Heat pump water heaters (HPWH) are 75 percent more efficient than conventional electric water heaters and perform well in all climates and installation scenarios in the Northwest. Nevertheless, some barriers – real and perceived – persist to widespread market adoption. To propel the product’s next leap to large-scale market acceptance, the alliance is working alongside manufacturers to identify barriers to consumer adoption and provide technical and market support to overcome those barriers.

GUIDING FUTURE PRODUCT DEVELOPMENT

The Advanced Water Heating Specification (AWHS) is one of NEEA’s most powerful tools to support HPWH product development and innovation. NEEA developed the AWHS, working closely with manufacturers, utilities and market partners, to provide guidance to manufacturers for developing products that provide high levels of consumer satisfaction and energy performance. The AWHS also serves as a foundational document for utility program efforts that work in partnership with manufacturers to drive the adoption of HPWHs.

“NEEA does a great job balancing the needs of utilities, manufacturers and other stakeholders. They bring the manufacturer perspective back to the other organizations, allow debate, and manage the entire process so the end result is a specification we can all get behind.”

—Tom Zimmer, Sr. Director of Water Heating, GE Appliances, a Haier company

The AWHS outlines different tiers of product performance, including forward-looking tiers that serve as a guide for how the specification and product will evolve. During the 2015–2019 Business Cycle, NEEA added two additional tiers to the AWHS for a total of five tiers of increasing performance. Today, every major water heater manufacturer has at least a Tier 3 HPWH product. And, the first Tier 4 HPWH, the highest level of efficiency currently available, was released in 2020. Thanks to product innovations, the average HPWH is 30 percent more efficient than the best-in-class HPWH was in 2015 and 75 percent more efficient than a conventional water heater.
CHANGING MARKET PERCEPTIONS

HPWHs on the market today offer a superior choice for Northwest consumers. Nevertheless, some negative perceptions of the product linger in the supply chain, including fears that customers will complain about cold air exhaust, or that HPWHs are too big or too loud for some common installation scenarios. In reality, thanks in part to ongoing collaboration between the supply chain and regional programs, today's HPWHs are quieter than a typical refrigerator, the same height as conventional electric-resistance water heaters and have been shown to have a negligible impact on room temperature.

With decades of experience supporting the market with research-driven messaging and marketing resources, the alliance is working closely with manufacturers to understand consumer needs. By identifying and addressing misunderstandings about HPWHs, the alliance continues to build trust in the product among installers and plumbers. “NEEA is knocking down barriers by dispelling myths and misconceptions of HPWH characteristics,” said Zimmer. “At first, end-users and contractors didn’t have a true understanding of how they operate. NEEA’s messaging on this front was extremely helpful.”

A POSITIVE TRAJECTORY OF TRANSFORMATION

From 2015 to 2019 HPWH market share in the Northwest grew from 3 percent to 9 percent, with over 50,000 units sold in the region. While this represents significant progress, increasing national sales will be critical to eventually influencing a federal water heater standard, which is NEEA’s long-term goal. More and more, the alliance is aligning its efforts with partners outside the region to drive national market adoption by supporting utility programs and partnering with manufacturers to provide education for contractors, builders and raters.

“The more we can increase market share, both in the Northwest and nationally, the more compelling it will be for the Department of Energy to permanently raise water-heating performance standards,” said Geoff Wickes, Senior Product Manager at NEEA. “Because that is really our end goal: to make sure every electric water heater sold in the U.S. uses heat pump technology.”