

Accelerating the Development of Efficient Natural Gas Technologies

National Partnerships Deliver Regional Benefits

Nearly three years ago, gas utilities serving customers in Oregon, Washington and Idaho collectively launched a five-year plan for accelerating natural gas efficiency in the Northwest. The plan leverages the two decades of experience that regional utilities and efficiency organizations have partnering to transform markets for electric energy efficiency. “By working together, our goal is to influence and expedite product development so technologies come to market faster, achieve enhanced energy savings and are more likely to meet the needs of Northwest consumers,” said Holly Braun, Program Manager, NW Natural.

NEEA’s natural gas collaborative leverages the support of organizations outside the Northwest that have a shared interest in advancing the development of efficient natural gas technologies. Working with utilities, technology developers, trade associations, and other organizations around the world increases the influence of the Northwest and helps attract the attention of major manufacturers, retailers and distributors.

Accelerating Product Availability

In 2017, the collaborative partnered with water heater manufacturer Rheem supporting its efforts to develop an efficient natural gas heat pump using innovative an new technology. Developed by the Swedish company SaltX, this technology uses salt as a medium to store and amplify heat and has the potential to deliver a gas-powered heat pump water heater that is twice as efficient as traditional natural gas models.

“Everyone in our industry understands the need for higher efficiency water heater technology, but we wouldn’t be this far ahead with product development without the support of NEEA and Northwest utilities.” - Ankur Maheshwari, Senior Product Manager, Rheem

The collaborative provided Rheem and SaltX with market intelligence, insight into utility programs, and funding – all of which accelerated the development of a viable prototype. In 2018, NEEA will continue to support this effort as it moves to lab and field testing of the prototype units.



SaltX reactor with nano-coated salt

When working with pre-commercialized products like gas heat pump water heaters, NEEA's natural gas collaborative mitigates risk for Northwest utilities and consumers by supporting a robust pipeline of product options. In addition to its efforts with SaltX and Rheem, the collaborative has also supported efficient gas water heater development efforts by Stone Mountain Technologies Incorporated, including lab and field testing of prototype units. This testing confirmed energy savings of between 30 and 50 percent above traditional natural gas models and helped to demonstrate a business case for the new technology. A commercialized product could be available to consumers as early as 2020.

The collaborative is also supporting technology development efforts by a partnership between the University of Florida and Oak Ridge National Laboratory, advising on the product development plan and influencing the team to incorporate NEEA's Advanced Water Heater Specification testing and performance criteria. Integrating the specification will ensure that the product meets the needs of Northwest consumers. As this early-stage project progresses, NEEA will evaluate opportunities to accelerate product development, validate energy savings and ultimately help connect the technology developers with interested manufacturers.

Did you know?

NEEA's Natural Gas Collaborative is comprised of Avista Utilities, Cascade Natural Gas, Energy Trust of Oregon, NW Natural and Puget Sound Energy. The Collaborative leverages NEEA's market transformation expertise and existing manufacturer and supply chain relationships to further the objectives of NEEA's Natural Gas Business Plan. This includes sharing lessons learned about product adoption, leveraging existing specifications and test protocols, combining research efforts and sharing data. The Collaborative also partners closely with the Gas Technology Institute, Northwest Gas Association and Natural Resources Canada.

TOGETHER *We Are Transforming the Northwest*

