



# **ENERGY STAR® Distributed Products Platform**

## **ACEEE Hot Water Forum**

**Water Heating, Distribution, and Use Efficiency**

**Hilton Portland & Executive Tower**

**Portland, OR • February 26 - 28, 2017**

# **Unique Program Approaches in the Market**

## ***Driving the Market Through Wholesale Distributors***



## About VEIC

- Nonprofit; 30 years of reducing economic & environmental costs of energy
- Comprehensive results
- Energy efficiency, renewable energy, & transportation
- Program design, planning & evaluation, policy, advocacy, and research



**veic.org**

Efficiency  
Vermont

EFFICIENCY\$MART



DC  
SUSTAINABLE ENERGY  
UTILITY



## The Opportunity

**Significant Potential for Savings from  
HVACR & Hot Water Equipment Sold  
through HVACR Distributors**



## Heating & Cooling Savings

- **Heating & cooling** costs the average homeowner; **\$930 a year—nearly half the home's total energy bill.**
- ENERGY STAR certified **central air conditioners use 8% less & heat pumps 5% less energy than conventional new models.**
- If your central air conditioning unit is more than 12 years old, replacing it with a model that has earned the ENERGY STAR could cut your cooling costs by **30%.**
- Certified gas **furnaces are 12%-16%** more efficient than standard models and can save from \$35 to \$95 in energy costs per year.
- Look for ENERGY STAR certified boilers and geothermal heat pumps.

## ENERGY STAR Heat Pump Hot Water Heaters

- Use **less than half the energy** of a standard electric water heater
- Can save a **four-person household**
  - **\$330 per year** in energy bills
  - **\$3,400 over its lifetime**
  - will pay for its additional cost in two years
- More information available at [www.energystar.gov/rebatefinder](http://www.energystar.gov/rebatefinder)

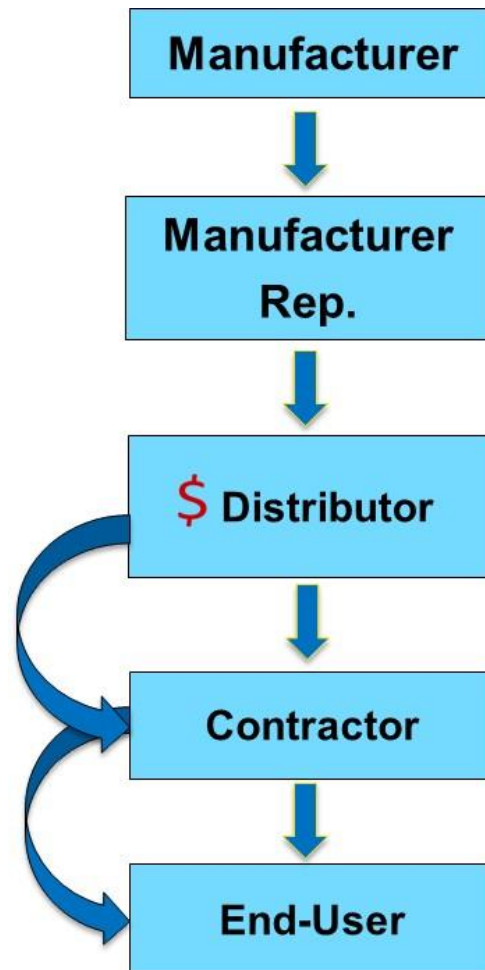




## The Opportunity

**Midstream Programs have proven to be highly effective for Equipment sold through HVACR Distributors**

## What is a Midstream Program?





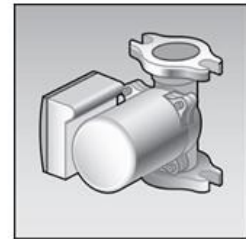
## Benefits of Midstream

1. Promotes increased availability, sales & installation of efficient equipment
2. Influences distributor stocking practices
3. Diminishes financial barriers
4. Facilitates market transformation





## Efficiency Vermont Participating Manufacturers



The new degree of comfort.™





## Efficiency Vermont Participating Manufacturers



**Haier**



**Panasonic**





## Participating Efficiency Vermont Midstream Distributors 16 Distributors, 48 Locations



F.W. WEBB COMPANY



*Blodgett* SUPPLY

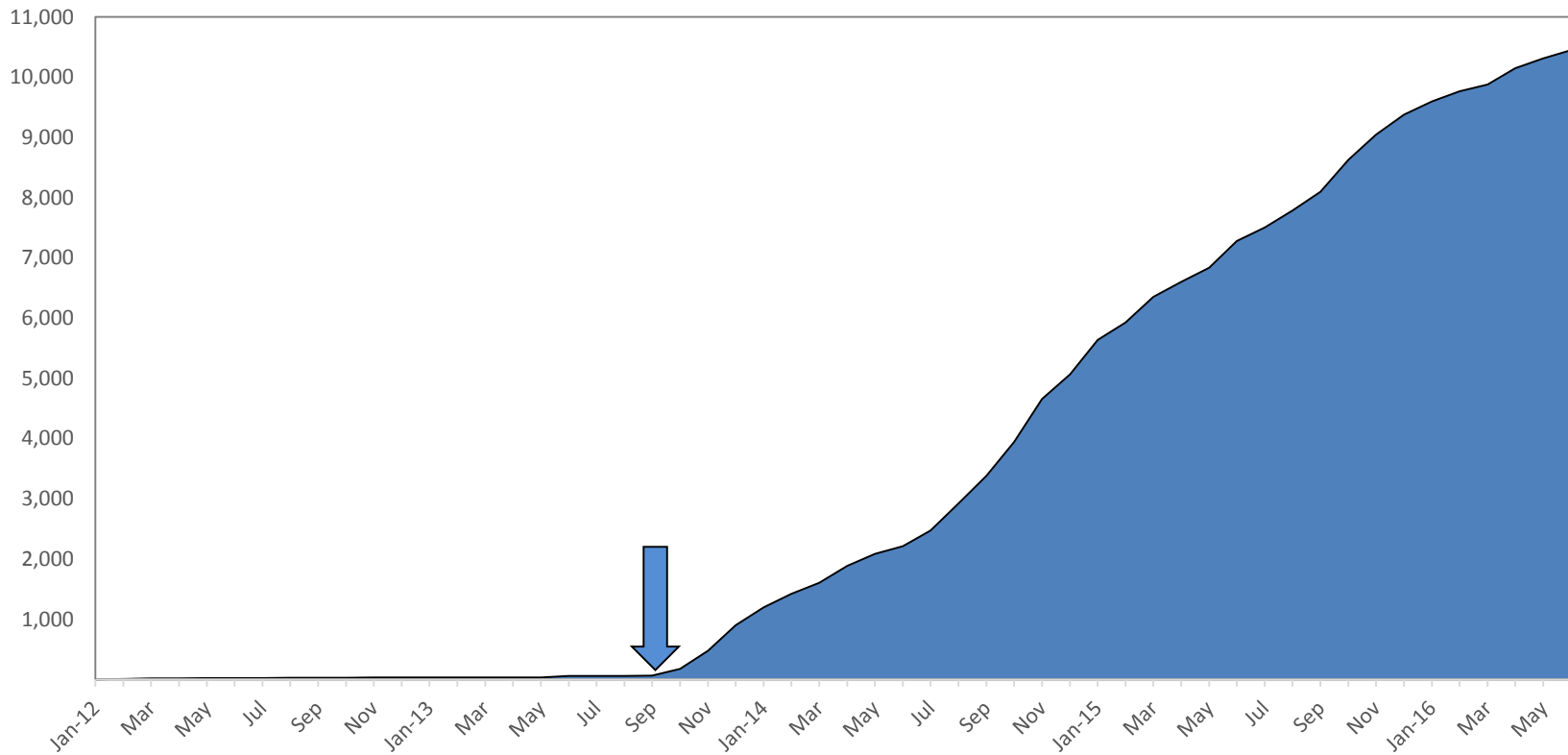


Appalachian Supply, Inc.





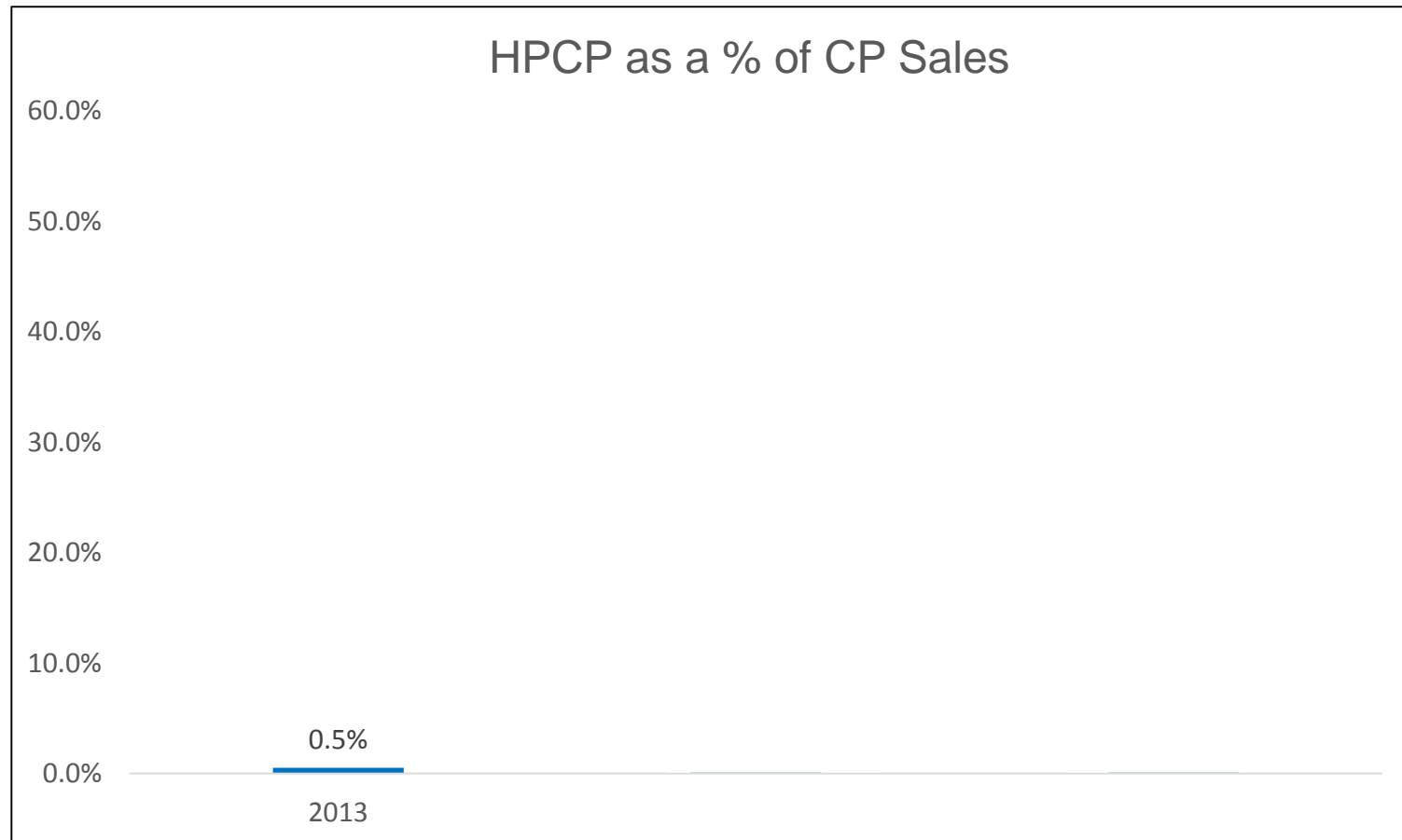
## Efficiency Vermont High-Performance Circulator Pump Results



**Every 2.5 Days = TOTAL ANNUAL AVERAGE before Midstream Program!!**

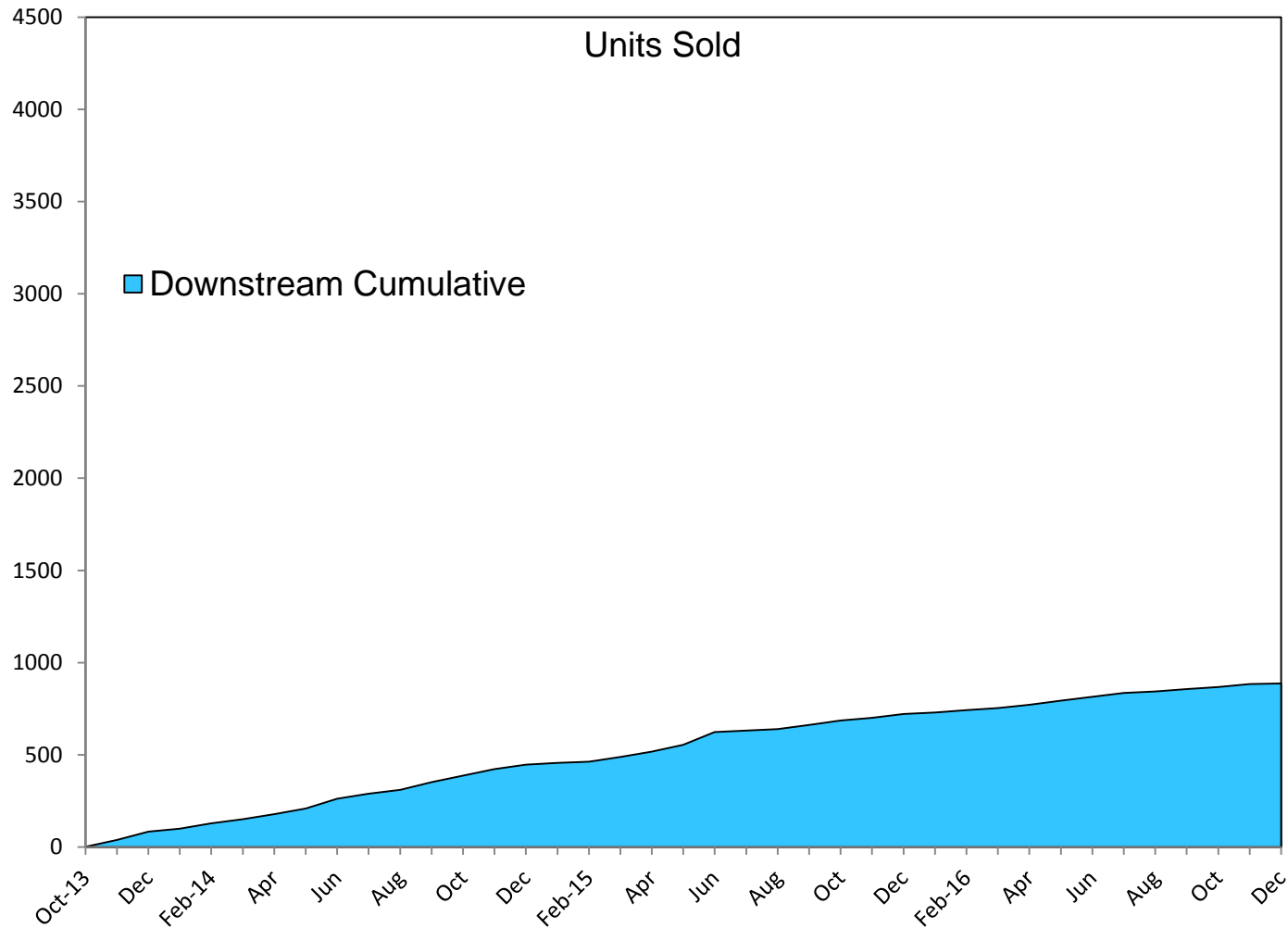


## Vermont Distributors *Before & After* Midstream



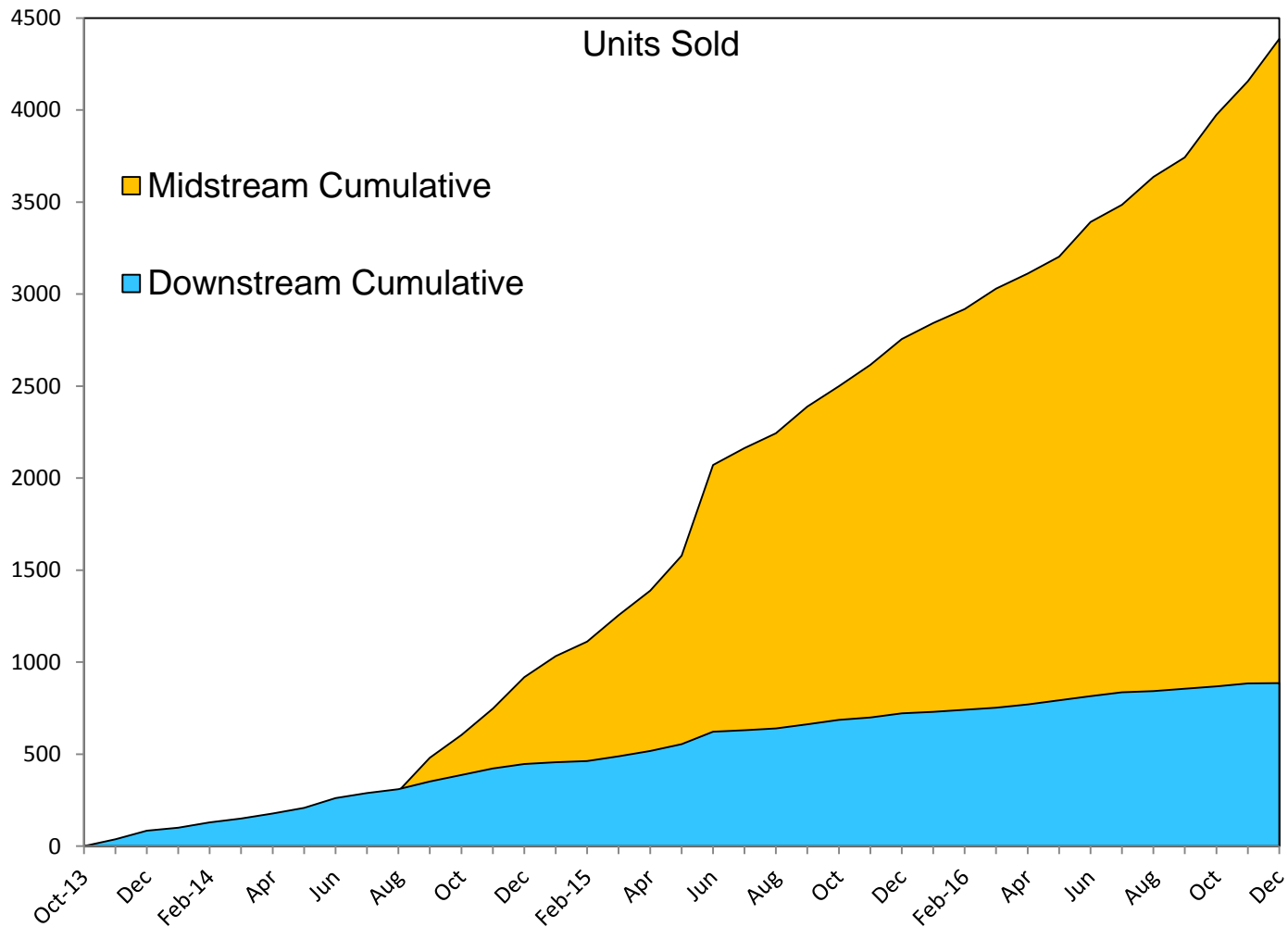


## Midstream vs. Downstream: Heat Pump Water Heaters





## Midstream vs. Downstream: Heat Pump Water Heaters





## Efficiency Vermont Heat Pump Water Heater Metrics

	US	VT	VT %
<b>Population</b>	324,227,000	626,562	<b>0.2% of Population</b>
<b>Annual # of HPWH Units</b>	60,000	<b>~3,600</b>	VT: <b>6%</b> of US Total HPWHs
<b>HPWH Penetration %</b>	2%	<b>60%</b>	<b>+2900%</b>

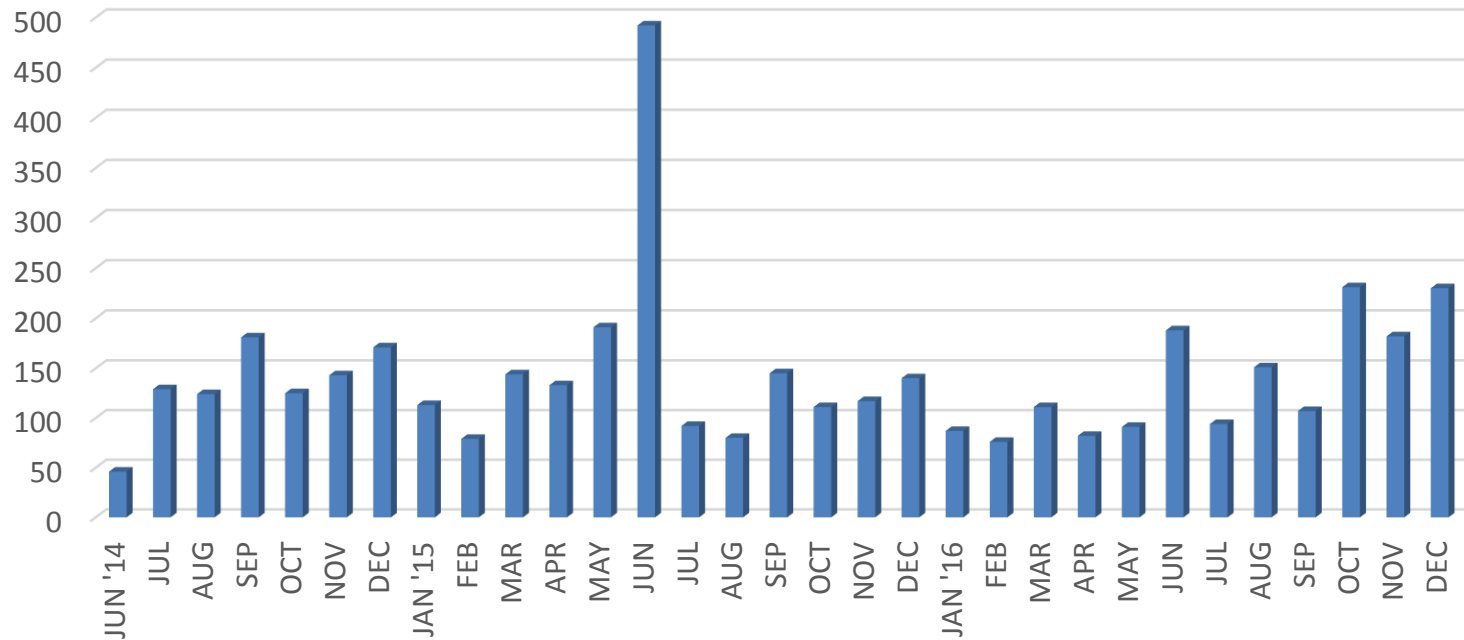
	<u>BEFORE</u>	<u>AFTER</u>	
<b>VT HPWH Penetration % Before &amp; After Midstream</b>	7%	<b>60%</b>	<b>+750%</b>



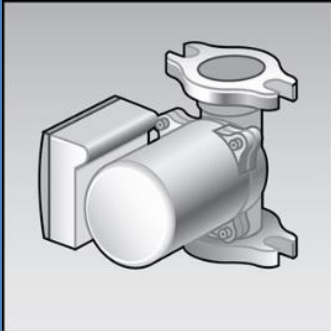
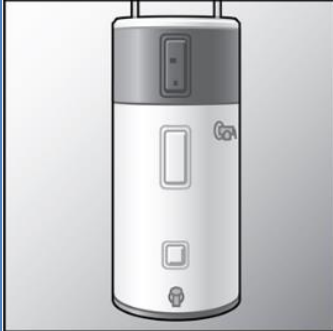



# Consolidated HPWH Participating Vermont Distributors' Results

4,386 TOTAL Units  
Jun '14 - Dec '16



## Efficiency Vermont Midstream Program Impact

	HPCP	HPWH	CCHP
			
Increase in Sales	<b>8,550%</b>	<b>750%</b>	<b>50%</b>



## The Challenge

# Barriers to Successful Implementation of Midstream Programs

## Things That Can Go Wrong...

Contractors not **trained** to sell or correctly install high-efficiency equipment



## Things That Can Go Wrong...

Distributors left w/ **excess inventory** after program are suspended or terminated



## Things That Can Go Wrong...

Utility Programs don't understand the Distributors' **business model** & don't optimize data collection



## Things That Can Go Wrong...

The **utility doesn't get any credit** because their involvement is invisible to the customer



“I don't think I got a rebate, did I?”

## Midstream Programs are Different

- Midstream programs rely on **different tools, systems & expertise** than downstream programs
- **Understanding the supply chain is key**







## The Solution

# Engage the Distribution Supply Chain



## Key Steps to Engage the Supply Chain

- ✓ Establish the value proposition for distributors
- ✓ Map the supply chain
- ✓ Define program requirements & incentives
- ✓ Collaborate with manufacturers, reps & distributors on sales, marketing, training & inventory plans



## Understand Distributors' Profit Model

**Return on Net Assets (RONA) =**

Distributor Net Income

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Inventory + Accounts Receivable – Accounts Payable



## Distributor's Profit Model

- ✓ **Impact w/ GP, GM & NI**
- ✓ **Decrease Inventory Investment, Increase Inventory turnover**
- ✓ **Decrease Accounts Receivable, accelerated reimbursement**
- ✓ **Potentially extend Accounts Payables**



## Distributor Value Proposition

### A strategic partnership

Factor	Standard pump	HPCP pump	Variance
Resale from distributor to customer	\$65	\$165	\$100
Distributor cost (estimate)	\$52	\$120.25	\$68.25
Incentives at distributor's point of sale	-	\$100	-
Resale value, with \$100 incentive to distributor's customer	\$65	\$65	-
Gross profit per circulator pump	\$13	\$44.75	\$31.75
Gross margin per circulator pump	20%	27%	
Gross profit generated from 10,000 units / year	\$130,000	\$447,500	\$317,500



## Distributor Value Proposition

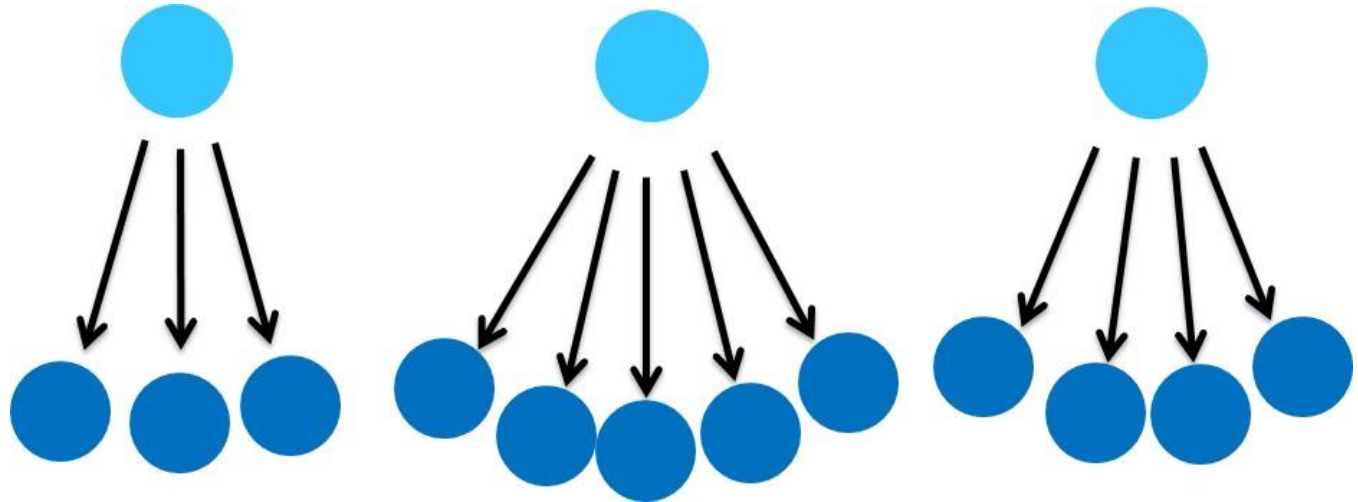
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Gross margin per circulator pump	20%	27%	<b>244%</b>
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## Map the Supply Chain

**Manufacturers /  
Manufacturer  
Reps**

**Distributors**





## Define Program Requirements & Incentives

- **Define performance criteria** for products included in midstream program
  - **ENERGY STAR** for many product categories
- Set incentive levels
  - Based on **incremental cost & program yield targets**
  - **Instant rebates strongly preferred by contractors & end-users**
- Design & offer **administrative / mngt. fees** to distributors; per/unit basis





# Collaborate with Manufacturers, Reps & Distributors; Sales, Marketing & Training Plans

**You just made a very smart decision**

By installing a cold-climate heat pump, you'll save energy and money and be more comfortable, too.

Here are a few ways to get the most out of your heat pump:

<p><input checked="" type="checkbox"/> <b>SET IT AND FORGET IT</b></p> <p>Set your temperature preferences and don't change them unless you're leaving for more than a week.</p>	<p><input checked="" type="checkbox"/> <b>AVOID DUELING HEAT SOURCES</b></p> <p>Set your back-up system 10° lower than the heat pump, so it won't kick on unless needed.</p>
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**GOOD NEWS: YOUR CONTRACTOR IS**  
Your unit was purchased at a special price from distributor, thanks to up to a \$400 discount from

Want to save even more? Keep rea

888-921-5990  
[www.encyvermont.com/coldclimateheatpumps](http://www.encyvermont.com/coldclimateheatpumps)

## Hybrid Water Heater Rebate

A Partnership between FW Webb - GE - Efficiency Vermont

In order to get Efficiency Vermont's \$550 instant-off rebate at FW Webb for the purchase of a GE Geospring™ Hybrid Water Heater, you will need to come to Webb with some basic information about the location where the equipment will be installed. Use the following checklist to ensure a smooth purchase.

<p><b>Required Information:</b></p> <ul style="list-style-type: none"> <li>• <b>Purchase Type</b> <ul style="list-style-type: none"> <li><input type="radio"/> New?</li> <li><input type="radio"/> Replacement?</li> </ul> </li> </ul>	<p><b>Requested Information:</b></p> <ul style="list-style-type: none"> <li>• <b>Install Location</b> <ul style="list-style-type: none"> <li><input type="radio"/> Customer name</li> <li><input type="radio"/> Phone Number</li> <li><input type="radio"/> Number of bedrooms (if residential)</li> <li><input type="radio"/> Primary space heat fuel type (Electric, LP, Oil/Kero, Wood/Biomass, or Other)?</li> </ul> </li> </ul>
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*Thank you*  
for purchasing & installing an

**ENERGY EFFICIENT HEAT PUMP WATER HEATER!**

Enjoy the years of energy savings ahead of you!

Visit [www.encyvermont.com](http://www.encyvermont.com) for more information

Efficiency Vermont

**GOOD NEWS**

If you or your contractor purchased your unit from a participating HVAC distributor, you have already received the maximum \$400 rebate through Efficiency Vermont. This rebate cannot be used in conjunction with any other rebate offered by Efficiency Vermont. Please see [www.encyvermont.com/hpwhdistributors](http://www.encyvermont.com/hpwhdistributors) for a list of participating distributors.



# ENERGY STAR Distributed Products Platform



## ENERGY STAR Distributed Products Platform

- **Information & resources** to support utilities and EE programs interested in starting or improving midstream incentive programs for distributed products
- Will include a subset of ENERGY STAR certified HVACR products:
  - Heat pump water heaters
  - Ductless mini split heat pumps
  - Furnaces and boilers
- Access to ENERGY STAR as a reputable brand & 3<sup>rd</sup> party certification



## ENERGY STAR Distributed Products Platform Objectives

- **Support utility programs** interested in launching midstream programs for ENERGY STAR HVACR equipment
- **Enable utility programs to ramp up energy savings** while reducing administrative costs
- **Substantially increase manufacturer, reps & distributors' sales / margins** for efficient products included in the platform
- **Save energy & transform the market**



## Next Steps

- **EPA is seeking to learn what barriers** utilities are having w/ implementing midstream HVACR programs:
  - What turnkey resources would be helpful?
  - What support do you need?
- More resources coming soon; mid '17
- Let us know if you are interested in being part of the dialogue
  - Sign-up sheets at VEIC booth.
- Contact information:

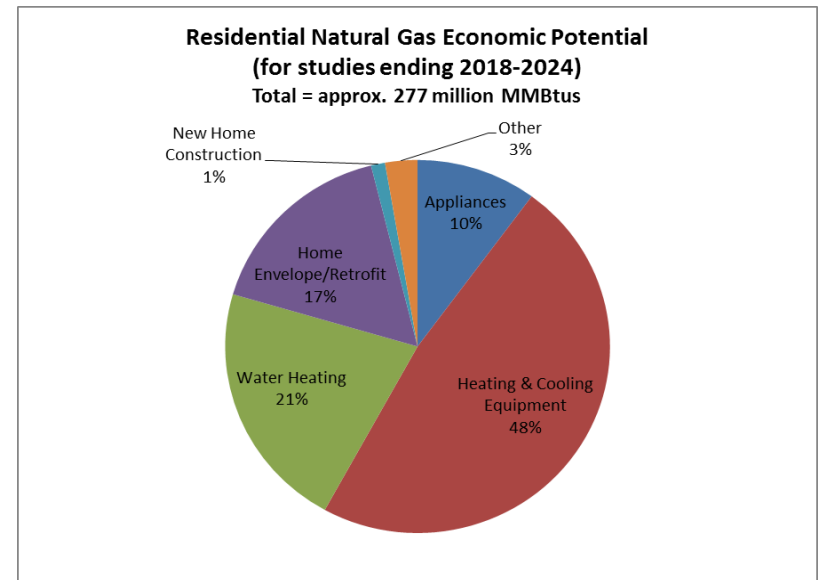
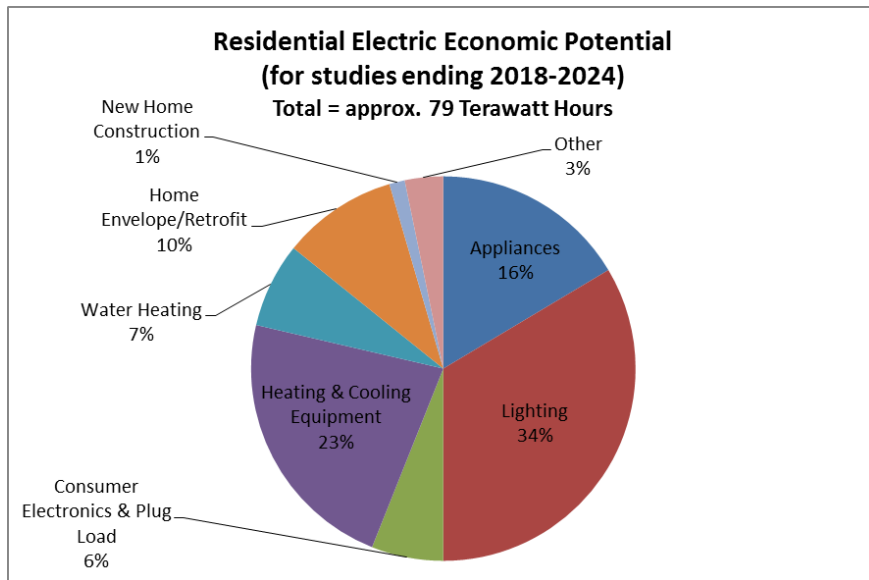
Howard Merson, VEIC  
Consultant, Distributed Products Platform  
[hmerson@veic.org](mailto:hmerson@veic.org) / p: 802-540-7821 / c: 802-310-8447

Stacy Glattig, U.S. Environmental Protection Agency  
Environmental Protection Specialist, ENERGY STAR Programs  
[glattig.stacy@epa.gov](mailto:glattig.stacy@epa.gov) / p: 202-343-9138 / c: 202-617-1001

# APPENDIX



## Economic Potential: Residential Sector for Studies Ending 2018-2024



**NOTE:** 79 TWhs equals 269 million MMBtus.

Conversion: 1 TWh = 3,412,141.633 MMBtus  
Source: <http://www.convert-measurement-units.com/conversion-calculator.php>

### Opportunities exist through:

- Efficient technology
- Nexus of technology and behavior
- Behavior

## Addressing Emergency Replacement

- Majority of sales are replacements, most on emergency basis.
- Inefficient/federal minimum equipment dominates distributor stock.
- Inertia and a lack of incentives at the distributor level lead to ‘lowest common denominator’ choices by contractors.
- High initial cost to homeowner for efficient HVAC.
- Emergency replacement also limits quality installation (QI) because of the additional cost and time to install correctly.
  - Who wants a duct check and repair when they don’t have heat or AC?

