

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

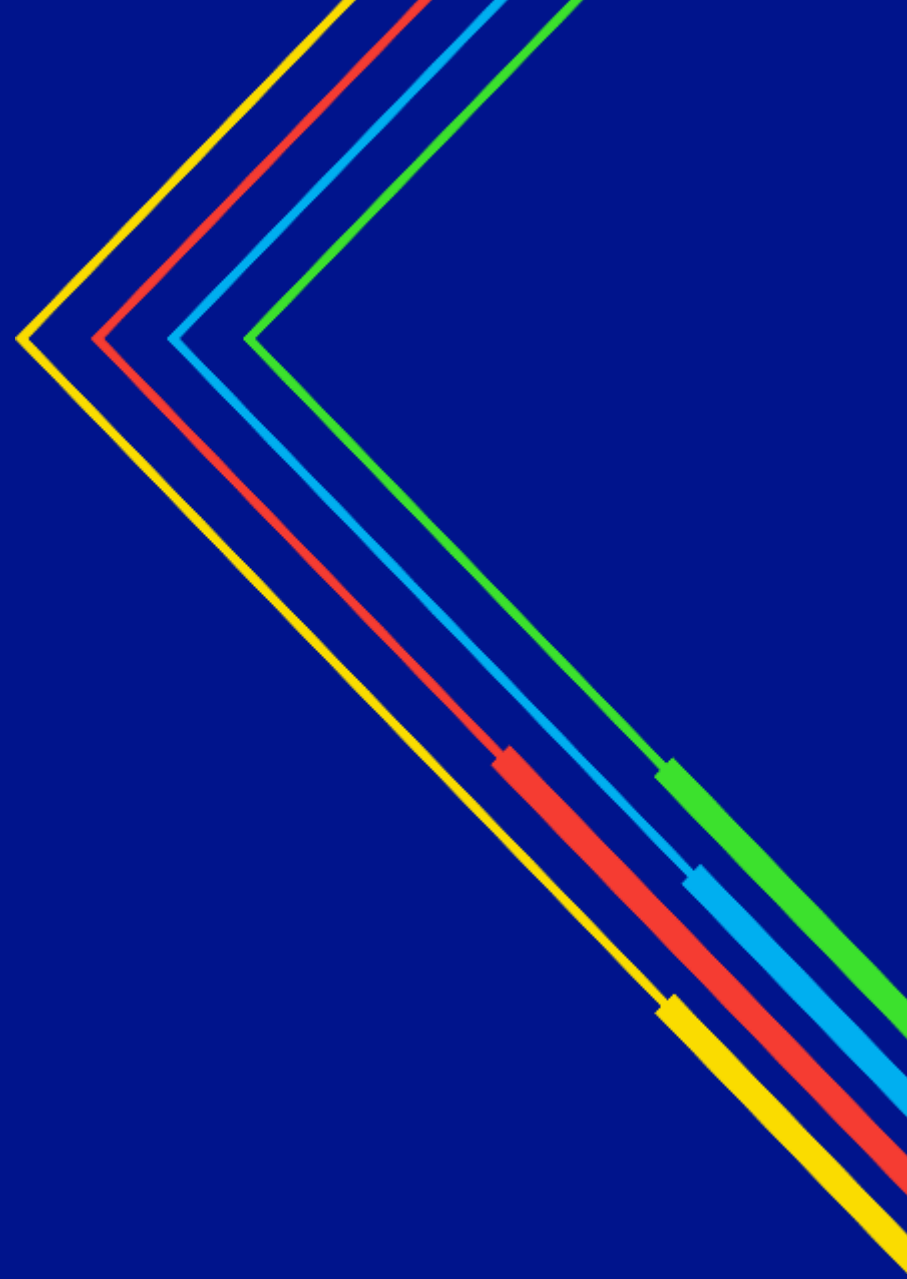
Lisa Timmerman, City of Portland, Oregon

Lauren McNutt, Dunskey Energy Consulting

R.I. DOE HES Pilot

Kevin Rose
12/7/18

national**grid**



Agenda

01 Drivers

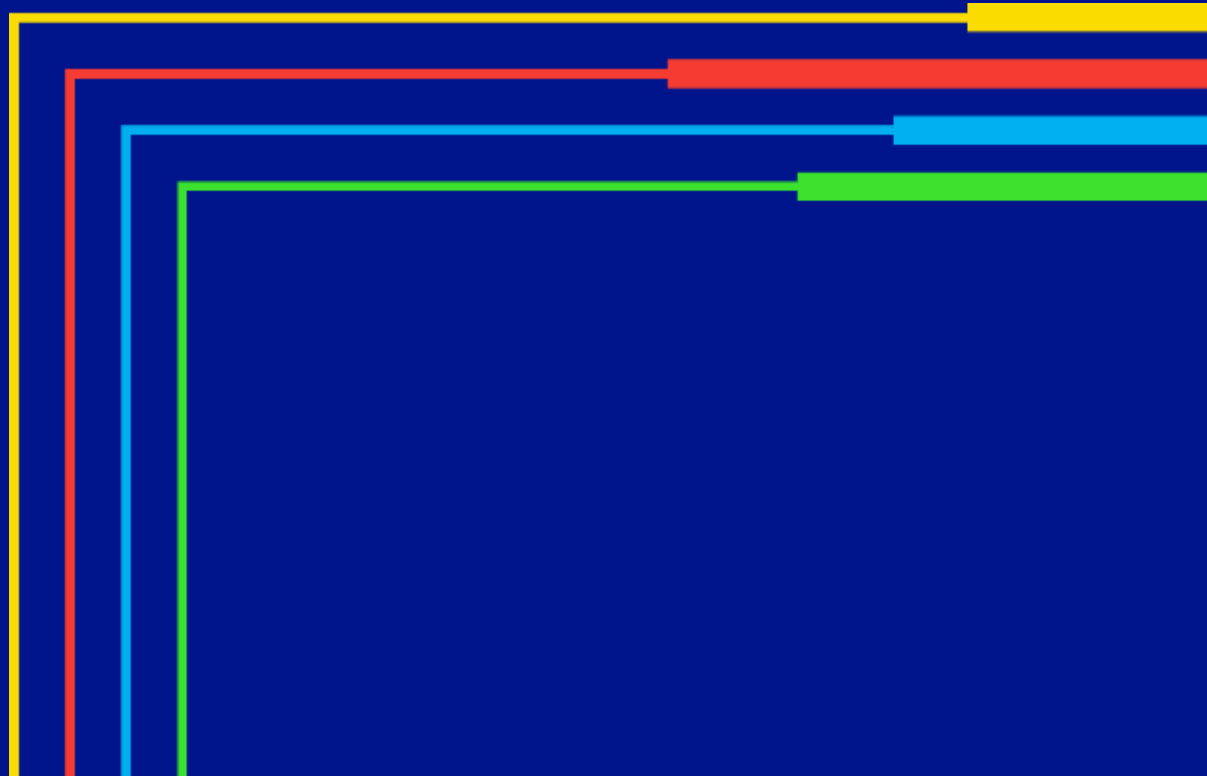
02 Pilot Basics

03 Lessons (so far)

01

Drivers

national**grid**



Drivers

Short term

Increased retrofit conversion rate?

Mid term

More “repeat customers”?

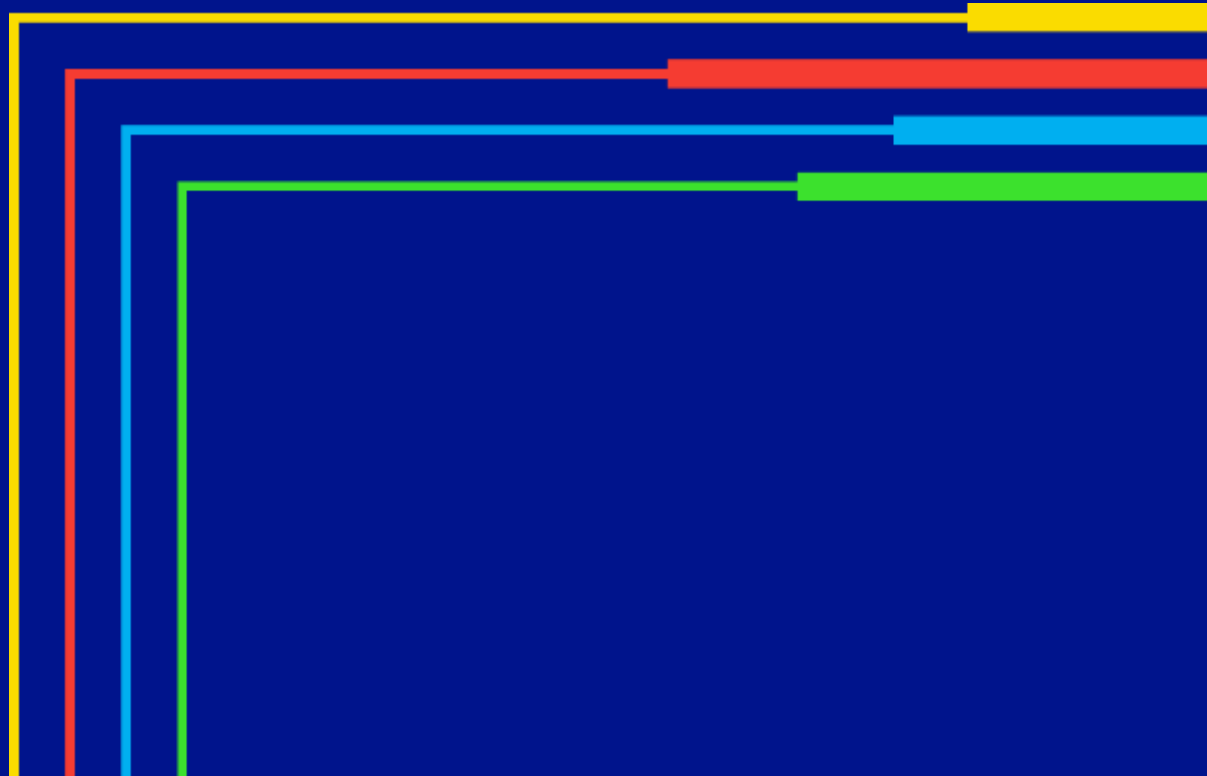
Long term

Market demand for efficiency
Data pipeline

02

Pilot Basics

national**grid**



Pilot Basics

150 Home Energy Scores

- Launched earlier this year
- Incorporated into our HPwES program
- Customers can opt-in to sharing

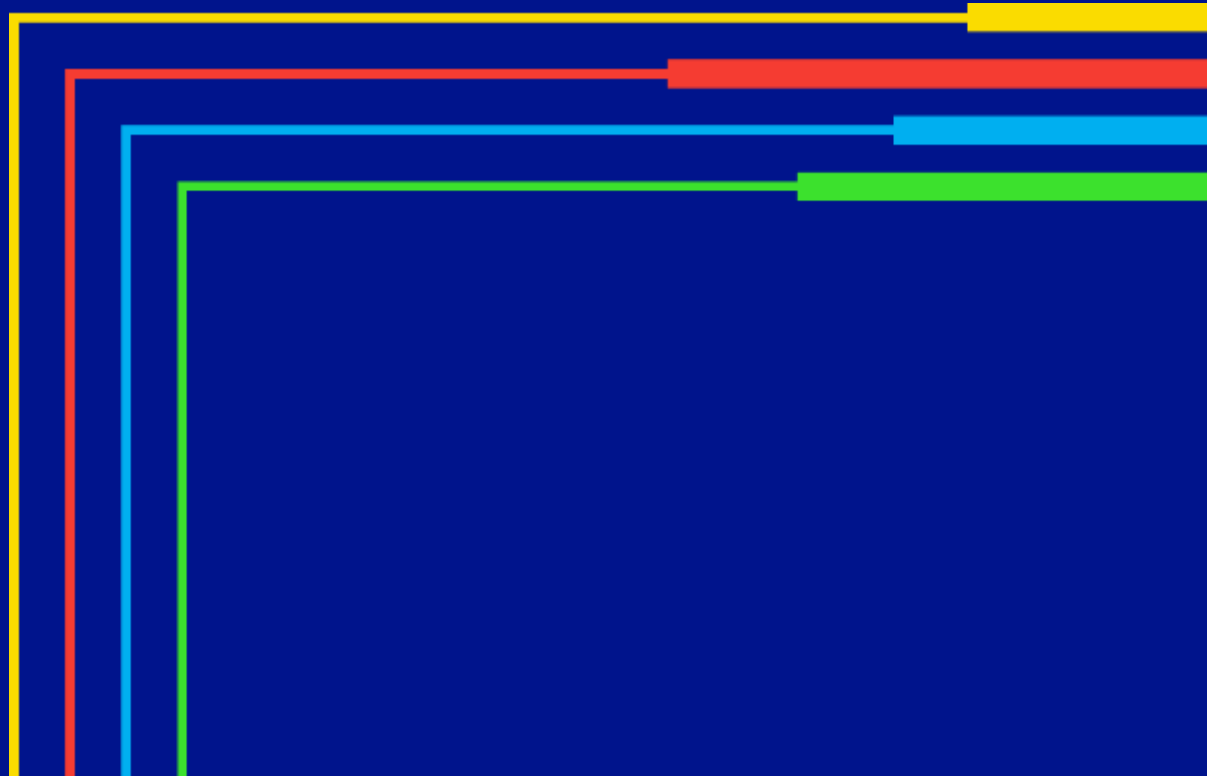


ETA for results: late 2019

03

Lessons
(so far)

national**grid**



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



Connecticut Department of Energy and Environmental Protection

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



Empowering you to make
smart energy choices

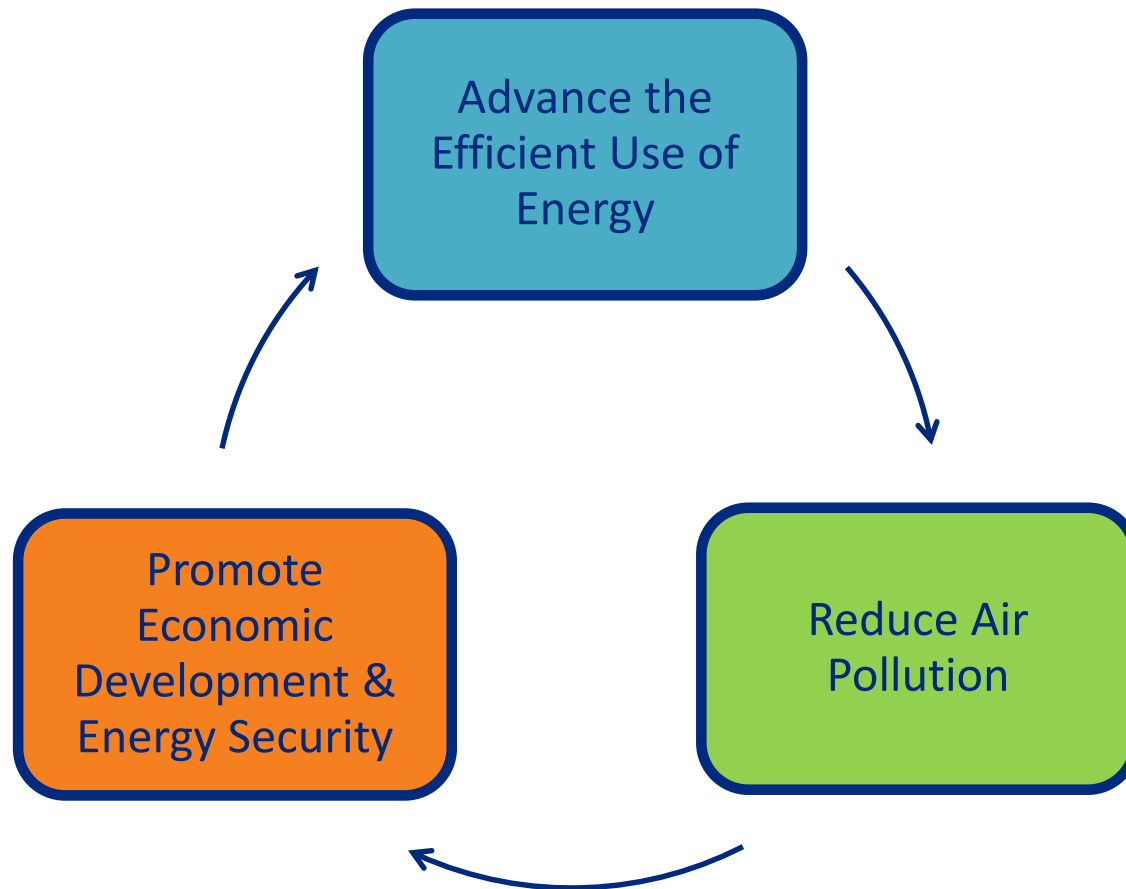
EVERSOURCE



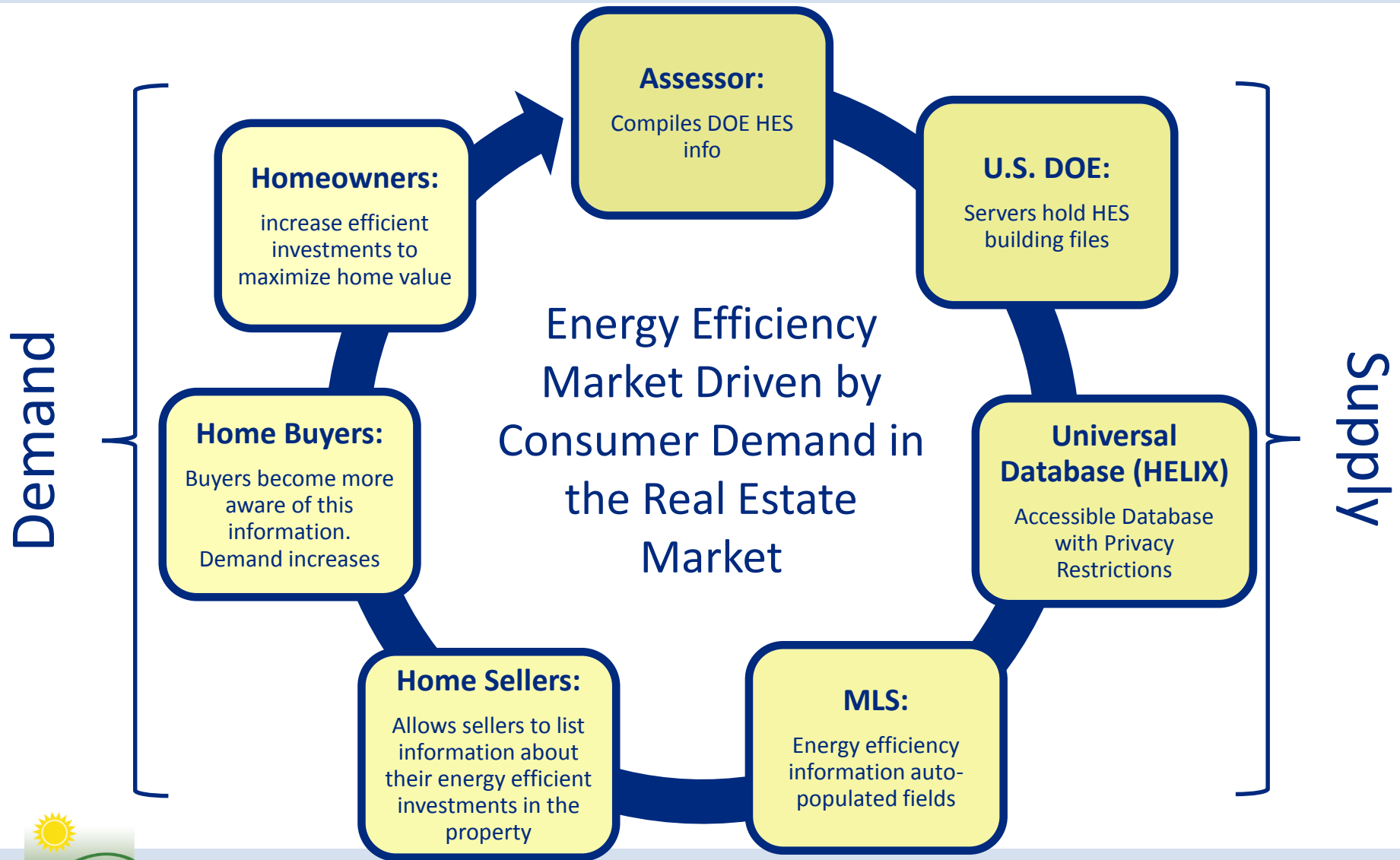
Connecticut Department of Energy and Environmental Protection

Conservation & Load Management

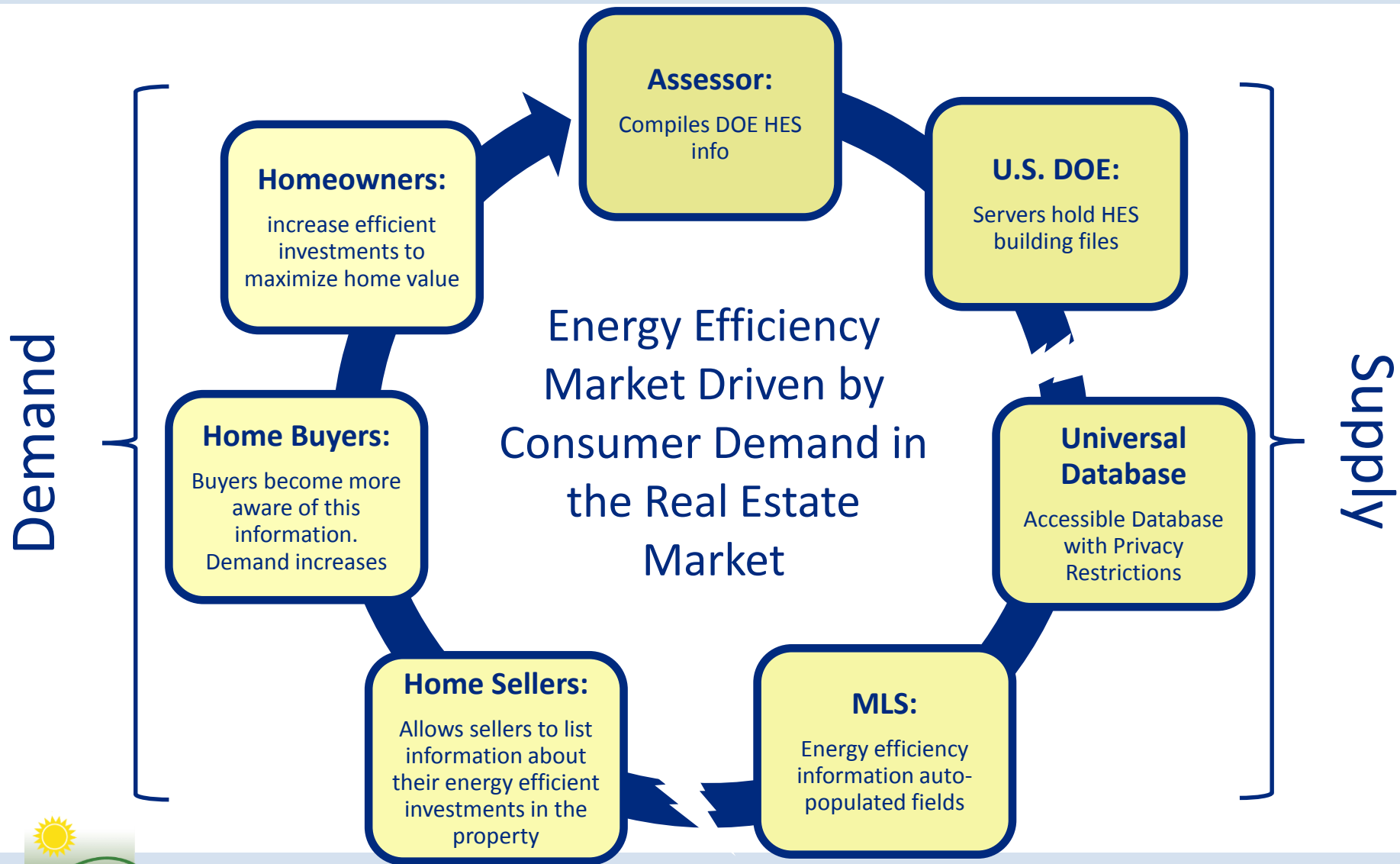
Mission: Public Act 98-28



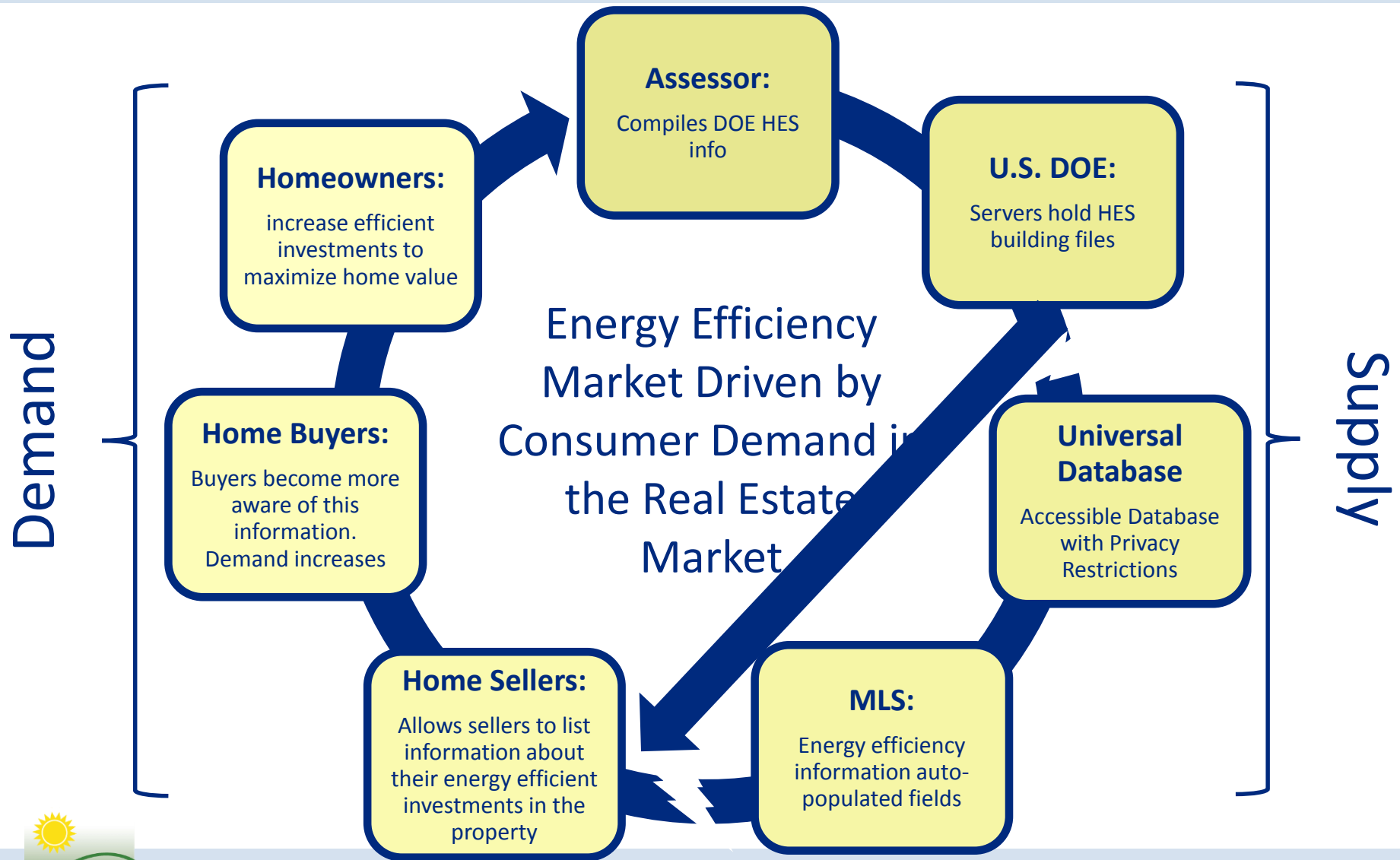
Future State Vision



Future State Vision



Future State Vision



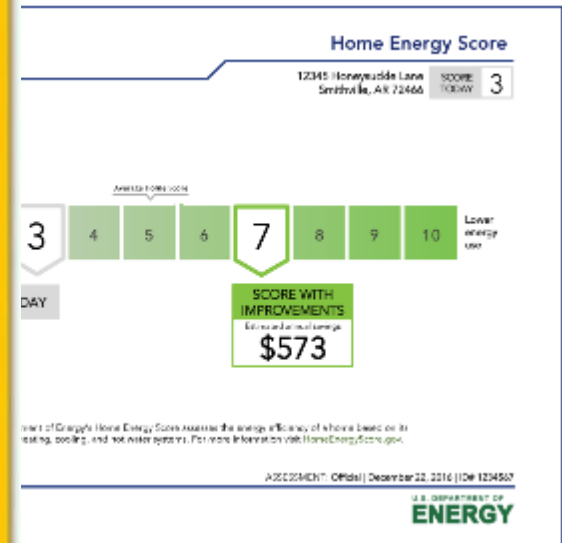
Engagement with the Real Estate Industry/HELIX

- 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 the first state to implement in 2014
- Home Energy Score is required for all HES assessments of homes and all HVAC technicians are required to be HES Assessors
- Beginning of 2015, the program was implemented in Spanish 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



Connecticut Department of Energy and Environmental Protection

Key to Success: Consistent Messaging

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.



Connecticut Department of Energy and Environmental Protection

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 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)

Key to Success: Technical Knowledge

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.



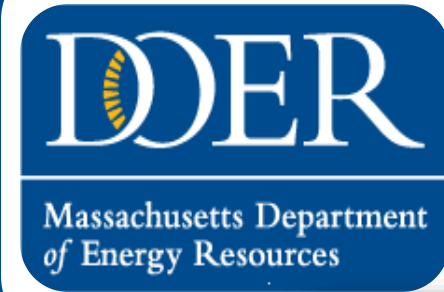
Next Steps: Begin Data Sharing with HELIX

- 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

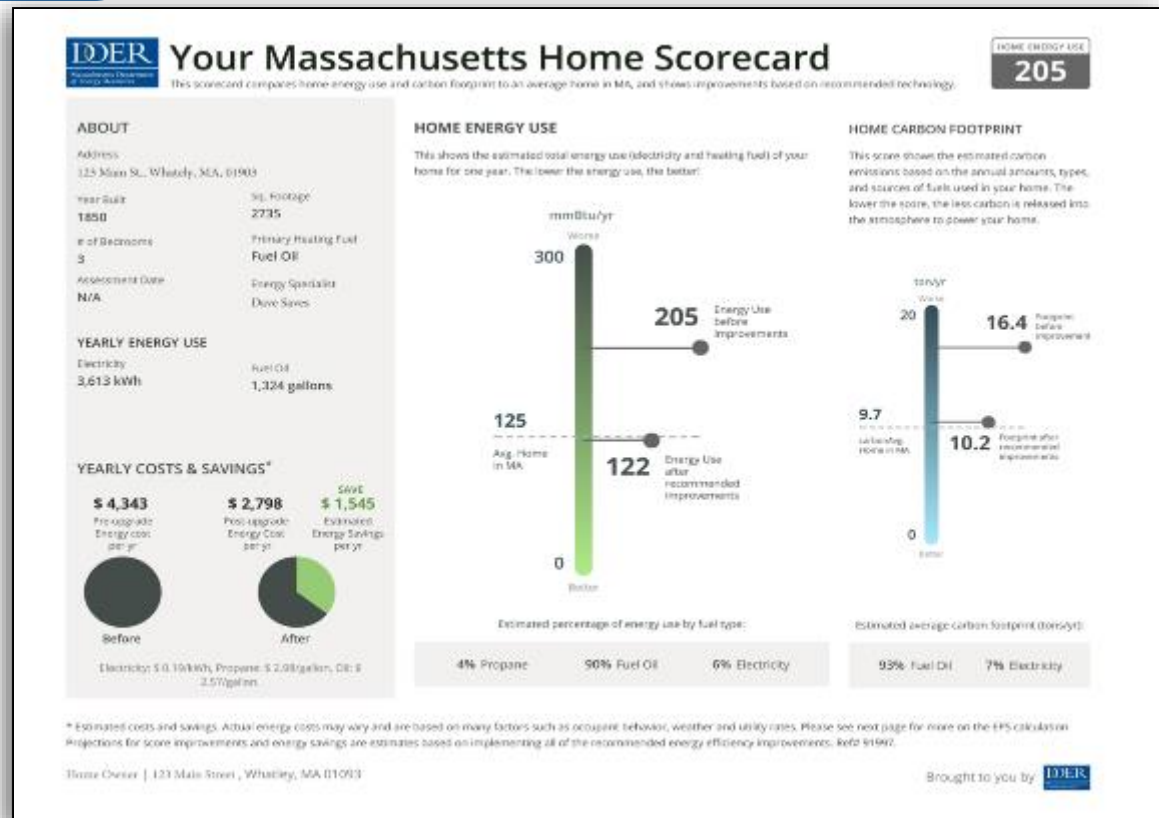




Connecticut Department of Energy and Environmental Protection



Home Energy labeling: lessons learned in MA



Ian Finlayson, Deputy Director, Energy Efficiency Division

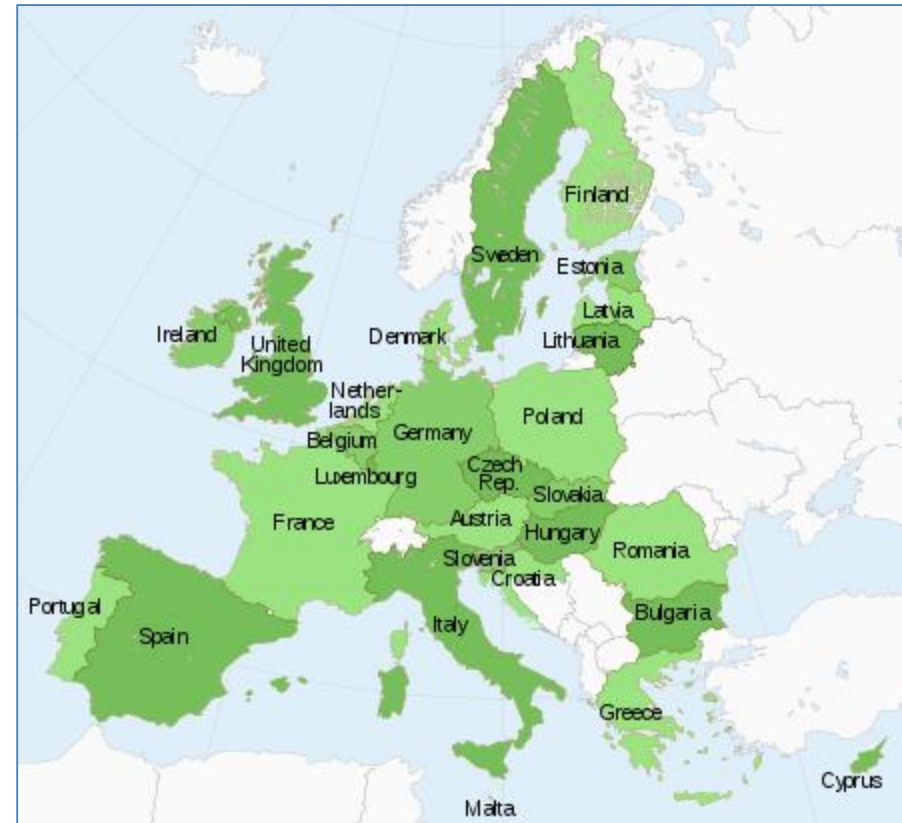
MA Dept. of Energy Resources

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

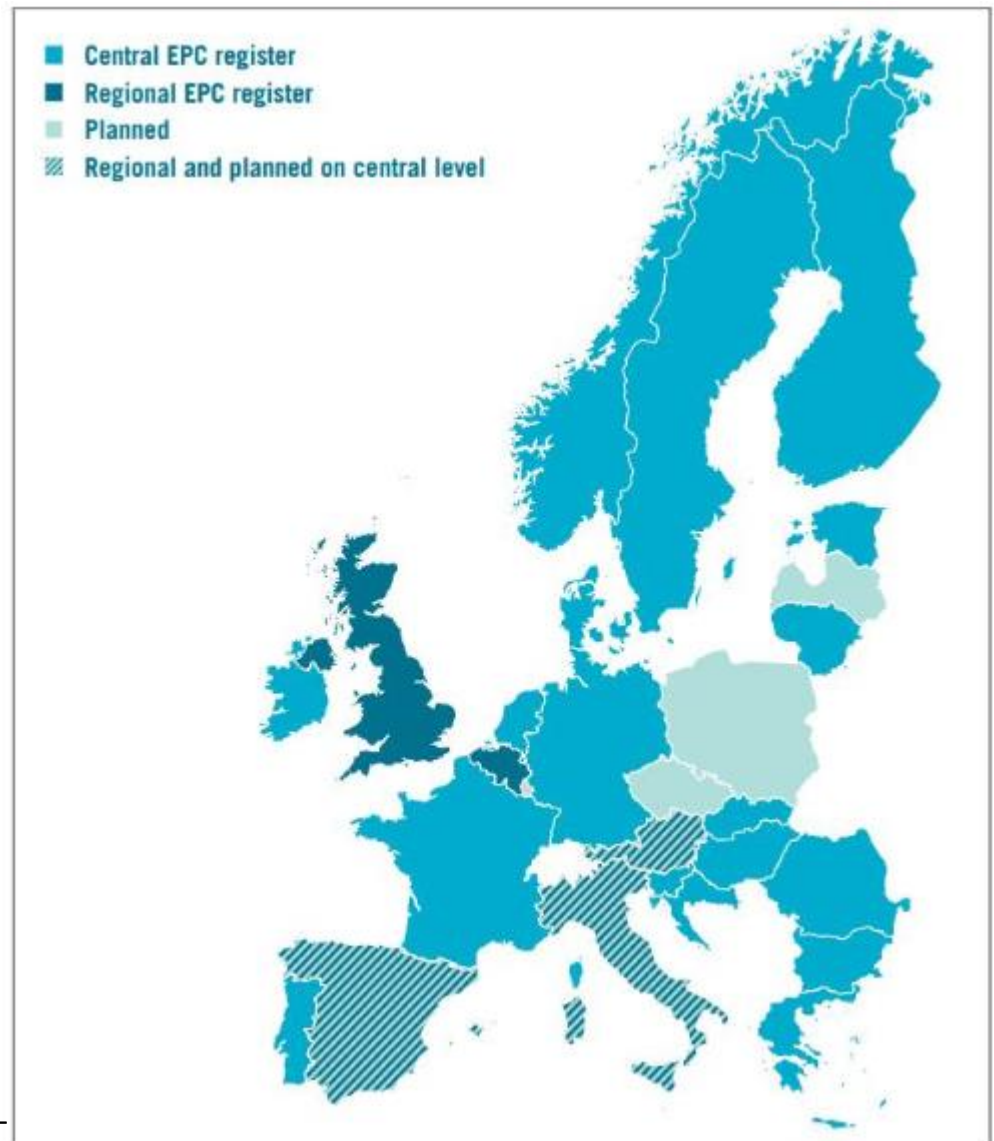
- Leverage behavioral research
 - Have a comparison to peers
 - Show potential for improvement
 - Units don't matter (smiley faces, stars, letters, numbers)
- Plan for the long-term
 - Have a score(s) that is durable/replicable over decades
 - i.e. not \$\$ as the primary metric
 - Plan for an improving 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)



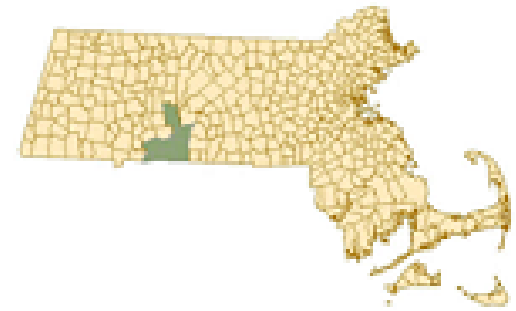
Lessons learned closer to home

- 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



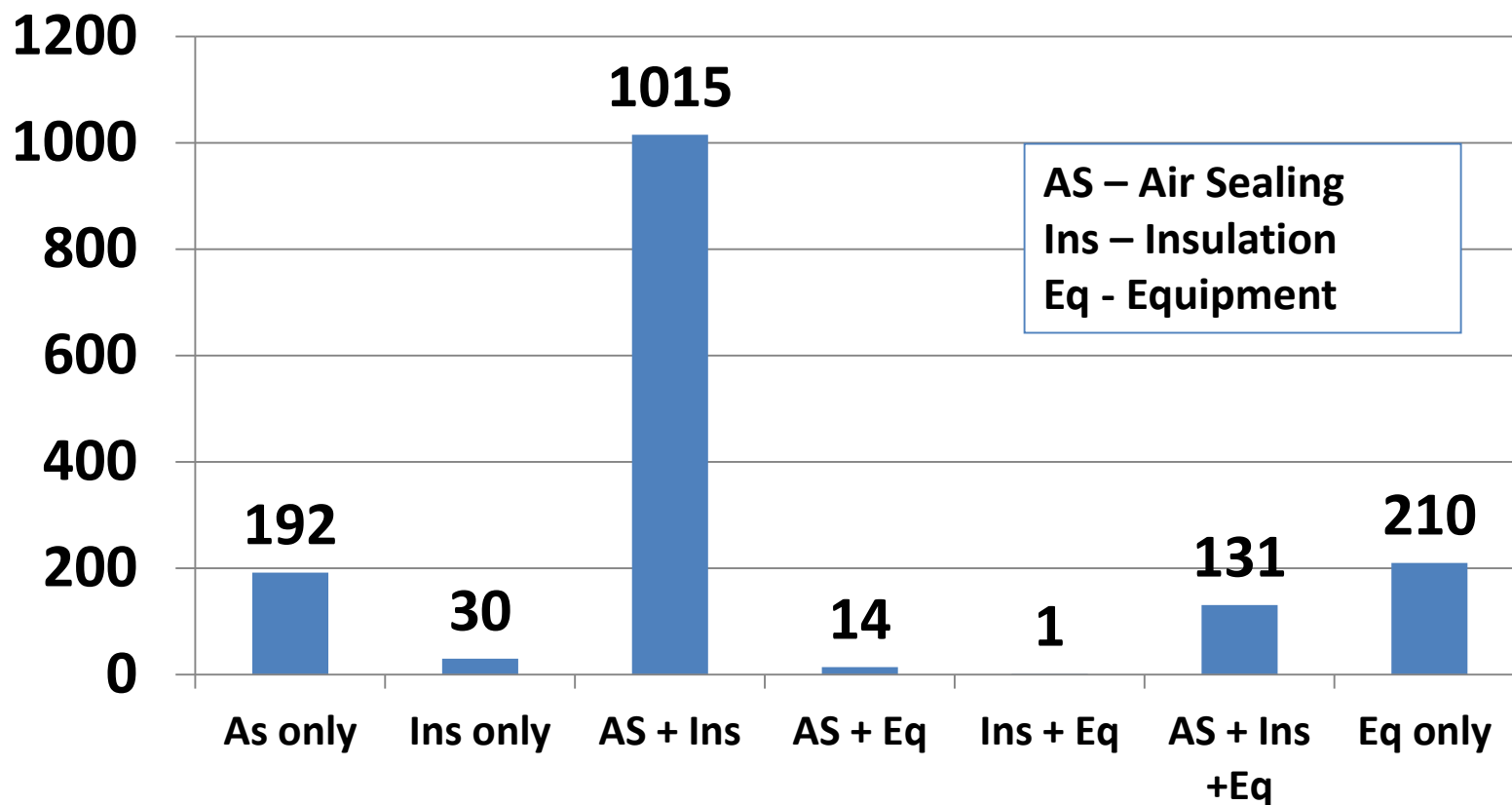
Springfield Area Pilot

\$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)

Home MPG Results



- 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

ENERGY PERFORMANCE SCORE



Address: 1107 NE Golf Ct Rd, Dracut, MA 01826

Reference Number: 410000091

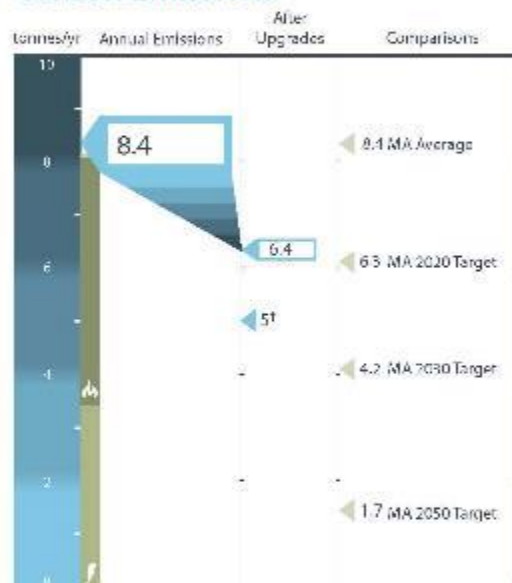
Energy Use: 126 MMBtu/yr \$1,888
 Electric: 7,131 kWh/yr \$570
 Natural Gas: 1,014 therms/yr \$1318

Carbon Emissions: 8.4 tonnes/yr
 Electric: 3.4 tonnes/yr
 Natural Gas: 5 tonnes/yr

Energy Use



Carbon Emissions



*With energy from renewable sources

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 (MMBtus/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).

Type: Single Family
 Bedrooms: 4
 Year Built: 1962
 Audit Date: 10/29/08
 Auditor: Earth Advantage Institute
 Denver, MA
 Ryan



Visit www.Energy-Performance-Score.com for tips to maximize energy savings



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

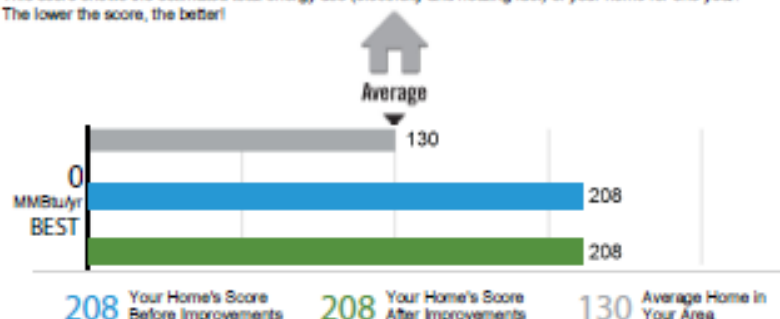
123 Test Street
Testville, NY 14850
Ref #: GSN637

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



THE BOTTOM LINE

PER YEAR

\$0

ESTIMATED ENERGY SAVINGS

Based on implementing all of the recommended energy efficiency improvements

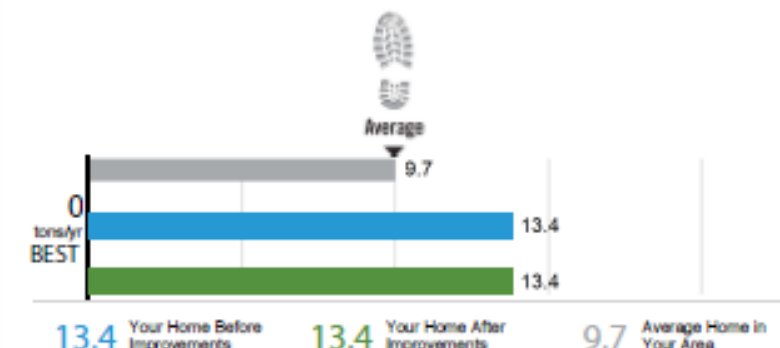
PER YEAR

\$9989

CURRENT ESTIMATED ENERGY COSTS

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.



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 reverse for more on the EPS calculation. Projections for ratings and energy savings are estimates based on implementing all of the recommended energy efficiency improvements.



Western Massachusetts Electric

A Northeast Utilities Company



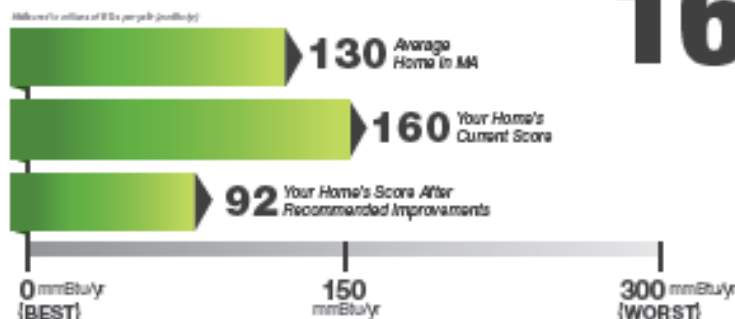


YOUR HOME'S ENERGY PERFORMANCE SCORE

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!



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

160

PREPARED FOR

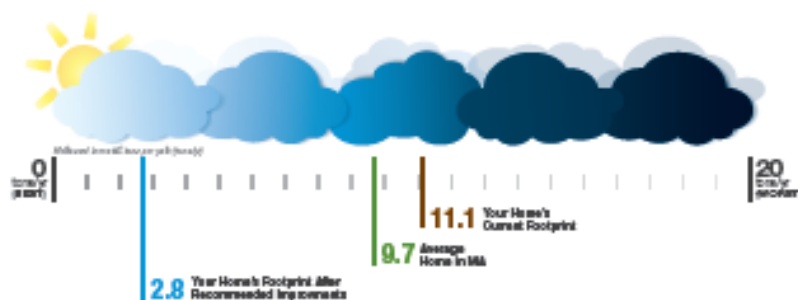
<Customer Name>
<Customer Address>
<City>, <State> <Zip>
Ref #: <Site ID>

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

EPS Report Date: <XX/XX/XXXX>
Energy Specialist: <Energy Specialist Name>

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.



Estimated average carbon footprint (tons/yr): Electric <XX>, Natural Gas <XX>

11.1

DOLLARS & SENSE

Current Estimated Energy Costs **\$2000** Per Year



ESTIMATED ENERGY SAVINGS

\$1150 Per Year

Based on implementing all of the recommended energy efficient improvements

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., Whatley, MA, 01903

Year Built
1850

Sq. Footage
2735

of Bedrooms
3

Primary Heating Fuel
Fuel Oil

Assessment Date
N/A

Energy Specialist
Dave Saves

YEARLY ENERGY USE

Electricity
3,613 kWh

Fuel Oil
1,324 gallons

YEARLY COSTS & SAVINGS*

\$ 4,343

Pre-upgrade
Energy cost
per yr



Before

\$ 2,798

Post-upgrade
Energy Cost
per yr



After

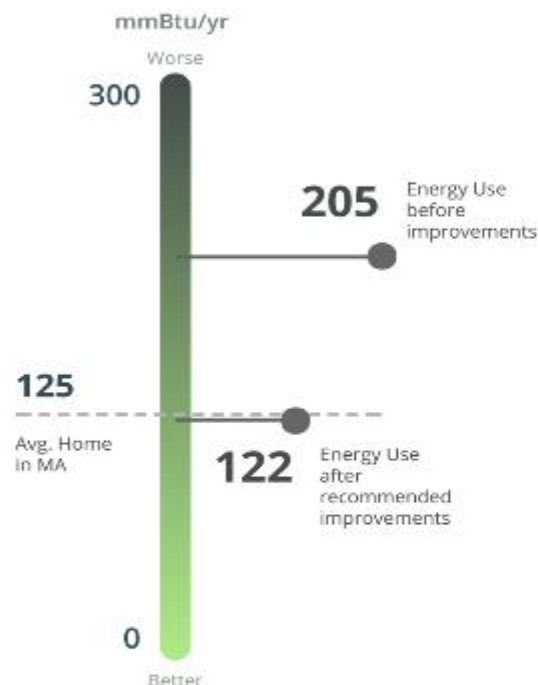
**SAVE
\$ 1,545**

Estimated
Energy Savings
per yr

Electricity: \$ 0.19/kWh, Propane: \$ 2.98/gallon, Oil: \$ 2.57/gallon.

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!



Estimated percentage of energy use by fuel type:

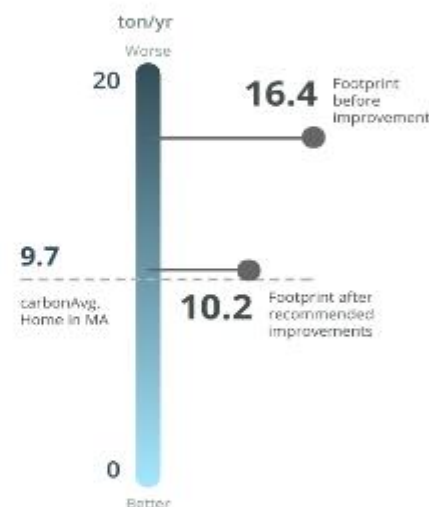
4% Propane

90% Fuel Oil

6% Electricity

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 average carbon footprint (tons/yr):

93% Fuel Oil

7% Electricity

* 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.

Home Owner | 123 Main Street, Whatley, MA 01093

Brought to you by 

Source: SnuggPro & DOER

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



Home MPG Pilot Examples – Large Home

Oil Home in Wilbraham, MA

Year Built: 1956

Sq Footage: 2,891ft²

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)

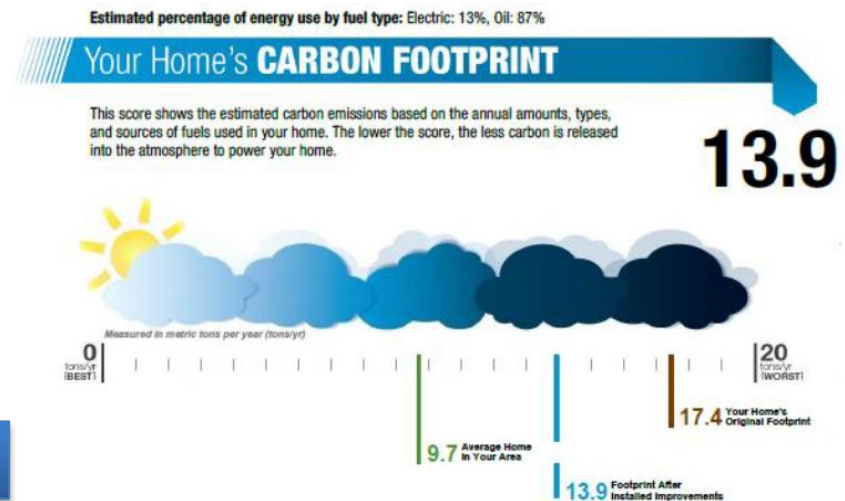
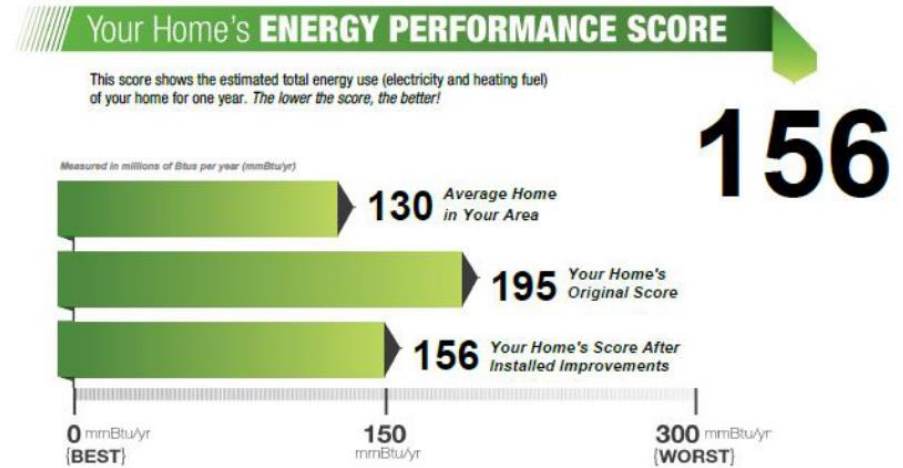
Homeowner cost:

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



U.S. DEPARTMENT OF
ENERGY

THIS HOME'S
SCORE **4**
OUT OF 10

THIS HOME'S ESTIMATED
ENERGY COSTS

\$1,507
PER YEAR



Home Energy Score



Official Assessment | ID# 193810

The Home Energy Score is a national rating system developed by the U.S. Department of Energy. The Score reflects the average energy efficiency of a home based upon 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: 6,153 kWh/yr. \$701
Natural Gas: 739 therms/yr. \$806
Other: _____ gal/yr \$0

TOTAL ENERGY COSTS PER YEAR \$1,507

How much
renewable
energy does
this home
generate?
_____ kWh/yr

THIS HOME'S CARBON FOOTPRINT:



What should my home's carbon footprint be? Between now and 2030, Portlanders should reduce carbon pollution per household to 3 metric tons per year to reach our climate goals.

- 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; \$1.09/therm for natural gas; \$2.58/gal for heating oil; \$2.21/gal for propane).
- Carbon footprint is based only on estimated home energy use. Carbon emissions are estimated based on utility and fuel-specific emissions factors provided by the OR Department of Energy.
- Reissuing 2-7 years after the assessment date requires a free reprint of the Report from www.greenbuildingregistry.com/portland to update energy and carbon information.
- This report meets Oregon's Home Energy Performance Score Standard and complies with Portland City Code Chapter 17.10B.

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.

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
Cathedral Ceiling/Roof	Roof insulated to R-11	Insulate cathedral ceiling/roof to R-30 or maximum possible
Duct insulation	Un-insulated	Insulate to R-8
Duct sealing	Un-sealed	Reduce leakage to a maximum of 10% of total airflow
Envelope/Air sealing	Not professionally air sealed	Professionally air seal
Heating equipment	Natural gas furnace 80% AFUE	Upgrade to ENERGY STAR
Water Heater	Standard natural gas tank	Upgrade to ENERGY STAR, minimum 0.67 EF (Energy Factor)
Air Conditioner	None	
Attic insulation	Ceiling insulated to R-30	
Basement wall insulation	None	
Floor insulation	Insulated to R-0	
Foundation wall insulation	None	
Skylights	None	
Wall insulation	Insulated to R-3	
Windows	Double-pane, low-E glass	
Solar PV	None	

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



RMLS Auto-population



[Click here to view more photos](#)

Price: 637,000
Beds: 2
Baths: 1
County: Multnomah
Style: COLONIL / DTCHCOL
Year Built: 1924 / REMOD
Status: ACT
SQFT: 1982

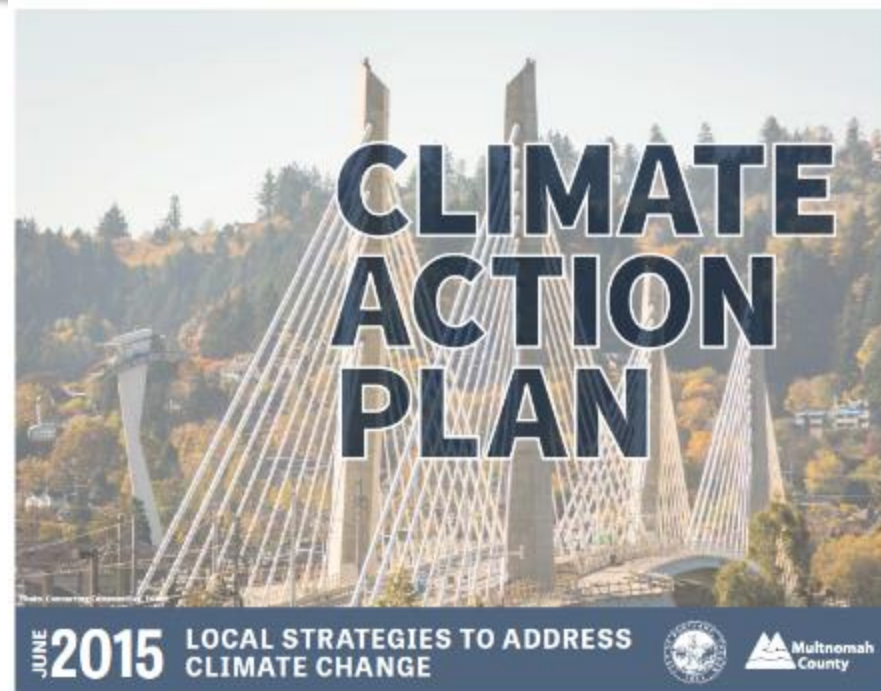
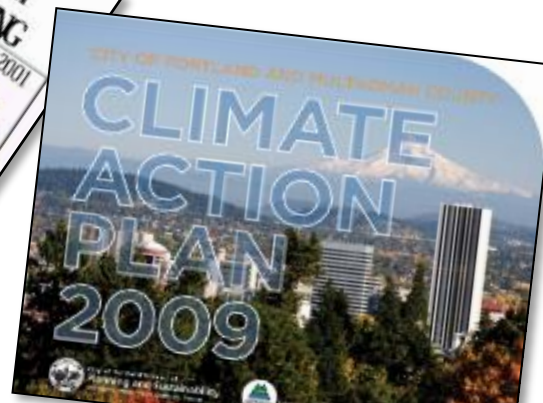
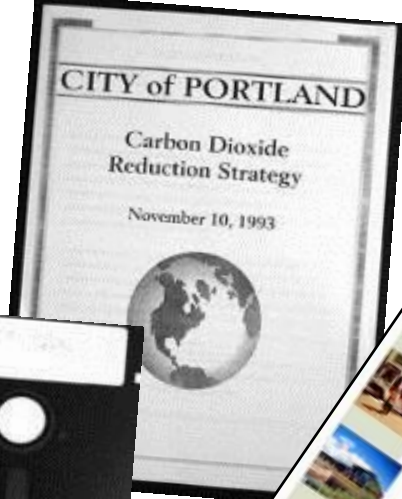
ML#: 18106125
Area: Portland Northeast
Elem School: Alameda
Middle School: Beaumont
High School: Grant
Short Sale Y/N: NO
Bank Owned/REO Y/N: NO
Waterfront:
Body of Water:
Tax/Year: \$6,640.22

Prop Type: DETACHD
Nbrhd/Bldg: ALAMEDA
Levels: 3
Garage: 0
Roof:
Exterior Desc: ALUM
MstBdrm Level: U
Fireplaces:
Bsmt/Fnd: FULLBAS
View:

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:

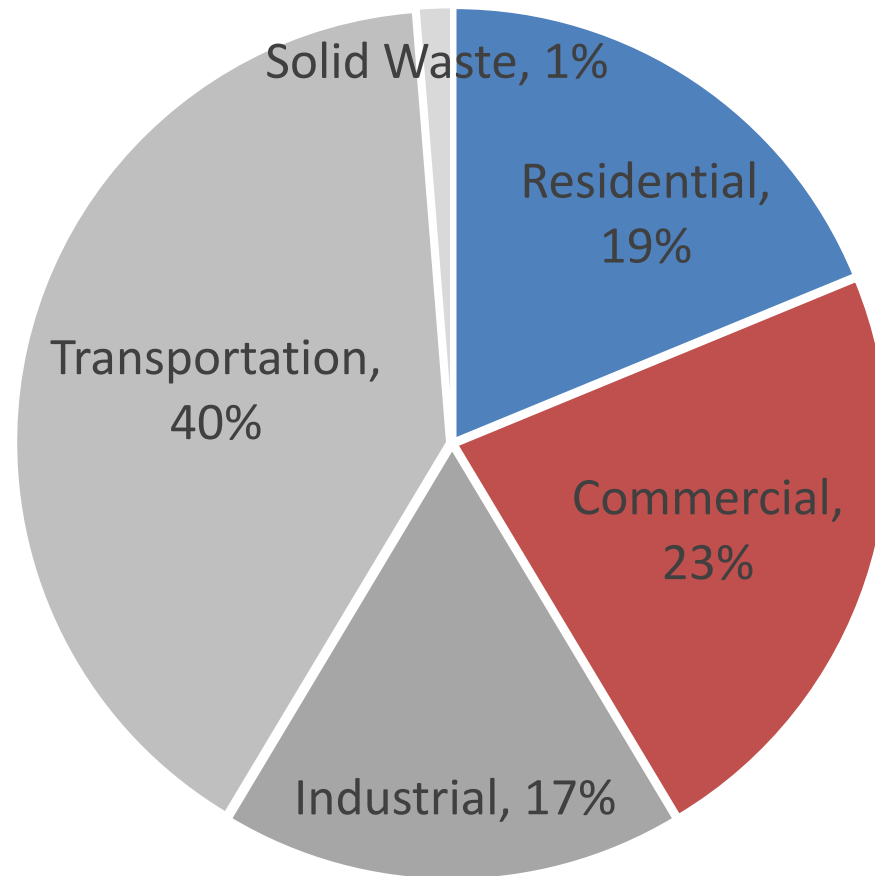
REMARKS: [Video/Virtual Tour #1](#) [Video/Virtual Tour #2](#)

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/OR10064898-20180719>

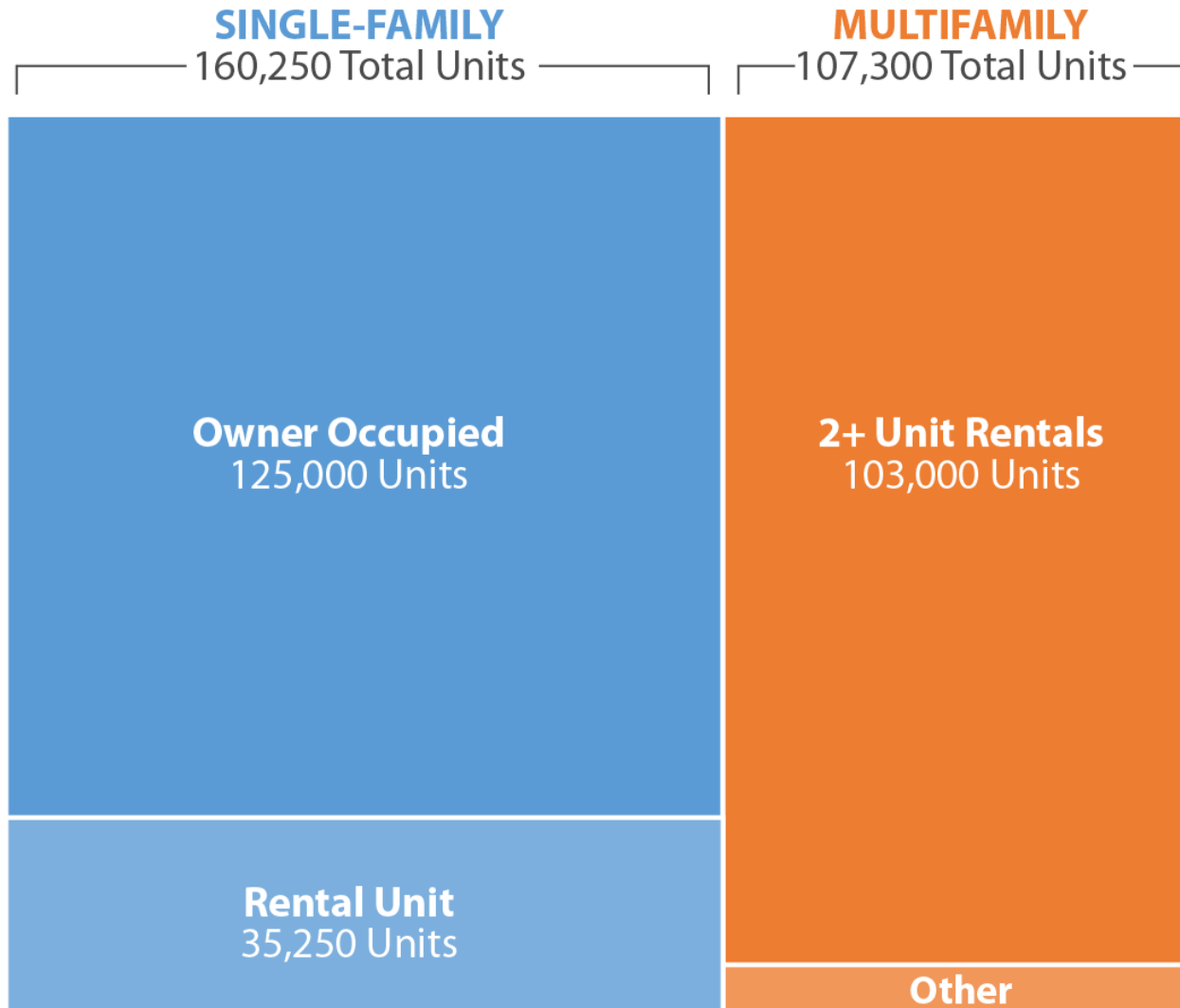


Carbon Emissions by Sector

(for Multnomah County, 2014)



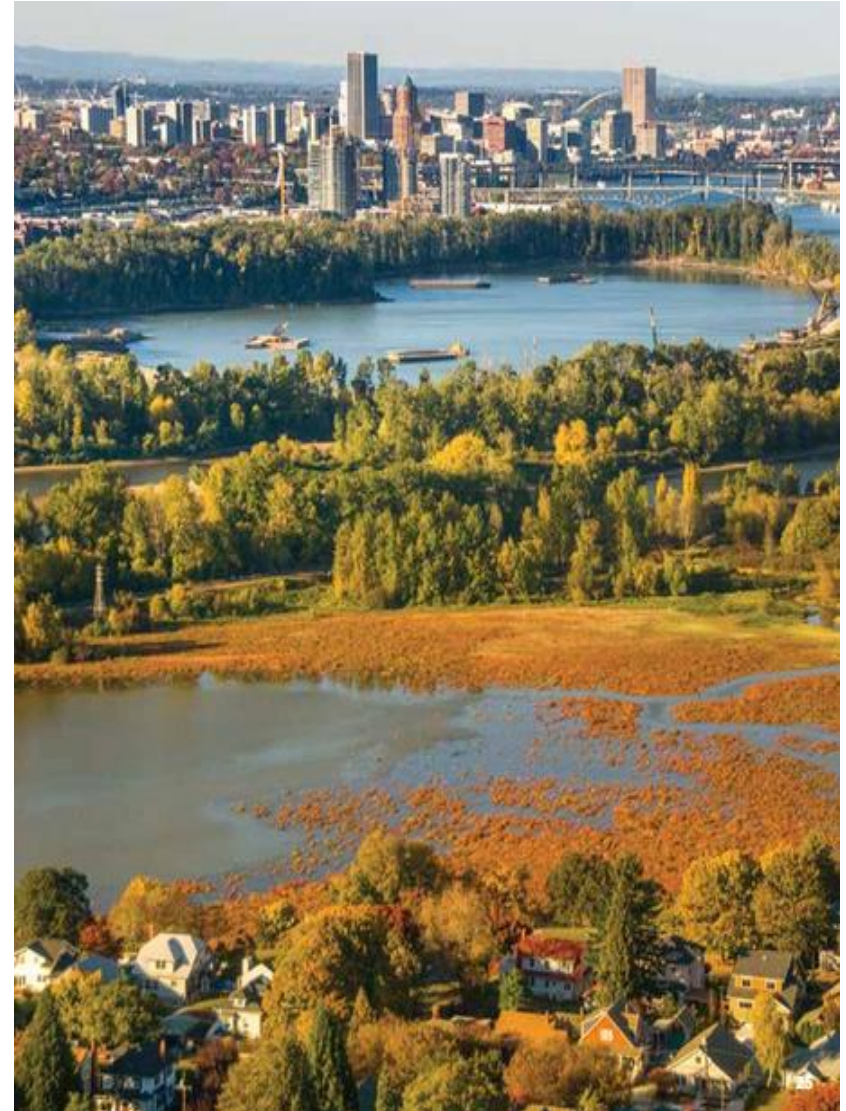
Portland Housing Units



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



Stakeholder Engagement

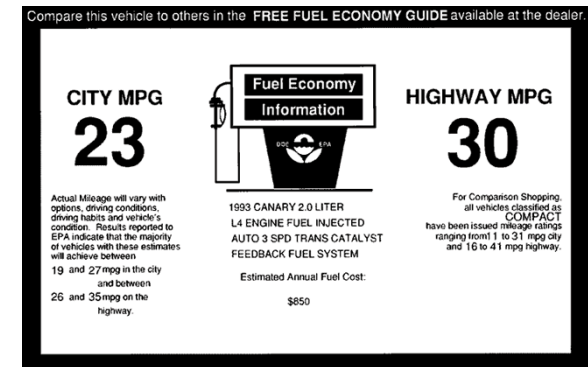
- Professionally run consumer focus groups
- Facilitated discussions with real estate and energy efficiency industry
- Equity stakeholder discussion with CBOs representing low income, tenants and communities of color
- Individual meetings with realtor association

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!

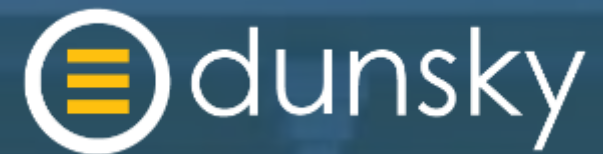
Program Website:

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

Photo: [Home for Sale Sign](#) by Mark Moz, Creative Commons

EXPERTISE



EFFICIENCY



RENEWABLES



MOBILITY

SERVICES



ASSESS
opportunities



DESIGN
strategies



EVALUATE
performance

CLIENTS



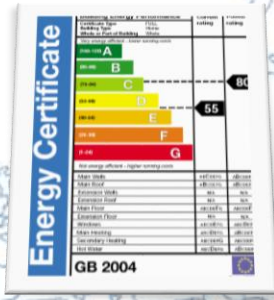
* selection of clients

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

European Mandatory Programs

EU 28 National Mandatory Programs



AU 2 State Programs



International analysis of experience worldwide

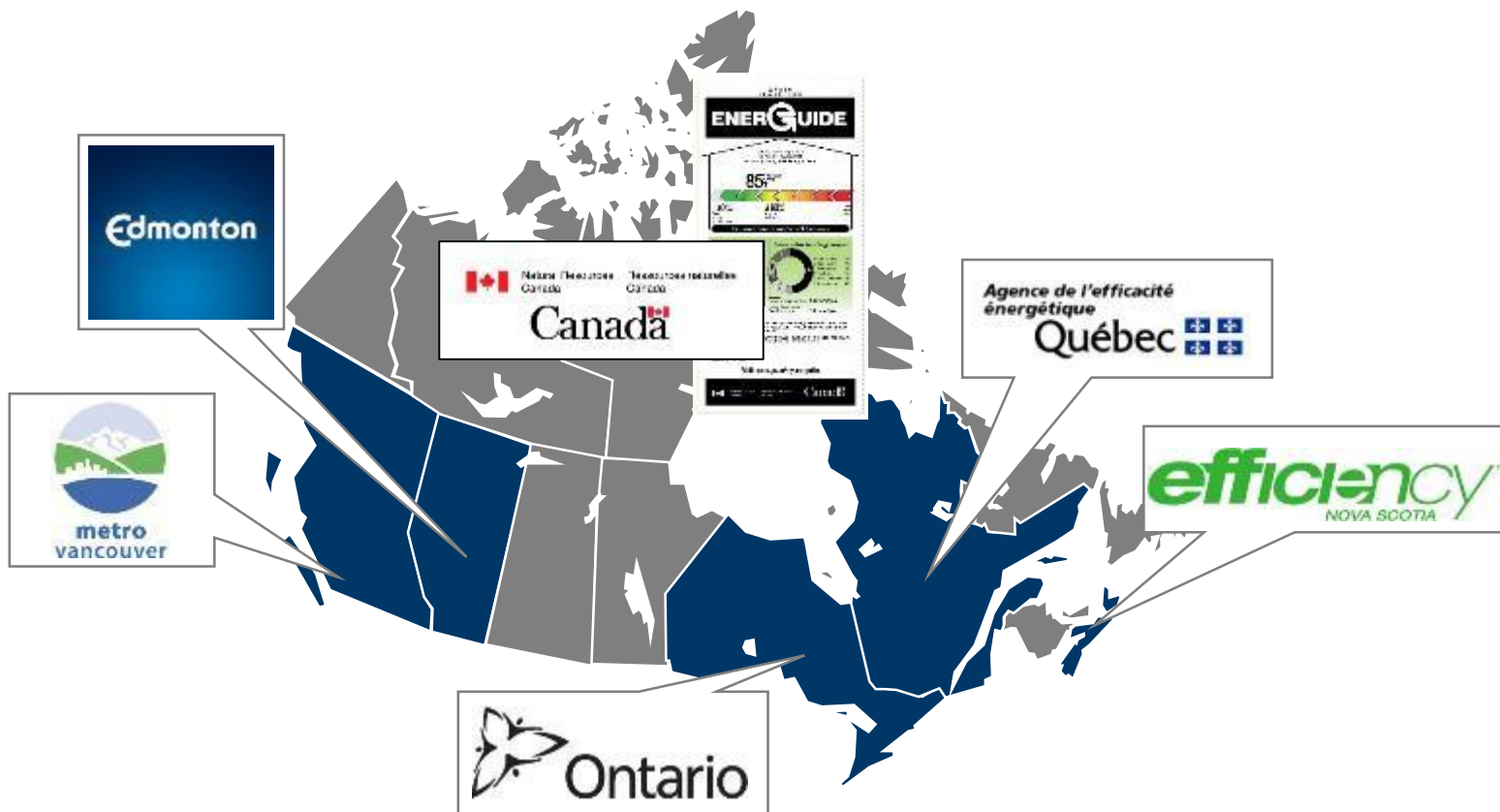
- **EU (8 national programs):**

- Denmark
- France
- **Germany**
- Hungary
- Ireland
- Portugal
- Sweden
- UK

- **Australia (2 state programs):**

- ACT
- Queensland

Canadian Voluntary Programs



Opportunities & limitations with voluntary & mandatory programs

HOME
FOR
SALE

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



Limitations

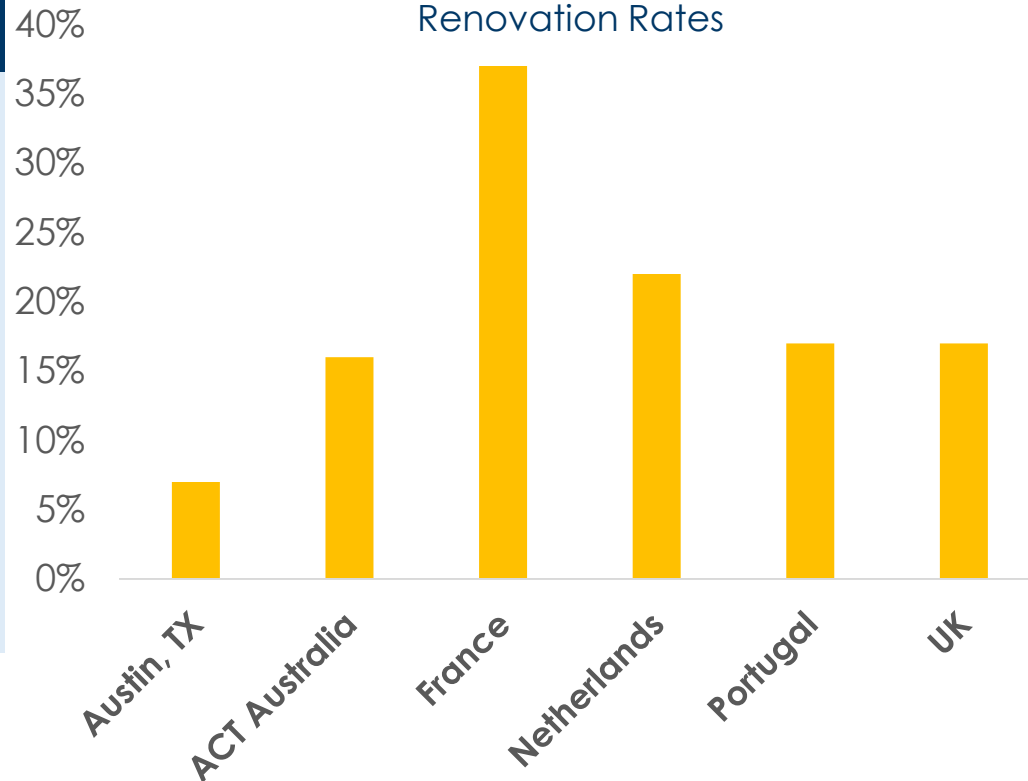
- **Low participation:** Relies heavily on industry to promote
- **Scale** needed to build capacity (Energy Advisors)
- **Low community-wide energy savings**
- **May not be representative** of future mandatory program
- **Short timeframe (of voluntary pilots)** may not demonstrate conversion rate



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



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

HOME
FOR
SALE

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

Edmonton currently offers a \$400 rebate on evaluations.

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

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.mcnutt@dunsky.com

