Residential Green Case Study: Pearl National Home Certifications

By

- Sandra K. Adomatis, SRA, LEED Green Assoc., NAR Green
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- Woody Fincham, SRA, AI-RRS, RAC
Pearl Certification is a marketing tech firm that captures data on home features to make value visible.

Our platform grows business for contractors, builders, and real estate agents.
Market Size:

- 50M homes have qualifiable energy assets*
- 3M homes with “certifiable” assets sold in 2017*
- $3.24B projected spend in 2018 home improvements**

*Based on US Dept of Energy housing data; **Joint Center for Housing Studies Harvard University
“Energy Aware” Consumers Want High-Performing Homes

Energy Efficiency is in Demand: One of Top 5 Most Desired Home Features
(source: 2016 NAHB survey and NAR 2018 Sustainability Report)

71% of REALTORS® say promoting energy efficiency in their listings is valuable
(source: NAR 2017 Sustainability Report)
#NewNormal

- Residential Energy Codes
- Smart home technology
- Millennials lean green
“There are over 30,000 searches a month in the database for different eco-friendly features, and our ongoing study...consistently finds that eco-friendly homes sell more quickly at higher prices.”

- Ellen Roland, MRIS (largest MLS in the country)
Why do these features matter?

Better Indoor Air Quality for a Healthier Family

Energy Efficiency to Manage Monthly Costs

Comfortable living and a Return on Investment
GREEN MLS NATIONWIDE
TOP 100 METRO AREAS COVERED

43% of MLS’s have Green Fields

This is the industry’s problem

Homes are not properly valued due to a lack of accurate, verified data on home performance features.

- National Association of Realtors and the Appraisal Institute

No upgrades
$525,000

$20K Kitchen Upgrade:
$535,000

$25K Efficiency Upgrade
$525,000?
$12.5 Billion in uncaptured home value for sellers that never made it to the closing

*Based on US Dept of Energy housing data
Identifies and Verifies Data on
• Energy Efficient and
• Renewable Energy Features

To make features visible
CREDIBLE CERTIFICATION SYSTEM DRIVES DATA COLLECTION AND VALUE

Building science-based, proprietary system is approved for use in the ENERGY STAR for existing homes program.

High-Performing Home Asset Categories

- BUILDING SHELL 300 POINTS
- BASELOAD 240 POINTS
- HEATING AND COOLING 360 POINTS
- HOME ENERGY MANAGEMENT 300 POINTS
- RENEWABLE ENERGY FEATURES
High-Performing Home Certification Tiers

Pearl Silver
700 points
A home with good building shell (e.g., insulation), or heating and cooling features

Pearl Gold
825 points
A home that has both a good building shell and heating and cooling systems

Pearl Platinum
975 points
Good building shell and heating and cooling systems, plus efficient appliances, lighting, and other devices like a smart thermostat
THEIR PARTNERS ARE THE MOST RESPECTED NAMES IN ENERGY EFFICIENCY AND REAL ESTATE

NATIONAL ASSOCIATION of REALTORS®
2017 REach® Company

U.S. DEPARTMENT OF ENERGY

BUILDING PERFORMANCE INSTITUTE INC.

ENERGY STAR PARTNER

Appraisal Institute™
Professionals Providing Real Estate Solutions
Best practice advice...from an Appraiser

- **Include the green certification** as an attachment in the MLS;
- **Label the electrical box** onsite showing the certification rating, and date rated;
- **Provide sufficient details in the MLS** searchable fields to provide good marketing techniques and maximize the sales price for these features;
- Recognize that **improper marketing of high performing home listings can be a liability** for agents.

- *What is Green Worth?* author, Sandy Adomatis
Certification Includes:

- AI Residential Green & Energy Efficient Addendum
- MLS Listing Report for RE agents
- Digital and print marketing package

How Pearl displays data on homes’ high-performing features to make value visible
High-Performing Home Certification Report

Details about installation

Highlights comparing the installation to the state average
Solar Certification Report

Details about installation and product quality

Energy + $ value

Highlights comparing the installation to the national average
Appraisal Institute’s Green & Energy Efficient Addendum

Auto-populated and provided within the Homeowner’s report

Inputs for PV Value tool that allow solar to be valued by appraiser

Solar section includes confirmation of ownership type
THIRD-PARTY VERIFICATIONS (See types defined in glossary).

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

Green Certification
Certifications attest that the home meets certain minimum thresholds.

Environmental Protection Agency (EPA):
- Indoor airPLUS
- WaterSense
- ENERGY STAR
- Zero Energy Ready Home (ZERH)

Energy Department (DOE):
- No NGBS Type Selected
- No NGBS Level Selected

Home Innovation Research Labs NGBS Home Remodel:
- No NGBS Type Selected

Home Innovation Research Labs NGBS New Home:
- Bronze
- Silver
- Gold
- Emerald

Living Building Challenge (LBC):
- Living Building Certified
- Petal Certification

Passivhaus Standard:
- PHI Low Energy
- EnerPhit
- Passive House

Passive House Institute US:
- PHIUS+ 2015

USGBC LEED:
- Certified
- Silver
- Gold
- Platinum

Other: Pearl Certification

Date Verified: 06/02/2017

Green Certification Version: Silver
Organization URL: www.pearlcertification.com

ABOVE VALID ONLY IF CHECKED:
- Verification reviewed on site
- Verification attached to this report

Energy Label
Labels disclose the state of the home’s energy assets.

No HERS Rating Selected

No Home Energy Score Selected

☑ Unofficial Score

Other Energy Score: Estimated energy savings: $___/year ___c kWh rate dated __/__/__
Range (____ to ____):
Describe energy label system:
Pearl's score is approved for use in Dept. of Energy’s Home Performance with ENERGY STAR program

Date Verified: 06/02/2017
Score or Rating Version: ___
Organization URL: ☐ www.resnet.us/
☐ www.homeenergyscore.gov
Other: www.pearlcertification.com

ABOVE VALID ONLY IF CHECKED:
- Verification reviewed on site
- Verification attached to this report

22
What is “verified”?

“Home energy information is considered “verified” if it is collected by a third-party organization, has clear definitions of thresholds associated with the verification, and is transparent about the quality assurance process behind each verification.”*

*From the Home Energy Information Guide
RE Reports to Inform Home Pricing Strategy

MLS Listing Report

11007 Oak Leaf Court, Boston, VA 20190

Verified Green Fields Listing Sheet

This property is a home performance package with an access BEES (Building Energy Efficiency Score). It is considered a personalized home and should not be sold off the market.

Appliances
- Recessed Lighting
- Under-Cabinet Lighting
- Exhaust Fan
- Water Heater - Electric (200 gallons)
- Water Heater - Lynx 80 gallons

Windows/Doors
- Double Pane Windows
- Energy Star Qualified Windows
- Low E Windows

Constructions/Heat Exchanger
- Condensation
- Insulated Exterior Ductwork
- Spray Foam

Climbing System
- Energy Star Rated Climbing System
- Insulated Ductwork
- Programmable Thermostat

Heating Fuel
- Electric Heat
- Natural Gas

Appraisal Addendum

Solar Panels

- Type of Ownership
- Array #1
- Array #2 (if applicable)

- Leased
- Owned
- Leased with Purchase
- Leased with Option
- Owner Occupied

- Panel Specifications
- System Type: 1,750W per Panel - 195 panels
- Total System Power: 370,000W
- Module Efficiency: 0.089
- Total Panel Cost: $37,200

- Array Placement
- Array #1: 2nd Street
- Array #2: Maximum

- Inverter Specifications
- Model of Inverter: 3 phase 200V inverters
- Solar Edge
- Maximum Output: 25 years

- Energy System References
- Supply Type: Maximum
- System Manufacturer: SolarEdge
- System Efficiency: 0.98%

- Energy System References
- Name of Utility Company: CUEC
- Change in 
- From/To/Buy: 5.102 kW

Solar Thermal Water Heating System

- Type of Systems
- Collector System
- Collector Type
- Back-up System
- Solar Energy Factor (SEF)

- Notes: For solar PV systems and Power Purchase Agreements
- Note: if sold with high efficiency, the sale of the property must be transferred to the buyer.
Pearl Certified Gold first floor master villa in Old Trail. Just 3 years old and appointed with many upgrades. Located in the very walkable Village East, walk to shops, cafes, and community. Call out certification in remarks.
Custom RE Marketing Packages

Online

Print

Air Sealing: Top 1% of VA homes

Soo many benefits with a well-sealed home: from a comfort perspective it’s less drafty and has greater humidity control. Bonus: less dust and insects!

All homes should be air sealed to increase comfort, minimize air leakage and enhance the effectiveness of the insulation. This home’s performance for air sealing is exceptionally high.

Air sealing typically includes using spray foam on the rim joists, areas where plumbing and electrical penetrations come through walls, around windows/doors, and other areas of the home.
When marketed correctly, Pearl Certified homes sold for 5% more.

Based on a peer reviewed, independent appraiser study
Pearl has now established a brand in the following states.

VA
MD
DC
WV
DE
NJ
NY
WI
MI
CA
AZ
GA
NC (coming)
TX (coming)
MA (coming)
PA (coming)
OR (coming)
FL (coming)
Celebrating 1,000 AI Residential Green and Energy Efficient Addendums completed by Pearl National Home Certification as of June 2018
Sustainable Homes

Valuation of Pearl Certification

By Donald Boucher, SRA
Sustainable Housing

Confusion
Sustainable Confusion

Hope
Path to Enlightenment

Proof: High-Performing Homes Sell for More

Pearl Valuation Study
Appraisers Analysis of Pearl National Home Certification Sales Premiums

Redfin
Green Homes Sell for More

Inman
Power of Renewables and Energy Efficiency in Real Estate

Washington Post
The value of third party certification

D.C. residential market study
What is Green worth?

Los Angeles Times
Energy efficient homes sell faster, worth more

U.S. Department of Energy
Buyers find more value in certified homes

Washington Post
Certification is Good for Home Resale

NC Energy Efficiency Alliance:
Certified efficient homes sell for more in North Carolina

Lawrence Berkeley National Laboratory
Selling Into The Sun: Price Premium Analysis of a Multi-State Dataset of Solar Homes

SolarPower World
Appraising Sunrays: How to Value Solar on Residential Roofs
The Pearl Certified Home Registry

Pearl Certified Home Registry

Search the registry to find Pearl Certified homes, using the home’s address or certification number. Note that a home may not be listed in the registry if the homeowner chooses to keep it confidential.

Download a registered home's:
- Pearl Certification Report
- Appraisal Addendum

Pearl is proud to work in partnership with:

[Logos of partnering organizations]
What Is the HERS Index?

The Home Energy Rating System (HERS) index is the industry standard by which a home's energy efficiency is measured. It’s also the nationally recognized index for inspecting and calculating a home’s performance.

What does a HERS rating say about a house?

The HERS index measures a home's energy efficiency and there are a lot of great reasons to have a home energy rating performed on your house. It can tell you so much about the home you live in, like how efficiently it's operating and where you can make modifications for greater energy savings. When you're selling your home, a low HERS Index Score can command a higher resale price. And when you're buying a home you can anticipate the costs of energy bills and efficiency upgrades.

How does the HERS Index work?

An Energy Rater assesses the energy efficiency of a home, assigning it a relative performance score. The lower the number, the more energy efficient the home.

The US Department of Energy has determined that a typical resale home scores 130 on the HERS index while a new home is awarded a rating of 100:

- A home with a HERS Index Score of 70 is 30% more energy efficient than a standard new home.
- A home with a HERS Index Score of 130 is 30% less energy efficient than a standard new home

More on the score range.

To calculate a home's HERS Index Score, a certified RESNET HERS Rater does an energy rating on your home and compares the data against a reference home: a designed-model home of the same size and shape as the actual home, so your score is always relative to the size, shape and type of house you live in.

What do the HERS Index scores mean?

A lower score means a more affordable, comfortable and energy efficient home.

Learn More
Subject Property: $590,000
Subject Marketing

Remarks

General/Agent: Easy to show. Please schedule online. Redone top-to-bottom Kings Park Queen model! Open floorplan with every detail considered that caters to modern living. **3rd Party Energy Cert.** New windows, New insulation in walls and roof, New bathrooms, New kitchen, New lighting/electrical/electrical panel box upgraded.
Additional Information
FOR BUYERS: ASSURING A COMPETENT APPRAISER FOR NEW HOME

Congratulations on choosing an energy efficient, high-performing home!

This home’s energy assets include upgrades to higher energy efficiency standards that will increase your quality of life. Your home will have fewer drafts, be more comfortable to live in, and have lower monthly energy bills than other newer homes on the market.

Some of your home features may include:
- More wall and ceiling insulation to keep conditioned air inside your home
- Windows that keep the heat out in the summer months to improve comfort
- Fewer drafts and air leaks, which improves indoor comfort

What You Need to Know Regarding the Loan/Appraisal Process

As part of the typical loan process, lenders randomly assign an appraiser to determine the appraised value of a new home. However, yours is not a typical new home — it is high-performing building with unique features.

Fannie Mae, Freddie Mac and FHA guidelines require appraisers to be competent in the property type they are appraising. If you do not clearly identify the property as a special property type requiring a competent appraiser trained in energy efficient, high-performance homes, a typical appraiser will be assigned, and these features may not be taken into account.

This will put your appraisal at risk of not being competently appraised.

What You Need to Do

Provide your lender with three things provided to you by Pearl:
- The lender letter regarding this special property type and the need for a trained, competent appraiser for energy efficient, high-performance homes
- The Appraisal Institute’s Residential Green and Energy Efficiency Addendum, completed by a Pearl Certifying Contractor
- The Pearl Home Certification Report (the Home Energy Asset Inventory)

The Pearl Home Certification report can also be downloaded from our registry at this link:
www.pearlcertification.com/registry

info@pearlcertification.com  www.pearlcertification.com  888-557-5543
Date:

Dear Lender,

This home located at is a special property type. It is an energy efficient, high-performing home that meets the stringent energy efficiency requirements of Pearl Certification as a **Pearl Certified Home**.

A copy of the Appraisal Institute’s *Green and Energy Efficient Appraisal Addendum* report, and the Pearl Certification Report should be included with the appraisal engagement letter. The Pearl Home Certification report can also be downloaded from our registry at this link: www.pearlcertification.com/registry.

Fannie Mae, Freddie Mac and FHA guidelines require lenders to choose competent appraisers who have the requisite knowledge required to perform a professional quality appraisal for the specific geographic location and particular property type. As a high-performing, energy-efficient home, it requires an appraiser that is competent to assess the value of the green and/or energy efficiency features in the local real estate market.


These specially trained appraisers have completed 28 hours of education and passed three exams.

If the appraisers on your panel are not on this list, they can complete 14 education hours online to get started:
http://www.myappraisalinstitute.org/education/course_desc?course_code=825&key_type=CO

Appraisers on this list are not required to be Appraisal Institute members but must take the required courses and pass the exams to be listed.

If you have questions, please contact a Pearl representative at: info@pearlcertification.com.
Comparable #1

$557,500
Comparable #2

$590,000

Subject

Comparable #1

$557,500

$545,000
Comparable #3

Subject: $590,000
Comparable #1: $557,500
Comparable #2: $545,000

Comparable #3: $560,000
Comparable #4

$535,000
Subject

Comparative Analysis

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Green Premiums

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Silver Pearl Certification

- 4%± adjustment
- Remember there’s research available now
- Results are variable
The Team

Sandra Adomatis, SRA, LEED Associate
  Project Lead
Don Boucher, SRA
  Team Member
Woody Fincham, SRA, AI-RRS, RAC
  Team Member
Betsy Hughes, SRA, AI-RRS
Where did the Study Take Place?

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Central Virginia
### Northern Virginia and Maryland

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**Median**
- 2.452 %
- 39
- $590,000
- $595,000
- $5,000
- 0.94%
- 7
- 98%

**Mean**
- 2.864
- 39
- $778,400
- $792,000
- $4,869
- 1.03%
- 22
- 99%
Overview

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<th>Statistics based on the following breakdown of premiums</th>
<th>Living Area</th>
<th>Age</th>
<th>Sale Price</th>
<th>List Price</th>
<th>% Sales Price</th>
<th>DOM for PHC</th>
<th>PHC Sale-to-List Price</th>
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The Focus of the Study

Residential units that had a Pearl Home Certification level at the time they sold.

i. Does the market pay a sales price premium for homes with a Pearl Home Certification?

ii. Do homes with this certification experience less time on the market than homes without the certification?

iii. Are Pearl Home Certified sales being marketed to maximize the benefits of the brand?

iv. How can marketing of homes with the certification be improved to influence the sales price premium and appraised values?
Value Add for Valuers

- Get out and Speak to Realtors
- Marketing is Important
- MLS Verbiage is key
Words Matter

Example of no marketing
New with flat lot <1 mile to Metro. Gracious front porch/detached 1+car gar/large low maintenance Azek deck. Light filled flex floor plan w/living room that converts to BR suite. Spacious kit/fam room w/banquette/custom light fix/trim/built-ins/wainscot/LL wetbar/5,257 SF.

Example of Marketing
PEARL VERIFIED Energy Saver Home (see Docs) ~ Fantastic Value for this 3000+ sqft Beauty in popular subdivision on Premium Cul-de-Sac lot. Hardwoods on entire main, gorgeous stone fireplace, renovated KIT w/granite, custom backsplash, island & black appl, 8-zone irrigation system. Newer Systems & lots more. Picture perfect yard w/3-season screened rm. Beautiful home. Just move in!
How To Tap The Market
Questions?
Sandra K Adomatis  
Don Boucher  
Woody Fincham  
Betsy Hughes

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E-Mail: donboucher@msn.com
E-Mail: wfincham@valucentric.com
E-Mail: betsy@bkappraisal.net

cynthia@pearlcertification.com