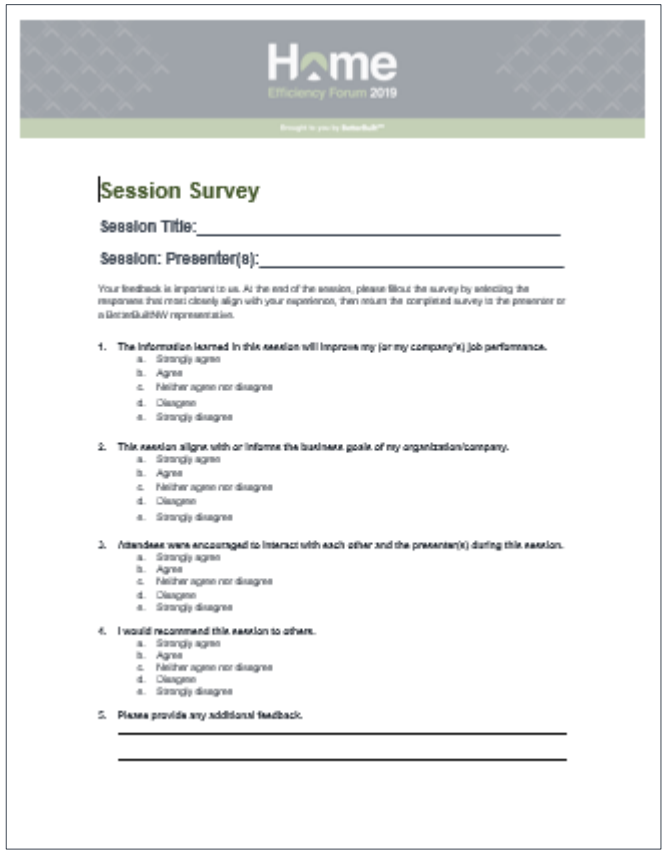
Beyond Code Points
Creating Lasting Success with Heat Pump Water Heaters

Session Survey Instructions

At the end of each session, you will be given 5 minutes to complete the session survey.

- Complete the survey using the mobile app or paper versions
- Provide the paper surveys to the room moderator or to the BetterBuiltNW table
- We appreciate your feedback



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Efficiency Forum 2019

Session Survey

Session Title:_____

Session: Presenter(s):_____

Your feedback is important to us. At the end of the session, please fillout the survey by selecting the responses that most closely align with your experience, then return the completed survey to the presenter or a BetterBuiltNW representative.

1. The information learned in this session will improve my (or my company's) job performance.
   a. Strongly agree
   b. Agree
   c. Neither agree nor disagree
   d. Disagree
   e. Strongly disagree
2. This session aligns with or informs the business goals of my organization/company.
   a. Strongly agree
   b. Agree
   c. Neither agree nor disagree
   d. Disagree
   e. Strongly disagree
3. Attendees were encouraged to interact with each other and the presenter(s) during this session.
   a. Strongly agree
   b. Agree
   c. Neither agree nor disagree
   d. Disagree
   e. Strongly disagree
4. I would recommend this session to others.
   a. Strongly agree
   b. Agree
   c. Neither agree nor disagree
   d. Disagree
   e. Strongly disagree
5. Please provide any additional feedback.

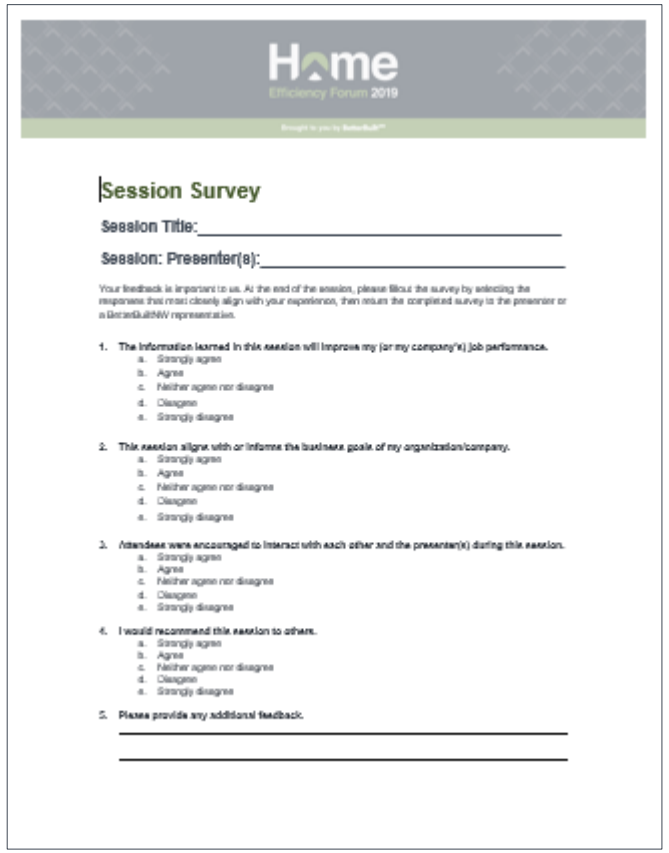
_____

_____

Complete the Session Survey

Beyond Code Points. Creating Lasting Success with Heat Pump Water Heaters

- Kevin Clark
- Bruce Manclark
- Bobby Secker



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_____

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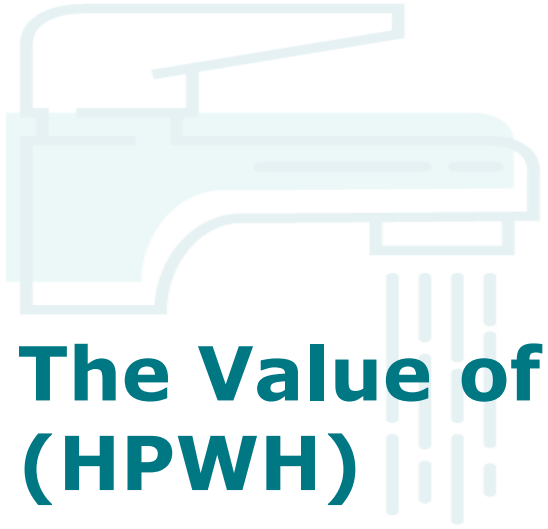

The Value of Heat Pump Water Heaters (HPWH)

Helping Your Customers
Make the Best Water Heating Decisions

HOT WATER SOLUTIONS

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State of the Market

HOT WATER SOLUTIONS

- Over **125,000** electric water heater replacements per year
- Policy is pointing toward electrification, favoring efficient electric products
- 87 utilities offer discounts on HPWHs
- Qualifying product from (all major brands): A. O. Smith, Bradford White, Rheem, Sanden

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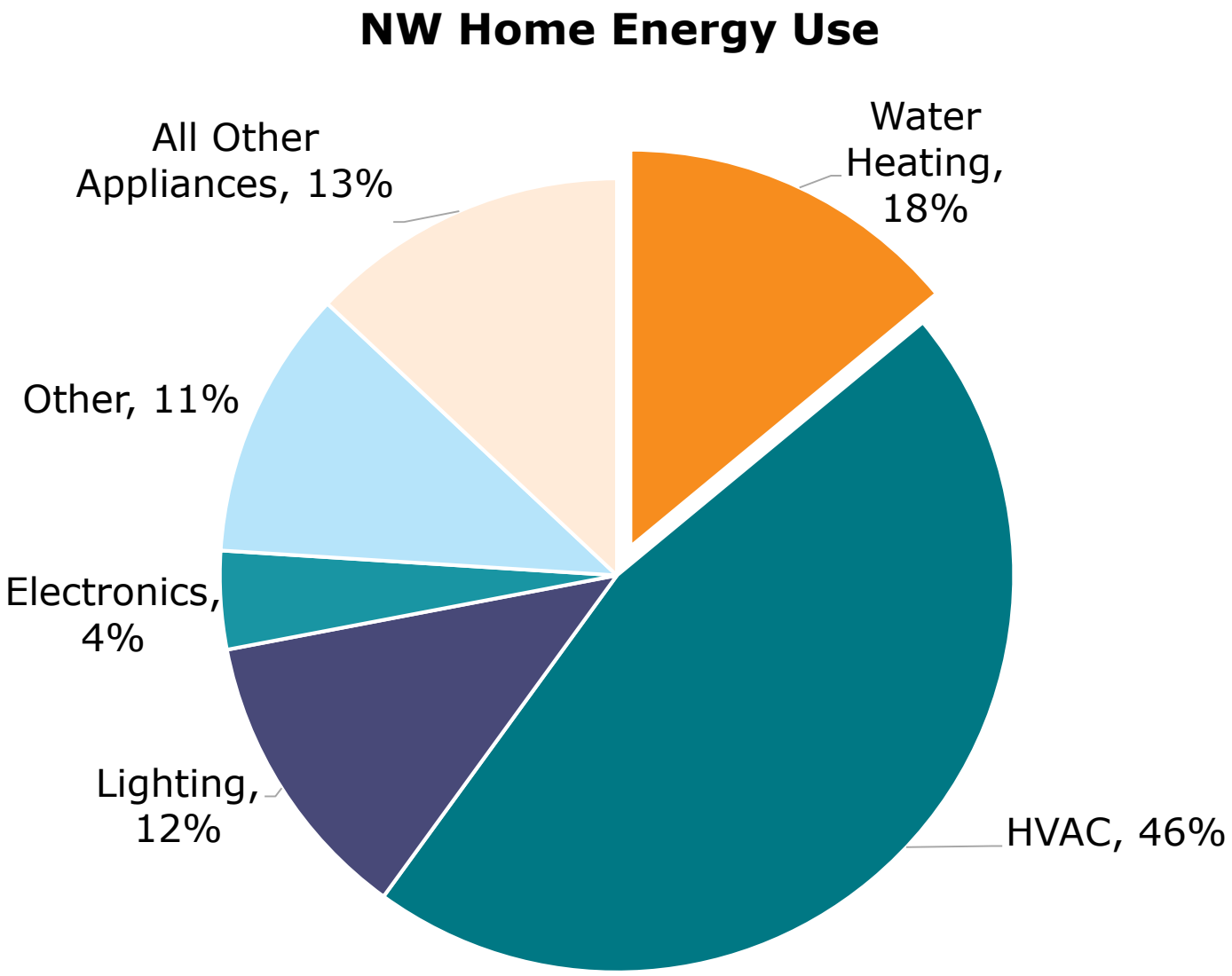
Why are we Here?

HOT WATER SOLUTIONS



Source: EnergyStar.gov

- Same reliable hot water
- A HPWH can save up to **$90**/person per year
- Pays for itself over the life of the **10**-year warranty
- Product incentives bring upfront cost down
- **93%** customer satisfaction

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Participating Distributors

FERGUSON®

MESHER SUPPLY WHOLESALE PLUMBING

KELLER SUPPLY COMPANY

GENSCO

George Morlan PLUMBING SUPPLY Est. 1927, Portland OR

GEN PAC General Pacific, Inc.

CONSOLIDATED SUPPLY CO. PLUMBING • WATER WORKS • HYDRONICS

SSC STANDARD SUPPLY COMPANY

Plumbing MATERIALS SUPPLY

Robertson SUPPLY

FAST WATER HEATER COMPANY "The Water Heater Experts"

HPWH Technology Overview

HOT WATER SOLUTIONS

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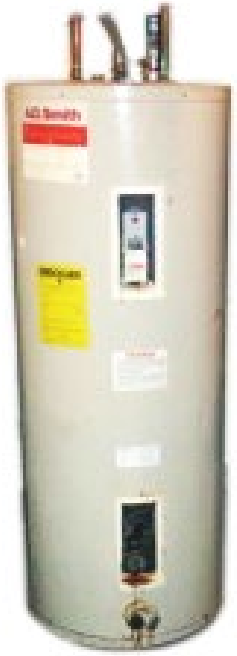
Product Comparisons

HOT WATER SOLUTIONS

Old Technology





Better Technology



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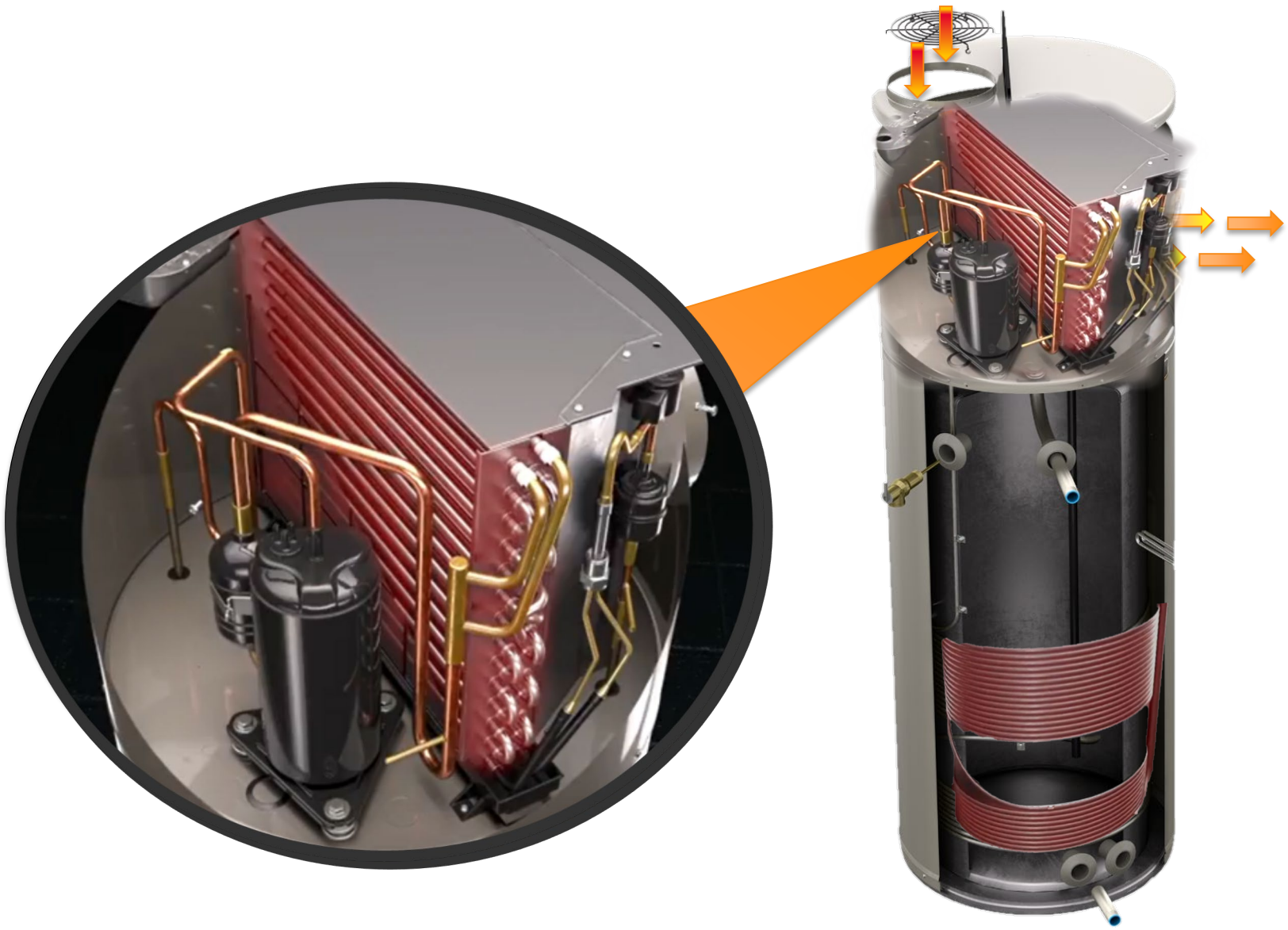
How a HPWH Works



- Ambient air is pulled into unit and heat is absorbed by the evaporator coil
- Compressor increases the temperature of the refrigerant
- Heated refrigerant is pumped into the condenser coil
- Condenser coil tubing wrapped around the tank transfers heat from the refrigerant to the water

HPWHs and Space Heat Interaction

HOT WATER SOLUTIONS

1-2 degrees temperature impact during heating months

Effects are felt **only when the unit is running**, 3-5 hours/day

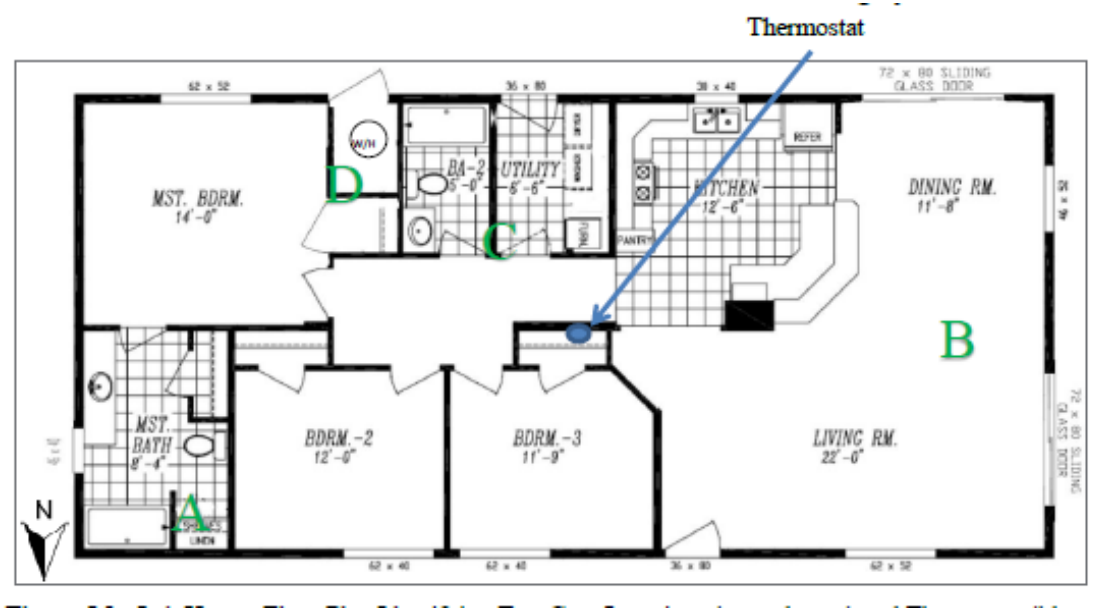
Only impacts installs in conditioned space; **not garage or basement**

93% customer satisfaction with HPWHs

Little to No Impact to Home Heating Bills

HOT WATER SOLUTIONS

- Detailed Study by PNNL (Pacific Northwest National Lab)
  - Winter modest impact
  - Spring and Fall neutral
  - Summer and high humidity HPWHs are beneficial
- Location of water heater matters
  - Garage- No effect (~20% installation)
  - Basement – Nominal to no effect (earth is a great radiator) (~40% installation)
  - Utility Room – Good if sufficiently size (~15% of installations)
  - Don’t exhaust heater onto the thermostat or temperature sensitive rooms
  - Vent only if absolutely necessary
- Localized affect only while running
- Needs sufficient make up air



https://neea.org/img/uploads/interaction-between-heat-pump-water-heaters-and-heating-system.pdf

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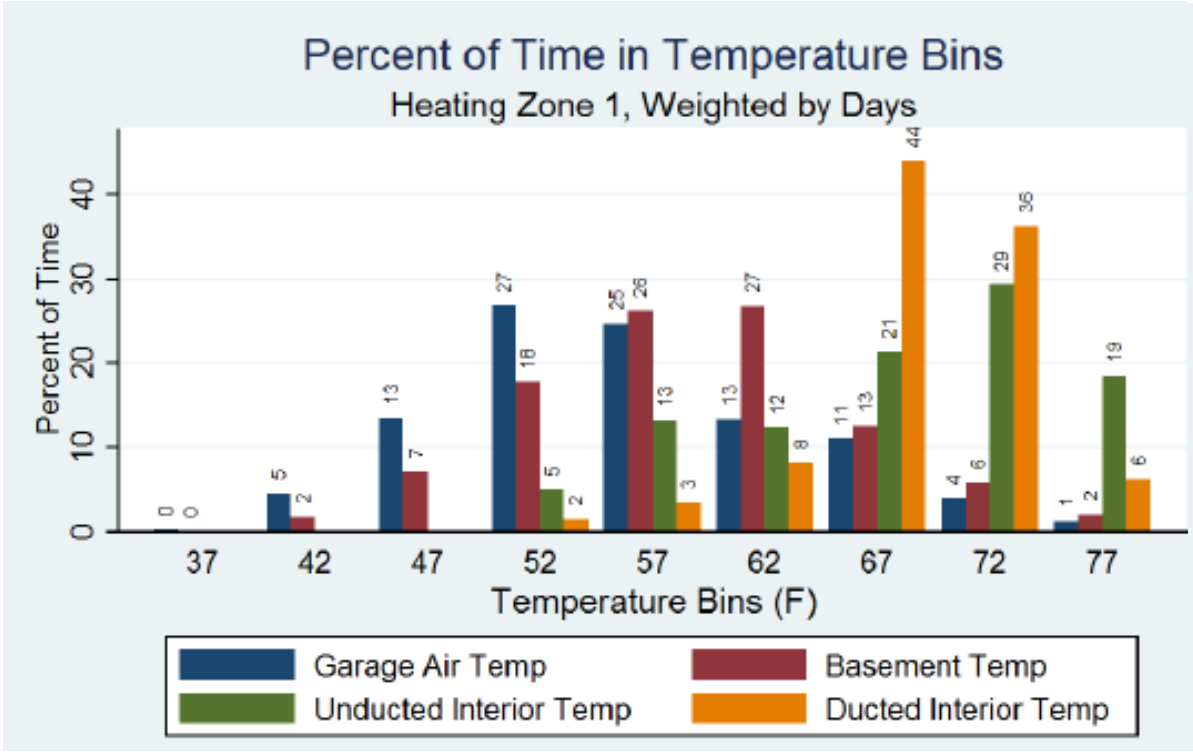
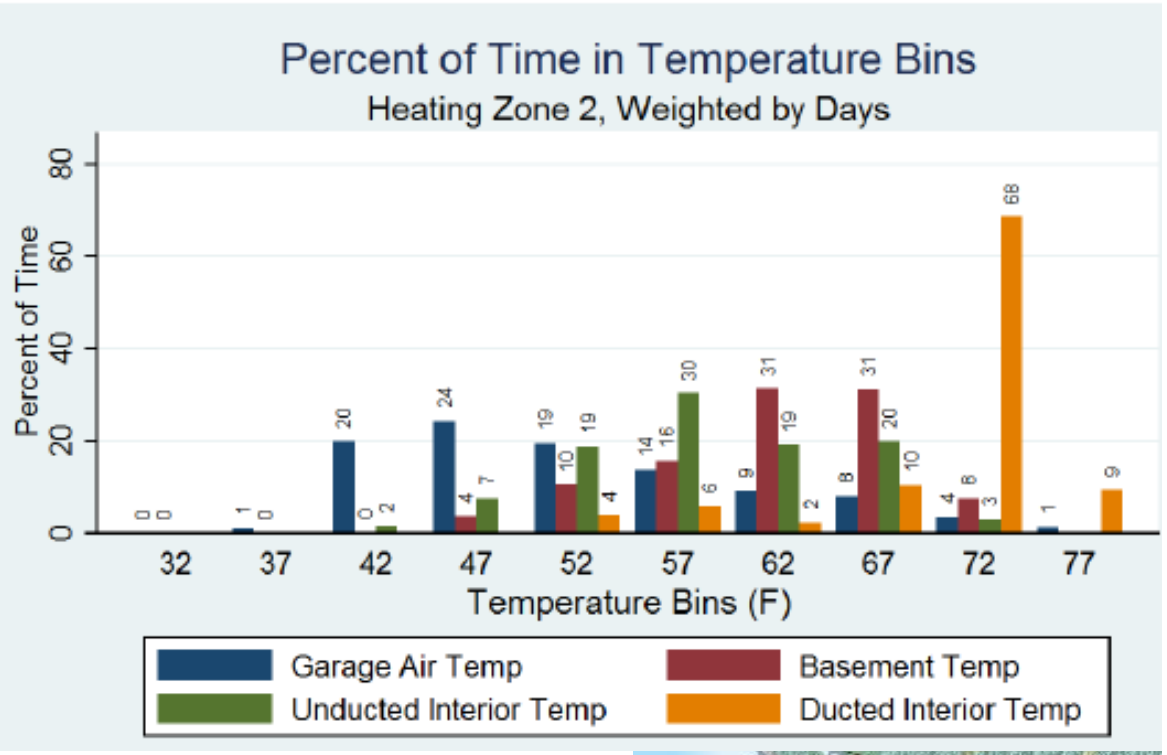
How Much Time Do HPWHs Operate at Different Temperatures?

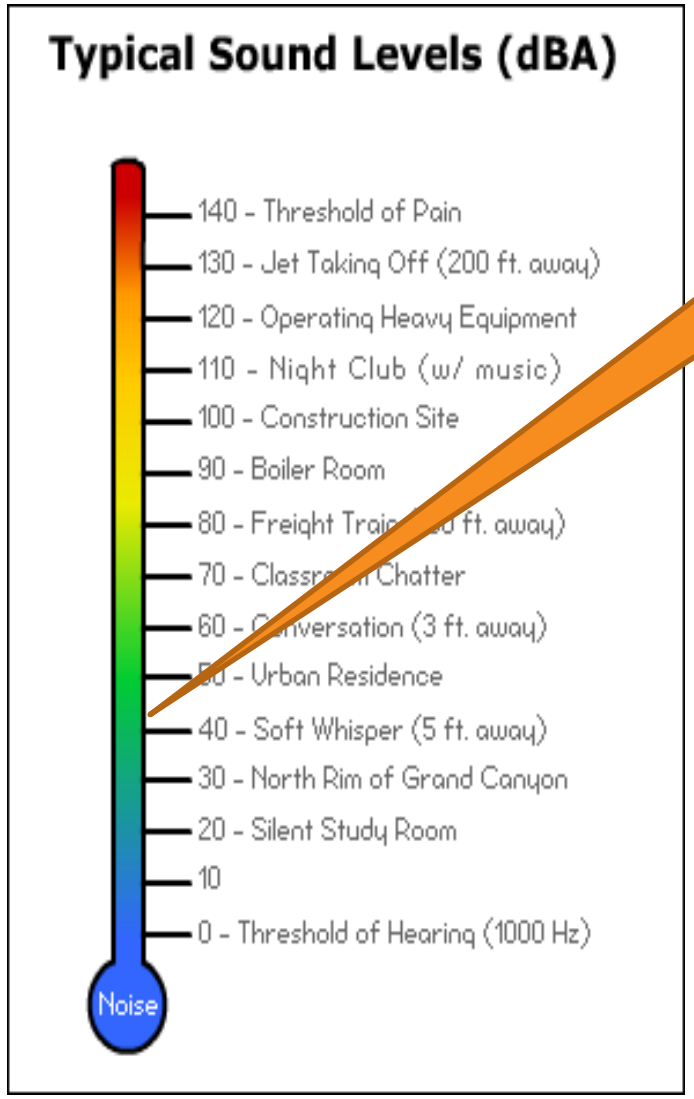




Heating Zones 1&2 cover the vast majority of the populated PNW

Message: If you are worried HPWHs working in colder spaces put the units in Hybrid Mode

Noise Level



Average HPWH

HPWHs are about as loud as a new dishwasher: **~40-50 dB**

Show your customers the reading

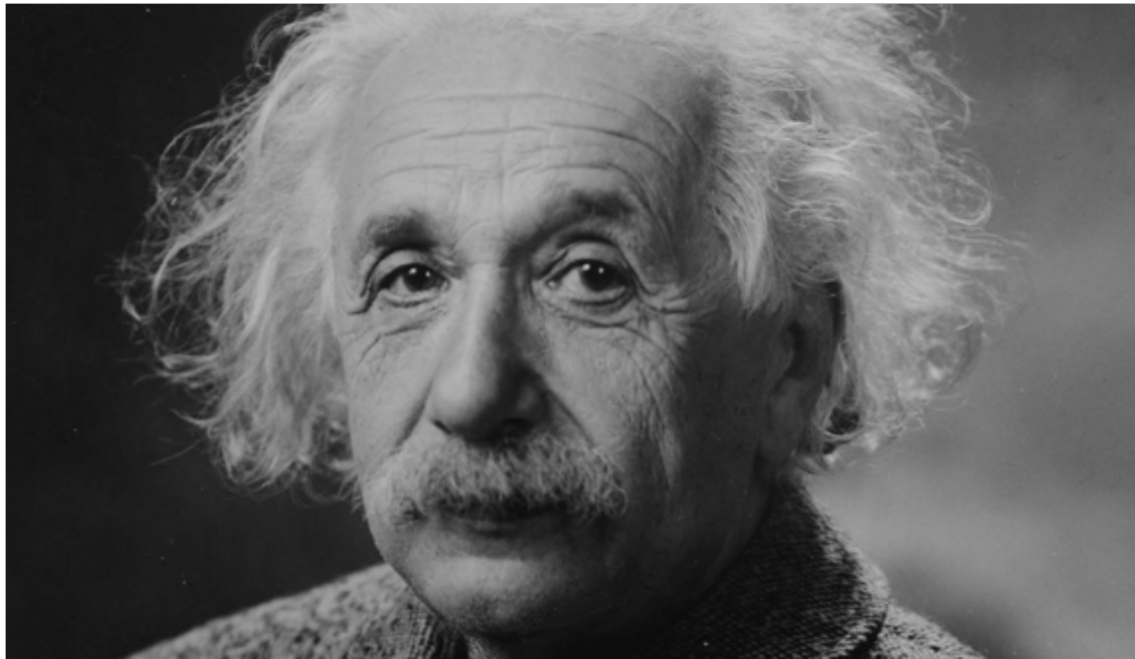
Source: OSHA

Plenty of Research has been Completed

HOT WATER SOLUTIONS

You may have concerns - don’t worry about them we have you covered!

- ✓ Savings Analysis
- ✓ Interactive Study
- ✓ Lab to field Study
- ✓ Performance Lab testing on 20 + units
- ✓ Evaluation reports for the last seven years
- ✓ Reliability testing by the OEM’s
- ENERGY STAR Brand



It is time to move on and install

Product Compatibility – Sizing Considerations

HOT WATER SOLUTIONS

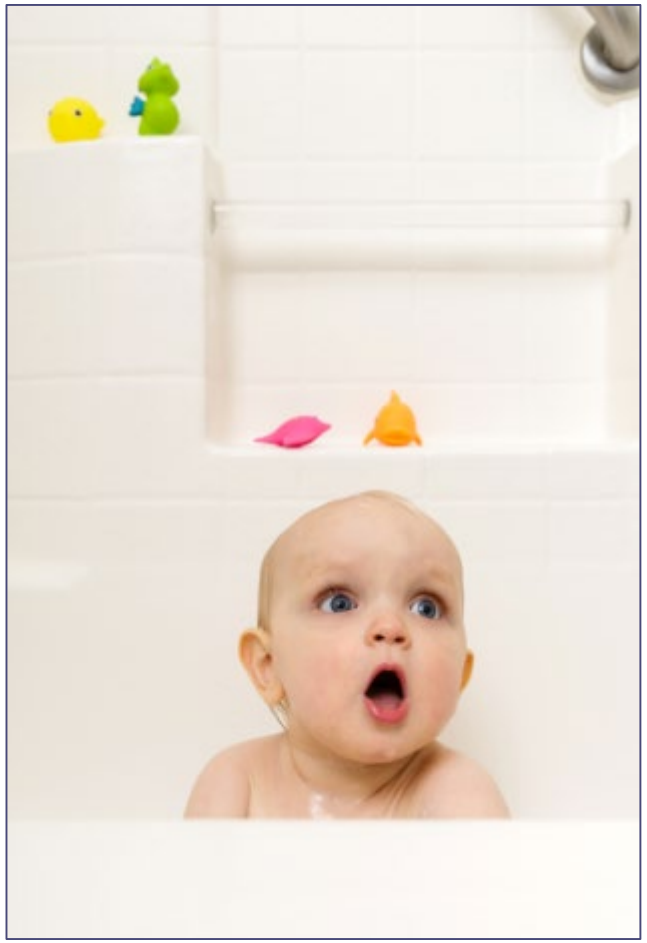
The third shower dilemma

Many households are likely to have three or more back-to-back showers.

Consider the following sizing guidelines when bidding a HPWH:

# of consecutive 10 minute showers	Appropriate tank size
1-2	50 gallon
3	65 gallon
4+	80 gallon

The functionality of the heat pump in addition to electric elements means a HPWH offers the same, or better responsiveness than a standard electric tank.



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Product Compatibility - Installation Considerations

HOT WATER SOLUTIONS

Space

- ~700 cubic ft. of space (roughly a 9x9x8 room), ducting or louvered door
- Check clearance requirements

Condensate

- Remove condensate
  - Pump or sloped system
  - Terminate into an existing drain or outside

Ducting

- Confined spaces or to move cold air

Filter Maintenance

- Warning lights should be visible
- Filter must be accessible

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Product Compatibility - Installation Considerations

HOT WATER SOLUTIONS

Check clearance requirements – construction channel

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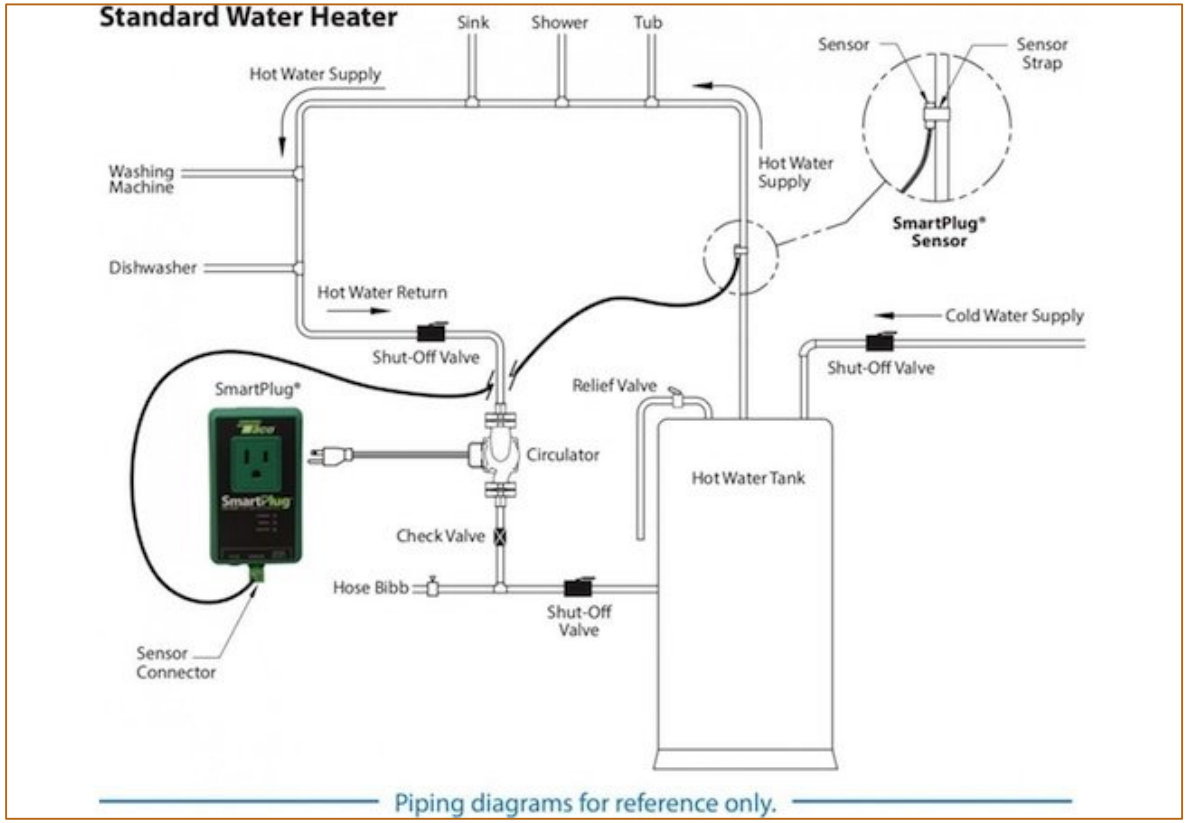
Uncontrolled Recirculation Pump Solution

HOT WATER SOLUTIONS



Uncontrolled recirculation pumps result in high energy use. The Taco Smart Plug is an easy, creative solution.

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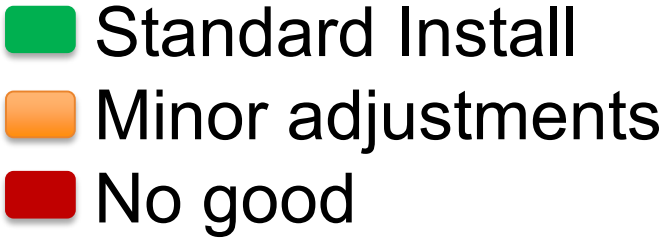
Locations

HOT WATER SOLUTIONS

1. Insulated garage
2. Attic
3. Uninsulated garage
4. Laundry room
5. Heated basement
6. Basement mechanical room (staircase from hell)
7. Dugout crawl space
8. Closet built around existing water heater
9. Unheated basement
10. Low boy under the sink



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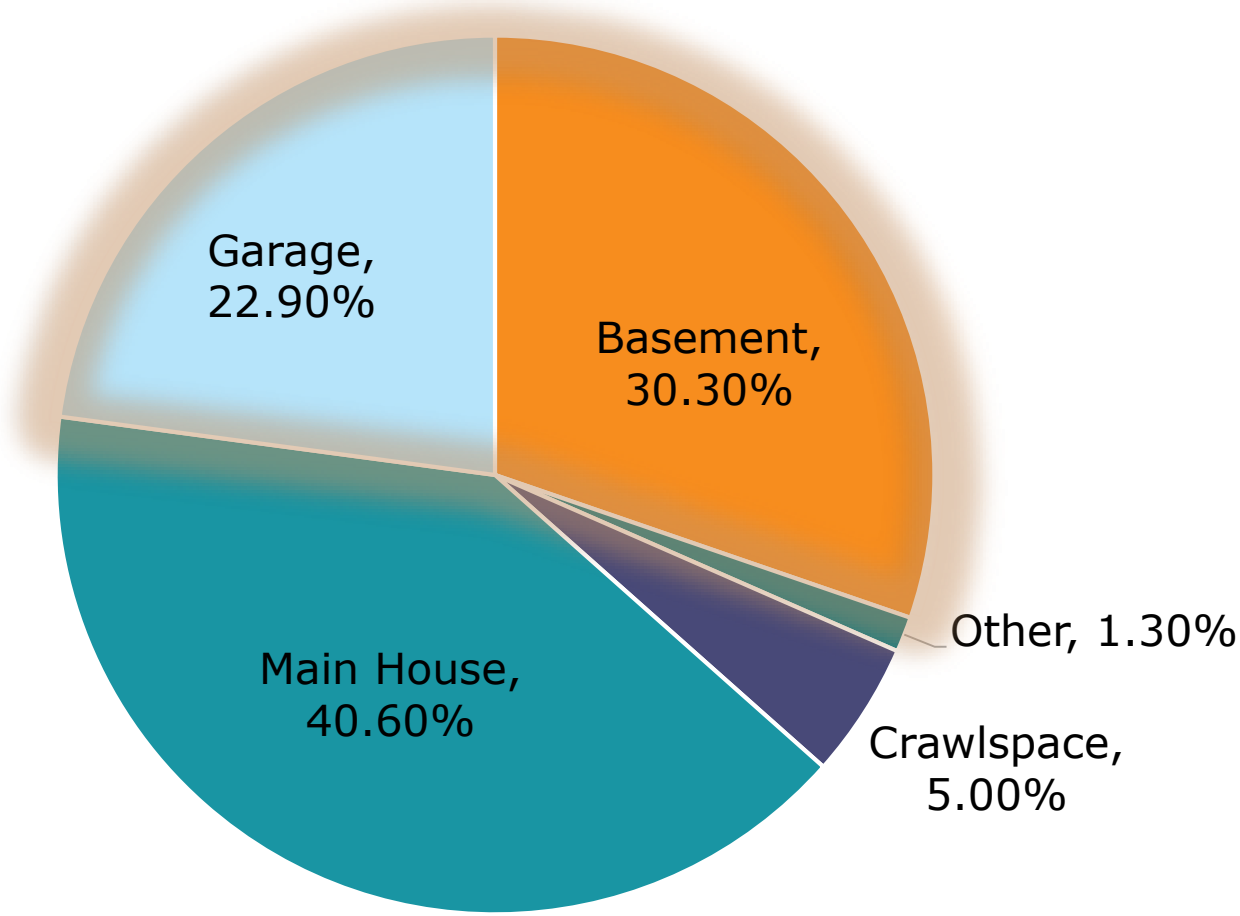
NW Electric Water Heater Locations*



**NEEA's Residential Building Stock Assessment II 2016-2017, Table 114*

New Construction Market Favors HPWHs

HOT WATER SOLUTIONS

Washington

In Washington code, a HPWH is worth **1.5 credits** and is often the most effective way for builders to earn required credits. (option 5c)

Oregon

In Oregon code, a HPWH is an **allowed conservation measure.**

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Portland OR Home Energy Score

4208 NE Cesar E Chavez Blvd
Portland OR 97211

SCORE TODAY **8**

PDX Average Home Score

Higher energy use | 1 | 2 | 3 | 4 | 5 | 6 | 7 | **8** | 9 | **10** | Lower energy use

SCORE TODAY		SCORE WITH IMPROVEMENTS	
Estimated annual energy cost:	$1,166	Estimated annual energy cost:	$967
Score basis:	53 MBtu	Score basis:	32 MBtu

The U.S. Department of Energy's Home Energy Score assesses the energy efficiency of a home based on its structure and heating, cooling, and hot water systems. For more information visit HomeEnergyScore.gov.

This Home…

CURRENTLY WASTES **40%** OF ENERGY ON INEFFICIENCIES

COULD SAVE **$199** EACH YEAR ON ENERGY COSTS

COULD ELIMINATE **16%** OF CO_2 EMISSIONS WITH COST-EFFECTIVE UPGRADES

Estimated Energy Use

Electricity | Natural gas

TODAY:

11,317 kWh | 115 therms

WITH IMPROVEMENTS:

9,148 kWh | 115 therms

Portland OR Home Energy Score

4208 NE Cesar E Chavez Blvd
Portland OR 97211

SCORE TODAY **10**

PDX Average Home Score

Higher energy use | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | **10** | Lower energy use

SCORE TODAY		SCORE WITH IMPROVEMENTS	
Estimated annual energy cost:	$1,019	Estimated annual energy cost:	$1,019
Score basis:	38 MBtu	Score basis:	38 MBtu

The U.S. Department of Energy's Home Energy Score assesses the energy efficiency of a home based on its structure and heating, cooling, and hot water systems. For more information visit HomeEnergyScore.gov.

This Home…

CURRENTLY WASTES **0%** OF ENERGY ON INEFFICIENCIES

COULD SAVE **$0** EACH YEAR ON ENERGY COSTS

COULD ELIMINATE **0%** OF CO_2 EMISSIONS WITH COST-EFFECTIVE UPGRADES

Estimated Energy Use

Electricity | Natural gas

TODAY:

9,717 kWh | 115 therms

WITH IMPROVEMENTS:

9,717 kWh | 115 therms

Explaining HPWH Benefits

HOT WATER SOLUTIONS

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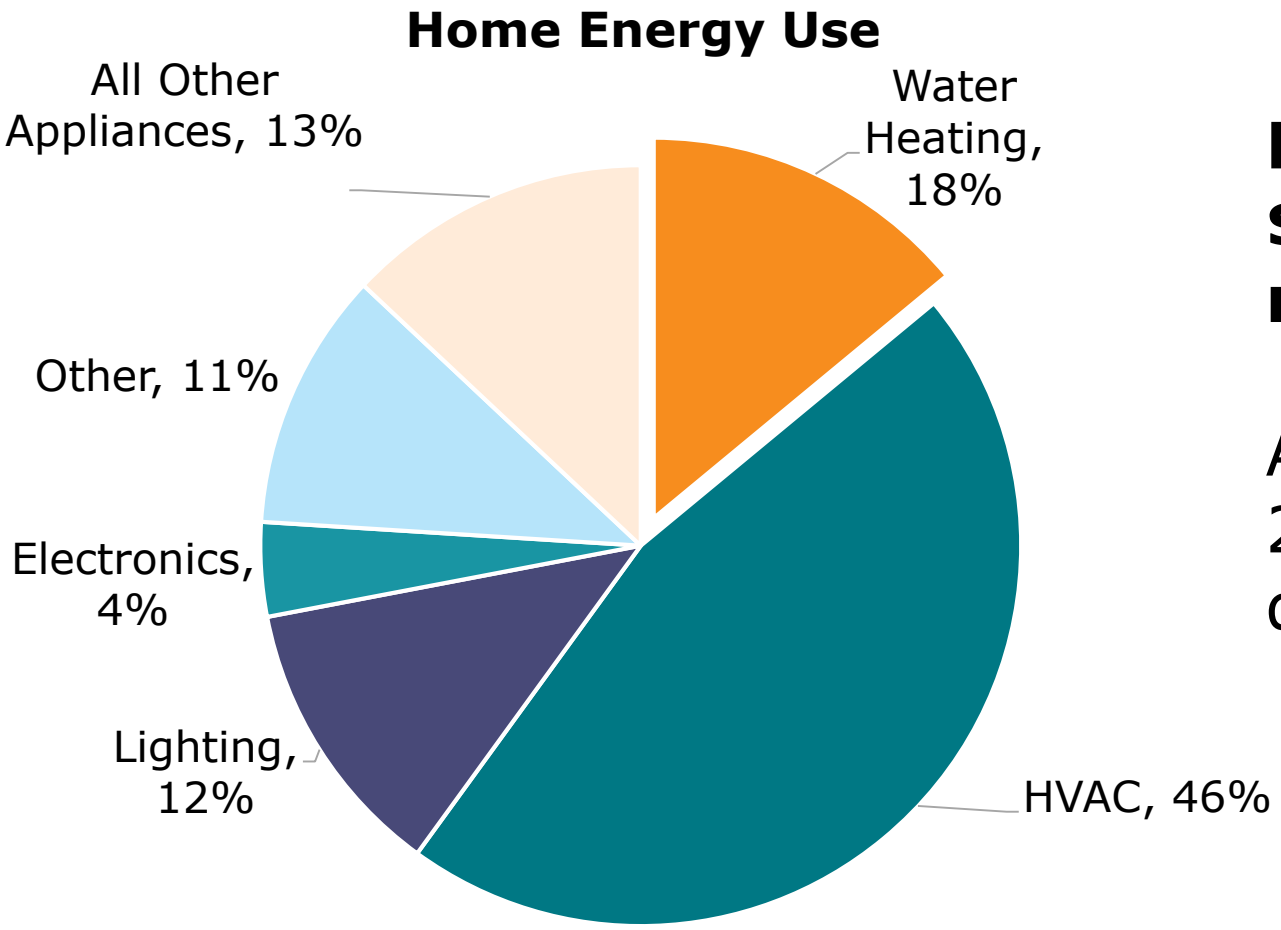
HPWH Benefits

HOT WATER SOLUTIONS

Water heating is the #2 top energy user in the home



Source: EnergyStar.gov

HPWH customers see $80-$100 in annual savings per member of their household

Assuming an average usage of 20-25 gallons per person, per day

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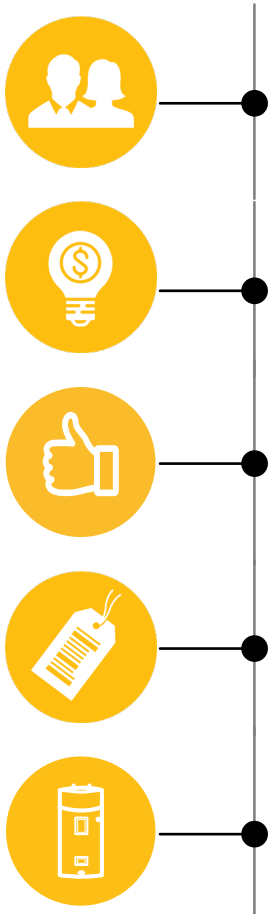
HPWH Benefits

HOT WATER SOLUTIONS



$90 in annual savings per person

Immediate savings through incentives

93% **customer satisfaction**

Peace of mind through 10-year warranty

Same **reliable hot water** delivery

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HPWH Savings Over Time

	2 People	4 People	6 People
Annual Savings	$174	$347	$522
10-Year Savings	$1,740	$3,470	$5,220

Standard Electric tanks… Still no savings

How would you respond?

HOT WATER SOLUTIONS

I'm not sure these are Reliable…

10-year warranty

I don't want buyers to run out of hot water…

Same delivery as a standard tank

It's too expensive…

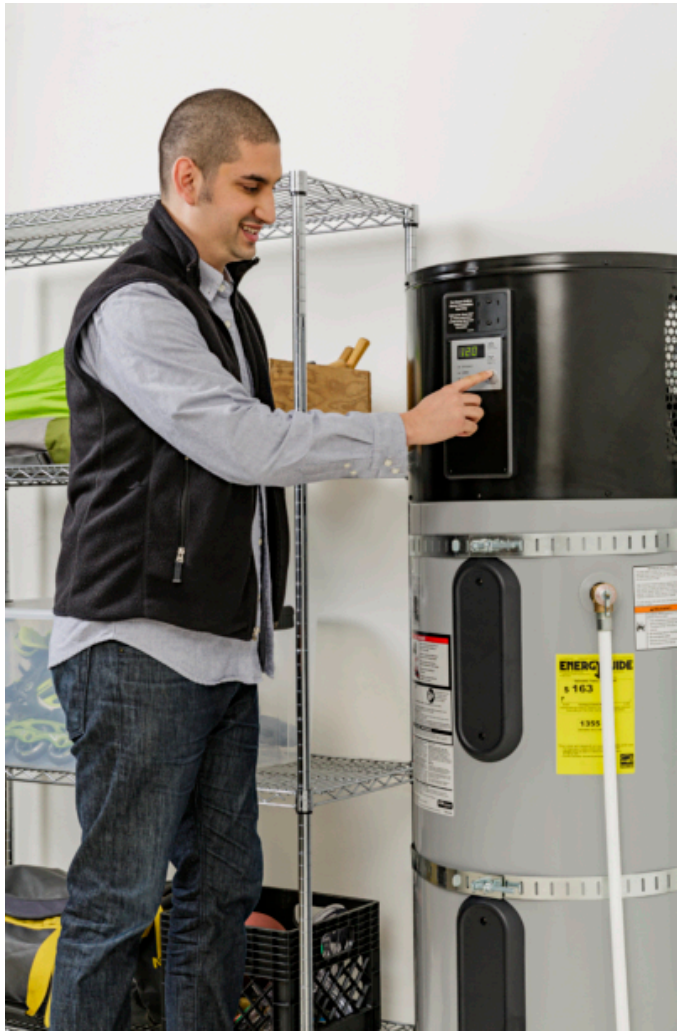
Incentives and higher scores

The technology is too new…

Heat pump technology has been around for over 60 years

Standard water heaters work just fine…

Its from the century like every other appliance in you homes



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Resources to Get You Started

HOT WATER SOLUTIONS

Installer Resources

- Best Practices Installation Guide
- Homeowner Quick Reference Guide
- Hot Water Solutions Image Library
- Sales Sheet
- Advanced Water Heater Specification
- Qualified Products List
- Incentive Listings
- Events Calendar

- **A. O. Smith**
  - https://www.hotwater.com/
  - ENERGY STAR Hub: https://aosmith.mymarketingbench.com/
- **Bradford White**
  - https://www.bradfordwhite.com/forthepro
- **Rheem**
  - https://my.rheem.com/

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Resources – Contractor Sales Sheet

HOT WATER SOLUTIONS

MAKE THE SWITCH TO A NEW HEAT PUMP WATER HEATER

A heat pump water heater provides the same steady supply of hot water you've grown accustomed to. But that's just the beginning:

EFFICIENCY
Reduce energy consumption by **up to 60%**, compared to standard electric water heaters.

COST SAVINGS
Save **over $200 a year** on electric water heating costs.

INSTANT DISCOUNTS OR UTILITY REBATES
Save even more by applying local utility rebates or instant discounts.

WARRANTY
With 10 year warranties, most heat pump water heaters have longer warranties than standard electric water heaters.

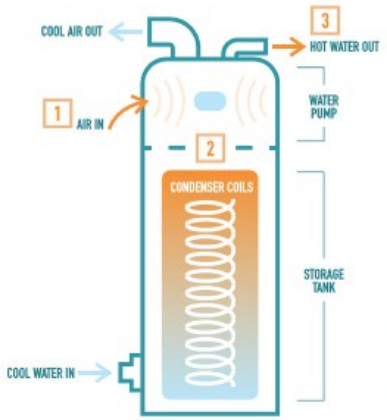
HEAT PUMP WATER HEATER vs STANDARD ELECTRIC

WATER HEATER COMPARISON	50-GALLON STANDARD ELECTRIC WATER HEATER	50-GALLON ELECTRIC HEAT PUMP WATER HEATER OPERATING IN HYBRID MODE
ESTIMATED ELECTRIC WATER HEATING COSTS PER MONTH	$30	$12
ESTIMATED ANNUAL ELECTRIC WATER HEATING COSTS	$360	$144
SAVINGS PER YEAR	$0	$217
LIFETIME SAVINGS *Based on 10-year warranty.*	$0	$2,168
INSTANT DISCOUNTS OR UTILITY REBATES	No	Yes
WARRANTY *Tank and parts.*	6 Years	10 years
ENERGY STAR® *Meets or exceeds ENERGY STAR specifications for energy efficiency.*	No	Yes
UNIFORM ENERGY FACTOR *Percentage of energy that is turned into hot water. The higher the number, the more efficient the unit and the less it will cost to operate.*	0.93-0.95	2.43-3.4
FIRST HOUR RATING *Number of gallons of water a fully heated water heater can deliver in the first hour of use.*	60-67	66-70
PAYBACK OF INCREMENTAL COSTS	N/A	3 Years
RECOVERY RATE *Amount of hot water, measured in gallons, a water heater is capable of providing in 1 hour, assuming 90 degree F increase.*	20-22	29

*Northwest savings provided by the Regional Technical Forum based on an average cost of electricity of $0.101/ kWh and a usage pattern of 2.5 people.

HOT WATER SOLUTIONS

HOW A HEAT PUMP WATER HEATER WORKS



1. Fans pull warmth from the air into the heat pump.
2. The heat is transferred to water in the storage tank.
3. Hot water is now ready to use, and cool air is ducted out.

BE MORE EFFICIENT
Standard electric water heaters are wasteful, using large amounts of energy to heat water. Heat pump water heaters use less than half the amount of energy to heat the same amount of water by transferring heat instead of creating it.

GET MORE CONTROL
A digital control panel allows you to easily set the temperature and change operational modes to maximize efficiency, delivering a lot more flexibility than standard electric water heaters.

Today's potential savings		Instant discount or utility rebate	Contact info
People per household	Potential yearly savings		
2	$174		
3	$261		
4	$348		
5	$435		

Hot Water Solutions is an initiative of the Northwest Energy Efficiency Alliance (NEEA), an alliance of more than 140 Northwest utilities and energy efficiency organizations working to accelerate the innovation and adoption of energy-efficient products, services and practices in the Northwest.

Learn more at HotWaterSolutionsNW.org

HOT WATER SOLUTIONS

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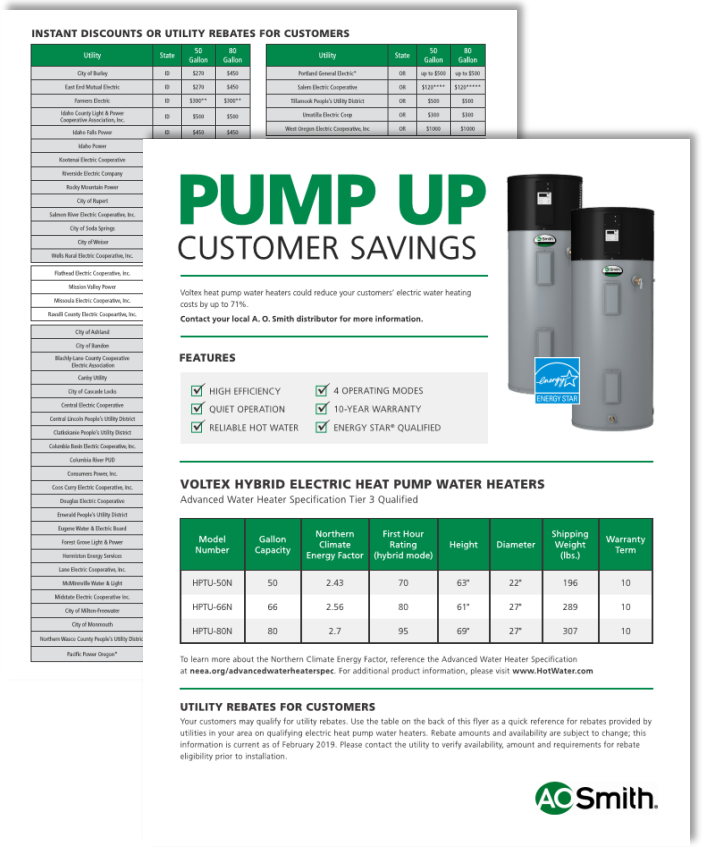
Resources – Product Flyers

HOT WATER SOLUTIONS



INSTANT DISCOUNTS OR UTILITY REBATES FOR CUSTOMERS

PUMP UP
CUSTOMER SAVINGS

Voltex heat pump water heaters could reduce your customers' electric water heating costs by up to 71%.

Contact your local A. O. Smith distributor for more information.

FEATURES

- HIGH EFFICIENCY
- QUIET OPERATION
- RELIABLE HOT WATER
- 4 OPERATING MODES
- 10-YEAR WARRANTY
- ENERGY STAR® QUALIFIED

VOLTEX HYBRID ELECTRIC HEAT PUMP WATER HEATERS

Advanced Water Heater Specification Tier 3 Qualified

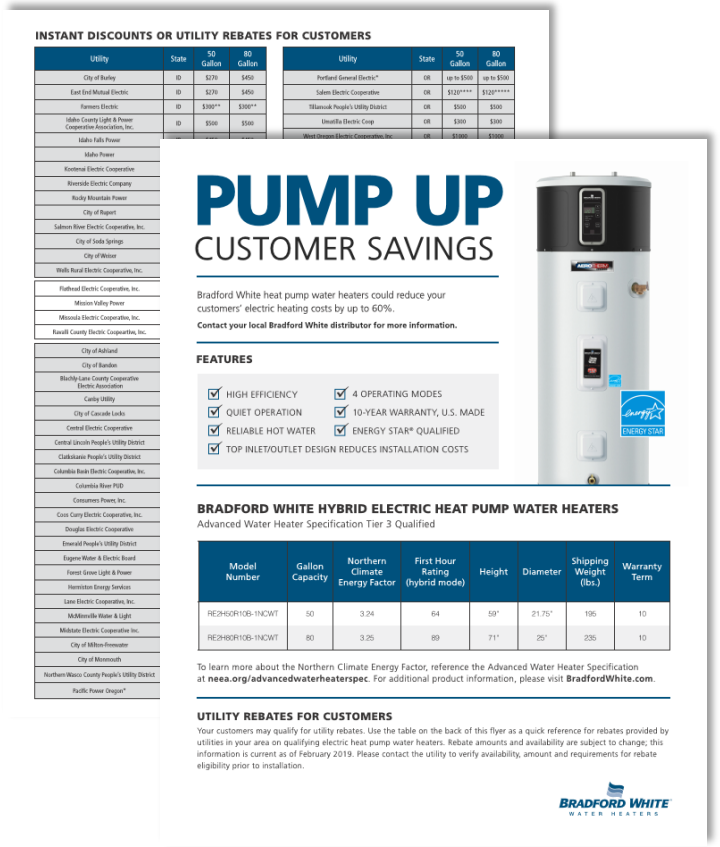
Model Number	Gallon Capacity	Northern Climate Energy Factor	First Hour Rating (hybrid mode)	Height	Diameter	Shipping Weight (lbs.)	Warranty Term
HPTU-50N	50	2.43	70	63"	22"	196	10
HPTU-66N	66	2.56	80	61"	27"	289	10
HPTU-80N	80	2.7	95	69"	27"	307	10

To learn more about the Northern Climate Energy Factor, reference the Advanced Water Heater Specification at **neea.org/advancedwaterheaterspec**. For additional product information, please visit **www.HotWater.com**

UTILITY REBATES FOR CUSTOMERS

Your customers may qualify for utility rebates. Use the table on the back of this flyer as a quick reference for rebates provided by utilities in your area on qualifying electric heat pump water heaters. Rebate amounts and availability are subject to change; this information is current as of February 2019. Please contact the utility to verify availability, amount and requirements for rebate eligibility prior to installation.

A.O. Smith



INSTANT DISCOUNTS OR UTILITY REBATES FOR CUSTOMERS

PUMP UP
CUSTOMER SAVINGS

Bradford White heat pump water heaters could reduce your customers' electric heating costs by up to 60%.

Contact your local Bradford White distributor for more information.

FEATURES

- HIGH EFFICIENCY
- QUIET OPERATION
- RELIABLE HOT WATER
- TOP INLET/OUTLET DESIGN REDUCES INSTALLATION COSTS
- 4 OPERATING MODES
- 10-YEAR WARRANTY, U.S. MADE
- ENERGY STAR® QUALIFIED

BRADFORD WHITE HYBRID ELECTRIC HEAT PUMP WATER HEATERS

Advanced Water Heater Specification Tier 3 Qualified

Model Number	Gallon Capacity	Northern Climate Energy Factor	First Hour Rating (hybrid mode)	Height	Diameter	Shipping Weight (lbs.)	Warranty Term
RE2H50R10B-1NCWT	50	3.24	64	59"	21.75"	195	10
RE2H80R10B-1NCWT	80	3.25	89	71"	25"	235	10

To learn more about the Northern Climate Energy Factor, reference the Advanced Water Heater Specification at **neea.org/advancedwaterheaterspec**. For additional product information, please visit **BradfordWhite.com**.

UTILITY REBATES FOR CUSTOMERS

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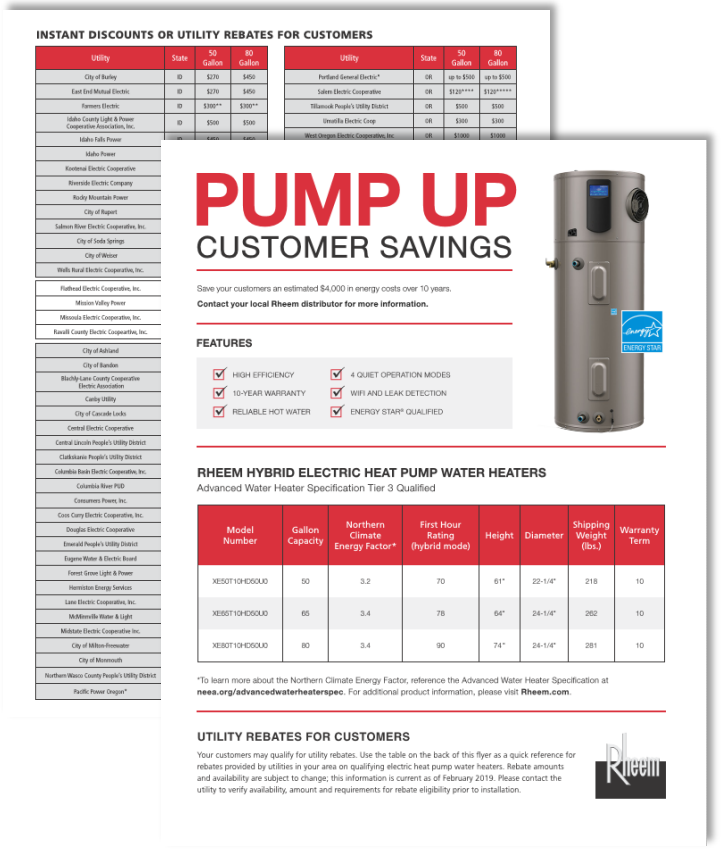
BRADFORD WHITE WATER HEATERS



INSTANT DISCOUNTS OR UTILITY REBATES FOR CUSTOMERS

PUMP UP
CUSTOMER SAVINGS

Save your customers an estimated $4,000 in energy costs over 10 years.

Contact your local Rheem distributor for more information.

FEATURES

- HIGH EFFICIENCY
- 10-YEAR WARRANTY
- RELIABLE HOT WATER
- 4 QUIET OPERATION MODES
- WIFI AND LEAK DETECTION
- ENERGY STAR® QUALIFIED

RHEEM HYBRID ELECTRIC HEAT PUMP WATER HEATERS

Advanced Water Heater Specification Tier 3 Qualified

Model Number	Gallon Capacity	Northern Climate Energy Factor*	First Hour Rating (hybrid mode)	Height	Diameter	Shipping Weight (lbs.)	Warranty Term
XE50T10HD60U0	50	3.2	70	61"	22-1/4"	218	10
XE65T10HD60U0	65	3.4	78	64"	24-1/4"	262	10
XE80T10HD60U0	80	3.4	90	74"	24-1/4"	281	10

*To learn more about the Northern Climate Energy Factor, reference the Advanced Water Heater Specification at **neea.org/advancedwaterheaterspec**. For additional product information, please visit **Rheem.com**.

UTILITY REBATES FOR CUSTOMERS

Your customers may qualify for utility rebates. Use the table on the back of this flyer as a quick reference for rebates provided by utilities in your area on qualifying electric heat pump water heaters. Rebate amounts and availability are subject to change; this information is current as of February 2019. Please contact the utility to verify availability, amount and requirements for rebate eligibility prior to installation.

Rheem

neea

Best Marketing Lines (from Contractors)

HOT WATER SOLUTIONS

- “It’s the only tank that can pay for itself”
- “Its like your (fill in the blank) smart phone, smart thermostat, connected TV… its from this century”
- “My boss put one in and she loves it”
- “They wouldn’t put a 10-year warranty on if they didn’t have a great products”
- “You must really think your buyers love the local utility”

- Reinforce HPWH benefits through watching this video. As you watch, be prepared to summarize the benefits. https://hotwatersolutionsnw.org/

neea

Thank You

info@hotwatersolutionsnw.org

HOT WATER SOLUTIONS

neea

Heat Pump Water Heaters:

An Easy Choice For Builders

Gregg Holladay
Business Development Manager
Gholladay@BradfordWhite.com
Bradfordwhite.com
502-774-0773

Bobby Secker
Western State Sales, Inc
Bsecker@westernstatesales.com
Bradfordwhite.com
360-798-2294

About BRADFORD WHITE CORPORATION

Bradford White Corporation (BWC) is a team of American-owned companies that is a leading US manufacturer of water heating, space heating, combination heating and storage solutions for residential, commercial and industrial applications.

BRADFORD WHITE WATER HEATERS

LAARS Heating Systems Company
A subsidiary of BRADFORD WHITE Corporation

NST NILES STEEL TANK Since 1898
A subsidiary of BRADFORD WHITE Corporation

BRADFORD WHITE CANADA

— BRADFORD WHITE IS —
AMERICAN STRONG

Investing in America

With 1,500 employees working in four locations across the country, Bradford White Corporation proves its commitment to keep America working strong now and in the future.

GET HEAT PUMPED UP!®

AeroTherm Series®
Heat Pump Water Heater

AMERICAN STRONG™

BRADFORD WHITE®
WATER HEATERS

How Many Heat Pumps are in YOUR home?

Heat pumps are a proven technology. You'll find them all around your home in air conditioners, freezers and refrigerators.

Discover the AeroTherm® Heat Pump Water Heater

The AeroTherm® is a high-performance heat pump water heater for your home. It can give you hot water more efficiently because it uses advanced technology to work much smarter – actually transferring heat from the air right into the tank!

That can mean BIG SAVINGS for you! Just look…

BRADFORD WHITE AEROTHERM® SERIES

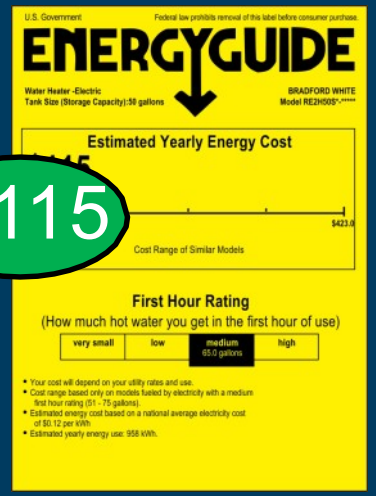
BRADFORD WHITE WATER HEATERS

The Uniform Energy Factor (UEF) measures efficiency. The higher the UEF, the greater the efficiency – and the more money you save!

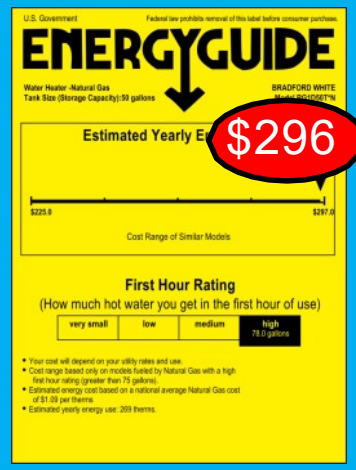
The AeroTherm®

Saves $304 a Year vs. Electric!

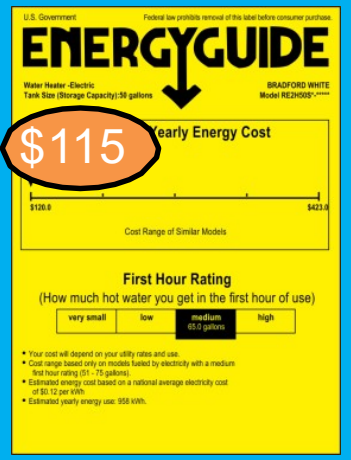
Standard Electric .93 UEF



AeroTherm® 3.39 UEF

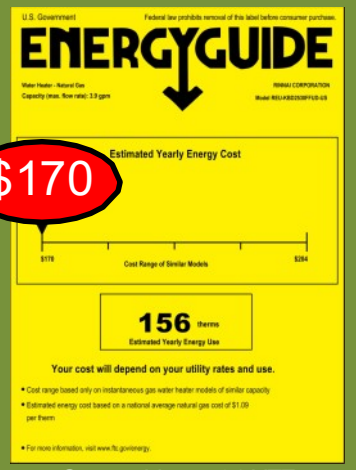


Standard gas tank .63 UEF

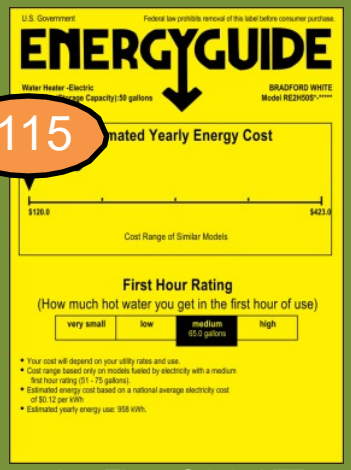


AeroTherm® 3.39 UEF

Saves $181 Per Year vs. Gas!



Gas tankless .90 UEF



AeroTherm® 3.39 UEF

Saves $55 Per Year vs. Tankless!

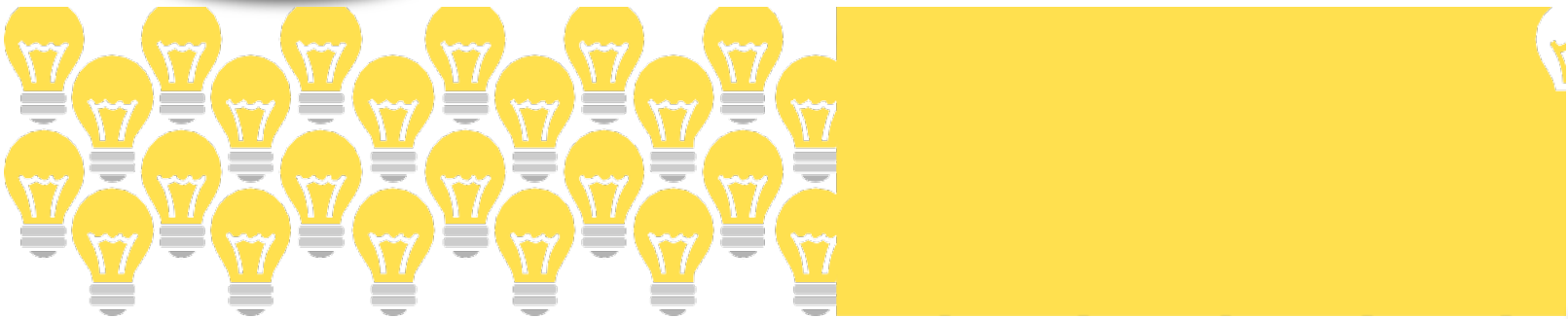
BRADFORD WHITE
WATER HEATERS

SEE THE LIGHT

about Heat Pump Water Heaters!

- AeroTherm® uses the same energy as 5 ½ incandescent 100 watt light bulbs while in heat pump mode

- Standard electric heating elements use the energy of 45 bulbs!



BRADFORD WHITE
WATER HEATERS

AeroTherm® Advantages At A Glance

SAVES YOU MONEY!

The average family saves about $300 a year on their utility bill.*The AeroTherm® pays for itself fast!

AMERICAN STRONG!

AeroTherm® is proudly manufactured in Middleville, Michigan.

BRADFORD WHITE QUALITY!

Built to last for years of trouble-free performance and backed by a 10 year limited warranty.

FLEXIBLE!

Choose from 4 operating modes to meet your changing household needs.

*Based on DOE test procedure and comparison of a standard electric tank water heater using 3493 kWh per year vs. the AeroTherm® heat pump water heater using 1003 kWh per year and national average electricity rate of 12 cents per kWh.

Why Wait? Start Saving Now!

We can show you how much you'll save in energy costs –

and how quickly the AeroTherm® will pay for itself!

Common Myths about HPWHs

- Don’t make enough hot water
- Challenging to install
- Won’t work in cold climates
- Make too much noise
- Won’t work in garages
- You must prevent condensate from freezing
- Need to be a Refrigeration Technician
- Cost too much

How HPWH Works

Heat pump

- Evaporator draws in ambient heat using a fan
- Evaporator absorbs the heat and the compressor increases the temperature and pressure of the 134A refrigerant

External condenser coils

- Heated refrigerant flows through the coils to heat water in the tank
- Coils are external and surround the porcelain lined tank to prevent corrosion and calcium build-up
- Can take tank temp up to 140 degrees

Tank and electric elements

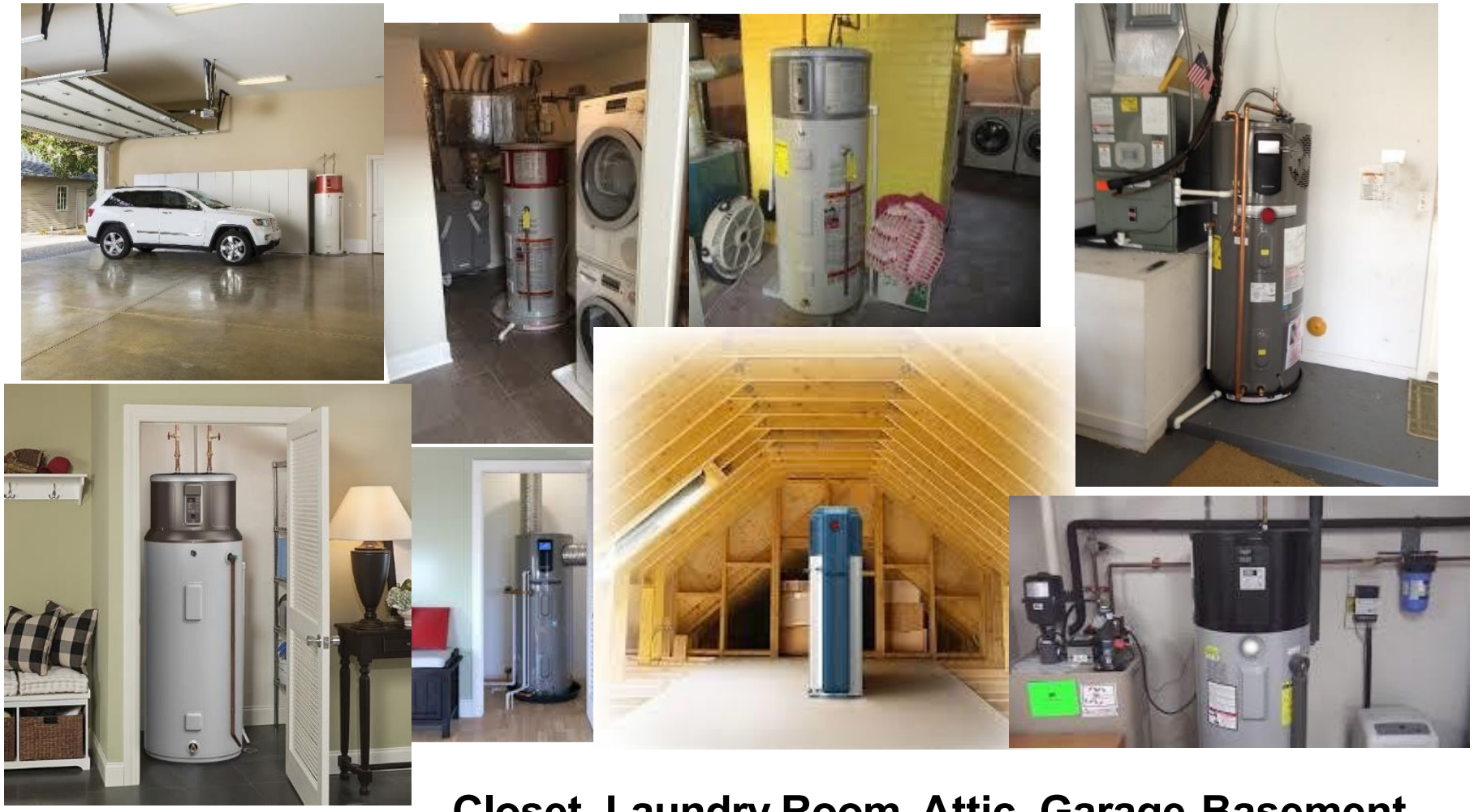
- If tank is depleted, HP cycles off and upper element (4500w) activates to recover top half of tank.
- Then upper element goes off and lower element comes on (4000w) AND the HP comes on (550W) to recover bottom half. Unit then returns to Hybrid mode.

Flexibility at your fingertips

Electronic controls with 4 operating modes plus vacation setting make it simple to select temperature and optimal energy savings performance

- **Heat Pump Mode**
  The most energy efficient mode as it only utilizes the heat pump
- **Hybrid Mode**
  The default setting combining eHeat, with the recovery of Standard Electric Mode
- **Standard Mode**
  Back up heat if fault occurs to avoid emergency service call. Timer up to 199 days with auto switch back to Hybrid mode
- **Vacation Mode**
  Adjusts the temperature setpoint down to 50F for the duration of your vacation
- **Communication Port**
  Used to test every AeroTherm® during production to verify a fully functioning heater

Where They Can Go



Closet, Laundry Room, Attic, Garage, Basement

12

Best Locations

- Basement
  - Non-conditioned space, inside a conditioned home
  - Heat in basement comes from the earth outside the walls (50°-60°)
- Laundry Room
  - Warm and damp due to dryer
  - May be next to HVAC
  - May be in closet with full louvered door

- Garage
  - Non-conditioned space that stays above freezing
  - Less efficient in winter, more efficient in summer – should average out to shown UEF listed by manufacturer
  - Easy to run condensate line

FREE warm

- Closet
  - Most require 36” closet for adequate space
  - Need full louvered door for proper air flow

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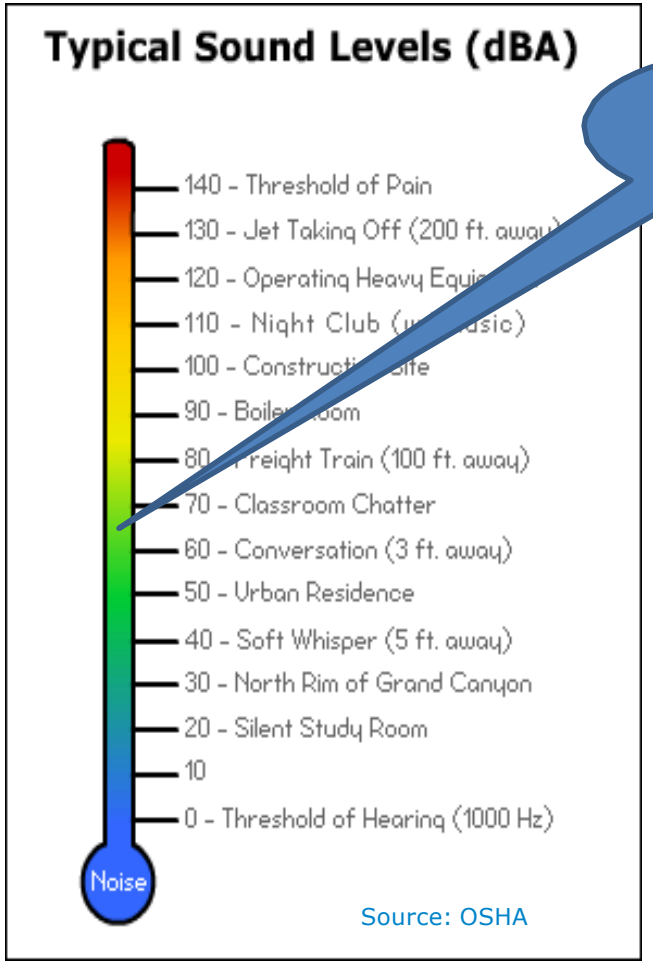
Noise Level



Average HPWH

HPWHs are about as loud as a dishwasher: ~49-55 dB

Show your customers the reading

14

Summary

- Adds value to the home Green Package for higher appraisal and buyer recognition
- Emits no Green House Gases
- Helps indoor air quality through dehumidification
- Solar friendly
- Pays for itself through energy savings alone
- Avoid the dangers associated with gas
- Exclusive 24/7 assistance
- Bradford White Advantage Package

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Be the Early Adopter

Attract buyers who want this now
Educate how heat pump water heaters pay for themselves
Smart for you, Smart for your customer

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Bradford White Sales Contacts

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Bsecker@westernstatesales.com
Bradfordwhite.com
360-798-2294

Gregg Holladay
Business Development Manager
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Bradfordwhite.com
502-774-0773

17

Questions?

— BRADFORD WHITE IS —

The new degree of comfort.®

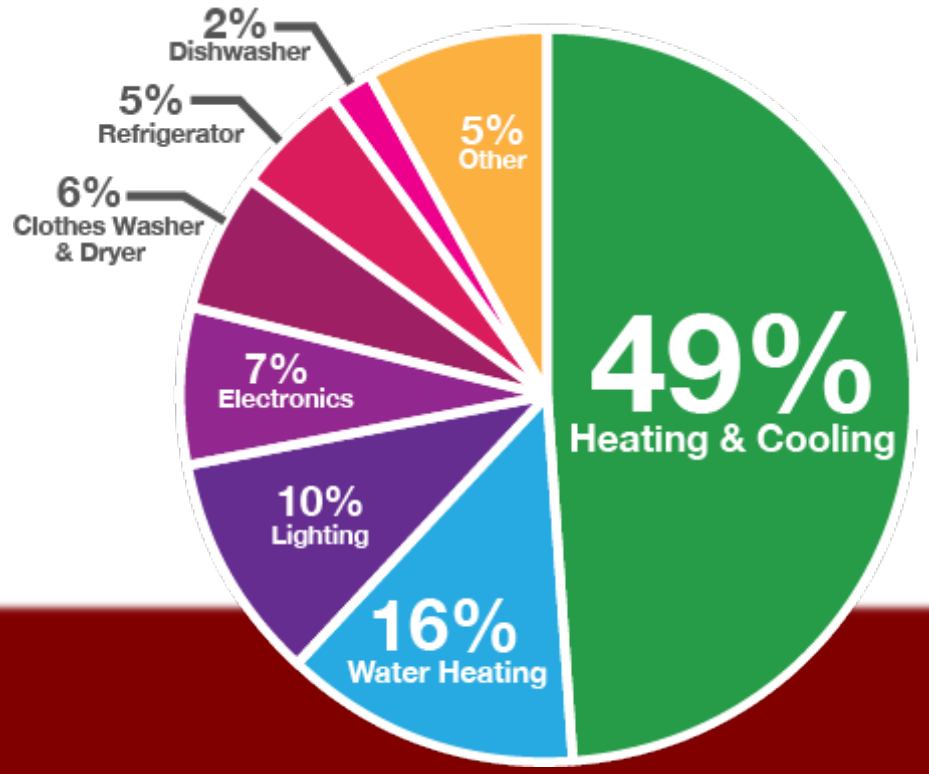
Home Efficiency Forum 2019

OCTOBER 17–18 | PORTLAND, OREGON

The Rheem Difference

Rheem is the only company who can help a homeowner control 65% of their home's energy usage.

Water Heating is The
2nd Highest
Energy User In The House



Prestige® Series Hybrid Electric Water Heater

Over 70% Reduction In Energy Usage

915 kWh per Year

U.S. Government

Federal law prohibits removal of this label before consumer purchase.

ENERGYGUIDE

Water Heater - Heat

Tank Size (Storage Capacity): 45 gallons

RHEEM SALES COMPANY, INC.

Model PROPH50 T2 RH350 D

Estimated Yearly Energy Cost

$110

$120 — Cost Range of Similar Models — $423

The estimated yearly energy cost of this model was not available at the time the range was published.

First Hour Rating

(How much hot water you get in the first hour of use)

Very Small	Low	Medium 67.0 gallons	High

- Your cost will depend on your utility rates and use.
- Cost range based on models fueled by heat pump with tank with a medium GPM (51-75 gallons)
- Estimated energy cost based on a national average heat pump with tank cost of 0.12 cents per kWh
- Estimated yearly energy use: 915 kWh

ftc.gov/energy

3,531 kWh per Year

U.S. Government

Federal law prohibits removal of this label before consumer purchase.

ENERGYGUIDE

Water Heater - Electric

Tank Size (Storage Capacity): 46 gallons

A.O. SMITH WATER PRODUCTS CO.

Model (E,P)NS-50

Estimated Yearly Energy Cost

$424

$120 — Cost Range of Similar Models — $423

The estimated yearly energy cost of this model was not available at the time the range was published.

First Hour Rating

(How much hot water you get in the first hour of use)

Very Small	Low	Medium 57.0 gallons	High

- Your cost will depend on your utility rates and use.
- Cost range based on models fueled by electric resistance with a medium GPM (51-75 gallons)
- Estimated energy cost based on a national average electric resistance cost of 0.12 cents per kWh
- Estimated yearly energy use: 3531 kWh

ftc.gov/energy

Value Proposition With Solar

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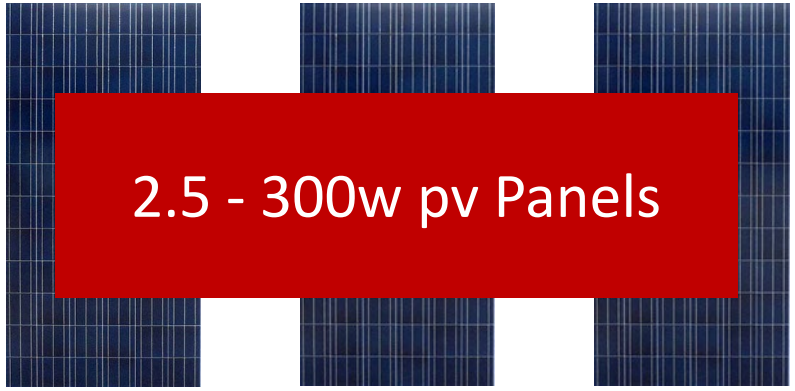

2.5 - 300w pv Panels

Standard Electric Water Heater

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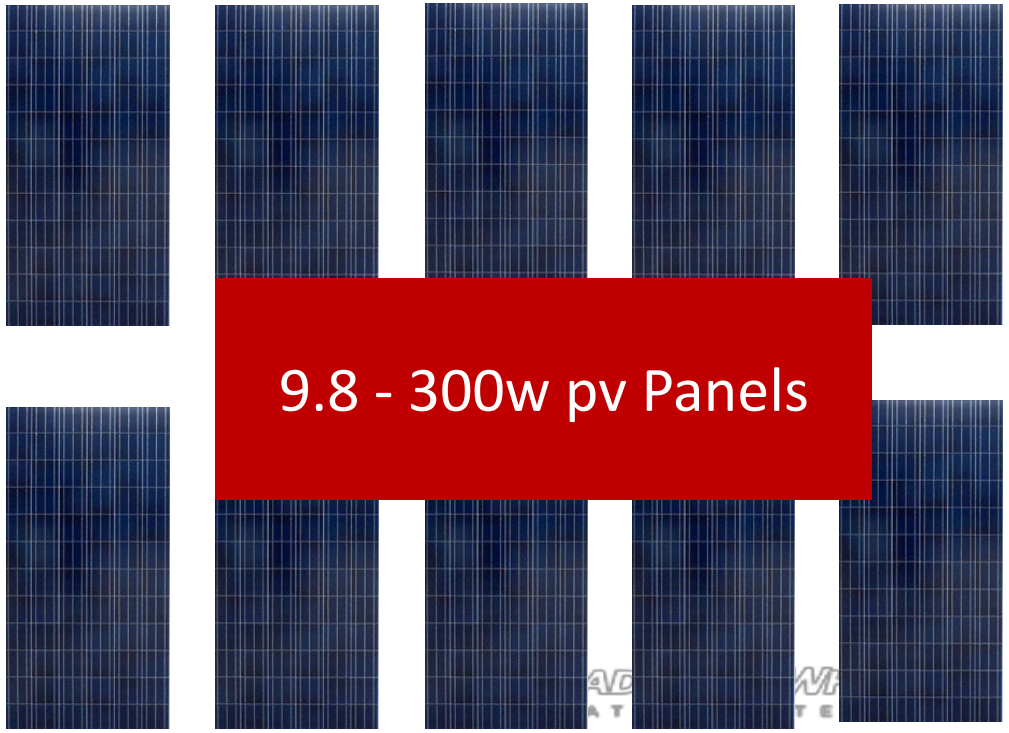


9.8 - 300w pv Panels

Environmental Considerations

Equivalency Results

How are they calculated?

The sum of the greenhouse gas emissions you entered above is of Carbon Dioxide Equivalent. This is equivalent to:

1.9 Metric Tons

Greenhouse gas emissions from

0.417	Passenger vehicles driven for one year	-or-	4,772	Miles driven by an average passenger vehicle	-or-	0.678	Tons of waste recycled instead of landfilled	-or-	0.097	Garbage trucks of waste recycled instead of landfilled

CO_2 emissions from

219	gallons of gasoline consumed	-or-	2,130	Pounds of coal burned	-or-	0.026	tanker trucks' worth of gasoline	-or-	0.21	homes' energy use for one year	-or-

BRADFORD WHITE WATER HEATERS

Thoughtful Design

Efficiency

- Compressor uses 300-500W but delivers 1700W to the water

Smartest

- 5000W heating elements
- Makes More Hot Water Than Standard Electric Heaters
- LeakSense
  - Protects your home
  - Audible Alert from unit
  - Alerts via EcoNet® App

Quietest

- QUIETEST IN ITS CLASS !
- Can be installed in the living space. As quiet as a dishwasher or refrigerator

BRADFORD WHITE WATER HEATERS

There’s an APP for That

Built-In Integrated Wi-Fi

NEW

Wi-Fi to receive alerts and alarms with no additional cost

On screen Wi-Fi Set up

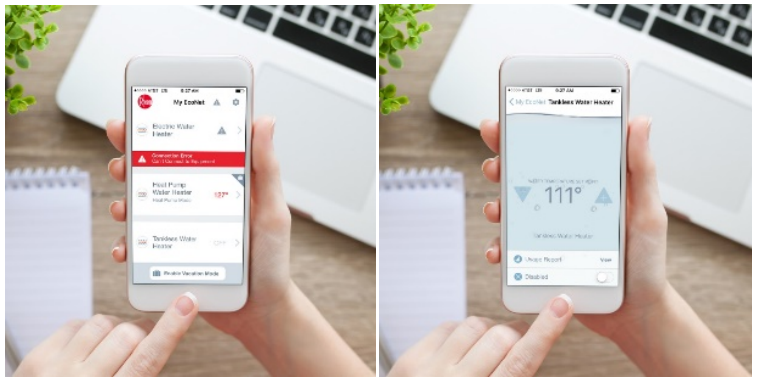
NEW

Simplifies Wi-Fi set up for the plumber or homeowner

Energy Usage Reports

NEW

Provides real time information on energy use



Works With

EcoNet®
Smart. Simple. Savings.

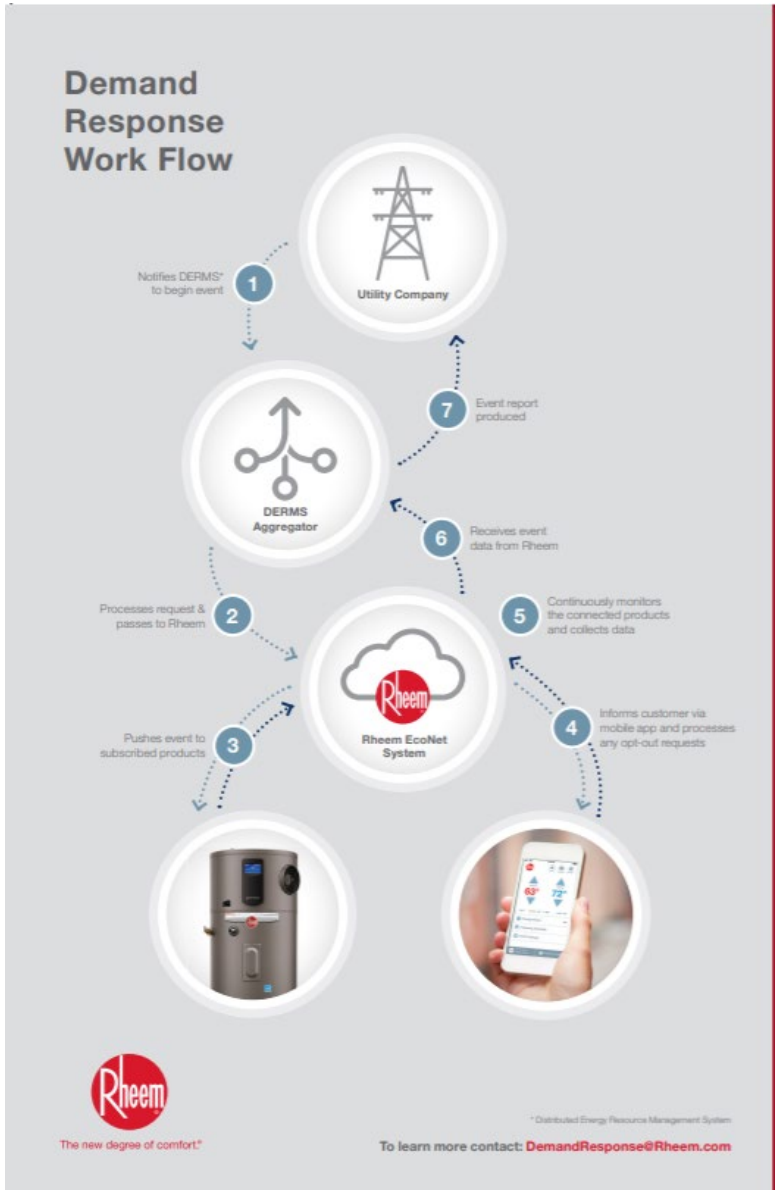
works with nest

JUST ASK amazon alexa

wink

Your Google Assistant,
always ready to help

Forging Partnerships for Better Grid Management



Alabama Power

aps

Georgia Power

GREEN MOUNTAIN POWER

nationalgrid

SMUD

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL® Company

Southern California Gas Company
A Sempra Energy company

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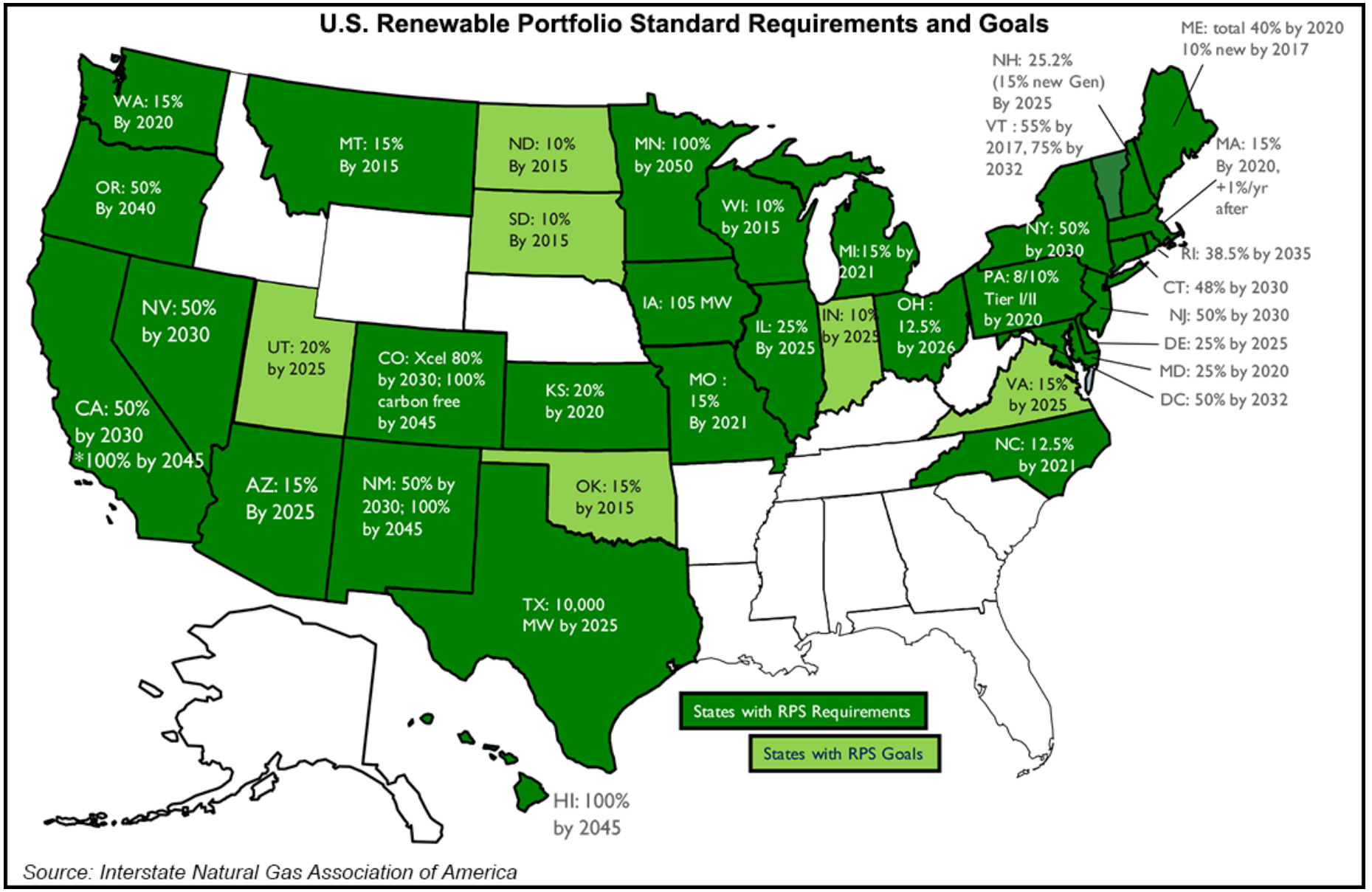
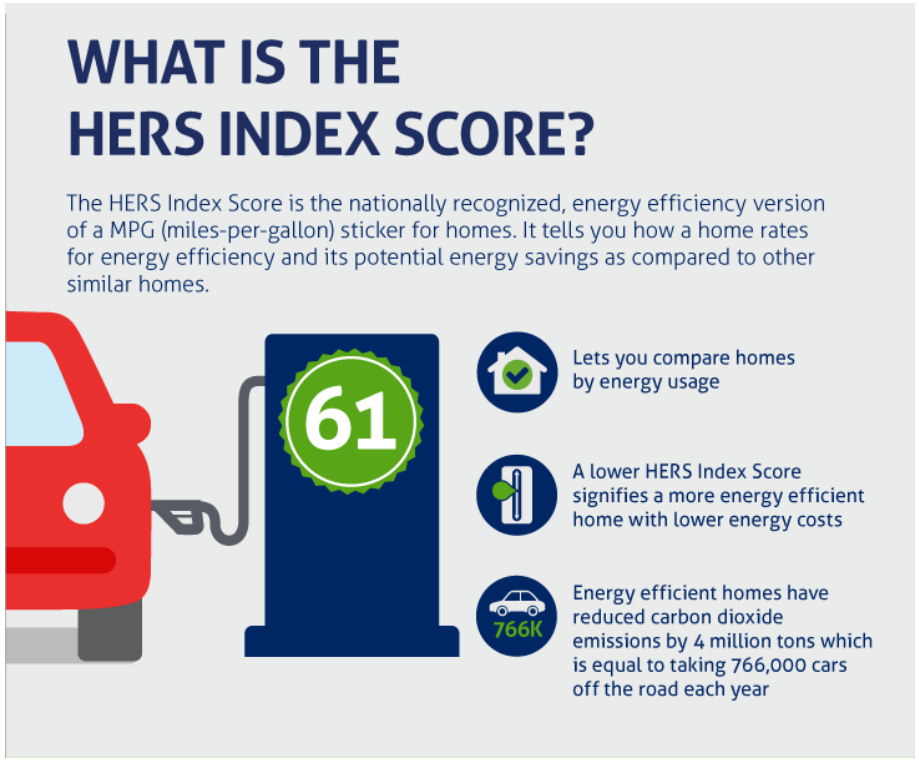
BRADFORD WHITE
WATER HEATERS

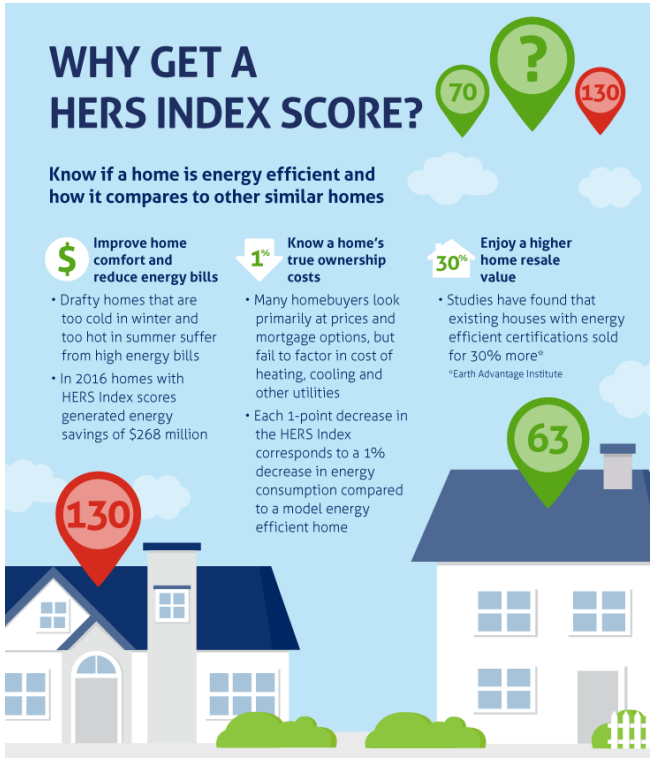
Renewables Goals by State



Home Energy Rating System (HERS)

Over 2,000,000 Homes in The U.S. Were RESNET HERS Rated!
From 120,000 homes in 2011.





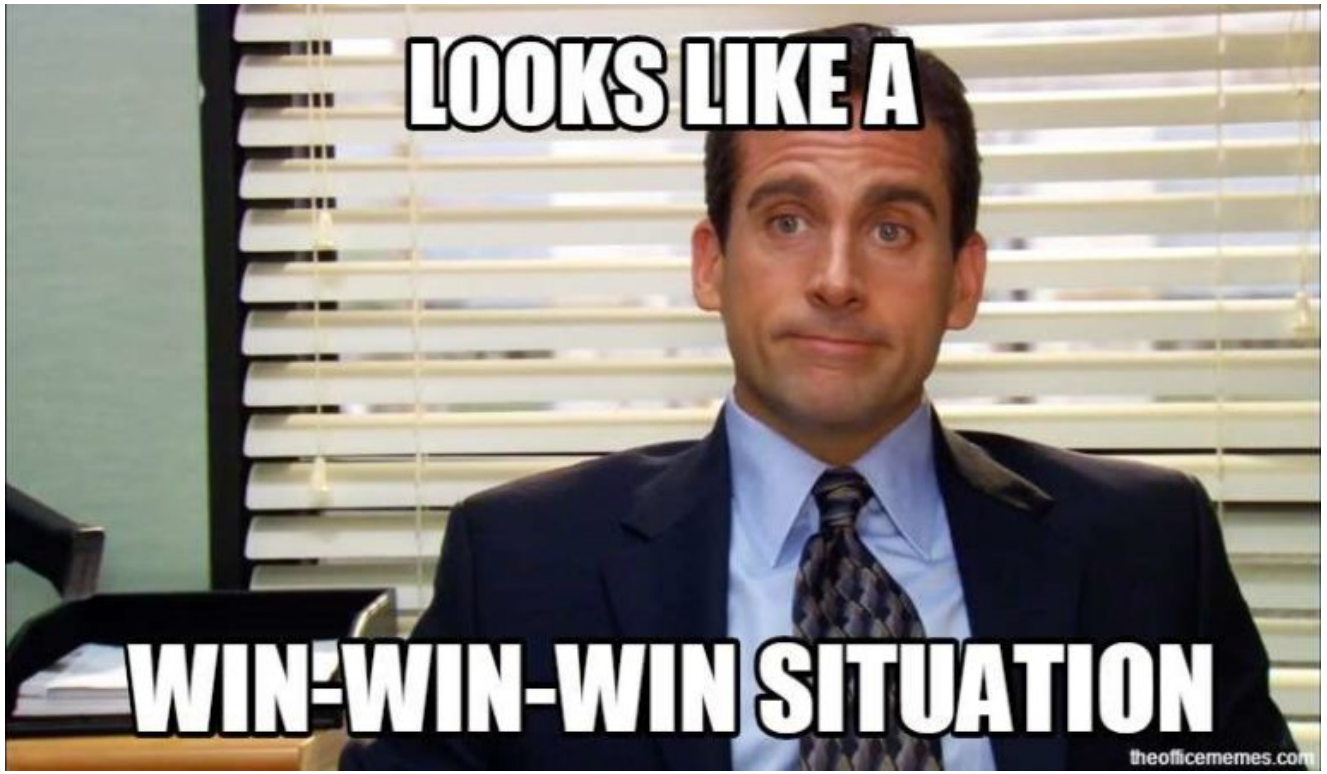
Prestige® Series Hybrid Electric Water Heater
Saves 4-7 HERS Points!

BRADFORD WHITE®
WATER HEATERS

Recap/Questions?

- Highest Efficiency
- Quietest
- Install ability
- Connectivity
- Leak Detection
- Energy Savings Reports
- Included Ducting Connection
- Serviceability
- Recovery
- Available Models

The Rheem Hybrid Wins:



Kevin Clark
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702-218-0194

BRADFORD WHITE
WATER HEATERS