



CHICAGO ROOFING CONTRACTORS ASSOCIATION
Maintaining High Standards of Professionalism
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Are you ready for the 2012 ICC Codes?

Mark S. Graham

Associate Executive Director, Technical Services
National Roofing Contractors Association



Topics

- Why?
- ICC revision process
- 2012 I-codes
- *International Green Construction Code (IGCC)*

Why do we even care?

The Code provides minimum legal requirements for the construction and maintenance of buildings and structures

Code enforcement

- Code official
- Plaintiff attorney

Who is responsible?

- The building owner
- And, everyone else involved

International _____ Code (I-codes)

- Building (IBC)
- Residential (IRC)
- Fire (IFC)
- Energy Conservation (IECC)
- Plumbing (IPC)
- Private Sewage Disposal
- Mechanical (IMC)
- Fuel Gas
- Wildland-Urban Interface
- Existing Building (IEBC)
- Property Maintenance (IPMC)
- Zone (IZC)

I-code Editions

1995: IPC

1996: IMC

2000: I-codes

2003: I-codes

2006: I-codes

2009: I-codes

2012: I-codes

09/10 code-development cycle for 2012

- Proposal deadline of Jan. 2, 2009
- Code development hearings:
 - Baltimore, MD: Oct. 24-Nov. 11, 2009
- Final action hearing (Group A):
 - Dallas, TX: May 15-23, 2010
- Final action hearing (Group B):
 - Charlotte, NC: Oct. 24-31, 2010
- Publication (scheduled for April 2011)

Roofing-related changes for 2012

- ASCE 7-10 for wind design (90 mph → 115 mph)
- Copper re-instated as Class A without testing
- Secured (e.g., adhered) underlayment in high wind areas
- Impact-resistance removed (hail regions)
- Coatings table for SPF
- Ice dam membrane recover in reroofing

Roofing-related changes – cont.

- Increased R-value requirements
- Vegetative roofs' fire resistance to IFC
- Rooftop PV added to IBC Ch. 15 and IFC
- IECC → ASHRAE 90.1-10 → air barriers

Air barriers

ASHRAE 189.1-09 Sec. 5.4.3.1,1 and ASHRAE 90.1-10 Norm. Appendix B

- “...continuous air barrier...”
- Materials: 0.004 cfm/ft²
- Assemblies: 0.04 cfm/ft²
- Building: 0.4 cfm/ft²
- Prescriptive material configurations

Prescriptive material configurations

Air barriers – ASHRAE 189.1-09 and ASHRAE 90.1-10

- Plywood and OSB, $\frac{3}{8}$ in. (min.)
- XPS, $\frac{3}{4}$ in. (min.)
- Foil-backed urethane, $\frac{1}{2}$ in. (min.)
- Gypsum or cement board, $\frac{1}{2}$ in. (min.)
- BUR or MB membranes
- Fully-adhered single-ply membranes
- Portland cement parge or gypsum plaster, $\frac{5}{8}$ in. (min.)
- Cast-in-place and precast concrete
- Grouted CMU
- Steel sheet

So what will happen to...?

- Mechanically-attached single plies
- Metal Panels
- Shingles, tile, slate

Ask those manufacturers... and stay tuned

Development of the *International Green Construction Code (IGCC)*

IGCC timeline

- Development
- Public Version 1.0 published on March 2010
- ICC public hearing Aug. 13-24, 2010 (Rosemont)
- Public Version 2.0 published in November 2010
- Code change submission by Jan. 3, 2011
- ICC code change hearing May 15-21, 2011
- ICC final action Nov. 3-6, 2011
- Publication by March 2012

International Green Construction Code

- An “overlay code”
- Addresses sustainability requirements
- Multiple compliance routes:
 - IGCC’s mandatory requirements
 - ASHRAE 189.1 option
 - Jurisdictional requirements (30)
 - Project electives (56)

Ch. 1-Administration

IGCC Public Version 2.0

- Applies to all buildings and structures:
 - Except one- and two-family dwellings and multiple single-family dwellings (townhouses) not more than three stories high
 - ICC 700 intended to apply to residential occupancies
- Does not apply to equipment or systems used for industrial or manufacturing purposes

Ch. 2-Definitons

IGCC Public Version 2.0

- Definitions to terms that are specific to the IGCC.

Ch. 3-Jurisdictional Requirements **and Project Electives**

IGCC Public Version 2.0

- Table 302.1-Jurisdictional Requirements (30):
 - Alternate compliance with ASHRAE 189.1
 - Recycling: 50% to 65% or 75%
 - Project Electives: Select 1 to 14
- Table 303.1-Project Electives (56):
 - “Cool” or vegetative roofs

Ch. 4-Site Development and Land Use

IGCC Public Version 2.0

- “Cool” roofs:
 - Required in Climate Zones 1, 2 and 3
 - By Project Elective in Climates Zones 4 through 8
- Vegetative roof systems:
 - Specific requirements, if used:
 - Minimum 80% coverage two years after installation

Ch. 5-Material Resource Conservation **and Efficiency**

IGCC Public Version 2.0

- Recycling of non-hazardous debris:
 - Min. 50%
 - Min. 65% or 75% by Jurisdictional Requirement
- Material section:
 - At least 55% (weight, volume or cost):
 - Used
 - Recycled
 - Recyclable
 - Indigenous (500 mile radius)

Ch. 6-Energy Conservation, Efficiency and Atmospheric Quality

IGCC Public Version 2.0

- Zero Energy performance Index (zEPI)
- zEPI = 51 (or less):
 - zEPI = 100 represents 2000 average usage
 - zEPI = 0 represents zero net energy usage
 - zEPI = 73 is equivalent to IECC 2006
- Jurisdiction option (zEPI = 0 to 50)
- Thermal insulation: IECC 2012 increased by 10%
- Renewable energy systems, if used:
 - Rooftop PV, solar hot water, wind energy systems

Ch. 7-Water Resource Conservation **and Efficiency**

IGCC Public version 2.0

- Rainwater catchment and collection systems, if used:
 - Drainage system water test
 - No lead flashings or joints (solder)

Ch. 8-Indoor, Environmental Quality **and Comfort**

IGCC Public Version 2.0

- VOC limits for all materials (roofing materials)
- Project Elective: Overall VOC limit for projects (also applies to roofing materials)

Ch. 9-Commissioning, Operational and Maintenance

IGCC Public Version 2.0

- Pre- and post-occupancy commissioning
- No specific roofing requirements

Ch. 10-Existing Buildings

IGCC Public Version 2.0

- Alteration, repair, additions and maintenance
- Roof repairs = “repair”?
- Reroofing = “alteration”?
- Change in occupancy or sale of buildings trigger IGCC provisions (energy efficiency, HVAC, water)

Ch. 11-Existing Building Site Development

IGCC Public Version 2.0

- No roofing-specific requirements

Ch. 12-Reference Standards

IGCC Public Version 2.0

- Lists designations, titles and years/editions of referenced standards

Appendixes

IGCC Public Version 2.0

- Appendix A: Optional Ordinance
- Appendix B: Greenhouse Gas Reductions in Existing Buildings
- Appendix C: Sustainability Measures
- Appendix D: Enforcement Procedures

“...the IGCC will fundamentally
change the construction industry...”

-Mark S. Graham

Is your company's
current business model “sustainable”?

Questions?



Mark S. Graham

Associate Executive Director, Technical Services
National Roofing Contractors Association
10255 West Higgins Road, 600
Rosemont, Illinois 60018-5607

(847) 299-9070

1-800-323-9545

(847) 299-1183

www.nrca.net

mgraham@nrca.net

