



GAMA-An Association of Appliance & Equipment Manufacturers

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Furnace
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- Motor & Blower
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- Relief Valve
- Vent Free Gas
Products
- Water Heater

September 1, 2006

Ms. Rebecca Duff
ICF, International
Washington, DC

Subject: Proposed Revisions to the ENERGY STAR Program for Residential Furnaces

Dear Ms. Duff:

GAMA appreciates the opportunity to comment on the proposed revisions to the ENERGY STAR Furnace specification included in the July 28, 2006 letter from the U.S. Environmental Protection Agency (EPA). Our comments to the proposed revisions are:

GAMA recommends that the definition of furnace be based on the U.S. Department of Energy (DOE) parameter of input rate less than 225,000 Btuh, rather than output rate less than 100 KW or 340,000 Btuh. Also, AFUE ratings per ASHRAE 103 and 10 CFR 430 are only applied to furnaces with input rates less than 225,000 Btuh. In addition, we recommend that the primary designator of furnaces should be Btuh, with the equivalent KW used as a secondary specification if necessary. All listings in the GAMA directory employ the Btuh system of units.

GAMA does not recommend the addition of the term "residential" to the furnace definition as this could be misleading. While the term "residential" can be used to describe the application of a furnace, it has no bearing in terms of the listing of the furnace. Single phase furnace models with input rates less than 225,000 Btuh are used in both residential and commercial applications without modification. We believe the more appropriate terminology would be "furnaces installed in residences" or "furnaces used in residences".

GAMA continues to support the proposal to expand the ENERGY STAR efficiency criteria for oil-fired furnaces. As stated in our March 4, 2006 letter, lowering the AFUE requirement for oil furnaces from 90% to 83% would qualify a greater number of the oil-fired furnace models listed in GAMA's "Consumer's Directory of Certified Efficiency Ratings" and increase the choices for consumers seeking the most efficient oil-fired furnace models. However, we just became aware of a possible issue with availability of a full spectrum of models at the 83% level. We are reviewing this further and we will provide some follow up comments on this issue in the next few weeks.

GAMA does not recommend any revision be made to the ENERGY STAR criteria for gas and oil furnaces to include the proposed Tier II furnace fan requirement. The use of the Average Annual Auxiliary Electrical Consumption (Eae) as a metric for ENERGY STAR inappropriately shifts the focus from gas or oil consumption to electricity consumption. This focus on electrical consumption has the potential of misleading the consumer to select an ENERGY STAR furnace model with higher gas or oil consumption thereby increasing their overall fuel consumption, just because the furnace saves a couple of hundred kWh per year.

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This proposal eliminates hundreds of models that are at the top level of fuel efficiency merely because their electrical consumption, which at worst is about 3% of the total furnace energy consumption, is higher than average. We believe this unintended consequence distorts the goal of the ENERGY STAR program.

Recognizing that EPA will discuss this issue further, we offer the following observations on the proposed Tier II furnace fan requirement:

- Eae is a metric for electric consumption not efficiency. It bears no relation to the efficiency of the motor but is directly related to the size of the furnace and thus the size of the blower motor. The proposed 800 kWh/year level would exclude most medium and large input furnace models. If Eae is to be used as one of the criteria for ENERGY STAR, it should be a percentage of total consumption which factors in the size of the furnace.
- The Tier II furnace fan requirement is inconsistent in comparing oil and gas furnaces with the Eae metric. Electrical consumption for gas furnaces will primarily be from the gas furnace circulating air fan, while electric consumption for oil furnaces includes both the circulating air fan and the oil burner motor. A test of comparable input models will show an oil furnace always having a higher Eae than the gas furnace, making it more difficult for the oil furnace to meet the specification. It may be more appropriate to have separate requirements for gas and oil furnaces.
- Fewer models will qualify for the ENERGY STAR rating. Currently 2,653 models in the GAMA Directory qualify for the ENERGY STAR rating. Adopting only the Tier I proposal would result in an additional 323 oil models qualifying. However, the adoption of the Tier II proposal would result in an almost 50% reduction in available models, with only 159 GAMA listed oil furnaces qualifying and only 1,334 GAMA listed gas furnaces qualifying.

We believe further discussions and research is required on the subject of furnace fan efficiency. GAMA has scheduled EPA's proposed revisions for discussion by appropriate internal association committees, and it is likely that these discussions will result in further comments on the proposals. GAMA, therefore, respectfully requests that the EPA extend the period for comment on the Tier II proposal for at least sixty (60) days, and recommends that the EPA continue to address furnace fan efficiency under an extended revision process.

If you have any questions or need additional information, please do not hesitate to contact me by email at gpumpuni@gamanet.org or by telephone at (703) 525-7060 ext. 237.

Sincerely,

Gloria Pumpuni
Director, Technical Services & Regulatory Affairs