

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



OFFICE OF
AIR AND RADIATION

May 25, 2007

Richard Karney
ENERGY STAR Product Program Manager
U.S. Department of Energy
1000 Independence Avenue, SW, EE-2J
Washington, DC 20585-0121

Dear Rich,

On behalf of the Environmental Protection Agency (EPA), I would like to comment on the Department of Energy's (DOE) draft criteria analysis for labeling residential water heaters under the ENERGY STAR Program. While EPA agrees that residential water heaters use a significant amount of home energy, that more efficient options are desirable, and that there are interesting new technologies to explore, we do not believe that ENERGY STAR is an appropriate program for advancing the market for emerging water heater technologies under current market conditions. We encourage DOE to explore other options and would be happy to work with you to do so.

As you know, the ENERGY STAR program relies on a well established set of principles when considering a new product category for the ENERGY STAR label. These guiding principles include:

- Products are widely available and a broad range of energy performance levels exist within a particular product category;
- Purchasers will recover their investment in increased energy efficiency within a reasonable period of time; and
- Product performance can be maintained or enhanced with increased energy efficiency.

These principles are employed consistently across the products encompassed in the ENERGY STAR program which now include more than 50 product categories, 40,000 individual products, and the purchase of more than 2 billion products. It is the consistency that contributes to consumers growing interest in using ENERGY STAR to help them make energy efficient decisions. A particularly important principle from the stand point of the consumer is the cost-effectiveness of ENERGY STAR products. A recent review of ENERGY STAR products and their cost-effectiveness shows that the vast majority of products provide a payback to consumers within two or three years. Further, thousands of organizations including manufacturers, retailers, state and local governments, and others have invested in promoting ENERGY STAR because of its common sense approach to helping consumers find cost-effective, widely available products.

EPA is very concerned about this effort to take the ENERGY STAR program in a new direction to use the ENERGY STAR label to recognize advanced technologies that are not proven, or widely available or cost-effective in the market place. We see this as a significant departure from the program principles that have guided the success of the ENERGY STAR program to date.

This marked change in program approach is demonstrated by a review of DOE's decision with regard to ENERGY STAR and water heaters in 2003 when DOE last looked at this issue and DOE's recent draft proposal.

In 2003, DOE explored ENERGY STAR labeling of water heaters but decided not pursue it because of market conditions that were inconsistent with the guiding principles of the ENERGY STAR Program. In a January, 2004 letter, the Department summarized the relevant market conditions as follows:

- Labeling conventional technologies would not offer sufficient market differentiation or savings to consumers.
- Labeling "non-conventional" products would not insure product performance could be maintained or enhanced with ENERGY STAR compliant products compared to non-compliant models.
- For most "non-conventional" technologies, purchasers would not recover their incremental investment within a reasonable time period
- Based on the analysis performed for our report, the non-conventional technologies demonstrated payback timeframes unreasonable for the average consumer, ranging from 3.6 years to 19 years.
- Product availability and infrastructure for "non-conventional" products was not yet broad based.

As evidenced by the information presented in your draft criteria analysis, summarized in the table below, very little has changed.

	Sales in 2006	Payback Period	Issues/concerns
Gas Tankless	255,000 (2.6%)	6 to 16 years 3.5 to 13 with tax credit Costlier in existing homes	<ul style="list-style-type: none"> • Expensive installation; venting; larger gas line • Greater use of water • Questionable energy savings under real use patterns • Maintenance in areas with hard water
Heat Pump (electric)	2,000	3 years 2.5 years with tax credit	<ul style="list-style-type: none"> • Small manufacturers with limited capacity • Questionable performance and reliability • Limited market infrastructure for maintaining the product
Solar with either gas or electric back up	2,430	Gas: 10 years 6 years with tax credit Electric: 15 years 9 years with tax credit.	<ul style="list-style-type: none"> • Higher first costs in some regions • Lack of maintenance infrastructure • Lack of consumer awareness of maintenance needs
Gas Condensing	Not in residential market	5 to 10 years Costlier in existing homes	<ul style="list-style-type: none"> • Lack of product availability • Product performance or reliability may be an issue given the infancy • Expensive installation: venting, condensate drainage and electric wiring
Advanced non-condensing Gas storage		< 4 years	<ul style="list-style-type: none"> • Lack of product availability • Product performance or reliability may be an issue given the infancy • Expensive installation: venting, condensate drainage and electric wiring

There continues to be little difference among conventional water heater technologies in terms of energy performance. And significant issues remain with the advanced technologies DOE is proposing to make eligible for the ENERGY STAR. These issues include

- Product is not generally available, particularly for the large existing homes market, where consumers typically purchase products under product failure circumstances
- Product is not supported by an adequate installation and maintenance infrastructure
- Product is not reliably cost effective to the consumer
- Product does not offer adequate assurance of product performance and reliability.

DOE fails to demonstrate that extended warranty periods would adequately address a range of performance issues. Further, EPA questions the appropriateness of establishing ENERGY STAR levels at the same levels where federal tax credits have been set. To date, the ENERGY STAR program and tax credit policy have been used for different purposes for important reasons. DOE's proposal represents an important departure to established practices in this area as well.

All this being the case, going forward with an ENERGY STAR label for water heaters as proposed by DOE would mean a fundamental change to the ENERGY STAR program, which raises serious concern in terms of program integrity and continued success.

EPA strongly encourages DOE to consider alternative policy approaches to improving performance and reliability, building infrastructure and reducing costs associated with advanced water heater technologies.

Sincerely,

A handwritten signature in cursive script that reads "Ann Bailey".

Ann Bailey, Chief
ENERGY STAR Labeling Branch