



## **2023 ENERGY STAR Products Partner Meeting**

# **Heat Pump Water Heater Workforce Development Is Hard, But Help is On the Way!**

### **Presenters:**

Paul Campbell – ICF

Ellen Steiner - Opinion Dynamics

Gregg Holladay – Bradford White

Tom McConahay – Rheem

**September 27, 2023**



# ENERGY STAR®

## Heat Pump Water Heaters



2023 ENERGY STAR Partner Meeting  
Workforce Development Resources  
9-27-23

Paul Campbell  
ICF



## ENERGY STAR HPWH Product Sales & Marketing Team

- Access to **tools** that increase education/awareness of HPWH
  - ✓ Product/Installer/Retailer Finder
  - ✓ Data sheets/Selling and Purchasing Guides
  - ✓ “Ask The Expert” Articles and Newsletters
  - ✓ National Outreach and Media Options
- Access to **Industry Partnership Network**
  - ✓ Department of Energy (DOE)
  - ✓ Manufacturers Action Council
  - ✓ Utilities and their third-party implementers
  - ✓ Retailers (national/regional)
  - ✓ Home Builders

## Build Show Video with Matt Risinger

ENERGY STAR teamed up with Matt Risinger at **The Build Show** to compare different water heater types and explain how ENERGY STAR certified HPWHs can save households hundreds of dollars on energy costs each year.

<https://youtu.be/wt95SE2ogNI>



2M+ subscribers



## ENERGY STAR Heat Pump Water Heater Manufacturer Action Council



What can ESMAC do for you?

- Manufacturer product/sales **training** with facilitation support from ENERGY STAR
- Collaborative **marketing** – develop co-brand, multi-channel marketing collateral
- Sales **channel engagement** - Access and support from retail and distribution partners
- **Innovative strategies** – market priming



Opinion **Dynamics**



# Training the Clean Energy Workforce - Heat Pump Water Heaters



Ellen Steiner, Ph.D.  
Vice President  
September 27, 2023



# Technology and Equipment for Clean Heating (TECH)

- \$265 million pilot program designed to help advance California's mission to achieve carbon neutrality
- Implemented by Energy Solutions and designed to use a combination of market incentives, supply chain engagement, **workforce development**, consumer education, regional pilots, and Quick Start Grants to install low-emissions space- and water-heating technologies in existing California homes.
- Evaluation utilizes Four Pillars of Whole Independent Systems Evaluation™ (WISE), which is especially salient for Workforce, Education, and Training Programs

## Learn and Earn Program

- TECH is sponsoring 1,000 HPWHs for TECH-enrolled contractors who complete ESMAC and manufacturer training offerings
- Units must be installed in homes of technicians or sales team members
- Goal to build familiarity and confidence with HPWHs; can speak from direct experience using the technology

## Electrification Training - Electrify My Home

- Three-day electrification introductory training
- Followed by cohort training
  - Create peer groups to share best practices and lessons learned
  - Reinforce and advance training from 3-day course
  - Provide opportunities for additional hands-on field training

# HPWH WE&T Best Practices

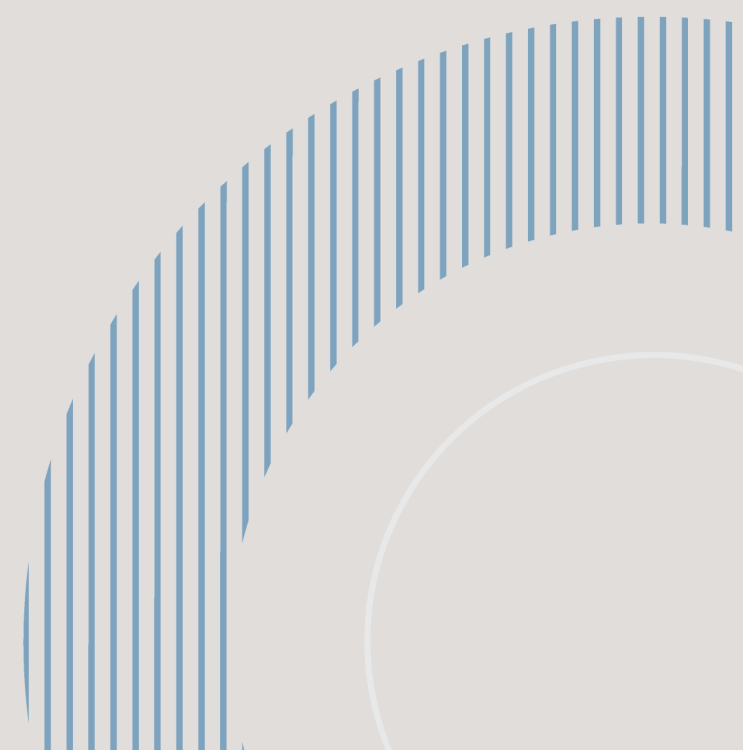
- Develop HPWH Workforce Strategy
  - Technical knowledge is not the only requirement for a good trainer. Do your trainers integrate adult learning principles into their instruction design?
  - Hands-on training is key. Does your strategy include laboratory spaces with current HPWH equipment?
  - Are your trainers skilled on HPWH equipment? Are they credentialed?
- Understand who is installing water heaters in your market
- Develop clear learning paths for key audiences
  - Upskilling incumbent plumbing installers
  - Upskilling incumbent HVAC installers (if allowed in your region)
  - Training entering workforce
- Partner with manufacturers and distributors
- Create peer networking opportunities
- Include assessment and evaluation expertise at the beginning
- Focus metrics on outcomes vs. outputs – Kirkpatrick’s Model



As organizations  
continue to develop plans for  
workforce, education, and training  
we welcome the opportunity to  
serve as a resource.



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# AeroTherm Series® Heat Pump Water Heater

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**Business Development Manager**

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— BRADFORD WHITE IS —


**AMERICAN  
STRONG™**

\*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.

**Learning to focus on the big picture will help you keep things in a proper perspective.**

Roy T. Bennett

- The market is changing
- We either move forward or get left behind
- Heat pump water heaters make sense in *every* market
- They pay for themselves, being Green is a bonus!

 QuotesLyfe



**GET  
HEAT  
PUMPED UP!™**

# Benefit - No direct carbon emissions and Pays For Itself!

\*Payback = Return on **total** investment of product including installation

Above UEF  
4.0 UEF  
3.0 UEF  
2.0 UEF  
1.0 UEF

4.07



- Provides \$3 - \$4 of hot water for every dollar spent
- Saves about **\$300 - \$400 a year** over standard electric water heater
- 10-year limited warranty

**Payback above the line**



Below

.82-.97

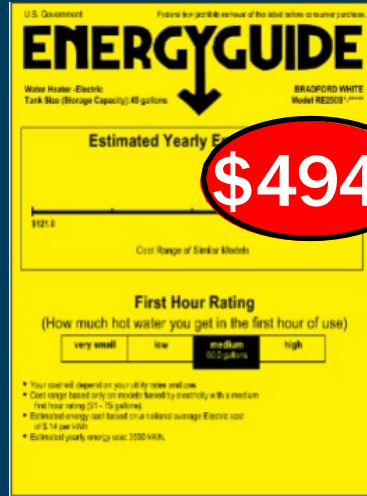


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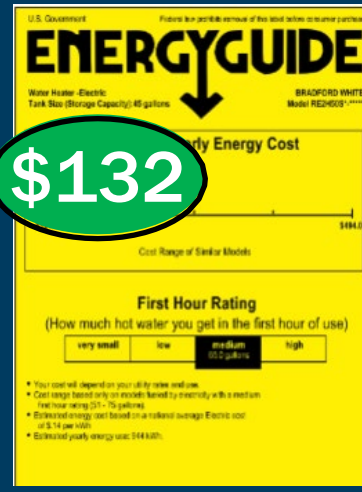


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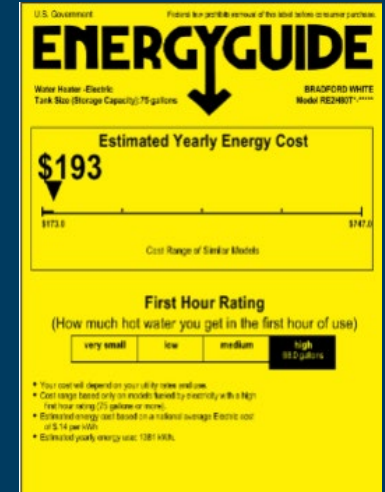
Standard Electric .93 UEF  
50 Gallon



AeroTherm® 3.43 UEF  
50 Gallon



AeroTherm® 3.64 UEF  
65 Gallon

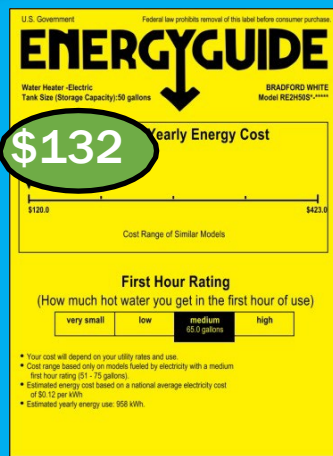


AeroTherm® 3.59 UEF  
80 Gallon

**Saves \$362 every year!**

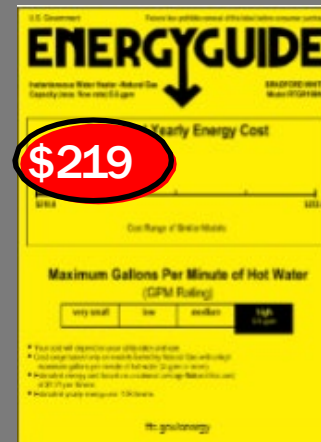


Standard gas tank .63 UEF

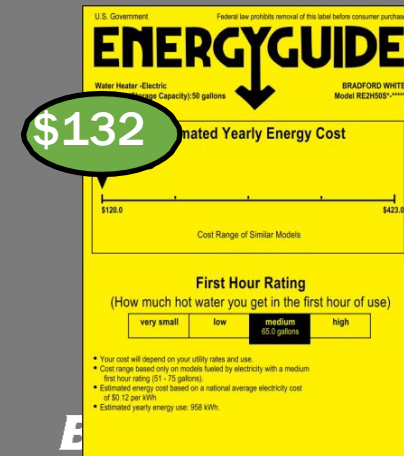


AeroTherm® 3.43 UEF

**Saves \$193  
Per Year  
vs. Gas!**



Gas tankless .95 UEF



AeroTherm® 3.43 UEF

**Saves \$87  
Per Year  
vs. Tankless!**

# Prioritize Your Work

## Electric to Electric – 1st choice

- Simple switch out
- Verify space
- Condensate drain only addition – can be tied to HVAC if close by

## Gas to Electric with non-used 30-amp dryer plug – 2<sup>nd</sup> choice

- Move dryer plug for water heater – no panel box work needed
- Condensate drain – can be tied to HVAC if close by

## Gas to Electric with 200 amp panel, add 30 amp breaker – 3<sup>rd</sup> choice

- Add a new 30 amp circuit and line
- Condensate drain – can be tied to HVAC if close by

## Gas to Electric with panel upgrade – 4<sup>th</sup> choice - Consider 120v plug in option

# Learn To Tell The Story...

- Your Introduction to Heat Pump Water Heaters – How We Got Here
- Why Heat Pump Water Heaters
- What Each Manufacturer Offers
- Proper Sizing/Space required
- Proper use of recirculation pumps, mixing valves, and expansion tanks
- Q&A Time



**GET  
HEAT  
PUMPED UP!**



GET  
**HEAT**  
PUMPED UP!™





# WORKFORCE DEVELOPMENT CHALLENGES FOR HPWH



Tom McConahay  
Sr Manager, National Plumber Support  
Rheem Water Heating



# Plumber Support Team Mission

## Mission

1. To help plumbers grow their business through education on Rheem products & programs
2. Professional classroom experience with Hands-on product training
3. Field Trainings
4. Virtual instructor led training
5. We transfer technical & business knowledge
6. Build Strong, trusting relationships



# Challenges

## OVERALL CHALLENGES

1. Average age of a licensed plumber is 59 years old
2. Recruitment to the trade
3. Understaffed and time constraints

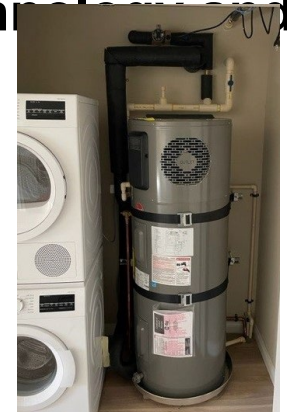


## HPWH CHALLENGES

1. Awareness of the Product Category
2. New Product and Install considerations
3. Upfront Cost



4. Confidence in the technology used



# Opportunities

- **CTE (Career Technical Education)**
- **Workforce Development Organizations**
  - Explore the Trades
  - BTF (Building Talent Foundation)
  - Utility Programs
    - NYSERDA, EnergizeCT, etc.
- **PHCC**
  - Education Foundation (apprenticeship programs)
- **Manufacturer Training**
  - In house
  - Field
  - Virtual



# WORKFORCE DEVELOPMENT CHALLENGES FOR HPWH



Tom McConahay  
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Rheem Water Heating

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