DATA, DATA EVERYWHERE: WHAT KIND OF DATA IS OUT THERE AND HOW IS IT TRANSFORMING THE REAL ESTATE MARKET?

Ed Carley, NASEO, moderator
Madeline Salzman, U.S. DOE
Asa Foss, USGBC
Ryan Meres, RESNET
Robin LeBaron, Pearl Certification
Data, Data Everywhere! What kind of data is out there, and how is it transforming the real estate market?

December 7, 2019
Providence, RI
Presenters

- Moderator: Ed Carley, NASEO
- Madeline Salzman, U.S. DOE
- Asa Foss, USGBC
- Ryan Meres, RESNET
- Robin LeBaron, Pearl Certification
- Katrin Klingenberg, Passive House Institute US
Energy Metrics to Promote Residential Energy Scorecards in States (EMPRESS)

EMPRESS is a State Energy Program funded grant

GOALS:

1. Developed recommendations for consistent elements to be included in home energy labeling initiatives
   - E.g.- GHG impact, Mbtu/year, total energy cost, date of issue, etc.

2. Encourage Home Energy Score (HES) and Energy Rating Index software providers to use a single energy modeling engine (Energy Plus) to promote consistency and reduce confusion
How can the EMPRESS project help me?

The EMPRESS team has compiled:
- Background information on Home Energy Score and Home Energy Rating System, including cost
- Sample legislation and ordinances
- Pros and cons of voluntary and mandatory approaches
- Recommendations for elements that should be on all labels
- Examples of labels used in other jurisdictions
- Workforce identification and training recommendations
- Information on working with real estate professionals
- [http://empress.naseo.org](http://empress.naseo.org) for more
Resources

- EMPRESS: http://empress.naseo.org
- HELIX: https://neep.org/home-energy-labeling-information-exchange-helix
- Home Energy Information Accelerator: https://betterbuildingsinitiative.energy.gov/accelerators/home-energy-information
Thank you

Ed Carley
National Association of State Energy Officials
Senior Program Manager, Buildings
703-299-8800 x 119
ecarley@naseo.org
Home Energy Score

Data Everywhere Panel
HELIX Summit 2018
Residential Buildings Are...

- 95% of U.S. buildings
- 70% of U.S. building stock square footage
- 50% of peak demand on electricity grids
- 21% of U.S. energy use
Efficiency is Good for Residents

Helps Reduce Costs. Energy burdens average higher than both property taxes and home insurance.

Smart Investment. Efficiency features payback via energy savings over time.

Improves Quality of Life

Reduce environmental impact.

Increased comfort.

Improved health outcomes.

Less draftiness.

Increased control.

Peace of mind.
**Ideal World**

**Home Energy Use.** Homes are energy efficient, contributing to modern & livable building stock.

**Energy Savings!**

**Efficiency Upgrade Packages.** Programs increase efficiency in targeted ways to meet energy goals & improve lives.

**Data Collection & Access.** Data is standardized, useful, and protects personal information.

**Data Management & Insight.** Data informs policy design, incentive packages, and goal setting.
*Actual* World

**Home Energy Use.**
Probably bad and wasteful but not exactly sure why…

**Data Collection & Access.**
No standard approach, all assessments are different. Do we have access?

**Efficiency Upgrade Packages.**
Impacts are difficult to measure and associated costs are high.

**Data Management & Insight.**
Solutions must be customized, unable to generate comparisons across users.
Home Energy Score

Features

- “Miles per gallon” rating for homes*
- Scale for easy-to-understand interpretation
- Building energy model estimates annual energy use, costs, emissions
- Recommendations for cost-effective improvements
- Easily show energy features and expected costs of comp homes
- Backend tool for various home energy assessments
- Can be included in home inspections
- Useful information for consumers, Home Energy Score Partners, real estate agents, lenders, appraisers, city & state governments

*Applicable for single-family homes and townhomes only.
# Home Energy Score Report

For the Consumer: Easy to understand home rating, motivation to improve and compete.

For the Lender: Comparable home energy use & cost estimates between homes, estimated savings from improvements.

For the Partner: Analysis of home’s potential to help achieve energy-related goals.

For the Appraiser: Comparison of home’s energy use estimate to other homes in the region.

---

### Home Energy Score

<table>
<thead>
<tr>
<th>Conditioned Floor Area: 2,134 ft²</th>
<th>Average Home Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>7</td>
</tr>
</tbody>
</table>

### Energy Use

<table>
<thead>
<tr>
<th>Today:</th>
<th>WITH IMPROVEMENTS:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,324 therms</td>
<td>849 therms</td>
</tr>
<tr>
<td>9,716 kWh</td>
<td>8,049 kWh</td>
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</tbody>
</table>

---

The U.S. Department of Energy's Home Energy Score assesses the energy efficiency of a home based on its structure and heating, cooling, and hot water systems. For more information visit homenergyscore.gov.
An Asset Rating

Home Energy Score

Home Assets

- Attributes
  - Number of Stories
  - Local Climate
  - Conditioned Floor Area
  - Orientation
  - Age

- Envelope
  - Attic & Roof
  - Insulation & Air Sealing
  - Windows & Skylights
  - Foundation

- Equipment
  - Heating
  - Hot Water
  - Ducts
  - Cooling

- Electric Load
  - Lighting
  - Appliances & Electronics

- Residents
  - Behavior
Why Not Use Energy Bills?

Data Privacy. Most utility bills are considered private information, which complicates their use in real estate and financing.

Occupancy Variables. Bills depend on more than just the home assets, like the number of residents and occupancy rate year-round.

Economic Variables. Energy use also depends on economic factors, such as energy price and resident income. These factors may not hold true for future occupants.

Asset scores rate the home features themselves, leaving residents, their private data, and their preferences out of the equation.
Home Energy Score

**Individual reports:** Like a miles-per-gallon rating or “nutrition facts” for a home
- Estimate energy costs, recommended upgrades
- Improve energy literacy

**Data in aggregate:** Consistent home energy information to understand sector wide issues, gains, and tracking
- Target upgrades and incentives
- Track sales rate, price, premiums; influence appraisal and financing
- Analyze efficiency gains
## Data In Aggregate

<table>
<thead>
<tr>
<th></th>
<th>Score Today</th>
<th>Score with Improvements</th>
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</thead>
<tbody>
<tr>
<td>Sample of 100,000+ Home Energy Scores Averages:</td>
<td>4.7</td>
<td>7.3</td>
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<table>
<thead>
<tr>
<th>Annual Savings Potential</th>
<th>22%</th>
<th>$600</th>
<th>2.0</th>
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</thead>
<tbody>
<tr>
<td>Energy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Energy Bills</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>TCO$_2$eq</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Most Common Cost-Effective Upgrade Recommendations:</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ Home Air Sealing</td>
</tr>
<tr>
<td>✓ Duct Air Sealing</td>
</tr>
<tr>
<td>✓ Attic Insulation</td>
</tr>
<tr>
<td>✓ ENERGY STAR Water Heater</td>
</tr>
<tr>
<td>✓ ENERGY STAR Heating System</td>
</tr>
<tr>
<td>✓ ENERGY STAR Air Conditioner</td>
</tr>
</tbody>
</table>

Data Collected by 500+ Home Energy Score Certified Assessors™ nationwide
Partners & Collaborators Nationwide
Accelerator Toolkit

Dozens of resources that help:

☑ Grow the inventory of home energy information
☑ Use common data standards
☑ Integrate with real estate

https://betterbuildingsinitiative.energy.gov/sites/default/files/attachments/HEIA%20TOOLKIT%20081318.pdf
EnergyPlus Harmonization Effort

Home Energy Score™ 3rd Party Software Providers

- SnuggPro
- ID Energy
- Design Avenue
- Franklin Energy
- AjO
- OptiMiser
- Pearl
- Energy Savvy

Home Energy Score™ Scoring Tool

HERS® Software Providers

- Ekotrope
- PSD
- Wrightsoft
- Pivotal

Weatherization Assistance Program’s NEAT Tool

ANSI/RESNET 301 Energy Rating Index Ruleset / Agreed Upon Rulesets (As Applicable)

OpenStudio/EnergyPlus Building Energy Model Simulations
EnergyPlus Harmonization Effort

Benefits
✓ Accelerates new technologies into software tools
✓ Increases consistency across DOE/industry programs
✓ Reduces developer effort to use EnergyPlus
✓ Lowers industry-wide costs of maintaining multiple engines
✓ Allows private-sector competition around innovations for user interface, business support, etc.
Questions?

Madeline Salzman
madeline.salzman@ee.doe.gov
(202) 586-2540
Asa Foss

Director, Residential Technical Solutions
Program Scope and Applicable Building Types

- Single-Family Homes
- High-Rise
- Low-Rise Multifamily
- Single-Family Production
- Gut Rehab
LEED Certifications (United States)

350,000 units certified

325,000 multifamily

24,000 single family
LEED Registrations (United States)

775,000 units registered

760,000 multifamily

14,000 single family
LEED Certifications (New England)

52,000 units certified

51,000 multifamily

1,300 single family
LEED Registrations (New England)

215,000 units registered

214,000 multifamily

1,000 single family
3.1 BILLION SQ. FT.
OF COMMERCIAL LEED® CERTIFIED PROJECTS
(CUMULATIVE)
WHAT'S THE VALUE OF LEED?

Occupants prefer to live in a sustainable building

8.9% rental premium

Lower Interest Rates

Fannie Mae – Green Financing Loans

Freddie Mac – Multifamily Green Advantage
WHAT’S THE VALUE OF LEED?

Added income of a property, adds value to the property when it’s time to refinance. 
\[ \text{ie$100,000 \text{ in added income, at 6\% capitalization rate, increases added value by }$1.6 \ Million} \]

Institutional Investors prefer to purchase LEED properties.
Single Family Sales Premium

North Carolina: 9.5% premium for certified properties in metro markets

Maryland: 2-5% premium for ENERGY STAR

DC: 3.5% premium for homes listed with green features

California: 9% sales premium for green certified homes
Meta-Analysis of Green Home Premiums

Green certified homes sell for a 4.3% premium (+/-) 1.0% (90% confidence levels for the means)
WHY THE SALES PREMIUM?

1) Green = Quality
   Improved comfort, health and quality of home and reduced maintenance

2) Lower utility bills

3) Doing the right thing (for the environmental)
Texas study on RESALE price

6% premium for certified homes in general (primarily ENERGY STAR)

8% premium for LEED certified homes.
GREEN BUILDING INFORMATION GATEWAY

GBIG

LEED

Special: California State Government LEED Projects

105 Buildings
Activities: 128 (27.36 Million sqft)
LEED EB 2009 (31) • LEED NC 2.2 (27) • LEED NC 2009 (23) ...
Gomes Way

Overview  Collections (0)

ACTIVITY SUMMARY

LEED-HOMES v2008 Gold certified on 09/20/2010

77/136  Possible points

LOCATION

This project is located at:
1 Gomes Way, Harwich, MA, USA

ACTIVITY DETAILS

<table>
<thead>
<tr>
<th>Activity Type</th>
<th>LEED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Space Type</td>
<td>Single-Family Home</td>
</tr>
<tr>
<td>CBSA</td>
<td>Barnstable Town, MA Metropolitan Statistical Area</td>
</tr>
<tr>
<td>USGBC Chapter</td>
<td>Massachusetts Chapter</td>
</tr>
</tbody>
</table>
Data on HERS Rated Homes

HELIX Summit ~ December 7, 2018 ~ Providence, RI

Ryan Meres, Program Director
RESNET
What is the HERS Index?

- The **national standard** by which a home’s energy efficiency is inspected and rated.

- A typical home built to 2006 energy efficiency standards scores 100 on the HERS Index.

- A 1-Point change in the HERS Index represents a 1% change in energy use.

- A lower Index Score means a home uses less energy.

- A home with a HERS Index Score of 0 produces as much energy annually as it uses.

- A simple, easy to understand system for prospective homebuyers, Realtors, Appraisers and utilities to compare the energy performance of homes.

The HERS Index accounts for a home’s energy consumption of heating, cooling, water heating, lighting and some appliances.
More Than 2 Million HERS Ratings

2,000,000
HERS-Rated Homes and Counting!
Percentage of New Homes HERS Rated

23% of all new homes in 2017 were HERS Rated!

Credit: Dave Roberts, NREL
Single Family HERS Ratings, 2014-17
Low-Rise Multifamily HERS Ratings, 2014-17
The average homeowner pays more for energy costs than property taxes or insurance. (U.S. Census Bureau)

Mortgage
Insurance
Taxes
HOA Fees
\[
\text{Energy Costs} \quad \text{Water Costs}
\]

Total Monthly Cost of Home Ownership

Not Included in mortgage underwriting
Energy Data in the Real Estate Transaction

Real Estate Agents
• Need access to data to include in the listing
• Market a home’s EE and green features

Lenders/Underwriters
• Need data to support potentially higher loan value

Appraisers
• Need data to identify comparables and justify value.
• Need more data in the MLS to more easily compare EE features
Auto-populate HERS Index scores into real estate listings!

RESO fields and corresponding RESNET Registry fields:
- Green Verification Type: *(HERS Rating)*
- Green Verification Year: *(Date of Rating)*
- Green Verification Metric: *(HERS Index Score)*
- Green Verification Status: *(Confirmed/Sampled/Threshold Rating)*
- Green Verification Source: *(RESNET Registry)*
- Green Verification URL: (Direct link to the home’s rating info on RESNET’s Public Access to the Registry: [http://www.resnet.us/public-access-to-resnet-national-registry](http://www.resnet.us/public-access-to-resnet-national-registry)).
Lower Mortgage Default Risk

Report published by UNC Center for Community Capital and Institute for Market Transformation

- Loans on ENERGY STAR homes are 32 percent less likely to go into default.
- Within efficient homes, the more efficient the house, the lower the default risk. For each point on the Home Energy Rating System (HERS) index of efficiency, the risk of default drops.
- This is the first report of its kind and is based on a sample of 71,000 home loans from across the country. The level of confidence is 99 percent.
Online Appraisal Portal

The HERS Index is the key to unlocking the value of green homes and the HERS Index Score, developed and introduced by RESNET in 2006, is the industry standard by which a home’s energy efficiency is measured. It has since grown to be regarded as a home’s MPG for energy efficiency.

The Appraisal Institute and RESNET have partnered to provide appraisers with access to RESNET’s National Registry of HERS Rated Homes through the new Appraiser Portal.

Accessing the Portal allows appraisers to begin to understand and value the energy efficiency of HERS-rated homes in their market including:

- HERS Index scores
- Estimated annual energy costs
- Energy cost savings

Appraisers can search for HERS-rated homes in their area by city and state, zip code or address. Search results can be filtered by:

- HERS Index score range
- Builder
- Year of construction
- HERS rating company

And best of all, the results can be downloaded as an Excel file so appraisers can print the results and access them offline.
Other Programs Use HERS

National Programs

Local/Regional Programs

Utility Programs
Thank you!

Questions?

Contact Info:
Ryan Meres
Program Director
RESNET
ryan@resnet.us
760-681-2391
the WHY of

“Everyone should have a home that is comfortable, healthy, safe and energy efficient”
60,000 HPwES upgrades in 2014 – the 800-year plan

Taking Home Performance to Scale

Pearl’s vision – millions of home upgrades per year
Staged improvements – at different times, by different contractors
Virtuous Circle of Visible Value

- More improvements
- High performing home improvements
- Improvements valued at time of sale
- Improvements made visible
Pearl Footprint

- 43 signed contractors in 12 states
- 11 brokerages in 8 states launched or in pilot
Your Neighbor is Pearl Certified

Over 3,000 homes certified, 400 more per month
Their competitors can’t say that all our installations are Pearl Certified. When we finish our work, we’ll send you a Pearl Certification report. Pearl’s report can increase the value of your home by 5% or more when you sell or refinance.
It’s my fiduciary responsibility to get you the best price for your home.

Buyers want and will pay more for homes that cost less to own and operate, have better indoor for their families, and are comfortable.

I’m going to ask you some questions about your home’s features that will help me uncover any hidden value we can market to interested buyers.

I do this with all of my listings to sell as them quickly as possible and for the best price.
In Their Own Words: Our Value Proposition

“We’re not just closing deals with Pearl, we’re opening the door with Pearl.”
John Kane
Home Solutions Expert
Allied Energy

“Pearl allows our agents to get maximum value for their homes.”
Carol Perry
CBDO
HomeSmart International

“Pearl not only provides a home certification but also documentation of the value we add.”
Josh Goldschmidt
President
Eagle Construction
Pearl Certification Reports

Pearl Home Certification Report

High-Performing Home
1577 Spring Hill Road, Vienna, VA 22182

Gold

Certification Date: March 15, 2018

W. Casey Murphy
Pearl VP of Quality Management
The Home at a Glance

What You Need to Know

This home has many high-performing features, including its attic insulation, attic hatch, air sealing, forced air ducts and windows.

This home will be healthier, more comfortable, cleaner and quieter, and cost less to operate, than most Virginia homes.

This Pearl Gold home has verified high-performing assets for a number of features that enhance the quality of life for its owners. Pearl Gold Certified: it’s what value feels like.

Certification Level

- **Gold**
  - 960 Pearl Points

U.S. Homes Eligible for Pearl Certification Levels

- **Platinum**: 281 / 300 points
- **Gold**: 254 / 360 points
- **Silver**: 201 / 240 points
- **Platinum**: 224 / 300 points
Is My Insulation Better than the Joneses’?

Special Performance Features of This Home

Central Air Conditioner: High efficiency unit

This home’s central air conditioner is very efficient, meeting the newest Federal standards that went into effect in 2016.

Forced Air Ducts: In conditioned space

This home’s ductwork is inside conditioned space - a big benefit for the lifetime of its systems. Installing ductwork in unconditioned space is bad building practice, as it not only wastes energy but also makes an expensive heating and cooling equipment work harder to cool the home - causing it to fail sooner.

Refrigerator: Very efficient

ENERGY STAR certified refrigerators are about 9-10 percent more energy efficient than models that meet the federal minimum energy efficiency standard.

Dishwasher: Very efficient

ENERGY STAR certified dishwashers use advanced technology to get your dishes clean while using less water and energy. Dishwashers that have earned the ENERGY STAR are, on average, about 5 percent more energy efficient and 15 percent more water efficient than standard models.

CFL/LED Lighting: Very efficient

This home has CFL and LED lighting, which means its lamps not only use less energy, they last a very long time. LED lights also produce better light along the color spectrum and are dimmable.

Filters: Very effective

The home’s special air filter unit attracts and captures airborne particles and allergens, such as pollen, pet dander, and mold spores - promising healthier indoor air for residents.

Certified on March 15, 2018
Pearl Gold Certificate | Pearl Score: 960
Detail for the Early Adopter Geeks
and yes, a completed AI Addendum

<table>
<thead>
<tr>
<th>Client:</th>
<th>Jane Doe</th>
<th>Subject Property:</th>
<th>1577 Spring Hill Road, Vienna, VA 22182</th>
</tr>
</thead>
<tbody>
<tr>
<td>Client File #:</td>
<td></td>
<td>Appraisal File #:</td>
<td></td>
</tr>
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</table>

**EFFICIENCY FEATURES (Water, Energy, and Environmental. See types defined in glossary).**

The following items are considered within the appraisal analysis of the subject property:

- **Insulation**:
  - Fiberglass Blown-In
  - Foam Insulation
  - Cellulose
  - Fiberglass Batt Insulation
  - R-Value Wall R-19
  - Ceiling R-49
  - Other R-15 Conditioned basement

- **Building Envelope**:
  - Envelope Tightness: 4.0
  - Unit: CFM25, CFM50, ACH50
  - ACH natural ventilation: Insert the rating as a number that could be 0.5 to 7ACH50 or higher. The lower the number, the more air tight the envelope. Building Codes for area show maximum Envelope Tightness allowed based on the climate zone. Not all areas have adopted a building code: http://iccap-energy.org/

- **Windows**:
  - ENERGY STAR®
  - Low E
  - High Impact
  - Storm
  - Double Pane
  - Triple Pane
  - Tinted
  - Solar Shades

- **Day Lighting**:
  - # of Skylights:
  - # of Solar Tubes:
  - Other (Describe):
  - % of lighting LEDs: 20

- **ENERGY STAR® Appliances**:
  - ENERGY STAR® Dishwasher
  - Refrigerator
  - Washer/Dryer
  - Other

  **Note**: ENERGY STAR® appliances do not result in an ENERGY STAR® Home.

- **Water Heater**:
  - ENERGY STAR®
  - Size: <=55 gallons
  - Tankless
  - Solar (next page)
  - Heat Pump
  - Coil

- **HVAC & Related Equipment**:
  - SEER rating: 14.0
  - Efficiency Rating %
  - *Annual Fuel Utilization Efficiency*
  - Thermostat/Controllers?
  - Programmable Thermostat?
  - Auxiliary Heat Source?
  - Radiant Floor Heat?
  - Geothermal?
  - Electric Heat Pump (ready car charger)
  - No

- **Indoor Environmental Quality**:
  - Energy (ERG) or Heat Recovery Ventilator (HRV)
  - Other Measured Whole-House Ventilation Device (See glossary)
  - Humidity Monitoring Device installed

- **Water Efficiency**:
  - reclaimed Water System (Describe)
  - Greywater reuse system
  - Water Saving Fixtures

- **Utility Costs**:
  - Annual Utility Cost: $ / year, based on: (full year)
  - Includes (check all that apply): Electric, Heating, Water, Other

- **Comments**:
  - Include source for information provided in this section.

The following property has a number of high-performing features as detailed in the Pearl Certification report. According to a 2017 study by Remodeling magazine, air sealing and attic insulation has the highest value-to-cost ratio of any home improvement and was the only improvement to have a ratio higher than 1.0 (i.e., the added home value was more than the cost to perform the work).

With the cooperation and approval of the Appraisal Institute, Pearl Certification has an AI REPORT® License Agreement. The Appraisal Institute makes no representations, warranties or guarantees as to, and assumes no responsibility for, the data, analysis or work produced by the individual appraiser(s) or any other individual in the specific contents of the AI Reports.

Completed by: W. Casey Murphy  
Title: Vice-President of Quality Systems  
Date: 03/15/2018

The objective of this Addendum is to standardize the communication of the high performing features of residential properties. Identifying the features not found on the appraisal form provides a basis for comparable selection and analysis of the features. Builders, contractors, homeowners, and third party verifiers are encouraged to complete this Addendum and present to appraisers, agents, lenders, and homeowners. Complete the pages that apply to the property appraised and provide to appraiser prior to the completion of an appraisal. Provide the Addendum to the lender at the time of loan application to assist them in understanding the property type so an appraiser with sufficient knowledge of this property type will be engaged to provide an appraisal to meet secondary mortgage market guidelines.
Learn more about this Pearl Certified home’s benefits: read the free report at www.pearlcertification.com/registry.

Pearl Certification is a national firm that provides third-party certification of high-performing homes: homes with “performance assets” that make them healthy, safe, comfortable, energy and water efficient. Pearl is an ENERGY STAR Partner.

This Pearl Gold home has verified high-performing assets for a number of features that enhance the quality of life for its owners. Pearl Certified: it’s what value feels like.

What You Need to Know

This home has many high-performing features, including its attic insulation, attic hatch, air sealing, forced air ducts and windows.

This home will be healthier, more comfortable, cleaner and quieter, and cost less to operate, than most Virginia homes.

Gold Certified: Special Performance Features of this High-Performing Home

<table>
<thead>
<tr>
<th>Feature</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attic Insulation</td>
<td>Top 9% of VA homes</td>
</tr>
<tr>
<td>Attic Hatch</td>
<td>Well-insulated</td>
</tr>
<tr>
<td>Air Sealing</td>
<td>Top 2% of VA homes</td>
</tr>
<tr>
<td>Forced Air Ducts</td>
<td>In conditioned space</td>
</tr>
<tr>
<td>Windows</td>
<td>Top 25% of VA homes</td>
</tr>
<tr>
<td>Thermostat</td>
<td>Smart home feature</td>
</tr>
<tr>
<td>Filters</td>
<td>Very effective</td>
</tr>
<tr>
<td>Room Ventilation</td>
<td>Lower indoor humidity</td>
</tr>
<tr>
<td>Whole House Ventilation</td>
<td>Better air and energy savings</td>
</tr>
</tbody>
</table>

U.S. Homes Eligible for Pearl Certification Levels

- Platinum
- Gold
- Silver
- Most homes
Attic Insulation: Top 9% of VA homes

This home’s attic is very well-insulated - it will keep you warmer in the winter and cooler in the summer. Feel at home in your home!

With the superior insulation installed in this attic, you’ll feel the difference right away: this house will be more comfortable - particularly in second floor rooms. Good attic insulation also protects against excessive winter heat loss that causes roof damage from snow melt.

Plus, enjoy lower utility bills year round.
Social Media Posts: 1577 Spring Hill Road, Vienna, VA

ATTIC INSULATION

New listing at 1577 Spring Hill Road, Vienna has been awarded Pearl Gold Certification in part because it scored very high for attic insulation. That's the stuff that keeps us cool and comfortable in the summer/warm and cozy in the winter. The US Department of Energy offers a good primer on insulation so you can see why it's all the rage. Link to: https://energy.gov/energysaver/insulation

AIR SEALING

Air sealing might not be as sexy as new windows, but it is the single most cost-effective way to reduce energy bills and improve comfort. It's reason enough to take a look at 1577 Spring Hill Road, Vienna, a Pearl Gold Certified property for its many high-performing features. You won't be able to see the impressive air sealing, but you'll feel the difference every season. [Link to listing]
Potential HELIX Data: Pearl Certification

Level

Pearl Certification Levels

- **Pearl Silver**: 700 points
- **Pearl Gold**: 825 points
- **Pearl Platinum**: 975 points
Potential HELIX Data: Home Feature Data

- Furnace: 92.5 AFUE, multistage gas valve
- Air conditioner: 20 SEER,
- Ducts: <5% leakage, R-6 insulation
- Air source heat pump 18 SEER / 10.5 HSPF, ENERGY STAR Verified HVAC Installation
- Gas storage water heater: UEF .72
- Attic insulation: fiberglass R-49
- Wall insulation: cellulose R-20
- Windows: U-factor 0.27, SHGC 0.35
- Wi-Fi thermostat
- Home Energy Management system
Potential HELIX Data: “Third Party”

Labels

- HOME PERFORMANCE WITH ENERGY STAR
- RESNET HERS INDEX
- EARTH CRAFT HOUSE
- EPA WaterSense
- U.S. DEPARTMENT OF ENERGY Home Energy Score
Make your home’s value visible

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