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May 29, 2007

Mr. Richard Karney
U.S. Department of Energy
Energy Star Program
1000 Independence Avenue NW
Washington, DC 20585-0121

Re: Energy Star Residential Water Heaters: Draft Criteria,
May 2, 2007 (publication date)

These are the comments of Southern Company on the Energy Star™ Water Heater Draft Criteria, issued May 2, 2007.

Southern Company (Southern) is the parent firm of four electric utilities in the southeastern United States: Alabama Power, Georgia Power, Gulf Power, and Mississippi Power. These electric utilities serve over 3.7 million customers, including 3.2 million residential and 479,000 commercial customers. Our 120,000 square mile service territory includes most of Georgia and Alabama, southeastern Mississippi, and the panhandle region of Florida.

Southern Company (Southern) is an active participant in the Energy Star™ program, and appreciates the opportunity to comment on the proposals. We believe that Energy Star™ is a very important part of the federal government's energy efficiency program.

Southern has reviewed the comments filed by the Edison Electric Institute, and agrees with their comments. These comments will not repeat those, but will discuss additional issues regarding the draft criteria.

In general, the draft criteria provide a proposed Energy Star™ standard which can be met by much too small a proportion of the current residential water heater market, and for which the proposed equipment choices do not have general applicability.

Heat Pump Water Heaters: A Niche Product Not Usable in All Installations

The only proposed electric water heater choice is heat pump water heaters. While air-source heat pump water heaters provide excellent energy savings opportunities, they do, as part of their normal operation, exhaust cold air as they transfer heat from the surrounding air to the water to be heated. They operate as a small air conditioner which operates whenever hot water is demanded from the water heating system. This can be an

advantage in some installation locations – for garage and basement locations, a heat pump water heater provides dehumidification, possibly eliminating the need for a separate dehumidifier. But many electric water heaters are installed in interior closets, especially in multifamily housing, and in these cases separate ductwork would be needed to vent the cold air to the outside, particularly in winter. To do otherwise would result in unacceptably cold temperatures in the vicinity of the unit, and in winter would also result in additional space heating load.

This issue was also raised by Southern in the DOE water heater efficiency standards hearings, and those documents are enclosed for reference with this submittal Based on information from the Georgia Power Company 2004 Saturation Survey, 41% of water heaters for Georgia Power are within conditioned space (closet, kitchen, bathroom) and will almost always be unsuitable for heat pump water heater installations. An additional 24% are in laundry rooms or utility rooms. Depending on home layout and the location of these rooms relative to other rooms of the house, many of these will also be unacceptable for heat pump water heaters.

Georgia Power Company, the source of the survey referenced above, is also a subsidiary of Southern Company.

An important factor in maintaining fuel neutrality for the Energy Star™ program is to insure that options are available from all fuel sources which are generally usable and applicable for all consumers. Based on the information cited above, between 41% and 65% of electric water heater installations for a large electric utility are unacceptable for the use of heat pump water heaters without substantial additional expense for exhaust ductwork. Since heat pump water heaters are the only proposed Energy Star™ option for electric water heaters, this proposal is not reasonable from the viewpoint of fuel neutrality.

Standby Loss Prevention Not Adequately Considered

For some consumer electronics products such as televisions, the standby losses while not in use is the only real criteria used by Energy Star Energy Star™. As noted by EEI, a plasma-based TV uses much more power than an LCD-based TV, but can still be Energy Star™ certified if it has low standby losses.

It should be noted that plasma versus LCD for televisions is a design option within a single product type which uses a single energy source (electricity), and which would be expected to have minimal competitive impacts – any manufacturer could choose to produce LCD televisions versus plasma ones. But fuel choice is a real competitive issue between gas and electricity suppliers, and it is important that Energy Star™ provide adequate options for all types of customers.

Energy Star™ should include certification options that reward reduction in standby losses for both gas and electric tanked equipment. A tanked water heater with very low tank

losses and which has either programmable controls or easy to use manual controls will allow significant consumer benefits from reduced usage during idle time periods, whether during the day while the consumer is not home or from extended absences such as business trips or vacations.

Summary

Due to the limitations of heat pump water heaters, the proposed standards would be discriminatory towards electric water heaters in their current form. Southern strongly recommends that Energy Star™ provide options for tanked electric water heaters that have both very low standby losses and consumer-friendly controls to reduce usage during extended idle periods.

Thank you for the opportunity to comment on these Energy Star™ proposals.

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