



ENERGY STAR Heat Pump Water Heater Best Practices and Innovative Programs

December 11, 2019





Why Heat Pump Water Heaters?

- Water heaters account for 12% of residential energy consumption, costing a household of four up to \$620 every year in energy costs.
- + 40 million water heaters nationwide that are at least 10 years old.
- A Heat Pump Water Heaters (HPWH) uses less than half the energy of a standard model.
- ENERGY STAR certified HPWHs can save a household of 4 approximately \$350 per year on its electric bills compared to a standard electric water heater and up to \$3,750 over the HPWH's lifetime. Larger families — that typically use more hot water — will save even more!
- **If all residential electric storage water heaters sold in US were ENERGY STAR certified HPWHs, the energy cost savings would grow to almost \$12B annually, and 140B pounds of annual GHG would be prevented = 13M vehicles off the road**



HPWH's and Energy Efficiency Programs: The Lay of the Land

- HPWH make up a significant portion of total EEPS incentives (5% of total incentives)
- HPWH representing 69% of water heater promotions (dramatic increase since 2018)
- Many EEPS are engaged in a distributor-focused midstream program with ENERGY STAR, and results are impressive: program participation has often at least doubled, and in some cases, increased ten-fold.
- Localities with emphasis on electrification and decarbonization focus heavily on the category with significant incentives and easy program models (e.g., midstream)
- EEPS are experimenting with a wide variety of programs including income qualified direct installations and demand response pilot programs
- ENERGY STAR has a Technical Advisory Group to assist EEPS interested in developing/implementing effective programs.



Program Design Terminology

- Downstream – Utility Rebate offered directly to Consumer, traditionally mail-in rebates
- Midstream – Instant Utility rebate offered to Distributor or Contractor
- Upstream – Instant Utility rebate offered to Manufacturer
- Markdown – Price reduction at retail available to ALL Consumers shopping at that store or online
- Validated Instant – Utility Instant rebate offered to Consumer after electronic validation that Consumer is an account holder of the Utility

Efficiency Maine
Distributor, Retail, Low Income
Heat Pump Water Heater Programs
ENERGY STAR® Webinar

Andy Meyer
Senior Program Manager
December 11, 2019



Efficiency Maine

- Administrator of all energy efficiency programs in Maine
- Funded by electric and natural gas ratepayers, Regional Greenhouse Gas Initiative revenue, and other sources
- Board appointed by the governor and confirmed by the legislature
- Regulated by the Maine Public Utilities Commission



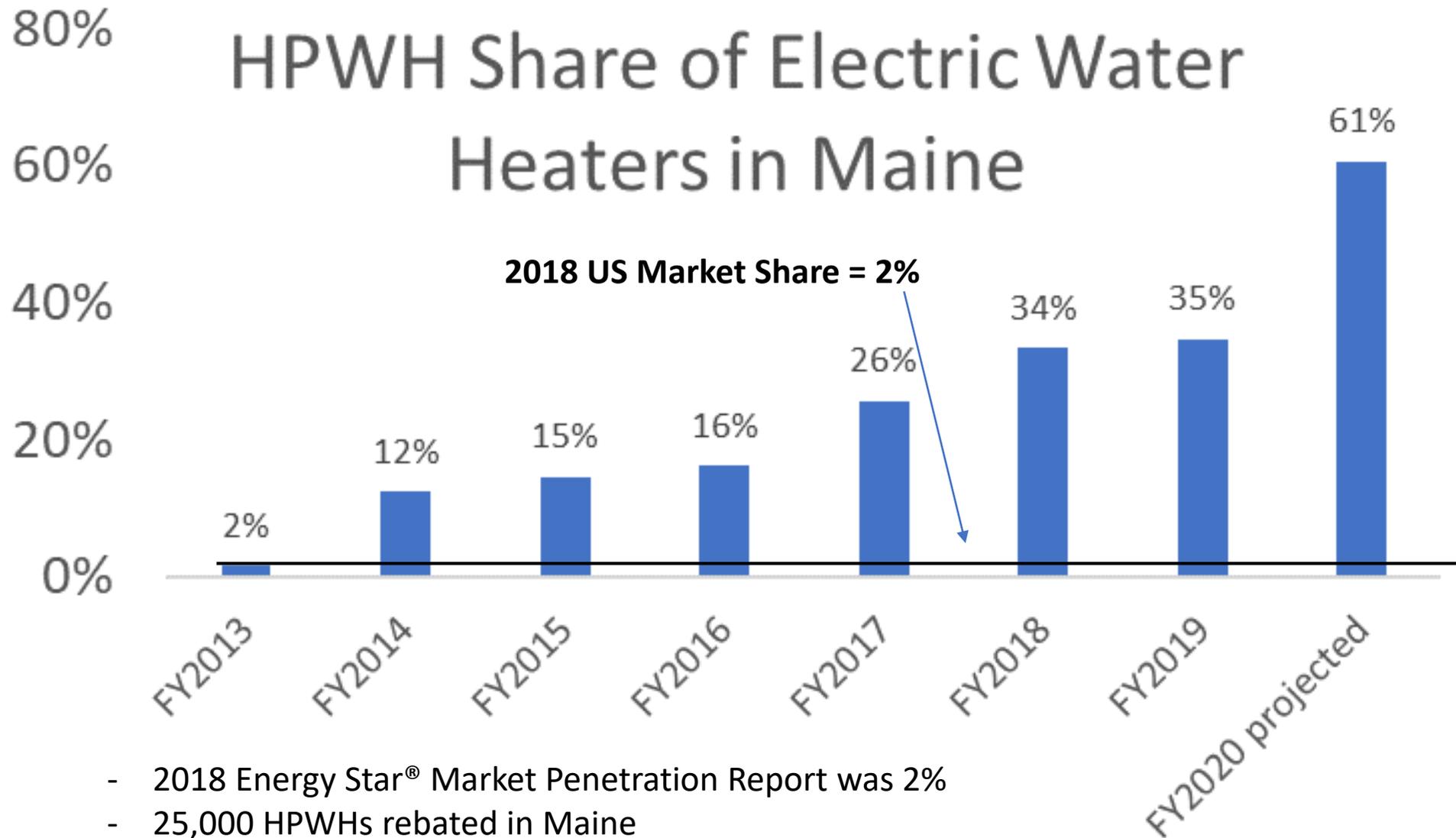
Three HPWH Programs

1. Distributor (midstream/instant)
2. Retail (downstream/mail-in)
3. Low Income Direct Install (midstream to installer)

One of every ten HPWHs sold in the US goes to Maine.



Maine Retail/Distributor Results



Distributor Program

- Per MOU with distributors (including installation data) Efficiency Maine pays:
 - \$750 per unit sold (any price)
 - \$50 administrative fee
 - \$100 additional if sell \leq \$250
- Eligibility = ENERGY STAR[®], residential/commercial
- Efficiency Maine reps visit weekly 



FW Webb Oakland, ME

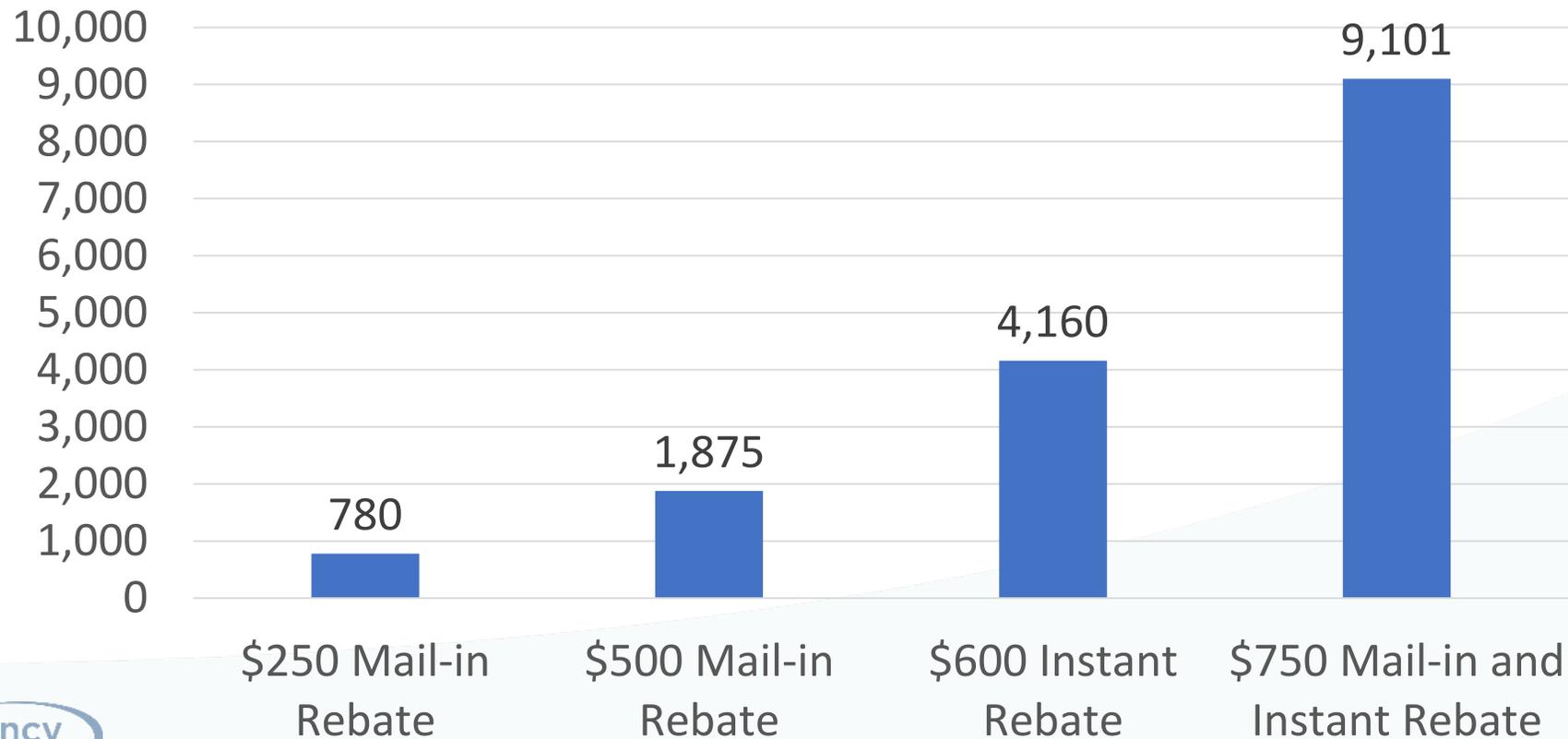
Retail Program

- \$750 mail-in rebate
- ENERGY STAR®
- Residential or commercial
- In-store or on-line purchases
- Any installer including self-install
- Field reps visit big box stores weekly ★



Rebate Amount Impact

Annual HPWH Sales Volume by Rebate Amount/Type



Messaging

Right to compete

- Tens of thousands installed in Maine
- Produce lots of hot water

Right to win

- Lowest price

Bonus features

- Can save more than \$3,000 over 10-year life
- Help to dehumidify

NOT: new, exciting, different, unproven (cold showers)



Channels

- Google search ads ★
- Retail/distributor POP ★
- Our website
- Other program cross-selling check stuffer
- Events
- E-newsletter to installers
- Allies (NGOs, utilities bill stuffers, trade schools, etc.)



Audiences

- Manufacturers
- Distributors/Retailers
- Plumbers
- Homeowners
 - Actively looking ★
 - Passive (e.g., alums, event participants)



Guiding Principles

Motivating
Incentives

Simple
Program



Marketing

Field Support



Continuous
Improvement

Distributor/Retail Best Practices

- In retail, put signs on the electric water heater too
- Communicate/support the entire value chain
 1. Manufacturer, manufacturer's representative
 2. Distributor HQ, branch manager, counter staff, field sales
 3. Retail HQ, regional manager, store manager, dept staff
 4. Installer owner, office staff, technicians
 5. Homeowners
 6. Allies (non-profits, trade associations, utilities)



Low Income – Distributor/Plumber Recruiting

- Negotiated \$889 price from 2 distributors:
 - 650 ENERGY STAR® HPWH/yr
 - Statewide, next-day delivery
 - 10-year warranty
- Contracted 20 plumbers
 - \$1,700 parts & labor
 - Install LEDs/aerators/showerheads at fixed rate



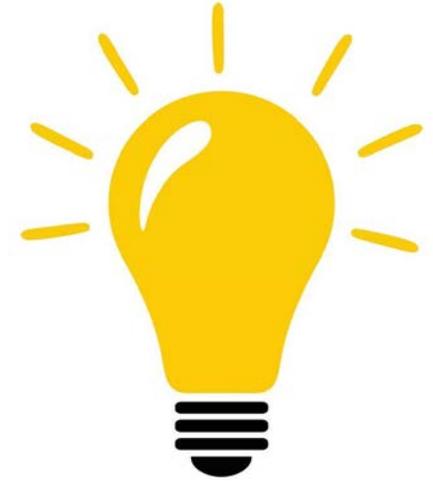
Low Income Program Process

- Send invitation letters to low income residents
- Customer calls Efficiency Maine
- Efficiency Maine confirms customer eligibility
- Efficiency Maine gives request to nearest plumber
- Plumber buys HPWH at our negotiated rate
- Plumber schedules and installs unit
- Plumber bills EM \$1,700 plus miscellaneous measures
- EM pays plumber and inspects 15% of jobs afterwards



Low Income Learnings

- Limited installation capacity during heating season
- HPWH aren't well suited to mobile homes
- Supplying LEDs, aerators, showerheads is cumbersome, but important for overall savings in direct install program
- \$1,500 won't cover removing the old water heaters which is why we offer \$1,700
- Pre-authorization ensures plumber and distributor get paid



Key Roles of ENERGY STAR®

- Certifying products
- Publishing data to support savings claim
 - Unit shipment reports
 - Baseline efficiency
- Convening partners to share best practices



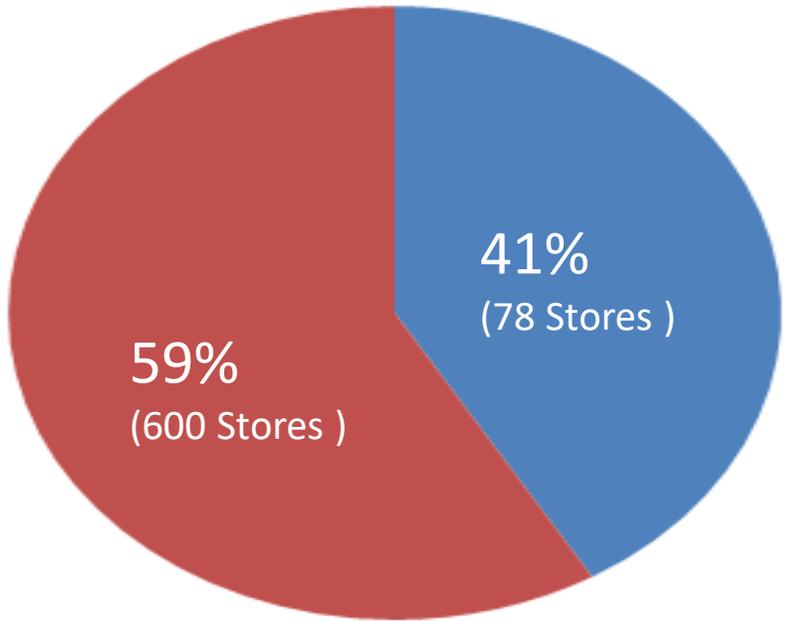
efficiencymaine.com



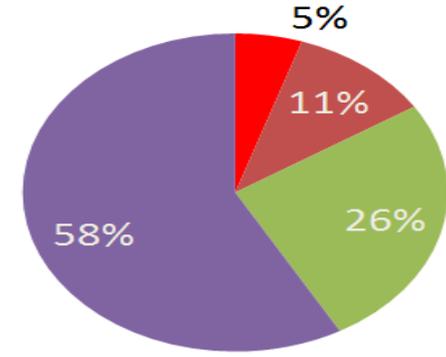
Market Adoption of ENERGY STAR® Water HeatersWhat it takes

December 11, 2019

Rebates \geq \$500 (instant especially) drive HPWH volume at Lowe's



■ Top Stores ■ Other Stores



■ No rebate ■ Rebate $<$ \$500
■ Mail-in Rebate \geq \$500 ■ Instant Rebate \geq \$500

January to September 2019 HPWH Unit Sales at Lowe's

Markdown



Validated Instant

XCEL ENERGY CUSTOMERS: WATER HEATER INSTANT REBATES NOW AVAILABLE



\$70–\$450 instant rebate on select models, plus up to \$330 in annual savings*

Claim your instant rebate by following these simple steps below:

STEP 1: Check your eligibility at xcel.store/WaterHeatersCO.

STEP 2: Choose your preferred qualifying water heater type and download your coupon.

STEP 3: Find a Customer Service Representative to help complete your purchase.



*Savings are based on www.energystar.gov. Lowe's is not responsible for fulfillment of rebate and may not combine with all Lowe's offers. See terms & conditions at www.xcel.store/waterheater.



Save more with an A.O. Smith® Electric Heat Pump Water Heater and your local utility company.

*Rebate cannot exceed purchase price of unit. Rebates good for qualified customers only. The costs of energy efficiency programs are recovered through customer rates in accordance with Pennsylvania Act 129 of 2008. For a complete list of commercial, industrial, residential and low-income energy efficiency programs, please visit energysavePA.com. Lowe's not responsible for fulfillment of rebate.



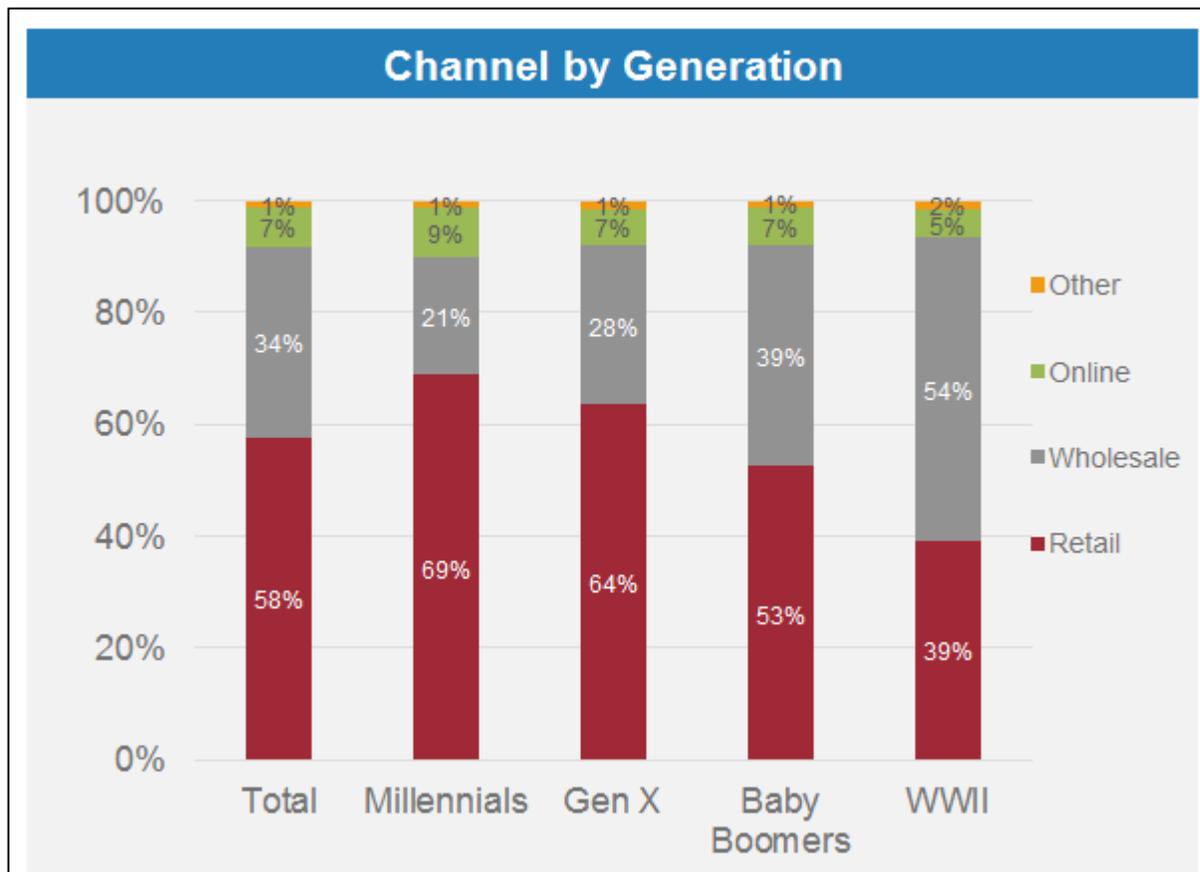
Met-Ed • Penelec • Penn Power • West Penn Power

\$500

Instant Rebate
Included In Price*



Create Market Demand For Both Retail and Wholesale Channels



Source: KeyStat water heater purchases YE4Q18 sample size n=5,310

Bring Consumers to Retailers

Heat Pump Water Heaters use less than half the energy of standard electric water heaters.*

Save More Money

- Save a total of \$700 when you combine a \$500 instant discount from Energy Trust of Oregon and a \$200 instant rebate from A. O. Smith.
- Save between \$160 and \$330 on your electric bill every year.

Get the same reliable hot water you're accustomed to. That means no surprises, only savings.

ACSmith. Innovation has a name.

EnergyTrust of Oregon

AVAILABLE AT **LOWE'S**

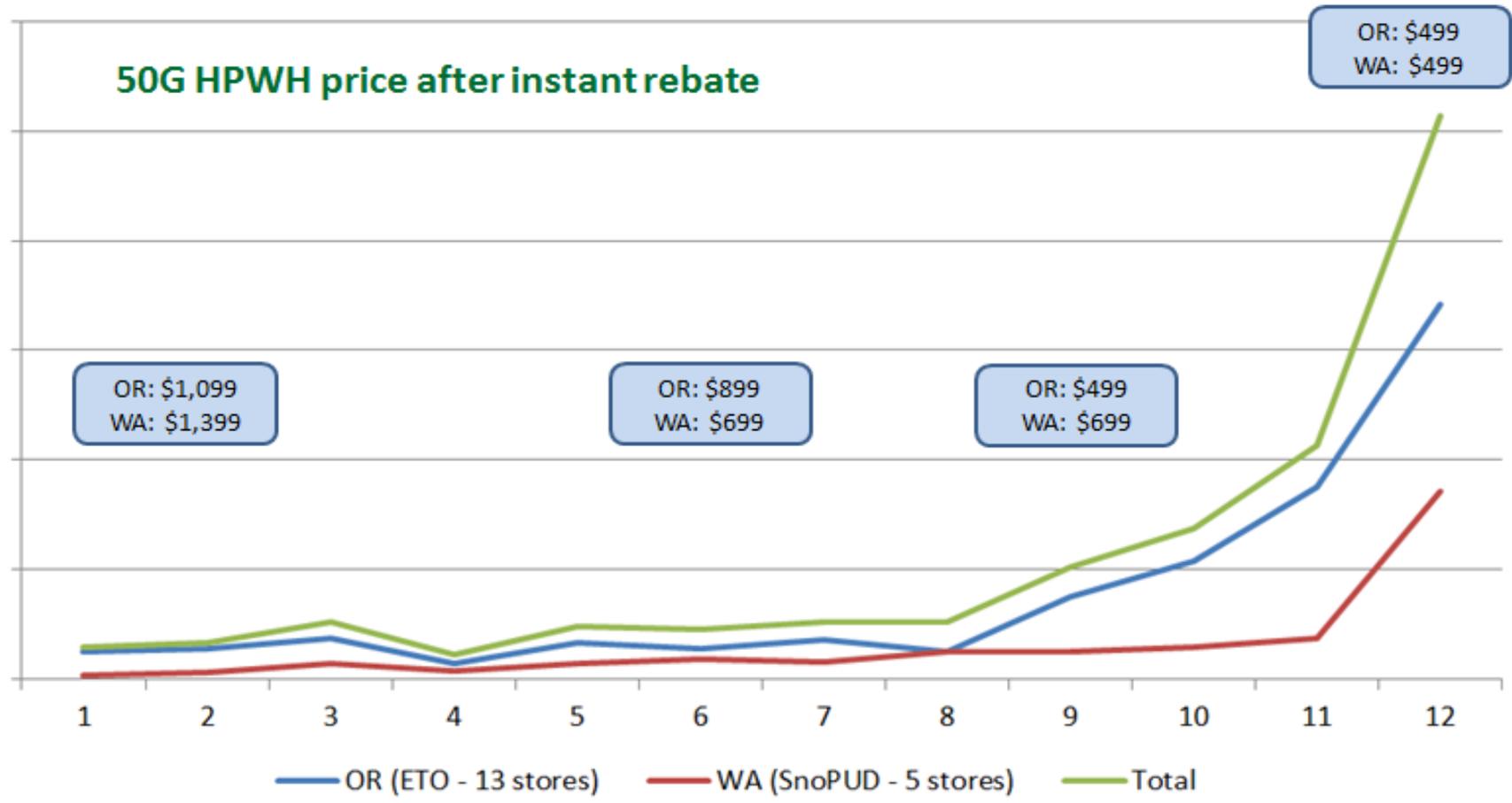
HUGE SAVINGS!
\$700
Off Qualifying Models

UPGRADE NOW AND WARM UP TO SAVINGS

*Based on energy savings information for Heat Pump Water Heaters located on the ENERGY STAR® website. https://www.energystar.gov/products/water_heaters/high_efficiency_electric_storage_water_heaters/benefits_savings

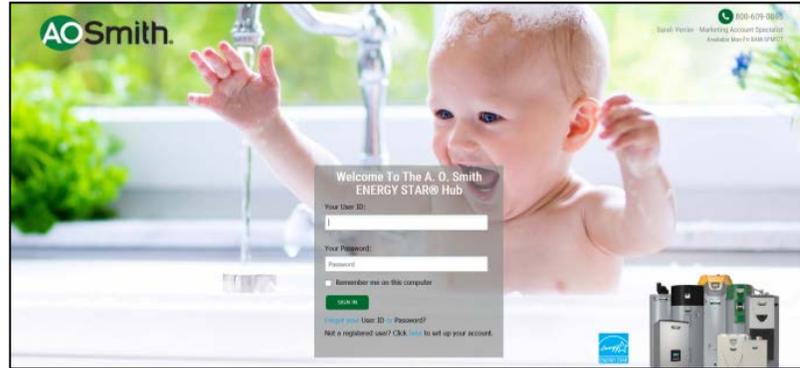
- Screaming deal
- Utility attribution
- Proactive replacements
- General market awareness
- Price transparency

50G HPWH Unit Sales 18 Lowe's Stores



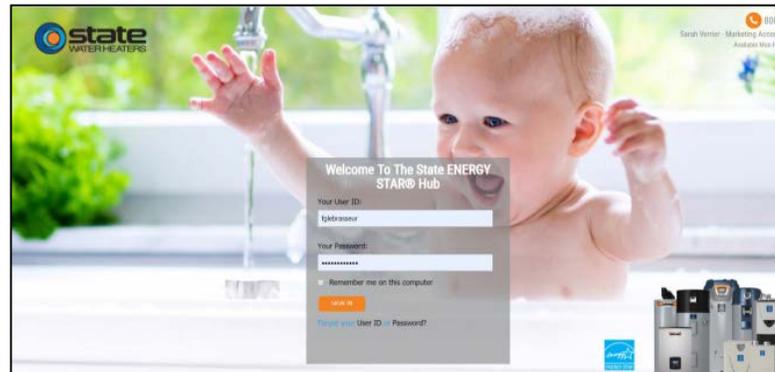
- ☐ \$499 price point (after \$700 instant rebate)
- ☐ Promo Advertising (month 12)

Wholesale channel....A. O. Smith and State ENERGY STAR Hubs



<https://aosmith.mymarketingbench.com/>

☐ Promotional tools for Distributors and Contractors



<https://state.mymarketingbench.com/>

☐ Product and Sales Training Material

Sales/Training/Advertising Tools

Counter Display



Dimensions
8.5"x14"

Heat Pump Shells



Product Training



Consumer Brochure/Tearpads



Contractor Rewards



Consumer Advertising



Spring Campaign - Available Items for Co-Funding

- 6x11" Postcard
- 6x11" Magnet Postcard
- Table Tent
- Poster
- Digital Banner Ads

**THE SPRING FORECAST:
HOT WATER.
BIG SAVINGS.**

AC Smith.
**VOLTEX®
HYBRID ELECTRIC
HEAT PUMP**

\$000

**INSTANT
SAVINGS
TODAY***

**YOUR LOGO
GOES HERE**

*FOR A LIMITED TIME. SEE TERMS AND CONDITIONS
OF LOCAL UTILITY REBATE PROGRAM
FOR MORE INFORMATION.

SAVE NOW

**BOB,
THE SPRING FORECAST:
HOT WATER.
BIG SAVINGS.**

SAVE \$000

For a limited time.
See terms and conditions of local utility
rebate program for more information.

Save money now AND later. The Voltex® Hybrid Electric Heat Pump is ENERGY STAR® certified and is eligible for local utility rebates. It reduces the electric bill of the average household by about \$300 every year compared to a standard electric tank water heater. Its integrated heat pump absorbs heat from ambient air and transfers it to the water.

**HUGE SAVINGS NOW
ON A NEW A. O. SMITH
VOLTEX® HYBRID
ELECTRIC HEAT PUMP**

**Save \$000
on average every year
in operating expenses***

*Based on DOE test procedure and Energy Guide
comparison of 50-gallon nominal capacity standard
electric and A. O. Smith 50 gallon ProLine® Voltex®
heat pump water heaters. Annual energy savings of
2543 kWh/year and average U.S. residential electricity
cost of 12 cents/kWh. Source Accessed May 2019:
https://www.eia.gov/electricity/monthly/epm_table_grapher.php?t=epmt_5_6_a

**YOUR LOGO
GOES HERE**

AC Smith.

**CALL TODAY
FOR THE BEST INSTALLER OF THE BEST
HEAT PUMP IN THE BUSINESS**

**YOUR LOGO
GOES HERE**

1-800-123-4567
www.website.com
1234 Street Name, Owings Mills, MD 12345

YOUR LOCAL UTILITY -<Utility name here>

**YOUR LOGO
GOES HERE**

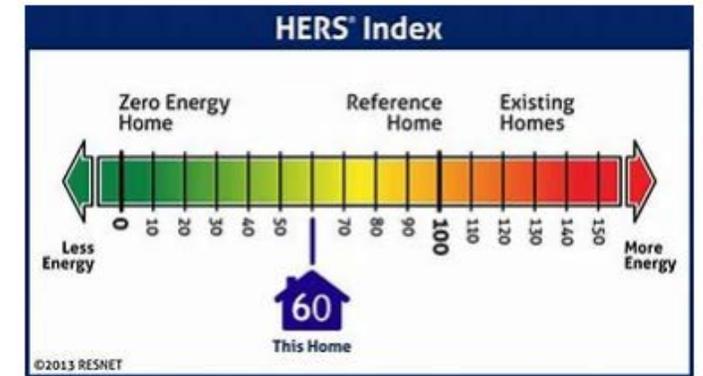
1234 Any Street
Owings Mills, MD 12345

Bob Smith
123 Main Street
Anytown, ST 12345

Help Builders upgrade to high efficiency equipment

3.42 UEF electric heat pump and 0.93 UEF tankless gas condensing water heaters earn between 3 and 6 HERS [Home Energy Rating System] points across climate zones and home configurations

.....More HERS points than an HVAC system upgrade from 14 to 15 SEER and 8.2 to 9 HSPF

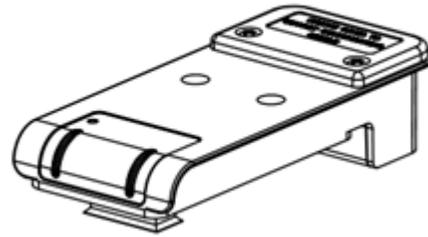


Water heaters....Low upgrade cost/HERS ratio

CTA-2045 Grid Connected Water Heaters



Residential HPWH



A. O. Smith Port Adapter



UCM Module

Capabilities

- Shed Load
- Shift Load
- Add Load
- Regulation
- Load Balancing
- Renewable Integration
- Price Controlled
- More.....

OADR Compatible

What it Takes....

- Prescriptive instant rebates for both Residential and Commercial water heaters, including residential units installed in commercial applications
- Prescriptive instant rebates offered to both Retail and Wholesale channels, including new construction
- Simple program design, digitize any data collection, combine EE/DR incentives
- Create market demand....Pool Ad funds with A. O. Smith
- Joint Distributor and Contractor trainings



Questions?



ENERGY STAR Resources

- ENERGY STAR HPWH Contractor Finder
- Marketing tools
- HPWH savings calculator in 2020
- ENERGY STAR Technical Advisory Group





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