

December 23, 2010

Ms Abigail Daken
U.S. Environmental Protection Agency
1725 Eye Street NW, Suite 1000
Washington, DC 20006

Dear Ms Daken

Thank you for the opportunity to comment on the Draft 2 Version 3.0 ENERGY STAR Furnace Specification. On behalf of Natural Resources Canada (NRCan), please accept the following comments.

NRCan supports the minimum efficiency of 95% AFUE as an appropriate level for the Canadian market. In 2009 35% of gas furnace shipments in Canada were at least 95% efficient.

Furnace Fan Efficiency Metric

NRCan fully supports the inclusion of a high efficiency motor requirement for both gas and oil-fired furnaces. NRCan favours a prescriptive requirement of a brushless DC motor rather than the use of the 'e' metric. The advantage of using this approach is that most of Canada's provincial and utility based energy efficiency rebate programs use this type of prescriptive requirement when defining qualifying criteria for furnaces. A further advantage is that consumers will be more familiar with this type of requirement than with the 'e' metric.

NRCan is concerned that the test method used to calculate 'e' may not be robust enough to ensure that only high efficiency motors would qualify. The parameters used to determine 'e', namely the rated annual electrical energy use (Eae) and rated annual fuel energy use (Ef), are non-certified values and are therefore not subject to requirements for accuracy and repeatability. Further, the test method does not specify the voltage to test the blower motor at, which may lead to inconsistent results. The static pressure used in this type of test is too low and does not represent installations in the field. Additionally the 'e' metric will not give any indication of electrical efficiency in cooling mode, circulation mode, or standby mode.

Ultimately NRCan advocates the use of C823 as the performance metric to overcome the drawbacks of test methods currently available. Once C823 is published, NRCan recommends that the data be analyzed to determine whether the range of performance among high efficiency motors warrants further differentiation in the form of a minimum performance requirement.

Air Leakage (Q_{leak})

NRCan does not believe that the inclusion of an air leakage test requirement in the ENERGY STAR specification would benefit Canadian consumers and installations. Non-weatherized furnaces in Canada are predominantly placed in a conditioned part of the home and any heat loss from the cabinet would be considered useful heat. NRCan does support this requirement for regions where furnaces are placed in unconditioned spaces.

Thank you again for the opportunity to comment. We hope that these comments are helpful in the next draft of the specification, particularly where it applies to Canadian consumers.

Sincerely



Rosalyn Cochrane
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Office of Energy Efficiency
Natural Resources Canada

cc John Cockburn
Katherine Delves
Kathy Deeg
Brian Killins