

# How to increase the market penetration of HPWH

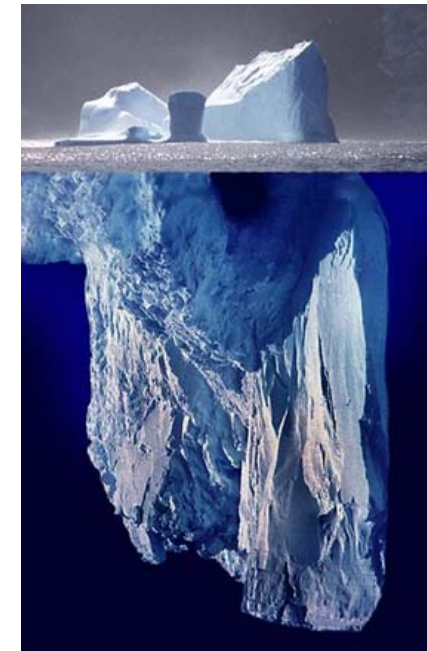


**GE APPLIANCES**

# ENERGY STAR WATER HEATER PENETRATION

At 1%, Heat Pump Water Heaters (HPWH) have the lowest penetration of all ENERGY STAR product categories

Product Category <sup>1</sup>	2014 Units Shipped (thousand units unless otherwise stated)	2014 Estimated Market Penetration
Water Heaters		N/A
Gas Storage	216	5%
Gas Tankless	416	N/A
Heat Pump	46	1%
Solar	3	N/A



Source:

[https://www.energystar.gov/ia/partners/downloads/unit\\_shipment\\_data/2014\\_USD\\_Summary\\_Report.pdf?3c1f-59eb](https://www.energystar.gov/ia/partners/downloads/unit_shipment_data/2014_USD_Summary_Report.pdf?3c1f-59eb)

# PRODUCT PERFORMANCE & SAVINGS

The GE GeoSpring heat pump water heater is 67%\* more efficient than standard electric water heaters, saving consumers up to \$500\*\* every year on their water heating expenses

~3,300 kWh  
savings/unit/year(\*)

\*Based on DOE test procedure and comparison of a 2015 standard electric tank water heater using 4647 kWh per year vs. the GeoSpring hybrid electric water heater using 1514 kWh per year.

\*\*energystar.gov/index.cfm?c=heat\_pump.pr\_savings\_benefits. Accessed August 2015.

**SPEND LESS ON ELECTRIC BILLS**  
Cut water heating expenses by more than half with the energy-efficient GeoSpring® hybrid electric water heaters.

GE APPLIANCES

**WATER HEATER**  
**2ND HIGHEST ENERGY USER** in U.S. households\*

Category	Percentage
HEATING & COOLING	46%
WATER HEATER	14%
APPLIANCES	13%
LIGHTING	12%
OTHER	11%
ELECTRONICS	4%

**HEAT PUMP TECHNOLOGY**  
**67% MORE EFFICIENT** COMPARED TO A STANDARD ELECTRIC WATER HEATER

Capacity	People	Annual Savings**
50-GALLON	3-4 PEOPLE	\$250-\$330
80-GALLON	5-6 PEOPLE	\$410-\$500

**80 GALLON NOW AVAILABLE**

**EASY TO INSTALL**  
Top electrical and water connections same as standard electric water heater

**4.6 STARS**  
Average Ratings & Reviews

**ABUNDANT HOT WATER**  
Save on standard electric water heater

Feature	Value
ENERGY FACTOR (EF)	2.0
67% LESS ENERGY	67
92 GALLONS	92

**SAVE EVEN MORE WITH UTILITY REBATES**  
Visit [geospring.com](http://geospring.com) for qualifying details

**Made in AMERICA**

©2015 GE Appliances. Product model details at [GEAppliances.com/2015](http://GEAppliances.com/2015).  
\*Based on DOE test procedure and comparison of a 2015 standard electric tank water heater using 4647 kWh per year vs. the GeoSpring hybrid electric water heater using 1514 kWh per year.  
\*\*energystar.gov/index.cfm?c=heat\_pump.pr\_savings\_benefits. Accessed August 2015.  
†Based on DOE test procedure and comparison of a 2015 standard electric tank water heater using 4647 kWh per year vs. the GeoSpring hybrid electric water heater using 1514 kWh per year.

# HEADWINDS....WATER HEATER PURCHASING FACTS

Failure based unplanned purchase, crisis emergency



HPWH upfront cost barrier

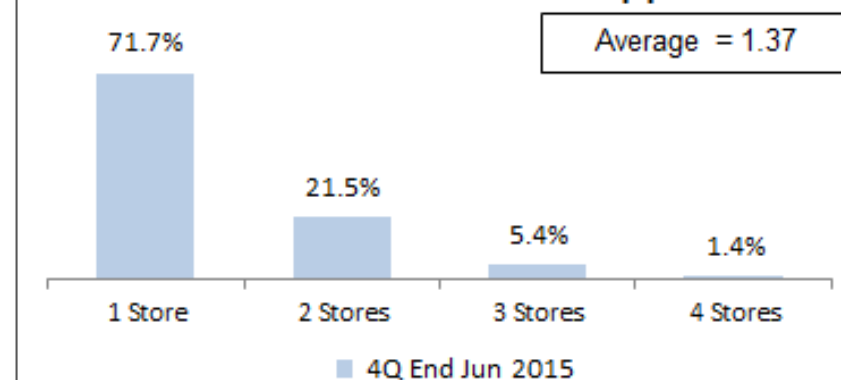


No time to shop and learn about energy savings, incentives

## Why Bought Product

	2015 Q2
<i>Sample Size</i>	233
Old one didn't work at all	53.7
Old one required service	30.0
Other reason	4.2
Just wanted a new one	6.5
Moved to a new home	3.3
Remodeled my kitchen	2.3
Wanted an additional one	0.0

## Number Stores Shopped



# COLLABORATION OPPORTUNITIES

[www.geospringtoolbox.com](http://www.geospringtoolbox.com)

## Mailers



# Digital



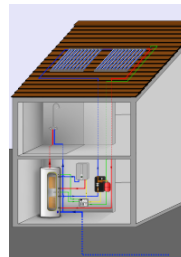
## Store events



## Instant rebates



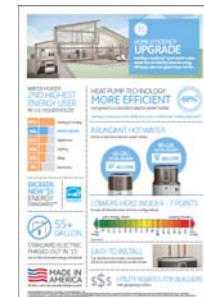
## DR/ETS



## Low income Weatherization



## New Homes



# 1MM+ MAILERS TO DRIVE PROACTIVE REPLACEMENTS

**STOP WASTING ENERGY  
AND LOCK IN BIG  
LONG-TERM SAVINGS.**

**Save Now & Save Later**  
Save hundreds with rebates from participating retailers and your local electric utility. Then keep saving from \$170 to \$500 every year\* on your electric bill when you switch to the 67% more efficient\*\* GeoSpring™ Hybrid Electric Water Heater.

 **GE APPLIANCES**

\*www.ge.com/index.cfm?test\_pumps\_savings\_benefits. Accessed August 2015.  
\*\*Based on DOE test procedure and comparison of a 2010 standard electric water heater using 6647 kWh per year vs. the GeoSpring Hybrid Water Heater using 1914 kWh per year.



  
**GE APPLIANCES**

**SAVE FROM  
\$170-\$500  
EVERY YEAR**  
with GeoSpring™  
hybrid electric  
water heater

**LEARN MORE ►**



  
**ENERGY STAR**

Co-funding for maximum impact and best ROI

# INSTANT UTILITY INCENTIVES

Connecticut	Washington, Oregon, Idaho, & Montana	San Diego California	Vermont
<b>\$400</b>	<b>\$300</b>	<b>\$250</b>	<b>\$400</b>
	Tier 2/3		Plumbing channel
INSTANTLY	INSTANTLY	INSTANTLY	INSTANTLY
Energize CT	NEEA	SDG&E	Efficiency VT
Until 12/31/15	Until 12/31/15	Until 12/31/15	Until 6/30/16

Shift incentives to upstream/midstream – HPWH Sales X4 or more



# INSTANT UTILITY INCENTIVES – LEAKAGE PREVENTION

Retail store selection based on trade area.

Store Name	Id	Name	Distance (Miles)	Store Share	Cumulative Share
LOWES	388	1929 Skibo Rd: Fayetteville NC: 28314			
	28303	28303 Fayetteville, NC	1.4	36.61	36.61
	28314	28314 Fayetteville, NC	3.6	29.91	66.52
	28311	28311 Fayetteville, NC	8.0	9.40	75.92
	28390	28390 Spring Lake, NC	10.7	7.44	83.36
	28304	28304 Fayetteville, NC	3.1	5.35	88.72
	28307	28307 Fort Bragg, NC	5.7	4.92	93.64
	28301	28301 Fayetteville, NC	4.8	2.07	95.71
	28305	28305 Fayetteville, NC	3.5	0.92	96.63
	28310	28310 Fort Bragg, NC	13.3	0.63	97.26
	28308	28308 Pope Army Airfield, NC	7.7	0.14	97.41
		Non-Resident Population		2.59	100.00
		All Other Residents		0.00	100.00

Source Nielsen Spectra.

Example shown Lowe's store in Fayetteville NC, 83% of trade area coming from 4 zip codes



# INSTANT UTILITY INCENTIVES – REBATE ATTRIBUTION; M&V

Utility


Sticker in store

Price shown includes

**\$250 INSTANT REBATE**


- Electric heat pump water heaters
- No application required
- Minimum 40 gallons
- Energy factor must be 2.0 or greater
- If replacing existing water heater, existing unit must be electric
- SDG&E residential customers only
- Limit 1 rebate per household

See associate for details.



Online rebate finder

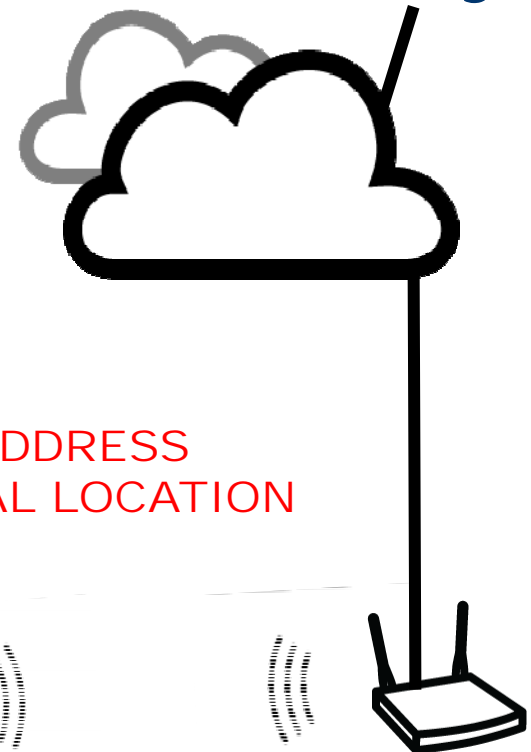
There is one rebate available in San Diego, CA | 92108 [Find Rebates](#)



**General Electric GEH50DFEJSR Water Heater** 1 rebate  
Item #: 665053 | Model #: GEH50DFEJSR | ENERGY STAR certified

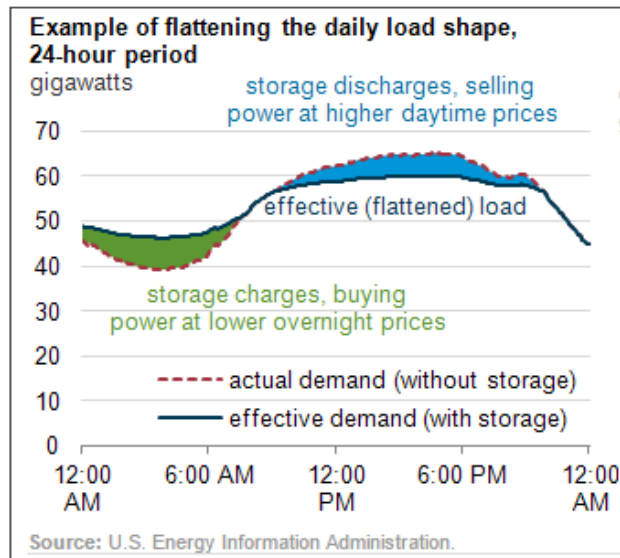
Download	Rebate Amount	Program	Valid Dates	Important Details
	<b>\$250 instant discount reflected in price</b>	San Diego Gas & Electric - CA	Purchase between Jan 1, 2015 and Dec 31, 2015	<ul style="list-style-type: none"><li>• Cannot be combined with other utility rebates</li><li>• If replacing existing water heater, existing unit must be electric.</li><li>• Limit 1 rebate per appliance type every 5 years</li><li>• Must be a customer of participating utility.</li><li>• Must be installed in service territory.</li><li>• Post installation inspection may be required.</li></ul>

Powered by EcoRebates.com © 2015 | [Terms](#)



# INSTALLED BASE FOR DEMAND RESPONSE AND THERMAL STORAGE

Load shifting, peak shaving, integration of renewables



## Static Storage Capacity (w/ 20F rise)

- 50 gal 2015 model: ~2.2KW
- 80 gal 2015 model: ~3.6KW

## Static Storage Capacity (w/ 40F rise & Mixing Valve)

- 50 gal 2015 model: ~4.4KW
- 80 gal 2015 model: ~7.2KW



# SUMMARY

~4MM electric water heaters sold every year

HPWH savings ~3,300 kWh/unit/year

HPWH penetration 1%

## Key market transformation levers:

- Pool Marketing funds to generate proactive replacements
- Upstream/Midstream incentives to convert the emergency purchase and drive inclusion in new homes
- Direct Utility purchases for low income, DR, ETS programs

