

ICC/IECC – What is happening in the future?



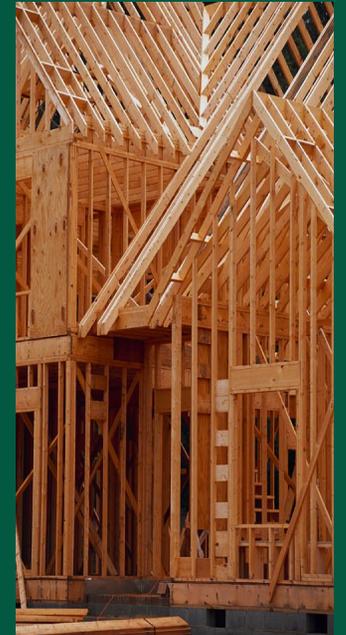
**Richard Kuchnicki
International Code Council**

The International Code Council



A 40,000-member association
dedicated to building safety

Develops the codes used to construct
residential and commercial buildings





ICC Mission and Vision

- Providing the highest quality codes, standards, products and services for all concerned with the safety and performance of the built environment
- Protecting the health, safety, and welfare of people by creating better buildings and safer communities

Green Building/Sustainable Communities- ICC Policy

The ICC must lead the building safety field:

- In educating our membership on green buildings and the various programs available for achieving an environmentally responsible building;
- In providing available information to our members so they can make informed decisions when necessary;
- In monitoring and advocating in the legislative, regulatory and codes arena to give Code Council members the opportunity to speak for sustainable building safety;
- Promote the environmental features of the I-Codes and reinforce the understanding that safety and sustainability are both achievable;
- Promote the understanding that the *I-Codes* and the Code Council safety system facilitate the application of sustainable building policy

Primary Concepts of Green Building

- Sustainable/durable/low maintenance building design and operation
- Energy efficiency and conservation
- Site/land management, sustainability, reclamation and conservation
- Water efficiency, management and conservation
- Indoor Air Quality (IAQ)
- Outdoor Air Quality
- Material and resource management, recycling and conservation (including the re-use of building materials and products)
- Innovation



IECC Scope

- Contains minimum energy efficiency provisions for residential and commercial buildings.
- Offers both prescriptive and performance based approaches.
- Contains building envelope requirements for thermal performance and air leakage.
- Covers new construction, additions, remodeling, window replacement and repairs.
- Addresses energy efficiency of elements such as mechanical, water heating, electrical and lighting.



Green Building Rating Systems

- Seek to establish minimum criteria and methods by which green buildings can be measured, compared and evaluated.
- Typically grade a structure on a scale so that various levels of “green” may be verified or certified.
- A point system is often utilized, with points given for each environmentally friendly concept implemented.
- The criteria analyzed and the relative score assigned to each criteria satisfied may vary significantly from one green building rating system to another.



IECC Intent

To establish an energy conservation code that:

- Effectively conserves energy
- Minimizes increases in construction costs
- Allows the use of new materials, products or methods of construction
- Eliminates preferential treatment for particular industries or types or classes of materials, products or methods of construction.

Promoting the Environmental Features of the I-Codes

Promoting awareness that the *I-Codes* and the Code Council safety system facilitate the application of sustainable building policy can be the foundation for more widespread acceptance of code requirements addressing:

- building energy performance
- indoor air quality, and
- the environmental impacts of buildings.

Once this awareness is realized, code officials can see this as part of their core responsibility for safeguarding the public from hazards attributed to the built environment.





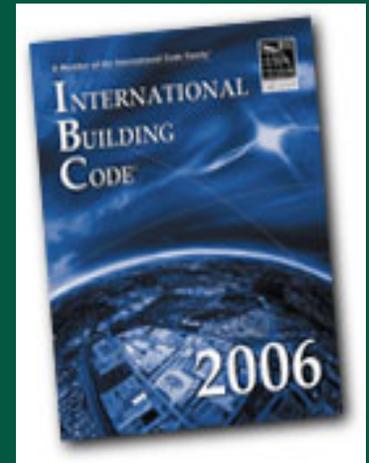
Relationship of I-Codes to Green Building Ratings

- Almost any building may be considered “green” to some extent.
- Although a building can certainly be “green” without being certified by a municipality or a green building rating system, certification serves to substantiate and quantify such claims.
- Green building rating systems seek to establish minimum criteria and methods by which green buildings can be measured, compared and evaluated.
- Green building rating systems typically use ICC code requirements as relative baseline requirements, then require higher standards in some areas, but also contain an array of additional requirements which are not currently addressed in the ICC codes.

Specific Examples of Green Code Requirements

From the 2006 International Building Code:

101.3 *The purpose of this code is to establish the minimum requirements to safeguard the public health, safety and general welfare* through structural strength, means of egress facilities, stability, sanitation, adequate light and ventilation, energy conservation, and safety to life and property from fire and other *hazards attributed to the built environment* and to provide safety to fire fighters and emergency responders during emergency operations.





Specific Examples

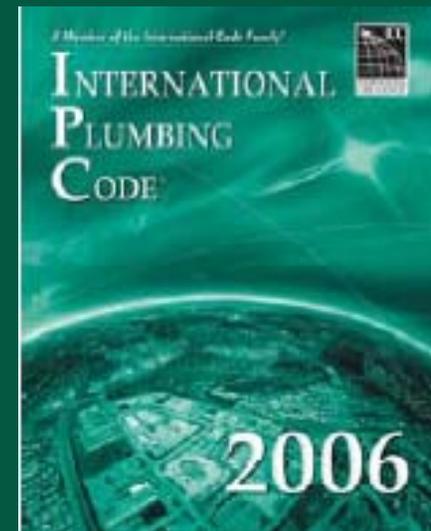
2006 ICC Codes provide for

- greywater recycling
- low flow fixtures
- fuel cells
- engineered lumber
- insulating concrete forms
- ground source heat pumps
- “lumber” from composite materials
- re-use of materials and equipment

Specific Examples

2006 IPC provides for waterless urinals

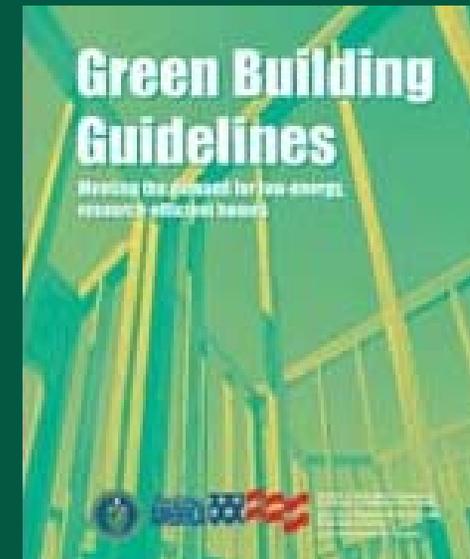
- Section 419.1 speaks of water supplied urinals with the clear intent to recognize that non-water supplied urinals also exist.
- Table 709.1 assigns a DFU value to non-water supplied urinals, further recognizing them
- ANSI Z124.9 was added because it covers plastic plumbing fixtures and most waterless urinals are made of plastic
- A new standard is proposed for this code change cycle for china ceramic waterless urinals



Next Step-Support Infrastructure

Once there is recognition that safeguarding the public from hazards attributed to the built environment is a core responsibility of the code official, the next step is to provide the support to undertake this responsibility. The key elements of this process are:

- Education and Training for code officials
- Developing information resources
- Developing technical resources





What is ICC doing to implement its green building policy?

- MOU with US Green Building Council
 - Advocacy and education initiatives
 - Share ideas and opportunities
 - Develop a green building education manual for code officials
 - Explore joint business opportunities related to greening the codes and educating all concerned with the built environment
- Agreement with National Association of Home Builders to develop and publish a residential green building standard
- Developed a green building web site to educate and inform ICC members on green building issues and activities



What is ICC doing to implement its green building policy?

- Survey ICC Governmental Members for feedback in shaping ICC policy and providing future direction on matters relating to the relationship of "green building" to the codes produced and derivative training, technical and evaluation services offered by the International Code Council.
- Conducting an entire educational track at the ICC Annual Conference on Green Building Construction
- Developed a "white paper" to give an overview of the current green building climate, track the efforts of various organizations in this area and provide a general background or primer for ICC members and others interested in green building and the relationship of green building to the codes produced by the ICC

NAHB/ICC National Green Building Standard®



- **Scope:** The provisions of this Standard apply to residential construction in all climate zones in the United States. The construction practices that impact lot development, resource efficiency, energy and water efficiency, indoor environmental quality, building owner maintenance, and global impact are addressed and organized into respective categories in Chapters 4 through 10 of this Standard.
- **Purpose:** This Standard provides criteria for rating the environmental performance of residential construction practices and provides guidelines for documentation that demonstrates conformance with the criteria.

National Green Building Standard DEVELOPMENT SCHEDULE

- 2/7/2007 CALL FOR COMMITTEE MEMBERS
- 3/10/2007 COMMITTEE APPLICATION CLOSING DATE
- 3/23/2007 WORKING DRAFT POSTED CALL FOR PUBLIC INPUT
- 3/30/2007 Committee Appointment Process Complete
- 4/16/2007 WORKING DRAFT PUBLIC INPUT CLOSES
- April 19-20, 2007 1st 2007 NGBS Development Meeting PUBLIC HEARINGS
- April 20 through June 8, 2007 Task Groups Work Starts
- July 9-13, 2007 2nd 2007 NGBS Development Meeting PUBLIC HEARINGS
- **8/9/2007 Draft Standard Released for Public Comment**
- 8/10/2007 BEGIN COMMITTEE BALLOT PERIOD - PUBLIC COMMENT PERIOD
- 8/28/2007 END COMMITTEE BALLOT PERIOD
- 9/24/2007 CLOSE PUBLIC COMMENT PERIOD
- 10/1/2007 BEGIN Comments Circulation
- 10/16/2007 CLOSE Comments Circulation
- 10/19/2007 Publish COMMITTEE ACTIONS REPORT
- 10/19/2007-10/26/2007 APPEALS Period
- 11/21/2007 APPEALS HEARING
- 11/23/2007 DECISION ON APPEALS
- 11/23/2007 Approval by NAHB-RC ESC
- 1/10/2008 Approval by ANSI Board of Standards Review
- **2/1/2008 Publish New Standard**





Emerging Trends

- Only a very small number of jurisdictions have *mandatory* “green” requirements (as defined by a green building rating system) for *private sector* buildings. Emerging trends, appear to indicate that, once voluntary green building programs have been in place and tested, building officials, the public, designers and contractors may be more accepting of mandatory requirements.
- The federal government is currently utilizing the LEED green building program for virtually all of its newly constructed and renovated *public sector* buildings and projects.
- At the state and local levels, green buildings are increasingly being *mandated* for both *commercial and residential public sector structures*.
- Even where jurisdictions have no green building program whatsoever (either voluntary or mandatory), builders, designers and building owners in the *private sector* are increasingly electing to *voluntarily* build green. This is applicable to both commercial and low-rise residential projects.



Future Impact on the I-Codes and Code Officials

- Green building has already impacted the I-Code's.
- There is currently an absence of requirements in the I-codes for building products which are specifically based on green or sustainable criteria.
- Just as with all methods and materials that are not prescribed in the codes, information may be required for alternative green building products, materials or methods before building officials have enough information to confidently give their approval. Thus, if someone wants to do something which is not prescribed in the codes, they may have to do something else first. Though it is often perceived as a barrier, it is really more akin to a hurdle, a hurdle which can be overcome.
- Where green building programs are implemented in a jurisdiction, there will be a learning curve for code officials, just as there likely was with their initial exposure to the ICC codes.



Future impact on the I-Codes and Code Officials

- Over time, more and more “green” materials and methods will appear in the codes and/or have an effect on current code text.
- Green buildings are, after all, buildings, and ICC is all about codes which regulate buildings. Therefore, at a very minimum, ICC must continue to keep abreast of and stay involved in the development of green building related criteria, such as green building standards, and make sure that our members are aware of the latest developments.
- As guardians of public interests, ICC and building officials have a responsibility to ensure that “green” materials and methods undergo the same scrutiny and procedures that other code prescribed materials and methods have endured.



IECC in the future ?

- Should the IECC minimum requirements be raised to a level equivalent to above code green building rating levels?
- Should the IECC minimum requirements be raised to achieve 30% savings as proposed by DOE?
- If the IECC does not increase minimum requirement to achieve 30% savings should Congress require states to comply with DOE energy efficiency standards?
- Will the IECC become unnecessary for those state and local jurisdictions that have mandated green building standards?



Thank you!

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