



NRDC Comments on DOE ENERGY STAR Residential Water Heating Specification Development Process

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On behalf of its more than 1.2 million members and e-activists, the Natural Resources Defense Council (NRDC) respectfully submits our comments to DOE on its ongoing process to establish a new ENERGY STAR specification for water heaters. NRDC has a long-standing history of working to improve the efficiency and reduce the energy use of residential water heaters. NRDC has actively participated in the federal water heating standard setting processes and most recently co-chaired the state-wide efficient water heating group in California (Water Heating Pagette) and served as an advisor to the SEGWAHI project which is designed to pull the next generation of dramatically more efficient natural gas water heaters to the N. American market.

Our comments provided below are largely in response to the May 2, 2007 Draft Criteria Analysis prepared by DOE.

1. NRDC strongly supports DOE's plans to add residential water heating to its ENERGY STAR product portfolio.

Household energy use for residential water heating is one of the top 3 energy uses in the home and is a product category that is glaringly missing from the ENERGY STAR portfolio. NRDC is extremely supportive of DOE's efforts to add residential water heating to its program.

2. The ENERGY STAR program should restrict its specification to advanced water heating technologies.

We completely agree with the recommendations in DOE's Draft Criteria Analysis to limit its specification to advanced water heating technologies. More specifically we concur with DOE's assessment that it is inappropriate to include electric-resistance water heaters in its program. We too reached this conclusion because:

- The most efficient electric-resistance water heater models would only save consumers approximately \$27 per year, or an electric bill savings of less than 5%. This does not represent a sufficiently large difference from the national standard to warrant earning the ENERGY STAR label.

- While electric resistant water heaters have a lower first cost than equivalent sized natural gas water heaters, their annual operating costs are much higher and result in higher life cycle costs than natural gas based water heaters.

In addition we want to discourage utilities or builders from encouraging fuel switching from the more efficient and cost effective natural gas based technologies to the less efficient electric-resistance water heater.

3. Further discussion is warranted regarding potential inclusion of the best currently available natural gas storage water heaters.

NRDC has read DOE's Draft Criteria Analysis and several of the submitted comments on the topic of allowing the best currently available non-condensing natural gas storage water heaters to be included in the program. Many of the stakeholders have expressed support for water heaters with a minimum energy factor (EF) of 0.65. An EF at this level yields per model savings that approach 10% and could warrant inclusion in the first version of an ENERGY STAR specification for a specified time frame (eg. no more than 3 years). The 0.65 plus EF models would serve as a bridge technology until the more advanced technologies, in particular the advanced non-condensing gas storage water heaters are introduced and begin to penetrate the market.

In closing we encourage DOE to complete in a timely basis its process to introduce a new residential hot water heater specification and to base it on advanced water heating technologies – advanced non-condensing and condensing natural gas water heaters, tankless water heaters, heat pump water heaters, and solar hot water heaters.