Leveraging the Real Estate Industry to Increase Energy Efficiency Upgrades

Joan Glickman
U.S. Department of Energy
Today’s Panel

- **Elizabeth Stuart**, Lawrence Berkeley National Laboratory
- **Denee Evans**, Council of Multiple Listing Services
- **Laura Stukel**, Elevate Energy
- **Emily Levin**, Vermont Energy Investment Corporation
The U.S. Department of Energy created the Home Energy Score to serve as a nationally standardized “miles-per-gallon” rating for homes

- Offers homeowners affordable, reliable, easy way to understand homes’ energy performance
- Available at no-cost to program providers
- Intended to motivate homeowners to invest in residential energy efficiency
  - Simple and action-oriented
  - Ability to document investment in energy efficiency using the post-improvement score

Home Energy Score website:  [www.homeenergyscore.gov](http://www.homeenergyscore.gov)
The Score Report

The Home Energy Score is a national rating system developed by the U.S. Department of Energy. The Score reflects the energy efficiency of a home based on the home’s structure and heating, cooling, and hot water systems. The Home Facts provide details about the current structure and systems. Recommendations show how to improve the energy efficiency of the home to achieve a higher score and save money.

<table>
<thead>
<tr>
<th>Score</th>
<th>Home Facts</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address: 12345 Honeysuckle Lane</td>
<td>Home size: 1,800 square feet</td>
<td></td>
</tr>
<tr>
<td>Smithville AR 72466</td>
<td>Year built: 1970</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Air conditioned: Yes</td>
<td></td>
</tr>
</tbody>
</table>

- Takes an hour or less to complete
- Can be generated by home inspectors, contractors, utilities, others
- Can be used directly online or linked to other software tools
- Builds on social norming principles: “5” represents a home with expected average energy use
- Generates values of interest beyond the 1-10 score (e.g., expected energy use)

Score with improvements: 7
Estimated annual savings: $411

Your home’s current score: 3
Uses more energy: 1 2 3 4 5 6 7 8 9 10
Uses less energy

Assessment type: Official Score
Assessment date: Feb 03, 2014
Score ID: 42944
Qualified assessor #: 101019
Home Energy Score Version: v2014.4506

homeenergyscore.gov
Score is a flexible offering that can be customized and delivered through many avenues
- Home Performance with ENERGY STAR, direct install programs, as part of real estate transactions

Earlier this year, DOE launched new 3-D training & testing tool for Assessors
- Allows greater number and type of building professionals (e.g., home inspectors, HVAC contractors) to offer the Score

Software companies licensing Home Energy Score Application Programming Interface (API)
- Allows seamless data transfer
- Now accepts data in HPXML
- Now offering Score thru API: EnergySavvy, Optimiser, CakeSystems, EnergySoft, Spirit Foundation, CEEF, PSD

State and local adoption
- CO, CT, MO, OR, VT
- Others likely to adopt include AL, AR, NY
- City of Berkeley passed ordinance – will use Score to fulfill disclosure requirement
But information alone is not enough…

we need to make that information easily ACCESSIBLE and USED in real estate transactions.
Two New Better Buildings Residential Accelerators

Called for in the President's Climate Action Plan

Better Buildings Accelerators are designed to demonstrate specific innovative approaches in energy data, performance contracting, utility strategic energy management, and other areas within three years, which upon successful demonstration will accelerate investment in energy efficiency.

- **Home Energy Information Accelerator** – facilitate widespread use of reliable home energy information at all relevant points in the real estate transaction

- **Home Upgrade Program Accelerator** – bring home energy upgrade services to more homes by reducing the costs associated with managing and operating energy upgrade programs and improving overall program effectiveness
Home Energy Information Accelerator

Vision
Widespread use of reliable home energy information at all relevant points in the real estate transaction, enabling fair value at sale for energy efficient / high performing homes

1. Expand Pipeline
   - Of homes with verified energy information (e.g., Home Energy Score, Zero Energy Ready Homes, ENERGY STAR)

2. Develop Tools & Systems
   - That facilitate the standardized and automated flow of home energy information from credible sources to relevant users

3. Demonstrate Use
   - Of home energy information in MLS listings, appraisal forms, and other relevant applications

4. Recognize Champions
   - In relevant fields, highlight their successes, and encourage adoption of best practices

5. Success Metric
   Significantly expand availability and use of reliable home energy information in five or more pilot markets to demonstrate replicable models of automated, linked systems influencing home sales
Closing the Loop to Capture the Value of EE in Homes

- Maintain energy information in a central repository (or make it part of public record)
- Automate information flow to MLS
- Make energy information non-threatening and useful to homebuyers
  - Buyers generally want to know what their monthly costs are going to be as a homeowner (e.g., utility costs)
  - Ideally, brokers will encourage buyers to have a home energy assessment as part of a home inspection
  - Inspectors can point out opportunities for greater efficiency as well as incentives, retailer or utility offers (e.g., lead generation)

- Design policies that encourage lenders and appraisers to seek out the information
  - Greater training and outreach to lenders & appraisers
  - Need clear policies on how this information can be used to inform lending decisions and valuation
# Engaging Key Players

<table>
<thead>
<tr>
<th>Key Players</th>
<th>Motivation</th>
<th>Key Challenges</th>
<th>National Progress</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agents/ Brokers</td>
<td>• Differentiation</td>
<td>• Awareness/training</td>
<td>Gaining traction</td>
</tr>
<tr>
<td></td>
<td>• Customer service</td>
<td>• Fear of negative information</td>
<td></td>
</tr>
<tr>
<td>Inspectors</td>
<td>• Differentiation</td>
<td>• Awareness</td>
<td>Gaining traction</td>
</tr>
<tr>
<td></td>
<td>• Additional revenue</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appraisers</td>
<td>• Required to analyze all characteristics of the house</td>
<td>• Awareness/training</td>
<td>Slow progress</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Additional effort</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Lack of comps</td>
<td></td>
</tr>
<tr>
<td>Lenders</td>
<td>• Minimize risk</td>
<td>• Quantifiable impact on foreclosures</td>
<td>Slow progress</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Favor “comp” appraisals</td>
<td></td>
</tr>
<tr>
<td>MLS Boards</td>
<td>• Keeping up with market</td>
<td>• Data transfer protocols</td>
<td>Gaining traction</td>
</tr>
<tr>
<td></td>
<td>• Delivering information of interest</td>
<td>• Privacy</td>
<td></td>
</tr>
<tr>
<td>EE &amp; RE Services</td>
<td>• Increased program participation</td>
<td>• Awareness</td>
<td>On board &amp; growing</td>
</tr>
<tr>
<td></td>
<td>• Capture value of investments</td>
<td>• Consistent metrics &amp; information</td>
<td></td>
</tr>
</tbody>
</table>
THANK YOU!

joan.glickman@ee.doe.gov

homeenergyscore@ee.doe.gov

www.homeenergyscore.gov
Determining a Path that’s Right for You

- Know your state’s (or community’s) strengths. Know its challenges.
  - Individuals
  - Organizations
  - Laws on the books, relevant requirements
  - Funds
  - Related interests
- What information do you currently have on home energy efficiency in the housing stock?
  - What are your best bets for growing a sustainable pipeline of reliable home energy information?
- What information do different players in the real estate industry want? Can you generate different pieces of information for different users without creating market confusion?
- Can you figure out messaging or delivery methods that use scores to drive demand for energy efficiency absent changes to lending and appraisal practices?
Home Energy Score Integration with FHA Loans

✓ Tying the Score to Financing

• Provide a two percent stretch on the qualifying debt-to-income ratio provided to borrowers
  • If home is a 6 or better
  • If improvements are being made to get the home to achieve a 6 or better

• Good News: 203(k) and 203(b) are standard, high volume products

• Bad News: Will only be possible through “manual” underwriting initially

• Changes to automated underwriting:
  • Much more difficult to achieve
  • Requires data to inform modifications to current algorithms
Incorporating Energy Efficiency into Mortgage Underwriting

- Adjust capacity to account for expected energy costs -
  - Can’t use previous owner’s utility bills given variability associated with occupant behavior, weather, etc.
  - Asset rating/score that predicts energy costs is an excellent alternative – we just need the policies in place to require this adjustment.

- Adjust valuation of the home reflects the energy cost savings.

The Three C’s of Underwriting

- Credit
  - Borrower’s ability to pay the monthly mortgage
  - Debt-to-Income Test

- Capacity
  - Loan to Value Ratio

- Collateral
  - Appraised value of the home

Courtesy of IMT, Cliff Majersik
The SAVE Act

• Would provide guidance to HUD to issue updated underwriting and appraisal guidelines for borrowers who submit a qualified home energy report.

• Debt-to-Income Adjustment: Instructs lenders to account for expected energy cost savings as an offset to other expenses in the debt-to-income qualifying ratio.
  ✓ “PITI+E”

• Loan-to-Value Adjustment: Instructs lenders to add the present value of expected energy savings when calculating the loan-to-value ratio, where not already accounted for in the home’s appraisal report.

• Opportunity to inform buyer -- what to expect in terms of likely monthly bills

Average U.S. Homeowner Costs: 2012

- Energy: $2,506
- Property Tax: $2,082
- Homeowners Insurance: $1,023

Sources: EIA Annual Energy Outlook 2014; 2012 American Community Survey; National Association of Insurance Commissioners, 2012 Annual Homeowners Insurance Report

Courtesy of IMT, Cliff Majersik
Using Score to Drive Demand for EE

- **Build A Base**
- **Consistent Metric for New & Existing Homes (e.g., cost)**
- **Improved Data Flow**
- **Ensure Quality & Continuous Improvement**
- **Optimize messaging & score delivery method to existing homeowners**
- **Leverage Time of Purchase Opportunities**
- **Facilitate lead generation from home inspectors**
- **Educate and Market to Homebuyers**
- **Attractive Financing & Appraisal Policies**
- **Training & CEU credits**
- **Tools for real estate professionals**

**HOME OWNERS**

**HOME BUYERS**

Strategies? Priorities?
# Program Accomplishments of Last 12 Months

<table>
<thead>
<tr>
<th>Key Activities</th>
<th>Accomplishments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Existing Partners</strong></td>
<td>• Reaching scale and trying new approaches – congratulations &amp; thank you!</td>
</tr>
<tr>
<td><strong>New Partners</strong></td>
<td>• Focus on Energy, Arkansas Economic Development Commission-Energy Office, OR Department of Energy, VEIC (VT), SEEL, Posigen</td>
</tr>
<tr>
<td><strong>State &amp; Local Policies</strong></td>
<td>• VT, NH, AL, AR, MO, CO, OR, CT</td>
</tr>
</tbody>
</table>
| **Scoring Tool, API, & Gateway**        | • 5 = average home  
• HPXML now available  
• Growing number of software tools with API access to Score  
• Partner Portal                                                                                                                                   |
| **Assessor Training & Testing**         | • Scoring Tool v.2015  
• 3-D simulation training & testing platform  
• New Assessor requirements                                                                                                                        |
| **Evaluation**                          | • Launched 2 additional studies with NYSERDA & Colorado Energy Office                                                                              |

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**Coming Soon**

<table>
<thead>
<tr>
<th>Quality Assurance</th>
<th>• More automated capabilities for QA and review of scores</th>
</tr>
</thead>
</table>
| IT Gateway        | • Development underway  
• Gateway expected September 2015                        |
| HUD/FHA           | • Announcement for 2% stretch expected in Spring/Summer 2015 |
Some Thoughts from our Team

VISION: Home Energy Score is widely used and motivates homeowners and buyers to make efficiency improvements

- What are indicators of success? What needs to be true in the marketplace to be confident that the program -- as well as its intended outcomes -- are sustainable?

✓ Increased supply
  - X number of homes scored/year
  - X percent of all home inspections include the score
  - Different players benefit from using it (e.g., sustainable, profitable)
  - Large retailers and/or manufacturers use the Score as part of their business strategies

✓ Increased Demand
  - Consumers demand the score, want to improve homes that score below 6
  - Easy to get key metrics (score, estimated cost) and easy to use the info to affect decision-making (lenders, appraisers, homeowner/buyer)

✓ Increased Impact
  - X percent of homes scored make EE improvements
  - House plays a role at time of sale (e.g., buyers desire a higher score)
  - Score factors into X percent of home sales
  - Policies in place (states, HUD, GSEs) rely on the score or incentivize action related to the score
Connecticut: Integrating Score with utilities’ *Home Energy Solutions* program
- Plan on scoring 11,000 homes annually
- Using the Score to help track progress toward the state’s 80% weatherization goal for 2030

Colorado: Linking the Score to incentives at point of sale or refinance
- $750 per score jump, up to $3,000
- Capitalize on homebuyers’ willingness to invest in efficiency at point of sale
- Launching in July (thru utilities & home inspectors)

Vermont: Adopting Home Energy Score as a key component of the state’s voluntary labeling program
- Using multiple metrics from the Home Energy Scoring Tool to generate a customized state label

Missouri: *Home Energy Certification* Program
- Recognizes high scores as well as specific improvements in ratings using Home Energy Score & HERS
• Recent developments
• Vision moving forward (utilities and now trying to push home inspectors)
• Value of HEScore and how it’s gaining traction (still need to sell some folks on it)
• Issues that Partners/states are having
• Accelerator
• New homes and existing homes and how we can work toward consistent calculations

What opportunities & challenges does DOE see? Can it work for New Homes? What issues are they hearing states / programs are struggling with.
How can we streamline data collection?
5. How can we unite differing state methods (e.g. custom labels) and metrics (e.g. HES vs. MMBTU) to provide the market with clear collective messaging?
6. What will it take to ensure that the Score remains viable over the long-term and is fully integrated into your communities?

What is the latest update to Home Energy Score? What opportunities & challenges does DOE see? Can it work for New Homes? What issues are they hearing states / programs are struggling with.
Overcoming Barriers to Valuing Energy Efficiency in Residential Real Estate Transactions:

Steps EE Programs Can Take Now

Elizabeth Stuart
Lawrence Berkeley National Laboratory
Why engage the real estate community?

- Homebuyers value efficiency
- EE not properly valued in home sale process
- Opportunity: > 5 million homes sold annually
- EE programs have information to drive EE valuation
- Create a future in which homeowners eagerly pay for efficiency upgrades
Some key barriers to accurately valuing EE

- EE often invisible to buyers, agents, inspectors
- Lack of standard documentation and dissemination
- Lack of 3\textsuperscript{rd} party verification certification
- Time gap between upgrades and home resale
- Failure to assign qualified appraisers
National Efforts Underway

- Unlocking the Value of an EE Home (Blueprint)
- DOE: BEDES; BPI 2101 Standard
- Green the MLS (NAR)
- Appraisal Institute Residential Green and Energy Efficient Addendum
- Appraisal Foundation forthcoming documents
- Aligning building efficiency and real estate information (e.g., RETS)
<table>
<thead>
<tr>
<th>Real Estate or Program Actor</th>
<th>EE Program Activity Ideas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home performance contractors</td>
<td>Document upgrades in standardized formats; put sticker on home’s breaker box</td>
</tr>
<tr>
<td>EE program participants</td>
<td>Issue EE upgrade or home rating certificate; engage homeowners to share the information when reselling the home</td>
</tr>
<tr>
<td>Local Board of REALTORS®</td>
<td>Support real estate agent education; give “brown bag” talks; work to establish green fields in MLS</td>
</tr>
<tr>
<td>Mortgage lenders, appraisers, home inspectors</td>
<td>Support green real estate education; post lists of green-qualified professionals</td>
</tr>
</tbody>
</table>
Activity Areas

• Activity areas

1. Collect and communicate EE data in standardized formats
2. Retain information and communicate at home resale
3. Support training resources for real estate professionals
EE Program Activities: Where to Start?

• Potential activities involve range of effort level
  • Basic level of effort, e.g.
    • Offer certificates for home energy upgrades
    • Put sticker with EE info on home’s circuit box
  • Long-term effort, e.g.
    • Establish green MLS data fields
    • Use established data standards
EE Program Activities: Where to Start?

• First step: assess local situation
  • What is the inventory of high performance homes?
  • Does program offer certification or rating?
  • What is the real estate community’s level of interest/experience with efficient homes
  • What ‘green’ fields does the MLS accept (if any)?
  • What resources do I have available?
Activity Area 1: Standardized Data Formats

- **Basic approach** – leverage existing resources:
  - National terminology standards (BEDES, RETS)
  - Rating systems (e.g., HES, EPS, HERS)
  - 3rd-party verified certificates (e.g., HPwES)
  - Appraisal Institute Residential Green and Efficient Addendum
Activity Area 1: Standardized Data Formats

---

Silver Certificate of Completion

This home has achieved an estimated total energy reduction of at least 15%* after the following home energy upgrades:

- Air sealing performed reducing total air leakage rate by 34%
- Attic insulation improved to R-49
- Existing bath fan vented to exterior

---

Home address:
1234 Sample Street
Sample, IL 60000

Contractor:
Name of Contractor

Program Provider:
Name of Program Provider

Work Completed On:
Date Completed

*Certificate issued 12/31/2014 by the Midwest Energy Efficiency Alliance (MEEA) on behalf of the Illinois Energy Office based solely on the reporting by or estimates of contractor. A minimum of 13% is required to receive a Certificate of Completion. See reverse.

Agnes Mrozowski
Assistant Deputy Director, Illinois Energy Office

---

[Energy Star Logo]
Activity Area 1: Standardized Data Formats

• **Longer-term effort:** Green the MLS
  - Establish or expand green MLS fields
  - Partner with local brokerages/agents
  - Use Green MLS Implementation Guide
  - Can start with checkbox for ENERGY STAR home, upgrade certificate or home energy rating

Program Example: State of Colorado

• Needed data to support EE financing programs
• Undertook broad statewide effort
Activity Area 1: Standardized Data Formats

- **Longer-term effort**: interoperable national standards
  - BPI-2101 defines data requirements for 2 certificates:
    - Cert. of performance (e.g. HES, HERS rating, EPS)
    - Cert. of energy improvement (e.g., HPwES)
  - BPI-2103 (HPXML) is the data transfer protocol
  - HPXML Implementation Guide: steps and use cases

**Program Example: NYSERDA**
- Goal: open market to multiple software vendors
- (Re)evaluated every data field
- Additional benefit: improved workflow
Activity Area 2: Retain and Communicate

- **Basic effort**: Keep EE information with the home
  - Create sticker with home’s EE information
  - Require contractors to place sticker on home’s breaker box
  - Follow lead of ENERGY STAR qualified new homes, manufactured homes and energy code compliance programs
Activity Area 2: Retain and Communicate

- **Basic effort**: engage program participants beyond the upgrade
  - Educate homeowners to retain EE/rating information and share it with agent when they sell home
  - Periodically engage and remind participants

Program Example: Illinois Home Performance

- Website reminder
- Postcard mailings
Activity Area 2: Retain and Communicate

- **Moderate effort:** Ensure EE information is included in appraisals
  - Document upgrades in Appraisal Institute Green and Energy Efficient Addendum
  - Educate homeowners to retain the Addendum
  - Educate lenders, real estate professionals and appraisers about the Addendum
  - Educate agents to tell home buyers to request green-qualified appraiser
  - Link to lists of local/national green-qualified appraisers
Activity Area 2: Retain and Communicate

• **Longer-term effort:** Automate data transfer to MLS
  • First step: as program participants for permission to share EE data

Program Example: Energy Trust of Oregon

• Exploring automated transfer from ETO database to MLS aggregators
• 1st step: transmit Energy Performance Score
Activity Area 3: Education and Training

- **Basic approach**: Outreach and presentations to real estate community
  - E.g., “brown bag” talks, green home tours
  - Develop relationships, network

---

**Program Example: Energy Trust of Oregon**

- Created real estate ally designation
- Promotes allies on website, networking
Activity Area 3: Education and Training

- Leverage existing resources to support training
  - Courses that provide CEUs for license renewal
  - Voluntary professional development
  - Multi-day advanced designation training, e.g.:
    - NAR Green Designation
    - Eco-broker
    - Earth Advantage Broker
    - Appraisal Institute Valuation of Sustainable Buildings Professional Development program
Activity Area 3: Education and Training

• Leverage existing resources to support training

Program Example: MEEA

• Partnered with NAR Green Designation and local board of Realtors®

• Success factors:
  • Partner to get courses CEU-certified
  • Messaging: expand expertise
  • Subsidize cost: agents have many options for free CEUs
Getting Started: Assess Your Situation

• Has the regional MLS established any green fields?
• Is there interest among local real estate professionals?
• Is there a growing inventory of high-performance homes?
• Are local green real estate trainings available?
• Does my program have relationships with members of the real estate community?
• Has my program established any energy efficiency certification and rating programs?
• Does my program have the resources necessary to develop databases and work with software vendors?
Thank you!

Elizabeth Stuart
Lawrence Berkeley National Laboratory
Estuart@lbl.gov
Multiple Listing Service

Leveraging the Real Estate Industry to Increase Energy Efficiency Upgrades
What is CMLS?

- Founded in 1957
- National Association supporting MLSs
- 150 members that service 85% of the market
- Provide resources, networking and advocacy
• Denee Evans, CEO
• Degree in Finance – Real Estate
• ED of EnergyFit Nevada, HPwES program
• Senior Loan Officer at BofA and Wells Fargo
• Homeowner

Who am I?
What is an MLS?

• How many MLSs in the US?
  No one really knows...
  Somewhere between 700 - 900

• How many should there be?
Can’t we just standardize MLS?

<table>
<thead>
<tr>
<th>850+ Nationally</th>
<th>1600+ Nationally</th>
<th>1.2 Million Members</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independently operated</td>
<td>Independently operated</td>
<td>National organization</td>
</tr>
<tr>
<td>Governance: Exec Board, Reps from local board of REALTORs</td>
<td>Governance: Exec Board</td>
<td>Governance: Exec Board</td>
</tr>
<tr>
<td>MLS Services: MLS data hosting, training, compliance</td>
<td>MLS-Related Services: Code of Ethics, training, grievance process</td>
<td>MLS Services: Legal guidance to MLS staff</td>
</tr>
</tbody>
</table>
Key partners leading the way

Where do we start?
How to green the MLS?

www.greenthemls.org/green-mls-implementation-guide
Strong MLS Adoption
79 out of Top 100 population markets

How do MLSs define “HPH”? 

Third-Party Verified Fields
Program/Body
- Rating
- Year
- URL
Performance Metrics
- Score
- Year
- URL

Specific/Technical Fields
(Sample List)
- Heating
- Cooling
- Interior Features
- Exterior Features
- Window Features
- Construction Materials
- Foundation Details
- Appliances

www.reso.org/data-dictionary
Auto-pop

Tax Data

MLS Operators

Verified
Green Data

Agents

Brokerages

Aggregators

2.4 Million Records

Tax works, why not “green”?
• Share perspective from different sides
  • MLS, EE Program, Lender, Homeowner
• Connect the dots between stakeholders
• Highlight what my members are doing
• Hear what others need to be successful
• Help build your EE army

Why?
Contact Info:

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919.674.4185 direct

Questions.....
Overcoming Barriers to Valuing Energy Efficiency in Residential Real Estate Transactions: Steps EE Programs Can Take Now

Laura Reedy Stukel
May 28, 2015
Our Mission

We promote smarter energy use for all.

We give people the resources they need to make informed energy choices.

We design and implement efficiency programs that lower costs, and protect the environment.

We ensure the benefits of energy efficiency reach those who need them most.
• Why don’t real estate markets consistently value high performance homes?

*Blueprint for collaboration was missing.*

---

**Value for Green Homes**

1. Green Builder or Contractor and Homeowner
2. Green MLS Listing Agent Buyer’s Agent
3. Lender
4. Appraiser
5. Underwriting
6. Fair Value at Closing
A Blueprint for Collaboration

1. Document Upgrades
2. Disclose Inventories
3. Continuing Education
4. Green MLS Usage
5. Appraiser Designed Valuation Studies
6. Cross-Industry IT Solutions
7. Work with Lending Institutions
1. Document Upgrades –

*Use MLS Definition of “High Performance Home”*

**Third-Party Verified Fields**
- Green Building Program/Sponsor
- Year Verified
- Rating Achieved
- Score Achieved (i.e., HERS Index Score)

**Specific/Technical Fields** (Partial List)
- Construction Materials (insulation, etc.)
- Cooling
- Heating
- Interior Features (countertops, etc.)
- Roof
- Foundation Details

**Utility Data Fields**
2. Disclose Inventories

Top 100 US Population Areas; Third-Party Verified Upgrades

Top 100 Macro and Micro MSA (>250k)

Density of High Performance Homes

- **Red**: 0.3% - 3.0%
- **Orange**: 3.1% - 6.0%
- **Yellow**: 6.1% - 12.1%
- **Light Green**: 12.2% - 19.2%
- **Green**: 19.3% - 66.0%

Green MLS Fields

- **Red**: No
- **Yellow**: Unknown
- **Light Green**: Yes

©2015 Elevate Energy
4. Green MLS Usage

DC Example

Eco-Friendly homes
18.9%
of total listings

ECO-FRIENDLY MARKET SHARE

Highest:
Friendship Heights
(ZIP Code 20015)
29.1%

D.C. Neighborhoods with the highest density of Eco-Friendly homes

- Cathedral Heights
- Georgetown
- Howard
- Brookland
- Brentwood
- Capitol Hill
Standards are Driving Solutions
Energy Cost Disclosure in Chicago’s MLS

[Image of a house with real estate listing information]

Detached Single
Status: NEW
Area: 8021

List Date: 06/26/2013
List Dt Rec: 06/26/2013

List Price: $399,900
Orig List Price: $399,900
Sold Price:

Directions: Diversey West to Rockwell, North to Property

Sold by:
Closed:
Off Market:
Year Built: 1920
Dimensions: 37.5X125
Ownership: Fee Simple
Corp Limits: Chicago
Coordinates: N:2900
W:2600

Rooms: 7
Bedrooms: 4
Basement: Full

Contract:
Blt Before 78: Yes

Subdivision:
Township: North Chicago

Model:
County: Cook

Lst. Mkt. Time: 1
Points:
Contingency:
Curr. Leased: No

In Price:

Utility Costs: Elec. - $770.60/yr, $64.22/mo; Gas - $1198.00/yr, $99.83/mo

Remarks: CHARMING 4 BED+DEN, 1.1 BATH SINGLE FAMILY HOME ON LOT & A HALF IN DESIRABLE LOGAN SQUARE/AVONDALE LOCATION. REMODELED APPROX 10 YEARS AGO W/ NEWER HVAC, ELECTRIC, PLUMBING, H2O HEATER & ROOF. DIAG HDWD FLRS; LARGE EAT IN KITCHN W/ SS APPLS; HIGH CEILINGS; FULL BASEMENT; HUGE FENCED YARD W/ BLUE STONE PATIO; SECURITY SYS OVERSIZED 2 CAR GARAGE. CLOSE TO 90/94 & ALL LOGAN SQUARE/BUCKTOWN SHOPPING & RESTAURANTS!
Energy Cost Disclosure in Chicago

**Impact – 18 month program review; Correlation, not yet causation**

- **Higher percentage of the asking price**
  - Sample – Chicago Condos
    - Disclosure homes - original list price to closed price (97.2%)
    - Non-disclosure counterparts - original list price to closed price (95.9%)
      - *Extra $4,576 for the average seller who disclosed energy costs*
      - Average condo closed price in Chicago - $352,000

- **Less time on the market**
  - Sample – Chicago condos
    - Disclosure homes - 69 days
    - Non-disclosure counterparts - 93 days
      - *About one less mortgage cycle for the average seller*

- **No negative consequence**
  - Data shows connection between homes that closed AND disclosed
    - *Disclosure at the time of listing benefits both seller and buyer*
Questions? -- Stay in Touch

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About VEIC

- Nonprofit founded in 1986
- Designs, delivers, and evaluates energy efficiency programs nationwide
- 300+ employees
- Locations: VT, DC, OH, NJ

www.veic.org
Vermont Green Homes Alliance History
In 2008, the HBRANV sought advice about rolling out the NAHB’s National Green Building Standard™ in Vermont.
An Alliance Was Formed

Vermont Green Home Alliance

Building for Social Responsibility
Local LEED for Homes Provider
Local USGBC Chapter
Local NAHB Chapter
Vermont Housing Finance
Engaging the Real Estate Industry

VGHA met with Vermont Realtors®, VT Chapter of the Appraisal Institute, & VT Mortgage Bankers Assn. to discuss what they might do to support energy efficient & sustainable building
VGHA Has Grown to Include

- Association of Vermont Credit Unions
- Sterling Construction, Inc.
- Building for Social Responsibility
- Turtle Creek Builders, Ltd
- Efficiency Vermont
- Energy Futures Group
- Home Builders & Remodelers Association of Northern Vermont
- Northern New England Real Estate Network
- Passive House Alliance – Vermont Chapter
- Vermont Association of Professional Home Inspectors
- Vermont Chapter of the Appraisal Institute
- Vermont Energy Investment Corporation
- Vermont Green Building Network
- Vermont Housing Finance Agency
- Vermont Realtors®
- VSECU – *a credit union serving all Vermonters*
VGHA Mission

- Transformation of the real estate market so that buyers & sellers can identify & accurately value energy efficiency benefits
- Operates on consensus basis
- Part-time coordinator funded by Efficiency Vermont
Green Homes Alliance Activities
Collaboration with our MLS

We now have:

- A data field to record the HERS Index score
- All pertinent Vermont 3rd party verified building certifications for new homes
- A HERS database for appraisers & real estate agents to use to find comparable homes
- A tutorial about HERS ratings
NEREN - MLS Public View

Condominium
20 Thorn Bush Rd Hinesburg, Vermont 05461 $259,900

MLS #: 3063781
Price: $259,900
Total Rooms: 5
Bedrooms: 2
Total Baths: 2
Acres: 0.00
Square Feet: 1348
Sq Ft Above Grade: 1348
Sq Ft Below Grade: 0
Taxes: 0
Tax Year: 2009
Year Built: 2010
Condo Fees: $175
Community:

Remarks:
Great Hinesburg “Smart Growth” neighborhood to be built by Sterling Construction in Thistle Hill. Home is Energy Star and National Green Building Standards rated. Garden homes with maintenance-free living in a village setting: lawn mowing, snow removal, trash, and landscaping handled by association. Home near 14 acres of wooded common land with walking trails. This home features 9 foot ceilings, GE appliances, and first floor master bedroom and laundry. Ground-level is awaiting your custom design touch! Other plans available.

Features:
Style: Townhouse
Color: Sand
Amenities: Garden Space, Snow Removal, Trash, Other
Full Baths: 2
3/4 Baths: 0
1/2 Baths: 0
Roads: Association, Private
Water Heater: Gas-Natural
Basement: Unfinished, Walk Out, Other
Construction: Wood Frame
Driveway: Paved
Electric: 100 Amp, Circuit Breaker(s)
Exterior: Vinyl
Foundation: Concrete
Garage/Parking: Attached, Auto Open/Off Premises
Heating/Cooling: Baseboard, Multi Zone
Heat Fuel: Gas-Natural
Lot Description: Common Acreage, Subdivision, Trail/Wear Trail, Village
Roof: Single-Architectural

HERS Index: 58

Building Certifications (max 99)
- Energy Star Cert. Home
- HERS Rated
- LEED for Homes-Platinum
- LEED for Homes-Gold
- LEED for Homes-Silver
- LEED for Homes-Certified
- Ntl Grn Bldg Stnd-Emerald
- Ntl Grn Bldg Stnd-Gold
- Ntl Grn Bldg Stnd-Silver
- Ntl Grn Bldg Stnd-Bronze
- Passive House
- VT Bldgs Greener Certified
- Other

Home Energy Rated Index Score
This MLS subscriber view shows the VT Grand List (listing home values per town property tax assessors)
As of 12/31/14, there were 1,204 homes listed in the database.
Existing Homes in the Real Estate System

We are working on:

- Implementing a statewide energy label for existing homes
- Creating a VT certification for existing homes
- Adding the DOE Home Energy Score and certificate to the MLS, in conformance with the Green MLS Implementation Guide & the BPI Standard Requirements for a Certificate of Completion for Residential Energy Upgrades (BPI-2101)
NEEP HELIX Project

Making data readily accessible with appropriate privacy protections is critical to the inclusion of home energy information in home appraisals and sales

- Three-year regional project
- Research, design, develop & deploy
- Publicly accessible database (HELIX)
- Database for DOE Home Energy Score data
- Conduit for incorporating data into MLS
Ongoing Activities... Educate, Educate, Educate!

Realtor education using their accredited, continuing education system
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<th>Course Name</th>
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<td>- Efficiency Vermont offering $100 incentive for registry listing/VGHA</td>
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Break Down the Silos

- Real estate industry symposium planned for October 29th
- Realtors, appraisers, and bankers from VT and NH
- Continuing ed courses
- Objective is to create a registry of green real estate professionals available to people looking to buy and sell energy-efficient homes
In summary, we drank the Kool Aid! We’re working the 9 blueprint steps slowly, yet steadily, with the goal of...
Acknowledgements

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For more information:

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