

December 2nd, 2011
Via Electronic Mail



Ms. Abigail Daken
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U.S. Environmental Protection Agency
Office of Air and Radiation
Washington, DC 20460

Re: Energy Star Water Heaters; Proposed v2.0 Product Specification, Draft 2

The following comments are submitted for the record of the Agency's above-captioned proceeding regarding the **Version 2.0 Product Specification, Draft 2 for Energy Star water heaters**. They are submitted on behalf of the Northwest Energy Efficiency Alliance (NEEA) and members of the Northern Climate Heat Pump Water Heater Task Force (Task Force) identified in the signature block below. (Because of the compressed timeline for comments, not all Task Force members were able to review the comments and gain approval for endorsement in time.)

The Northwest Energy Efficiency Alliance is a non-profit organization working to maximize energy efficiency to meet our future energy needs. NEEA is supported by, and works in collaboration with, the Bonneville Power Administration, Energy Trust of Oregon and more than 100 Northwest utilities on behalf of more than 12 million energy consumers. NEEA facilitates collaboration between the region's electric utilities, public benefits administrators, state governments, public interest groups and efficiency industry representatives. This unique partnership has helped make the Northwest region a national leader in energy efficiency.

The Northern Climate Heat Pump Water Heater Task Force is a NEEA-facilitated stakeholder group working to encourage the development and adoption of heat pump water heater technologies that deliver superior energy efficiency performance and consumer satisfaction in the more severe operating environments of the northern half of the United States.

Overview

It is clear from the revisions and discussion in the second draft of the specification that EPA is carefully considering the concerns and input of all stakeholders. We very much appreciate the care and thought that EPA is devoting to this important area for residential energy savings. While progress is being made with all elements of the specification, we still have concerns with regard to the comprehensiveness and utility of the specifications for heat pump water heaters. NEEA will provide comments on two additional issues under separate cover: 1) regarding the inclusion of electric point-of-use water heaters (POUs) as currently defined, and 2) the resolution of the warranty issues for add-on heat pump water heaters. In these comments we will focus only on heat pump water heater issues, with the intent of helping EPA make further progress toward a specification that will maximize the benefits of the Energy Star Water Heater label to organizations such as ours that will invest substantial resources in promoting significant improvements in residential water heating efficiency.

Heat Pump Water Heater Specifications

In our September 8th comments on the specification first draft, we explained in some detail why we strongly believe that the Northern Climate Heat Pump Water Heater Specification and its associated test methods can provide EPA the means to assure product performance commensurate with their ratings and consumer satisfaction, in all regards, with their Energy Star-rated products. In the absence of such a comprehensive specification, we fear that many heat pump water heater products will fail to deliver their promised energy savings and fail to meet consumer expectations in other regards, as well. This has happened before; the energy efficiency community in the Pacific Northwest has suffered through more than one period of heat pump water heater market failure in the past, and we are determined not to repeat the experience again.

The final version of the recently updated Northern Climate specification, and related materials, are available here: <http://www.neea.org/northernclimatespec>.

While we're pleased that EPA sees value in the Northern Climate specification, we're not confident that the two requirements chosen by EPA (the compressor audible alarm and reporting of the compressor low ambient temperature cut-off), taken out of the context of the rest of the specification, will accomplish what is needed from a consumer perspective.

The Northern Climate specification includes the audible alarm requirement only for tiers 2 and 3. Tier 1 products, while not requiring this audible alarm or many other features mandated for tiers 2 and 3, still do meet minimum "Northern Climate EF" values and therefore hold great promise for substantial energy savings. Including this audible alarm requirement in isolation from the Northern Climate tiering structure will cause all tier 1 qualified northern climate products to lose their Energy Star status as well as their Northern Climate qualified status. We doubt this is EPA's intent.

The Northern Climate specification has taken a two-pronged approach to the condensate drain-plugging problem by also specifying a 3/4"-diameter condensate drain line for all Tier 2 and Tier 3 qualified products. It may be that the larger diameter condensate drain line will prove to be sufficient insurance of performance so as to make the audible alarm eventually unnecessary. We have already confirmed at least one reported problem in the field with the smaller drain lines used in current generation Tier 1 products (and seen similar blockages in previous generations of products). Because this is such a critical issue, we are taking a very conservative approach, and we recommend that EPA do the same. Given the November 2012 proposed effective date of the Energy Star v2.0 specification, we urge EPA to contact manufacturers of products now on the market to get a sense of whether or not compliance with this element of the specification constitutes an unmanageable burden.

Second, the reporting of the lower compressor ambient temperature cut-off in manufacturer literature will have little or no impact on the performance of the product or the knowledge base of consumers. Most consumers and installers will have no idea how to use this information. This is required in the Northern Climate specification because it is the basis for part of the associated test procedure – this temperature is verified in the test procedure and then used to assign COP performance in the ten temperature bins that provide weights for the Northern Climate EF calculation. Out of context, this provision will have little practical impact.

Even as we continue to work with EPA to advance the ENERGY STAR water heater specification, NEEA and Pacific Northwest utilities intend to proceed with the Northern Climate HPWH Specification and its

test procedure as the basis for the marketing programs and incentives that will be necessary to accelerate the adoption of these products in the market.

Based on wide-spread support from the HPWH Task Force, it is likely that other utilities and organizations in the northern half of the country (including Canada) will adopt the Northern Climate Specification as well, as a means of ensuring energy savings and consumer acceptance of these products.

An EPA note in the second draft (lines 139-142) indicates that “some of the requirements identified in the Northern Climate specification make sense for ENERGY STAR, [but] most cannot be adopted until a test method is in place.” While we agree that current federal test methods are in need of revision, we believe that the test methods proscribed in the Northern Climate specification are sufficient to differentiate products that are designed for reliable energy savings and customer satisfaction in northern climates. As the federal test procedure for these products is updated (for instance, with new draw patterns), NEEA will update the Northern Climate specification to align it with any changes. Because NEEA is a direct participant in that rulemaking process, some portions of the Northern Climate specification may find their way into the federal procedures.

Summary

We continue to believe that the HPWH Northern Climate specification and its associated test procedure and ratings are essential for identifying products that will meet consumer expectations in the northern half of the country. We also believe that the market for the most efficient electric water heaters would be best served if the Northern Climate specification and the ENERGY STAR specification were optimally aligned. Thank you for the opportunity to provide EPA with the benefits of the rapidly growing body of knowledge and experience with these products.

Comments supported by:

Idaho Falls Power
Northwest Energy Efficiency Alliance
Portland General Electric
Ravalli County Electric Co-op
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