



International Code Council

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EPA Clean Power Plan
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**COMMENTS OF:
THE INTERNATIONAL CODE COUNCIL (ICC)
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BACKGROUND

The International Code Council (ICC) is a U.S.-based membership association. It is dedicated to developing model codes and standards used in the design, build and compliance process to construct safe, energy-efficient, sustainable, affordable and resilient structures in the built environment. The International Codes, or I-Codes, published by ICC, provide minimum safeguards for people at home, at school and in the workplace. Building codes benefit public safety and support the industry's need for one set of codes without regional limitations. Among the codes published by ICC is the International Energy Conservation Code (IECC), which is referenced in the Energy Conservation and Production Act (ECPA, Public Law 102-486), and the Energy Independence and Security Act (EISA) of 2007. The 2009 IECC was also a compliance requirement in the American Recovery and Reinvestment Act for the receipt of state energy efficiency funding, which was agreed to by the governors of all 50 states. ICC also publishes the International Green Construction Code (IgCC), which contains energy efficiency, water efficiency, air quality, siting and location considerations and sustainability provisions.

All 50 states and the District of Columbia have adopted at least one I-Code at the state or jurisdictional level. 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 for the facilities that they own or manage. The Department of Defense references the International Building Code for constructing military facilities, including those that house U.S. troops, domestically and abroad.

ICC was established in 1994 as a non-profit association dedicated to developing a single set of comprehensive and coordinated national model construction codes. The founders of the ICC were the Building Officials and Code Administrators International, Inc. (BOCA), International Conference of Building Officials (ICBO), and Southern Building Code Congress International, Inc. (SBCCI). Since the early part of the last century, these non-profit organizations developed three separate sets of model codes used throughout the United States. Although regional code development was 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.

We begin by noting that ICC has worked closely with the energy efficiency community, home builders and contractors, the Department of Energy (DOE), State energy offices, and others over the past five years to help raise awareness of the importance of building energy codes to reduce electricity end-use, and the need to adopt and enforce current building energy codes at the state and local level. At the same time, DOE has also focused some effort on measuring the degree to which energy codes are complied with, through a program of pilot programs, and a Request for Information (RFI) within the past year.

As the association that represents the majority of local code officials, who are charged by law with assuring compliance with all adopted building codes within the jurisdictions they serve, we look at this issue with a unique perspective. We hope that our comments will assist the Agency, and the states developing compliance plans consistent with the agency's proposed rule, to successfully achieve their objectives.

In the world of building codes, most building code officials believe that the answer to a question about building code compliance, such as "Does the building comply with the 2012 IECC?" can be answered either yes or no. The nature of code inspection allows for little discretion in allowing a building that is non-compliant to be approved for occupancy. In most jurisdictions, if the building meets the requirements of the code, it is approved, and issued a certificate of occupancy. If it does not, the builder or owner is notified of the deficiencies in code compliance and requests a re-inspection when those issues have been addressed. While we acknowledge that compliance with codes, to the extent that it is based on human examination of large buildings and systems, will almost never be 100% accurate, we do know that increased training, awareness and familiarity with the codes by builders, contractors and code officials leads to a higher level of compliance.

We believe that as the adoption and use of the IECC becomes accepted as a fundamental part of code compliance, compliance with energy codes will approach the very high levels of compliance seen for the International Residential Code (IRC), the International Building Code (IBC) and the International Fire Code (IFC), that assure the public of safe buildings. It should be noted, that while the IRC, IBC and IFC and their predecessor regional codes have been around for nearly 100 years in the U.S., the IECC has only been published for a little more than 10 years, and its predecessor, the Model Energy Code only since 1992. The building industry changes slowly, and practices of builders and their contractors change slowly as well. While many see the IECC level of compliance as a glass half empty, when we look at the short time the code has been available, and the even shorter period that a large number of jurisdictions have adopted and begun complying to it, we see the glass as half full. Given the fact that the states have approximately five more years before the plans envisioned in the EPA Clean Power

Plan will begin being measured, we think that the states will be achieving much higher levels of compliance, approaching the 90-100% level routinely seen with base building codes.

COMMENTS

ICC will comment exclusively on “Building Block 4- Demand Side Energy Efficiency” and within that building block, we will discuss the issue of building energy codes.

We commend EPA for looking at the experience of leading states, in particular California, which has a long history of adopting and enforcing building energy codes that have led the nation, and have contributed significantly to the development of recent versions of the IECC, as well as to parts of the IgCC. As EPA points out, in the preamble to the proposed rule, the application and implementation of best practices takes time, and states like California have been engaged in requiring buildings to meet strict building energy codes for many years. While the discussion in the preamble suggests a distinction between state “energy efficiency programs” and implementation of building energy codes, it is quite clear that the reduction in energy use in California is to a very large extent the result of adoption and enforcement of building energy codes. We would say that a key, and very crucial element of the California energy efficiency program has been the advanced, and highly efficient energy codes, that have been consistently adopted, enforced, and upgraded on a regular basis in that state.

While some energy efficiency programs are higher profile, and attract more attention than building energy codes, the fact remains that to achieve a really significant reduction in electricity end use, it is necessary to reduce usage across the board, in all homes, offices and other commercial structures. The huge use of energy for heating, cooling and lighting buildings means that reducing energy for those purposes in ALL new buildings by a significant percentage—such as the 30% reduction in average energy use estimated by DOE in buildings constructed to meet the 2012 IECC, over buildings built to meet the 2006 IECC—will result in a significant decrease in energy end-use.

We see several reasons to allow states to count end-use energy savings achieved through adoption of statewide building energy codes to be used to achieve part of the state plan for end-use energy reduction. These reasons go to the heart of the EPA rationale for the Clean Power Regulation, and strongly support the inclusion of building energy codes in state plans:

- 1) Reductions in energy use attributed to building codes are measurable. New tools to accurately measure the difference between existing buildings and new buildings meeting current energy codes continue to be developed and implemented in the field.
- 2) Reductions in energy use attributed to building energy code adoption and enforcement are scalable and predictable, based on known demographic and construction trend data.
- 3) Reductions in energy use attributed to energy codes are permanent, and continue to result in lower end-use for the life of the building, often 100 years or more.
- 4) Reductions in energy use for new buildings regulated by building codes have an indirect market impact on existing buildings, influencing owners of both residential and commercial to retrofit those building to be competitive in the market place in competition with newly constructed, energy-efficient buildings.
- 5) Once adopted, and integrated into construction practices, building energy codes are non-reversible. They are almost never modified to result in less efficient buildings. At ICC, we know of no jurisdiction that having adopted the IECC has later adopted a less stringent version of the code. The fact that building energy codes are adopted

by, and supported by, policymakers of all political backgrounds and philosophies means they are unlikely to be subject to swings in public sentiment or political changes.

- 6) Finally, there is already a strong and sustainable infrastructure in place to support the adoption, implementation and enforcement of building energy codes across the nation in every state, and especially in areas where over 90% of new construction occurs. The infrastructure comprises systems for publishing and distributing the model IECC. The system provides interpretations and guidance on code provisions, and training and certification testing on current and each new version of the IECC. All of these are provided nationwide by ICC, and there are various training and guidance programs provided by other public and private sector organizations.

For all the above reasons, ICC suggests that EPA include building energy codes as an acceptable element of state Clean Energy plans, and specifically include the 2012 or 2105 IECC as an acceptable element of Building Block 4.

We believe it is critical to include this in the final rule for a number of reasons, one of which is to recognize the public support for the cost effectiveness of building energy codes. However, while ICC knows that the public supports strong energy codes, and believes that building energy codes are cost-effective even without incentives or mandates, adoptions are not automatic. Though confidence in the codes cost-effectiveness is bolstered by DOE modeling that demonstrates a very short payback period for building energy codes in new construction, there continues to be some resistance to adoption of the IECC, as a result of the split incentive phenomenon that applies in nearly every aspect of building energy use. This is the phenomenon where the first cost of efficiency measures is borne by a different party than the benefits of energy efficiency savings over the life of the residential unit. This applies in the instance of rental housing, where the cost of utilities is almost always paid for by tenants, and the cost of efficiency upgrades, either at initial construction or during renovation, is borne by the building owner. Likewise, in single family housing, while there are some market reasons for a builder to promote “energy efficient homes” the cost of actually incorporating efficiency upgrades is borne by the builder. The benefits of efficiency are realized over time by the residence owner, resulting in the builder focusing on the lowest cost upgrades, which may or may not be the most effective upgrades to reduce end-use energy. And, in nearly all commercial leasing situations, the building tenant pays for energy use. That results in little incentive for the builder/owner of the building to invest in construction practices and systems that will minimize energy use over the 100 year plus lifespan of the building.

All of these split incentive issues can only be addressed by over-arching regulatory and policy decisions that influence policy makers to require building owners, home builders, and building contractors to invest in building energy efficiency beyond what they might choose to invest in, when the only consideration is to maximize their own profit and minimize their expenditures on the initial construction cost of homes and commercial buildings.

To the extent that the Clean Power Rule influences states to make policy decisions that will counteract the split incentives in the building marketplace, it will minimize the overall costs of such investments as efficient products and construction methods become more widespread in the marketplace, and will maximize the end-use energy reductions from buildings. It has been estimated that although residential buildings use only 22% of all end-use electricity in the U.S. they represent 33% of the potential for energy efficiency, partially as a direct result of the split incentive phenomenon identified and described above.

We also believe there is a further very strong reason to include a robust endorsement of building energy codes in the final rule. Following the historic agreement announced by the President in China for the U.S and China to jointly commit to reducing greenhouse gas emissions, it is critical that we demonstrate to the Chinese that we are “walking the walk” related to building energy codes. In China, it has been suggested that building energy codes are the single, largest change that could be implemented to reduce greenhouse gas emissions over the next 20 years in that country. Including building energy codes as an element of our U.S. state plans, will demonstrate the U.S. EPA’s confidence in this proven effective method for reducing electricity end use, and set an example for the Chinese government. Failure to include them would certainly raise questions.

ICC looks forward to continuing to work with the Environmental Protection Agency as it further develops this proposed rule, and with the states in developing their plans to achieve end-use energy reduction through the use of building energy codes.