



June 15, 2011

Abigail Daken
Environmental Protection Agency
1200 Pennsylvania Ave. NW
Washington, DC 20460

Re: ENERGY STAR® Version 2.0 Water Heater Specification

Dear Ms. Daken:

On behalf of Bradford White Corporation (BWC), I would like to express our appreciation for the opportunity to comment on this framework for ENERGY STAR Version 2.0 Water Heater Specification. Please find our comments below.

BWC is in support of improving upon the already successful ENERGY STAR program for water heaters. We believe that the next specification can develop the program in places where there are currently shortcomings. Specifically in response to the questions asked, please find our answers below.

1. In our experience, approximately 90 percent of replacements installations are done in emergency installations, which accounts for a majority of the residential water heater market today. Of those installations, most consumers set out to buy or request a plumber to install a like water heater to what is already installed. Since the majority of the installed water heater base are storage water heaters, these likely would be replaced with the same.
2. No, it is not appropriate to assess tankless and storage technologies on one EF level. The EF test procedure gives an unfair advantage to tankless technology, which has been very well documented in past water heater rulemakings. In addition, gas storage water heater technology is limited in the maximum achievable EF. Therefore, it is inappropriate to hold them to the same requirement.
3. It is unknown how system sizes of tank versus tankless units would differ. The meaning of "system sizes" is undefined.
4. No, hybrid systems should not be considered. This is mainly attributed to the fact that there is not a test method for these units (more than 1 gallon storage per 4,000 Btu/hr, but less than 20 gallons).
5. Question is missing
6. Question is missing
7. It is very likely that gas condensing storage water heaters will be developed at or below 75,000 Btu/hr. While some water heater manufacturers produce commercial condensing water heaters above this input, there are regulatory requirements that are difficult to incorporate below this input for a reasonable price point. These requirements include FVIR, ultra low NO_x, etc.

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Ultimately, water heater manufacturers are required to implement condensing technology on residential water heaters above 55 gallons beginning April 2015.

8. Due to the fact that there are no residential gas condensing storage water heaters on the market today, it is impossible to determine the installed or maintenance costs for this type of product.
9. If the water heater is sized correctly for the application in question, the gas condensing storage water heater will reliably condense.
10. The purchase of a solar water heater is largely rebate driven, as well as the payback received from operating this type of water heater versus a standard water heater. Solar water heaters are compared to standard gas and electric product when evaluating cost and operational savings.
11. The EF metric is based on actually testing a water heater versus the SEF metric, which is a performance rating based on the results of a computer simulation. These metrics cannot be considered equivalent. No, the SRCC does not calculate a First Hour Rating.
12. Solar water heaters are typically sold as part of packages through dealers and installers. In the case of dealers, they purchase the components of the system from manufacturers or distributors/wholesalers before they sell the packages to installers or direct to home/business owners.
13. We are not aware of any alternatives to the OG-100 and OG-300 rating methods. Also, these rating methods are required to receive the tax credit.
14. Add-on heat pump units are used in applications that either a new or current homeowner decides to upgrade the efficiency of their water heater without replacing it. Yes, there are some situations where these compete with integrated heat pump water heaters.
15. Add-on heat pumps can follow the same distribution channels as standard water heaters. Also, they can be purchased direct from the manufacturer or through a dealer.
16. No, COP is not the most appropriate metric for assessing the efficiency of add-on heat pump units. Integrated heat pump water heaters operate under controlled conditions where the same control runs the heat pump and electric resistance components. This is different than an add-on heat pump unit that has no understanding of how the electric water heater is performing.
17. The use of COP is not applicable and should not be used.
18. The performance of add-on heat pump units cannot be appropriately determined in how it would interact with a standard electric water heater.
19. The warranty requirement of the add-on heat pump must be the same as that required on ENERGY STAR qualified storage water heaters, which is six (6) years.
20. Models appropriate for point of use (POU) should be distinguished from whole home models by input, storage capacity, and size.
21. POU models must be characterized by their appropriate test procedure. The current test procedures for water heaters, in general, is being evaluated and how this test procedure needs to change, as well as whether it will incorporate other technologies including POU units.
22. Water savings cannot be quantified for POU products. This is due to the fact that it is unknown what water distribution system they will be incorporated into. The same is true for in-field energy savings.
23. The efficiency of whole home and POU products cannot be compared, because they are not supplying hot water at the same point in the distribution system.
24. No, there are not additional performance requirements that should be considered for the POU category, as they are a very small part of the current market.
25. POU water heaters are used in the following types of locations: remote fixtures; sanitation fixtures; etc. POU water heaters rarely compete with whole home water heaters.

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26. No, there are there not differences in the distribution channels of POU vs. whole home water heaters.

BWC agrees that it is very important that the ENERGY STAR program for water heaters become technology neutral and better enable consumers to compare different water heaters. We also support the proposal to combine the gas condensing and high efficiency gas storage water heater categories.

In regards to the designation of ENERGY STAR solar water heaters, we believe that the current specification does not have the appropriate requirements. This is due to the fact that OG-300 rating is for a solar water heating “system” not water heater. Therefore, the inclusion of this requirement forces a water heater manufacturer to offer a solar water heating system or not participate in this market directly. Therefore, we recommend that this requirement be removed.

Currently, the ENERGY STAR water heater program does not include commercial water heaters, which are typically one of the top three energy consumers at their installation site. In addition, all other major appliances in restaurants can be ENERGY STAR compliant, yet water heaters are excluded. BWC requests that commercial water heaters are included in this Version 2.0 Water Heater Specification.

Bradford White Corporation thanks you for this opportunity to comment on the ENERGY STAR Version 2.0 Water Heater Specification. AHRI has our full support in submitting their separate comments.

Respectfully Submitted,

Bradford White Corporation

Michael W. Gordon
Senior Vice President, Engineering

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