

# Maine Heat Pump Pilot Program

Presentation to  
National Association of State Energy Officials

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# People are talking ...

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power smart maine heat pumps



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# Maine's Current Heating Situation

- Highly rural state
- Cold climate
- Among the nation's oldest housing stock
- 70% homes use oil heat (US avg. 6.5%)
- Highest home heating costs of any state
- Low median income



# Development of Pilot

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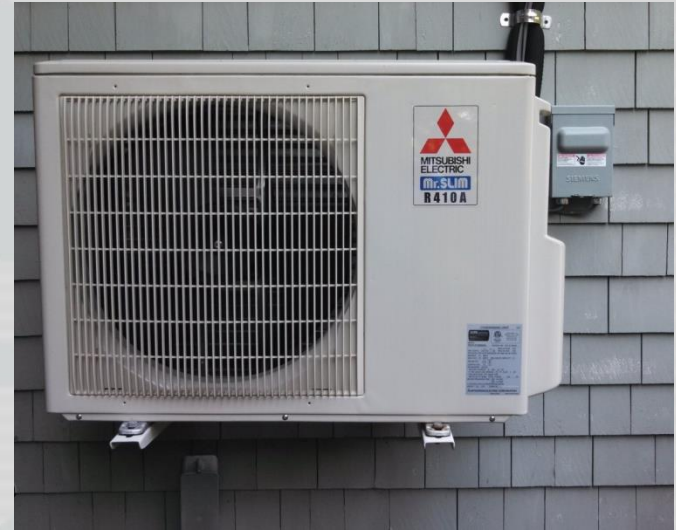
- L.D. 1864 (2012), authorized T&D utilities to offer pilot programs for efficient electric heating systems
- Bangor Hydro/Maine Public Service (BHE/MPS)  
~130k residential & small commercial customers
- Collaborative effort between BHE/MPS and EMT  
(T&D electric utility and an EE utility)



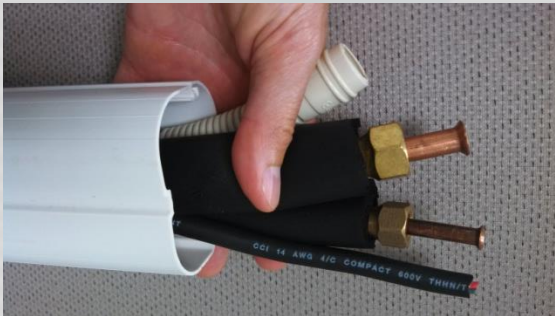
# Cold Climate, Ductless Heat Pumps



1. Indoor unit



2. Outdoor unit

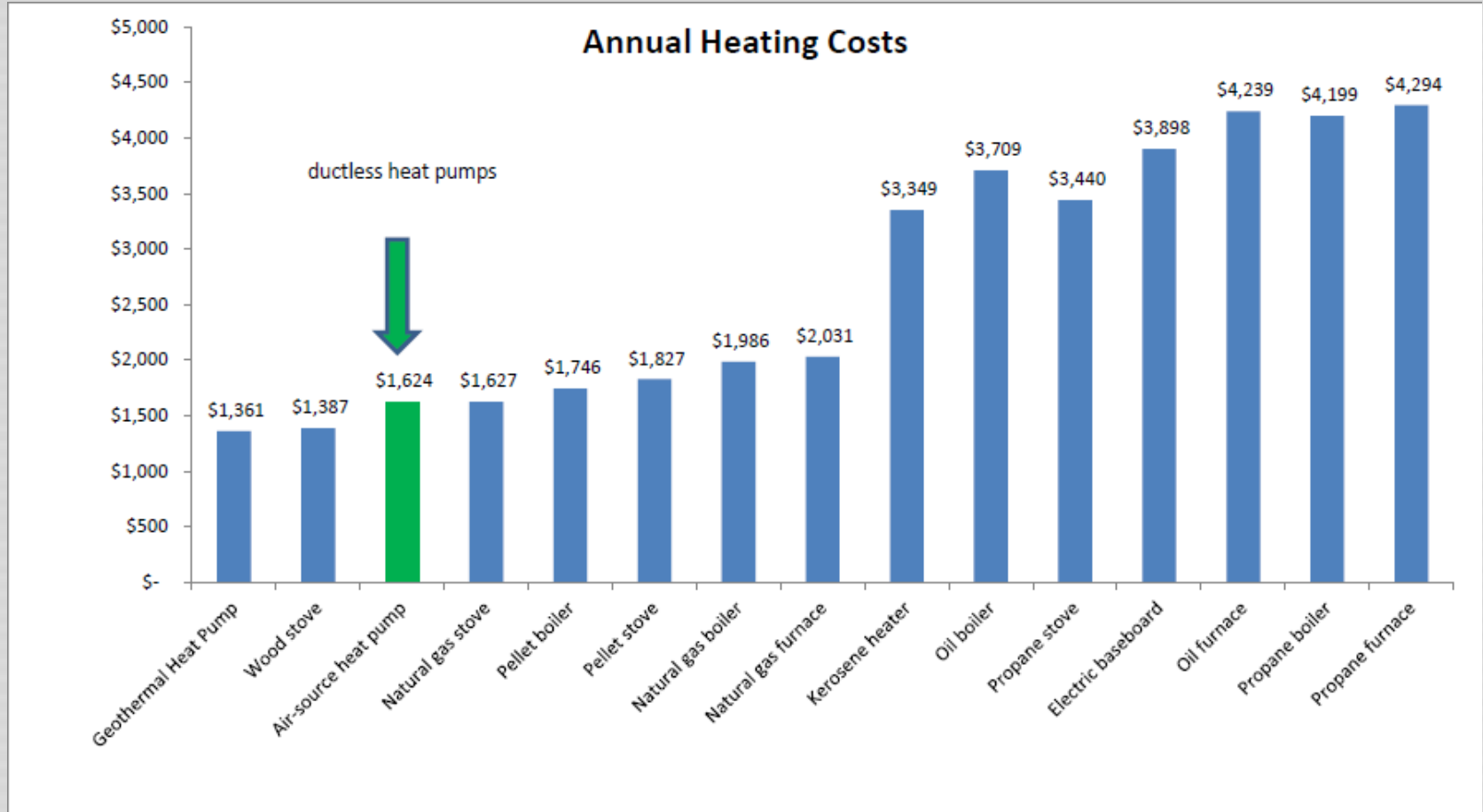


3. Line set



4. Remote control

# Annual Heating Costs by Fuel Type



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# Simple Program Design

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- \$600 rebate
  - Energy Star
  - HSPF  $\geq 10$
  - Registered installer
- On-bill financing (optional)
  - 7.75% APR
  - Up to 5 years
- Discounted electric rate 3 cents/kwh





# Marketing Measures

## Bangor Hydro and Maine Public Service Heat Pump Pilot Program

### Am I eligible?

You may be eligible if:

- You are a Bangor Hydro or Maine Public Service residential or small commercial customer in good standing.
- You currently use oil, propane, electric resistance heat or kerosene as your primary heat source, and you spend at least \$1,400 on heat annually.
- You are purchasing/installing a mini-split heat pump with an HSPF rating of 10 or greater.
- Your installer is registered to install air-source heat pumps with Efficiency Maine.
- The home or business where the heat pump will be installed is owner-occupied.
- The estimated energy savings associated with your new heat pump must cover the cost of the equipment, installation and loan (optional) over five years.



## Why consider a mini-split heat pump?

An efficient heat pump can pay for itself through energy savings.

It's a clean, comfortable, and convenient supplemental heat source. Heat pumps not only heat, they cool and dehumidify.

Customers who heat with heat pumps may qualify for a lower electric heat delivery rate for all electricity used during the heating season. Please remember that while your heat pump is intended to offset your expenses from other fuel sources, your electricity will increase.

### Learn More

Bangor Hydro Customer Service Center  
207-947-2414 or 800-499-6600  
[www.bangorhydro.com](http://www.bangorhydro.com)

Maine Public Service Customer Service Center  
207-760-2300 or 877-655-4448  
[www.maine-public-service.com](http://www.maine-public-service.com)



## Heat Pump Pilot Program Plug into energy savings.

Financial incentives to install mini-split heat pumps.



## About mini-split heat pumps.



"It's performing great. We haven't had any weather where it hasn't worked well. I haven't had to use the oil furnace at all to heat the house."

Brent Bubar  
Woodland



"I'm really pleased with my decision to install a heat pump. The rebates, tax credit and special electric rate all made it affordable. Even on the coldest days my heat pump keeps my home very comfortable."

Mary Lou Weaver and Belle  
Winter Harbor



"As a small business owner I was looking for ways to cut my heating costs. I highly recommend ductless, mini-split heat pumps. My only regret is that I didn't have them installed sooner."

John Kingsbury, President  
Whitten's 2-Way Service - Brewer

### Current Incentives:

\$600 rebates | Optional on-bill financing | Discounted electric heat rates | Federal tax credit



[www.bangorhydro.com](http://www.bangorhydro.com) • [www.maine-public-service.com](http://www.maine-public-service.com)

Bangor Hydro Customer Service:  
1-800-499-6600

Maine Public Service Customer Service:  
1-877-655-4448

**WHITTEN'S 2-WAY**

"As a small business owner I was looking for ways to cut my heating costs. I highly recommend ductless, mini-split heat pumps. My only regret is that I didn't have them installed sooner."

— John Kingsbury  
President  
Whitten's 2-Way Service  
Brewer

Bangor Hydro's Heat Pump Program offers:

- \$600 rebates
- Optional on-bill financing
- Discounted electric heat rates

**Bangor Hydro**  
ELECTRIC & GAS COMPANY

Customer Service: (207) 947-2414 • 1-800-499-6600 • TDD 1-800-559-0069  
[www.bangorhydro.com](http://www.bangorhydro.com) • [www.powersmartmaine.com](http://www.powersmartmaine.com)



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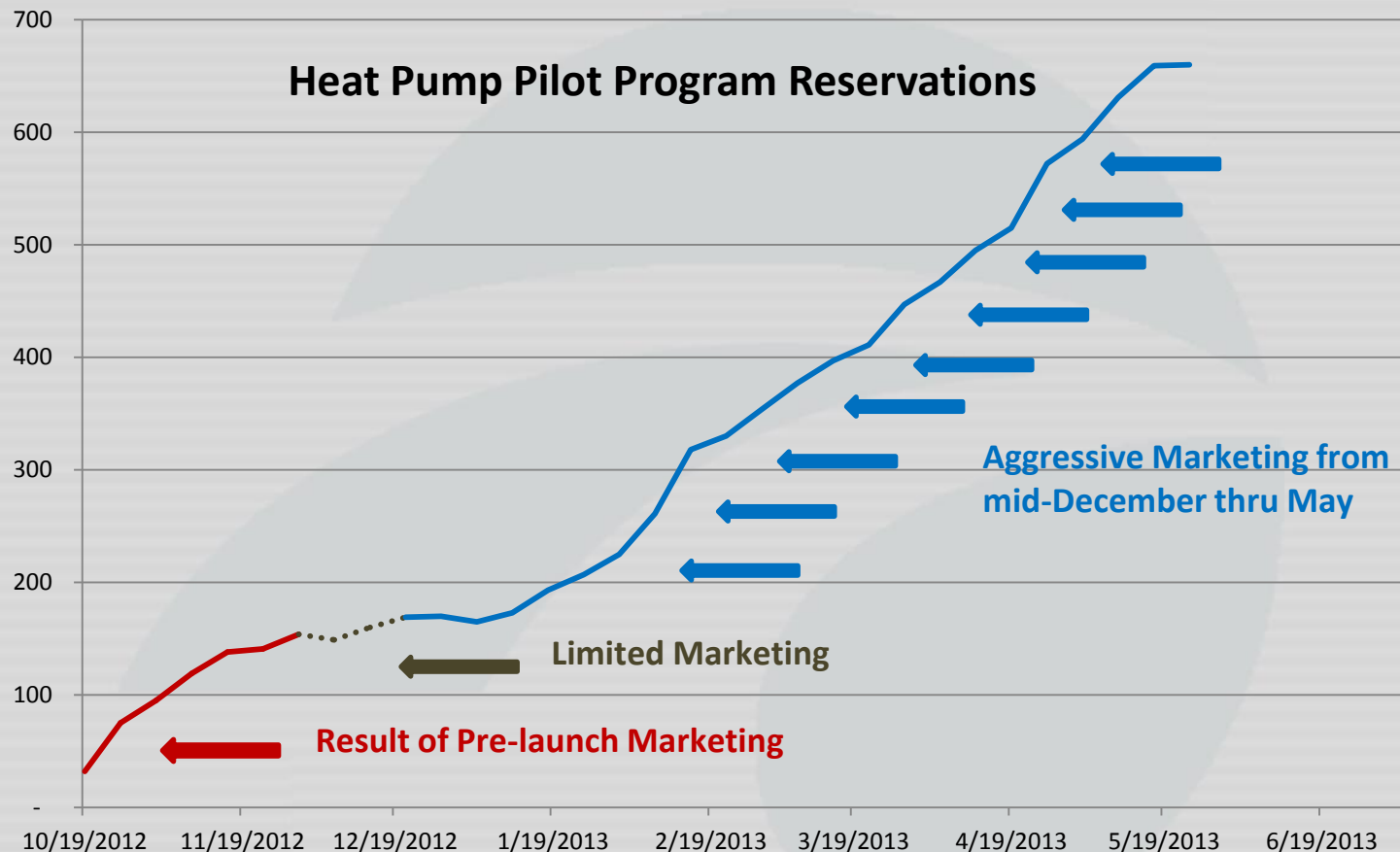


# Aggressive Marketing Campaign

1. PR (press releases, op eds, tv news)
2. Local Discovery TV channel
3. Radio
4. Print
5. Trade shows
6. Bill stuffers & envelope message
7. Newsletters, emails
8. Website
9. Referral program
10. Advisory board



# 660 heat pumps in 9 months



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# Energy Cost Savings

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- Preliminary data indicate cost savings of 40%
  - Interim report end of October; final report June 2014
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- Program design assumes heat pump used as the heating source for main living areas
  - Backup system still needed for distribution and capacity reasons



# Case Study – Presque Isle

- Air Source and Hot Water Heat Pumps installed in 2750 sq. ft. Cape, built in '97
- Well insulated; upstairs heat @ 60°F

## Before Heat Pumps (2011-2012 Heating Season):

– heat & hot water = \$3,155 (814 gallons of oil)

## After Heat Pumps (2012-2013 Heating Season):

– heat & hot water = \$721

- 18.2 gal oil x \$3.56 = \$65
- 5,960 kwh electricity x \$0.11 = \$656

**2012-2013 Heating Season Savings = \$2,434**

# Case Study: Bangor, Maine

- 1,500 sq. ft. Cape built in 50s; thermostat @ 65°F

Before Heat Pump: oil use - 700 gal @ \$3.67 = \$2,569

After Heat Pump:

Year 1: 2011- 2012 Heating Season: **Total Cost = \$1,021**

4,734 kwh electricity x \$0.1581 = \$749

+ 74 gal oil x \$3.67 = \$272

**Heating Season Savings = \$1,548**

Year 2: 2012 – 2013 Heating Season : **Total Cost = \$961**

5,259.20 kwh electricity x \$0.1581 = \$831

+ 35 gal oil x \$3.71 = \$130

**Heating Season Savings = \$1,608**

# Conclusions

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- Customers can be motivated to invest in energy efficiency with:
  - Meaningful rebates
  - Simple program design
  - Aggressive marketing
- This technology holds real promise to reduce energy costs for a rural state, highly dependent on oil for home heating





# Maine's Heat Pump Pilot



Governor's Energy Office



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