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Sent: Friday, December 02, 2011 5:58 PM

To: waterheaters@energystar.gov

Cc: Rajendra, Ajita; Wheeler, Kevin; Stern, Jim; Josh Greene; Nice, Nicole; Heideman, Robert; Schuh, Darrell; Roy Smith; Aldrich, Robert; Perez, Ralph; Schulz, Matt; Warren, David; Berning, Dave; Bixby, David; Dan Snyder; Ted Poulin; Neil Rolph; Abigail Daken - EPA; Craig Haglund; Stanonik, Frank; Neufcourt, Marc

Subject: A.O. Smith Corporation comments on ENERGY STARR Version 2.0; Draft 2, for water heaters

Importance: High

The A.O. Smith Corporation has the following comments regarding the water heater eligibility criteria proposed in Version 2.0: Draft 2:

- **General Comments**
 - Although higher input residential heaters (EPACT-covered) such as hybrids are currently not included, we continue to strongly support their inclusion in the program. Using the same criteria as the 25C Federal income tax credit would be an appropriate way to do so, or, alternatively, using the FEMP criteria that is currently in effect. We continue to believe that not including such heaters in the program is contrary to the goal of this ENERGY STAR 2.0 revision as stated at the Stakeholders' meeting, which is "Greater energy savings by **expanding the scope** of the program!"
 - We believe there is a typo in the table for POU electrics on page 4, line 160, in that the EF should be greater than or equal to 0.97, instead of just greater than. If that is not a typo, we believe that it should be "greater than or equal to".
- **Point-of-use Electric**

- As discussed at the Stakeholders' meeting on November 10, we continue to be troubled with the rationale of putting coverage and criteria into the ENERGY STAR product program that only realizes energy savings by the manner in which the product is installed in the home - which in our view is a system application feature, not a product feature. It would be entirely proper, in our view, to include such coverage in the ENERGY STAR Home criteria, as they address systems within the home, and the total energy savings obtained by implementing those systems. For a product program that is intended to recognize the superior performance of a product as it is put in the box and shipped from the manufacturer to include products that depend on how they are installed to save energy is confusing and inappropriate.
- If, however, POU units are included in the program, "activation" should be defined. We suggest "Activation is when the water temperature exiting the water heater is at least 105F". "Activation time" may also be a useful term to define, and we suggest "The time (in seconds) between starting the flow of water and when the temperature of the water exiting the heater reaches at least 105F".
- Electric Storage
 - While the warranty complication for add-on heat pumps (A/O-HP) and the electric heaters upon which they are installed is addressed in Draft 2, we believe that the administration of this warranty approach will still be cumbersome in actual application. When a tank with an A/O-HP leaks, the customer will contact the tank manufacturer (such as us). When they discover, or are reminded, that the tank warranty was voided due to the installation of the A/O-HP, we believe that their dissatisfaction is going to be substantially directed at us, if for no other reason than they are on the phone with our Customer Support people when they find out that they are no longer covered. We do not see this as a reasonable position in which the tank manufacturers should be placed by the program.
 - We are not generally supportive of the proposed EFM metric for A/O-HP as we understand it, but we will wait for the document in early December to be issued before making specific comments. Maybe we'll understand the rationale better after seeing the explanatory document.
 - The continuing major concern that is raised by installing an A/O-HP onto a storage heater is the problem with the safety certification of the storage heater. The factory wiring of a heater is obviously a part of the certified construction of the heater (by UL, or whomever), and that certification is issued with the condition that if any modifications are made to the construction of the heater, the safety certification is voided. Since all A/O-HP units (of which we are aware) require modification to the wiring of the storage heater in order to tie the HP unit into the thermostat circuitry, such factory wiring modification constitutes a change to the certified construction, thus voiding the certification.
 - We take the position that add-on heat pump units should, therefore, NOT be included in ENERGY STAR, as we do not believe the program

should endorse putting a consumer in the situation where a product's safety certification is no longer valid, and where there is no practically administrable warranty available to that consumer (unless ALL warranty requirements are removed from the ENERGY STAR criteria).

- We are okay with including the information in the manual specifying the ambient temperature at which the compressor cuts off.
- While we do not strenuously object to the audible alarm for compressor cut off due to blocked condensate, we do not support its inclusion in the criteria. Audible alarms on appliances such as water heaters are generally used to signal conditions that require immediate attention for safety or "appliance completely down" reasons. A blocked condensate line that shuts off the compressor will still allow the heater to provide hot water safely via the resistance element(s), so there is neither an unsafe nor an out-of-service condition. We would support a visual alarm, but not an audible alarm.
- **Gas Storage**
 - We agree with the change from 8 to 6 year warranty, and thank EPA for considering our comments on this issue in our response to Draft 1.
- **Solar**
 - We continue to believe that solar water heater systems should remain in the water heater ENERGY STAR program, and should convert to the SEF as the performance measurement instead of SF. Changing to SEF and leaving in the program will allow the consumer to judge all highly efficient water heating technologies against each other, and make an informed choice between all of his or her options. (Again, technology neutrality!)

Thank you for the opportunity to provide input into the ENERGY STAR criteria revision process. Please contact me if additional information or explanation is desired.

Regards,

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