NEEA's Heat Pump Water Heater Market Transformation



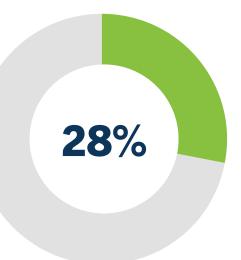
NORTHWEST MARKET SHARE: 0% PRE-2012 Supports manufacturers to invest in HPWH products. **NORTHWEST MARKET SHARE: 2%** • First ENERGY STAR[®] labeling, Northern Climate Specification (NCS) 2013-2014 and Qualified Product List (QPL). NEEA provides data and comments NEEA launches to U.S. DOE standards resulting in Program in market **October 2013** new requirements for large tanks. **NORTHWEST MARKET SHARE: 1%** 2012 • Retailer pilot results in 1,200% increase in HPWH sales. • Tier 2 product introduced in market: +29% energy savings. Launch of consumer information resource, smartwaterheat.org.

 Regional Technical Forum established Unit Energy Savings (UES) for use by utility programs.

Explore the significant milestones and achievements of NEEA's journey to Heat Pump Water Heater Market Transformation.

NORTHWEST MARKET SHARE: 5% 2016

- NEEA expands national collaboration.
- NCS evolves into Advanced Water Heater Specification (AWHS) 6.0.
- NEEA helps additional manufacturer enter the market, securing HPWH products with top national water heater manufacturers.



Awareness

NORTHWEST MARKET SHARE: 8% 2018

 Washington state includes HPWH in 2018 residential new construction code.

NORTHWEST MARKET SHARE: 4%

2015

- Tier 3 products introduced.
- Enhanced customer performance specifications for noise and exhaust-air management.
- Federal standards requiring HPWH for large tanks take effect. \square



NORTHWEST MARKET SHARE: 9% 2017

- Program strategy expanded to include both consumer and installer education.
- Added distributor interventions.



30-50% Ir

NORTHWEST MARKET SHARE: 12% 2020

• Tier 4 products introduced.

• The program faces COVID-19 challenges.



NORTHWEST MARKET SHARE: 10%

2019

- Program focus shifts to distributors and installers education.
- AWHS 7.0 includes optional grid connectivity.
- NEEA Comments on ENERGY STAR v5.



40-57% Insta

NORTHWEST MARKET SHARE: 15% 2021

- National Advanced Water Heater Initiative (AWHI) launched with NEEA as an active participant.
- NEEA runs "Boring But Efficient" consumer awareness campaign.



NORTHWEST MARKET SHARE: 17%+ 2022

- U.S. DOE releases Technical Support Document showing HPWHs are cost-effective for national market.
- post-campaign awareness.
- consideration in the rulemaking process.



• NEEA provides Northwest-specific data to U.S. DOE.

- NEEA runs consumer-awareness campaign focused on rural regions, resulting in 20% increase in
- NEEA participates in a joint recommendation to U.S. DOE, along with manufacturers and energy efficiency organizations, proposing efficiency levels for



NORTHWEST MARKET SHARE: 18% 2024

• U.S. DOE elevates the federal water-heating standard, which they estimate will achieve 17.6 quadrillion BTUs of full-fuel-cycle energy savings over the next 30 years.



NORTHWEST MARKET SHARE: 18%

2023

- U.S. DOE cites the Advanced Water Heating Specification in federal rulemaking as a de-facto industry standard.
- U.S. DOE issues Notice of Proposed Rulemaking evaluating proposed amended energy conservation standards for consumer water heaters.



2029

•U.S. DOE estimates the federal water-heating standard will take effect in 2029.