Closing the Loop: Energy Efficient Homes, Home Performance Contractors, Realtors, Inspectors and Appraisers

October 21, 2015
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In Today’s Market…

It’s Hard to Get Consumers to Look Beyond First Cost of Energy Efficiency Investments
In An Ideal Market…

Consumers Perceive (and Receive) a Higher Value for Efficiency Investments
Today’s Session

- Joan Glickman, U.S. Department of Energy
- Kevin Rose, Northeast Energy Efficiency Partnership
- Susan Ellman, New Jersey Natural Gas
- Christa Ross, RE/MAX Select Realty
Making Home Energy Performance Visible and Understandable

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
Value Proposition….Why Bother?

The Score helps translate investment in energy efficiency into a tangible value.

✓ Easy to understand and capture at point of sale
✓ Exposes “hidden” value: makes insulation and air sealing visible
✓ Used for lead generation when offered by inspectors at point of sale (NYSERDA)
What is the Home Energy Score?

- Takes an hour or less to complete
- Can be generated by home inspectors, contractors, utilities, others
- Can be used directly on-line or linked to other software tools
- No reporting requirements, all automated
- Builds on social norming principles: “5” pegged to home with average energy use for that area
Market Adoption Highlights

✓ Score is a **flexible offering** that can be customized and delivered through many avenues
  – Home Performance with ENERGY STAR; direct install programs, with specific incentives (e.g., HPWH), as part of real estate transactions

✓ 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

✓ **State and local adoption**
  – CO, CT, MO, OR, VT
  – Others in process or likely to adopt: AL, AR, NY
  – City of Berkeley using the Score to fulfill new disclosure requirement
Third-party software companies can license the Home Energy Score API to build applications that exchange data with the tool

- Allows **seamless data transfer**
- Now accepts data in HPXML

Software companies and organizations that have completed API integration:

- EnergySavvy, PSD/ TREAT , Optimiser, CakeSystems, EnergySoft, Spirit Foundation, CEEF
So, how do we make this information AVAILABLE and USED in real estate transactions?
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 create leads: point out opportunities for greater efficiency and as well as incentives, retailer or utility offers
- 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
The Score is integrated into the state Mortgage Energy Efficiency program.

- Homeowners receive $750 for each point improvement on the Score, up to $3000 for moving up 4 points. Available at point of sale or refinancing.
Better Energy Information in Real Estate Transactions

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 Homes, HERS)

2. Develop Tools & Systems
   - That facilitate the standardized 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.

GOAL: Develop replicable models of automated, linked systems in at least 5 pilot markets with demonstrated use of this information by key real estate stakeholders.
Why a Home Energy Information Accelerator?

Two Goals:
• Grow the number of verified green data records
• Innovate with new applications for real estate
National Partners

- Appraisal Institute
- CoreLogic
- Council of Multiple Listing Services
- Green Button Alliance
- Home Innovation Research Labs
- Home Performance Coalition
- Homes.com
- Institute for Market Transformation
- National Association of Realtors® Center for Realtor® Technology
- National Association of State Energy Officials
- PicketFence.com
- Real Estate Standards Organization
- Realtors Property Resource LLC
- U.S. Green Building Council

Local Partners

Colorado
- Colorado Energy Office
- IRES

DC Metro
- DC SEU
- MRIS

Illinois/Chicago Metro
- Elevate Energy
- Illinois Department of Commerce
- Midwest Real Estate Data (MRED)

Northeast
- NEEP
- VEIC

Oregon/Portland Metro
- Clean Energy Works
- Earth Advantage
- Energy Trust of Oregon
- Oregon Department of Energy
- Regional Multiple Listing Service
What’s New & What’s to Come…

✓ Financing

• New FHA Mortgagee Letter (September 2015) allows lenders to provide a two percent stretch on qualifying ratios (e.g., debt-to-income) for borrowers purchasing or refinancing a home
  • Home must score 6 or more
  • Or borrower must demonstrate that they are taking action to improve home’s score to 6 or more

✓ Market Development

• Outreach to banks, home inspectors, retailers, manufacturers…

✓ Policy

• NASEO meeting: February of 2016
• Agree on standard metrics to be provided to consumers, MLS
• Work on translator between HERS and Home Energy Score to allow comparisons of new and existing homes
  • Opportunity: DOE expected to offer EnergyPlus for homes (currently only for commercial buildings) via OpenStudio And more…
Home Energy Score

Motivate Homeowners

Data Collection Mechanism

Transparent Calculation Methodology

Integration with existing programs

Free

Easy and quick

HomeEnergyScore@ee.doe.gov
www.HomeEnergyScore.gov
HOME ENERGY LABELING IN THE MID-ATLANTIC

ACI Mid-Atlantic Regional Conference
October 21, 2015
About NEEP

Mission

Accelerate energy efficiency as an essential part of demand-side solutions that enable a sustainable regional energy system

Approach

Overcome barriers and transform markets via

Collaboration, Education and Enterprise

Vision

Region embraces next generation energy efficiency as a core strategy to meet energy needs in a carbon-constrained world

One of six regional energy efficiency organizations (REEOs) funded by the US Department of Energy (US DOE) to link regions to US DOE guidance, products and programs
THE GOAL

EPA DOT Fuel Economy and Environment

Fuel Economy

26 MPG
combined city/hwy
22 city
32 highway
3.8 gallons per 100 miles

Small SUVs range from 16 to 32 MPG. The best vehicle rates 99 MPG.

You Save
$1,850
in fuel costs over 5 years compared to the average new vehicle.

Annual fuel cost
$2,150

Fuel Economy & Greenhouse Gas Rating (tailpipe only)

7
10
Best

This vehicle emits 347 grams CO₂ per mile. The best emits 0 grams per mile (tailpipe only). Producing and distributing fuel also create emissions; learn more at fueleconomy.gov.

Smog Rating (tailpipe only)

6
10
Best

fueleconomy.gov
Calculate personalized estimates and compare vehicles
THE PATHWAY
THE CHALLENGE
INTRO

METRICS, TOOLS, AND SYSTEMS

REGIONAL ROUNDCUP

WHAT IT MEANS FOR YOU
METRICS
TOOLS

- DOE HES tool
- REM/Rate, EnergyGauge
- TREAT
- REScheck
- ...

[Diagram of tools flow]
INFORMATION FLOW - PRESENT

Assessor software compiles DOE HES info → U.S. DOE servers hold HES building files → RE Agent retrieve info indirectly and enter manually → MLS HES info missing or incorrect
INFORMATION FLOW - FUTURE

Assessor
- software compiles DOE HES info

U.S. DOE
- servers hold HES building files

“HELIX”
- accessible database with privacy restrictions

MLS
- HES info included via auto-pop
SYSTEMS

• Home Energy Labeling Information eXchange (HELIX)
  – 3 year project (2016-2018)
  – New England + New York
  – Database development and implementation
  – Outreach to real estate community
INTRO
METRICS, TOOLS, AND SYSTEMS
REGIONAL ROUNDUP
WHAT IT MEANS FOR YOU
CONNECTICUT

- **DRIVER**: mandate - weatherize 80% of CT homes by 2030
- **SCOPE**: statewide add-on to utility home performance offerings
- **METRICS**: DOE HES
- **TOOLS**: DOE HES tool
- **STATUS**: launched in April; over 10,000 scores projected in first year

- **INSTANT INFORMATION**: If energy assessor has internet connectivity they can produce and email the score and report on site
• **DRIVER:** 2013 Act 89 created working group - recommendations

• **SCOPE:** statewide voluntary program; meets needs of several independent audit programs

• **METRICS:** EPS (MMBtu/yr), $$breakdown, DOE HES

• **TOOLS:** DOE HES tool

• **STATUS:** target of January 2016 to begin statewide rollout

❖ **COST EFFICIENCY:** Efficiency Vermont’s goal was to limit audit/rating costs to ~$250
• **DRIVER:** 2012-14 HomeMPG labeling pilot project in Western MA
• **SCOPE:** voluntary program for existing homes - 3,866 scores
• **METRICS:** MMBtu/yr, carbon, $$$
• **TOOLS:** proprietary software
• **STATUS:** 41% of homes completed retrofits

**MANDATORY RATING + DISCLOSURE?:** proposed legislation requiring statewide label program and audits at time of listing
NEW YORK

- **DRIVER**: NYSERDA “Cleaner Greener Communities” grant
- **SCOPE**: Tompkins County
- **METRICS**: TBD (will evaluate DOE HES, HERS, EPS, etc.)
- **TOOLS**: TBD
- **STATUS**: kicked off this year, not recommending required disclosure

- **NYSERDA DOE HES PILOTS**: generated HES for 14k HPwES program homes; 2300 audit sample to determine HES conversion rate
NEW JERSEY

- **DRIVER**: DOE HES pilot
- **SCOPE**: new offering of SAVEGREEN program for three counties
- **METRICS**: DOE HES
- **TOOLS**: DOE HES tool
- **STATUS**: program underway; two year extension to July 2017

- **ALL ONLINE**: Customers choose a NJNG BPI certified Auditor to perform audit via the Contractor Portal and access their custom NJNG recommendations online
PENNSYLVANIA

- DRIVER: Conservation Consultants, Inc. and stakeholder interest
- SCOPE: Western PA
- METRICS: DOE HES
- TOOLS: DOE HES tool
- STATUS: formed working group summer 2015

❖ SCALING UP: exploring ways to integrate HES into existing programs and via statewide plans
DISTRICT OF COLUMBIA - MARYLAND - DELAWARE

- **DRIVER**: stakeholder interest
- **SCOPE**: TBD
- **METRICS**: DOE HES
- **TOOLS**: DOE HES tool
- **STATUS**: DOE’s Home Energy Information Accelerator kicked off summer 2015

- **MERGING MLSs**: MRIS and TRENDS announced forthcoming merger in summer 2015
Arkansas Home Energy Score

Home Energy Score

Your home's current score: 5

Estimated Monthly Energy Costs:

$182*

5-year savings potential:

$1,337*

Estimated average energy costs per month: Electric $189, Natural gas $13

Score with improvements:

Uses more energy

1 2 3 4 5 6 7 8

Score with improvements:

Uses less energy

1 2 3 4 5 6 7 8 9 10

Location:
555 Magnolia Street
Little Rock, AR 72202

Year built: 2002
Size (sq. ft.): 2,210

Score issue date:
July 15, 2015

About the score:
The Arkansas Home Energy Score is a rating system developed by the US Department of Energy for Arkansas. The score reflects the energy efficiency of a home based on the home's structure and heating, cooling, and hot water systems. The information on this score card shows energy use and costs that are estimates only. Actual usage and costs may vary and are based on many factors such as weather and occupant behavior. See reverse side for technical information and details.

Potential annual savings:

$208
$2,500
$1,520

After recommended improvements

Top energy savings opportunities:

- Attic insulation upgrade: Insulate to R-38
- Duct sealing: Seal ducts to reduce air leakage
- Heat pump upgrade: Add high efficiency heat pump (16 SEER)

To find out how you can easily improve your home's energy efficiency:

Call (800) 555-1212 or visit www.arkansasenergy.org

Worst | Poor | Average | Better | Best

For a complete list of upgrade opportunities for your home, please review the recommendations report.
“GREENING THE MLS”

• Greened:
  – NNEREN - VT, NH, ME, MA
  – MLS PIN - MA
  – Lehigh Valley, PA

• Next up for Greening:
  – MRIS+TREND - DC, MD, DE, PA
  – West PA
  – Ithaca, NY
  – RI (statewide)
<table>
<thead>
<tr>
<th>State</th>
<th>Status</th>
<th>Rating Programs / Policies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connecticut</td>
<td><img src="image" alt="Implementation" /></td>
<td>DOE HES has been incorporated statewide into HPwES program since spring 2015</td>
</tr>
<tr>
<td>Massachusetts</td>
<td><img src="image" alt="Legislation" /></td>
<td>Potential legislation requiring rating and disclosure at time of listing following 2012-2014 HomeMPG pilot</td>
</tr>
<tr>
<td>Vermont</td>
<td><img src="image" alt="Implementation" /></td>
<td>Statewide implementation of multi-program energy label (including DOE HES) starting in 2016</td>
</tr>
<tr>
<td>New York</td>
<td><img src="image" alt="Pilot" /></td>
<td>Ithaca-based NYSERDA pilot launched in 2014 with additional research analyzing DOE HES statewide</td>
</tr>
<tr>
<td>New Jersey</td>
<td><img src="image" alt="Pilot" /></td>
<td>Three county NJ Natural Gas pilot of DOE HES participation through audit program</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td><img src="image" alt="Discussion" /></td>
<td>Pittsburgh-based stakeholder group formed in 2015 promoting uptake of DOE HES in local/state programs</td>
</tr>
<tr>
<td>Maryland, Delaware</td>
<td><img src="image" alt="Discussion" /></td>
<td>Initial interest from state-level groups (MD Energy Administration, DE Sustainable Energy Utility)</td>
</tr>
<tr>
<td>District of Columbia</td>
<td><img src="image" alt="Implementation" /></td>
<td>Data flow and real estate community outreach supporting Home Energy Information Accelerator</td>
</tr>
</tbody>
</table>
HERS VS. DOE HES

Nutrition Facts
Serving Size 2/3 cup (55g)

HERS® Index

More Energy
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0

Existing Homes

Standard New Home

This Home 65

Less Energy

Zero Energy Home

Less than
Total Fat
65g

Less than
Sat Fat
20g

Less than
Cholesterol
230mg

Less than
Sodium
2,400mg

Less than
Total Carbohydrate
300g

Dietary Fiber
25g

Uses More Energy
1 2 3 4 5 6 7 8 9 10
Uses Less Energy

Top 20% of similarly sized homes score here or better

Score with Upgrades 8
Estimated Annual Savings $520

Product Details
Post Selects Cranberry Almond Crunch
Cold cereals

iPhone Screenshots
Kevin Rose
Senior Building Energy Technical Associate
Northeast Energy Efficiency Partnerships
krose@neep.org
Always
Delivering
Strong
Balanced
Renewable
Local
Reliable
Innovative
Resourceful
Trusted

CLOSING THE LOOP
REALTOR OUTREACH – CONTRACTOR OPPORTUNITIES
New Jersey Natural Gas

- Established in 1952
- Largest independent Local Distribution Company in New Jersey
- 500,000 customers in Monmouth, Ocean and Morris counties
- Maintain over 7,000 miles of natural gas pipelines
- Primarily residential and small commercial customer base
The SAVEGREEN Project®

- Launched in September 2009
- Promotes energy-efficiency and conservation measures to support state policy, and benefit our customers and the environment
- Designed to complement New Jersey’s Clean Energy Program (NJCEP)
- Encompasses energy-efficiency rebates and incentives available for our customers
  - Energy-Efficient Equipment Rebates
  - Financing Options
  - Comprehensive Home Energy Audit
SAVEGREEN by the Numbers

- **56,000+** Phone Calls
- **185,000+** unique visitors to The SAVEGREEN Project micro site
- **32,000+** Energy Audits completed
- **33,000+** Enhanced Rebates
- **6,500+** customers have participated in 0% APR Financing
- **11,228** Home Energy Scores conducted
Marketing

- Advertising
  - Print
  - Direct Mail
  - Web Site

- Participation in numerous outreach events

- Work with marketing channels to get message to end users
  - Realtors
  - Contractors
Realtor Outreach & Opportunities

- Quarterly e-blast

- Tools and Resources for Realtors brochure
Realtor Outreach & Opportunities

- Realtor sales meeting presentations
- Support realtor education seminars
- Participation at Real Estate Convention
  
  ![TriplePlay](image)
  REALTOR® Convention & Trade Expo
  December 7 - 10, 2015
  Atlantic City Convention Center, Atlantic City, NJ

- Sponsorships
Realtor Outreach & Opportunities

➢ Work with real estate community to incorporate energy efficiency into each transaction
  ◇ More education on energy efficiency is needed
  ◇ Ensure that listings include energy efficiency upgrades where available

➢ Add an energy audit to a home inspection

➢ Connect customers to energy efficiency programs

➢ Connect customers to contractors for energy efficiency upgrades
Contractor Outreach & Opportunities

- 56,000+ Phone Calls
- 185,000+ unique visitors to The SAVEGREEN Project micro site
- 32,000+ Energy Audits completed
- 33,000+ Enhanced Rebates
- 6,500+ customers have participated in 0% APR Financing
- 11,228 Home Energy Scores conducted
The study uses randomized control testing to identify the impact that the Home Energy Score had on homeowners’ willingness to pursue energy efficiency improvements.
Contractor Outreach & Opportunities

Latest Updates
New Jersey’s Clean Energy Program (NJCEP)
New WARMAAdvantage AFUE Requirements
Effective November 1, 2014

Program changes include a new 95% AFUE furnace requirement with a two-tiered eligibility and rebate level ($200 for tier 1 and $500 for tier 2). Combination and boiler/indirect units that supply both heat and domestic hot water are now eligible.

For more information on NJCEP fiscal year 2015

New Natural Gas Boiler Rebate List
The eligible product list was recently updated to include boilers between 85% and 90% AFUE that qualify for both the NJCEP and SAVEGREEN rebates. Visit ENERGYSTAR for a list of eligible boilers with an AFUE of 90% or greater. Please take note to ensure your installation
Contractor Outreach & Opportunities

Participating Home
Performance with ENERGY STAR contractors can download leads

Up to three contractors can bid on each job – this shows how many bids are left
Recommendations

1. Air seal in the attic above any interior partitions, penetrations through the attic plane, and exterior walls if accessible.
2. Air seal in the basement or crawl space around the perimeter band joist.
3. Bring attic insulation up to a minimum of R-38.
5. Ductwork in unconditioned space should be sealed with mastic.
6. Ductwork in unconditioned space should be insulated to R-8.
7. Upgrade to a water heater with a power vent and a minimum energy factor of 0.67.
8. Replace AC with a unit that has a SEER of 14.5 or higher.
9. Seal the gaps and cracks in the exterior of your home.

Audit Results

This is the data collected by your auditor during your recent home audit.

<table>
<thead>
<tr>
<th># of ducts observed</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are skylights present in the home?</td>
<td>No</td>
</tr>
<tr>
<td>Are the window types the same on all sides?</td>
<td>Yes</td>
</tr>
<tr>
<td>Area of skylights (total sq. ft.)</td>
<td>None</td>
</tr>
<tr>
<td>Asbestos issues</td>
<td>No</td>
</tr>
<tr>
<td>Attic/roof type</td>
<td>Unconditioned attic</td>
</tr>
<tr>
<td>Audit type</td>
<td>Initial</td>
</tr>
<tr>
<td>Back wall construction type</td>
<td>None</td>
</tr>
<tr>
<td>Back wall exterior covering</td>
<td>None</td>
</tr>
<tr>
<td>Back wall insulation value</td>
<td>None</td>
</tr>
<tr>
<td>Back window U-value</td>
<td>None</td>
</tr>
<tr>
<td>Back window area</td>
<td>26.00</td>
</tr>
<tr>
<td>Back window frame type</td>
<td>None</td>
</tr>
<tr>
<td>Back window glazing type</td>
<td>None</td>
</tr>
</tbody>
</table>

Back window solar heat gain coefficient

https://njng.energysavvy.com/your-project/26882/report/task/70430
Contractor Outreach & Opportunities

Audit Results :: New Jersey Natural Gas - Windows Internet Explorer

Recommendations

1. Air seal in the attic above any interior partitions, penetrations through the attic plane, and exterior walls if accessible.
2. Air seal in the basement or crawl space around the perimeter band joist.
3. Bring attic insulation up to a minimum of R-38.
5. Upgrade to a water heater with a power vent and a minimum energy factor of 0.67.
6. Seal the gaps and cracks in the exterior of your home.

Audit Results

This is the data collected by your auditor during your recent home audit.

- # of ducts observed: 1
- Are skylights present in the home?: False
- Are the window types the same on all sides?: True
- Area of skylights (total sq. ft.): None
- Asbestos issues: False
- Attic/roof type: Unconditioned attic
Come visit with us at our booth
Make sure you are signed up on portal to receive eBlasts

Susan Ellman
Energy Efficiency Marketing Manager
sellman@njng.com
732-378-4924
Green Designations in Real Estate
Homes in Southwestern PA

- Some of the oldest in the country
- City of Pittsburgh
  - 76% of homes were built prior to 1960
  - 53% constructed before 1940
  - 25% homes within the City meet the newer codes introduced in 1970
  - 22 out of 90 neighborhoods have an average age over 100 years old
In order to sell energy efficiency it needs to be visible.

Guess which one the buyer will focus on?
Homeowners need to see value in energy efficiency to be willing to invest in it.

• When they live in the home
  • Cost Savings
  • Comfort

• When they sell the home
  • Return on Investment
Regional Energy Efficiency Summit

- Includes the goal to “Monetize the Value of Home Energy Investments”
  - REALTOR Education
  - Greening the MLS
  - Time of Sale Actions
  - Home Energy Score
“Be the source of the source of the information”
Help With Costs

Programs and incentives are available from a variety of utilities and organizations that can help make home energy improvements easier and less expensive. The following are available in the Greater Pittsburgh area:

**Watt Choices**
Duquesne Light offers rebates, low-cost energy audits, and other assistance to its customers.
For more information visit [www.wattchoices.com](http://www.wattchoices.com)

**Energy Save PA**
Met-Ed, Penelec, Penn Power & West Penn Power offer a Whole House energy efficiency program with rebates towards the cost of an energy audit and installed improvements.
For more information visit [www.energysavepa-home.com](http://www.energysavepa-home.com)

**Columbia Gas of Pennsylvania**
WarmWise Audits & Rebates is an energy efficiency program for residential heating customers who meet certain income guidelines. The program provides a free whole-house energy audit and up to $1,800 in rebates for installed improvements.

**Keystone Help**
Pennsylvania's special energy efficiency financing program, offering loans for energy related home improvements. Keystone HELP is administered by AFC First Financial Corporation a Pennsylvania energy efficiency lender and offers a wide variety of loan options and terms.
For more information visit [www.keystonehelp.com](http://www.keystonehelp.com)

**Energy Efficient and Energy Improvement Mortgages**
Available from several lenders in Pennsylvania.
For more information visit [www.energywiseepa.org/financing/mortgages](http://www.energywiseepa.org/financing/mortgages)

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What Should I Be Looking for in an Auditor?

The most important factor when choosing an auditor is their training, certification and experience.

The most highly qualified auditors are certified by the Building Performance Institute (BPI) and the Residential Energy Services Network (RESNET).

Where To Learn More?

ReEnergize Pittsburgh Coalition
[www.reenergizepgh.org](http://www.reenergizepgh.org)

CCI

Keystone Energy Efficiency Alliance

ENERGY STAR
[www.energystar.gov](http://www.energystar.gov)

Where Do I Find an Auditor?

Directories of Auditors serving the Greater Pittsburgh area can be found at:

[www.deawp.org](http://www.deawp.org)
[www.energywiseepa.org/contractor](http://www.energywiseepa.org/contractor)

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Buying a Home?

It's not just the mortgage you will be paying each month... A typical homeowner spends between 5% and 20% of monthly income on utility bills.

Concerned about a home’s safety, health, comfort or utility costs?
A home energy audit can ease your concerns with all four!

Get a Home Energy Audit

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[RPC Pittsburgh Coalition](http://www.rpcpgh.org)

[www.christaross.com](http://www.christaross.com)
[www.remaxselectrealty.com](http://www.remaxselectrealty.com)
What is a Home Energy Audit?
An energy audit (sometimes called an energy assessment) is a comprehensive top to bottom review of your home and its systems performed by a certified professional who determines how well those systems are operating and their effect on your safety, health, comfort and utility use. The audit starts with an interview to better understand your objectives, concerns and energy use patterns. The auditor then analyzes the home using advanced diagnostic tools such as a blower door to measure and locate air leaks, an infrared camera to inspect the quality of insulation and other meters that assess the condition and safety of your home’s heating equipment.

Did You Know?
"Reducing energy costs by just $350 per year increases the value of the home by $7,000." Said another way, every $1 in energy savings results in an increase of $20 in home value.
-From the Appraisal Journal Oct. 1998

Your Home is a System
So called “Energy Audits” performed by single discipline contractors may be fine for their individual discipline, but they don’t address the needs of your whole house. When was the last time an HVAC contractor told you that by adding insulation in the attic, he could install a smaller, less expensive furnace? A true energy audit doesn’t just focus on a single component of your home, but rather all of the components as a system. While installing new windows, a new heating or AC system, or adding insulation may fix part of your home’s problem, the truth is that if you want an efficient home, greater comfort, and lower utility bills, the best way to get there is with a comprehensive, whole-house approach.

How do I put the Audit to Work?
The auditor provides written plan for the most cost-effective strategies to save you energy and money while improving comfort and safety. With the audit report in hand, you can seek out home performance contractors to implement the plan. After completing your improvements, your auditor can come back for a quality and safety inspection of the work performed.

Why Should I Get A Home Energy Audit?
Your home, appliances and family are all parts of a system that affects your Safety, Health, Comfort and Wallet. Auditors are trained to understand how all the parts interact with one another. Sometimes it’s obvious, like a leaky natural gas line that poses a safety risk to your family. Other issues can be less obvious such as a malfunctioning furnace that is spilling unhealthy levels of carbon monoxide into your home. Have you ever wondered what causes one room in your home to be hotter or colder than the rest of your home? Are your utility bills causing you “sticker shock”? All these are problems your auditor can identify and help you solve. Think of your audit as the ‘owners manual’ for your home that you wish you had received when you purchased your home.
Greening the MLS

• MLS’s control the information that is entered into the system.
• MLS’s are usually owned by the local REALTOR’s board or for-profit company.
• Most online real estate sites (Zillow, Trulia, REALTOR.com) are fed from the local Multiple Listing Service (MLS).
### Property Information

**Agent ID**: MANDATORY

**Mandatory Fields**: All MANDATORY fields must be completed or a fine will be levied.

### Insulation

- **Type Insulation**: Other
- **Other Insulation Information**: Included in Remarks

### Construction

- **Heat Type**: Other
  - **Other Heat Information**: Included in Remarks

### Listing Details

- **PUBLIC OPEN HOUSE DATE**: MANDATORY
- **PUBLIC OPEN HOUSE TIME**: MANDATORY
- **PUBLIC OPEN HOUSE INFO**: MANDATORY

### Remarks

- **Remarks**: This area is provided for pertinent information relative to the listing, such as inclusions, exclusions, and specific amenities that are enhancements to the property description. The uniform abbreviations listed below should be utilized, as shown, for ease in searching for the specific amenities that are desired. For all other marketing features you are required to use AGENT REMARKS. Kindly include Deed Book Volume and Page #.

---

**Agent Information**

- **Agent Name**: Christa Ross
- **Real Estate Company**: RE/MAX Select Realty

---

**RENEGGERIZE PITTSBURGH COALITION**

**Christa Ross**

**REALTOR • RE/MAX Select Realty**
Without a space in the MLS to enter energy efficiency or green features:

- Information is not available to agents, buyers and online sites.
- The information is not easily searchable by agents or buyers.
- Appraisers are not aware of the energy efficiency features of a home, or a comparable home.
Seller puts the home on the market

Buyer likes it and agrees on a price

Buyer asks the banks for the money to buy it

Bank sends the appraiser to look at the house and confirm the price is accurate

Appraisal process 101
Appraiser compares seller’s house to others that have sold recently using best available information.

If appraiser supports value then deal goes through.

If not...
What if...

• The seller’s home has home performance upgrades that the appraiser doesn’t know about?
• The comparable homes did not have the same energy efficient features?

Either way, without “Green Fields” the appraiser can’t value what he doesn’t know about, even if the buyer does.
Selling The Green House
4-year New Construction home warranty

Savings Per Year - $3,168 (that’s $264 a month)
Savings over 10 years - $31,680
Savings for the planet too!

<table>
<thead>
<tr>
<th>E lane @ Carnegie</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size: 1,100 Sq Ft</td>
<td></td>
</tr>
<tr>
<td>HERS Index: 69</td>
<td></td>
</tr>
<tr>
<td>Insulation: Roof R-50, Walls R-27</td>
<td></td>
</tr>
<tr>
<td>Heating: High Efficiency Electric Heat Pump</td>
<td></td>
</tr>
<tr>
<td>Heating</td>
<td>$319</td>
</tr>
<tr>
<td>Cooling</td>
<td>$31</td>
</tr>
<tr>
<td>Hot Water</td>
<td>$317</td>
</tr>
<tr>
<td>Lights/Appliances</td>
<td>$397</td>
</tr>
<tr>
<td>Service Charges</td>
<td>$78</td>
</tr>
<tr>
<td><strong>Total Estimated Annual Energy Costs</strong></td>
<td><strong>$1141</strong></td>
</tr>
</tbody>
</table>

The average ENERGY STAR qualified home
- Saves over 3,000 lbs of coal
- Is equal to planting almost an acre of trees
- Saves the environment 5,800 pounds of CO2 per year

<table>
<thead>
<tr>
<th>Existing Pittsburgh Home</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size: 1,085 Sq Ft</td>
<td></td>
</tr>
<tr>
<td>HERS Index: 159</td>
<td></td>
</tr>
<tr>
<td>Insulation: Roof R-15, Walls R-0</td>
<td></td>
</tr>
<tr>
<td>Heating: Gas Furnace</td>
<td></td>
</tr>
<tr>
<td>Heating</td>
<td>$2856</td>
</tr>
<tr>
<td>Cooling</td>
<td>$105</td>
</tr>
<tr>
<td>Hot Water</td>
<td>$323</td>
</tr>
<tr>
<td>Lights/Appliances</td>
<td>$810</td>
</tr>
<tr>
<td>Service Charges</td>
<td>$216</td>
</tr>
<tr>
<td><strong>Total Estimated Annual Energy Costs</strong></td>
<td><strong>$4309</strong></td>
</tr>
</tbody>
</table>

2 Units Available
Priced at $184,900 and $189,900

Contact: Christa Ross, REALTOR®
Direct: 724-309-1758
Email: christa@greenhomespgh.com

REMAX® Select Realty
724-933-6300 x214

Christa Ross
RE/MAX Select Realty
Residential Green and Energy Efficient Addendum

Additional resources to aid in the valuation of green properties and the completion of this form can be found at [http://www.appraisalinstitute.org/education/green_energy_addendum.aspx](http://www.appraisalinstitute.org/education/green_energy_addendum.aspx)

**ENERGY EFFICIENT ITEMS**

The following items are considered within the appraised value of the subject property:

<table>
<thead>
<tr>
<th>Insulation</th>
<th>R-Value:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fiberglass Blown-In</td>
<td></td>
</tr>
<tr>
<td>Foam Insulation</td>
<td></td>
</tr>
<tr>
<td>Cellulose</td>
<td></td>
</tr>
<tr>
<td>Fiberglass Batt Insulation</td>
<td></td>
</tr>
<tr>
<td>Other (Describe):</td>
<td></td>
</tr>
<tr>
<td>Basement Insulation (Describe):</td>
<td></td>
</tr>
<tr>
<td>Floor Insulation (Describe):</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Water Efficiency</th>
<th>Location:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reclaimed Water System (Explain):</td>
<td></td>
</tr>
<tr>
<td>Rain Barrels - #:</td>
<td></td>
</tr>
<tr>
<td>Rain Barrels Provide Irrigation</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Windows</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ENERGY STAR®</td>
<td></td>
</tr>
<tr>
<td>Low E</td>
<td></td>
</tr>
<tr>
<td>High Impact</td>
<td></td>
</tr>
<tr>
<td>Storm</td>
<td></td>
</tr>
<tr>
<td>Double Pane</td>
<td></td>
</tr>
<tr>
<td>Triple Pane</td>
<td></td>
</tr>
<tr>
<td>Tinted</td>
<td></td>
</tr>
<tr>
<td>Solar Shades</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Day Lighting</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Skylights - #:</td>
<td></td>
</tr>
<tr>
<td>Solar Tubes - #:</td>
<td></td>
</tr>
<tr>
<td>ENERGY STAR Light Fixtures</td>
<td></td>
</tr>
<tr>
<td>Other (Explain):</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Appliances</th>
<th>Water Heater:</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENERGY STAR Appliances:</td>
<td></td>
</tr>
<tr>
<td>Range/Top</td>
<td></td>
</tr>
<tr>
<td>Dishwasher</td>
<td></td>
</tr>
<tr>
<td>Refrigerator</td>
<td></td>
</tr>
<tr>
<td>Other:</td>
<td></td>
</tr>
<tr>
<td>Water Heater:</td>
<td></td>
</tr>
<tr>
<td>Solar</td>
<td></td>
</tr>
<tr>
<td>Tankless (On Demand)</td>
<td></td>
</tr>
<tr>
<td>Size:</td>
<td></td>
</tr>
<tr>
<td>Gal.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HVAC (Describe in Comments Area)</th>
<th>Appliance Energy Source:</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Efficiency HVAC - SEER:</td>
<td></td>
</tr>
<tr>
<td>Programmable Thermostat</td>
<td></td>
</tr>
<tr>
<td>Heat Pump</td>
<td></td>
</tr>
<tr>
<td>Wind</td>
<td></td>
</tr>
<tr>
<td>Thermostat/Controllers</td>
<td></td>
</tr>
<tr>
<td>Radiant Floor Heat</td>
<td></td>
</tr>
<tr>
<td>Geothermal</td>
<td></td>
</tr>
<tr>
<td>ENERGY STAR Home</td>
<td></td>
</tr>
<tr>
<td>Indoor Air PLUS Package</td>
<td></td>
</tr>
</tbody>
</table>
Challenges

• Resistance from the MLS / No one cares
1. Please rate your agreement with the following statements:

<table>
<thead>
<tr>
<th>#</th>
<th>Question</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Somewhat Disagree</th>
<th>Neither Agree nor Disagree</th>
<th>Somewhat Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Homebuyers frequently ask me about the energy use, energy efficiency, or other cost savings or “green” features of a home.</td>
<td>3</td>
<td>10</td>
<td>6</td>
<td>27</td>
<td>15</td>
<td>13</td>
<td>7</td>
</tr>
<tr>
<td>2</td>
<td>The energy efficiency, or other “green” features of a home, appears to be a significant factor in my homebuyers’ purchasing decision.</td>
<td>7</td>
<td>6</td>
<td>14</td>
<td>26</td>
<td>17</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>I make homebuyers aware of the value of cost saving features, like energy efficiency, when showing a home.</td>
<td>3</td>
<td>4</td>
<td>8</td>
<td>15</td>
<td>18</td>
<td>19</td>
<td>14</td>
</tr>
</tbody>
</table>
2. In your experience, does the age of the homebuyer influence their interest in energy and “green” features?

<table>
<thead>
<tr>
<th>#</th>
<th>Answer</th>
<th>Bar</th>
<th>Response</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Yes</td>
<td></td>
<td>70</td>
<td>86%</td>
</tr>
<tr>
<td>2</td>
<td>No</td>
<td></td>
<td>11</td>
<td>14%</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>81</td>
<td></td>
</tr>
</tbody>
</table>

3. How important are the "green" or energy features of a home for homebuyers in the following age groups?

<table>
<thead>
<tr>
<th>#</th>
<th>Question</th>
<th>Not at all Important</th>
<th>Somewhat Important</th>
<th>Very Important</th>
<th>Total Responses</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Under 40</td>
<td>7</td>
<td>23</td>
<td>30</td>
<td>60</td>
<td>2.38</td>
</tr>
<tr>
<td>2</td>
<td>40-60</td>
<td>8</td>
<td>35</td>
<td>10</td>
<td>53</td>
<td>2.04</td>
</tr>
<tr>
<td>3</td>
<td>Over 60</td>
<td>19</td>
<td>24</td>
<td>6</td>
<td>49</td>
<td>1.73</td>
</tr>
</tbody>
</table>

4. Rank the following training sessions or seminars on your level of interest. (1=Most Interested and 4= Least Interested)

<table>
<thead>
<tr>
<th>#</th>
<th>Answer</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>Total Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Building Envelope (Windows/Doors/Insulation)</td>
<td>15</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>35</td>
</tr>
<tr>
<td>2</td>
<td>High efficiency appliances (furnace/water heater/kitchen appliances/ etc.)</td>
<td>12</td>
<td>17</td>
<td>5</td>
<td>5</td>
<td>39</td>
</tr>
<tr>
<td>3</td>
<td>Renewable energy (solar panels/geothermal heat pumps)</td>
<td>11</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>36</td>
</tr>
<tr>
<td>4</td>
<td>Home Energy Use Ratings (Home Energy Score/ Energy Star/ LEED for homes)</td>
<td>11</td>
<td>8</td>
<td>11</td>
<td>8</td>
<td>38</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>49</td>
<td>36</td>
<td>33</td>
<td>30</td>
<td></td>
</tr>
</tbody>
</table>
Challenges

- Resistance from the MLS / No one cares
- No one wants to add cost to the transaction
Challenges

• Resistance from the MLS / No one cares
• No one wants to add cost to the transaction
• Agents need objective information
Objective Information

• As agents we need good information that can be presented to buyers, we can’t use our opinion or subjective details.

• We will make scores and reports available if they come from a reliable 3rd party.
  • ENERGY STAR, LEED, HERS, HES
Home Energy Score

The HES score and reports that are being created are a consumer friendly, objective way to present energy efficiency information.
Challenges

• Resistance from the MLS / No one cares
• No one wants to add cost to the transaction
• Agents need objective information
• Devaluing of homes / Nothing to compare to
Devaluing Homes

- What is a “5”?
- Is this just one more way to “beat up” the seller?
Last Thoughts

- Our job is to help buyer’s get the best home for the best price and to help the seller’s get the most money.
- We need your help to get the best information.
- Greening the MLS is an important step to getting value for your work.