

**RESNET**<sup>®</sup>  
RESIDENTIAL ENERGY SERVICES NETWORK

2019  
Conference  
New Orleans, LA • Feb 25-27



# New Business Opportunities for HERS Raters

Positioning HERS Raters as the Resource for Energy Code  
Compliance Verification

## What We Will Cover

- ICC Background
- Evolution of Energy Codes
- Overview of Energy Code Related Services
- Employment Outlook for Code Compliance/Verification
- Career in Energy Code Compliance/Verification
- Next Steps

## Background: International Code Council (Organization)

- Nonprofit corporation
- Membership of over 60,000
- Self-funded (receives no funding from federal or state government)
- Staff of more than 300 engineers, architects, administrators and support staff
- Currently maintain 15 base codes and 13 standards
- Codes updated triennially

# Background: International Code Council (Codes)

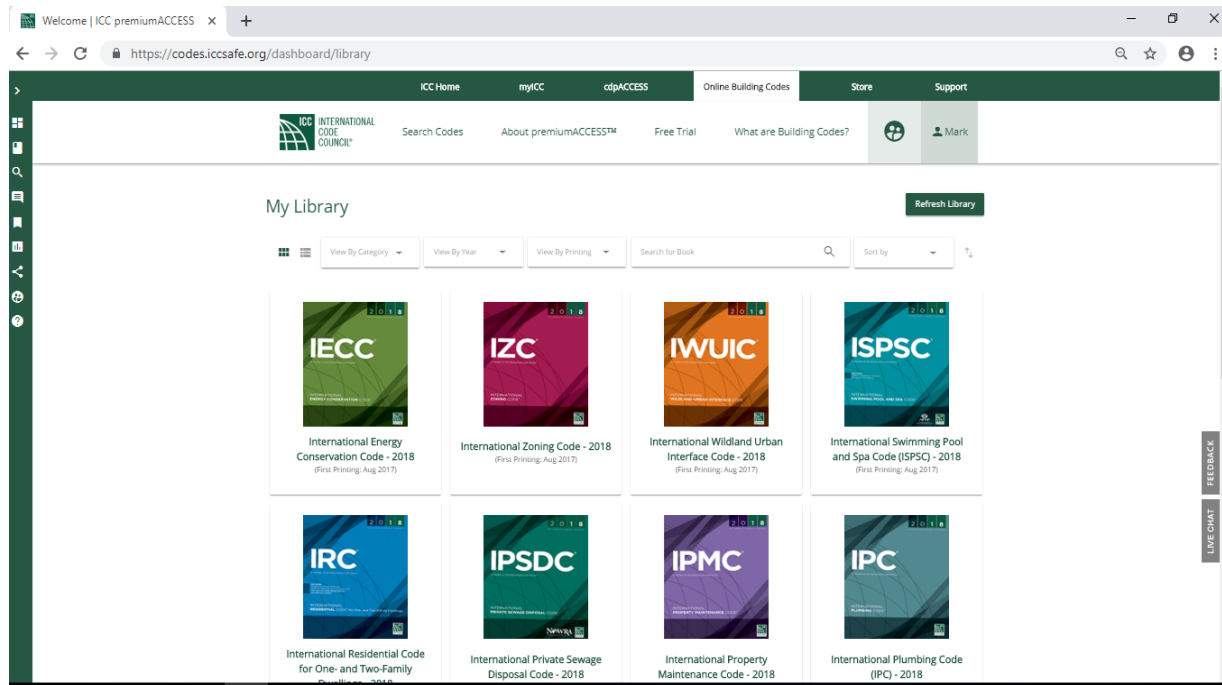
## 15 ICC Codes

- Structural/ Life Safety
- Plumbing, Mechanical & Fuel Gas
- Energy
- Fire Safety
- Property Maintenance
- Zoning
- Green Construction
- Swimming Pool & Spas



# Background: International Code Council

(Online Building Codes codes.iccsafe.org)



# Background: International Code Council (Codes)

## Five Tenants of the Code Development Process

- Openness
- Transparency
- Balance of Interest
- Due Process
- Consensus



## Background: International Code Council (Codes)



# ICC CODE DEVELOPMENT PROCESS

## BY THE NUMBERS



**3,318**

CODE CHANGES



**1,552**

VOTERS



**207,176**

VOTES CAST

# Evolution of Energy Codes and Enforcement

## Key impetus for Energy Codes

- ▷ Oil shocks 1973 & 1979
- ▷ 1975 Energy Policy and Conservation Act
  - ▷ Comprehensive approach to federal energy policy
- ▷ Energy Policy Act of 1992
  - ▷ All states must review and consider adopting the national model energy standard





# Evolution of Energy Codes and Enforcement

- Building energy consumption grew between 1980 and 2009 by nearly 48%\*
- Commercial and residential buildings account for approximately 40% of total US energy consumption \*



\*Resources: Alliance Commission on National Energy Efficiency Policy

# Evolution of Energy Codes and Enforcement

## Development of Residential Energy Codes

- ▶ ASHRAE Standard 90-75
- ▶ 1977 Model Conservation Energy Code
- ▶ 1983 CABO Model Energy Code (MEC)
- ▶ 1998 International Energy Conservation Code (IECC)
- ▶ 2000 International Residential Code
- ▶ 2018 IECC (current edition)
- ▶ 2021 IECC (scheduled for release in mid to late 2020)

# Evolution of Energy Codes and Enforcement

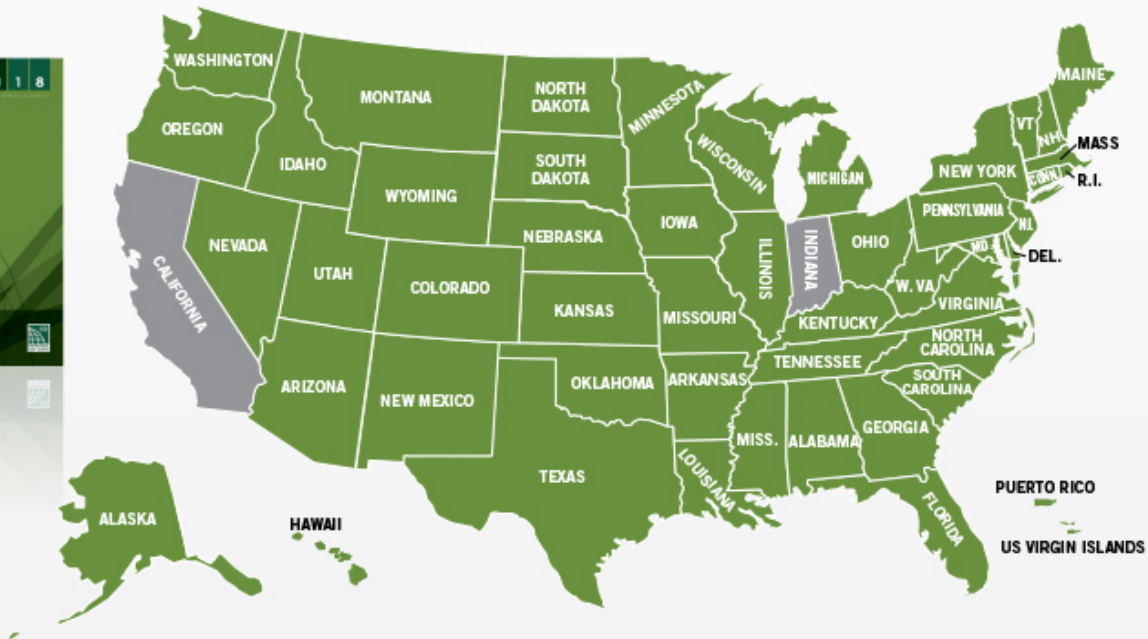
- IECC adopted or in use in 48 states
- Adopted/adapted in Abu Dhabi, parts of the Caribbean, Mexico (voluntary)
- IECC with ASHRAE 90.1 as a compliance path for commercial





# INTERNATIONAL ENERGY CONSERVATION CODE ADOPTION MAP

The IECC is in use or adopted in 48 states, the District of Columbia, Puerto Rico and the U.S. Virgin Islands.

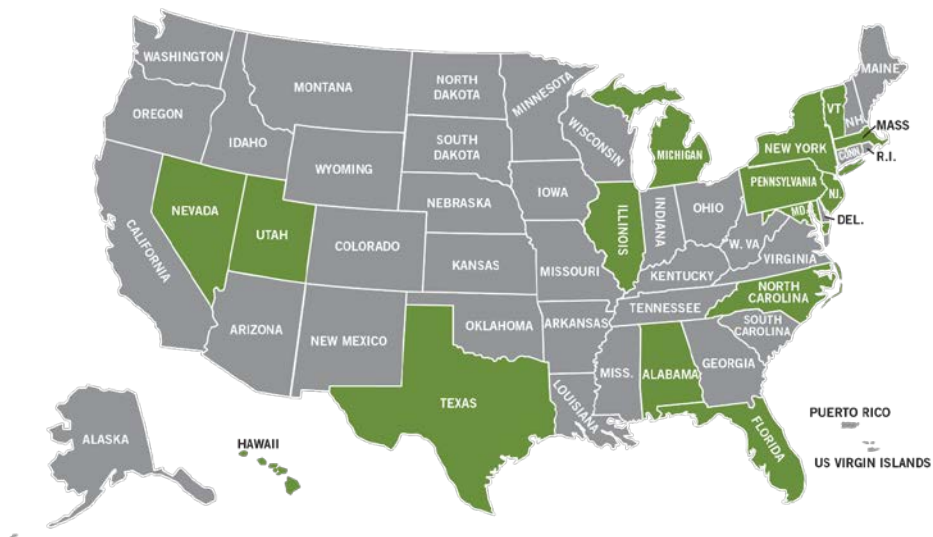


■ IECC administered at the state and/or local level

# Evolution of Energy Codes and Enforcement



States that Allow the ERI Compliance Option in the *International Energy Conservation Code*® (IECC®)

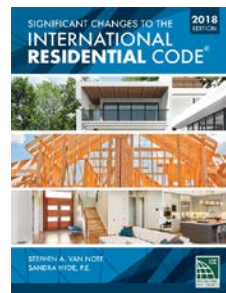
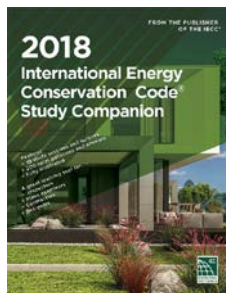
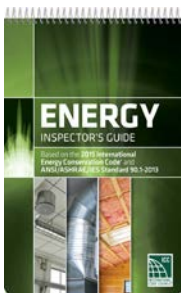
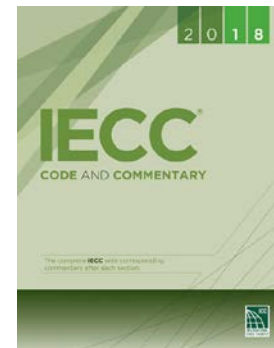
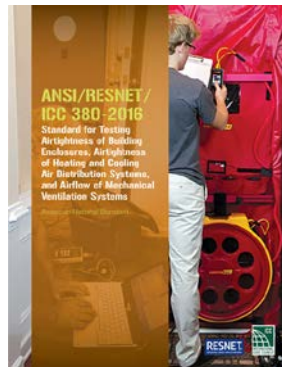
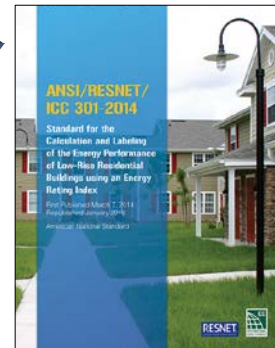


■ ERI Compliance Option in the IECC (Section R 406)

# Overview of Energy Code Related Services & Publications

## Support Publications

- ▶ Standards
- ▶ Commentary
- ▶ Inspector Guides
- ▶ Study Companions
- ▶ Significant Changes



# Overview of Energy Code Related Services & Publications

## Training

### Energy Courses directly from ICC

- ▶ IECC Essentials
- ▶ ERI Index Compliance
- ▶ IECC Update
- ▶ Performing Residential Energy Inspections
- ▶ Performing Residential Energy Plan Reviews
- ▶ Online offerings/Webinars/Virtual Classroom

### Preferred Provider Network

- ▶ Over 400 Preferred Providers
- ▶ Over 300 energy course offerings to choose from



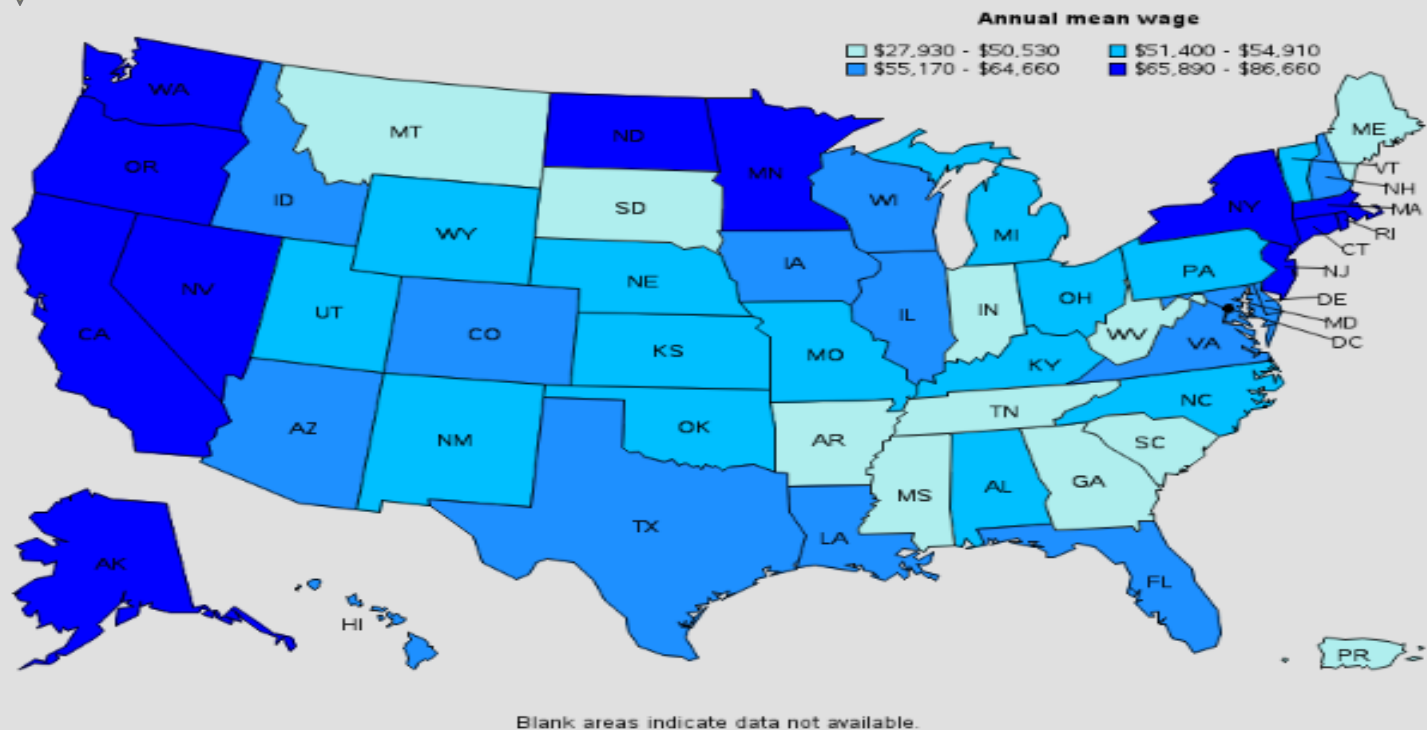
## Code Compliance: Employment Trends/Outlook (BLS)

### Building and Construction Inspectors

- ▶ 2017 Median wages: \$59,090
- ▶ Number of jobs: 105,000
- ▶ Job Outlook (2016-2026): 10% growth (7% for all occupations)
- ▶ Net increase of 10,500 jobs for 2016-2026 period
- ▶ Nearly half employed by government
- ▶ Highest 10 percent earn over \$95,340
- ▶ Certified construction/code officials have best jobs



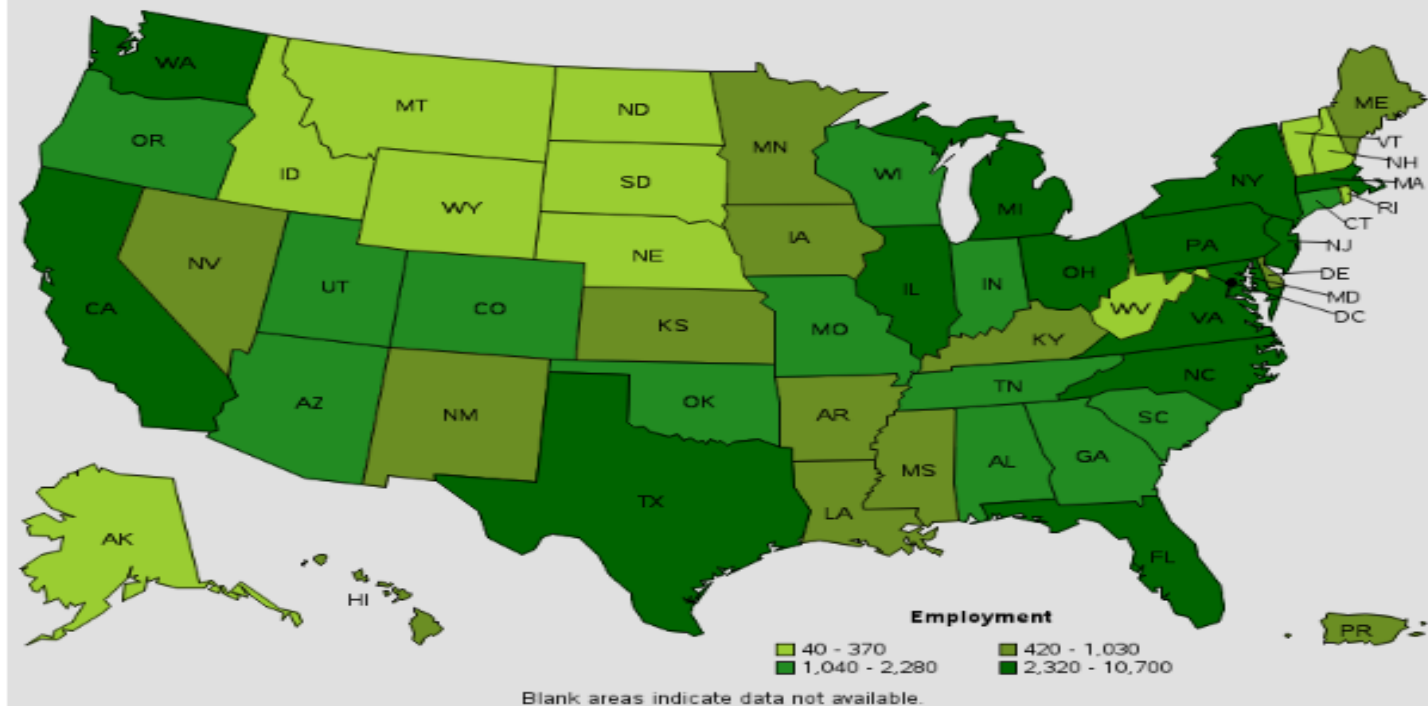
# Annual mean wage of construction and building inspectors, by state, May 2017



Top paying States for this occupation:

State	Employment (1)	Employment per thousand jobs	Location quotient (9)	Hourly mean wage	Annual mean wage (2)
<a href="#">California</a>	10,700	0.64	0.92	\$41.66	\$86,660
<a href="#">Alaska</a>	220	0.68	0.99	\$41.60	\$86,530
<a href="#">District of Columbia</a>	290	0.41	0.60	\$39.92	\$83,040
<a href="#">North Dakota</a>	240	0.57	0.83	\$35.98	\$74,840
<a href="#">Washington</a>	3,000	0.94	1.36	\$35.66	\$74,180

# Employment of construction and building inspectors, by state, May 2017



States with the highest employment level in this occupation:

State	Employment (1)	Employment per thousand jobs	Location quotient (9)	Hourly mean wage	Annual mean wage (2)
<a href="#">California</a>	10,700	0.64	0.92	\$41.66	\$86,660
<a href="#">Texas</a>	7,890	0.66	0.96	\$27.80	\$57,820
<a href="#">New York</a>	7,240	0.79	1.13	\$32.10	\$66,770
<a href="#">Florida</a>	6,980	0.83	1.20	\$27.68	\$57,570
<a href="#">Pennsylvania</a>	5,610	0.97	1.40	\$26.32	\$54,750

# Code Official Profile: 2014 ICC Survey

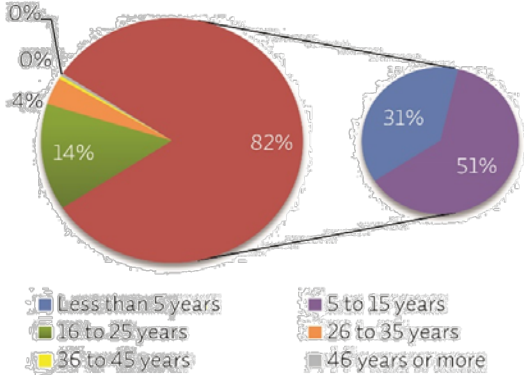
## Survey Highlights

- ▶ 3,850 respondents covering all 50 states
- ▶ Typical respondent between ages of 55 and 64
- ▶ Salary range between \$50,000 and \$75,000
- ▶ 51% surveyed indicated they plan to leave profession within 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
- ▶ Movement to privatize many aspects of code enforcement

# Code Official Profile: 2014 ICC Survey

- Between 26 to 35 years experience in building industry
- 82%percent plan to leave industry within 15 years
  - Of that 82% 31%plan to leave within 5 years

## Plans to Retire



## Employment Trends/Outlook

- Mass exodus of talent due to retirements will leave a serious shortage of Code Officials and Inspectors
- Many who have left the industry due to the past recession (layoffs) are not coming back
- Outsourcing certain Building Department activities is increasing (reliance on third parties)
- Sustained economic recovery driving up demand for code officials, inspectors, etc.
- The building industry in general is experiencing similar trends
- Complexity of codes/standards is demanding more specialization

# Employment Trends/Outlook

## Key Takeaways

- Organic growth will not solve this impending problem
- 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

# Outlook

Industry Outlook:  
Labor Demand



Industry Outlook:  
Labor Supply



## Building Departments are Strapped for Time

A recent survey shows:

- 45% of IECC residential plan review is conducted in under 20 minutes
- 37% of IECC commercial plan review is completed in less than 40 minutes



# Studies Show the Value of Third Parties

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## THIRD-PARTY CODE INSPECTION TRADE-OFFS

### Pros

- Enhanced city energy code inspection capability, reduced inspector workloads.
- Less permitting time, more compliance.
- Lower project costs, quicker turnarounds; accelerated local property tax enrollment.
- Better quality control, more project oversight (city sets inspector criteria).
- Increased market awareness of project developer.

### Cons

- Oversight can be time consuming; checks and balances can deplete code officials' resources.
  - Difficulty establishing trust between city permitting office and inspectors.
  - Potential construction cost increases if hiring required of contractors.
-

# HERS Raters have an Inherent Understanding of Building Science

## Insulation



Insulation traps pockets of air  
Stagnant air pockets create the R-value

## Air Barrier



Stopping the movement of air from  
scrubbing away the stagnant air pocket  
Now it works

## HERS Raters Understand the Life-Safety Contribution of Energy Efficiency

Works in Tandem  
with Model Codes

### Resiliency

Durability ensures  
home is livable  
for decades



### Extreme Weather Protection

Better envelopes  
– more lives  
saved

### Moisture Management

Rot, mold,  
mildew

### Indoor Air Quality

“Build tight,  
ventilate right”

### Fire Safety

## Third Party Firms, a Small Sample

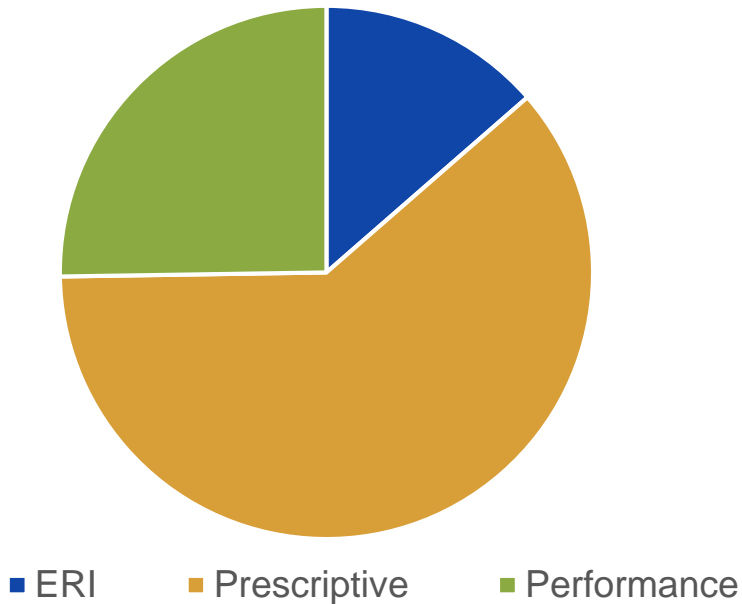
- Colorado Code Consulting
- Lee Roberts Inspection
- US-Eco Logic
- A Closer Look Inspection Services
- Bluegill Energy
- Bureau Veritas
- DRS Third Party Energy Inspectors in Washington

# Know Your Market

LIST OF ENERGY CODE PROVIDERS			
Contractor	Energy Provider	Phone	Email
A CLOSER LOOK	HEMSELL, JIM	(940) 268-6688	jim@dallasenergyinspection.com
ACE COMPANIES	DELUDE, CHERIE	(469) 899-6050	acecompaniesstexas@gmail.com
ADVANCED ENERGY SOLUTIONS	WALLACE, LARRY	(972) 423-2500	energyrater@live.com
AFTER HOURS ENERGY INSPECTIONS	CRAWFORD, DANIEL	(214) 734-3173	dc Crawford@peoplepc.com
ALERT RESIDENTIAL INSP	HACKNEY, JERRY D	(817) 808-0274	alertinspection@hotmail.com
ALIAS ARCHITECTS	ALALI, BAN	(214) 500-1273	baali@aliasarch.com
ASSURED HOME PERFORMANCE	YOUNG, MARVIN	(469) 443-3171	marvin@assuredhp.com
BLINK ENERGY INSPECTIONS	ALLEN, MAVERICK	(469) 240-2399	maverickwallen@gmail.com
BLUEGILL ENERGY MANAGEMENT	FARMER, CLAYTON	(281) 802-1224	cfarmer@bluegillenergy.com
BLUE LINE DESIGN	YOUNG, NOAH	(817) 565-3126	noah.young@me.com
BOSTROM ENERGY CHECK	BOSTROM, DAVID	(214) 585-3352	bostrom27@yahoo.com
BUILDING SOLUTIONS	CLARK, RUSSELL	(214) 221-9145	rolark@buildingsols.com
BURGESS CONSTRUCTION CONSULTANTS, INC	SANDLIN, RICKY	(214) 888-7310	rsandlin@burgess-inc.com
CITY SERVICE LLC	WEBB, JOHN	(972) 937-8283	johnwebbjr@energysmart.us.com
CODE COMPLIANCE SERVICES	BROWN, ROBERT	(817) 715-1711	rbrownccs@yahoo.com
CONSTRUCTION CONCEPTS, INC.	RODRIGUEZ, ELIAS	(214) 946-4300	elias@buildingplansandpermits.com
DFW CONSULTING GROUP, INC	MCCULLOCH, WELDON JR.	(972) 827-2606	wmcculloch@dfwoci.com
DFW ENRGY CHECK	SCHIRF, MIKE	(469) 231-1882	schirf1@yahoo.com
DFW GREEN CODE	DEVINE, MARK	(214) 886-1431	mark@dfwgreencode.com
DWELL GREEN OF DALLAS	TAYLOR, ROGER K	(214) 509-8582	rtaylor@dgdallas.com
ENERGYWISE	RUE, RICHARD	(972) 365-8317	rrue@esoglobal.net
ENERGY EFFICIENT MEASURES	ESTRADA, JOSE	(214) 875-3249	eemeasures@att.net
ENERGY INSPECTORS TEXAS	MCGHIE, CODY	(469) 441-9795	cmcghie@energyinspectors.com
ENERGY IQ	SENGLIN, CRAIG	(214) 929-7317	craig.senglin@energyiq-usa.com
ERIC L DAVIS ENGINEERING	POOLE, ROB	(972) 342-7430	robp@eldengineering.com
ESTES, MCCLURE & ASSOC.	GENTRY, JOSH	(903) 581-2677	jgentry@estsmcclure.com
EVANS SERVICE COMPANY, LLC	EVANS, REBECCA	(972) 351-9302	rebecca@evansservicecompany.com
FACILITY PERFORMANCE ASSOCIATES	ALBERT, COREY	(972) 386-0144	gkettler@att.net
FOX ENERGY SPECIALISTS	LYONS, DONNIE	(817) 546-0160	dlyons@foxenergyspecialists.com

# Compliance Paths

Compliance Paths



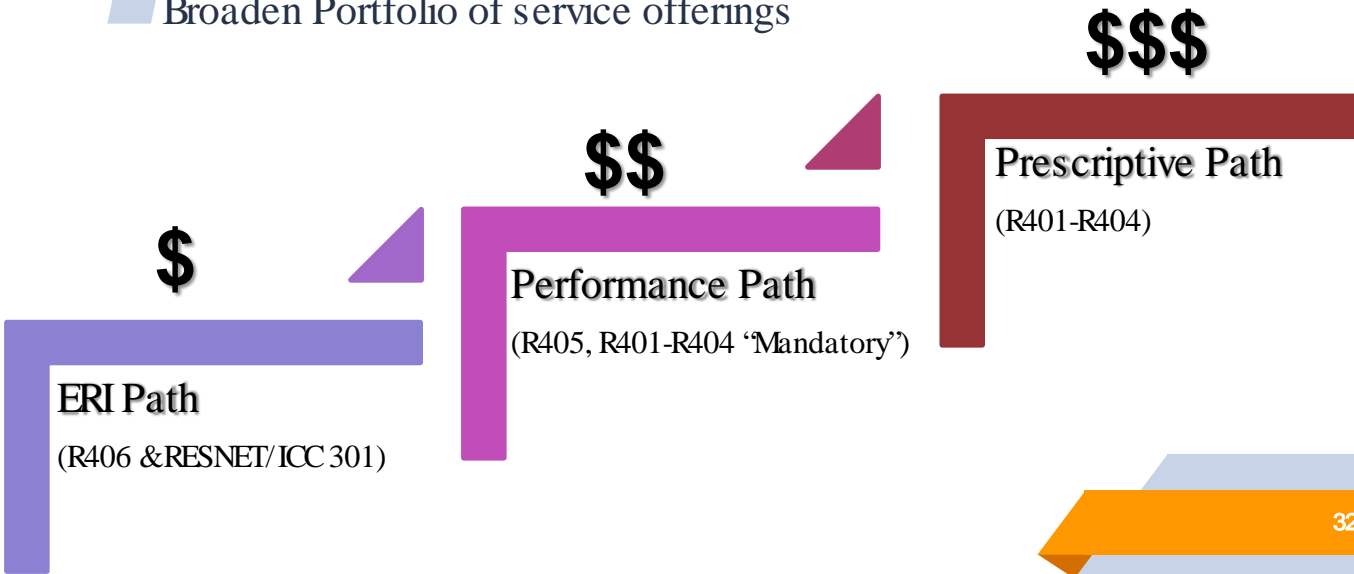
## ICC/RESNET: A Natural Synergy

- Taps knowledge base of RESNET and its members to improve level of code compliance
- Recognizes the shared mission to promote energy efficiency through education
- RESNET Members can serve as a resource in raising efficiency of building performance
- Helps meet the challenges of demographic shift of code related workforce

# Expanding Opportunities for RESNET HERS Raters

## Energy Code Compliance Verification

- Opportunity to expand into areas with higher demand
- Broaden Portfolio of service offerings





# Expanding Opportunities for RESNET HERS Raters

**ICC/RESNET  
Perf. Compliance  
Report**

**ICC/RESNET  
Certificate:  
Performance Path**

**ICC/RESNET  
Certification**

**Residential Energy Inspect./Plans Exam.  
79**

**ICC IECC Training**

# Importance of ICC Certification

- Certification as Residential Energy Inspector increases marketability to jurisdictions/building industry
- ICC Certification has portability
- 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
- Certification reflects code competency
- Third Party Certified individual has greater credibility with Code Official

# Importance of ICC Certification

## ■ Energy Certificants by the Numbers

- ▶ 1,600 ICC Commercial Energy Inspectors
- ▶ 1,040 ICC Commercial Energy Plans Examiners
- ▶ 2,775 Residential Energy Inspector/Plans Examiner

# Energy Certification Program

- Available through Internet (PRONTO) or computer based testing center (CBT)
- Over 400 testing centers in US (PearsonVUE)
- Certification renewal every 3 years
- Most examinations are around \$200



# Becoming ICC Certified as a 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



# Next Steps

Take advantage of the ICC/RESNET Special Offer

**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 \$100.

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

- 1-year ICC Building Safety Professional Membership
- A digital download of the 2015 or 2018 International Energy Conservation Code® (IECC®)
- 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.
- A hard copy or digital download of RESNET/ICC 380-2016, Standard for Testing Airtightness of Building Enclosures, Airtightness of Heating and Cooling Air Distribution Systems, and Airflow of Mechanical Ventilation Systems.
- A voucher good for one ICC Certification Examination\* that can be redeemed at any of hundreds of exam locations throughout the country.

\*Subject to completion of the ICC certification exam results in a 2-year ICC certification. Code Officials looking to enhance inspection rates for HERS Raters that have ICC credentials 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/RESNETrater](http://www.iccsafe.org/RESNETrater)

**INTERNATIONAL CODE COUNCIL**  
People Helping People Build a Safer World®

## Next Steps

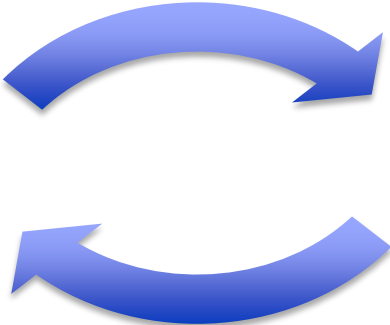
- Bundle includes:
- 1 year ICC Professional Membership
- Free code opinions on all ICC Codes
- Member discounts
- Complimentary IECC
- Complimentary ANSI/RESNET/ICC 301, ANSI/RESNET/ICC 380
- Voucher to take Certification exam
- Online subscription to Building Safety Journal
- Savings of more than \$100.00

# Next Frontier

- Residential Inspection
- Water Efficiency Ratings



Water



Energy





# QUESTIONS



International Code Council

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