Home Energy Labeling: The New Granite Countertops of Real Estate

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Presenters:
Samantha Caputo (NEEP), Julia Dumaine (CT DEEP), Ellen Tohn (Tohn Environmental Strategies) & Craig Foley (LEAR Realty Partners)
Home Energy Labeling: The New Granite Countertops of Real Estate

Building Energy Boston – NESEA
August 14, 2020
Northeast Energy Efficiency Partnerships

“Assist the Northeast and Mid-Atlantic region to reduce building sector energy consumption by at least 3% per year and carbon emissions by at least 40% by 2030 (relative to 2001)”

Mission
We seek to accelerate regional collaboration to promote advanced energy efficiency and related solutions in homes, buildings, industry, and communities.

Vision
We envision the region’s homes, buildings, and communities transformed into efficient, affordable, low-carbon, resilient places to live, work, and play.

Approach
Drive market transformation regionally by fostering collaboration and innovation, developing tools, and disseminating knowledge.
Today’s Speakers

Julia Dumaine
Economist, Connecticut DEEP

Samantha Caputo
Senior Policy Associate, NEEP

Ellen Tohn
Tohn Environmental Strategies

Craig Foley
CSO, LAER Realty Partners
FIRST STEP Towards Improving Energy Performance

You can’t manage what you don’t measure
Making the Invisible, Visible

State and Local Gov’t

- Support for energy efficiency and clean energy program management
- Labeling and retrofitting homes to meet state energy and climate goals
- Economic growth
  - home performance contractors, energy auditors, weatherization installers, HVAC technicians, etc.

Real Estate Professionals

- Lenders, Realtors, & appraisers use labeling in mortgaging, marketing, & appraising
- Access to verified data
- Meet market interest in sustainable and high performing homes
- Transparency for buyers and sellers
The Solution

Over 370,000 records in HELIX for the NEEP region! & Growing!

- RESNET HERS/DOE HES
- Solar PV
- Green Certifications
- Weatherization/Systems data

Local Customizable Labels

HELIX

API Export

Flexible policy management tool
- Track/manage compliance
- Export to local MLS
- Create custom labels
- Access for local real estate professionals
- Trainings and technical assistance
The Many Benefits of Residential Labeling

Health  Comfort  Safety  Cost Savings

Energy Savings  Resilience  Cleaner Environment  Reduced Greenhouse Gases
Motivating Energy Efficiency Improvements through Home Energy Labeling

Julia Dumaine
Connecticut Department of Energy and Environmental Protection
2018 CT Comprehensive Energy Strategy

Strategy #2: Advance market transformation of the energy efficiency industry

A. Integrate energy efficiency with real estate market forces
B. Develop a sustainable workforce to meet industry demand
C. Standardize efficiency with energy performance codes, standards, and certifications
D. Transition to cleaner thermal fuels and technologies
Home Energy Labeling in Connecticut

• Statutory goal of achieving market transformation through C&LM programs

• Connecticut was first statewide Home Energy Score implementer in April 2015

• Home Energy Score is a feature of all energy assessments in qualifying homes that opt-in

• All lead technicians are required to be Assessors
Real Estate-Driven Market Transformation

Energy Efficiency Market Driven by Consumer Demand in the Real Estate Market

Homeowners:
- Increase efficient investments to maximize home value

Home Buyers:
- Buyers become more aware of this information. Demand increases

Home Sellers:
- Allows sellers to list information about their energy efficient investments in the property

Assessor:
- Compiles DOE HES info

U.S. DOE:
- Servers hold HES building files

Universal Database:
- Accessible Database with Privacy Restrictions

MLS:
- Energy efficiency information auto-populated fields
Creating a Database

• *Home Energy Labeling Information eXchange (HELIX)*
  - Three-year project to develop the universal database capable of auto-populating real estate listings with home energy information in a standardized format
  - Partnership of seven states (New England + New York) using U.S. DOE SEP Competitive Grant received by Vermont
Who Needs to be at the Table?

Utilities

Contractors
(HVAC, Energy Auditors, Builders)

MLS’s

Realtors

Appraisers

Inspectors

Lenders
Engaging Contractors

Leverage existing communication pathways.
- CT focused on utility Home Energy Solutions contractors to start

Conduct outreach to ensure their questions and concerns are addressed.
- Held roundtables and circulated surveys to understand contractor concerns.

Employ consistent messaging.
- Took the top FAQs and created messaging materials to share and train on.

Build and maintain technical knowledge.
- Engage with DOE, they are a resource to help build technical knowledge.

How can you express the benefit to contractors?
- DOE Home Energy Score creates a roadmap of deeper energy efficiency measures for customers which contractors can leverage as a sales tool.
Engaging Contractors - examples of concerns

“A lower score may end up being detrimental to a home,”

FALSE: a more informed consumer makes a better decision.

a) Studies have shown that homebuyers like having energy information, and high bills or a low score do not necessarily “kill” a sale

b) A low score does not necessarily mean that a home is poorly built.
   – The score estimates a home’s total energy use, not energy per sq. ft.
   – A 4,000sq. Foot, beautiful home will likely be expected to use more energy each year than the average U.S. home
Engaging Realtors

Customize training to meet them where they are.

- Working with local realtor associations to engage on familiar platforms and provide CEU’s

Use data and evidence.

- Demonstrate that the stock of data is growing, available, and be prepared to address concerns about labeling.

Engage them in the process.

- Most realtor associations and MLSs are member-based organizations. Education helps empower them to demand change.

Craig Foley, CSO and REALTOR®, conducting a training on energy efficiency and solar PV for Connecticut realtors in September, 2019.
Engaging the Multiple Listing Services

Establish the necessary technology.

- HELIX allowed us to establish credibility and open discussions.

Recognize and adjust to different industry timelines.

- MLS board engagement can change.

Leverage their membership base— the realtor community.

- Educate the realtors to demand this information be available.

Build and maintain technical knowledge.

- Bring their IT staff to the table if possible.
Track Your Data

- Connecticut has almost 15,000 property records in HELIX to date
  - Includes LEED, HERS Index, DOE Home Energy Score, and NGBS New Construction

No. of Home Energy Scores since 2018

- Average score ~5 (expected)

<table>
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<tr>
<th>Score</th>
<th>Average Baseline Asset Energy (MBTU)</th>
<th>Average Year Built</th>
<th>Average Square Footage</th>
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<tbody>
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<td>1</td>
<td>181</td>
<td>1949</td>
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<td>1965</td>
<td>2,011</td>
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<td>10</td>
<td>39</td>
<td>1975</td>
<td>1,794</td>
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Additional Challenges

• Stream-lining re-scoring of updated homes
• Improving lender and appraiser education and exposure
• Increase contractor-motivated adoption by customers
• Sustainable funding for training
• Potential for mandatory energy information disclosure through **SB 177 An Act Concerning Energy Consumption Data and Labeling**
Consumers Value Building-Based Health Certifications

Ellen Tohn, Tohn Environmental Strategies
etohn@tohnenvironmental.com
Tohn Environmental Strategies

We work at the intersection of health, energy and housing/community.

- Strategic planning
- Applied research
- Program design and evaluation
- One Touch®: Creating healthy and energy efficient housing.
Consumers believe their home can impact their health

Over 72% of consumers believe their house has a moderate to strong impact on their health and are at least somewhat concerned about indoor air quality.

30% of households are concerned about their home endangering their health.

Sources: The Shelton Group, Home Performance Association Webinar and 2019 Conference; Healthy Homes Remodeling: Consumer Trends and Contractor Preparedness, 2019, prepared by the Joint Center for Housing Studies at Harvard University.
60%

Have been at least moderately concerned about indoor air quality
They perceive IAQ issues to stem from the original construction of the home; nearly 1 in 4 believe construction materials are the cause of poor IAQ. And HVAC systems.
Figure 1: Indoor Air Quality, Pests and Water Quality Issues Top List of Concerns

Which general category(ies) best describes your concern about the impact of your home on your household's health?

- Indoor air quality
- Pests
- Water quality
- Safety/comfort of structure
- Other indoor issues
- Harmful materials/chemicals
- Accessibility
- Neighborhood safety
- Other basic safety issues

Notes: Out of a sample of 561 homeowners, 250 renters concerned about specific healthy housing issues.
Source: Farnsworth Group and Joint Center Healthy Homes Surveys, August 2019.

© President and Fellows of Harvard College

Joint Center for Housing Studies of Harvard University

Environmental Strategies
Post Covid Air Purification Searches Are Exploding

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<tr>
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<td>120%</td>
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Source: Energy Circle, Peter Troast, Google Trends, Last 30 days April 20, 2020
Pre-Covid homeowners were motivated to make health repairs

Over 30% of homeowners have completed or plan to make healthy homes repairs/actions (air filters, ventilation, mold/moisture)

20-40% of homeowners exploring health repairs

motivated by concerns for a household member with physical symptoms they associated with the home
We link energy efficiency & health

80% think energy efficient homes are healthier

60% believe telling someone that an energy efficient home is a healthier home is an effective way to get people to spend $1500 on efficient home features
WGBC Report: Doing Right by Planet and People

ASID, WELL Platinum Certified (Washington, DC)
"ASID’s new office headquarters was designed for environmental sustainability, and health and wellness, with a focus on indoor air quality, employee satisfaction, and productivity. In their new office, employee absenteeism has decreased by 19% and presenteeism by 16%.”

Cundall, WELL Gold Certified (London, UK)
"Cundall’s new office, which focused on improved indoor air quality, including continuous monitoring of carbon dioxide (CO2) and volatile organic compounds (VOCs), has saved the company £200,000 due to a reduction of four sick days per year per employee and a 27% reduction in staff turnover. WELL Certification increased the project cost by 3.6%. Based on the above noted savings, these costs had a return on investment of less than two months.”

ULI Report: The Business Case for Healthy Buildings

CBRE’s offices in Toronto and Vancouver — Key features include daylight/circadian lighting, ventilation/air quality, collaborative space, active staircase, sit/stand desks. Value added: greater employee satisfaction, recruitment and retention; and enhanced landlord/tenant partnerships. In these WELL-certified offices, the total employee turnover rate has fallen by almost a third and the hiring rate for new talent has doubled.

Arup’s Boston office – Key features include daylight/circadian lighting, ventilation/air quality, collaborative space, sit/stand desks. Value added: improved productivity, attitude, collaboration and social cohesion among employees.

# Home rating systems

<table>
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<tr>
<th>Program</th>
<th># Certified</th>
<th>New/Existing Homes</th>
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<tbody>
<tr>
<td>EPA Indoor Air Plus</td>
<td>Over 19,000 homes certified. 25% in AZ. Mostly single family.</td>
<td>New home focus</td>
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<tr>
<td>Well Building</td>
<td>29 multifamily registered, 3 completed. Over 4,000 registered projects, including commercial and hospitality.</td>
<td>New buildings</td>
</tr>
<tr>
<td>Multifamily focus</td>
<td></td>
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<tr>
<td>Fitwel® Center for Active Design</td>
<td>700 multifamily projects certified or pending.</td>
<td>New &amp; existing</td>
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<td>Multifamily focus</td>
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<tr>
<td>Living Building Challenge</td>
<td>Over 100 certified, 550 registered. Single, multifamily, commercial. 8 certified homes, 2 are single family</td>
<td>New &amp; existing</td>
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<tr>
<td>International Living Future Institute</td>
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<tr>
<td>Earthcraft Southface</td>
<td>Over 50,000 certified. Southeast focus. Majority residential.</td>
<td>New &amp; existing</td>
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<tr>
<td>Pearl</td>
<td>240 homes, newer program. Over 23,000 homes with certified HVAC equipment.</td>
<td>New &amp; existing</td>
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</table>
HCAC contractor using healthy homes messages in marketing

Rodenhiser Home Services is now offering many discounted services that can help improve the overall health of your home.

Air conditioning specials can keep your family cool as temperatures rise. Indoor air quality products, hands free/voice activated faucets and reliable hot water can all contribute to maintaining a healthy home.

Our technicians have been trained to practice social distancing and sanitation processes throughout the service so schedule now to keep your home happy and save!
Craig Foley, CSO LAER Realty Partners  
Co-founder REthink39 Group

- Craig works to unlock the value of sustainability in the real estate industry

- NAR leadership positions include
  - 2019 Chair Sustainability Advisory Group
  - 2020 Chair Presidential Advisory Group exploring impact of extreme weather events on the real estate industry

- Fannie Mae Energy Advisory Council
- Freddie Mac Energy Efficiency Task Force
Big Picture: Tailwinds for Industry Leadership to Advance a Sustainable Future
Small Picture: Challenge at the Boots on the Ground Level
Small Picture: Challenge at the Boots on the Ground Level
Small Picture: Challenge at the Boots on the Ground Level
Like builders and subs that have specialized knowledge to build HPHs there are agents, appraisers, and lenders that also have specialized knowledge in valuing HPHs.
The Real Estate Value Chain

- Listing Agent
- Buyer
- Buyer’s Agent
- Appraiser
- Bank Underwriter
Signs of movement in the market
Home inspectors are responding to buyer’s interest in EE.
My ask to builders, remodelers, and architects
Our Takeaways

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