

# **Towards Tomorrow: Development of a Rating Path to Energy Codes**

**"Ratings as Performance Tool for Codes"  
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# Key Points to Remember: Home Energy Ratings

- **Are Voluntary**
- **There are Accredited Rating Programs in all 50 States**
- **Over 3,000 Raters Certified Across Nation (and growing daily!!)**



# What Are Ratings Good For?

**Energy Efficient Mortgages**

**ENERGY STAR Home labeling**

**&**

**Home Energy Ratings are currently  
being used as a Performance  
Option for energy code compliance  
in 11 states**

# RESNET's Policy on Energy Codes

**"RESNET supports the adoption and effective implementation of energy codes because they provide a critical function by establishing a 'floor level' of energy efficiency which homes cannot be built below.**

**RESNET supports a robust performance path to the code that results in higher energy performance of homes."**



# Why Encourage Ratings In Codes Infrastructure

- Will Make Energy Efficient Homes More Affordable
- Will Improve Energy Code Performance
- Will Improve Builder Performance
- Will Link Code Performance to

# **Why Encourage Ratings In Codes Infrastructure** (cont'd)

- **Will Make Energy Efficient Homes More Affordable**
- **Home Energy Ratings and Energy Efficient Mortgages Add Value to Home and Increases Buying Power of Consumer**
- **Ability to Finance 100% of Energy Improvements Without Added Down Payment**
- **Will Link Code Performance to Market Demand**



# Why Encourage Ratings In Codes Infrastructure (cont'd)

## Will Improve Energy Code Performance

- Ratings Based on National Standards Recognized by Federal Government and Mortgage Industry – *Performance Quality Assurance*
- “Home energy ratings tied with energy mortgages can help state and local governments increase compliance with building energy codes” – National Council of State Legislatures

# Why Encourage Ratings In Codes Infrastructure (cont'd)

**11 States Currently Incorporate Home Energy Ratings  
For Code Compliance**

**Alaska**

**Arkansas**

**California**

**Florida**

**Iowa**

**Kansas**

**Massachusetts**

**Ohio**

**New York**

**Texas**

**Vermont**



# **Why Encourage Ratings In Codes Infrastructure** (cont'd)

## **Will Improve Builder Performance**

- **Leads the Builder from Minimum Compliance to Maximum Performance**
  - **Rewarding Builders for Improving Performance**
- **Incorporates Diagnostic Testing of Envelope and Ducts**
- **Work Inspected on Whole House Basis by Building Performance Professional**

# **Why Encourage Ratings In Codes Infrastructure** (cont'd)

## **Will Link Code Performance to Market Demand**

- **Ratings Used by EPA for Labeling of  
ENERGY STAR Homes**
- **ENERGY STAR Has Demonstrated  
That The Market Will Recognize  
Higher Building Performance**



# **Proposal Submitted to ICC**

**Revision to Section 103.1.1**

**Retitle:**

**Home Energy Ratings**

**Submitted by William Prindle (ACEEE)**

**(to be reviewed at ICC 2004-2005  
hearings taking place this week)**

**"A proposed building for which the builder obtains a final rating certificate by an accredited Home Energy Rating System (HERS) may, at the code official's discretion, be considered to comply with the intent of this code.**



**A copy of the final rating certificate, indicating that it is based on a physical inspection of the property address and that the point score for the finished building meets or exceeds the score based on plans will be submitted to the code official before the Certificate of Occupancy is issued."**

**"The final rating certificate must indicate compliance with this code, and must meet the following requirements:**

**(a) The rating organization or agency must be accredited by the Residential Energy Services Network (RESNET) or the authority having jurisdiction;**



**“(b) the compliance analysis and rating score must be based on the ‘Mortgage Industry national Home Energy Rating Standard’ developed by the National Association of State Energy Officials (NASEO) and RESNET, with the score on a scale of 0-100 points; and**

**“(c) a report which includes a verification that the design complies with this code, a description of the building’s energy features, and a statement that the rating score is ‘based on plans.’”**



# **Alignment of Rating Standards With IECC**

**Will Ease Path of Ratings as Energy Code Compliance Option**

- **Amendments to National Home Energy Rating Standards**
- **Will Go Into Effect on January 1, 2006**

# Alignment of Rating Standards With IECC

## Amendments to National Home Energy Rating Standards

- Align Rating Method to RICC Proposal Adopted for the IECC
- New Insulation Inspection Procedures
- More Stringent Rating Quality Assurance Procedures
- Amendments Posted at [www.natresnet.org/amend](http://www.natresnet.org/amend)



# **Alignment of Rating Standards With IECC**

**Aligns the Technical Basis for**

**IECC**

**Home Energy Ratings**

**ENERGY STAR**

**Building America**

**Proposed Federal Tax Credits**

# Verification & Certification of Software for IECC

**DOE – NREL - PNNL – RESNET  
Combined Effort**

## **Goals:**

**Ensure National Consistency of Software Tools to  
Calculate Compliance to the IECC**

**Make it Easier for Code Officials to Accept Code  
Compliance Software Tools**

**Increase Credibility for Performance Method of IECC**



# **Verification & Certification of Software for IECC**

## **Software Verification Test Suite**

- **Auto-generation of IECC Reference Home**
- **HERS BESTEST Developed by NREL**
- **HVAC Tests**
  - **furnaces, air conditioners & heat pumps**
- **Duct Distribution Efficiency Test**