

# RESNET 2016 Conference

## Career Opportunities of HERS Raters Becoming ICC Certified Energy Inspectors

Mark Johnson, EVP, International Code Council



# What We Will Cover

- Background on ICC
- Brief History of Energy Codes
- Employment Trends/Outlook for Inspectors/Code Officials
- Regulatory Changes & Opportunities
- Benefits of ICC Membership/Energy Certification Program
- ICC/RESNET Partnership & Value Proposition for HERS Raters
- How RESNET Members Can Participate in Code Process

# Background: International Code Council

- Nonprofit corporation
- Annual budget \$60 million
- Self-funded (receives no funding from federal or state government)
- Staff of more than 250 engineers, architects and administrators
- Currently maintain 15 base codes and 8 Standards
- Codes updated triennially



# Background: International Code Council

58,000 member organization with 360  
Chapters dedicated to building safety

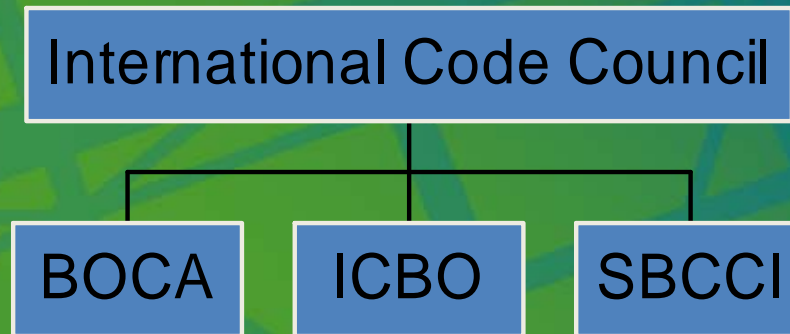
Develops codes/standards used to  
construct residential/ commercial  
buildings



**RESNET**  
RESIDENTIAL ENERGY SERVICES NETWORK

 **ICC** INTERNATIONAL  
CODE  
COUNCIL

# Background: International Code Council



- 1994 - ICC created by BOCA, ICBO and SBCCI to develop a single set of code
- 1995 - First ICC Code published - *International Plumbing Code*
- 2000 - Complete family of *International Codes* published
- 2003 - Three code organizations consolidated into a single organization

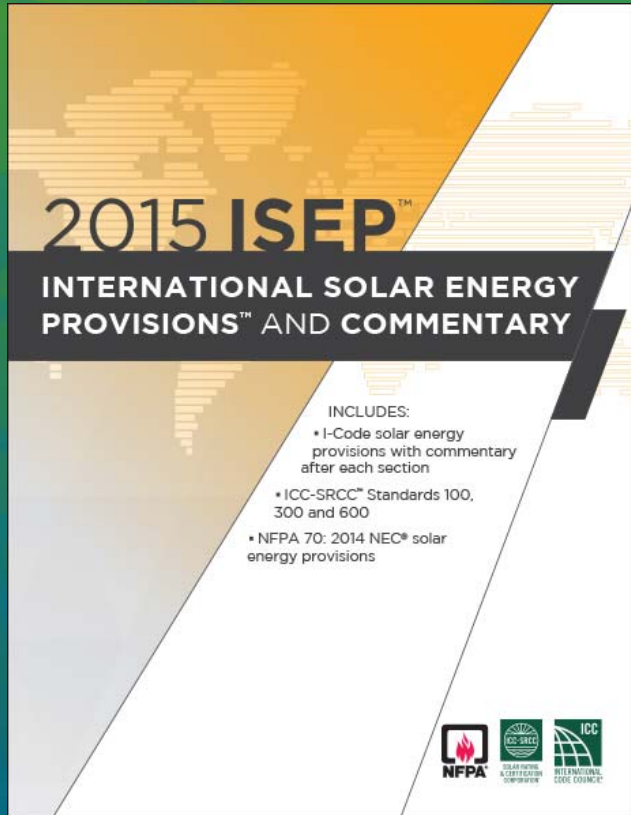
# Background: International Code Council

- 15 ICC Codes
  - Structural
  - Fire & Life Safety
  - Plumbing, Mechanical & Fuel Gas
  - Energy
  - Green Construction
  - Swimming Pools & Spas
  - Property Maintenance
  - Zoning
  - Etc.



# Background: International Code Council

## 2015 ISEP



- Contains code provisions applicable to solar requirements
- Includes commentary after each section to assist with effective application
- Includes NFPA 70 electrical requirements applicable to solar energy
- Broken into commercial and residential provisions (like IECC)
- Reformatted for continuous section numbers
- Cross references code sections where material originated

# Background: International Code Council (Custom Codes)

- Currently publish custom codes for 25 State/Country/Local Jurisdictions
- Translates into more than 115 specific titles



# Background: International Code Council (Code Development)

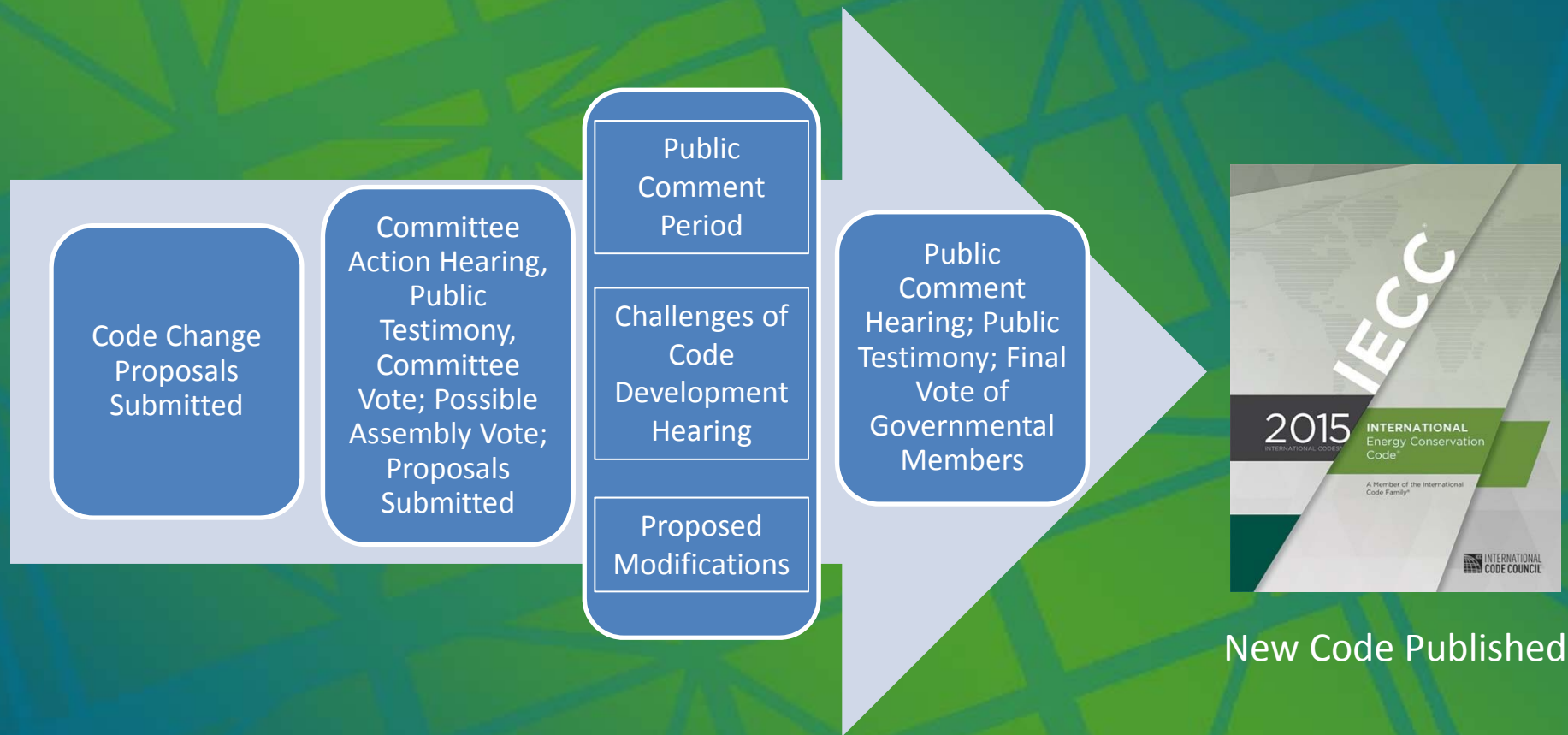
- New edition of codes every three years
- Changes are made during an open public hearing and voting process
- Participation open to anyone
- Process used is *Governmental Consensus Process*
- Over 2,000 code changes are submitted each cycle



# Background: International Code Council (Code Development)

- Code Committees
  - Representation of interests
    - **General:** Consumers, Regulators
    - **Producer:** Builders, Contractors, Manufacturers, Material Associations, SDO's, Testing Labs
    - **User:** Academia, Designers, Research Labs, Owners, Product Certifiers
  - Not less than 33% of each committee are Regulators
  - Committees are appointed by the ICC Board

# Background: International Code Council (Code Development)



# Brief History of Energy Codes

- Key impetus for Energy Codes
  - 1973 Oil Embargo
  - 1975 Energy Policy & Conservation Act
    - 1978 Amendment (Building Efficiency Standards)
  - Building energy consumption grew between 1980 and 2009 by nearly 48%\*
  - Commercial & residential buildings account for 41% of total US energy consumption\*

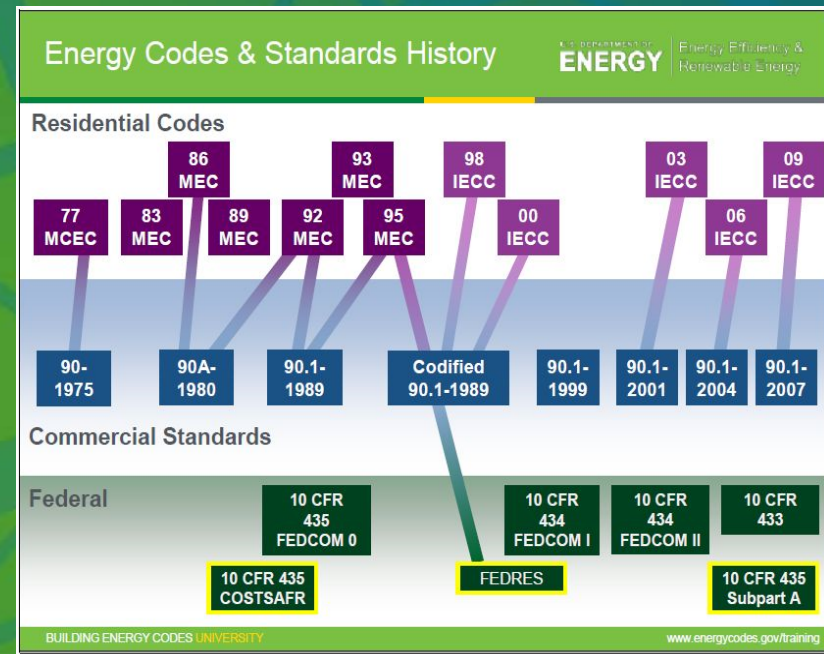


\*Alliance Commission on National Energy Efficiency Policy  
*The History of Energy Productivity*

# Brief History of Energy Codes

- Development of Residential Energy Codes

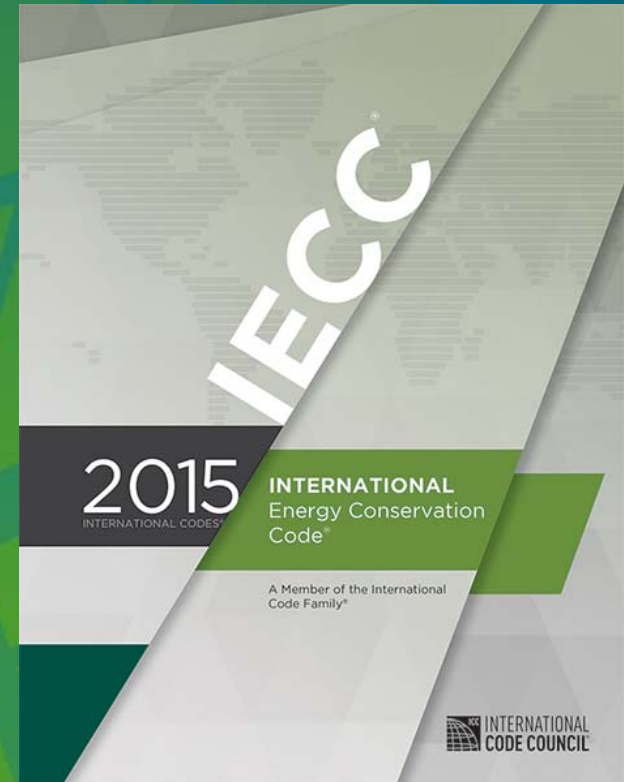
- ASHRAE Standard 90-75
- 1977 MCEC
- 1983 CABO Model Energy Code (MEC)
- 1998 IECC
- 2000 IRC
- 2015 IECC (Current Edition)
- 2018 IECC in development\*



\*Group B Code Hearings in Louisville

# Background: International Code Council

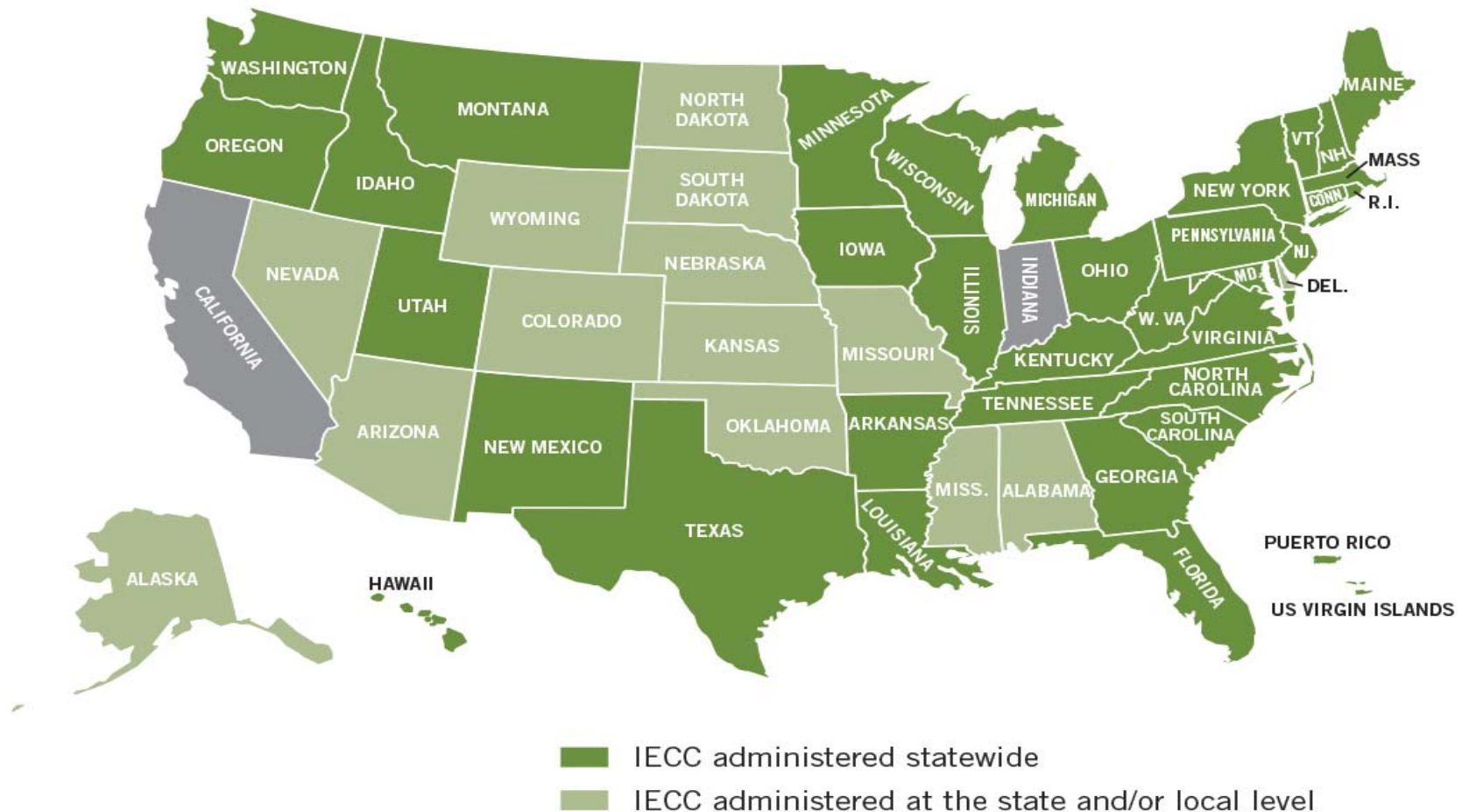
- IECC adopted or in use in 48 states
- Adopted in Saudi Arabia, Abu Dhabi, Parts of the Caribbean, etc.
- IECC with ASHRAE 90.1 as a compliance path for Commercial
- IECC available in English and Spanish



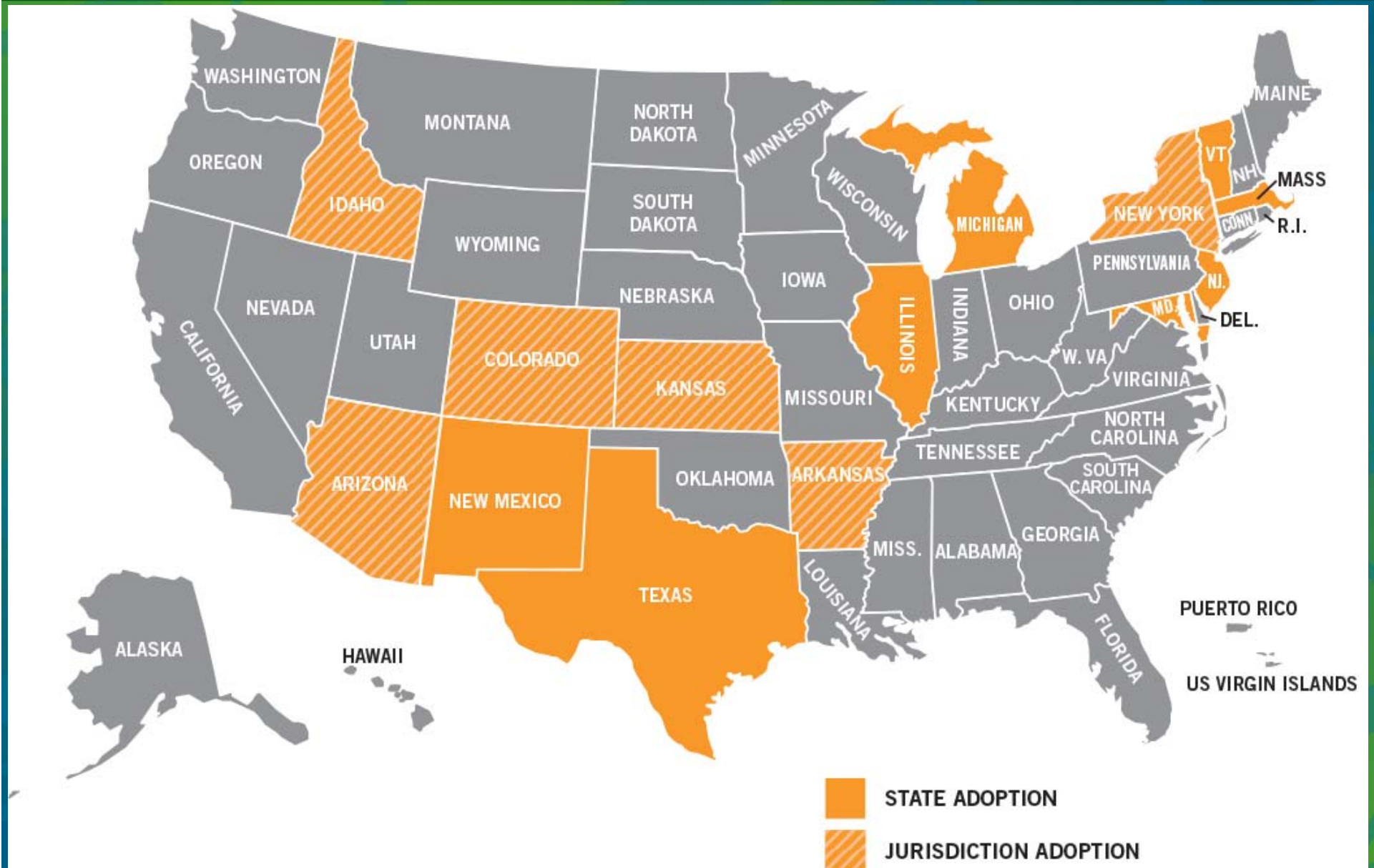
# IECC Breakdown (State vs Local Adoptions)

## INTERNATIONAL ENERGY CONSERVATION CODE ADOPTION MAP

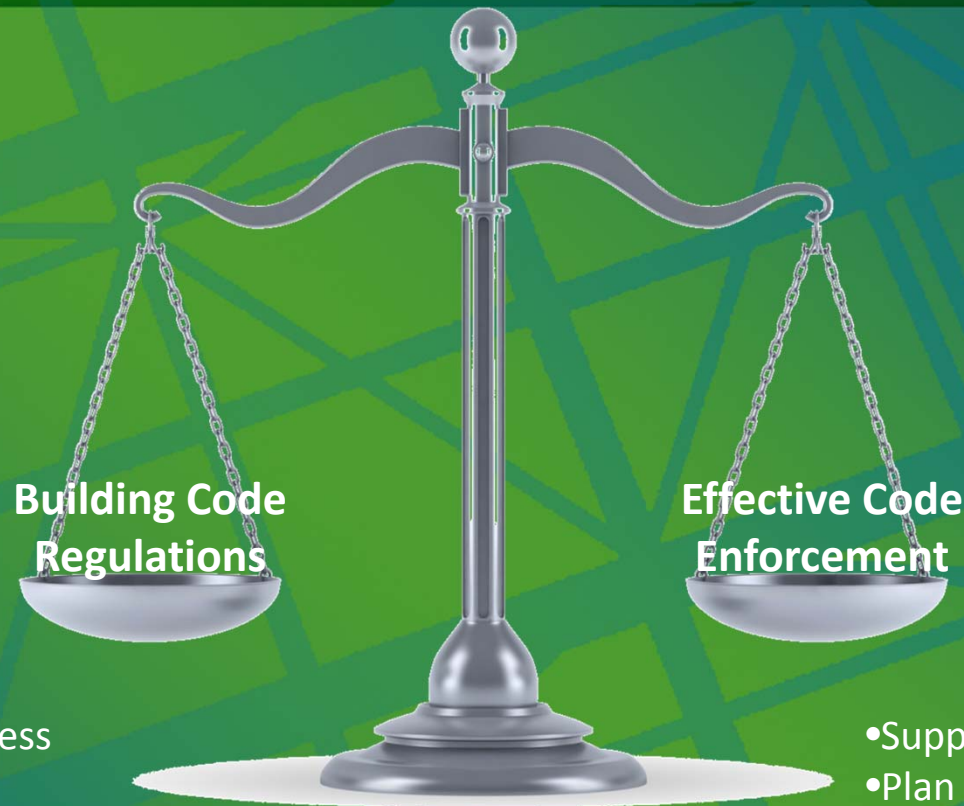
*The IECC is in use or adopted in 48 states, the District of Columbia, NYC, Puerto Rico, the U.S. Virgin Islands, Saudi Arabia and Abu Dhabi.*



# IECC Breakdown (Adoption of ERI)



# Success: A Balanced Building Regulatory System

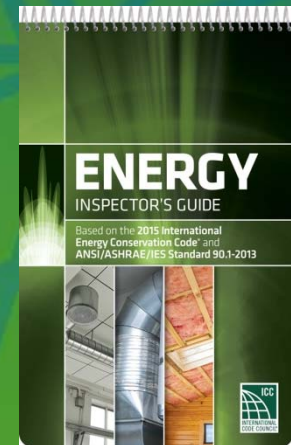
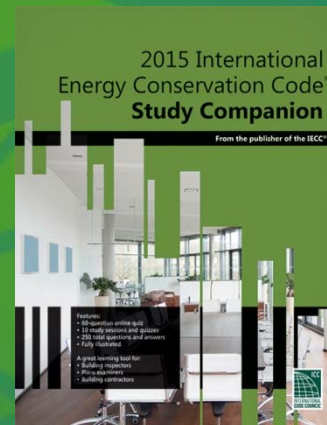
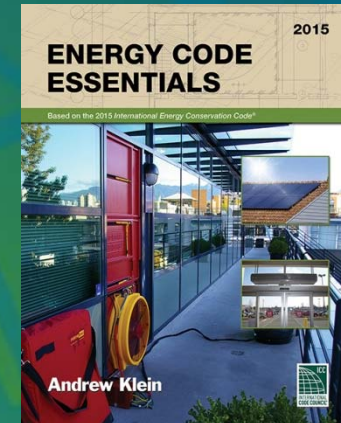
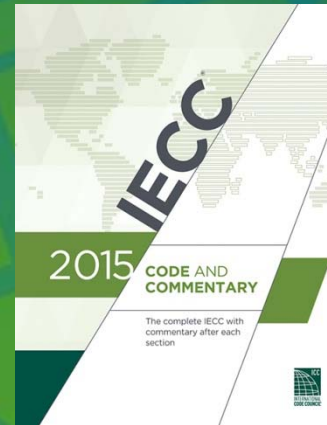


- Open development process
- Continuous
- Input from all interested parties
- Technical Committee
- Final decision by governmental membership

- Support Publications
- Plan review
- Building inspection
- Education and training
- Certification and accreditation
- Building product evaluation

# Services Offered Related to the *International Energy Code*

- Support Publications
  - Commentary
  - Inspector Guides
  - Study Companions
- Training
  - Onsite
  - Online
- Certification
- Product Evaluation

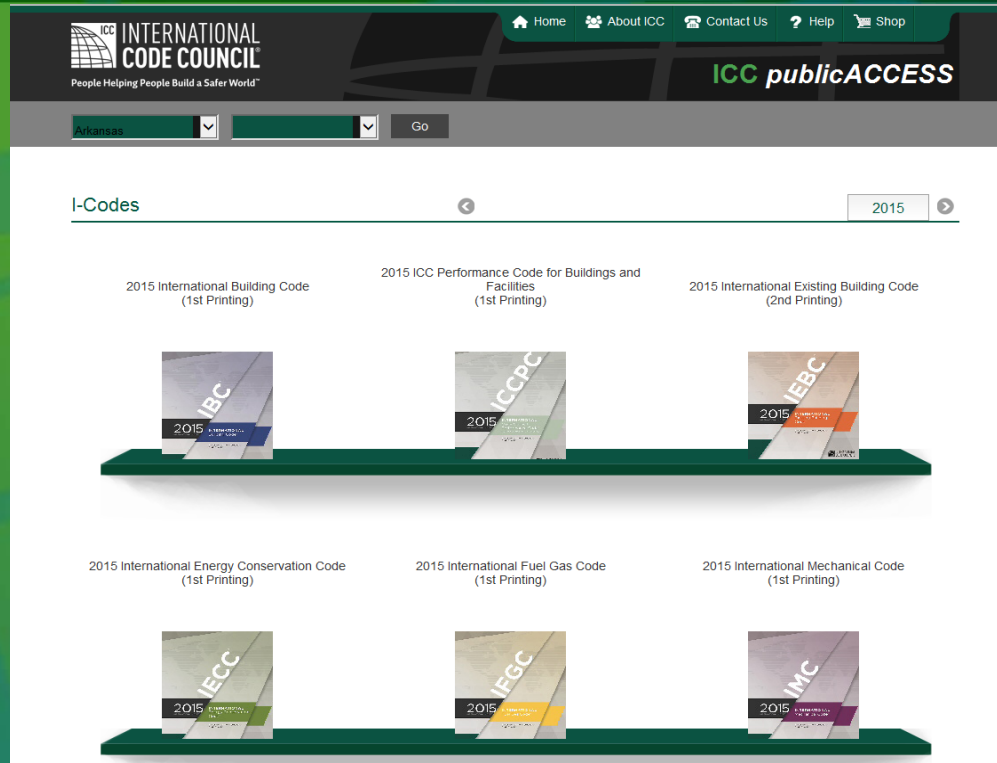


# ICC Subsidiaries

- ICC Evaluation Service (ICC-ES)
  - Leader in US in evaluating building products for code compliance
- International Accreditation Services (IAS)
  - Accreditation Programs (Building Department, Inspection Agencies, Product Cert. Agencies, Testing Labs, etc.)
- Solar Rating & Certification Program
  - Administers a certification, rating and labeling program for solar collectors and a similar program for complete solar water heating systems



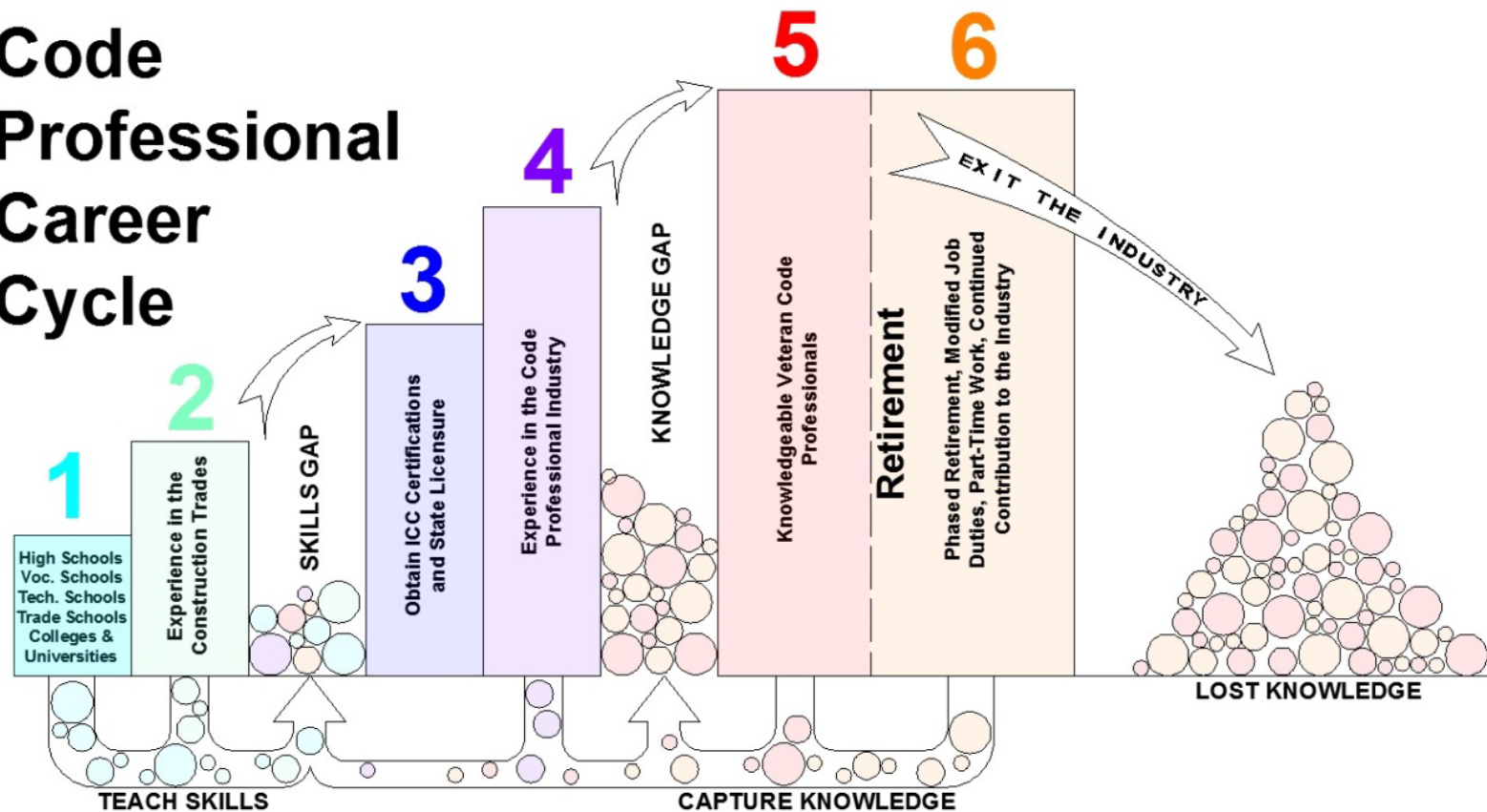
# Public Access and Awareness



- New site is up and running: [codes.iccsafe.org](http://codes.iccsafe.org)
- Contains 2015 I-Codes, ICC Standards and many state codes

# Employment Trends/Outlook

## The Code Professional Career Cycle



# Employment Trends/Outlook

- Bureau of Labor Statistics (BLS)

[Construction and Building Inspectors : Occupational Outlook Handbook: : U.S. Bureau of Labor Statistics](#)

- ICC Commissioned NIBS Study

<https://c.ymcdn.com/sites/www.nibs.org/resource/resmgr/ncgbcs/future-of-code-officials.pdf>

- MN Construction Codes & Licensing Division (CCLD)

[http://www.dli.mn.gov/CCLD/PDF/bofficial\\_survey.pdf](http://www.dli.mn.gov/CCLD/PDF/bofficial_survey.pdf)

- BYU Graduate Study (Thesis)

<http://scholarsarchive.byu.edu/cgi/viewcontent.cgi?article=6608&context=etd>

# Employment Trends/Outlook (BLS)

- Bureau of Labor Statistics (Construction & Building Inspectors)
  - Job Outlook (2014-2024): 8% growth
  - Nearly half employed by government
  - 2014 Median wages: \$56,040
  - Highest 10 percent earn over \$88,830
  - Certified construction/code officials have best job opportunities

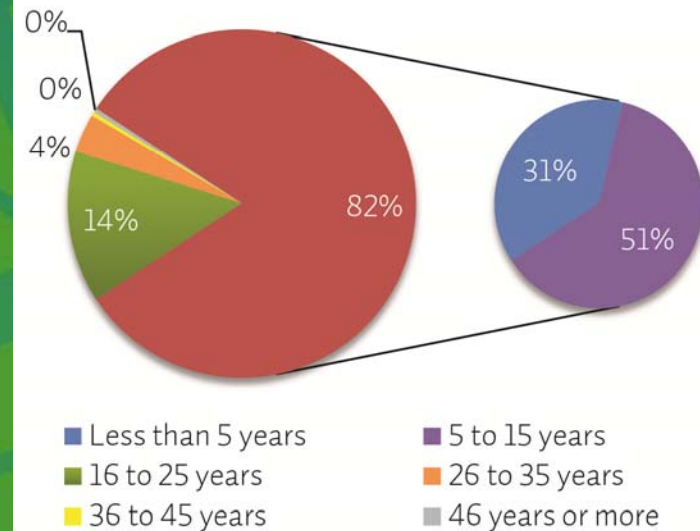
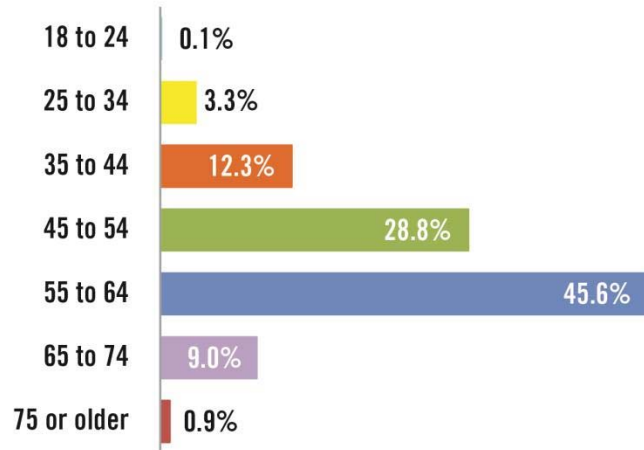
# Employment Trends/Outlook (NIBS)

- NIBS Study Highlights

- 3,850 respondents covering 50 states
- Typical respondent between ages of 55 and 64
- 56% surveyed were over the age of 55 (84% over 45)
- Salary of respondent ranged between \$50,000 and \$75,000
- Nearly 78% respondents entered the field  $\geq 30$  years
- 51% surveyed indicated they plan to leave the profession between 5 to 15 years
- Great recession of 2008 drove many from the industry due to massive layoffs
- Demand for code officials is growing, supply is dwindling

# Employment Trends/Outlook (NIBS)

- NIBS Study Highlights



# Employment Trends/Outlook (CCLD)

- CCLD Study Highlights
  - State-wide survey of Certified Building Officials & MN Chapters
  - 346 respondents (62%)
  - 50% respondents salary ranged between \$50,000 and \$75,000
  - 36% respondents salary exceeded \$75,000
  - 64% surveyed indicate they plan to leave the profession within 10 years
  - 38% surveyed indicate they plan to leave the profession within 5 years
  - When ranking top three challenges facing industry
    - Finding qualified staff
    - Complexity of the code
    - Pending retirements

# Employment Trends/Outlook (BYU Study)

- **BYU Study Highlights**
  - State-wide survey of 303 Certified Building Officials
  - 54% planned to leave the profession within 10 years
  - All Utah Code Professionals require licensure (ICC Certification)
  - There is an expected growth rate of 2.4% through 2022 in the Building & Construction Inspection job market
  - Growth rate will require 200 inspectors over the next 10 years
  - However, it is expected that approximately 300 inspectors will leave over the same time period-500 inspectors will be needed to fill the gap
  - Time is needed to develop the necessary skillsets in the younger generations

# Employment Trends/Outlook

- Key Takeaways
  - We will have a serious shortage of Code Officials and Inspectors
  - Organic growth will not solve this impending problem
  - Many who have left the industry due to the past recession (layoffs) are not coming back
  - Wages are driven by supply and demand creating upward pressure on wages
  - Trend for outsourcing certain Building Department activities will increase (reliance on third parties)
  - Time is not our ally
  - The building industry in general is experiencing similar trends
  - Complexity of codes/standards is demanding more specialization

# Outlook: The Perfect Storm



# Regulatory Changes and Opportunities

- 2015 IECC Section R406
  - Energy Rating Index Compliance Alternative
  - Verification by an *approved* third party (R 406.5)
- IECC Section R102
  - Alternative materials, design, and methods of construction and equipment
  - R102.1.1 Above code programs

## SECTION R102 ALTERNATIVE MATERIALS, DESIGN AND METHODS OF CONSTRUCTION AND EQUIPMENT

### R102.1 General.

The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative has been approved. The code official shall be permitted to approve an alternative material, design or method of construction where the *code official* finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that the material, method or work offered is, for the purpose intended, at least the equivalent of that prescribed in this code.

### R102.1.1 Above code programs.

The *code official* or other authority having jurisdiction shall be permitted to deem a national, state or local energy-efficiency program to exceed the energy efficiency required by this code. Buildings *approved* in writing by such an energy-efficiency program shall be considered in compliance with this code. The requirements identified as "mandatory" in Chapter 4 shall be met.

# Benefits of ICC Membership/Energy Certification

- Participation in code development process
- Access to ICC's online *Building Safety Journal*
- Complimentary Code
- Access to ICC staff for code opinions
- Membership in one of the Membership Councils
- Discount on ICC reference materials
- Discounts on training seminars/online campus

# Benefits of Being ICC Certified

- Holding ICC Certification as an Energy Inspector increases marketability to jurisdictions and building industry
- Code Officials are struggling to keep up and often rely on third parties for help
- ICC is a trusted brand with jurisdictions throughout the US and around the globe

# Energy Certification Program

- 4 National Exams offered by ICC on Energy:
  - Residential Energy Inspector/Plans Examiner
  - Commercial Energy Inspector
  - Commercial Energy Plans Examiner
  - Commercial Energy/Plans Examiner with ASHRAE 90.1

# Energy Certification Program

- Nearly 2,600 ICC Certified Residential Energy Inspectors
- Over 1,610 certified Commercial Energy Inspectors
- 1,020 Commercial Energy Plans Examiners

# Energy Certification Program

- Available by computer based (CBT) or pencil paper-based testing
- Over 400 testing centers in US (Pearson VUE)
- Certification renewal every 3 years
  - Renewal requires CEUs
  - 40% from ICC or one of its Preferred Providers
- Most examinations are around \$200 (US)
- Test results provided same day

# Becoming ICC Certified as an Residential Energy Inspector

- Pass Residential Energy Inspector/Plans Examiner test
- 50 multiple-choice questions
- Open book, 2-hour exam
- Once passed, it is good for three years
- Renewed every three years by obtaining CEUs

# Certification Program (Third Party)

- Other ICC Special Inspection Certifications:
  - Prestressed Concrete 850
  - Reinforced Concrete 2468
  - Soils Special Inspection 2192
  - Spray-applied Fireproofing 2287
  - Structural Masonry 3203
  - Steel & Bolting 3256
  - Welding 1931

# ICC/RESNET Partnership

## WHY?

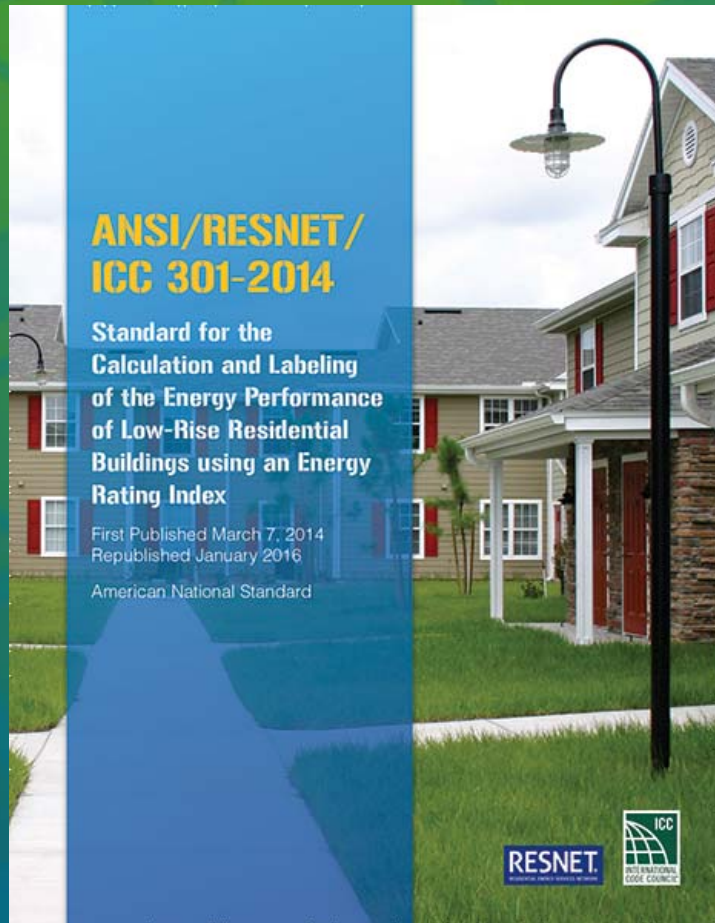
- Tap knowledge base of RESNET and its members to improve level of code compliance
- Recognized the shared mission to promote energy efficiency through education
- RESNET Members can serve as resource in raising efficiency of building performance
- Help meet the demographic challenges facing our industry

# ICC/RESNET Partnership

## Where We See Greatest Impact

- Joint Standards Development
- Joint Training
  - Code Officials and Builders
- Third Party Providers for Building Departments
  - Assist in dealing with demographic shift in code related workforce
- Government Relations
  - Outreach at federal, state and local levels

# ICC/RESNET Partnership- Standards



- 301- Standard for the Calculation and Labeling of the Energy Performance of Low-Rise Residential Buildings using the HERS Index
- Coming Soon-
  - 380: Standard for Testing Air Leakage of Building Enclosures, Air Leakage of Heating and Cooling Air Distribution Systems, and Airflow of Mechanical Ventilation Systems
  - 1101: Standard for the Calculation and Labeling of the Water Efficiency Performance of Low-Rise Residential Buildings Using the WER Index

# ICC/RESNET Partnership- Education



- ICC & RESNET put together a public service announcement aimed at code officials addressing the HERS Index and energy codes
- Available on YouTube:  
<https://www.youtube.com/watch?v=y1s7TEwOvVA>
- ICC 2015 IECC ERI Compliance training course

# Value Proposition (Benefits)

- 1 year ICC Professional Membership
  - Valuable Code Opinion Service
  - Member pricing on support materials/services
  - Online subscription to *Building Safety Journal*
- Complimentary download of the IECC
- Complimentary print copy or download of ANSI/RESNET/ICC 301-2014
- Voucher for IECC certification exam

# Value Proposition (Benefits) con't

- Benefit package provided at a reduced rate of \$285
  - Approx. \$75 saving
- Each benefit package sold provides a revenue share of \$10 back to RESNET
- ICC grants two year Preferred Provider status to RESNET
  - \$1,000 value

# What's Next

**SHOW SPECIAL!**  
Join now and receive  
RESNET/ICC 301-2014!

## Your RESNET HERS Rater Certification *Qualifies You for* the ICC/RESNET Member Value Package



The International Code Council (ICC), in cooperation with RESNET, is offering certified RESNET HERS Raters the opportunity to build their professional qualifications and enjoy the valuable benefits offered exclusively to ICC Members at a savings of more than \$75.

Through the ICC/RESNET Member Value Package, you will receive:

- 1-year ICC Building Safety Professional Membership
- A digital download of the 2012 or 2015 *International Energy Conservation Code®* (IECC®)
- A voucher good for one ICC Certification Examination\* that can be redeemed at any of hundreds of exam locations throughout the country.
- Show special! For a limited time, receive a hard copy or digital download of *RESNET/ICC 301-2014: Standard for the Calculation and Labeling of the Energy Performance of Low-Rise Residential Buildings using an Energy Rating Index*. Offer ends March 31, 2016.

\*Satisfactory completion of the IECC certification exam results in a 3-year ICC certification. Code Officials looking to outsource inspections often look for HERS Raters that have ICC credentials—so now is a great time to get yours!

The ICC/RESNET Member Value Package also includes:

- One year of free code opinions by ICC's expert technical staff—an ICC Member favorite
- Special ICC Member pricing on many publications and digital products, training and other products and services.

Don't miss out on this opportunity that is only available to certified RESNET HERS Raters! Simply submit the application on the back of this flyer and begin to enjoy all the benefits of being an ICC Member.

For more information on ICC Member benefits visit [www.iccsafe.org/RESNETraters](http://www.iccsafe.org/RESNETraters)



People Helping People Build a Safer World™



# How to Leverage Benefits/Key Drivers

- Use of IECC has grown and is now used or adopted in 48 states
- Code Opinion Service (ICC member benefit)
- 2015 IECC Section R406
  - Energy Rating Index Compliance Alternative
- Adoption of Section R102 in earlier energy codes
- ICC Personnel Certification Program

# How RESNET Members Can Participate in the Code Process

- Propose Code changes
- Apply to serve of Code Development Committees
- Vote as part of the Assembly Vote
- Utilize new cpdACCESS tool to facilitate participation

# How RESNET Members Can Participate in the Code Process

- cdpACCESS
  - New online based tool built exclusively for ICC's code development process.
  - “cdp” is the abbreviation for “Code Development Process”.
  - cdpACCESS was once known as remote voting, but it has expanded to be much more than just remote voting.

# Features of cdpACCESS

- cdpACCESS allows participation through computer or tablet
- Allows users to:
  - Allows submittal of code changes electronically
  - Allows collaboration of code changes electronically
  - Allows remote voting
- Offers participation without having to travel to hearings

Participation in Process Gives You a Voice



# QUESTIONS??



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