

2012 IgCC

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The American Institute of Architects



Good design
makes a differenceTM

It's here!



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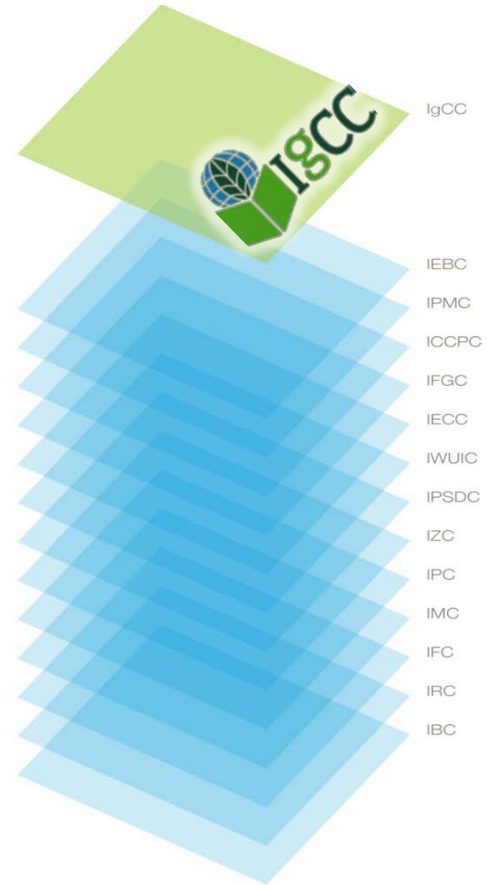


Today's Topics

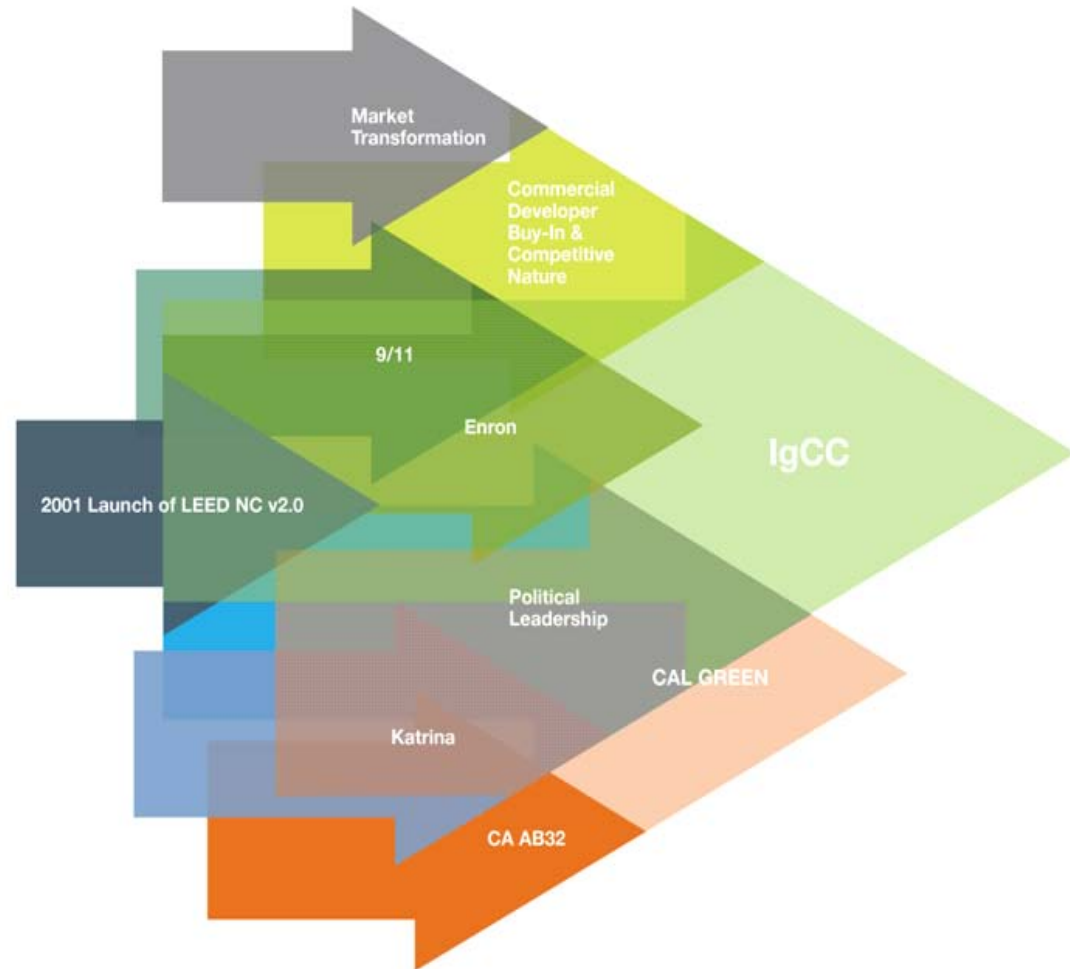
- History of the 2012 IgCC
- Overview of the 2012 IgCC
- Basics of the new code
- Adoption forecast
- Questions and Answers

What is it?

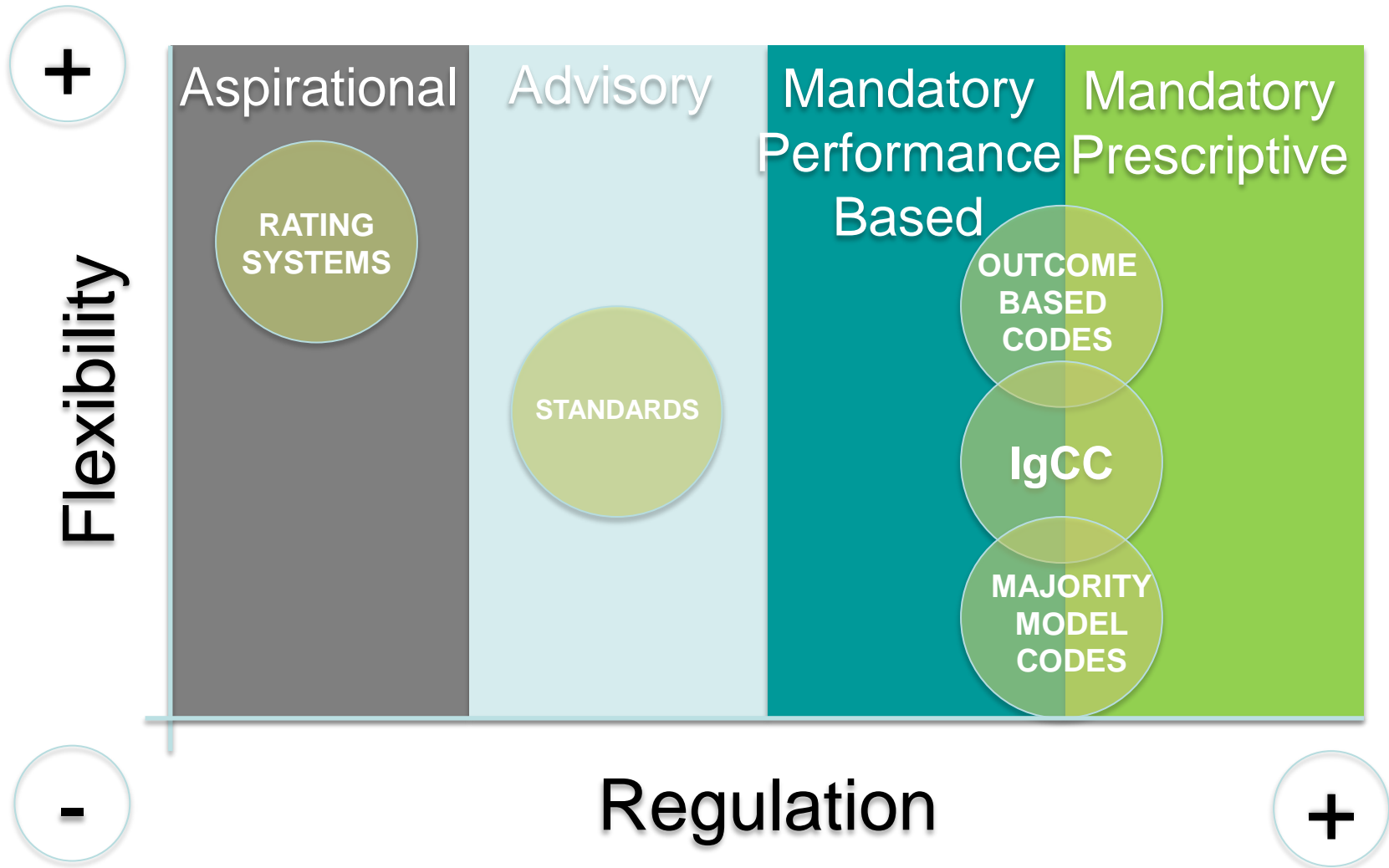
- An “overlay” code
- Part of the International Codes Council (ICC)set of Building Codes
- Intended to be used in conjunction with other ICC codes
- Includes ASHRAE Standard 189.1 as an option for compliance.



Development Factors



Where does the IgCC fit in?



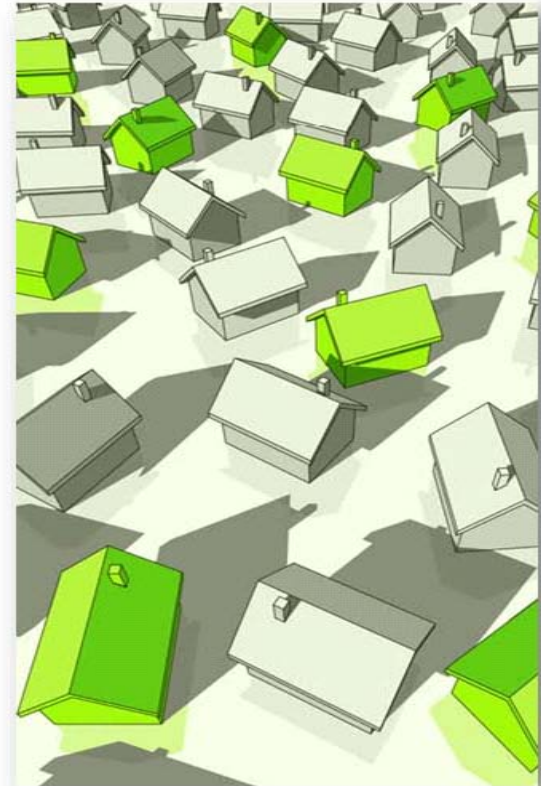
Green Building Ratings, Codes & Standards

 LEED 2009 BD&C	 CALGreen	 ASHRAE 189.1	 IGCC
 Sustainable Sites	5. Commercial 4. Residential  5.1 Planning and Design	 Site Sustainability	 Site Development and Land Use
 Water Efficiency	 5.3 Water Efficiency & Conservation	 Water Use Efficiency	 Water Resource Efficiency
 Energy & Atmosphere	 5.2 Energy Efficiency	 Energy Efficiency	 Energy Efficiency & Atmospheric Quality
 Indoor Environmental Quality	 5.5 Environmental Quality	 Indoor Environmental Quality	 Indoor Environmental Quality & Comfort
 Materials & Resources	 5.4 Material Conservation & Resource Efficiency	 Building Impact on Atmosphere, Materials & Resources	 Material Resource Conservation
 Innovation in Design	 Additional CALGreen Voluntary measures are required for Tier 1 & 2	 Construction and Operations Plans	 Commissioning, O&M
 Regional Priority			 Jurisdictional & Elective Requirements
			 Existing Buildings & Sites

Source: Simon & Associates, Inc., International Code Council, Inc.,

What is the scope of the IgCC?

- Natural Resource, Material, and Water and energy conservation
- Indoor environmental quality and comfort
- Building materials, components, equipment and systems
- Building commissioning, operations and maintenance
- New and Existing Buildings and Building Sites



Code Concepts

- ANSI/ASHRAE/USGBC/IES Standard 189.1 also is offered as a jurisdictional compliance option.
 - The Standard is included within the IgCC.
 - Adoption of the Standard occurs via the local jurisdiction adoption process.
- Adopting the IgCC, including the 189.1 option, allows the widest set of options to a jurisdiction, all under the umbrella of the IgCC.

Chapters of the IgCC

Ch.1-2: Administration and Definitions

Ch. 3: Jurisdictional Requirements and Life Cycle Assessment

Ch. 4: Site Development & Land Use

Ch. 5: Material Resource Conservation and Efficiency

Ch. 6: Energy Conservation, Efficiency and CO2 Emission Reduction

Ch. 7: Water Resource Conservation, Quality and Efficiency

Ch. 8: Indoor Environmental Quality and Comfort

Ch. 9: Commissioning, Operations and Maintenance

Ch.10: Existing Buildings

Ch.11: Existing Building Site Development

Ch.12: Referenced Standards

App A: Project Electives

App B: Radon Mitigation

App C: Optional Ordinance

App D: Enforcement procedures

Appendices

- Appendix A: Project Electives***
- Appendix B: Radon Mitigation
- Appendix C: Optional Ordinances
- Appendix D: Enforcement Procedures

How does the IgCC differ from LEED and GreenGlobes?

- Model Code in a regulatory framework, written in enforceable language unlike voluntary rating system
- Provides a legally enforceable baseline for states wishing to adopt a green code. Allows for LEED to become a market transformation program to raise the ceiling in green building
- USGBC and GBI on development committee for creation of IgCC; endorsed and supported by USGBC
- No 3rd party certification required

New focus: Energy

- Outcome based thinking
 - Projected performance
 - Feedback loops
 - Communicating performance expectations
 - The limits of “predicting” energy
 - Reporting data
 - Commissioning
 - Training



Commissioning in the IgCC

Potential Scope:

Site Development and land use

Materials

Energy

HVAC Systems

Lighting

Water

Indoor Environmental Quality

Fire suppression systems

Fire alarms

Vertical Conveyance systems

Construction and demo waste mgt.



Commissioning in the IgCC

Included in the IgCC:

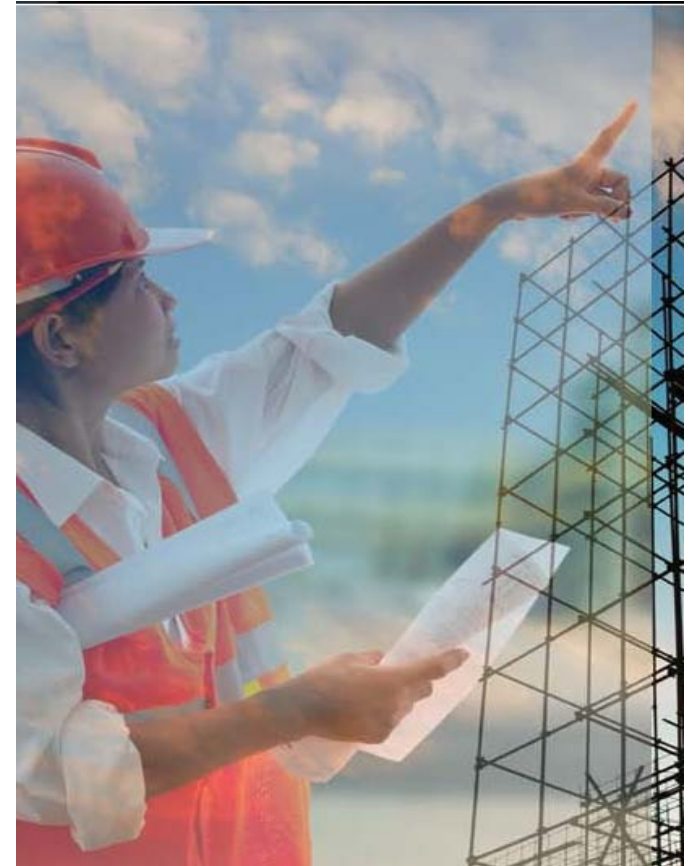
Commissioning shown in CDs
Commissioning Plan
Functional Performance Testing
Documentation and Training
Commissioning Report
Owner's Project Requirements
Basis of Design
Functional Systems Checklist
System verification



Commissioning in the IgCC

*ICC Commissioning
Guidelines For IgCC*

Available Summer 2012



Post Occupancy Evaluations

- Metering and Monitoring
- Use diligence in contracts and setting expectations (and ranges) on goals to manage risk.
- Energy efficiency is everyone's responsibility
- A collaborative process improves outcomes
- Process Improvements
- Output reports for design use
- A shift in thinking



Getting Ready for the IgCC

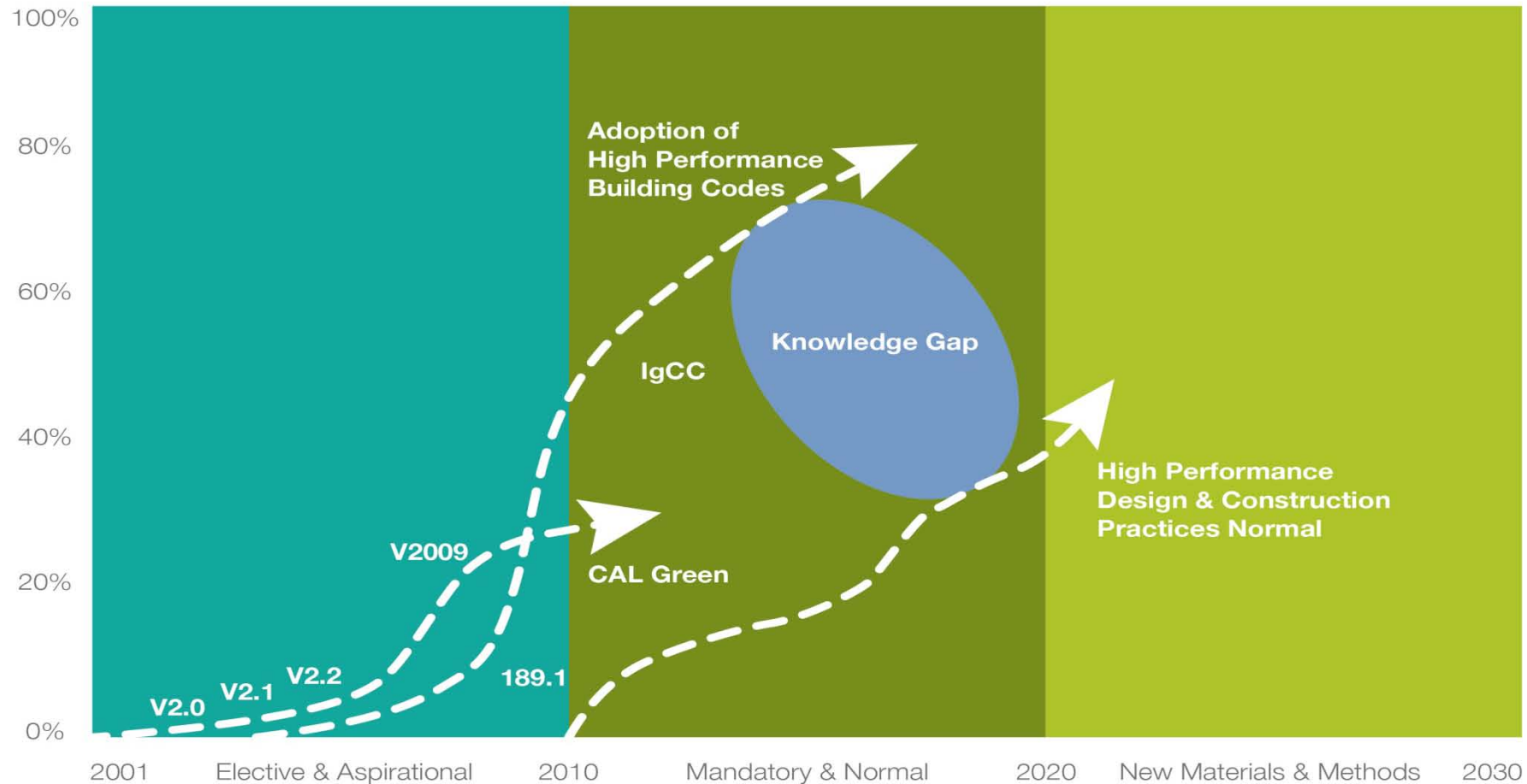
- Get (or make) an overview of the IgCC
- Read the IgCC in detail
- Inventory – what do you already do? What do you need to learn? Seek out education – know your learning curve
- Design and Performance: determine your path and outline compliance
- Consider the use of partners and consultants

Getting Ready for the IgCC

- Get an overview
- Read the IgCC in Detail
- Take an inventory
- Seek Education
- Pick a path
- Consider partners



The Knowledge Gap for full integration



Electives

- Help your jurisdiction choose the right electives **before** the code is adopted
- Choices should be regionally based, in some cases local conditions apply
- Design electives – Appendix A may be in effect (jurisdiction chooses number, you choose specific electives)

Recommendations for Greening: Local Leaders

- Be inclusive
- Use architects as a resource
- Hire a director of sustainability
- Train and accredit municipal employees
- Keep the policy simple
- Implement additional sustainability initiatives
- Pursue green economic development
- Make green building regional
- Remove legal barriers

How will the IgCC help communities achieve green objectives?

- Generally, green building:
 - Is an opportunity to create green collar jobs
 - Can reduce energy and water costs
 - create all-around superior buildings
- Green buildings are often included smart-growth plans, creating energy-efficient buildings in areas that reinforce these features by being walkable, mixed use neighborhoods.
- *Local Leaders in Sustainability*, www.aia.org/localleaders



Winner: 2011 AIA COTE Top 10



- Location: Santa Monica, California
- Building type(s): Special needs housing, Retail, Multi-unit residential, Commercial office
- New construction
- 31,600 ft² (2,940 m²)
- Urban setting
- Completed April 2009

(Brooks + Scarpa, Santa Monica, CA)



Adoption: Current stats

- Publication vs Adoption
- Early activity (Sept 2011)

Adoption: current stats

- Jurisdictional adoptions of IgCC as compliance *option* local jurisdictions *may* adopt to meet state high-performance building standards
- Jurisdictional adoptions of IgCC as compliance *option* for *government-owned or -funded construction*:
- Jurisdictional adoptions of *part of IgCC*

Adoption: Washington DC

- Roger Chang
- Washington DC
- Integrating current energy codes with the IgCC

Compliance

- IgCC represents new materials for most communities
- How the IgCC is adopted in a jurisdiction will determine what is required to demonstrate compliance.
- Variables also include interpretation of the code by code officials, capacity of code officials

Administrative Challenges

- New collaborations between departments that have previously not worked together
- Educating a lot of people involved in the compliance process about the ins and outs of the new code

Questions?

AIA Resources

- *AIA Guide to the IgCC*; a member-created, high-level overview for AIA members, including chapter summaries
- www.aia.org/igcc
- AIA as a industry partner
- AIA as an active participant in the code development process



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Thank you!