Where RESNET Is Heading and Why

Steve Baden, RESNET Executive Director
www.resnet.us
Demand for HERS Ratings Growing

218,000 homes rated in US in 2013 (128,000 in 2012)

Average US HERS Index Score – 64 (66% more efficient than average existing home)

To date over 1.5 million homes rated in US
Mega Trends for High Performance Homes

• National Builders Marketing the Energy Performance of Homes

• Incorporation of HERS Index Scores as Compliance Option to Building Energy Codes
  – 2015 IECC, Arkansas, Colorado, Idaho, Kansas, Massachusetts, New Mexico and New York

• Incorporation of HERS Index Scores in MLS
  – Colorado, Florida, Illinois, Maine, Minnesota, Nebraska, New Hampshire, Oklahoma, Texas, Vermont, Wisconsin
Mega Trends for High Performance Homes

- Evidence that Low HERS Index Scores Reduces Risk in Mortgage Loan

- Large Home Owner Insurance Carrier Offers Energy Bill Guarantee Based on Home Energy Rating
Code Jurisdictions Recognizing HERS Index in Energy Codes

- Over 150 state and local code jurisdictions adopt HERS Index Score compliance option
- 2015 IECC to Include Energy Rating Option
## HERS & Codes – What is the Right Number?

<table>
<thead>
<tr>
<th>Climates</th>
<th>2006</th>
<th>2009</th>
<th>2012</th>
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</thead>
<tbody>
<tr>
<td>Zone 1</td>
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<tr>
<td>Zone 8</td>
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<td>86</td>
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<tr>
<td><strong>U.S. Average</strong></td>
<td><strong>94</strong></td>
<td><strong>82</strong></td>
<td><strong>76</strong></td>
</tr>
</tbody>
</table>
2015 IECC Incorporates Rating Score

The rating scores that were adopted by the IECC are:

- Regions 1 and 2: 52
- Region 3: 51
- Region 4: 54
- Region 5: 55
- Region 6: 54
- Region 7 and 8: 53

The HERS path also requires that a builder must meet the mandatory envelope requirements of the 2009 IECC.
Incorporation of HERS Index Scores as Compliance Option to Energy Codes

Why?

• The inspection and testing protocols are established in RESNET's national home energy rating standards

• The professionals that undertake the inspection and performance testing are certified following RESNET's standards stringent training and testing procedures.

• The HERS Index is a trusted measurement of the energy performance of a home. Over 1.5 million homes have been issued a HERS Index Score in the US.
Potential Game Change to HERS Raters

Why?

Only viable performance option in energy codes.

Gives builders more flexibility by setting a performance target and not dictating building practice.

Raters Need to be Proactive on Local/State Code Hearings and Involve Builder Clients
Tools Available to HERS Raters
Web Site

The RESNET HERS Index is the industry standard by which a home’s energy efficiency is measured. The HERS or Home Energy Rating System was developed by RESNET and is the nationally recognized system for inspecting and calculating a home’s energy performance. Certified RESNET Home Energy Raters conduct inspections to verify a home’s energy performance and determine what improvements can be made to increase it. For more information click on RESNET HERS Index.

Across the nation state and local governments are adding a HERS Index Score target as a performance compliance option to their building energy code.

The reasons why a HERS Index Score is being tied into energy codes include:

- The inspection and testing protocols are established in RESNET’s national home energy rating standards. RESNET is a national not-for-profit membership standard setting organization. It is accredited by the American National Energy Standards Institute (ANSI) as a Standard Development Organization.

- The professionals that undertake the inspection and performance testing are certified following RESNET’s standards stringent training and testing procedures.

- All certified RESNET home energy raters are subject to RESNET’s quality assurance oversight procedures.

- The RESNET national home energy rating standards are recognized by the federal government (U.S. Department of Energy, Environmental Protection Agency, Internal Revenue Service) and the mortgage industry.

- The HERS Index is a trusted measurement of the energy performance of a home. Over one million homes have been issued a HERS Index Score in the US.
Tools Available to HERS Raters
Factsheets & Presentations

Energy Rating Index Performance Path

Overview of the ERI Performance Path in the 2015 IECC

The Energy Rating Index (ERI) performance path provides builders and others with a new option for complying with the International Energy Conservation Code (IECC). In addition to the prescriptive and performance paths of previous versions of the IECC, builders now have the option of meeting a target ERI score through a wide range of performance options to demonstrate compliance. The ERI performance path also requires builders to meet the mandatory code requirements of the IECC, including water heating appliance efficiency, and comply with the minimum insulation and window efficiency prescription requirements of the 2009 IECC.

The ERI performance path allows assessors and jurisdictions adopting the ERI to specify how qualifying Energy Rating Index methods will be used. RESNET’s Home Energy Rating System (HERS) index, based on ANSI/RESNET Standard 201-2004, is the existing compliant ERI method and is nationally recognized for inspecting and calculating a home’s energy performance. To date, over 1.5 million homes have been rated in the U.S. under the RESNET standards and in 2013, half of all new homes were rated and awarded a HERS Index Score.

Energy Ratings are based on a number of variables, including use of equipment and appliance upgrades, as well as the type and efficiency of each of the following:

- Insulation levels (both above and below grade)
- Floors, walls and roof systems (both above and below grade)
- Windows and doors, vents and ductwork
- HVAC and water heating systems
- Airtightness of the home
- Leakage in the heating and cooling distribution system.

How the 2015 IEC ERI Required Ratings Were Determined

The ERI score is defined as a numerical score where 100 is equivalent to the 2009 IECC and 0 is equivalent to a net zero energy home. Each inch less in the wall insulation represents a one percent change in the total energy use of the rated design relative to the total energy use of the IECC reference design. The ERI scores are based on presumed locations of the buildings and on the installed equipment in the buildings. The ERI scores are generated by the IBA, ITRT, DSM, and NBE for each climate zone are also included in Table 1.

In viewing the relation of the IECC and ERI Scores, it is important for states and jurisdictions to remember that lower ERI Scores equal to lower energy consumption and greater energy savings.

Table 1: 2015 IECC Adopted Scores by Climate Zone

<table>
<thead>
<tr>
<th>Climate Zone</th>
<th>2015 IECC Adopted Scores</th>
<th>IBA, ITRT, DSM, NBE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zone 1</td>
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<tr>
<td>Zone 2</td>
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2009 IECC ERI SCORES

According to the U.S. Department of Energy, a home built to the 2009 IECC is expected to use 15% to 20% less energy than a home following the 2009 IECC. As a result, a home built to comply with the maximum prescriptive requirements of the 2009 IECC would achieve the following HERS Index Scores:

Table 2: 2012 IECC ERI Scores by Climate Zone

<table>
<thead>
<tr>
<th>Climate Zone</th>
<th>2012 IECC ERI Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zone 1</td>
<td>74</td>
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<tr>
<td>Zone 2</td>
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Potential Game Change to HERS Raters Becoming ICC Certified

International Code Council (ICC)/RESNET Partnership

• Special packages of certification examinations, and related study and training materials for HERS raters to provide inspections that would be accepted as third party inspections of homes to meet provisions of the IECC and IRC.

• Customized ICC Membership for Certified RESNET HERS raters, which may also include discounted code books, training courses and certification examinations in relevant areas.
National Builders Committing to Marketing HERS Index of Homes
The appraiser hereby certifies that the information provided within this addendum:

- has been considered in the appraiser's development of the appraisal of the subject property only for the client and intended user(s) identified in the appraisal report and only for the intended use stated in the report.
- is not provided by the appraiser for any other purpose and should not be relied upon by parties other than those identified by the appraiser as the client or intended user(s) in the report.
- is the result of the appraiser's routine inspection of and inquiries about the subject property's green and energy efficient features. Extraordinary assumption: Data provided herein is assumed to be accurate and if found to be in error could alter the appraiser's opinions or conclusions.
- is not made as a representation or as a warranty as to the efficiency, quality, function, operability, reliability or cost savings of the reported items or of the subject property in general, and this addendum should not be relied upon for such assessments.

**Green Building:** The practice of creating structures and using processes that are environmentally responsible and resource-efficient throughout a building's lifecycle from siting to design, construction, operation, maintenance, renovation, and deconstruction. This practice expands and complements the classic building design concerns of economy, utility, durability, and comfort. High Performance building and green building are often used interchangeably.

**Six Elements of Green Building:** A green building has attributes that fall into the six elements of green building known as (1) site, (2) water, (3) energy, (4) materials, (5) indoor air quality, and (6) maintenance and operation. A Green Building will be energy efficient but an energy efficient building is not synonymous with Green Building.
Incorporation of HERS Index in MLS

CONCERNING THE PROPERTY AT: ________________________________

AUSTIN/CENTRAL TEXAS REALTY INFORMATION SERVICE
ENERGY, ENVIRONMENT AND SUSTAINABILITY ATTACHMENT

This information is intended to provide a potential Purchaser(s) with information directly from the Seller(s). The following are representations made by the Seller(s) and are not the representations of ACTRIS or the REALTOR®(s). ACTRIS and the REALTOR(s) play no role in completing this form and disclaim any responsibility for the data, analysis, or any other documentation provided by the Seller(s). It is not a warranty of any kind by the Seller(s) and should not substitute for any inspection or test(s) the Purchaser(s) may wish to obtain. Sellers are encouraged to provide all available documentation.

<table>
<thead>
<tr>
<th>ENERGY EFFICIENCY RATINGS</th>
<th>Copy of certification(s) required</th>
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<tbody>
<tr>
<td>□ Building America</td>
<td>Rating:</td>
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<tr>
<td>□ Energy Efficient Mortgage Qualified</td>
<td>Rating:</td>
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<tr>
<td>□ Home Performance w/ ENERGY STAR®</td>
<td>Rating:</td>
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<tr>
<td>□ HERS Index</td>
<td>Rating:</td>
</tr>
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<td>□ Other:</td>
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Home Energy Efficiency and Mortgage Risks

32% LOWER
Mortgage Default Risks

Low HERS Score = Low Mortgage Risk!
A new study found that mortgage default risks were 32% lower on HERS rated homes.
Bonded Builders Warranty Group
Energy Guarantee Program

RESIDENTIAL ENERGY GUARANTEE
An exclusive new program for energy-efficient homes.
Bonded Builders Warranty Group
Energy Guarantee Program

- Third largest home warranty carrier in U.S.
- Offering policy that guarantees home energy bills based on the homes HERS rating
With Opportunities Comes Challenges
Need to Enhance QA of Raters

- Tools for QADs to be more effective - 2015
  - Standardized File and Field Review Checklists
  - Rating QA Process Document
  - Video Series on QA
  - Rater Practical Simulation Test & Rating Field Mentoring Tablet Tool

- Revise Way QA is Delivered - 2017

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Oh Yea, RESNET CAZ Requirement for Raters

Existing HERS Raters Need to Complete RESNET Training and Certification by December 31, 2014
RESNET CAZ Requirement for Raters

Why?

Recession of 2008 Demonstrated That New Homes Market is Volatile – Need to be Proficient in Existing as Well as New Homes

Industry and Candidate Confusion & Frustration Over Too Many RESNET Certifications:

• Rating Field Inspector
• HERS Rater
• Comprehensive HERS Rater
• Home Energy Survey Professional
• Building Performance Auditor
California Here We Come