and coordinated national model construction codes. Since the early part of the last century, three non profit organizations developed three separate sets of model codes used throughout the United States. Although regional code development had been effective and responsive to our country's needs, the time came for a single set of codes. The nation's three model code groups responded by creating the

International Code Council and by developing codes without regional limitations – the International Codes.

Now, concerning the proposed rulemaking at hand, the ICC would like to offer the following comments.

First of all, the ICC applauds the Federal Energy Management Program for taking the steps to create clear, understandable and measurable criteria that Federal agency building owners and managers can use, allowing them to effectively build, operate and maintain sustainable and energy efficient buildings. We are confident this will not only set a positive example that can be emulated nationwide, but provide real benefits in operational savings and improved building conditions for both Federal employees and citizens who use the buildings.

However, we also must note, and we believe FEMP should recognize, that some of the terminology used in the legislation and in the proposed regulation does not reflect the most optimal blend of tools now in existence to achieve Congressional intent, instead reflecting only the options available at the time of drafting. Prior to this year, voluntary "rating" type programs were among the only options for guiding the design of green buildings. Such programs, including LEED, were not designed to act as regulatory language. In the absence of a model code to create a regulatory framework for green construction, rating systems helped bring the discussion of green design into focus, setting the stage for a baseline set of codes while LEED and other systems function as an additional set of criteria beyond this codified baseline. The gap between existing codes and rating systems has now been filled. With the publication of the International Green Construction Code (IGCC), which includes ANSI/ASHRAE Standard 189.1 2009 as an optional

building experts, integrating their work into a usable, enforceable document addressing every type of building, in a manner that is flexible enough to meet the needs of diverse jurisdictions.

To recast the proposed rule in this new context, we attempt to indicate throughout our comments the places where the language of the proposed rule is either too restrictive or uses inappropriate or outdated definitions or terminology that could disqualify buildings otherwise meeting state of the art requirements in the rapidly evolving area of green construction.

In the context of the needs of the Federal government, it is also important to designate solutions that will keep up with construction technology, trends and innovations, and to do so through regular updating and publication of the documents used as reference resources. The IGCC covers this need as well. For those unfamiliar with the Code Council's development process, we convene and manage a transparent, participatory process driven by the consensus of voters in several stages. We begin with committees mixing government and industry, moving to a development hearing involving votes of governmental and non governmental members, with final action taken by the enforcement community who will be required to interpret and implement the code. Federal officials and agency staff regularly contribute testimony and participate in our voting process. Our model code development process meets the principles outlined in the OMB Circular A 119, Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities, as codified by Public Law 104 113, the National Technology Transfer and Advancement Act of 1995.

ICC's long history of regularly updating the model codes every three years will allow the Federal aEp

## Part 433

Sec. 433.1

ICC recommends deleting the definitions "major renovations" and "rapidly renewable" for the reasons following Sec. 433.2

Sec. 433.2

ICC suggests deleting *Major Renovations* as a defined term. There is no need to limit the application of this proposal to "major" renovations or renovations over a certain cost threshold. This is a significant segment of the built environment which should not be ignored. Though some rating systems do limit their application to "major" renovations, the IGCC, ASHRAE 189.1 and ICC 700 are applicable to renovations of all sizes, and the mandatory language of the IGCC and ASHRAE Standard 189.1 make the them simple to apply. Where application is burdensome to smaller projects, the IGCC provides exceptions or only applies to larger projects.

process, and the IGCC requires that the end result be verified.

### (e)(1)(iii)

The IGCC fulfills all of the requirements described in this section.

### (e)(2)

The IGCC addresses commissioning principles in both Chapter 6 (Energy conservation, efficiency, and atmospheric quality) and Chapter 9 (Commissioning, operation and maintenance).

## (f)(1)

The IGCC addresses renewable energy systems in Section 611.

### (f)(2)

The IGCC addresses indoor water in Chapter 7 (Water Resource Conservation and Efficiency). The IGCC requires that plumbing fitting and fixture flow rates conserve at least 20 percent more water than the fitting and fixture flow rates permissible under the International Plumbing Code. Two tiers requiring 30 percent and 40 percent less water be used by plumbing fitting and fixtures are also included in Section 702.1.2. In addition, Chapter 7 of the IGCC addresses water conservation in many other ways.

### (f)(2)(i)

Water meters are required by Section 705.2 of the IGCC.

# (f)(2)(ii)

As required by this proposal, the IGCC regulates plumbing and fixture flow rates separate of other water related requirements.

# (f)(3)

The IGCC addresses outdoor water conservation in Chapter 4 (Site Development and Land Use) and Chapter 7 (Water Resource Conservation and Efficiency).

### (f)(4)

Rather than specify WaterSense labeling, (which is a consumer marketing program with requirements other than water conservation) the IGCC specifies water

503.2 and its subsections. Rapidly renewable materials are no longer recognized as particularly greener or more sustainable than other renewable materials.

## (f)(9)(iv)(A)

The IGCC addresses waste materials management in Section 502.

# (f)(9)(iv)(B)

The IGCC requires space for recyclable materials in buildings in Section 502.2 an 502.3.

# (f)(9)(v)

IGCC Section 502.1 requires the amount of construction waste which is required to be recycled to be selected by the adopting entity from three percentage values.

## (f)(10)

The IGCC addresses siting in Chapter 4 (Site Development

ICC 700, though it is a point based rating system, differs from most in that it requires performance be ramped up in each and every environmental category at each of its four performance levels.

ASHRAE Standard 189.1 primarily contains minimum requirements for sustainable construction. It is not a rating system, does not contain performance thresholds and does not contain electives. It does, however, offer both prescriptive and performance options for many of its requirements. ASHRAE Standard 189 is a compliance option included within the IGCC, and can be used if specified by the adopting entity.

All other requirements of Section 433.9 are satisfied by the IGCC.

Part 435

Sec.4c(IGCC,)Tj/TT31Tf2.20220TD0T236Tt

unnecessary. Design teams are typically expensive, and additional consultants can complicate and burden small projects. Again, it is the end result that is the important factor, not the process, and both ICC 700 and the IGCC require that the end result be verified.

### (e)(2)

The IGCC references ICC 700 for low rise residential buildings. As stated previously under Integrated Design, the ICC 700 addresses commissioning in the form of verification requirements.

## (e)(2)(i)

All commissioning agents must gain experience at some point. Therefore, the current language would prevent many from gaining that initial experience. Conversely, a provider who is experienced but not certified may unwittingly be doing things wrong. Thus, certification of the commissioning provider should be the determining factor, not experience.

### (f)(1)

Renewable energy is encouraged, but not required, by Sections 704.3, 704.3.1, 704.3.2, 704.3.3 and 705.2 of ICC 700.

## (f)(2)

ICC 700 regulates both indoor and outdoor water in Chapter 8, Water Efficiency.

ICC 700 encourages many water conservation related practices, including the reduction of potable water use and the use of rainwater, treated wastewater and water efficient products, therefore, while not specifically mandated, it would be nigh impossible for a building receiving a Bronze ICC 700 certification not to reduce it s potable water usage by at least 20 percent based on sample DOE FEMP data, pursuant to EO 13423.

### (f)(4)

Again, rather than specify WaterSense labeling, the IGCC specifies water conservation requirements for appliances and fixtures which are at least the equivalent of WaterSense labeled appliances and fixtures. Requiring Watersense labeled products may add cost without adding additional value or performance.

#### (f)(5)

ICC 700 addresses moisture control in Section 903, Moisture Management.

#### (f)(6)

Although ICC 700 does not provide requirements for daylighting, the International Residential Code (IRC), which governs low rise residential buildings, does.

Section R303 of the IRC contains requirements for a minimum glazed area which is equal to at least 8 percent of the floor area of all habitable spaces, with an exception which allows lighting to be provided by mechanical means.

#### (f)(7)

ICC 700 regulates material emissions and encourages the use of low emitting materials in Sections

products.

It is not necessary that specific recycling and salvage operations be indentified during the planning stages. Successful bidding contractors are not typically known during the planning stage. Successful bidders should be free to select the best option available to them and should be free to change to another