An Overview of the 2012 International Green Construction Code (IgCC)
What is the IgCC?

INTERNATIONAL GREEN CONSTRUCTION CODE

- Comprehensive, integrated code
- Code overlay
- Minimum requirements
- Consensus development process
- Baseline green
- Wide scope of application
IgCC: Comprehensive Green Code

- Energy efficiency and alternative energy sources
- Water efficiency and alternate water sources
- Materials and resource use
- Indoor environmental quality
- Global impact
- Site design and impact of land development
- Operation and maintenance
- Existing buildings
Integrated Green Code

IgCC Approach:

Green buildings work best with an integrated, holistic approach to design and construction.

- Balances disciplines like water and energy.
- Avoids contradictions and conflicts between systems and trades.
Correlated Code Overlay

- Correlated with the ICC family of 15 Codes & Standards like the A117.1 Accessibility Standard.

- Energy efficiency provisions use 2012 IECC as basis

- Works with base codes, does not replace them.
Tiered Approach to Performance

- **Sustainability**
  - LEED
  - IgCC
  - ASHRAE 189.1

- **Energy Conservation**
  - IECC

- **Life, Health, Safety**
  - IBC, IRC, IMC IPC, IFGC, NEC
IgCC: Scope of Application

- Applicable to new construction, additions, remodels
- Includes most types of buildings and sites except:
  - IRC Buildings
  - R-3 Occupancies
  - R-2 and R-4 Occupancies 4 stories or less in height.
- Jurisdictions have option to regulate residential using ICC-700
Unique Features of the IgCC
Unique Features of the IgCC

- **Choice:** ICC approach separates life/health/safety codes from sustainability codes.
- **Mandatory provisions:** Uses existing code enforcement systems. No points or rating systems.
- **Comprehensive:** Addresses the entire structure, not one or two aspects or systems.
- **Flexible:** Provides ASHRAE 189.1 as alternate compliance path.
- **Correlated:** Works with ICC’s full family of codes.
- **Robust process:** Developed using ICC’s full consensus code process.
- **Transparency, balance, due process**
- **Customizable:** Jurisdictional and project electives; multiple energy paths.
Elective Requirements

Jurisdictional and project elective requirements provide vehicles to customize the code to local priorities and issues.

- Environmental goals and priorities
- Geographic differences
- Infrastructure
- Local resources
- Local climate
- Site-level considerations

Project elective allows use of ASHRAE 189.1 as alternate compliance path.
Background and Development
Development Timeline

- **6/2009**: IgCC Development Announced
- **5/2010**: Code Development Meeting
- **11/2010**: Code Development Hearing
- **2011**: Code Development Hearings (May, Nov)
- **3/2012**: IgCC Public Version 2 Released
- **2012**: IgCC Published
- **2014**: Development of 2015 IgCC
Developmental Partners

- IgCC developed by ICC in association with cooperating sponsors:
  - AIA and
  - ASTM

- References ASHRAE 189.1-2011 as an alternative compliance path, as developed by:
  - ASHRAE and partners
  - IES and
  - USGBC
ASPE Participation in the IgCC

- Public Version 1
  - Water Efficiency Working Group (Ch. 7)
  - Site Working Group (Ch. 4)

- Public Version 2 – Green
  - Public comment submissions

- 2012 IgCC
  - Water and Energy Technical Committee Representative
  - Proposal and public comment submissions

- 2015 IgCC Water and Energy Technical Committee
  - Water and Energy Technical Committee Representative
  - Public comment submissions via cdpACCESS web-based system
cdpACCESS Overview

- Revolutionary, new web-based code development system designed to increase participation while preserving value of in-person hearings.

- Features
  - Collaborative proposal development tools
  - Online code proposal submission
  - Track proposals and results
  - Code Development Hearing – Remote voting on floor action
  - Public Comment Hearing – Remote voting on final action.

- LAUNCHING NOV 15 FOR 2015 IGCC
Voting Procedural Flow

Committee Action Hearing
- Approve as Submitted
- Disapprove
- Approve as Modified by Committee
- Remote vote on Assembly motions. Successful motions result in automatic Public Comment.

Results + Public Comments form Agenda for PCH

Public Comment Hearing
- Approve as Submitted
- Disapprove
- Approve as Modified by Committee
- Approve as Modified by Committee, Assembly, Public Comment, or combination.

Results form Ballot for GCV

Online Governmental Consensus Vote
(1 of 3 actions based on PCH Result)
- Approve as Modified based on PCH Result or Disapprove
- Approve as Submitted based on PCH Result or Disapprove
- Disapprove based on PCH Result or Approve as Submitted
Plumbing Topics in the IgCC
Water – Related Topics in the IgCC

General Principles

- Basic health and safety
  - Protect potable water from contamination

- Efficient water use
  - Indoors and outdoors.
  - Potable and non-potable

- Substitute non-potable water for the use of potable water wherever possible
  - Allow for widest possible sources of non-potable water
  - Prevent interruption of systems served by nonpotable water sources

- Balance water and other sustainability topics when there are conflicts (e.g. water & energy)
Chapter 4: Site Development and Land Use

- Preservation of natural resources
  - Allows jurisdictions to prohibit construction in floodplains and limit development of certain sites and site features
  - Natural resources inventory required
- **Landscape irrigation**
- Management of vegetation, soils and erosion control
- Building site waste management
- Transportation impact
- Heat island mitigation
- Site Lighting
- Stormwater management
Chapter 6 is applicable to new buildings and additions to existing buildings.

- Energy requirements for alterations to existing buildings found in Ch 10.

- The IgCC provides the following energy compliance paths:
  - Prescriptive-based
  - Performance-based zEPI (Zero Energy Performance Index)

- Plumbing-related topics: Hot water delivery, pipe insulation, appliances, solar thermal
Chapter 7: Water Conservation and Efficiency

- Seeks water efficiency regardless of the source

- Encourages the use of lower quality water wherever possible and permissible.

- Efficiency provisions for plumbing fixtures/fittings
  - Appliances
  - Carwashes
  - Cooling towers

- HVAC systems and equipment
  - Water treatment systems

- Metering

- Rainwater collection systems

- Gray water reuse systems

- Reclaimed water systems

- Other alternative water sources
Adoptions and Use
All Adoptions are Not Created Equal

Key Questions To Ask

• Optional or mandatory adoption?
• Adopted in whole or in part?
• Adopted for all structures or just a subset?
• Only option or one of several green options?
• Amended? How much?
• Combined?
The IgCC is currently used by:

- Rhode Island
- Maryland
- Oregon
- Florida
- North Carolina
- Richland, WA
- Keene, NH
- Dallas, TX

- Maplewood, MN
- Ft. Collins, CO
- Boulder, CO
- Carbondale, CO
- Kayenta Township, AZ
- Boynton Beach, FL
- Phoenix, AZ
- Scottsdale, AZ
Using the IgCC in the Field

- Know the Differences: Be prepared to help architects and building owners choose locally between rating systems/codes/standards.

- Design Guidance: IgCC can provide invaluable guidance on interface of green systems with the codes.
  - Safe implementation.
  - Interaction with code officials who may not be familiar with green technologies.
  - Ideas for consideration.

- Voluntary Compliance: Encourage customers to build to a green code or standard – even when it is not required.
  - Social consciousness
  - Future-proofing
Next Steps for the IgCC
Getting Involved

- Code Action Committees
  - PMG CAC **(OPEN FOR APPS)**
  - Sustainability CAC

- Technical Committees for Codes
  - IPC
  - IRC Plumbing/Mechanical
  - IgCC Energy/Water

- Membership Councils (members)
  - PMG MC
  - Sustainability MC

- Standards
  - Rainwater Collection Systems
  - Solar Water Heaters and Collectors
  - Landscape Irrigation Sprinklers and Emitters
  - Commissioning

- Code Development
  - Proposals/Comments/Hearings
Summary

- IgCC is a comprehensive green code overlay designed to work with existing health and safety codes.

- Developed using ICC’s full consensus code development process with support from Code Action Committees.

- 2012 IgCC released on March, 2012

- 2015 IgCC development in 2014, rolling out cdpACCESS web-based system


- Water Efficiency Provisions version available.

- Go to www.iccsafe.org/igcc for more info.
Questions?

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Learn More at: www.iccsafe.org/pmg