CEE Working Together, Advancing Efficiency

November 26, 2007

Richard Karney
ENERGY STAR Product Manager
US Department of Energy
Forrestal Building
1000 Independence Avenue SW, EE2J
Washington, DC 20585

Dear Mr. Karney,

The Consortium for Energy Efficiency (CEE) appreciates the opportunity to submit comments to the Department of Energy. On behalf of CEE, I am submitting the following comments on the ENERGY STAR Residential Water Heaters: Second Draft Criteria Analysis and Proposal. These comments were developed by CEE's Natural Gas Committee and the organizations listed at the end of this letter have chosen to indicate their strong individual support of these comments.

**CEE strongly supports DOE's efforts to develop an ENERGY STAR residential water heater program.**

ENERGY STAR is frequently used as a marketing platform by CEE member energy efficiency program administrators for a variety of appliances. CEE believes that an ENERGY STAR Program for water heaters will be invaluable for raising consumer awareness of efficient options for water heating. CEE's Gas Committee welcomes the opportunity to support the market introduction of efficient water heating solutions in conjunction with the ENERGY STAR Program.

**CEE continues to support establishing the initial minimum efficiency performance requirement for gas storage water heaters at 0.62 EF**.

The CEE Gas Committee in its deliberations for its initiative found 0.62 EF to be the most commonly cost effective and most widely available efficiency level. This performance level represents a solid platform to conduct consumer, installer, distributor and retailer education and a launch pad for support of more efficient technologies. CEE believes that this level has the greatest potential to positively impact the mass market for water heaters, because it represents a relatively low incremental product cost relative to 0.65 EF models and yields a meaningful level of savings.

All models at the .65 EF performance level on the market today (according to the GAMA directory) require power venting. Power venting typically results in increased unit cost and, potentially, installation costs. CEE believes that such costs might better be allocated to advanced products that may achieve 0.67 EF or higher levels of performance. CEE is

committed to help support new higher efficiency technologies as they enter the market place.

In our discussions with manufacturers about promoting high efficiency water heating, there was unanimous agreement that the best strategy to overcome the marketing challenge is to establish the presence of ENERGY STAR water heaters at a level widely available with known cost effectiveness at the 0.62 EF level. Efficiency programs need ENERGY STAR to engage consumers, installers, and the distribution channel now around affordable 0.62 EF water heaters to achieve acceptance of new, even more efficient models as they come to market.

To effectively build the infrastructure for a successful market introduction, the CEE Gas Committee has developed draft performance specifications that enable cost effective promotion of available options and then migration to more aggressive performance levels over time. The CEE specification levels currently under consideration (and to be recommended by the Committee for Board adoption) include not only 0.62 EF storage water heaters, but even higher levels of performance for tankless and advanced storage water heating. The two most important factors that influence where member energy efficiency program administrators wish to set those levels are cost effectiveness as measured by individual program Total Resource Cost (TRC) calculations and market availability of models. While water heaters at 0.63 EF and above are often listed in product catalogs, they can be difficult for consumers to find for purchase. Availability in this case means availability at the point of purchase, whether purchased by a plumber at a wholesale or distribution center or direct from a retailer.

**CEE supports inclusion of Condensing Type Storage Water Heaters with additional guidance.**

For higher performing condensing type storage water heaters, CEE believes these should qualify for the ENERGY STAR label as they are available; however, as a condition, additional guidance on installation practices should accompany the sale. This guidance should be subject to stakeholder review and acceptance prior to launch under the Energy Star Program.

**CEE supports the inclusion of Whole-Home Tankless Water Heaters provided ENERGY STAR supplies satisfactory educational guidance for consumers and installers.**

CEE supports inclusion of tankless water heaters in an ENERGY STAR program, but release of the label should be predicated on the development of satisfactory educational guidance on a variety of issues. Such guidance should not be finalized without stakeholder input. Some of the aspects included in this guidance should be appropriate sizing and location of the water heater for installers, and water usage implications for consumers. We believe that such education is necessary not only to help achieve the promised efficiencies of tankless water heaters, but also to ensure that consumers are not disappointed with their ENERGY STAR purchase. Proper sizing, location and water consumption education are crucial to delivering the expected performance.

CEE supports increasing the efficiency of tankless water heaters from 0.80 to 0.82 EF as identified in the most recent draft, but does seek clarification on "a minimum gallons-per-minute (gpm) requirement of 3.0 gpm at a 77ºF rise." CEE would like to see the analysis in support of this requirement. In addition, as currently stated, the minimum flow requirements are potentially confusing. As we understand it, the requirement of 3.0 gpm minimum at a 77ºF rise actually refers to the maximum flow rate achieved by the unit at that temperature. We are concerned that this could cause confusion with the minimum flow required to activate the burner, also called the turn-on value. This is often a much lower value (ranging in our informal research from 0.32 to 0.60 gpm. It is important that tankless water heaters continue to have low turn-on values so that consumers don't over-consume hot water for small jobs such as hand washing and so that low flow shower heads will be capable of delivering sufficient hot water. CEE does not have a data set to inform DOE of a specified range and associated guidance. CEE recommends that DOE undertake an analysis to suggest a realistic minimum flow capacity range in the specification as well as guidance.

**CEE supports DOE's position on Electric Resistance Water Heaters.**

CEE continues to support the exclusion of Electric Resistance Water Heaters because of the cost-to-operate concerns expressed in our letter to DOE dated July 13. There is a precedent for a gas only ENERGY STAR program in the case of residential space heat. In that case ENERGY STAR recognizes energy efficient gas furnaces and boilers, but does not include electric resistance space heating technologies.

**CEE's position on Solar Water Heaters is unchanged.**
CEE has little experience with Solar Water Heaters, though some members are beginning to run pilot programs to assess in-field performance of this technology. If DOE can demonstrate that performance and reliability are consistent with that of traditional tank-type units and that the economics are within reason, CEE would support the inclusion of Solar Water Heaters in the program.

DOE recommended organized training sessions and contractor-driven educational materials as ways to increase the number of contractors who stock and service solar water heaters. DOE also recommended consumer education to make consumers aware of how to maintain these systems. CEE strongly supports these program elements as a way to ensure customer satisfaction.

**CEE encourages DOE to explicitly state that all water heaters in the ENERGY STAR program should comply with all relevant safety codes and performance standards prescribed by the National Appliance Energy Conservation Act (NAECA) or other relevant standards. CEE requests an additional stakeholder meeting be held to seek greater alignment of all stakeholder efforts to advance higher efficiency water heating with ENERGY STAR.**

Thank you for your consideration of these comments. Please contact CEE Program Manager Kara Rodgers at (617)-589-3949 ext. 202 or krodgers@cee1.org with any questions.

Sincerely,

Marc Hoffman
Executive Director

**Supporting Organizations**
Berkshire Gas Company
Cascade Natural Gas
KeySpan Energy Delivery / National Grid
MidAmerican Energy Company
Minnesota Department of Commerce State Energy Office
New Jersey Clean Energy Programs
Connecticut Light and Power
NSTAR Electric & Gas
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