

RESNET

Residential Energy Services Network

*Setting the STANDARD
for QUALITY*

UNEP-SBCI Annual General Meeting & Symposium

Paris

Steve Baden, Executive Director, RESNET

www.resnet.us

What is RESNET

- An industry-based, not-for-profit membership corporation
 - Membership composed program administrators, raters, and allied industries
 - Governed by a board of 21 elected by membership
- A national standards making body for building energy efficiency rating and certification systems in the USA
 - Consensus based standard development and amendment process
 - Transparent review and adoption process – Formal public review and comment process

Who Recognizes RESNET

- Mortgage industry for capitalizing energy efficiency mortgages
- Financial industry for certification of “white certificates”
- Federal government agencies
 - IRS for tax credit qualification
 - U.S. EPA for ENERGY STAR labeled homes
 - U.S. Department of Energy for *Building America* program
- States for minimum code compliance in 16 states.

RESNET Standards

- Accreditation Standards
 - Rating Providers
 - Training Providers
 - Software Providers
- Technical Standards
 - Specification of Reference and Rated building characteristics
 - Specification of operating conditions
 - Specification of calculation procedures
 - Specification of minimum rated features
 - Specification of software requirements

RESNET Rating Report

Home Energy Rating Certificate

Lot 21 Thorn Bush Road
Hinesburg, VT 05461



5 Stars Plus
Verified Condition

Uniform Energy Rating System

1 Star	1 Star Plus	2 Stars	2 Stars Plus	3 Stars	3 Stars Plus	4 Stars	4 Stars Plus	5 Stars	5 Stars Plus
500-401	400-301	300-251	250-201	200-151	150-101	100-91	90-86	85-71	70-0

Energy Efficient

HERS Index: **55**

General Information

Conditioned Area: 2146 sq. ft. House Type: Single-family detached
Conditioned Volume: 15473 cubic ft. Foundation: Unconditioned basement
Bedrooms: 3

Mechanical Systems Features

Heating: Fuel-fired hydronic distribution, Propane, 92.0 AFUE.
Water Heating: Integrated, Propane, 0.85 EF, 80.0 Gal.

Duct Leakage to Outside: NA
Ventilation System: Exhaust Only: 169 cfm, 54.0 watts.
Programmable Thermostat: Heating: Yes Cooling: No

Building Shell Features

Ceiling Flat: R-37 Exposed Floor: R-39, R-0
Vaulted Ceiling: NA Window Type: U:0.35, SHGC:0.30
Above Grade Walls: R-19 Infiltration:
Foundation Walls: R-10.0 Rate: Htg: 830 Clg: 830 CFM50
Slab: None Method: Blower door test

Lights and Appliance Features

Percent Fluorescent Pin-Based: 70.00 Clothes Dryer Fuel: Electric
Percent Fluorescent CFL: 0.00 Range/Oven Fuel: Propane
Refrigerator (kWh/yr): 460.00 Ceiling Fan (cfm/Watt): 0.00
Dishwasher Energy Factor: 0.66

The Home Energy Rating Standard Disclosure for this home is available from the rating provider.

REM Rate - Residential Energy Analysis and Rating Software v12.5 Vermont
This information does not constitute any warranty of energy cost or savings.
© 1985-2008 Architectural Energy Corporation, Boulder, Colorado.

Rating Number: 6038J685
Export Build Run No: 13723
Certified Energy Rater: Sara Davie
Rating Date: December 15, 2008
Rating Ordered For: Collin Frisbie

Estimated Annual Energy Cost

Use	Verified Condition		
	MMBtu	Cost	Percent
Heating	71.7	\$2276	67%
Cooling	0	\$0	0%
Hot Water	3.9	\$125	4%
Lights/Appliances	22.6	\$668	26%
Photovoltaics	-0.0	\$-0	-0%
Service Charges		\$119	4%
Total		\$3389	100%

This home meets or exceeds the minimum criteria for all of the following:

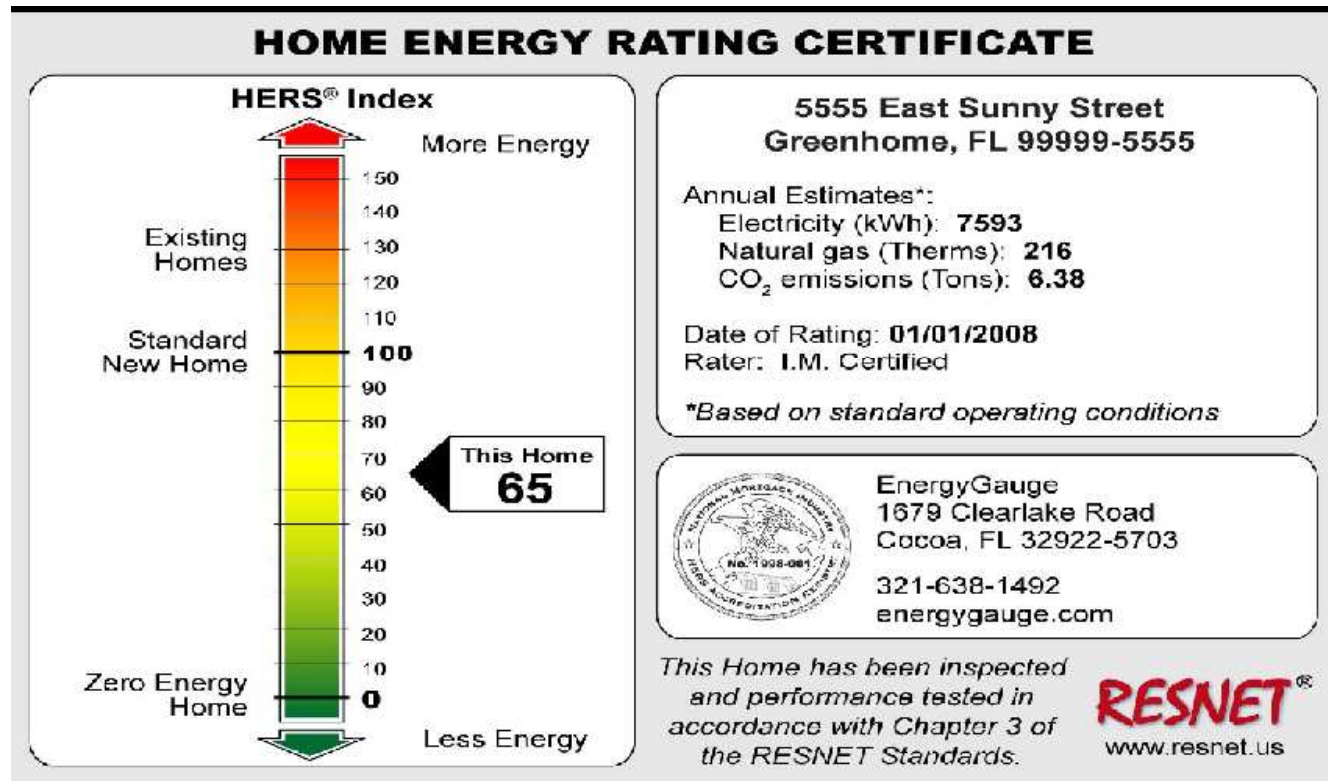
Federal Energy Policy Act, 2005*
Vermont Energy Star Homes Criteria*
Vermont Residential Energy Code*

* Compliance with criteria for this program is determined by the rater.

Vermont Energy Investment Corp.
255 South Champlain St.
Burlington, VT 05401
800-639-6069
Fax 802-658-1643
www.veic.org



RESNET Rating Label



Affix to electric panel

RESNET National Building Registry

Collect information on every home rated

- Building address
- Size of building
- Energy features breakdown
- Projected energy consumption and savings
- Projected carbon emissions and savings

Rating Industry Taking Off

RESNET Ratings (2009)

- 116,283 homes rated (34.2% of new homes sold in the U.S.) – 12.2% in 2008

Tax Credit Qualifications Grew in 2009

37,506 homes were certified as complying with federal tax credit (50% more efficient than code) (10.0% of new homes sold in US) – 21,939 (4.6%) in 2008

Tax Credit Qualifications

Year	Number of Homes	Number of Homes Sold	% of Homes Verified
2009	37,506	374,000	10.0%
2008	21,939	485,000	4.6%
2007	23,102	776,000	3.0%
2006	7,110	1,051,000	0.7%

COMNET Background

- EPAAct 2005 requires method for calculating 50% reduction in energy costs from ASHRAE 90.1-2001: COMNET provides this method by automatically generating the baseline building
- EPAAct requires the establishment of a field quality assurance mechanism analogous to RESNET's Home Energy Rating (HERS) approach: COMNET will be this mechanism

COMNET Standing Committee

RESNET Board Of Directors established the Committee in Feb 2010 to guide development efforts:

- Charles Eley/AEC/RESNET BOD – Chair
- Martha Brook/California Energy Commission
- Philip Fahey/FL Solar Energy Center/RESNET BOD
- David Goldstein/NRDC/RESNET BOD
- Mike Holtz/RESNET BOD
- Jean Luppinacci/EPA-ENERGY STAR
- Cliff Majersik/Institute for Market Transformation
- Colin McCormick/US Department of Energy
- Mike Optiz/USGBC
- Bill Prindle/ICF
- Steve Taylor/ASHRAE/ISO

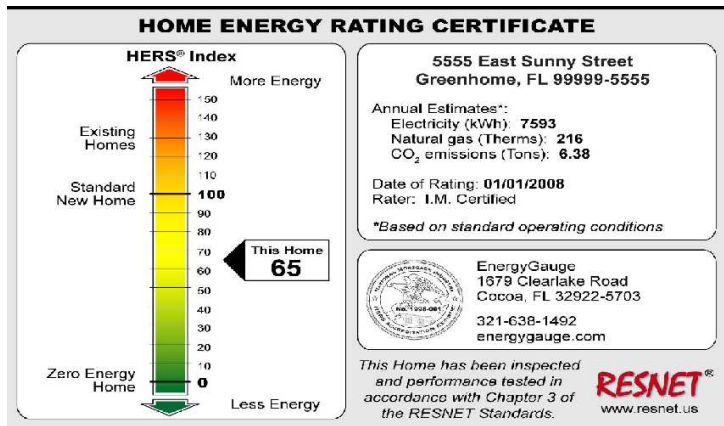
Ongoing COMNET Relationships

- Driving to a national consensus technical standard in 2010
- IECC baseline integration is being discussed
- Formal recognition is expected by:
 - IECC/IGCC
 - USDOE/IRS
 - USGBC
 - ENERGY STAR Buildings Program
 - ASHRAE Energy Quotient Building Rating/Labeling Program
 - California Energy Commission

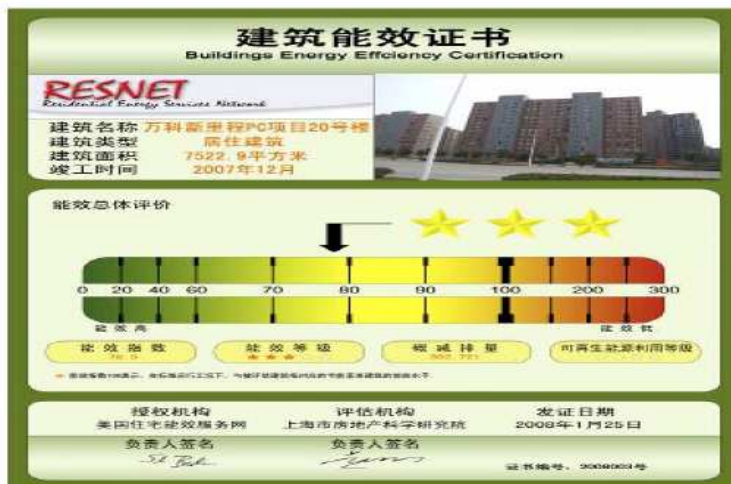
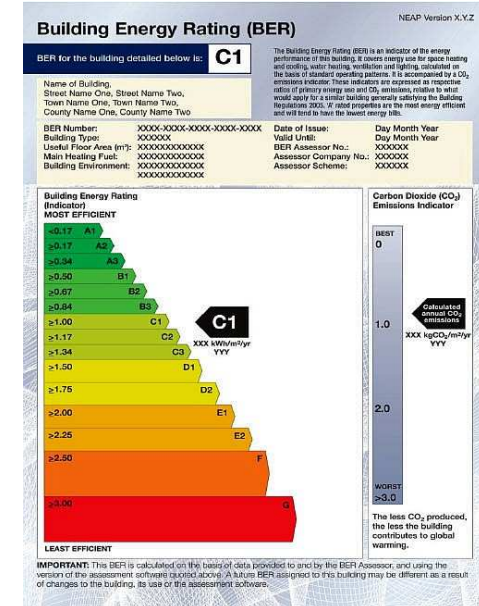
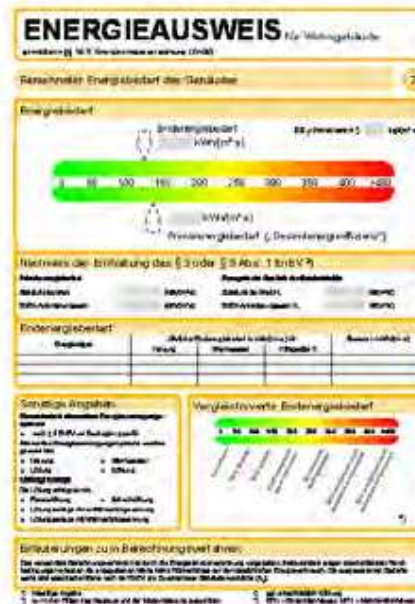
What is COMNET Technically?

- COMNET Commercial Buildings Energy Modeling Guidelines and Procedures
 - Enhanced inputs to building energy modeling software increases the accuracy of modeling by among other attributes includes non-regulated loads such as ENERGY STAR office equipment
 - Automatically generates the reference baseline building for ASHRAE 90.1-2001 and 90.1-2007
 - Provides compliance checking with EPA Act 2005 federal tax incentives + USGBC/LEED + Green Globes
 - Inputs to ENERGY STAR Target Finder
 - Future performance-based energy code compliance

Labeling of Homes – Opportunity for Harmonizing Internationally?



Attix to electric panel



Make Plans to Attend the 2011 RESNET Conference





Thank You