

**Market Madness**  
*Coordinating Supply Chain Players  
on the HPWH Court*

**ACEEE Hot Water Forum**  
**Water Heating, Distribution, and Use Efficiency**

**Hilton Portland & Executive Tower**  
**Portland, OR • February 26 - 28, 2017**

**Howard Merson**  
Vermont Energy  
Investment Corp.  
VEIC, Consulting



Vermont  
**Energy Investment**  
Corporation

# 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

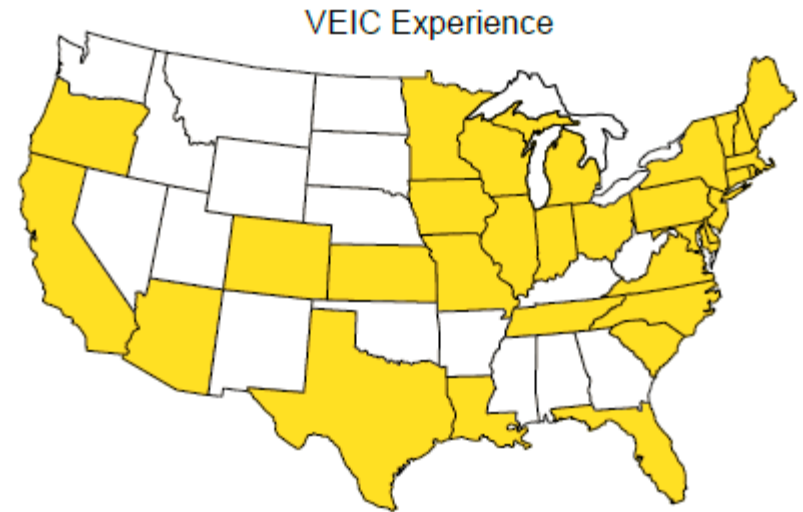
EFFICIENCY\$MART



DC  
SUSTAINABLE ENERGY  
UTILITY

# About VEIC

- 330+ employees
- National & international consulting / implementation
- Clients
  - Utilities, trade associations, government agencies, regulators, foundations, and advocates

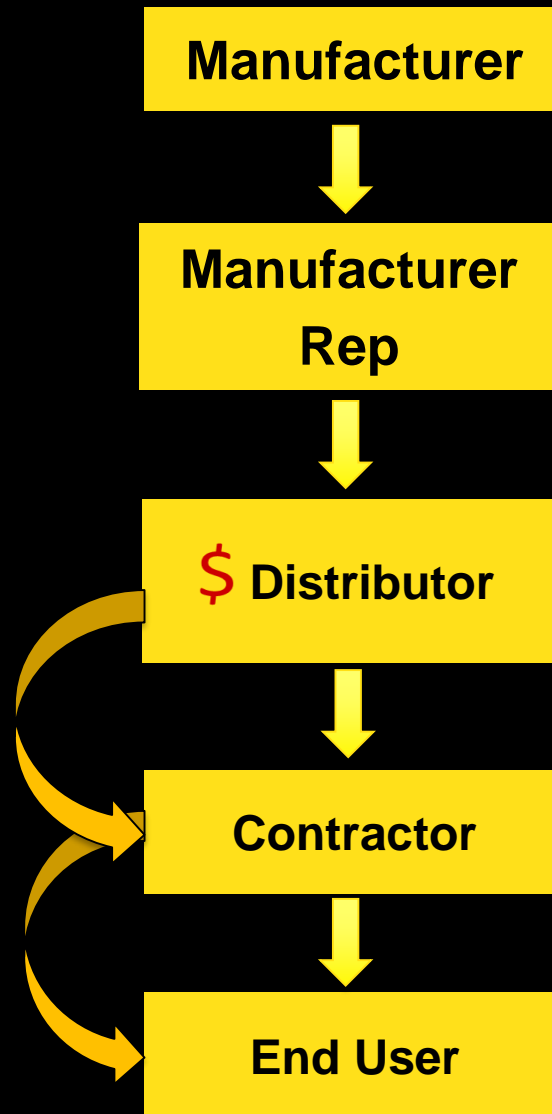


# Examples of VEIC's Utility Clients



# **HVACR Upstream**

# What is an upstream program?

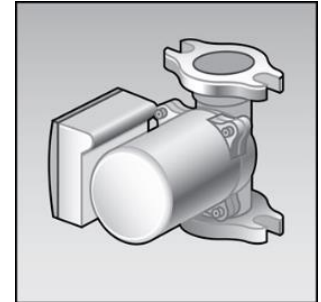


# Benefits of Upstream

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



# Participating Manufacturers



The new degree of comfort.™



# Participating Manufacturers



Haier



Panasonic

QM POWER



*In the future...*



# Upstream Distributors

## 16 Distributors, 48 Locations



F.W. WEBB COMPANY



*Blodgett* SUPPLY



Appalachian Supply, Inc.



# **HVACR Upstream Approach**

## VEIC's Approach to Upstream

1. Project Planning
  2. Establish Value Proposition
  3. Mapping the Supply Channel
  4. Eligibility & Performance Request
  5. Data Collection
  6. VEIC 101/201 Planning Sessions
  7. Establish Incentive Levels
  8. Administration / Management Fees
- Develop SMIT Plans
- MOU

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# Understand Distributors' Profit Model

Return on Net Assets (RONA) =

Distributor Net Income

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Inventory + Accounts Receivable – Accounts Payable



# Distributors' Profit Model

RONA driver	Consideration
Increase gross margin (GM), gross profit (GP) & net income (NI)	• Energy-efficient products affect GM, GP, & NI

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<p>Decrease inventory investment &amp; increase turnover</p>	<ul style="list-style-type: none"> <li>• Collaborative sales &amp; marketing</li> <li>• Intensive product &amp; program training</li> <li>• Incentives increase market demand</li> <li>• NO manufacturer penalties</li> </ul>

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Accounts Payable (AP)	<ul style="list-style-type: none"><li>• Avg. AP terms 30 - 35 days; Target: 45 - 240 days</li></ul>

# Distributor Value Proposition - HPCP

## 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

# Distributor Value Proposition - HPCP

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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 - HPCP

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Gross profit per circulator pump	\$13	\$44.75	\$31.75 / \$13
Gross margin per circulator pump	20%	27%	<b>244%</b>
Gross profit generated from 10,000 units / year	\$130,000	\$447,500	\$317,500



# Distributor Value Proposition - HPWH

	Electric Resistance	HPWH	Variance
Resale from distributor to customer	\$458	\$1054	\$596
Distributor cost (estimate)	\$376	\$850	\$474
Gross profit per water heater	\$82	\$204	\$122
Gross profit generated from 25,000 units / year	\$2,050,000	\$5,100,000	\$3,050,000

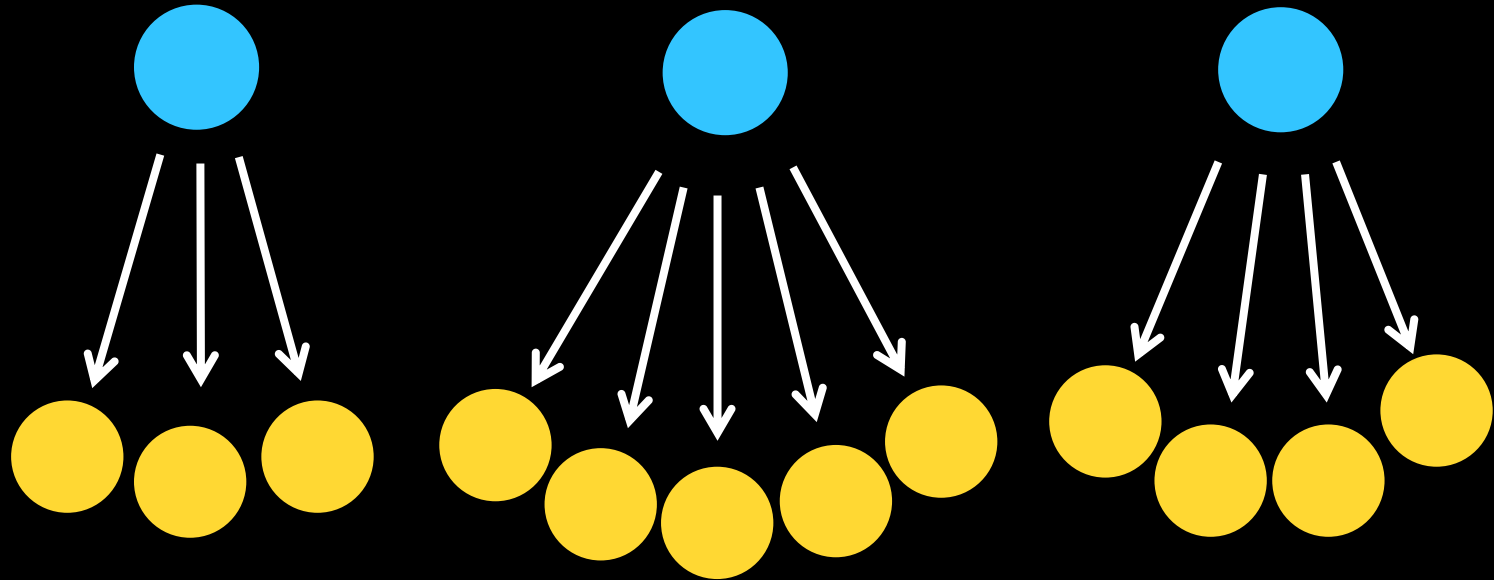
HPWH increase distributor value **150%**

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# TARGET: Use Supply Channel Approach

Manufacturers /  
Manufacturer  
Reps

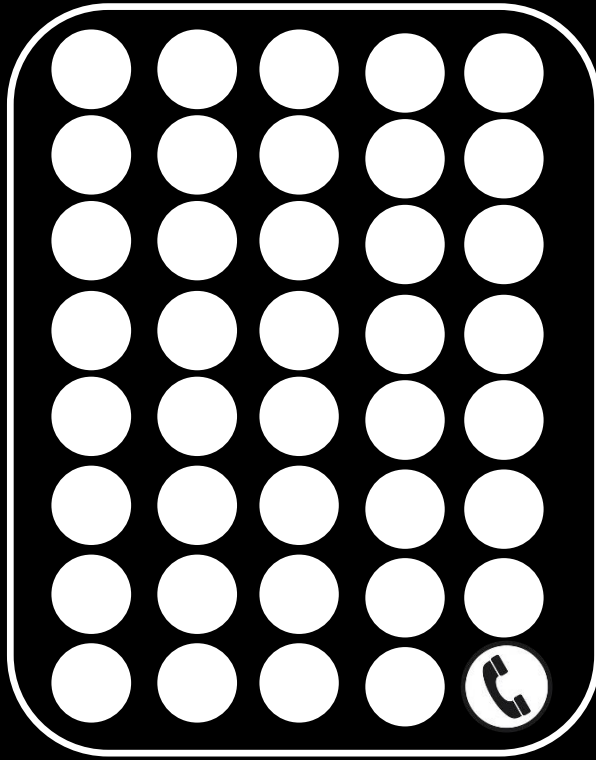


Distributors

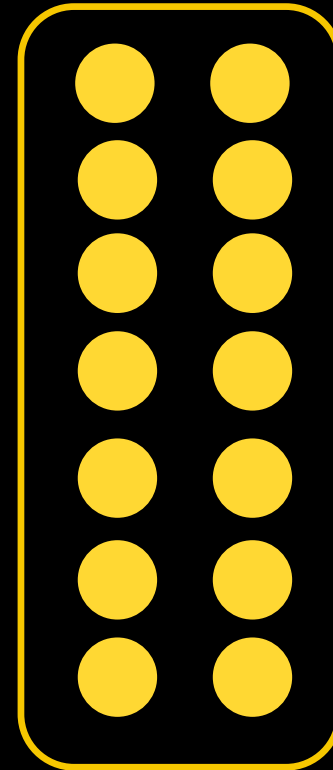
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# Optimize the Collection of Transactional Data



40




14



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# HVACR Upstream Incentives & Fees



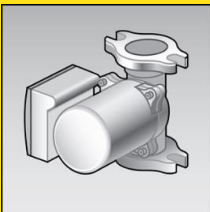
Upstream program	Current incentive / unit	Current administration / management fee / unit	Comments
<p>HPWH</p> 	\$600	\$65	<ul style="list-style-type: none"><li>• Aggressive incentive &amp; fee</li><li>• Sales under duress (95%)</li><li>• Small window of upsell opportunity</li></ul>

# HVACR Upstream Incentives & Fees

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<p><b>CCHP</b></p> 	<p>\$600 single zone \$800 multi-zone</p>	\$50	<ul style="list-style-type: none"> <li>• Aggressive fee</li> <li>• Complex sale</li> <li>• Inventory investment</li> </ul>



# HVACR Upstream Incentives & Fees

Upstream program	Current incentive / unit	Current administration / management fee / unit	Comments
<b>HPWH</b> 	\$400	\$65	<ul style="list-style-type: none"> <li>Aggressive incentive &amp; fee</li> <li>Sales under duress (95%)</li> <li>Small window of upsell opportunity</li> </ul>
<b>CCHP</b> 	\$300 single zone \$400 multi-zone	\$50	<ul style="list-style-type: none"> <li>Aggressive fee</li> <li>Complex sale</li> <li>Inventory investment</li> </ul>
<b>HPCP</b> 	\$50 \$200 \$600	\$3 \$3 \$50	<ul style="list-style-type: none"> <li>Tiered fee: \$ / MWh</li> </ul>

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# **SMIT:**

## **Sales, Marketing, Inventory & Training**

- **Internal / external stakeholder planning meetings**
- **RFI (Request for information) to suppliers**
- **Suppliers: Develop & present SMIT plan**
- **SMIT strategy planning sessions**

# SMIT Supply Channel Feedback

***“The most comprehensive program for impacting the marketplace. We are proud to be asked to be a partner.”***

**– Distributor, VP-Residential Sales**

***“VEIC team, I want to thank you all for a great meeting and looking forward to working with you. Thank you again for your time and information shared.”***

**– Manufacturer, Division Sales Manager**

***“We, as manufacturers, look to you for guidance in what equipment to develop and bring to market. Efficiency Vermont is really a national leader on this.”***

**– Manufacturer, Regional Sales Manager**

# SMIT Examples

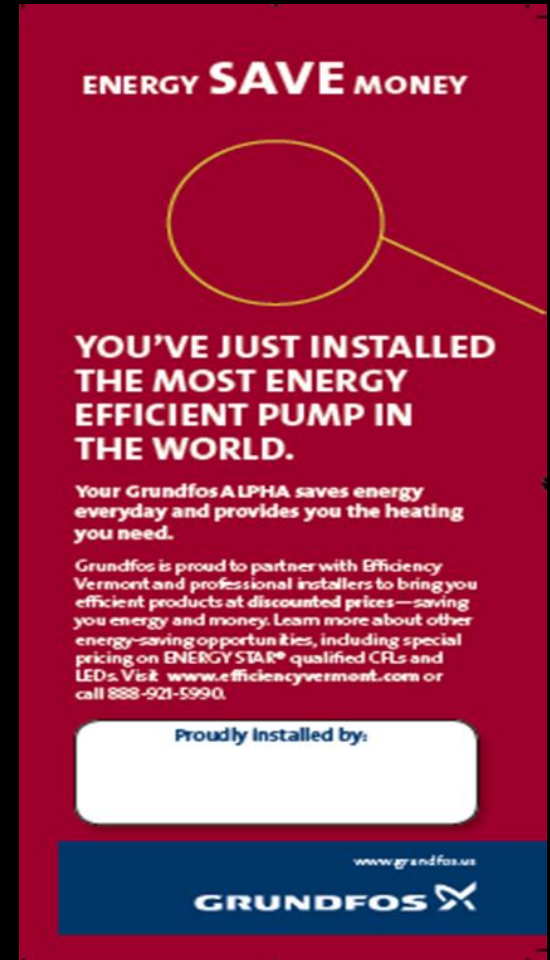
# Joint Marketing Efforts

**Challenge:** Communicate end-user benefits of upstream programs to contractors & customers

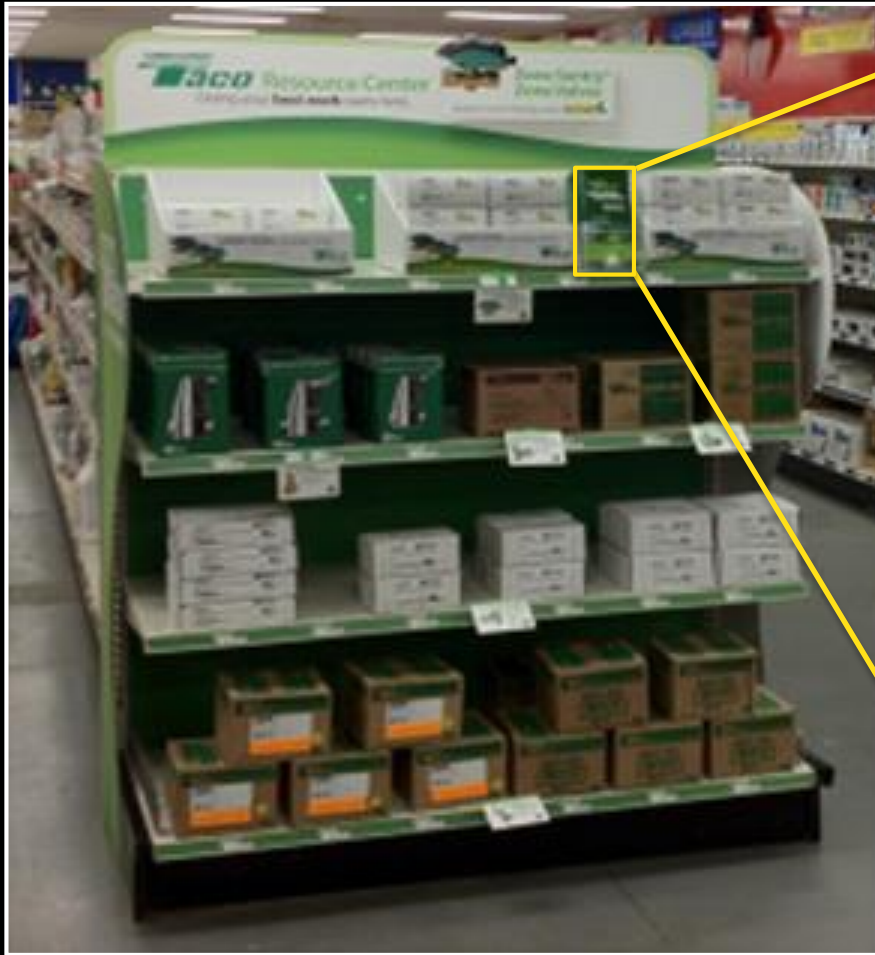
**Solution:** Visual materials



Box sticker



# HPCP Joint Marketing Efforts



Introducing **instant green.**  
Instant savings. Delta-T easy.

**\$80 REBATE!**  
Go to [www.e-smart.com/delta-t](http://www.e-smart.com/delta-t)

**e-smart**  
Power Saving Products

**AT**  
[www.delta-project.com](http://www.delta-project.com)

**Taco**  
Do your best work.

## High-Efficiency HVACR Products for the price of conventional

Funded by Efficiency Vermont

Find a full list of qualifying HVACR products and discounts at: [www.efficiencyvermont.com/upstream](http://www.efficiencyvermont.com/upstream)  
Or call 888-921-5990 for more information.

Discounts effective 7/1/2015 through 12/31/2015

Efficiency Vermont

Efficiency Vermont

### Everybody wins

Now you can provide the energy-efficient HVACR products your customers are looking for—at deep discounts.

End-user customers will enjoy greater comfort and lower bills, contractors and distributors will increase sales and customer satisfaction, and all of Vermont benefits through lower energy demand and related costs.

### How does it work?

Efficiency Vermont subsidizes the cost of qualifying efficient products by paying rebates directly to distributors, who pass the savings on to installers, who then pass these savings on to end-users.

Contractors purchase qualifying products, provide end-user information, and receive in-store discount.

Call 888-921-5990 for more information.

Efficiency Vermont

### COLD-CLIMATE HEAT PUMPS

UP TO A \$400 DISCOUNT

Cold-climate heat pumps heat and cool homes at a fraction of the cost of conventional heating and cooling. By moving heat rather than generating it, heat pumps typically consume much less energy than traditional electric, propane, or oil heating systems. Depending on the system they offer, heat pumps can save between \$5,000 and \$20,000 over the lifetime of the unit.

Visit [www.efficiencyvermont.com/fchp](http://www.efficiencyvermont.com/fchp) partners for full product list, participating distributors, and more information.

### HEAT PUMP WATER HEATERS

\$400 DISCOUNT\*

Heat pump water heaters can cost less than half as much to operate compared to traditional electric resistance water heaters, and save as much as \$4,900 over the lifetime of the unit. In addition to providing domestic hot water, heat pump water heaters also dehumidify the space around them.

Visit [www.efficiencyvermont.com/hpw](http://www.efficiencyvermont.com/hpw) partners for full product list, participating distributors, and more information.

Not available for natural gas conversions. As of January 1, 2016, Efficiency Vermont will no longer provide a discount for heat pump water heaters that are GE patents or larger.

### HIGH-PERFORMANCE CIRCULATOR PUMPS

DISCOUNTS VARY BY PRODUCT

Circulator pumps use advanced controls and business model technology to optimize pump operation, resulting in lower energy use up to 85% compared to conventional circulator pumps.

Visit [www.efficiencyvermont.com/pumps](http://www.efficiencyvermont.com/pumps) for full product list, participating distributors, specific discounts, and more.

Thank you  
for purchasing & installing an

## ENERGY EFFICIENT HEAT PUMP WATER HEATER!

Enjoy the years of energy savings ahead of you!

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

### 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.efficiencyvermont.com/hpw](http://www.efficiencyvermont.com/hpw) distributors for a list of participating distributors.



Efficiency Vermont

## 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:



#### SET IT AND FORGET IT

Set your temperature preferences and don't change them unless you're leaving for more than a week.



#### AVOID DUELING HEAT SOURCES

Set your back-up system 10° lower than the heat pump, so it won't kick on unless needed.



#### AIR SEAL AND INSULATE

The tighter your home, the less energy your heat pump will need to keep you comfortable.

**GOOD NEWS: YOUR CONTRACTOR IS SMART, TOO.**  
Your unit was purchased at a special price from a participating distributor, thanks to up to a \$400 discount from Efficiency Vermont.

Want to save even more? Keep reading ▶

888-921-5990

[www.efficiencyvermont.com/coldclimateheatpumps](http://www.efficiencyvermont.com/coldclimateheatpumps)

Efficiency Vermont

## More smart ways to save, brought to you by Efficiency Vermont:

### HEAT PUMP WATER HEATERS

\$400 OFF REGULAR PRICE

### HIGH PERFORMANCE CIRCULATOR PUMPS

DISCOUNTS VARY BY MODEL

### CLOTHES DRYERS

UP TO \$400 CASH BACK

### REFRIGERATORS

UP TO \$75 CASH BACK

Find information about these deals and more by visiting [www.efficiencyvermont.com](http://www.efficiencyvermont.com) or call 888-921-5990.

Efficiency Vermont

128 Lakeside Avenue, Suite 401  
Burlington, VT 05401

## 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.

### Required Information:

- **Purchase Type**
  - New?
  - Replacement?
- **Replacing Natural Gas Water Heater**
  - Yes? — **NOT ELIGIBLE**
  - No?
- **Replacing Electric Water Heater**
  - Yes
  - No
- **Bill To**
  - Purchaser Info
    - Company or Purchaser Name
    - Address
    - Phone
- **Install Location**
  - Address
- **Install Type**
  - Residential?
  - Commercial?

### Requested Information:

- **Install Location**
  - Customer name
  - Phone Number
  - Number of bedrooms (if residential)
  - Primary space heat fuel type (Electric, LP, Oil/Kero, Wood/Biomass, or Other?)



Vermont  
Energy Investment  
Corporation





**Upstream Website**

**Participating  
Distributors**

**QPLs**

Logos & hyperlinks

## Heat Pump Water Heater

Participating Distributors  
Effective 7/2/2014; Updated 8/23/2016



Distributor Name	Phone	City	State	HPWH Manufacturer
Blodgett Supply <a href="http://www.blodgettssupply.com">www.blodgettssupply.com</a>	802-229-5105	Montpelier	VT	Rheem <a href="http://www.rheem.com">www.rheem.com</a>
	802-334-0151	Newport	VT	
	802-775-3342	Rutland	VT	
	802-295-3143	White River Junction	VT	
Central Supply <a href="http://www.plumberssupplyco.com">www.plumberssupplyco.com</a>	802-864-9831	Williston	VT	RUUD <a href="http://www.ruud.com">www.ruud.com</a>
	603-448-5116	Lebanon	NH	
	603-747-2328	Woodsville	NH	
F.W. Webb Company <a href="http://www.fwwebb.com">www.fwwebb.com</a>	802-479-3373	Barre	VT	GE <a href="http://www.ge.com">www.ge.com</a> Bradford White <a href="http://www.bradfordwhite.com">www.bradfordwhite.com</a>
	802-447-2312	Bennington	VT	
	802-257-4316	Brattleboro	VT	
	802-775-1922	Rutland	VT	
	802-885-8127	Springfield	VT	
	802-527-0531	St Albans	VT	
	802-748-8101	St Johnsbury	VT	
	802-863-1167	Williston	VT	
	603-357-1877	Keene	NH	
	603-448-1980	Lebanon	NH	
The Granite Group <a href="http://www.thegrantegrup.com">www.thegrantegrup.com</a>	802-476-6239	Barre	VT	State <a href="http://www.statewaterheaters.com">www.statewaterheaters.com</a>
	802-658-2747	Burlington	VT	
	802-323-1330	Newport	VT	
	802-773-1209	Rutland	VT	
	802-383-4510	South Burlington	VT	
	603-357-0350	Keene	NH	
Hulbert Supply <a href="http://www.hulbertsupply.com">www.hulbertsupply.com</a>	603-442-6480	Lebanon	NH	AO Smith <a href="http://www.aosmith.com">www.aosmith.com</a>
	802-862-6426	Burlington	VT	
	802-862-6427	Brandon	VT	
Premier Supply Group <a href="http://www.premiersupplygroup.com">www.premiersupplygroup.com</a>	802-257-9230	Brattleboro	VT	Rheem <a href="http://www.rheem.com">www.rheem.com</a>
	603-443-9768	Lebanon	NH	
	413-588-5391	Greenfield	MA	
RE Michel	802-862-3661	Williston	VT	Bradford White <a href="http://www.bradfordwhite.com">www.bradfordwhite.com</a>

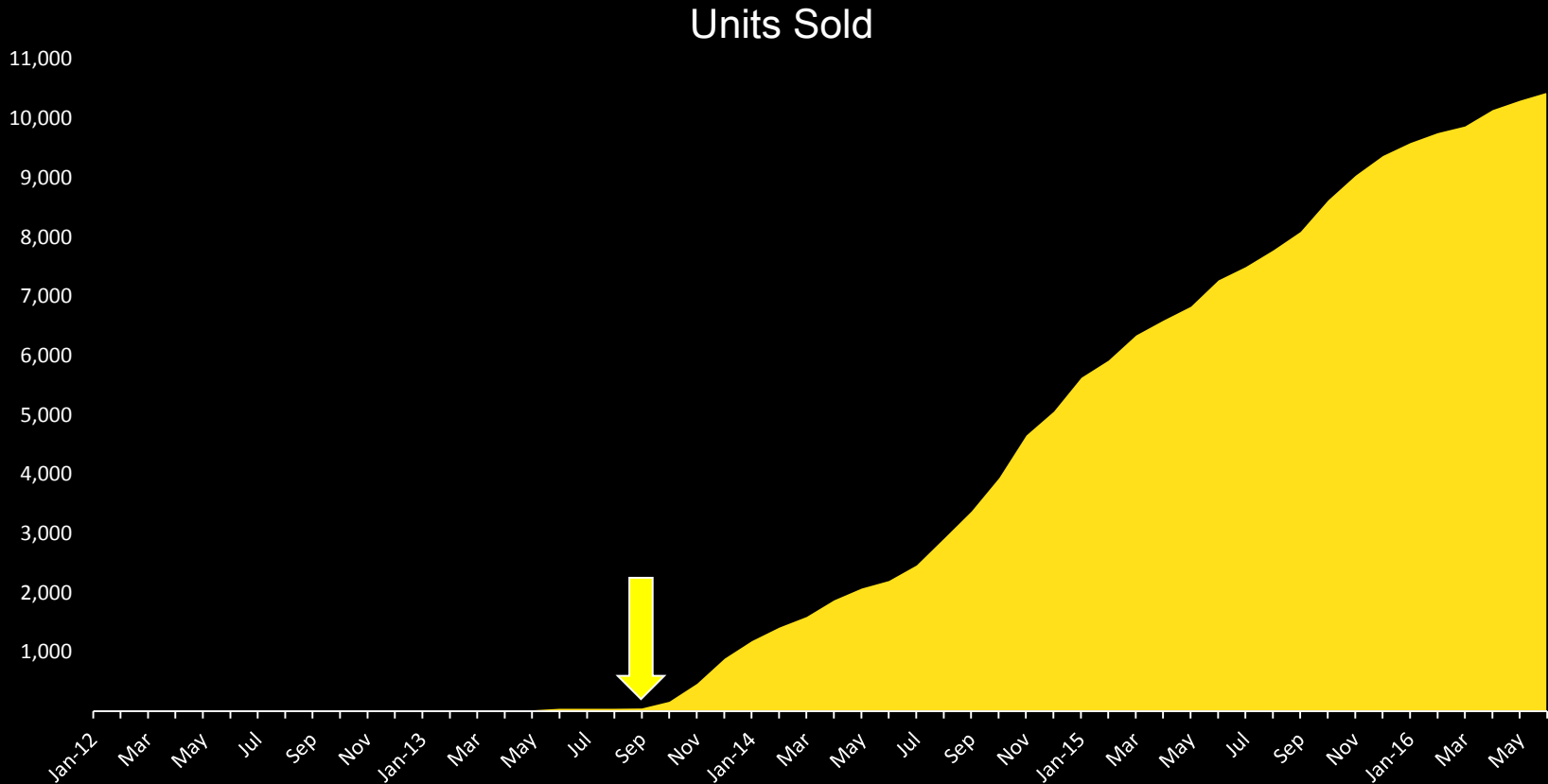
### Participating Manufacturers:



For more information, visit: [www.encyciencyvermont.com/hpwhpartners](http://www.encyciencyvermont.com/hpwhpartners)

# **HVACR Upstream Results**

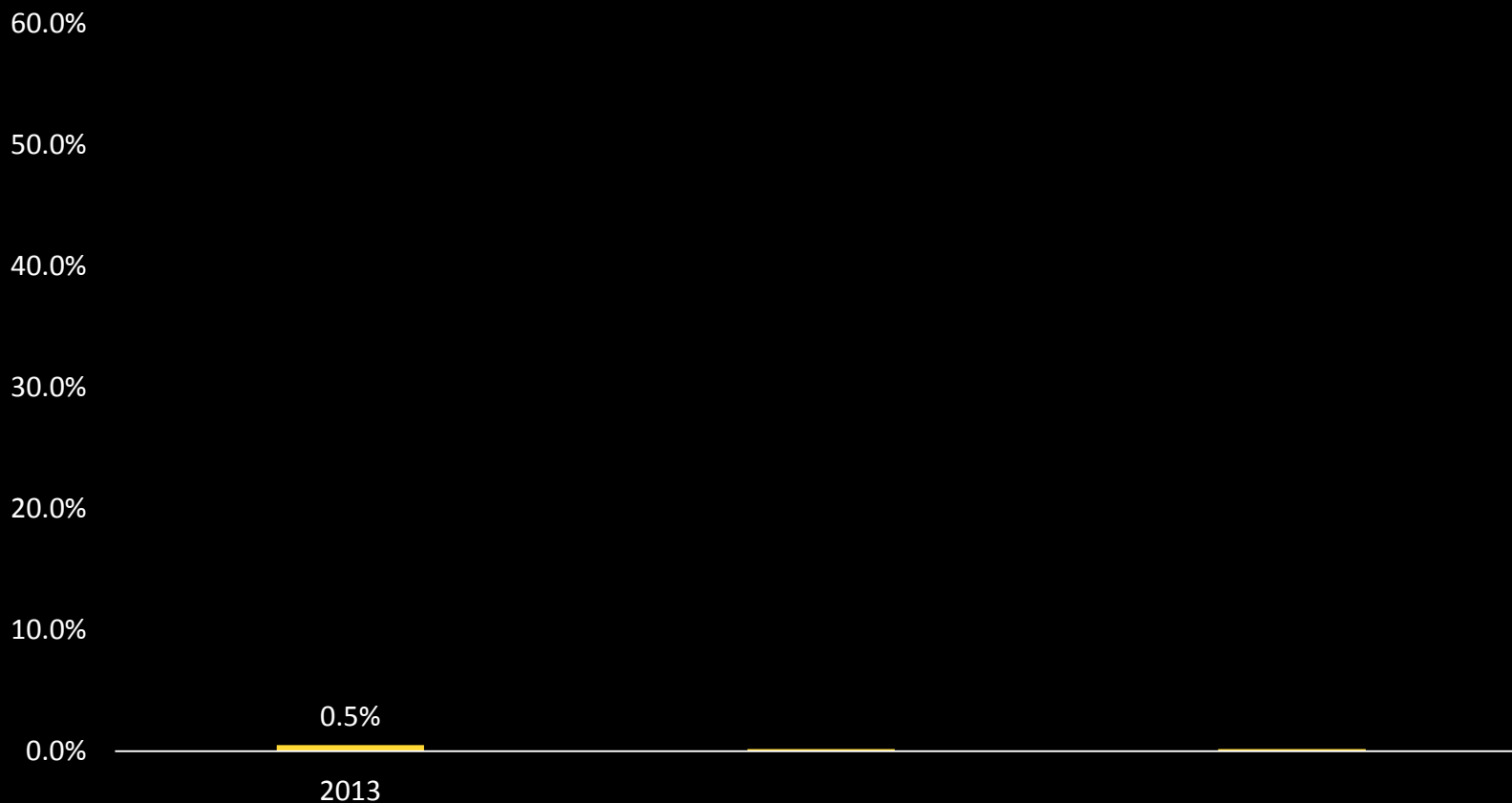
# Consolidated Results from Participating Vermont Distributors of High-Performance Circulator Pumps



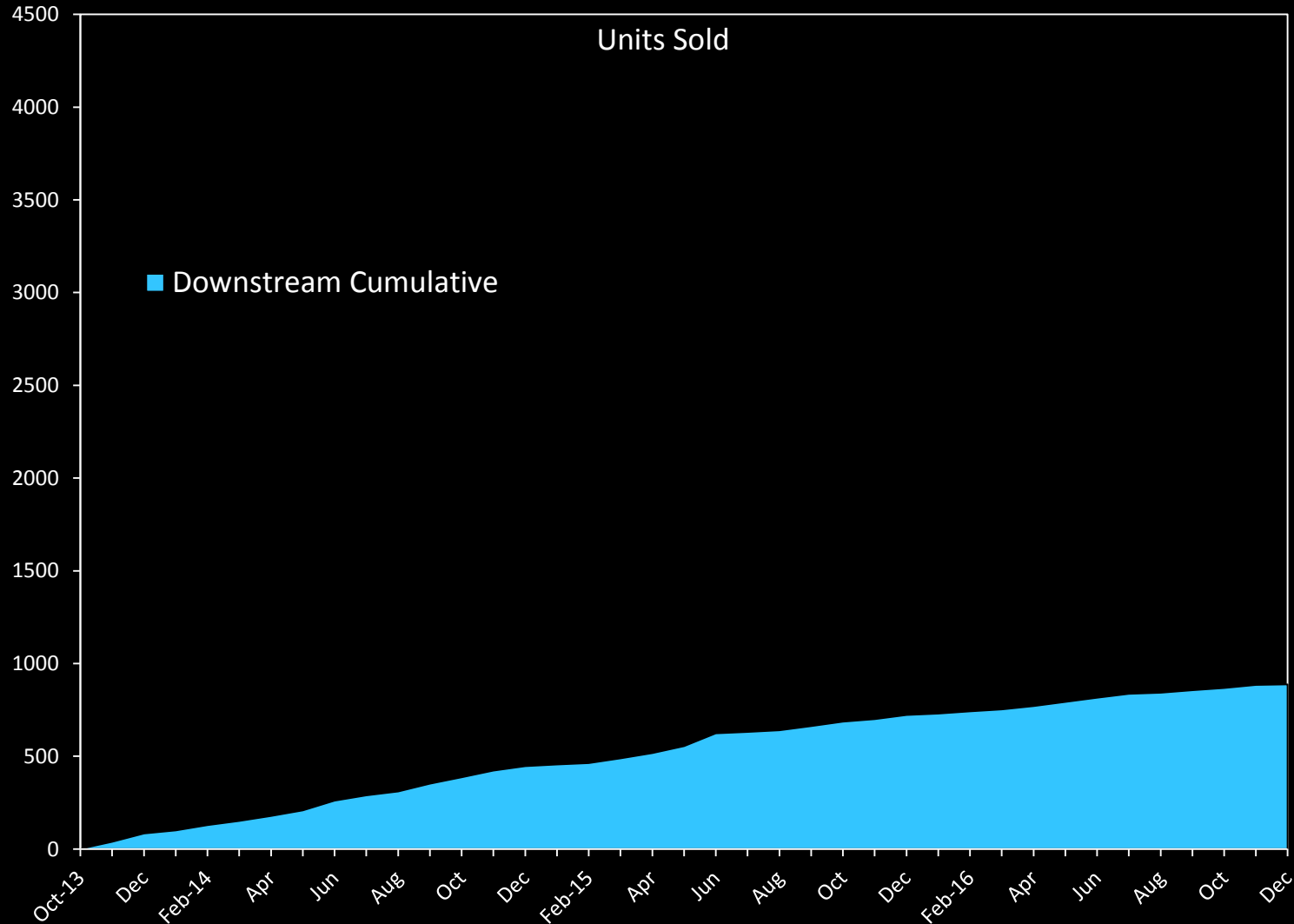
→ *Every 2.5 Days = TOTAL ANNUAL AVERAGE before Upstream Program!!*

# Distributor's "Before & After" Upstream

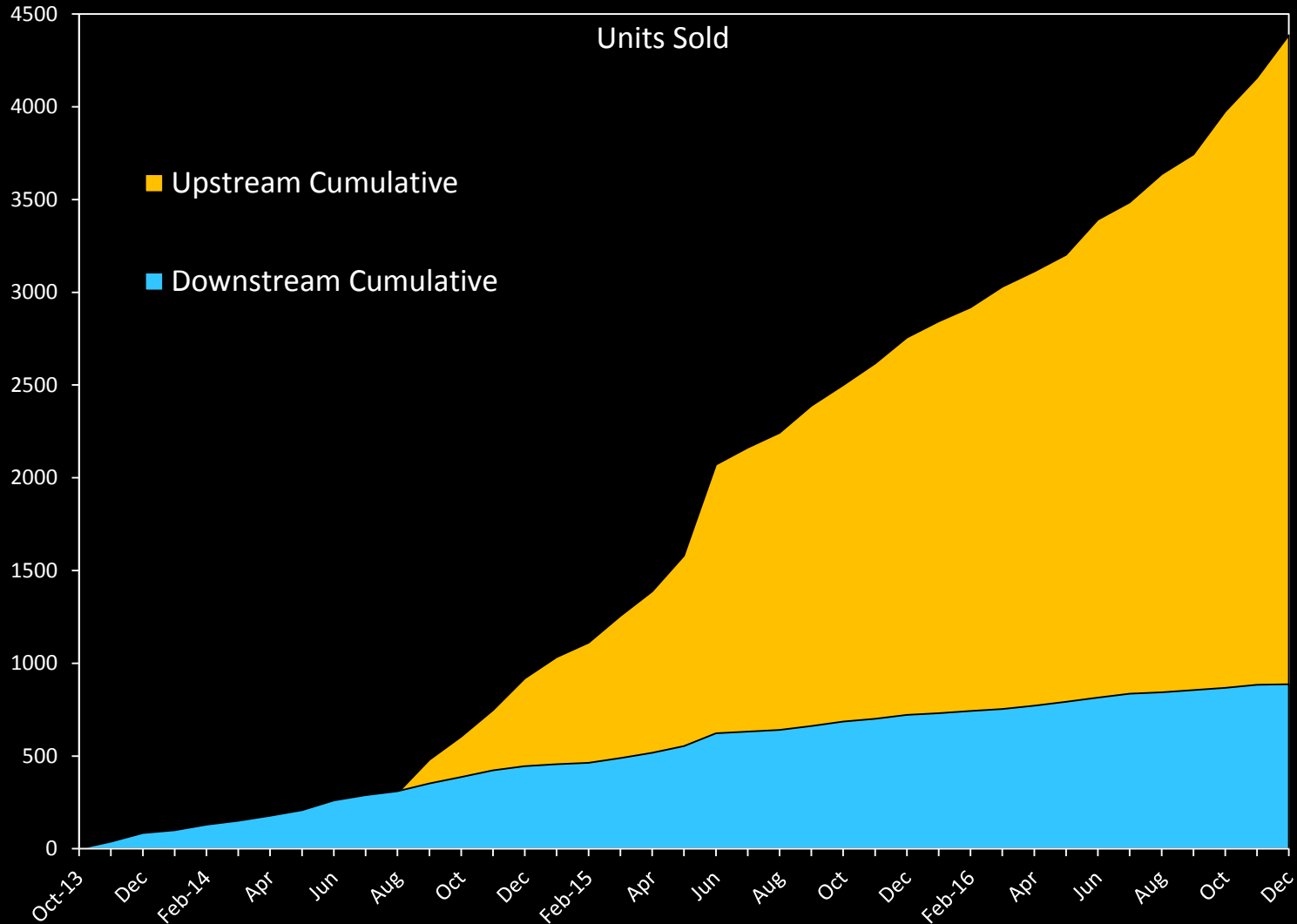
## HPCP as a % of CP Sales



# Upstream vs. Downstream; Heat Pump Water Heaters

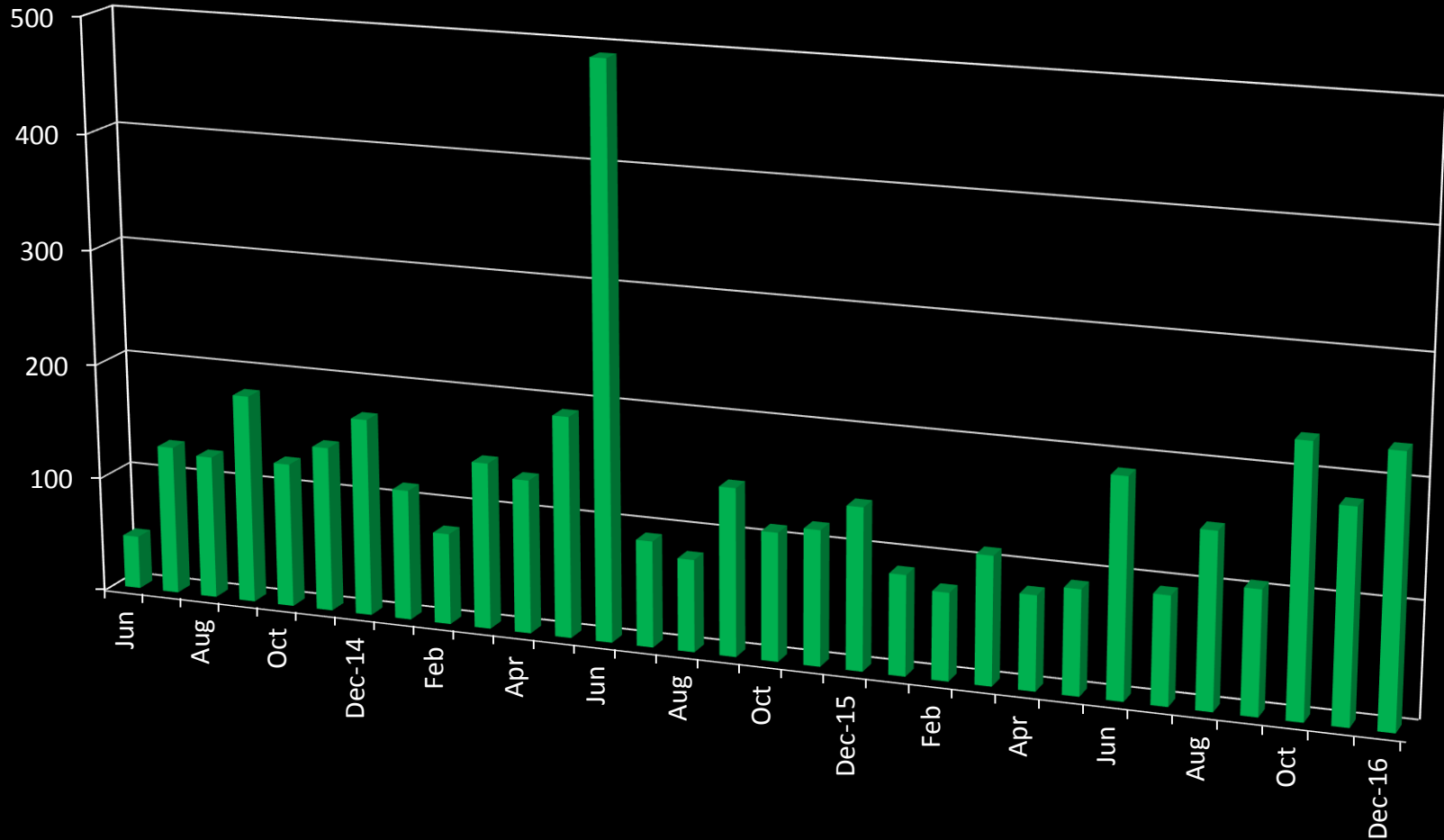


# Upstream vs. Downstream; Heat Pump Water Heaters



# Consolidated HPWH Participating Vermont Distributors' Results

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



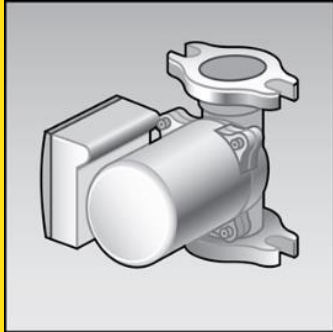
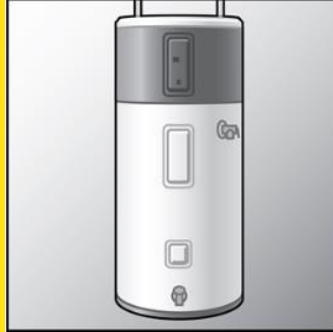



# Efficiency Vermont Heat Pump Water Heater Metrics

	<b>US</b>	<b>VT</b>	<b>VT %</b>
<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>

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

# Impact of the Upstream Program in 2015

	HPCP	HPWH	CCHP
			
Increase in Sales	8,550%	750%	50%

- 1) Business model**
- 2) Front loaded**
- 3) Strategic partnerships**
- 4) Supply chain management**

# **The National Distributed Products Platform (NDPP)**

# Objectives for NDPP

- Shorten timeline & reduce complexity
- Accelerate EE product sales based on SMIT upstream approach
  - ➔ *Utilities*
- Substantially increase sales of efficient products included in the NDPP Platform
  - ➔ *Manufacturers, distributors, & contractors*

***Thank you!***

**Howard C. Merson**

**Vermont Energy Investment Corp**

**Consultant, National Distributed Products Platform**

**[hmerson@veic.org](mailto:hmerson@veic.org)**

**p: (802) 540-7821**

**c: (802) 310-8447**



**QUESTIONS?**