

May 17, 2019
Via Electronic Mail



Abigail Daken
U.S. Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Avenue NW
Washington, DC 20460

Re: Comments for the ENERGY STAR Residential Water Heater Specification Draft 1 Version 3.3

Dear Abigail,

Thank you for allowing us the opportunity to comment on the Draft 1 Version 3.3 of the ENERGY STAR Residential Water Heater Specification released April 16th, 2019.

The Northwest Energy Efficiency Alliance is a non-profit organization working to encourage the development and adoption of energy-efficient products and services. The Northwest's utilities, public benefits administrators, state governments, public interest groups and efficiency industry representatives support NEEA. This unique partnership has helped make the Northwest region a national leader in energy efficiency. NEEA has a strong interest in promoting all aspects of energy efficiency and ancillary services that will promote energy efficiency and grid services.

NEEA is currently working with efficiency organizations and manufacturers in a collaborative partnership to develop an update to our Advanced Water Heater Specification soon to be released. Partners include Bonneville Power Administration, Energy Trust of Oregon, Portland General Electric and Vermont Energy Investment Corporation to name a few. We encourage EPA to consider the following items from our specification for inclusion in the ENERGY STAR Residential Water Heater Specification Version 3.3:

1. NEEA recommends that EPA include specific language: "ENERGY STAR is strongly considering requiring ANSI/CTA-2045." Water heating is the second largest load in the home. For utilities to tap this huge demand resource, and enhance greater grid efficiency and reliability, utilities and manufacturers must align on a strong standard for communicating between utilities and flexible loads. NEEA has worked with a broad consortium of stakeholders to complete the "Regional Study of CTA-2045 Enabled Water Heaters". The report is hosted on the Bonneville Power Administration website¹. This study clearly demonstrated that the key to simplifying the customer experience and to using resources cost-effectively was widespread adoption of a standardized approach to communicating to loads that have flexibility about when they use electricity. NEEA has discussed our findings with several manufacturers who agree that ANSI/CTA-2045 will ease the implementation costs of using residential water heaters for demand response and will increase uptake by consumers.
2. NEEA recommends the open standardization of communication ports and methods for enabling demand response with water heaters. Open standards will allow for the rapid adoption and deployment of demand response for the second largest load in the home. Original Equipment Manufacturers (OEMs) have been seeking guidance and direction for a "Standard Solution" and utilities have been looking for a practical and effective solution to unlock this flexible load. Proposing demand response requirements in Version 3.3 of the ENERGY STAR Residential Water Heater Specification will provide market leadership in shifting the industry to the next chapter of grid innovation. Adoption of these demand response requirements will allow utilities to take advantage of a power grid that is becoming more dynamic due to an abundance of renewable energy. We encourage the EPA to consider a recent bill that passed in Washington State (HB 1444), which

¹ "Regional Study of CTA-2045 Enabled Water Heaters" is located at: <https://www.bpa.gov/EE/Technology/demand-response/Pages/CTA2045-DataShare.aspx>

requires a physical port on water heaters. This bill is evidence of market momentum towards an open source communication standard. NEEA strongly supports ANSI/CTA-2045, including a CTA-2045 port, for the physical layer of the specification.

3. NEEA recommends revising line 94 of Draft 1 Version 3.3 of the ENERGY STAR Residential Water Heater Specification to “these elements, either individually or together, could be with the water heater/controller, and/or an external communication module, or a hub/gateway – all located with the premises. To enable the customer external functionality in section 4.B and /or provide a second additional option to enable the Demand Response functionality in section 4.C, the internet/cloud may be permitted”. This language will promote development of a demand resource that the utility market needs, and will enable the customer journey that OEMs would like to offer.
4. NEEA recommends that EPA develop a special brand that would differentiate “Grid Ready” products such as what is proposed in Version 3.3 of the ENERGY STAR Residential Water Heater Specification. This brand would be recognized by the OEMs, members of the supply chain, utilities, customers and third party demand response providers.

NEEA works to increase the efficiency of both electric and gas products in the market place. To that end, NEEA recommends changes in Version 3.3 of the ENERGY STAR Residential Water Heater Specification to support greater efficiency of gas water heaters. NEEA recommends EPA increase and/or add higher performance tiers in gas storage water heater requirements in this version of the ENERGY STAR Residential Water Heater Specification. Gas storage water heaters with a UEF >1 are expected to be on the market in 2022, and having a clear ENERGY STAR tier reflective of this performance will help prime the market for this technology. This strategy was used prior to the widespread launch of electric heat pump water heaters and was successful in accelerating market adoption. NEEA is currently integrating gas performance requirements of UEF >1 into its existing Advanced Water Heater Specification, a collaborative specification developed by industry, utilities and energy efficiency organizations. Having both EPA and NEEA providing a clear performance target will drive manufacturers to accelerate the significant energy savings possible with new gas technologies.

Thank you for considering our comments.



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