

Subject: AHRI Comments on Draft Version 4.1 Furnace Specification

To Ms. Abigail Daken,

We have the following comments on the Draft Version 4.1 specifications for the ENERGY STAR Program for residential furnaces presented in your March 24, 2017 letter.

The proposed change to replace the Furnace Fan Efficiency ($e \leq 2.0\%$) requirement with a requirement that the furnace be equipped with an electronically commutated fan motor (Section 3C Furnace Fan Requirement) is unnecessarily confusing. The note at the top of page 2 states that the definition of ECM encompasses both constant torque and constant airflow brushless permanent magnet motor designs. However in the rulemaking on the fan energy rating (FER) standard DOE consistently uses the term ECM to refer to a high efficiency brushless permanent magnet motors that provides constant airflow and identifies high efficiency brushless permanent magnet motor that provides constant torque as "X13 motors." That is a distinction used by many in the industry.

To limit any potential for misunderstanding, we suggest that Section 3C be modified to recognize both ECM and X13 motors as qualifying high efficiency motor and the definition of "Electronically Commutated Motor (ECM)" be replaced with the general term "high efficiency motor," which would be defined to include both ECMs and X13 types.

If you have any questions, please contact me.

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