

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



OFFICE OF
AIR AND RADIATION

April 2, 2014

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

The U.S. Environmental Protection Agency (EPA) welcomes your input on the attached Draft 1 Version 3.0 ENERGY STAR® Water Heater specification. EPA plans to hold a stakeholder meeting on April 16, 2014 to discuss the Draft 1 specification in greater detail. Stakeholders are encouraged to submit comments on this Draft to EPA no later than April 30, 2014.

The new federal minimum energy conservation standards, effective April 16, 2015, are, in some cases, the same as or above the current ENERGY STAR Water Heater levels, necessitating a revision to the ENERGY STAR criteria. To ensure that ENERGY STAR continues to distinguish the top performers in terms of energy efficiency, providing significant energy and cost savings to the consumer, EPA is revising the Version 2.0 Water Heater specification. Specifically, the Draft 1 proposes the following changes and identifies other areas for further discussion:

Definitions: In anticipation that the new Federal test method will add water heaters with storage capacities between 2 to 20 gallons, EPA proposes to remove the storage capacity limit of 2 gallons from the definition of gas instantaneous water heaters.

Product Classes: In an effort to align with the upcoming 2015 federal standards, EPA proposes to classify the gas storage and electric storage (heat pump) water heaters into two product classes based on capacity – less than or equal to 55 gallons and greater than 55 gallons.

Energy Factor (EF) Levels: EPA's initial market research supports raising the ENERGY STAR levels for gas storage and electric water heaters greater than 55 gallons and for gas instantaneous water heaters. As such, in this Draft 1, EPA is proposing to raise the EF level to 0.80 EF for gas storage > 55 gal; 0.90 EF for gas instantaneous and 2.2 EF for electric storage water heaters > 55 gal.

For gas storage and electric storage water heaters less than or equal to 55 gallons, and for solar water heaters, EPA proposes to retain the current ENERGY STAR criteria.

Standby Loss: For Light Duty EPACT covered water heaters, EPA proposes to strengthen the standby loss requirement from $2374 \text{ btu/hr} \times (\text{TE} - 0.74)$ to $1647 \text{ btu/hr} \times (\text{TE} - 0.75)$, where TE is the thermal efficiency.

Connected Product Criteria: Consistent with optional criteria for other ENERGY STAR products, EPA has proposed optional connected product criteria for hot water heaters. As EPA is aware of only very limited interest in Demand Response for gas, this Draft 1

proposal limits applicability of the optional connected criteria to only electric water heaters.

Connected criteria for water heaters include:

- Communications
- Remote management
- Operational status
- Demand Response
- Information for installers and Consumers

Products that comply with all the criteria will be recognized as connected. These criteria are intended to be verifiable, but EPA does not anticipate applying a test method for connected functionality to residential Water Heaters at this time.

More details regarding EPA's rationale for proposing these changes are included in note boxes throughout the draft specification document.

Pending Test Procedure Changes

EPA recognizes that there is an ongoing Department of Energy (DOE) test procedure rulemaking affecting all residential and certain commercial water heaters that have residential applications. The proposed DOE test procedure revision will establish a uniform test method and descriptor that will be used to establish ratings for these water heaters and will replace the current metrics for these types of products. However, due to the need to revise now to ensure ENERGY STAR's continued consumer value in certain segments of the water heater marketplace, the Version 3.0 ENERGY STAR revision will be developed based on the current metrics (i.e. Energy Factor (EF) for residential water heaters and Thermal Efficiency (TE) for Light Duty EPACT covered water heaters) as measured by the Federal test methods in effect today.

Since DOE is required to develop a crosswalk after the uniform descriptor metric and test method is finalized, EPA plans to follow it, allowing Version 3.0 to remain in place for the near-term.

Comment Submittal

Stakeholders are encouraged to provide written comments for EPA consideration to Waterheaters@energystar.gov by **April 30, 2014**. All comments will be posted to the ENERGY STAR Product Development website unless the submitter requests otherwise.

Stakeholder Meeting

EPA plans to host a stakeholder meeting on **April 16, 2014 from 1:00 pm to 3:00 pm Eastern time** to discuss the Draft 1 specification and address initial stakeholder comments and questions. Stakeholders interested in participating in this discussion should RSVP to Waterheaters@energystar.gov by **April 14, 2014**. Stakeholders are also encouraged to inform EPA of any industry events that may conflict with this proposed date. EPA will distribute further information about this meeting over the next few weeks.

Specifications and meeting materials will be distributed via email and posted on the ENERGY STAR web site. To track EPA's progress with the revision of this specification, please visit the Product Development website at www.energystar.gov/revisedspecs and follow the link to "Version 3.0 is in development" under Water Heaters.

Please direct any specific questions to Abigail Daken at EPA, daken.abigail@epa.gov and 202-343-9375 or Sarah Medepalli, ICF International, at sarah.medepalli@icfi.com and 202-677-5201. Please direct specific questions regarding test method to Ashley Armstrong at the U.S. Department of Energy (DOE), Ashley.armstrong@ee.doe.gov and 202-586-6590.

Thank you for taking the time to review this draft specification. I look forward to working with you over the next several months on this specification development effort.

Sincerely,

A handwritten signature in cursive script, appearing to read "Abigail Daken".

Abigail Daken
Product Manager
ENERGY STAR HVAC Program