

“Collaboration with Other Programs HERS & ENERGY STAR”

**2005 National Workshop on State Building
Energy Codes**

June 29, 2005

**Steve Baden
Executive Director
RESNET**

www.natresnet.org

Winds of Change

“Not Your Father’s ENERGY STAR Home”

2006 Will See Significant Changes to Home Energy Ratings and ENERGY STAR for Homes

Why?

New Environment in Residential Energy Efficiency

- * **Wide Spread Adoption of IECC
(Ratings & ENERGY STAR Based on MEC)**
- * **2006 13 SEER Requirement**

Comprehensive Enhancement of RESNET Rating Standards

Standards Development Process

- **Two year drafting process**
 - **Proposal period open to all**
 - **All proposals considered by Drafting Committee**
- **Pre-vetting offered to national groups**
 - **NAHB Energy Committee**
 - **U.S. Department of Energy**
 - **Environmental Protection Agency**
 - **Building America Team**
 - **National Association of State Energy Officials**
- **75 Day Public Comment Process**

Comprehensive Enhancement of RESNET Rating Standards

Two Categories of Enhancements

- **Program Administration (Will not affect rating score) – Went into effect on April 1, 2005**
- **Technical (Will impact how rating scores are calculated) – Goes into effect on January 1, 2006**

To Download Enhancements

www.natresnet.org/standards/enhancements

Goals of Technical Enhancements

- **Enhance the Technical Basis of Energy Ratings**
- **Update Rating Standards to Bring Into Alignment with Current National Standards (IECC, Zero Energy Homes, Proposed Tax Credits)**

HERS Reference Home

REF: 2004-01 “Amending the Rating Reference Home”

- **Establishes the HERS Reference Home as equivalent to the DOE Residential IECC Code Change (RICC)**

Expanded HERS Score

EXP: 2004-01 “Incorporating lighting, appliances and on-site energy production in the rating score”

- **Establishes technical guidelines and procedures for expanding the rated features of the rated home.**

What Does It Mean?

Rates the Home's Whole Energy Use

- **Aligns with U.S. Department of Energy's Building America Program**

Why Important?

Whole Energy Use

End Use

IECC Home

**Heating/Cooling/
Water Heating**

49%

Lighting

14%

Misc. Electric

37%

Soure: NREL - 2005

Expanded HERS Score

- **HERS “Expanded” score based on:**
 - **Heating, cooling, hot water,**
 - **Lighting and appliances, and**
 - **On-site power generation.**

Insulation Inspection Procedures

TECH: 2004-01 - Insulation Inspection Procedures

- **Provides procedures for assessing and applying insulation installation quality – Grades I, II and III**
- **Establishes standards for grading insulation R-value due to compression.**

Comprehensive Enhancement of RESNET Rating Standards

Why the Buzz?

Rating Scores Will Go Down in 2006

- Significantly in the cooling climates**

Changes to ENERGY STAR for Homes Specifications

Why?

- **Wide Spread Adoption of IECC**
- **2006 13 SEER Requirement**
(Above changes could make current ENERGY STAR home below code in Miami)
- **RESNET Standards Changes**

Changes to ENERGY STAR for Homes Specifications

Steps

- **Announced Proposal at 2005 RESNET Conference in March**
- **60 Day Public Comment Process**
- **Summit Meeting with RESNET Representatives**

To Download Proposed Changes

www.natresnet.org/hotnews/epa_newsspecs/default.htm

Changes to ENERGY STAR for Homes Specifications

Prescriptive Specifications

- **2004 IECC Insulation Levels**
- **ENERGY STAR Qualified Heating, Cooling Equipment, Windows and Thermostat**
- **Checklist of 12 Often-Missed Thermal and Air Barrier Locations to be Inspected by Raters (Thermal Bypass Checklist)**
- **Maximum Allowable Levels for Envelope & Duct Leakage**
- **A Minimum of Five ENERGY STAR Qualified Light Fixtures, Ceiling Fans, and/or Appliances**

Changes to ENERGY STAR for Homes Specifications

Performance Specifications

- **The Performance Path will be Based on the New Expanded HERS Score**

(EPA will be making a determination whether a single national score or multiple regional scores will be used and what the threshold rating scores will be)

Changes to ENERGY STAR for Homes Specifications

Potential Additional Performance Specifications

- **Within the performance path, EPA will require some combination of ENERGY STAR qualified products, as well as set maximum allowable levels for envelope and duct leakage (to be determined).**
- **The Thermal Bypass Checklist**

Changes to ENERGY STAR for Homes Specifications

Transition Period

- **EPA will establish a longer “grandfathering” period and make allowances for developments /contracts underway to aid the industry in moving smoothly to the new specification.**

Changes to ENERGY STAR for Homes Specifications

What's Next?

- EPA will officially post the revised guidelines with proposed score thresholds, maximum allowable leakage numbers, and ENERGY STAR equipment options for comment on July 1 for a 3-week comment period
- EPA plans to officially release the final new guidelines in early August

Changes to HERS and ENERGY STAR

What It Means?

- + **HERS, ENERGY STAR, IECC, Tax Credit, Building America Reference Home will be Aligned (Standardized Measurement of Home's Energy Performance)**
- **Rating Score/ENERGY STAR Will No Longer Track With Energy Code (Code = Heating / Cooling / Water Heating – HERS = Whole Energy Use)**

Will Ratings/ENERGY STAR Still Have Relevance with Energy Codes?

Yes

- **Base Line Reference Home Aligned (Chapter 4 - IECC 2004 Supplement)**
- **Ratings Most Practical Tool for Performance Compliance Documentation (Accredited Rating Programs in 50 States)**
- **Ratings Governed by National Consensus Standard and Involve Third Party Accreditation and Quality Assurance Review**
- **Rating Software Programs Have Code Compliance Report (All versions of MEC and IECC)**