

Better Buildings Residential Network
Peer Exchange Call Series:
The Increasing Connection Between Energy
Efficiency and Real Estate

March 15, 2018

Call Slides and Discussion Summary



Agenda and Ground Rules

- Agenda Review and Ground Rules
- Opening Poll
- Residential Network Overview and Upcoming Call Schedule
- Featured Speakers:
 - Véronique Bugnion, Co-Founder, ClearlyEnergy
 - Kyle Diesner, Policy Analyst, City of Portland, Oregon
 - Cheryl Julcher, Co-Founder and CEO, Yellow Brick Properties, LLC
- Open Discussion, Closing Poll, and Announcements

Ground Rules:

- 1. Sales of services and commercial messages are not appropriate during Peer Exchange Calls.
- 2. Calls are a safe place for discussion; please do not attribute information to individuals on the call.





Better Buildings Residential Network

Join the Network

Member Benefits:

- Recognition in media and publications
- Speaking opportunities
- Updates on latest trends
- Voluntary member initiatives
- Solution Center guided tours

Commitment:

 Members only need to provide one number: their organization's number of residential energy upgrades per year

Upcoming calls:

- March 15: March 22: <u>Power Up: Residential Energy Efficiency and Resiliency</u>
- April 12: Myth Busters: Exposing Residential Energy Efficiency Misconceptions

Peer Exchange Call summaries are posted on the Better Buildings website a few weeks after the call

For more information or to join, for no cost, email bbresidentialnetwork@ee.doe.gov, or go to energy.gov/eere/bbrn & click Join





Véronique Bugnion Co-Founder ClearlyEnergy







HELIX

Home Energy Labeling Information eXchange







Massachusetts Department of Energy Resources







SUSTAINABLE REAL ESTATE CONSULTING SERVICES





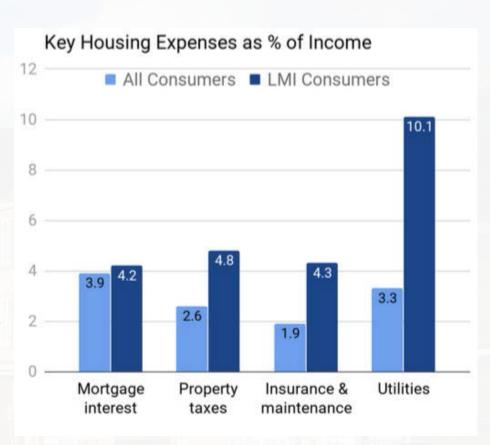






Why Add Energy Costs to Homes?

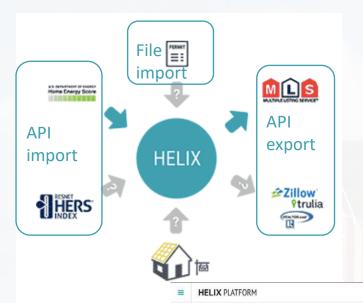
- Homeowners spend more on utilities than property taxes or insurance, in particular lower and middle income consumer.
- Efficient homes have a lower mortgage default rate.
- But efficient and solar homes struggle to get the valuation benefit they deserve.
- ➤ Energy cost, solar and efficiency information needs to be incorporated from listing inception to mortgage valuation



Source: Rocky Mountain Institute; IMT

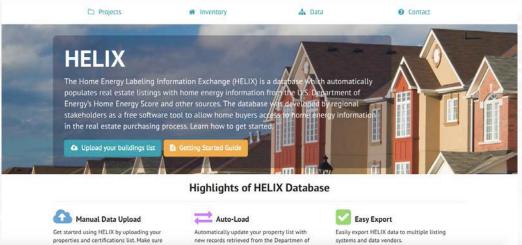


Introducing HELIX



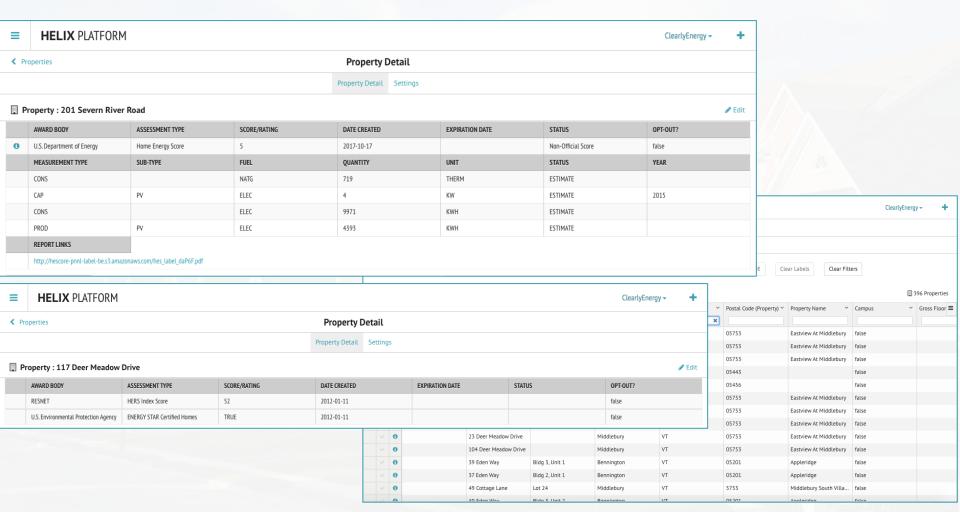
- The HELIX project is managed by the Northeast Energy Efficiency Partnership (NEEP) with support from DOE and VT
- 7 Northeast States are HELIX partners
- Energy rating and solar data
- Architecture inherited from SEED
- Goal: include energy specs before realestate listing is created!

ClearlyEnergy - +





Certifications Are Attached to a Searchable / Sortable Property List

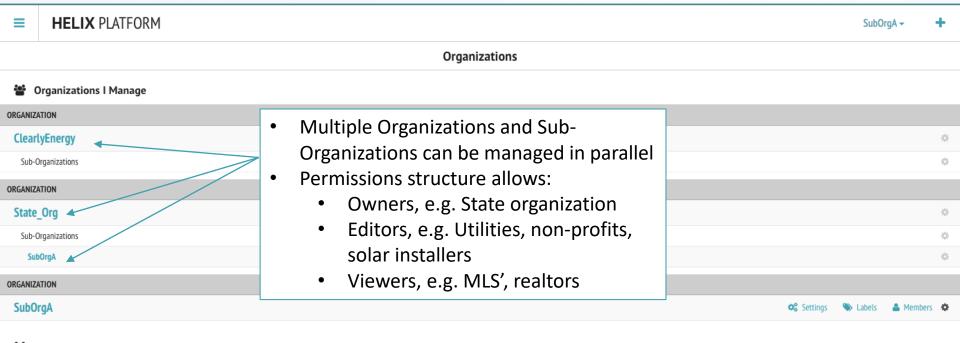




ODCANIZATION OWNED (S)

Flexible Permissions and Organization Structure & Dashboard

DRODERTIES ADDED LAST 70 DAVS



23	Organizations	ı	Belong	То

MUMBER OF PROPERTIES

ORGANIZATION NAME	NUMBER OF PROPERTIES	PROPERTIES ADDED LAST 30 DAYS	NUMBER OF CERTIFICATIONS	YOUR ROLE	NUMBER OF USERS	OKGANIZATION OWNER(S)
ClearlyEnergy	264	10	270	owner	3	Veronique Bugnion
State_Org				owner	5	Mark James Veronique Bugnion Ahson Wardak
SubOrgA	2	2	2	owner	4	Veronique Bugnion SubOrgA Owner
Vermont Energy Investment Corporation	10	10	0		1	Leslie Badger

NUMBER OF CERTIFICATIONS

For More Information: Véronique Bugnion















SUSTAINABLE REAL ESTATE CONSULTING SERVICES









Presentation Highlights: HELIX

- Utility expenses are among the highest household costs. For low and middle income homes, utilities can represent the largest monthly expense.
- HELIX, the Home Energy Labeling Information eXchange, aims to automatically populate real estate listings with home energy information (like the DOE's Home Energy Score), when available.
- The platform is currently being tested by 7 Northeast states with help from local grassroot organizations. In the future, HELX will be an open source project.
- The energy efficiency attributes supported by HELIX include Energy Star certifications, RESNET audits and ratings, Home Energy Scores, smart home and renewable features (e.g., solar), and other green certifications the home may have.
- The database incorporates various levels of permissions to view and/or edit the information.
- HELIX is not storing personally identifiable information and organizations can opt out from publishing a certain type of information in the database.





Kyle Diesner
Policy Analyst
City of Portland, Oregon







City of Portland Home Energy Score

Better Buildings Call, March 15, 2018



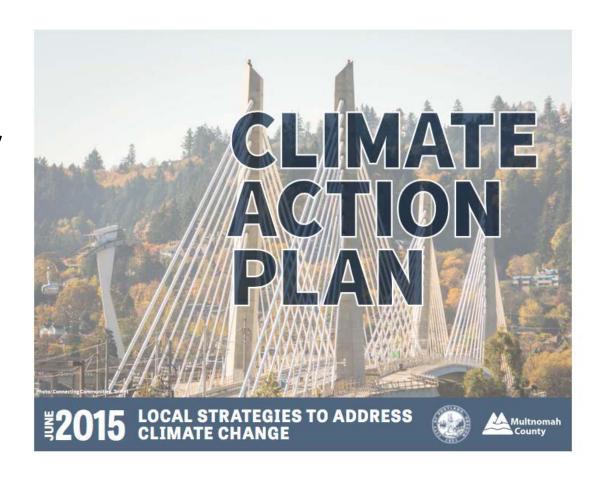
The Increasing Connection Between Energy Efficiency and Real Estate

Kyle Diesner, Bureau of Planning and Sustainability

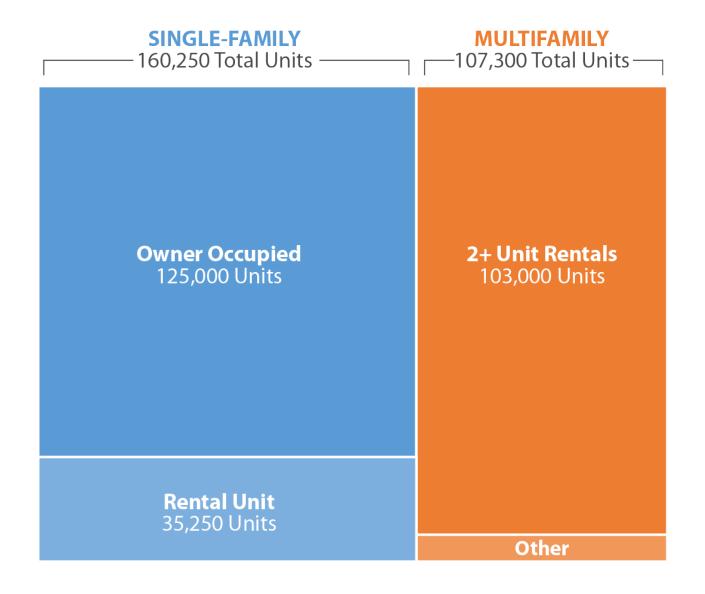


Objective 1

Reduce energy
use from
existing
buildings
25% by 2030



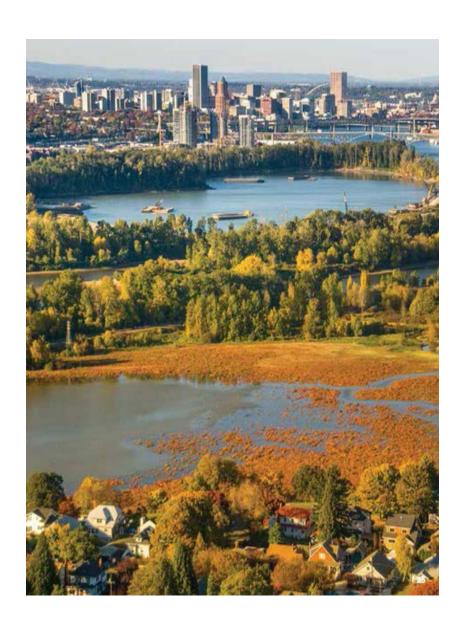
Portland Housing Units



Climate Action Plan Priority

Action 1B

Require energy performance ratings for all homes so that owners, tenants and prospective buyers can make informed **decisions** about energy costs and carbon emissions





COMMUNICATE









Know the score. Outsmart energy waste.

Benefits of a Home Energy Score program

A Home Energy Score at time of listing will help homebuyers and sellers have access to information on home energy performance that is credible and easy to understand.

Allows new home buyers insight into the full costs of owning a home.

Supports City of Portland's Climate Action Plan to help reduce carbon emissions.



As of January 1, 2018...

Information disclosed

 Home energy report and home energy score (defined by state law)

Regulated party

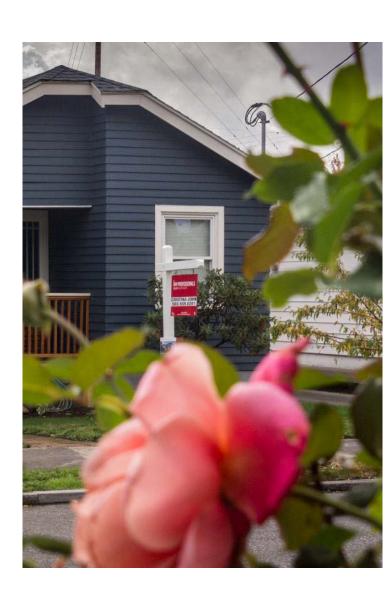
Seller or homebuilder

Time of disclosure

At or before listing

Recipient of disclosure

 Real-estate listings, prospective buyers.



Exemptions

(admin rule p. 8)

- Foreclosure sales
- Trustees sales
- Deed-in-lieu of foreclosure
- Short sales
- Qualifies for sale at public auction
- In receivership
- Subject to notice of default
- Uninhabitable due to casualty or condemned
- Undue hardship







SCORE OUT OF 10

THIS HOME'S ESTIMATED **ENERGY COSTS**

PER YEAR

HOME PROFILE

123 Main St Portland, OR 97201

1924

1,500 sq. ft.

3

ASSESSMENT

12/22/2016

12/22/2018

Maria Gomez **Gomez Energy Partners**

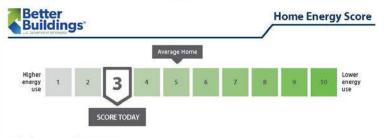
503-555-1211

maria@gomezenergy.com

1234567890

Flip over to learn how





Official Assessment | ID#1234567

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 average score is a 5. Learn more at HomeEnergyScore.gov.

HOW MUCH ENERGY IS THIS HOME LIKELY TO USE?

Electric: 10,000) kWh/yr\$600
Natural Gas: 7	00 therms/yr\$633
Other:	gal/yr\$0

How much renewable energy does this home generate? 3,000 kWh/yr

TOTAL ENERGY COSTS PER YEAR \$1,233

THIS HOME'S CARBON FOOTPRINT:



Estimated average carbon footprint for a similar sized home: 3.8 tons of CO2 equivalent emissions per year.

- · Actual energy use and costs may vary based on occupant behavior and other factors.
- · Estimated energy costs were calculated based on current utility prices (\$0.11/kwh for electricity; \$0.89/therm for natural gas; \$2.50/gal for heating oil; \$3.50/gal for propane).
- · Carbon footprint is based only on estimated building energy use.
- · Carbon emissions are estimated based on utility- and fuel-specific emissions factors provided by the Oregon Department of Energy.
- · This report meets Oregon's Home Energy Performance Score Standard and complies with Portland City Code Chapter 17.108.

Score today:

Score with improvements:*

Estimated **energy savings** with improvements:

\$500

Estimated carbon reduction with improvements:

27%

TACKLE ENERGY WASTE TODAY!

Enjoy the rewards of a comfortable, energy efficient home that saves you money.

- ✓ Get your home energy assessment. Done!
- ☐ Choose energy improvements from the list of recommendations below.

 Need help deciding what to do first? Non-profit Enhabit offers free 15-minute phone consults with expert home advisors. Call 855-870-0049.
- Select a contractor (or two, for comparison) and obtain bids.
 Checkout www.energytrust.org/findacontractor or call toll free 1-866-368-7878.
- Explore financing options at www.enhabit.org or www.energytrust.org.

* PRACTICAL ENERGY IMPROVEMENTS | COMPLETE NOW OR LATER

To achieve the "score with improvements," all recommended improvements listed below must be completed. Improvements all have a simple payback of ten years or less and may be eligible for mortgage financing. For a more detailed explanation of costs and payback, please get a bid from a contractor.

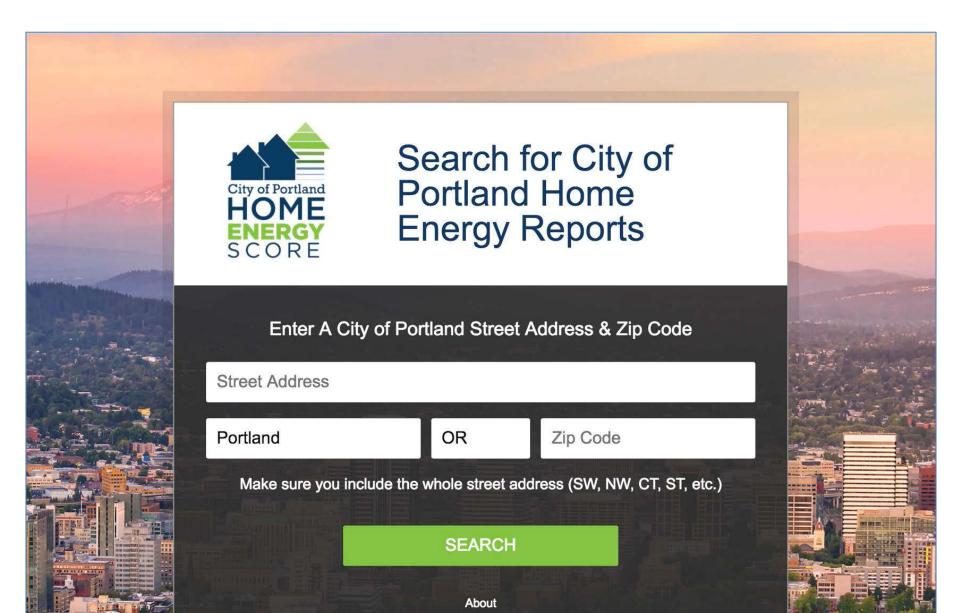
FEATURE	TODAY'S CONDITION	RECOMMENDED IMPROVEMENTS
Basement wall insulation	No insulation	Insulate to R15
Attic insulation	No insulation	Insulate to R49
Foundation wall insulation	No insulation	Insulate to R11
Wall insulation	No insulation	Insulate to R15
Envelope/Air Sealing	Not professionally air sealed	Seal the gaps and cracks that leak air into your home
Duct insulation	R3	Insulate to R6
Duct sealing	45% leakage	Reduce leakage to 10% of total airflow
Floor insulation	R5	Insulate to R38
Gas furnace	78% AFUE	Upgrade to ENERGY STAR 95% AFUE
Skylights	Single-paned	Replace with ENERGY STAR (double-pane solar-control low-E argon gas wood frame)
Water heater	Standard electric tank	Upgrade to ENERGY STAR (heat pump, EF 2.76)
Windows	Single-paned aluminum	Replace with ENERGY STAR (double-pane solar-control low-E argon gas wood frame)

YOU CAN DO IT YOURSELF!

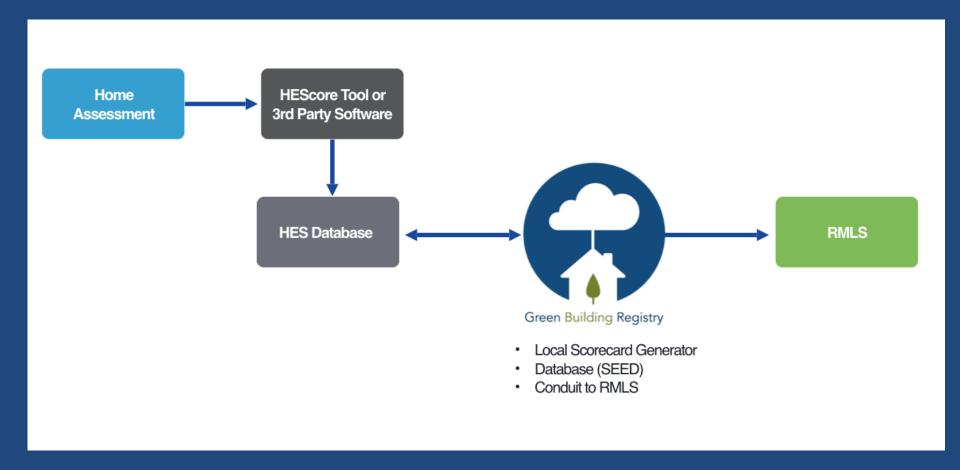
Looking for low-cost ways to cut energy waste, boost your comfort and lower your energy bills? Visit the resources below to learn about easy changes you can make today:

www.energytrust.org/tips and www.communityenergyproject.org/services

Green Building Registry™



Green Building Registry™ Data Flow in Portland



Key Attributes of Green Building Registry



Latest data record for this home

5808 SW KRUSE RIDGE DR PORTLAND, OR

PROPERTY ID: R199895

Latest Home Assessment: 2018-03-06



This home's energy score

Green Building Verification

Type: Home Energy Score

Green Verification Body: US DOE

Green Verification Year: 2018

Green Verification Version: v2017.0d3573cc

Green Verification Metric: 8

Green Verification Status: OFFICIAL

Green Verification Source: City of Portland, OR

https://api.greenbuildingregistry.co Green Verification URL: m/report/pdf/R199895.pdf

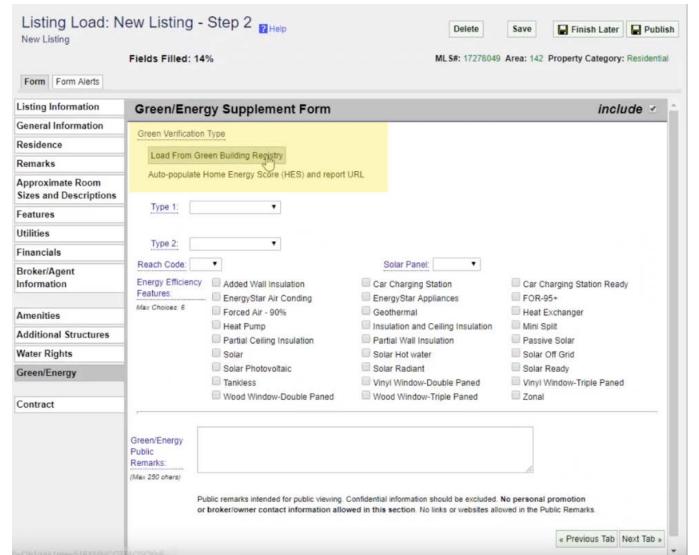


Click the image to download the home energy report or copy the link above This home does not have a green certification.

CLOSE RECORD

Portland RMLS Auto-Populating Home Energy Scores

EarthAdvantage

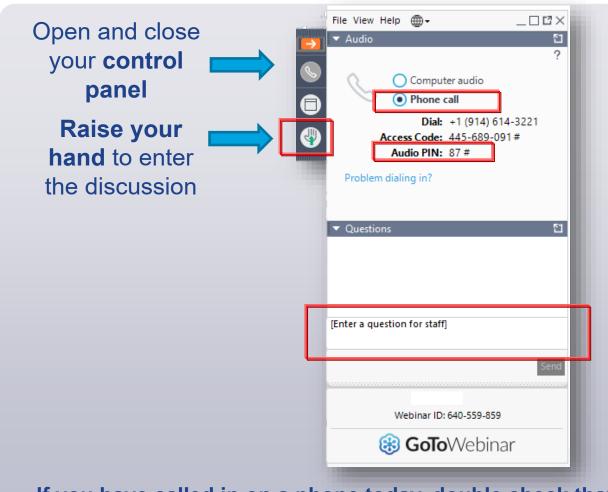






Program Website: www.pdxhes.com

Discussion: City of Portland, Oregon



Please use the questions box to submit questions, comments, or alert us of technical difficulties

If you have called in on a phone today, double check that you've selected telephone as your audio option.





Discussion Highlights: City of Portland, Oregon (1 of 2)

- The City of Portland's <u>Home Energy Score</u> ordinance, in effect since January 2018, requires that all homes complete a home energy assessment and receive a home energy score prior to listing the home on the market. The score must be included in all areas the home is listed.
- The ordinance is aimed to motivate sellers to make energy upgrades before selling and encourage buyers to choose more energy efficient homes.
 - An <u>online platform</u> is available to promote this effort. Potential buyers can check home scores in the <u>Portland Green Building Registry</u>.
 - The average home score is 4.4, mostly due to Portland's old house stock.
 - 7.1 is the average score following improvements, with an average of \$308 in annual cost savings with energy efficient measures.
- Portland collaborated with realtors to develop the regulation, but still faced challenges from the real estate sector.





Discussion Highlights: City of Portland, Oregon (2 of 2)

- Homeowners are responsible for covering the cost of the audit, but qualifying low-income households can receive a free home energy assessment.
 - Audit prices started higher than anticipated at \$200-300, but stabilized to around \$150-200 due to the high number of contracting businesses in Portland.
- The ordinance has a **54% compliance rate** so far.
 - While the ordinance is new, the city is prioritizing education over enforcement to achieve higher rates of compliance.
 - The City sends non-compliance letters and can give fines of up to \$500 for sellers that don't comply within 90 days.
 - Enforcement mechanisms are challenged by Portland's active real estate market where homes rarely take more than 90 days to sell.
- The City plans to monitor the impact of the Home Energy Score on the real estate market and demand for home upgrades.



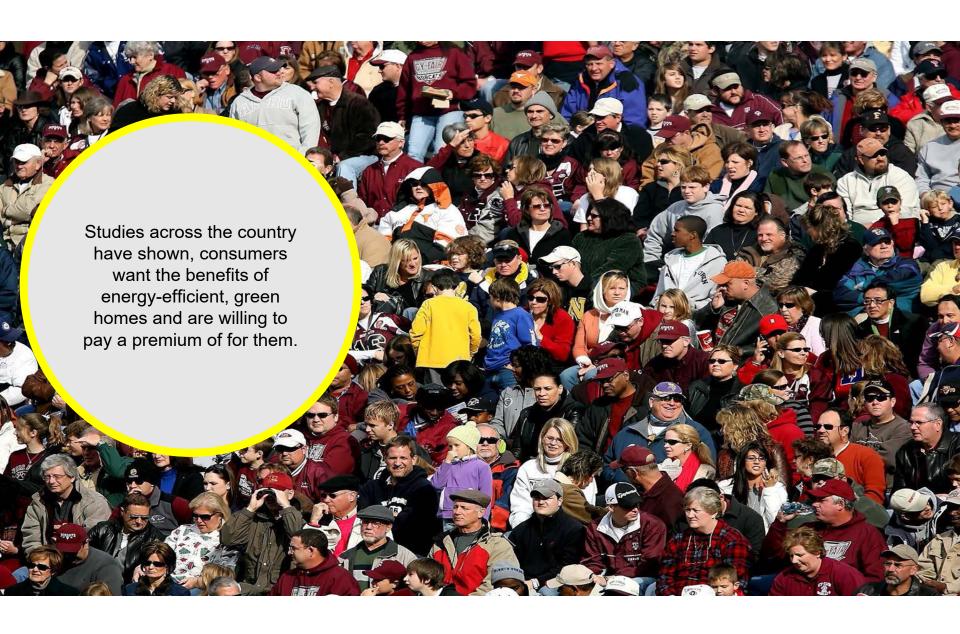


Cheryl Julcher
Co-Founder and CEO
Yellow Brick Properties, LLC





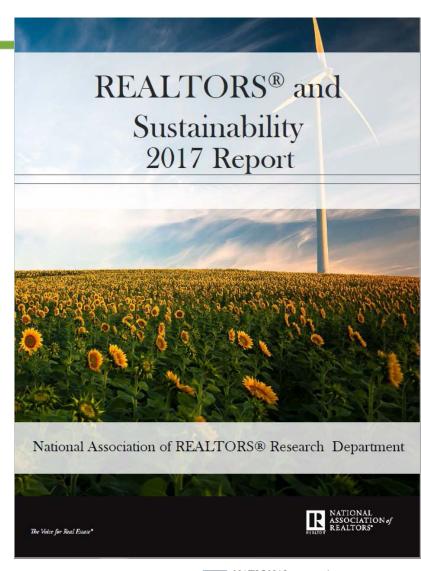




2017 NAR Report

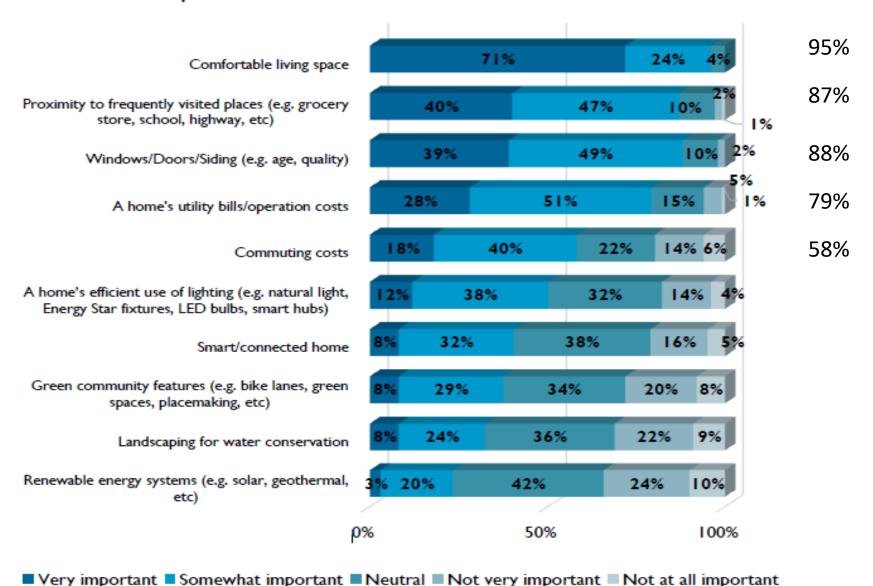
The National Association of Realtors® conducted a survey of its members to learn what agents were hearing from their clients.

Download available at www.nar.realtor/sustainability

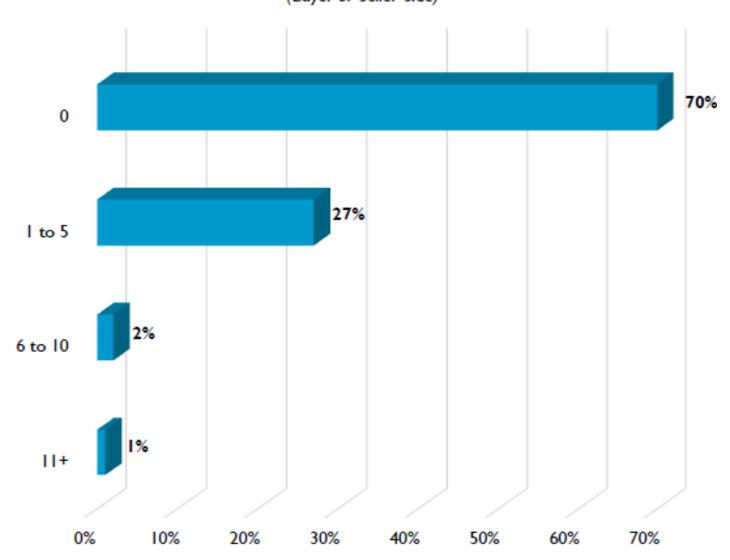




Importance of Home Features to Clients



Number of Properties with Green Features Respondents Were Involved With in Past 12 Months (Buyer or Seller Side)





Bridging the gap:



http://greenresourcecouncil.org/find-nar-green-designee

Resale Challenge - Bad



Energy Star Certified Home - Nothing mentioned in the remarks

Marketing Message Inside the Home -

Certifications

Not Sponsors



Marketing Message Is Critical - Best



Education and Communication is Critical

- Stay away from technical jargon i.e. "tight house". Do use words that describe the outcome of energy-efficient homes-"Comfortable" & "Cost Savings"
- Fill-in all applicable green fields in the MLS-review complete listing for accuracy, upload certifications as JPEGs
- Hang feature sheets in the home explaining the feature and why it benefits the buyer. Consider touring buyers through showings.
- Prepare for the sale- use the AI Green and Energy-Efficient Addendum
 - https://www.appraisalinstitute.org/assets/1/7/ResidentialGreenandEnergyEfficientAddendum.pdf
- Don't be afraid to tack on a premium to your asking price!

Conclusion - GET LOUD and CLEAR!

- Demand is there
- Be Loud and Clear with your marketing
- Consumer's don't know what to ask for
- Don't be afraid to put a premium on the price of a verified energy efficient home.



The Results Are In...

https://www.builditgreen.org/green-certified-homes-bring-higher-sales-prices-despite-market-barriers

http://www.wm.com/documents/pdfs-for-services-section/New%20and%20Remodeled%20Green%20Homes%20SMR%20(2012).pdf

https://www.usgbc.org/resources/value-leed-homes-austinround-rock-realestate-market

http://www.imt.org/resources/detail,what-is-green-worth-unveiling-high-performance-home-premiums-in-washington

Cheryl Julcher

Managing Broker, Co-Founder Yellow Brick Properties, LLC

Cheryl Julcher

Co-Founder
Zoetic Building Consultants, LLC



ww.ybproperties.com



ww.buildzoetic.com

Discussion: Yellow Brick Properties, LLC



Please use the questions box to submit questions, comments, or alert us of technical difficulties

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Presentation Highlights: Yellow Brick Properties, LLC

- Homebuyers aren't necessarily asking for energy efficient homes, but are interested in features directly related to efficiency, such as comfort, convenience, and cost savings, according to a recent study from the National Association of REALTORS (NAR).
- There are still untapped opportunities for increased access to energy information for homes on the market:
 - NAR's study shows that 95% of buyers want an energy efficient home, though only 3 out of 10 real estate agents know how to sell a house with green features.
- Communicate energy efficiency features in a way that realtors and buyers will understand:
 - Avoid using jargon, such as "tight house"
 - Relate the benefits of home certifications with what's in it for buyers
 - Be ready to explain and educate buyers on any certifications displayed in a home.





Discussion Highlights: What are the gaps in knowledge around the connection between energy efficiency and the real estate market that, if filled, would help improve work in this area?

- Quantifying ROI: Further research is needed for how to quantify the return on investment for retrofits and home upgrades. Buyers want to know the difference in value over time for purchasing a more expensive home that is more energy efficient versus a cheaper upfront cost, but less efficient home.
- The relationship between energy scores and upgrades: More evidence is needed to assess whether energy efficiency information disclosure leads to more energy upgrades and demand for energy efficiency measures.
- Transparent price information: From Portland's experience enforcing the ordinance, homeowners and potential sellers nearly always want to know how much a retrofit will cost and what their return on investment will be for making improvements. Price information and cost savings estimates are not readily available.





Upcoming Seasonal Messaging Opportunities

Now is the time to start planning energy efficiency messaging!

June 10 **Children's Day** **June 21**

Summer Solstice

June 22

National HVAC Tech Day



Boosting Your Bottom Line with HVAC Add-Ons

IE3

Posted by Audrey Henderson Date: March 07, 2017 in: Sales & Marketing Leave a comment



Especially for small to medium-sized contractors. maintaining a steady income stream can be a challenge, particularly during the off-season. Add-ons represent a possible year-round income stream. Items like whole home air cleaners, desuperheaters and whole home dehumidifiers may not be part of a basic HVAC system, but perhaps they should be part of your

company's services.



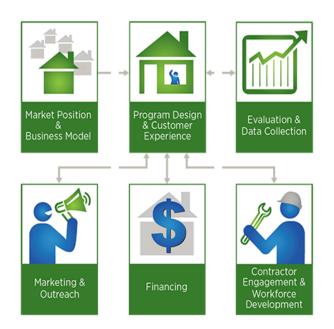




Explore the Residential Program Solution Center

Resources to help improve your program and reach energy efficiency targets:

- Handbooks explain why and how to implement specific stages of a program.
- Quick Answers provide answers and resources for common questions.
- Proven Practices posts include lessons learned, examples, and helpful tips from successful programs.
- Technology Solutions NEW! present resources on advanced technologies, HVAC & Heat Pump Water Heaters, including installation guidance, marketing strategies, & potential savings.



https://rpsc.energy.gov





Addenda: Attendee Information and Poll Results



Call Attendee Locations











Call Attendees: Network Members (1 of 2)

- American Council for an Energy-Efficient Economy (ACEEE)
- Austin Energy
- BlueGreen Alliance Foundation
- Boulder County
- City of Cambridge
- City of Charlottesville
- City of Chula Vista Conservation Section
- City of Fort Collins
- City of Plano
- CLEAResult

- Connecticut Green Bank
- Consumers Energy
- Delaware Sustainable Energy Utility
- DickKornbluth, Ilc
- Earth Advantage Institute
- Efficiency Maine
- Elevate Energy
- Enhabit
- FMC Facility Management Consultores
- Focus on Energy
- Green & Healthy Homes Initiative





Call Attendees: Network Members (2 of 2)

- Honeywell International, Inc.
- International Center for Appropriate and Sustainable Technology (ICAST)
- New York State Energy Research & Development Authority (NYSERDA)
- Rocky Mountain Institute
- Ryan Taylor Architects, LLC
- The Environmental Center
- United Energy Advisors
- Wisconsin Energy Conservation Corporation (WECC)





Call Attendees: Non-members (1 of 3)

- AcclimateUs
- Alliant Energy
- Appalachian Voices
- Ballarat Consulting
- Bank of Montreal
- Berkshire Hathaway HomeServices Montana Properties
- California Public Utilities Commission
- Cascade Natural Gas
- City of Ann Arbor
- City of Cupertino
- City of Edmonton
- City of Portland

- Clark County
- ClearlyEnergy
- Columbia Water and Light
- Consortium for Energy Efficiency (CEE)
- County of Sacramento
- E4TheFuture
- ECS-Aeroseal
- Elite Education
- Emerson
- ESHP (EESNY Blogspot)
- Florida Department of Agriculture& Consumer Services
- FortisBC
- Greenbanc





Call Attendees: Non-members (2 of 3)

- Hawai'i Energy
- ICF
- Idaho Division of Building Safety
- Idaho Power Company
- Katerra
- Lantern Energy
- LEENA Labs
- Local Government Commission
- Lockheed Martin Energy
- M&E Engineers, Inc.
- Massachusetts Department of Public Utilities
- MassEnergize
- Mercy Housing Management Group

- National Association of Home Builders
- NATIONAL ASSOCIATION OF REALTORS
- National Association of State Energy (NASEO)
- National Council of Structural Engineers Associations (NCSEA)
- National Fenestration Rating Council
- National Grid (NY)
- Natural Resources Canada
- Navigant Consulting
- Navitas Partners, Inc.
- NORESCO





Call Attendees: Non-members (3 of 3)

- One Montgomery Green
- Pearl Certification
- Pennsylvania Housing Research Center
- Pivotal Energy Solutions
- Proctor Engineering
- Red Rocks Community College
- Sierra Club Hoosier Chapter
- Smith & Boucher Engineers
- SPEER
- StopWaste
- Sustainable Real Estate Consulting Services
- The Build Coach

- Thermostat Recycling Corporation
- Timber Block USA
- U.S. Green Building Council Montana
- Utah Office of Energy Development
- Washington State Department of Commerce
- West Virginia Office of Energy
- Xcel Energy
- Yellow Brick Properties, LLC
- Zoetic Building Consultants





Opening Poll

- Which best describes your organization's familiarity or experience with the connection between real estate and residential energy efficiency?
 - Some experience/familiarity 43%
 - Very experienced/familiar 31%
 - Limited experience/familiarity 19%
 - No experience/familiarity 5%
 - Not applicable 2%





Closing Poll

• After today's call, what will you do?

- Seek out additional information on one or more of the ideas
 59%
- Consider implementing one or more of the ideas discussed
 31%
- Make no changes to your current approach 10%
- Other (please explain) 0%



