

Bridging the Rural Efficiency Gap

Expanding Access to Energy Efficiency in Remote and High Energy Cost Communities

Lisa Smith, Maine Governor's Energy Office
NASEO Annual Meeting
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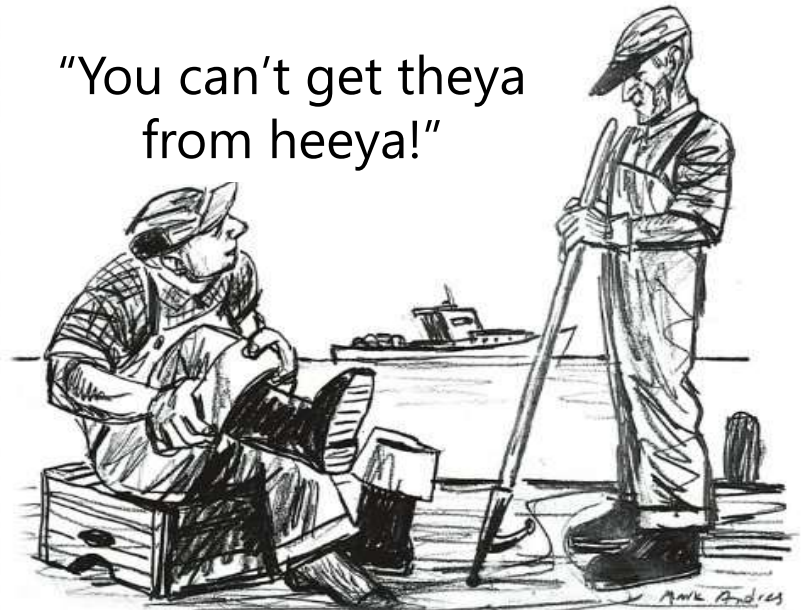
Governor's Energy Office



ISLAND
INSTITUTE

The Rural Efficiency Gap

"You can't get theya
from heeya!"



Rural and Remote in Maine: Some Statistics

- **Maine has the largest percentage (61%) of its population living in rural areas than any other state in the country¹**
- **Maine has the longest coastline of any state, with many remote peninsulas**
- **There are also 15 Maine islands with year-round communities only accessible by boat or plane**
 - *Year-round populations range from 50 – 1,200*
- **Energy is expensive, due to small customer base, local ownership, logistical delivery challenges**
 - *Electric rates up to \$0.70/kWh (on the islands)*
 - *Heating oil can be more than a dollar more per gallon on the islands*
 - *Limited number of fuel options (non-utility) and lack of competition in rural communities*

¹Bureau of Census, American Community Survey

Doug's Story



Island Institute



Non-Profit working to sustain Maine's island and coastal communities, and exchange ideas and experiences to further the sustainability of communities here and elsewhere.

About the Project

Bridging the Rural Efficiency Gap is connecting rural communities in heating oil-dependent states like **Maine, Alaska, New Hampshire, and Vermont** with financial assistance for home energy efficiency.

Project Leads:

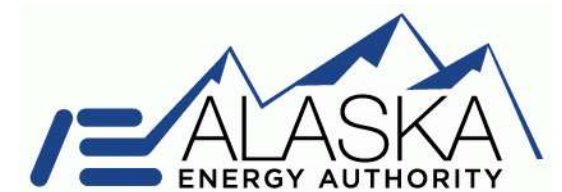


Project Partners:

New Hampshire Office of Strategic Initiatives




Maine Office of the Public Advocate

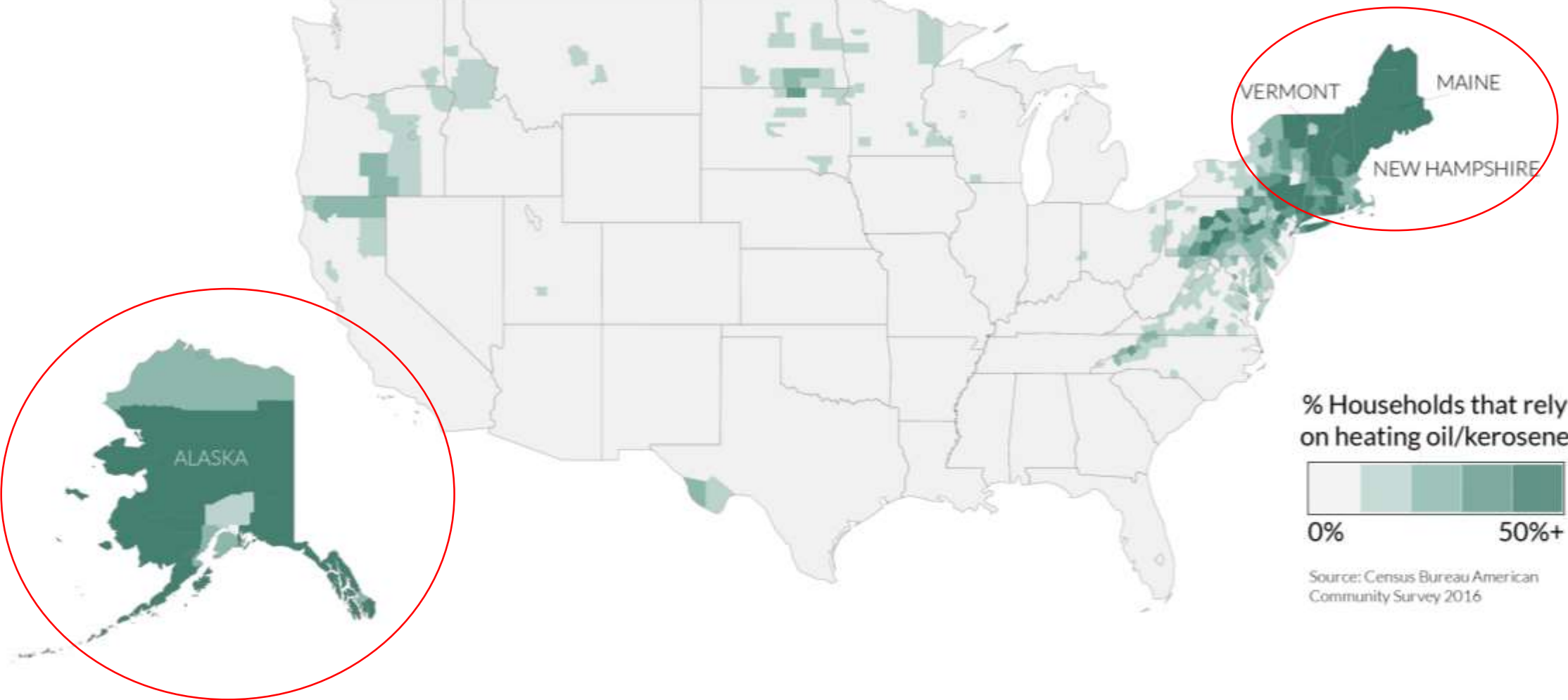


Summary: Shared Challenges

- Rural populations
- Oil dependence
- Old (or inefficient) buildings
- High energy cost, burden
- Lower incomes in rural areas
- Lack of EE contractors

 ISLAND INSTITUTE	Maine	Alaska	New Hampshire	Vermont
Number of Households (rank)	553,823 (39th)	251,899 (49th)	518,245 (40th)	257,004 (48th)
Approximate Median Household Income (rank) US Avg: \$50,502	\$46,033 (33rd)	\$67,825 (2nd)	\$62,647 (7th)	\$52,776 (20th)
Percent Population in Rural Areas (rank)	61.3% (1st)	33.9% (14th)	39.7% (11th)	61.1% (2nd)
Median Population Age (rank)	44.5 (1st)	33.5 (50th)	42.7 (3rd)	43.1 (2nd)
Percent of Homes Built Before 1940 (rank)	23% (8th)	1% (51st)	21% (12th)	24% (7th)
Heating Oil Consumption Per Capita (rank)	1st	7th	5th	2nd
Energy Expenditures Per Capita (rank)	\$4,565 (5th)	\$7,487 (1st)	\$3,934 (19th)	\$4,273 (9th)

Shared Challenge: Heating Oil Dependence





Assessing the Rural Efficiency Gap

Methodology

- **Interviews with 50+ stakeholders (AK, ME, NH, VT)
Administrators, implementers, customers**
- **Analysis of census & EIA data, DOE's LEAD tool**
- **Analysis of EE program participation data**

Barriers to EE in Rural Communities

- **Geographic**

- Geographic isolation & dispersed population
- Lack of energy efficiency contractors



- **Financial**

- Upfront cost
- Lower incomes, higher energy burdens
- Credit access and debt aversion



- **Awareness & Access**

- Lack of access to traditional marketing channels
- Lack of awareness or skepticism of existing resources

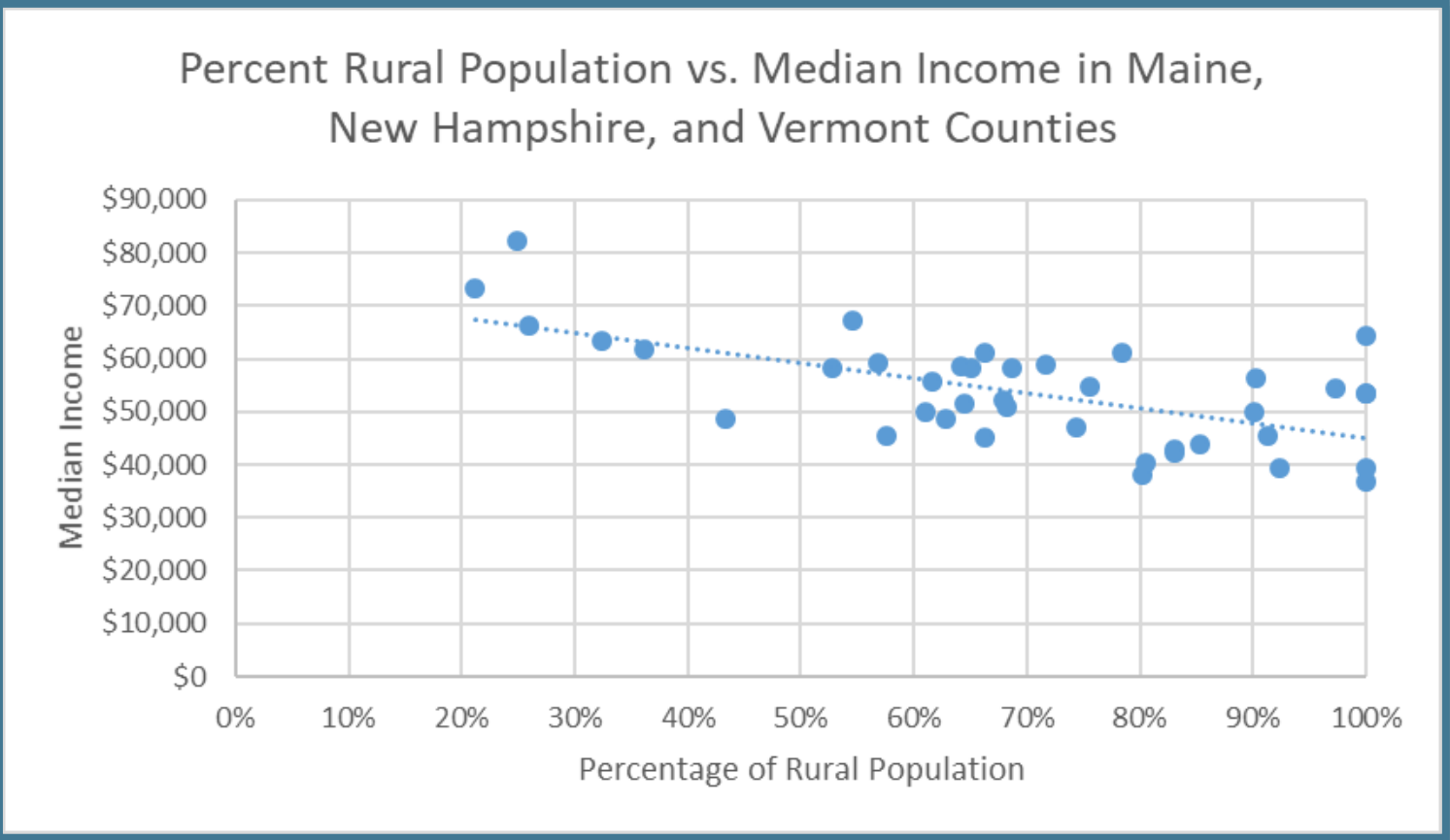


Geographic Barriers

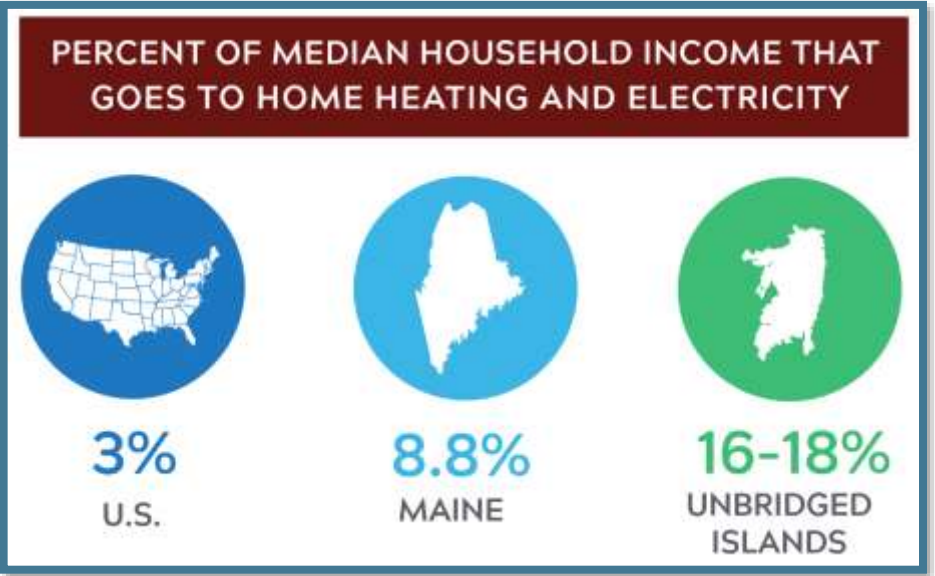


A barge unloads an insulation truck on Monhegan Island, Maine. Photo credit: Portland Press Herald

Financial Barriers: Lower incomes, higher energy burden



Source: U.S. Census



Waypoints, 2017

Awareness & Access Barriers



Models & Strategies for Bridging the Gap



Photo credit: Matthew Baron.

“Bridging Models” & Strategies

- Program design – staged upgrades (ME), DIY rebate (VT), rural-specific program (AK)
- Implementation models - Community-scale energy efficiency initiatives (AK, ME, NH, VT)
- Policies – Geographic equity mandate (VT)

Rebates Available Rebates

FOR RESIDENTIAL

DIY Insulation and Air Sealing

Small steps can have a significant impact on how you feel in your home.

Efficiency Vermont provides a rebate to cover the cost of materials to air seal and insulate your attic or basement yourself. Because tightening up a home improperly can worsen air quality issues or lead to mold, we require review of our DIY Insulation and Air Sealing Quality Standards Manual before submitting your rebate application.






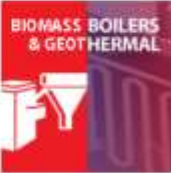


\$250
cash back after purchase



EFFECTIVE DATE
April 9, 2018

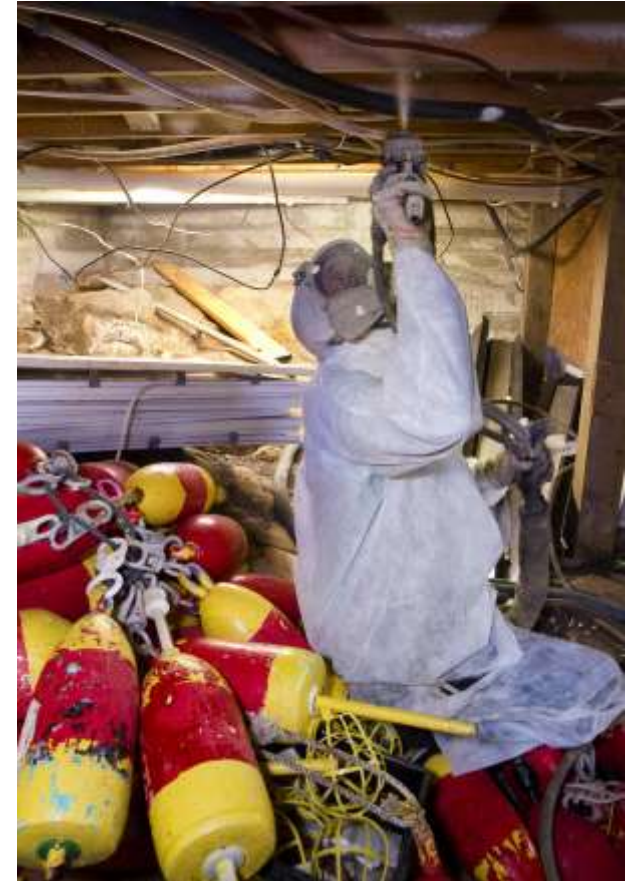
Rebate offer and amount subject to change.

[Download Manual & Form](#) [Contact Us](#)

 Air Sealing	 Energy Efficient Insulation	 Ductless Heat Pumps	 Heating Systems
Air Sealing with Assessment \$400 rebate	Insulation rebates up to \$3,000	Ductless Heat Pump \$500 – \$750 rebate	High Efficiency Central Heating Systems \$500 rebate
 Pellet & Wood Stoves	 BIOMASS BOILERS & GEOTHERMAL	 LOW-INCOME OPTIONS	 Find a Residential Vendor
Pellet and Wood Stoves \$500 rebate	Renewable Central Heating Systems \$3,000	Home Efficiency Upgrades for as little as \$50	Find a Registered Vendor

Bridging Model: Weatherization Weeks

- Bundling jobs over the course of one week
- Energy Assessment + air sealing
- Affordable for homeowners - \$200
 - 75% discount
 - Payback in first heating season
- Coordinated logistics – make it easy to say yes!
- Creates a buzz – Comparing blower door scores at the post office
- Includes community buildings



Spray foam insulation installed in a lobsterman's basement on Monhegan Island, Maine. Photo credit: Portland Press Herald.

Bridging Model: “Weatherize” Campaigns



Photo credit: Vital Communities

- Request for Proposals to identify contractors
- Group discounts from pre-approved contractors (who will work in rural areas)
- Outreach from local volunteers (energy fair; door-to-door; social media)
- Free energy consult
- Services include air sealing, insulation, heating systems

Lessons Learned

- Aggregate demand in remote communities
- Address EE at community scale (e.g., weatherize campaigns)
- Build partnerships between community, contractors, and administrators
- Incorporate energy education (energy fairs)
- Work across sectors and building types
 - Connect energy efficiency to other community priorities



Coming soon...

- Bridging the Rural Efficiency Gap Toolkit
- White paper for efficiency program administrators
- Video series
- Webinar (sponsored by NASEO)



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