

COMMONWEALTH OF MASSACHUSETTS

Deval L. Patrick, Governor

Maeve Vallely Bartlett, Secretary

Mark Sylvia, Commissioner



*DOER Green Communities
Webinar*

June 18, 2014

Residential Energy Rating Initiative

Walker Larsen

Ben Pignatelli

Alissa Whiteman

Green Communities Division

Serves as the hub for all Massachusetts cities and towns on energy matters



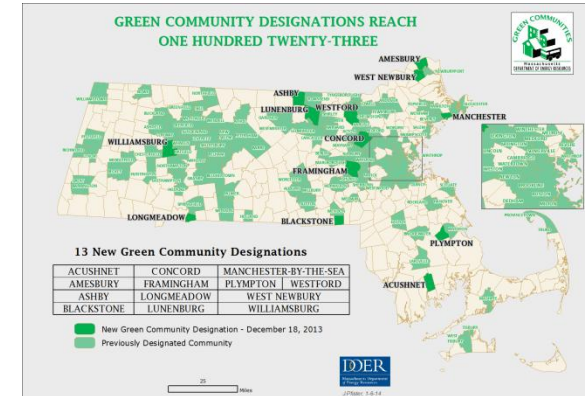
Helping Massachusetts Municipalities Create A Cleaner Energy Future



Green Communities Division

Programs & Resources for Municipalities

- Green Communities Designation and Grant Program
- **MassEnergyInsight** energy tracking tool
● ● ● ● ● POWERING EFFICIENCY
- Municipal Energy Efficiency Program
- Energy Management Services Technical Assistance (EMS)
- Mass Municipal Energy Group (MMEG)
- Website filled with tools & resources - www.mass.gov/doer
- Email updates via listserv – Sign up by sending an email to: join-ene-greencommunities@listserv.state.ma.us



Outreach - Regional Coordinators

- Regional Coordinators act as direct liaisons with cities and towns on energy efficiency and renewable energy activities
- Located at each of the DEP Regional Offices:



SERO – LAKEVILLE: Seth Pickering
Seth.Pickering@state.ma.us

NERO – WILMINGTON: Joanne Bissetta
Joanne.Bissetta@state.ma.us



CERO – WORCESTER: Kelly Brown
Kelly.Brown@state.ma.us

WERO – SPRINGFIELD: Jim Barry
Jim.Barry@state.ma.us



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Recording & Presentation

- The webinar is being recorded and will be available on our website in approximately 48 hours at:
www.mass.gov/energy/greencommunities
- The slide presentation will also be posted at:
www.mass.gov/energy/greencommunities
- Website and contact information is listed at end of presentation



Helping Massachusetts Municipalities Create A Cleaner Energy Future



Background

- DOE-funded (\$2.6 million rec'd October 2010)
- Implemented April 2012 through March 2014
- 8 MA municipalities
 - Belchertown, East Longmeadow, Hampden, Longmeadow, Monson, Palmer, Springfield, and Wilbraham
- “Extras” into Home Energy Services Program



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Home MPG Partners

- Utilities:
 - National Grid
 - Columbia Gas of MA
 - Western Massachusetts Electric Company
- Program implementers:
 - Conservation Services Group
 - Honeywell Home Energy Solutions
- Outreach, Marketing, Technical Assistance:
 - Pioneer Valley Planning Commission
 - Center for Eco Technology
- Thermal imaging analysis: Sagewell



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Home MPG “Extras”

- Energy Performance Scorecard before & after efficiency improvements
- Thermal imaging analysis
- Local outreach & marketing
- Bonus insulation incentives & equipment rebates
- Technical assistance service for customers considering equipment upgrades
- Real estate broker & appraiser trainings



Why building energy rating ?

Informing
Consumers

Product
Differentiation

Motivating
Investment

Sustainability Facts		
Area: 2800 ft ²		
Annual Energy Consumption (kBtu)	37,472*	
Percentage of national average 30%		
Annual CO2 Emissions (lbs)	10,292**	
Percentage of national average 41%		
Average Annual Water Use (gal/day)	86	
Percentage of regional average 24%		
Insulation (R-value)		
		% State Minimum
Wall Assembly	22.5	175%
Roof	38.0	126%
Floor	32.0	164%
Windows (R-value)		
Dual-pane, low-E glazing	3.6	240%
U-Value	0.28	

* Projected usage based on total energy usage for heating, cooling, domestic hot water, appliances and lighting
** Projected emissions based on both on site and remote energy conversion



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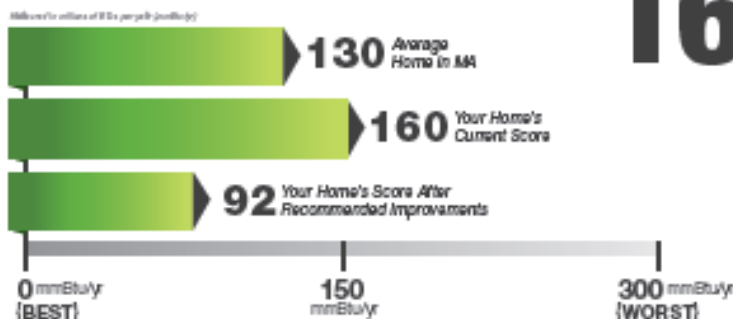


YOUR HOME'S ENERGY PERFORMANCE SCORE

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!



160

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

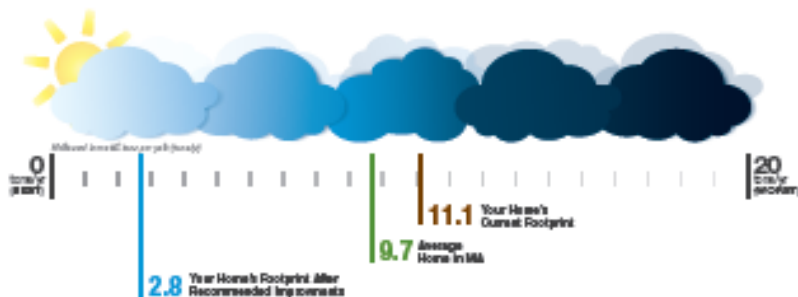
PREPARED FOR
<Customer Name>
<Customer Address>
<City>, <State> <Zip>
Ref #: <Site ID>

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.



11.1

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

DOLLARS & SENSE

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



ESTIMATED ENERGY SAVINGS

\$1150 Per Year

ure

Based on implementing all of the recommended energy efficient improvements



Scorecard Design Criteria

- Asset rating (not billing data)
- Energy performance: 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





YOUR HOME'S ENERGY PERFORMANCE SCORE

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PREPARED FOR

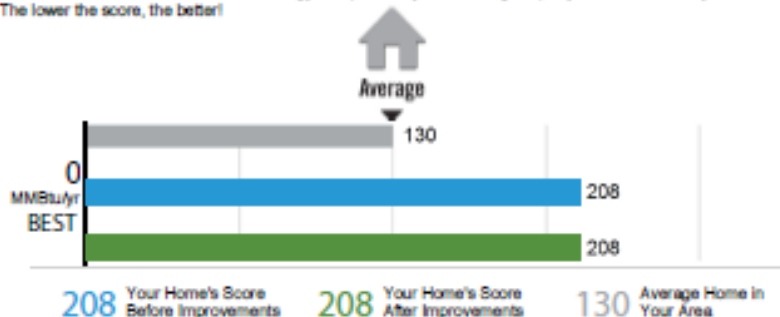
123 Test Street
Testville, NY 14850
Ref #: GSN637

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!



Estimated percentage of energy use by fuel type: Electric: 86%, Natural Gas: 14%.
Estimated percentage of energy use by end use: Heating 80%, Cooling 5%, Hot Water 25%,
Appliances and Lighting 10%

THE BOTTOM LINE

PER YEAR

\$0

ESTIMATED ENERGY SAVINGS

Based on implementing all of the recommended energy efficiency improvements

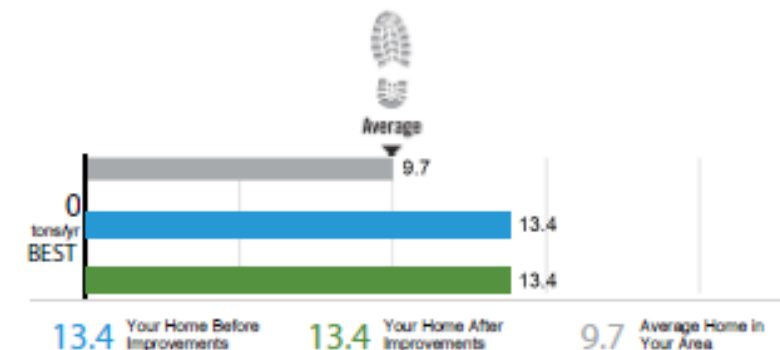
PER YEAR

\$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



Energy Future



Poll Question #1

If you were buying a home, would you find it useful to know the Energy Performance Scores of homes you were considering?

- Yes
- No
- Not sure



Bonus Incentives and Rebates

- Insulation bonus incentive of 75% up to \$3,750
 - \$2,000 from Mass Save
 - Additional \$1,750 from Home MPG if needed
- High efficiency equipment rebates
 - Focused on most efficient models
- Higher bonus rebates for renewable thermal technologies
 - Cold Climate Air Source Heat Pumps
 - Heat Pump Water Heaters
 - Central Biomass Pellet Systems

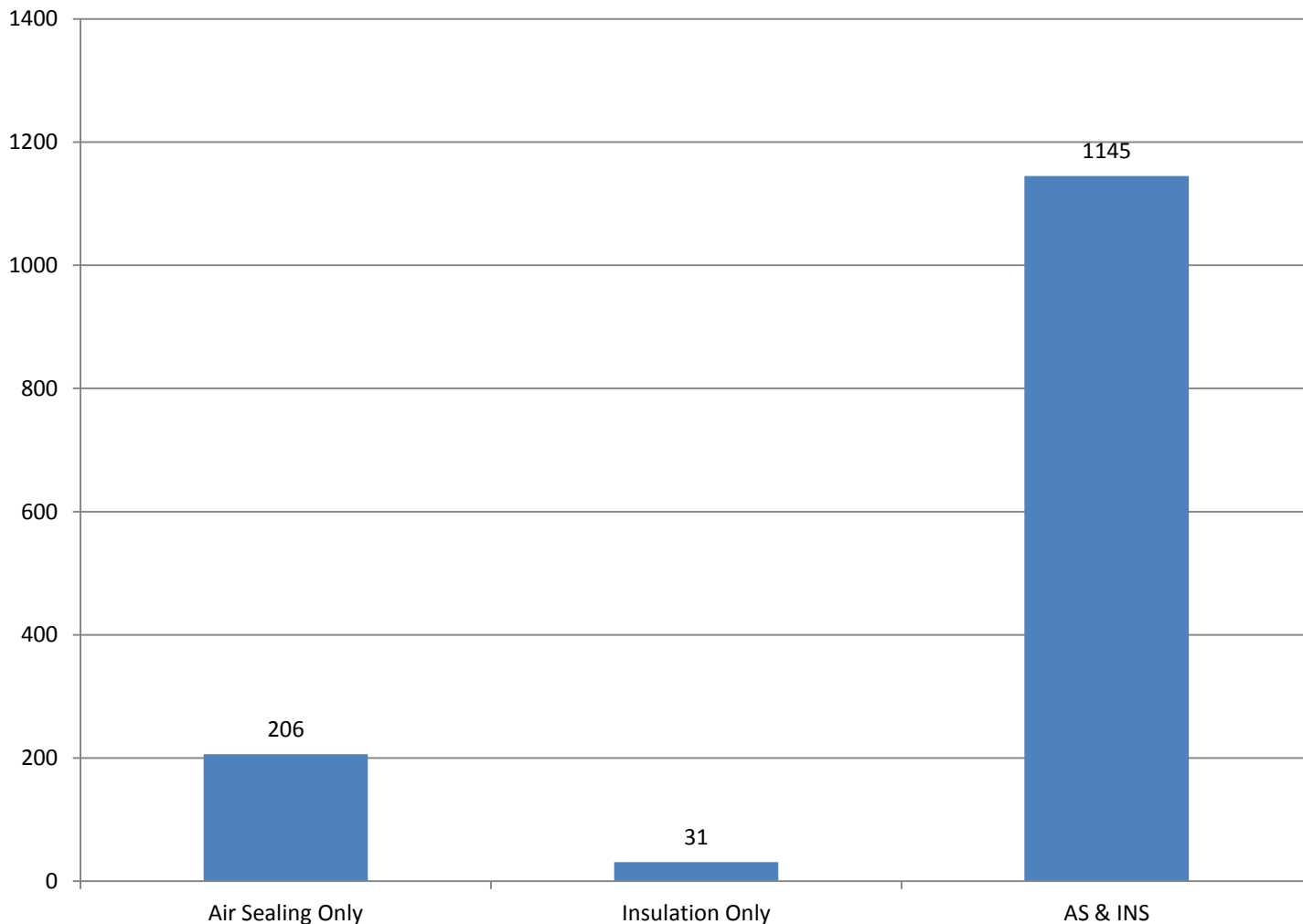


Home MPG Outcomes

- 3866 initial scorecards issued via energy assessment
- 1611 updated scorecards to participants that completed efficiency work
- 42% of participants completed work
- 1252 homes completed multiple measures
- 21 MMBTUs = avg energy savings at homes that completed work
- CSG and PSD audit software can generate scorecards (built-in or API)



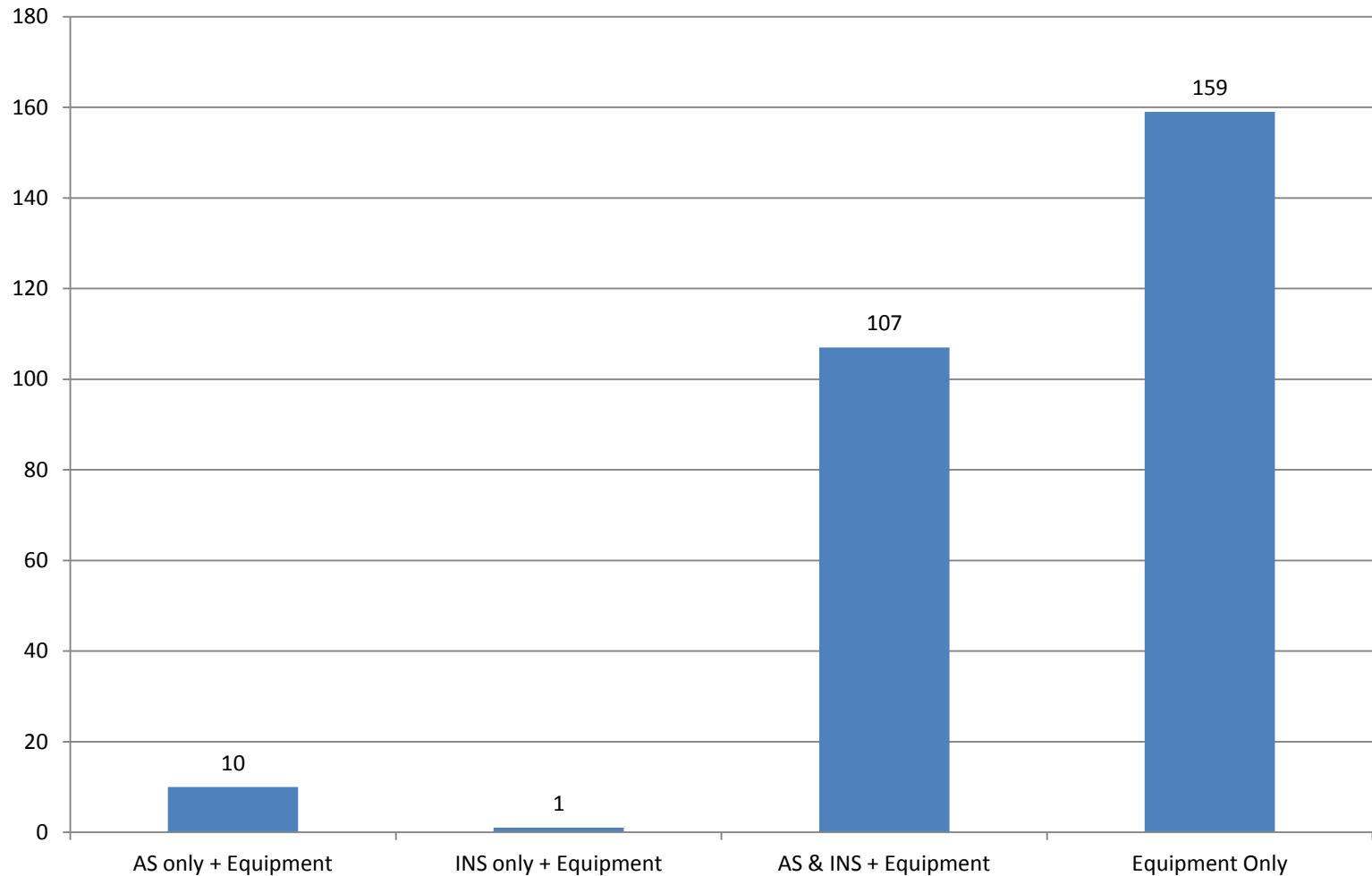
Weatherization by Household (1452)



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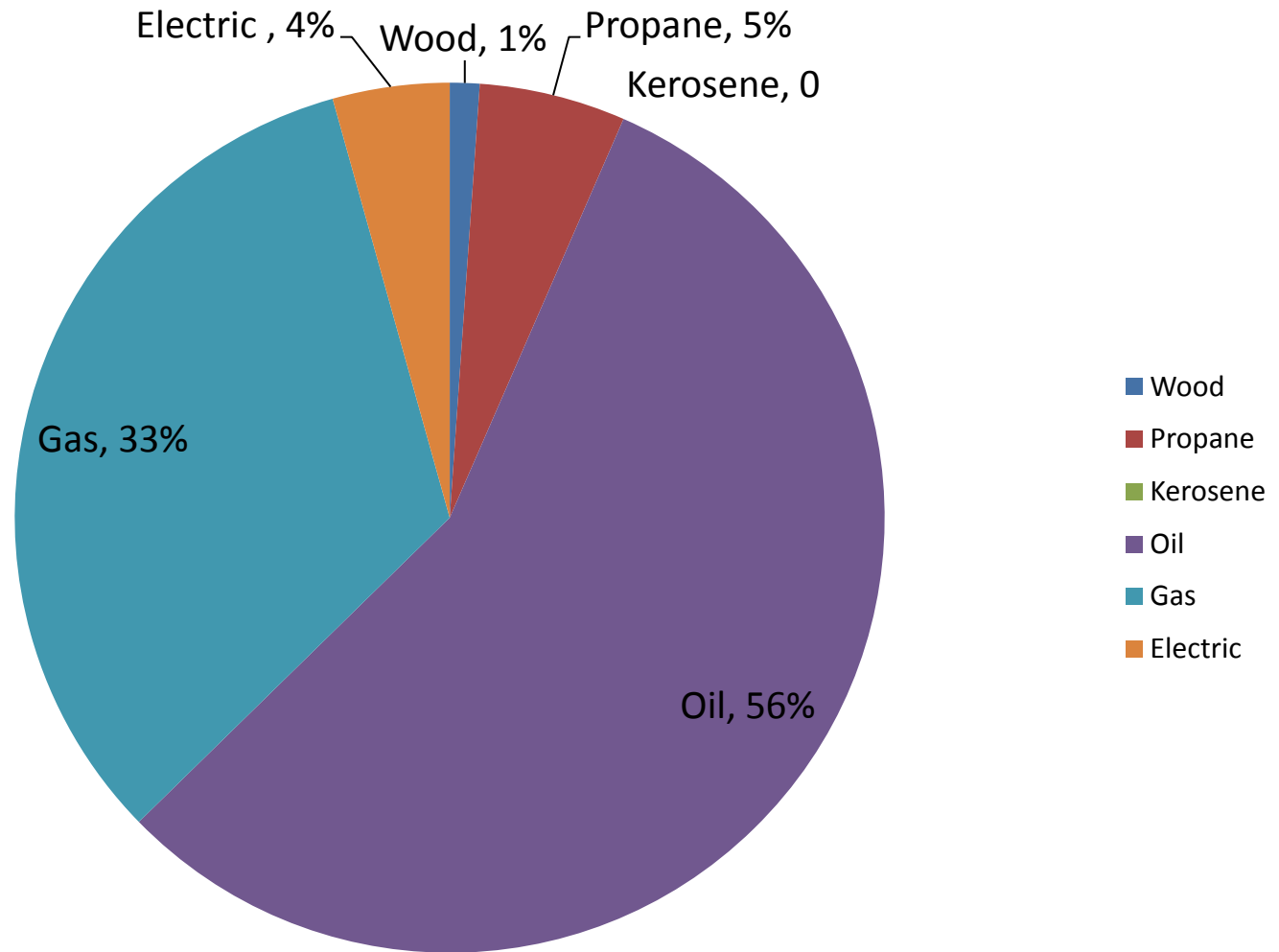
Bonus Rebate Equipment (277)



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Completed Work by Fuel Type



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Customer Feedback on Scorecard

- EPS helped customers decide to make energy-saving improvements to their home:
 - 67% “very useful”
 - 31% “somewhat useful”
- 74% said the EPS would be “very useful” when buying a house
- Additional feedback in June



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A picture is worth a thousand words...



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Poll Question #2

Would seeing your home's thermal image analysis be useful in deciding whether or not to implement efficiency work?

- Yes, very helpful
- Yes, somewhat helpful
- Maybe
- No, I don't think this would be helpful



Outreach & Technical Assistance

- Local outreach coordinated by PVPC
 - 150+ community events
 - 593 customer leads
- Mailing response rate over 3%
- Technical assistance service for customers considering equipment upgrades
 - 83 customers



Real estate trainings

- 6 total trainings for CEUs
 - 4 broker with 93 attendees
 - (locally developed 2 CEU curriculum seeking state real estate board approval on June 20th)
 - 2 appraiser with 58 attendees
 - 20 Accredited Green Appraisers through the Earth Advantage Institute
 - Massachusetts Board of Real Estate Appraisers (MBREA) and Earth Advantage are working out a curriculum licensing deal to continue offering the course in MA and in New England
 - Positive feed back from attendees



What's next?

- Further analysis of Home MPG data
- Feedback from customers & partners
- Scorecards in MA beyond Home MPG?
 - Other local MA initiatives (Worcester and Belmont)
 - Discussions with PAs/lead vendors
- Collaboration with DOE and other states



Thank You

For questions, contact:

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Benjamin.pignatelli@state.ma.us

Alissa Whiteman at
Alissa.whiteman@state.ma.us



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