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August 9, 2006

United States Environmental Protection Agency
Energy Star Product Manager
1310 "L" Street
Washington D.C. 20460
Rebecca Duff

RE: Draft I Energy Star Version 2.0 Furnace Specification

Dear Rebecca:

The purpose of this letter is to explain our position with regards to the EPA plan to **lower** AFUE levels effective October 1, 2006.

In an effort to make our response to the point, this letter is formatted with excerpts from your Draft I Energy Star Version 2.0 Furnace Specification dated July 28, 2006 and an appropriate response point by point. (Note our response is indicated by bold type.)

EPA Position:

Note on Proposed AFUE Requirement for Oil Furnaces: EPA is proposing to create a separate minimum 83% AFUE level for oil furnaces based on:

1. Feedback from builders in the Northeast concerning a lack of available ENERGY STAR qualified equipment.
2. Concern expressed by energy efficiency program implementers in the Northeast U.S. that the limited supply of qualified furnaces has restricted their ability to promote energy efficient equipment. Unable to locate ENERGY STAR qualified furnaces, builders maintain that they are reverting minimum efficiency equipment (78%) AFUE.

Adams Manufacturing Position:

Adams, Dornback and Spartan brand condensing oil-fired furnaces are available through wholesale distributors in every state in the country. There are nearly 300 distributor locations in the Northeast and Mid-Atlantic states.

We would like to obtain a list of builders and energy efficiency implementers so we can contact them and make sure they are aware of our furnaces.

EPA Position;

It is the EPA's understanding that the supply of oil furnaces meeting the current ENERGY STAR specification is limited for three reasons:

1. With a stagnant, mature market of 125,000 units per year, manufacturers cannot justify considerable expense in new product development.

Adams response:

Adams Manufacturing has invested substantially developing and refining our furnace over the last 5 years. Our objective 5 years ago was to develop the most energy efficient oil-fired appliance on the market with AFUE levels of 96.0%.

Today we have the right product at the right time for consumers.

We have focused on maximum thermal efficiency (96%AFUE) developing an oil-fired condensing appliance. This is significant since the current minimum AFUE is 78%.

Please note no manufacturer has even *inquired* if a license to manufacturer (our condensing oil furnace) is an option. This excuse of "not being able to justify expense for product development" is not credible.

Your agency's decision to lower AFUE levels from the current 90% to 83% AFUE effectively negates our significant investment developing and refining this condensing appliance. It appears promoting the highest efficiency product available on the market today is not an EPA Energy Star Program priority. It has been our experience in many instances, builder use the most economical product regardless of efficiency.

2. Oil Heat is a predominantly boiler industry -consumers interested in energy efficiency are steered toward a boiler with and combine heat and hot-water system instead of an oil-furnace.

Adams response:

The total number of residential oil-fired boilers sold in the U.S. market is approximately 150,000 units per year and there are 125,000 oil-fired furnaces sold per year. We agree there are more oil-fired boilers sold than furnaces, but we cannot agree that oil-fired boilers dominate this industry.

3. Manufactures perceive technological difficulties with condensing technology including caustic condensate, soot build-up, expense of a secondary heat exchanger, maintenance and longevity issues, etc...

Adams response:

We think the key word here is "perceive". Note the condensate is treated with a neutralizer that is supplied with the furnace. This condensate (water) is technically acidic, but once the water is run through a "neutralizer" the PH level of the water becomes neutral and drains to any floor drain or condensate pump. Soot build up is not an issue since it is washed away with the condensate.

The secondary heat exchanger in a condensing oil furnace is comparable to the ones used in gas-fired furnaces. We have never replaced a secondary heat exchanger in over 20 years of production. Maintenance of a condensing appliance is no different than a non-condensing furnace, with the exception of a secondary heat exchanger vacuuming/brushing and a condensate neutralizer check/replacement. Longevity issues are always a concern, however, we have been manufacturing a condensing oil-furnace since 1986 (major revision in 2002) and those revisions are mainly ease-of-service / access type issues and not conceptual in nature.

EPA Position;

When developing ENERGY STAR Specifications, EPA strives to identify top performers while offering the consumers options. To date, the ENERGY STAR specification does not provide a variety of manufacturers, brands or models from which consumers can choose. An analysis was performed on the latest version of the Gas Appliance Manufacturers Association (GAMA) certified equipment database (March 2006) to determine a more feasible performance level. EPA found that a minimum 83% AFUE level would represent approximately 25% of the models currently found in the marketplace and would ensure that a number of manufacturers and brand could earn the ENERGY STAR.

Adams response:

We appreciate the EPA's concern for a fair and equitable qualifying criteria to earn an ENERGY STAR label. The distribution of public funds in any forum demands accountability to the highest degree.

We are concerned the ENERGY STAR Version 2.0 Specification does not differentiate between technologies (high efficiency condensing vs. mid-efficiency non-condensing) currently available to the consumer.

EPA Position;

Given that the majority of oil furnaces sold do not exceed minimum efficiency requirements (78% AFUE), the potential environmental benefits associated with ENERGY STAR level of 83% AFUE is significant. Approximately 800 gallons of oil per year are used by oil furnaces for space heating. (National Oil Heat Research Alliance). Furnaces can be expected to remain in service for 18 years. Fuel types #1,2 and 4 produce 22.834 lbs of CO₂ per gallon (U.S. Department of Energy, Energy Information, Residential Energy Consumption Survey) as well as sulfur oxides, nitrogen oxides, CO, unburned hydrocarbons and particulate matter.

Adams response:

Consider that if an average home burns 800 gallons of fuel per year (with a 83% AFUE unit), that same home would burn 672 gallons of fuel per year with a condensing furnace (96%AFUE) or a savings of 128 gallons per year, per household, per year. Note 128 gallons per year savings x 18 year life expectancy = 2,304 gallons of fuel savings per home, not to mention the reduction of 52,600 pounds of CO₂ emissions.

EPA Position;

If the average AFUE of all furnaces sold in one year were raised just one percentage point, the CO₂ emitted over the life of those furnaces would be approximately 400 million pounds.

Therefore having builders purchasing readily available ENERGY STAR qualified equipment at 83% AFUE, rather than a minimum efficiency level of 78%, would result in considerable energy savings and environmental benefits.

Adams response:

We couldn't agree more, and consider how phenomenal these results would be if the AFUE minimum levels were 96%.

EPA Position;

Gas furnace are not posed with the same challenges as oil furnaces. Therefore, EPA is maintaining the existing 90% AFUE requirement for gas furnaces under this specification. Approximately 24% of gas-fired models found currently in the GAMA directory meet the 90% AFUE requirement.

Adams response:

We do not have control over our competitor's perceptions or commitment to enhance high-efficiency oil-fired condensing technology, although we do not see the significant challenges from one fossil fuel to the other.

EPA Position;

Note on Proposed Furnace Fan Efficiency Levels: Over the last several months, EPA has conducted research on furnace fan efficiency, which included an analysis of the electrical efficiency (Eae) data listed in the GAMA database. What resulted was a robust data set that provided for a wide range of differentiation based on kWh/year. Further analysis shows that 800 kWh/year level represents approximately 50% of the models listed in the database, indicating that fan efficiency is both technically feasible and widely available in the marketplace today. When coupled with the oil and gas furnace AFUE requirements this level provides for significant savings opportunities while ensuring that many different manufacturers and models are represented.

Adams response:

We need to address the fact that the average furnace fan electrical consumption is 3.3% of the total energy equation (fuel plus furnace fan power consumption).

We invested our resources to manufacture a furnace that offers significant savings opportunity of up to 96%AFUE (an increase of 23%) from the minimum standard.

To focus on furnace fan efficiency means to improve a 3.3% component of the total energy usage. If we can improve furnace fan efficiency by 50%, it means we've improved the appliance efficiency by about 1.5%. At this time, we do not feel the payback of this accessory justifies the added expense for the consumer.

Essentially, this decision to lower AFUE levels rewards manufacturers who have not invested in new product development.

Adams Manufacturing has invested substantially developing a condensing oil furnace over the last 5 years. Our objective 5 years ago (when oil prices were \$30 per barrel) was to develop the most energy efficient oil-fired appliance on the market with AFUE levels of 96.0%.

Today, when oil prices are approaching \$77.00 dollars per barrel with no end in sight, we have the right product at the right time for consumers.

It appears promoting the highest efficiency product available on the market today is not a priority of the EPA Energy Star Program.

The 83% AFUE proposed to earn an Energy Star rating can have a major negative impact for consumers, builders, contractors, distributors and manufacturers. Condensing (high-efficiency) furnaces are vented (sidewall or roof vented) with PVC piping because the flue temperatures are so low (80-130F) and do not require a chimney.

We wonder how many builders realize the fact no chimney is required.

The so-called mid-level efficiency furnaces do require a chimney and the efficiency levels you propose may create condensation in the venting system at the AFUE levels proposed.

The expense of these venting treatments (stainless steel vent or relining the masonry chimney) offset any savings by purchasing a “mid-level efficiency” appliance.

By prescribing and promoting these “mid-level” non-condensing (83% AFUE) appliances, issues with venting systems can surface. This potentially unsafe condition can expose all parties involved to liabilities.

We propose the following recommendations:

1. AFUE levels for oil-fired condensing furnaces should be raised to 92%, not lowered to 83% to earn an ENERGY STAR label.
2. Create a joint education / information campaign that informs builders of the current available furnace technology (does not require a chimney) . This cooperative strategy would be a win-win scenario for everyone.
Consumers want and deserve options.

This approach is an equitable solution that benefits everyone. We all agree the EPA strives to identify top performers while offering the consumers options.

Thank you for the opportunity to present our position. We look forward to your response.

Best Regards,

Jeffrey Dubasak

Jeffrey Dubasak

Sales Manager