



September 9, 2011

Ms. Abigail Daken
ENERGY STAR Water Heater Program Manager
U.S. Environmental Protection Agency
1200 Pennsylvania Ave NW
Washington, DC 20460
Daken.Abigail@epamail.epa.gov

Dear Abigail:

This letter comprises the comments of the American Council for an Energy-Efficient Economy on the August 2011 *ENERGY STAR Product Specification for Residential Water Heaters Version 2.0: Draft 1*. We remain impressed with the open, collaborative development of this specification, and look forward to continued work with you on this program.

The American Council for an Energy-Efficient Economy (ACEEE) is a non-profit research organization formed in 1980. We have worked extensively with EnergyStar® since its beginning. ACEEE is also an active participant in the DOE appliance testing and standards programs, the DOE/EPA Energy Star program, and many utility and state energy efficiency programs. ACEEE has carried out policy-related work on water heaters for many years, as investigators and as advisors to research projects led by others. Some of ACEEE's work was offered in the development of the original EnergyStar Water Heater Program, and we are most appreciative of the efforts EPA and DOE have made to start this key program. After all, hot water was the last major residential energy user *not* addressed by EnergyStar, for understandable reasons.

Overview

ACEEE supports much of the specification as outlined in the draft document. We offer some examples of areas which we believe are improved, and a few comments on areas that we feel warrant additional attention:

- Simplified product category titles should help consumers select appropriate water heaters.
- Although ACEEE favors early announcement that EnergyStar expects to require that all gas water heaters be condensing in the next round, the proposed qualifying criteria for electric storage, gas storage, and solar water heaters seem appropriate levels for now.
- We support the electric point-of-use water heater category, and the list of required features for these products (line 135). When installed appropriately, these units can save significant amounts of energy and water by reducing distribution losses while providing hot water to fixtures that previously either did not receive, or took large amounts of time to receive it.
- The definition of Point-of-use electric water heater (Item A.a.iii) confuses “table top water heaters” with (electric tankless and small tank) point of use water heaters, at lines 43 and 73. The allowed dimensions, 36x25x24 inches) are those associated with under-counter storage electric resistance water heaters with capacities that can range up to 40 gallons (or more?). Such units are specifically excluded (2.B, line 96) ACEEE believes these are intended as whole-house solutions for small units (such as efficiency apartments). Characteristic POU electric tankless water heaters, implied by the 12 kW limit, would be much, much smaller, roughly the size of a shoe or boot box.¹ They generally seem much smaller than 1 cubic foot, where the specification would allow about 12 cubic foot volume. The distinction is critical to preclude labeling conventional resistance tank water heaters as POU products. Like EPA, ACEEE does not want to discriminate between tank and tankless technologies, but to us a “POU” tank type would probably have maximum capacity much less than 20 gallons, which poses some problems with ratings under EF.²

¹ For an illustrative example of a POU ETWH, see <http://www.eemaxinc.com/assets/files/sp.pdf>

² For an illustrative example of a 40 gal. “Table Top” water heater, see <http://www.rheem.com/product.aspx?id=857305E8-ECC4-403A-BFF6-423AF78574CD>. A “table top” electric water heater is just a tank water heater that is short and well finished, so it can blend in with kitchen or laundry cabinet work. To ACEEE, 40 gallons is not a POU product. It's just a low-EF (0.88) resistance water heater. If

- ACEEE supports inclusion of add-on heat pump water heaters, and agrees that the proposed language may be a good-enough solution to the controls challenges for now – unless industry agrees on a better one.

Thank you for your time and consideration.

Sincerely,



Jacob Talbot
Analyst, Buildings Program



Harvey M. Sachs
Senior Fellow.

EPA wishes to exclude whole-home electric resistance only water heaters (Line 96), we believe that the specification as written is contradictory, since it would allow introduction of a qualifying 0.97 EF storage electric resistance water heater.