



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
AIR AND RADIATION

March 19, 2012

Dear ENERGY STAR® Water Heater Manufacturer or Other Interested Party:

The U.S. Environmental Protection Agency (EPA) is pleased to share the attached Draft 3 Version 2.0 ENERGY STAR Residential Water Heater specification. EPA encourages stakeholders to submit comments on this Draft 3 proposal by **April 16, 2012**.

The Draft 3 proposal is based on comments received on the Draft 2 proposal as well as subsequent stakeholder discussions and research. With this draft, EPA has concluded its consideration of point of use and add-on heat pump water heaters for purposes of this revision. Before finalizing Version 2.0, the Agency is taking comments on a proposal to add residential gas hybrid water heaters.

As part of the revision process, EPA has made a concerted effort exploring the possible addition of point of use (POU) and add-on units to the ENERGY STAR Residential Water Heater specification. While both technologies have the potential to deliver substantial energy savings, a number of critical issues remain, leading the Agency to exclude them from the specification scope.

Point of Use

POU water heaters can deliver meaningful energy savings, both from water heating and from hot water distribution. However, depending on the application, the purchase of a POU may or may not be as energy-saving as other options designated with the ENERGY STAR label. Determining whether a POU is the better choice typically requires the evaluation of complex trade-offs, with a number of factors affecting savings. These include when water tends to be used in the household, the distance between fixtures and the central hot water heater, and characteristics of the POU heater itself. While not a good fit for a binary label, these products present an opportunity for the ENERGY STAR program as part of its consumer education efforts. EPA will work with POU manufacturers to ensure that ENERGY STAR is a credible source of information regarding the advantages of this technology.

Add-on Heat Pumps

Field studies show that add-on heat pumps deliver energy savings; however, they raise significant issues with respect to reliability and consumer acceptance. EPA anticipates that further study will increase confidence that these problems have been addressed. In some cases, additional test methods can assist, such as for sound. In addition, warranty and safety certifications remain a concern in that consumers whose water heater fails due to manufacturing defects will be left without recourse if they are voided by installation of an add-on heat pump. EPA will continue to monitor these issues in anticipation of the next Residential Water Heater revision.

Hybrids

A range of stakeholders expressed strong support for adding EPACT covered water heaters to this Version 2.0 specification. Several factors have led EPA to propose including a limited subset of EPACT water heaters intended for the residential market. EPA's interest is in hybrid water heaters with input rates above 75,000 btu per hour and containing more than 2 gallons of water. These units can be designed to have some of the efficiency and performance advantages of instantaneous water heaters, and some of the ease of installation and performance advantages of storage water heaters. Because

their efficiency and installed cost lie between that of instantaneous water heaters and storage water heaters, these products present an attractive alternative to residential consumers. Despite challenges associated with comparing products subject to different metrics, including hybrid water heaters as part of the ENERGY STAR residential specification is consistent with the program's objective of helping consumers identify the most efficient among the product options available to them.

The following additional key changes as compared to Draft 2 are reflected in this Draft 3:

- **Additional Heat Pump Qualification Requirements:** Revisions have been made to the condensate drain blockage alert requirement to allow a visual alert as an alternative to the audible alert.
- **Solar Energy Factor:** Solar water heaters have been retained and SEF requirements proposed equivalent to the current Version 1.1 SF levels.
- **Effective Date:** The effective date has been changed to February 1, 2013.

Additional discussion regarding comments received on the Draft 2 specification can be found in note boxes throughout the Draft 3 document.

Comment Submittal

Stakeholders are encouraged to submit comments on Draft 3 **by April 16, 2012** to Waterheaters@energystar.gov. All comments will be posted to the ENERGY STAR website unless the commenter requests otherwise.

EPA plans to host a stakeholder webinar on **April 5, 2012** from 1:00 pm to 3:00 pm Eastern Time to discuss the Draft 3 specification and address initial stakeholder comments and questions. Stakeholders are encouraged to inform EPA of any industry events that may conflict with this proposed date. Please RSVP to Waterheaters@energystar.gov.

To track EPA's progress in revising the ENERGY STAR Water Heater specification, visit the Product Development website at www.energystar.gov/revisedspecs and click on "Residential Water Heaters".

Please direct any specific questions to Abigail Daken at EPA, daken.abigail@epa.gov or (202) 343-9375 and Craig Haglund, D&R International, at chaglund@drintl.com or 301-588-9387. Thank you for your continued support of ENERGY STAR.

Sincerely,



Abigail Daken
U.S. Environmental Protection Agency
ENERGY STAR HVAC Program