FROM VOLUNTARY TO MANDATORY: HOW POLICIES AND PROGRAMS ARE SHAPING THE MARKET

Madeline Salzman, U.S. DOE, moderator
Julia Dumaine, CT DEEP
Kevin Rose, National Grid, RI
Ian Finlayson, Massachusetts Department of Energy Resources
Lisa Timmerman, City of Portland, Oregon
Lauren McNutt, Dunsky Energy Consulting
R.I. DOE HES Pilot

Kevin Rose
12/7/18
Agenda

01 Drivers

02 Pilot Basics

03 Lessons (so far)
Drivers

nationalgrid
# Drivers

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<tr>
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<td>Short term</td>
<td>Increased retrofit conversion rate?</td>
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</tr>
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Pilot Basics
Pilot Basics

150 Home Energy Scores

• Launched earlier this year

• Incorporated into our HPwES program

• Customers can opt-in to sharing

ETA for results: late 2019
Lessons (so far)
Opt-in Consent Form

Customer Consent and Release: DOE Home Energy Score Program

The undersigned (“Customer”) understands that The Narragansett Electric Company d/b/a National Grid (“National Grid”) is collaborating with the United States Department of Energy (“DOE”) to provide interested Customers who are homeowners with a Home Energy Score (“HES”) report through the DOE’s Home Energy Score Program (“Program”). Like a miles-per-gallon rating for a car, the Home Energy Score or HES provides an estimate of a home’s energy use as well as associated costs and other information based on a standard assessment of its energy-related assets.

☐ By checking this box, the Customer hereby consents and agrees to the disclosure of Customer Information (as defined below) by National Grid or by its contractor, Rise Engineering, a division of Thielsch Engineering, Inc. (“Contractor”), to the DOE. “Customer Information” will include Customer’s address, description of home (e.g. year built, dimensions), and energy feature details (e.g. window types, heating and cooling system characteristics). Customer Information is needed for the DOE to (i) produce a HES report for the Customer’s residence as set identified below (“Property”) and (ii) deliver that report to the Customer. The Customer further understands that the DOE may publish or disclose analyses and aggregates using the Customer Information. Except as stated below, the DOE will not publish or disclose the Customer Information to any third parties and the DOE will not, directly or indirectly, identify the Customer in any publication or disclosure. Customers’ name and energy consumption/utility bill information are not shared with DOE.

☐ By checking this box, the Customer hereby further consents and agrees to the inclusion of the Customer’s HES report in future real estate listings and disclosure by the DOE of the HES report to any relevant multiple listing service, as well as to any intermediary databases serving to populate these listings, through accepted and secure methods of data transportation.

Customer agrees to release, indemnify and hold harmless National Grid, the Contractor and National Grid’s affiliates and its and their respective officers, directors, employees, agents, successors and assigns from any and all liability, claims, losses, damages or expenses arising out of, resulting from or in connection with (a) the disclosure of Customer Information by National Grid or by the Contractor to the DOE and (b) any use of the Customer Information or Customer’s HES report as described hereunder.

The undersigned represents and warrants that he or she read this Customer Consent and Release and fully understands the contents hereof.

Sign: ____________________ Date: ___________
Lessons (so far)

About 40% consent to sharing

• Customers reluctant to share if they don’t know what the score is going to be.

• We allow customers to change their mind later

Real estate professionals are interested

• AI chapter training events
Summary

Midway through 150 home pilot

Short, Medium, and Long-term drivers
No conclusions to be made yet

60% of customers don’t opt in to sharing

Can’t scale up if we can’t prove cost-effectiveness
nationalgrid
Home Energy Ratings in Connecticut: Driving Market Transformation

December, 2018
Julia Dumaine
Energize Connecticut

- Created in 1998 by the Connecticut Legislature
- $240 million, ratepayer-funded initiative dedicated to empowering Connecticut to make smart energy choices, save money, and use clean, affordable energy.
- Managed and administered by
  - The Connecticut Energy Efficiency Fund
  - The Connecticut Department of Energy and Environmental Protection
  - The Connecticut Green Bank
  - Eversource
  - United Illuminating
Conservation & Load Management
Mission: Public Act 98-28

- Advance the Efficient Use of Energy
- Promote Economic Development & Energy Security
- Reduce Air Pollution
Future State Vision

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

Assessor:
Compiles DOE HES info

U.S. DOE:
Servers hold HES building files

Universal Database (HELIX)
Accessible Database with Privacy Restrictions

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

Homeowners:
increase efficient investments to maximize home value

MLS:
Energy efficiency information auto-populated fields

Connecticut Department of Energy and Environmental Protection
Future State Vision

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- **Universal Database**
  - Accessible Database with Privacy Restrictions

Connecticut Department of Energy and Environmental Protection
Engagement with the Real Estate Industry/HELIX

• Home Energy Labeling Information eXchange (HELIX)
  • “The purpose of this project is to develop a database capable of automatically populating real estate listings (whether they are accessed through local Multiple Listing Services (MLS) or portals like Trulia and Zillow) with home energy information from Home Energy Score and other sources when it is available and approved by the seller.”

• Beta-testing HELIX
  • Protection of customer data is primary concern
  • Identifying how and with whom information will be shared with by HELIX (automated versus manual data transfer)

• NEEP and CT in discussions with the MLS
  • Connecticut is not mandating scores (voluntary)
  • Quality assurance and consistency
  • Data sharing
  • Educating the industry
Integrating the DOE Home Energy Score

- Connecticut was first statewide implementer in April 2015.

- Home Energy Score is a feature of all HES assessments in qualifying homes and all HES lead technicians are required to be Assessors.

- Beginning of 2018 - moved to opt-in language.
Integrating the DOE Home Energy Score

• Lessons Learned after Opt-In
  – Significant decrease in HEScore participation
    • Data sharing concerns
    • Stigmatization of homes
    • Lack of understanding/training and support by contractors
  – Messaging and education must be consistent across the board—starting with the technicians and assessors

• DEEP & Utilities hosted trainings in Summer of 2018 to educate technicians
  – DEEP provided overview of state vision
  – DOE Home Energy Score Representative
  – Both covered topics related to technical knowledge and messaging
Key to Success: Consistent Messaging

2. “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
3. “Why is a Score valuable in the residential real estate market?”

“Efficiency investments face a challenge in that they are not visible to buyers like new countertops or a remodeled bathroom. When improvements are done well, they are completely out of sight in attics or behind walls, with benefits that only become obvious after living in the home.” – Home Energy Information Guide

a) Most buyers consider location and character before other features (like energy)

b) The Home Energy Score allows sellers to showcase efficiency investments

c) The information can be used by appraisers and mortgage lenders for energy-related financing products

a) Ex: Fannie Mae Homestyle® Energy Mortgage
Key to Success: Consistent Messaging

4. “What is the ultimate goal of the score?”
   
   **TO SAVE ENERGY!**
   
   a. The Score is used to make people more aware and drive efficiency improvements.
   
   b. Energy plays a huge role in the comfort, safety, and affordability of a home
   
   c. This contributes towards Connecticut achieving our energy reduction and reliability goals, and environmental goals.
Key to Success: Technical Knowledge

4. “It is difficulty to predict a score and explain to a customer why they got what they did,”
   a. A home’s unique feature are modeled to determine annual energy use

   **One-Story House**

   • 2000 sq/ft floor plan
   • 5440 sq/ft exposed surface (walls, ceiling, floor)

   **Two-Story House**

   • 2000 sq/ft floor plan
   • 4080 sq/ft exposed surface (walls, ceiling, floor)
5. “Language being used to explain the score might be different between relevant players,”

a. Real estate industry is embracing efficiency and the score more and more nationwide

b. Many online resources both at the state and federal level

• [DOE Real Estate Professionals Fact Sheet](#)
• EnergizeCt.com is currently building out a “Trade Ally” landing page for real estate professionals that will use the same language as elsewhere on the site.
Next Steps: Begin Data Sharing with HELIX

• Utilities finalizing data sharing agreements with DOE to provide HEScores to HELIX and third parties

• Need for increased communication and collaboration with MLSs to streamline processes

• Working with NEEP to establish a payment mechanism to support HELIX
Creating a Clean, Affordable and Resilient Energy Future for the Commonwealth

Home Energy labeling: lessons learned in MA

Ian Finlayson, Deputy Director, Energy Efficiency Division
MA Dept. of Energy Resources
Why Scorecards in Massachusetts?

• Create Transparency for Consumers
• Help drive residential energy improvements, which will:
  ➢ Lower energy bills for homeowners & renters
  ➢ Improve home values; and
  ➢ Reduce greenhouse gas emissions
Lessons learned from Europe (EU)

• Study trips:
  - Oxford University, UK – 2007
  - Salzburg, Austria – 2008
  - Wels, Austria – 2011
  - Vienna, Austria – 2013

• Interviews & Lit. review
  - 2008 – Denmark, Germany, Austria, UK
  - 2012 – Denmark, Austria, Portugal, Ireland, UK
  - 2017 – Germany, Ireland, Austria
Carrots, Sticks & Tambourines

Scorecards

1 leg of a 3-leg stool
Scorecard design matters

• Leverage behavioral research
  • Have a comparison to peers
  • Show potential for improvement
  • Units don’t matter (smiley faces, stars, letters, numbers)

• Plan for the long-term
  • Have a score(s) that is durable/replicable over decades
    • i.e. not $$ as the primary metric
  • Plan for an improving average over time
    • The point is to see an improvement in housing stock
    • Account for PV (rooftop solar) and EV (home charging)
  • There are reasons not to use a letter grade
    • E.g. EU: A, A+, A++
Voluntary disclosure doesn’t work: Critical mass is needed in MLS

• Ireland and Germany both started with voluntary disclosure in real estate listings
• Representatives from both countries said their EPCs were failing until they made a policy correction and required disclosure at time of listing
• Once the policy changed the market valuation improved rapidly
  • Ireland up to 10% premium for ‘B’ or better
Store the Score – (aka HELIX)

- EU initially split (2014)
  - Nation-state dataset (19)
  - Regional dataset (5)

- Trend towards a nation-state database model (28 in EU)

http://building-request.eu/content/overview-energy-performance-certificate-database-systems-across-europe
Lessons learned closer to home

• Field Studies: 2012-2014
  ➢ Home MPG pilot in Springfield area
  ➢ Cape Light Compact – DOE Home Energy Score pilot

• Current implementation: 2017-2018
  ➢ Home MVP pilot statewide
  ➢ ENE program for 19 Municipal Light Plants
Springfield Area Pilot
$2.6m 2012-2014

• 4 State U.S. DOE funded Pilot
• Massachusetts Pilot Municipalities
  ➢ Springfield, Belchertown, East Longmeadow, Hampden, Longmeadow, Monson, Palmer, and Wilbraham
• Utilities/ PAs
  • National Grid
  • Western Mass Electric (now Eversource)
  • Columbia Gas
• Lead Vendors
  • Honeywell – WME (now Eversource West)
  • CSG (now CLEAResult) - NGRID, Columbia)
• 3,866 audits / scorecards, 1,593 retrofits / updated scorecards
• 41% completed efficiency work
• Avg savings per home: 20 MMBtus
  • 25% more savings per household vs. Mass Save
• Outreach increased participation:
  • 25% more households completed installations over Mass Save
Springfield lessons learned

- Scorecard integrated in audit software is critical
  - Avoid dual data entry
- Marketing and outreach takes time
- $$$ matter for selling efficiency, even if they don’t make a good scorecard metric
  - Incentives inspire investment
- Homeowners (& auditors) like a scorecard
  - And can handle more than one metric
- MA only state to meet the ambitious DOE goal of 20% energy savings in 2% of target market
Cadmus evaluation: Q’s on scorecards

• Easy to understand
  • 100% Phone survey (very 65%, somewhat 35%)

• Useful in decision to make improvements
  • 99% Phone survey (very 67%, somewhat 31%)
  • 84% On-line survey (very 44%, somewhat 40%)

• Useful in home-buying
  • 99% Phone survey – (very 74%, somewhat 25%)
  • 99% On-line survey – (very 70%, somewhat 29%)

• Include in Mass Save assessments
  91% on-line survey (strongly agree 44%, agree 47%)
Scorecard Design & Metrics

• Asset rating (not operational)
• Energy use metric: MMBtu/year
• Carbon footprint: carbon metric tons/year
• Compared to area average & expected score after implementing recommended measures
• Expected cost savings associated w/recommendations
• Post-implementation scores based on what was implemented & compared to prior scores
This score measures the total energy use (electricity, natural gas, propane, heating oil) of this home for one year. The lower the score, the less energy required for normal use. Actual consumption and costs may vary.

Measured in millions of British Thermal Units (MMBtu/yr).

This score measures the total carbon emissions based on the annual amounts, types, and sources of fuels used in this home. The lower the score, the less carbon is released into the atmosphere to power this home.

Measured in metric tonnes of carbon per year (tonnes/yr).
YOUR HOME'S ENERGY PERFORMANCE SCORE

Home MPG, a program within Mass Save®, provides you with your home’s "miles per gallon" energy performance rating, called an "energy performance score" or EPS. By helping you better understand your home's energy use, Home MPG helps you make smart decisions about implementing improvements that make your home more energy efficient and reduce your energy costs.

PREPARED FOR
123 Test Street
Testville, NY 14850
Ref #: GS0637

Year Built: 1975
Sq Footage: 1800
Bedrooms: 3
Primary Heating Fuel: Electricity

Assessment Date: 9/12/2012
Energy Specialist: Performance Manager

208
Your Home’s ENERGY PERFORMANCE SCORE

This score shows the total energy use (electricity and heating fuel) of your home for one year. The lower the score, the better!

Average

0
MMBtu/yr
BEST

130

208
Your Home's Score Before Improvements

208
Your Home's Score After Improvements

130
Average Home In Your Area

THE BOTTOM LINE

PER YEAR

$0
ESTIMATED ENERGY SAVINGS
Based on implementing all of the recommended energy efficiency improvements

13.4
Your Home's CARBON FOOTPRINT

This score shows the estimated carbon emissions based on the annual amounts, types, and sources of fuels used in your home. The lower the score, the less carbon is released into the atmosphere to power your home.

PER YEAR

$9989
CURRENT ESTIMATED ENERGY COSTS

13.4
Your Home Before Improvements

13.4
Your Home After Improvements

9.7
Average Home In Your Area

For more information on Home MPG or to create an online account to manage your home’s information, visit masssave.energy.performance-score.com

Actual energy costs may vary and are based on many factors such as occupant behavior, weather and utility rates. Please see review for more on the EPS calculation. Projections for energy use and energy savings are estimates based on the implementation of the recommended energy efficiency improvements.

Source: Honeywell & DOER
YOUR HOME'S ENERGY PERFORMANCE SCORE

Home MPG, a program within Mass Save®, provides you with your home's "miles per gallon" energy performance rating, called an "energy performance score" or EPS. By helping you better understand your home's energy use, Home MPG helps you make smart decisions about implementing improvements that make your home more energy efficient and reduce your energy costs.

Your Home's ENERGY PERFORMANCE SCORE

This score shows the estimated total energy use (electricity and heating fuel) of your home for one year. The lower the score, the better!

130 Average Home in MA
160 Your Home's Current Score
92 Your Home's Score After Recommended Improvements

0 mmBtu/y [BEST] 150 mmBtu/y 300 mmBtu/y [WORST]

Estimated percentage of energy use by fuel type: Electric: <XXX%>, Natural Gas: <XXX%>

Your Home's CARBON FOOTPRINT

This score shows the estimated carbon emissions based on the annual amounts, types, and sources of fuels used in your home. The lower this score, the less carbon is released into the atmosphere to power your home.

11.1

2.8 Your Home's Footprint after Recommended Improvements

9.7 Average Home in MA

 Estimated carbon footprint (home/yr): Electric <XX%>, Natural Gas <XX%>

PREPARED FOR
<Customer Name>
<Customer Address>
<City>,<State> <Zip>
Ref #: <Site ID>

Year Built: <XXXX>
Sq Footage: <XXXX>
Bedrooms: <X>
Primary Heating Fuel: <XXXX>

EPS Report Date:
<XXXXX>
Energy Specialist:
<Energy Specialist Name>

DOLLARS & SENSE

Current Estimated Energy Costs $2000 Per Year

ESTIMATED ENERGY SAVINGS $1150 Per Year

Based on implementing all of the recommended energy efficiency improvements.

Source: CSG/CLEAResult & DOER
Your Massachusetts Home Scorecard

This scorecard compares home energy use and carbon footprint to an average home in MA, and shows improvements based on recommended technology.

ABOUT
Address
123 Main St., Whately, MA, 01903
Year Built
1850
# of Bedrooms
3
Assessment Date
N/A

YEARLY ENERGY USE
Electricity
3,613 kWh
Fuel Oil
1,324 gallons

YEARLY COSTS & SAVINGS*
$ 4,343
Pre-upgrade Energy cost per yr
$ 2,798
Post-upgrade Energy cost per yr
SAVE $ 1,545
Estimated Energy Savings per yr

Estimate percentage of energy use by fuel type:

<table>
<thead>
<tr>
<th>Fuel Type</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propane</td>
<td>4%</td>
</tr>
<tr>
<td>Fuel Oil</td>
<td>90%</td>
</tr>
<tr>
<td>Electricity</td>
<td>6%</td>
</tr>
</tbody>
</table>

Estimated average carbon footprint (tons/yr):

<table>
<thead>
<tr>
<th>Fuel Type</th>
<th>Footprint</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuel Oil</td>
<td>93%</td>
</tr>
<tr>
<td>Electricity</td>
<td>7%</td>
</tr>
</tbody>
</table>

HOME ENERGY USE
This shows the estimated total energy use (electricity and heating fuel) of your home for one year. The lower the energy use, the better!

HOME CARBON FOOTPRINT
This score shows the estimated carbon emissions based on the annual amounts, types, and sources of fuels used in your home. The lower the score, the less carbon is released into the atmosphere to power your home.

* Estimated costs and savings. Actual energy costs may vary and are based on many factors such as occupant behavior, weather and utility rates. Please see next page for more on the EPS calculation. Projections for score improvements and energy savings are estimates based on implementing all of the recommended energy efficiency improvements. Ref # 91997.
Where are we now with scorecards in Massachusetts?

• 2019-2021 3-year Energy Efficiency Plan requires scorecards be integrated into the home audit
  ➢ “before” and “after” EE implementation
• DOER working to finalize scorecard design & requirements with input from Mass Save PAs
• Scorecards electronically provided to DOER on a quarterly basis
• MA Baker Administration plans to re-file scorecard disclosure legislation in December
Thank You!

Ian Finlayson
Department of Energy Resources
ian.Finlayson@mass.gov
617 626 4910
Oil Home in Wilbraham, MA

Year Built: 1956  
Sq Footage: 2,891 ft²  
Bedrooms: 5  
Heating Fuel: Oil

Score BEFORE: 195  
Score AFTER: 156  
Est. Energy Savings: $908/year  
Est. GHG savings: 3.5 tons/year

Total Mass Save incentive of $3672 for:  
21 CFLs, and 1 LED bulb  
11 hours of air sealing  
Wall insulation ($2,740 from Mass Save)

Homeowner cost:  
This household** - $913  
Low-income household - $0  
Moderate income household* - $274

2017 Zillow Home Value: $293,000

* Mass Save covers up to 90% of insulation costs, up to $3,000 for households at 61-80% of median income  
** Mass Save covers up to 75% of insulation costs, up to $2,000 for households above 81% of median income
City of Portland Home Energy Score

HELIX Summit
December 7, 2018

Lisa Timmerman
Portland Bureau of Planning and Sustainability
City of Portland HOME ENERGY SCORE

Know the score. Outsmart energy waste.
How it works

Regulated party = Seller or homebuilder

Time of disclosure = At or before listing

Assessment completed by = 100+ authorized home energy assessors

Information disclosed = Home Energy Score and home energy report

Disclosure required in = Real estate listings and displayed in the home for prospective buyers
HOME PROFILE

LOCATION:
1324 SE 123rd Ave
Portland, OR 97206

YEAR BUILT:
1999

HEATED FLOOR AREA:
1,439 sq.ft.

NUMBER OF BEDROOMS:
3

ASSESSMENT

ASSESSMENT DATE:
02/28/2018

SCORE EXPIRATION DATE:
02/28/2026

ASSessor:
John Smith
Energy Score Assessor.com
PHONE:
503-123-4567
EMAIL:
John@EnergyScoreAssessor.com

CB License #:
123456

Score today: 4
Score with improvements: 7
Estimated energy savings with improvements: $273 PER YEAR
Estimated carbon reduction with improvements: 20% PER YEAR

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.


☐ Select a contractor (or two, for comparison) and obtain bids.

☐ Explore financing options at www.enhabit.org or call toll free 1-866-368-7878.

* 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

Cathedral Ceiling Insulation
Duct Insulation
Duct Sealing
Envelope Insulation
Footing-Grout
Water Heater
Air Conditioner
Attic Insulation
Basement wall Insulation
Floor Insulation
Foundation wall Insulation
Stair Insulation
W indows
Solar Panel

TODAY'S CONDITION
Un-insulated, or R-11
Un-insulated
Un-sealed
Not professionally air sealed
Natural gas furnace R-4.6
Standard natural gas
None
Colling Insulated in R-10
None
Insulated to R-0
None
None
Double-pane, low-E glass

RECOMMENDED IMPROVEMENTS
Insulate cathedral ceiling to R-30 or maximum possible
Insulate to R-4
Reduce leakage to a maximum of 10% of total airflow
Professionally air seal
Upgrade to ENERGY STAR
Upgrade to ENERGY STAR, minimum R-07 (Energy Focus)

Visit www.energytrust.org/solar to learn more (Note: Solar PV is not included in “Score with Improvements”)

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
### Alameda Dutch Colonial

- **Address:** Portland Northeast
- **ML#:** 181006125
- **Area:** Portland Northeast
- **Prop Type:** DETACHD
- **Nbrhd/Bldg:** ALAMEDA
- **Levels:** 3
- **Garage:** 0
- **Roof:**
- **Exterior Desc:** ALUM
- **MstBdrm Level:** U
- **Fireplaces:**
- **Bsmt/Fnd:** FULLBAS
- **View:**
- **Price:** $510,000
- **Beds:** 2
- **Baths:** 1
- **County:** Multnomah
- **Style:** COLONIL / DTCHCOL
- **Year Built:** 1924 / REMOD
- **Status:** ACT
- **Year:** 1982
- **Acres:** 0.11
- **Lot Size:** 3K-4.999SF
- **Lot Dim:**
- **Lot Desc:**
- **Heat/Fuel:** FOR-AIR / GAS
- **Cool:** CENTAIR
- **Water/Sewer:** PUBLICWTR / PUBLICSWR
- **Hot Water:** GAS
- **Zoning:**

**REMARKS: Video/Virtual Tour #1 Video/Virtual Tour #2**

Alameda Dutch Colonial on name brand street awaits! Perched high above the street this classic Dutch Colonial boasts large well proportioned rooms, high ceilings and gorgeous period finishes. Recently updated kitchen exudes period appropriate subway tile & wood grain finishes. High ceilings, french doors and the best schools are all here!! The incredible deep backyard and private spaces are an additional perk of this truly special home! Home Energy Score: 3.00 HES report at [https://api.greenbuildingregistry.com/report/hes/OR10064988-20180719](https://api.greenbuildingregistry.com/report/hes/OR10064988-20180719)
Carbon Emissions by Sector
(for Multnomah County, 2014)

- Residential, 19%
- Commercial, 23%
- Transportation, 40%
- Industrial, 17%
- Solid Waste, 1%
Portland Housing Units

SINGLE-FAMILY
160,250 Total Units

MULTIFAMILY
107,300 Total Units

Owner Occupied
125,000 Units

2+ Unit Rentals
103,000 Units

Rental Unit
35,250 Units

Other
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.
Stakeholder Engagement

• Professionally run consumer focus groups
• Facilitated discussions with real estate and energy efficiency industry
• Equity stakeholder discussion with CBOs representing low income, tenants and communities of color
• Individual meetings with realtor association
Real Estate Industry Response

– Makes housing even less affordable
– Unfairly impacts low income homeowners with sub-standard homes
– Pointless without mandatory upgrades
– Only addresses a small % of houses
– Punishes those selling older homes or buying fixers
Next Steps for 2019 and beyond

• Increase brand recognition and demand
  – Improve the score appearance in listings
  – Increase marketing/outreach through available networks

• Enforcement
  – Relationship with RMLS

• Analysis and evaluation
  – 8000+ scores analysis

• Financing
Thank you!

Program Website:
www.pdxhes.com

Email:
HESinfo@portlandoregon.gov
lisa.timmerman@portlandoregon.gov
Home Energy Labeling & Disclosure
From Voluntary to Mandatory:
The International Experience

December 7, 2018
1. **Overview** of international labeling & disclosure programs
2. **Opportunities & limitations** with voluntary & mandatory programs
3. **How** to get the most out of either approach
Overview of **international** labeling & disclosure programs
**International** analysis of experience worldwide

- **EU (8 national programs):**
  - Denmark
  - France
  - Germany
  - Hungary
  - Ireland
  - Portugal
  - Sweden
  - UK

- **Australia (2 state programs):**
  - ACT
  - Queensland
Opportunities & limitations with voluntary & mandatory programs
Voluntary programs: Opportunities

Opportunities

- **Increase awareness:** Educate industry and community
- **Easier to digest:** REALTORS® likely to be supportive
- **Address administrative capacity:** Establish and test systems before scaling up
- **Prepare the market:** Balance roll-out with industry capacity
- **Can move the market to some degree:** Prove the feasibility and value of a mandatory approach
Voluntary programs: Limitations

Limitations

- **Low participation**: Relies heavily on industry to promote
- **Scale** needed to build capacity (Energy Advisors)
- **Low community-wide energy savings**
- **May not be representative** of future mandatory program
- **Short timeframe (of voluntary pilots)** may not demonstrate conversion rate
**Mandatory programs: Opportunities**

**Opportunities**

- **Strong correlation between energy rating and sale price:** 2% to 6% increase in sale price for one letter improvement in EU

- **High rate of home improvements:** 12-37% homeowners conduct all or part of recommendations

- **Over time, provides an accurate inventory of building stock:** Benefits multiple stakeholders

![Home Energy Labeling & Disclosure Renovation Rates](chart)
Mandatory programs: Challenges

Challenges

- **Poor program design** can lead to failure (or fall short of expectations)
- **Loss of trust** in the process, energy advisors and ratings can derail a program.
- **Privacy concerns** can limit what information is shared reducing impact
- **Costs/time to get a home energy assessment** needs to be addressed to alleviate homeowner and REALTOR® concerns

Germany
How to get the most out of either approach
How to get the most out of voluntary programs

PROVIDE OPPORTUNITY TO RAISE AWARENESS
• Educate industry/community on the value of, and need for, home energy labeling & disclosure
• Improve understanding of impacts on industry and how to mitigate

BUILD CAPACITY AND SUPPORT
• Develop, test and evaluate functional labeling & disclosure systems/processes, QA/QC, customer support etc.
• Help the market and homeowners transition

PROOF OF CONCEPT
• Set appropriate targets to reflect that Voluntary will not deliver on market transformation objectives
• Evaluate the appropriate metrics to show that Voluntary has built needed capacity to move ahead with Mandatory programs

Edmonton currently offers a $400 rebate on evaluations.
Moving from voluntary to mandatory: Example

**EXAMPLE:** GERMANY

**START DATE**
- 1997 (voluntary)
- 2007 (mandatory)

**BENEFITS**
- Voluntary was useful to socialize home energy labeling & disclosure prior to mandatory requirement

**CHALLENGES:**
- Dual system creates confusion
- Privacy concerns limits access to data
- Non-functional enforcement and quality assurance (although recent efforts have been made to improve this)
- Limited public awareness and acceptance
How to get the most out of mandatory programs

SET COMMITMENT AND GOAL
- Clearly outline the long-term market transformation goals
- Engage in extensive stakeholder consultation

ENCOURAGE AND ENFORCE COMPLIANCE
- Choose and adapt the rating system
- Create tools, offer training, assistance & support before enforcing fines

INCREASE HOME ENERGY IMPROVEMENTS
- Include upgrade recommendations and estimated cost/benefit
- Link to the home energy ecosystem
- Develop method of attributing GHG reductions to demonstrate impact

France’s compliance system has resulted in compliance rates of 85% and conversion rates of almost 40%

Denmark’s policies have given rise to industry-driven solutions to help homeowners on their renovation journey.
Questions?

Lauren McNutt
Consultant
(514) 504 9030 ext. 29
Lauren.mcнутt@dunsky.com