Ms. Brenda Edwards
U.S. Department of Energy
Building Technologies Program
Mailstop EE-2J
1000 Independence Avenue, SW.
Washington, DC 20585–0121

January 23, 2014

Re: Notice of Proposed Rulemaking for Residential Furnace Fans

Docket Number: **EERE-2010-BT-STD-0011**
RIN: **1904-AC22**

Dear Ms. Edwards,

Thank you for the opportunity to comment on the Notice of Proposed Rulemaking (NOPR) for Residential Furnace Fans. Northeast Energy Efficiency Partnerships (NEEP) strongly supports the Department's proposed standards levels as described in the NOPR. We are heartened to see several of the comments/recommendations that we submitted during the previous Preliminary Technical Support Document (PTSD) stage reflected in the Department's Proposal. We would like to voice continued support for several aspects of the NOPR while also raising a few important issues that we urge the Department to consider before developing its Final Rule for furnace fans.

SIGNIFICANCE OF RULEMAKING TO THE NORTHEAST/MID-ATLANTIC

Even with a relatively high prevalence of boiler-type heating systems in the region, ducted Furnace systems (natural gas, oil, electric, propane) employing furnace fans make up a significant portion of heating systems in the region. Across New England and the Mid-Atlantic approximately 42 percent of housing units operate these types of systems. According to an Appliance Standards Awareness Project (ASAP) analysis, electrical consumption attributable to residential furnace fans today (in homes with furnaces) accounts for approximately 10 percent[1] of total residential electricity use. The combination of their broad use and their individual annual energy needs (approximately 800 kWh/year) creates a significant energy footprint at the local, regional and national levels. When considering the millions of furnace fans in use throughout the region, every small improvement to the efficiencies of furnace fans will add up to important energy savings for residents of the Northeast United States. The proposed levels go well beyond incremental efficiency gains.

The technical analysis projects exciting and cost-effective energy savings associated with the proposed standard levels. According to the projections, the U.S. will save 4.6 Quads of energy (cumulatively over the 30 year Analysis) with an associated $8.5 Billion Net Present Value at efficiency levels that provide cost effective savings to consumers. With 58 percent of furnaces in the region 10 years or older, the Northeast/Mid-Atlantic will likely see the savings accrue sooner than other regions.

Furnace fan efficiency, or lack thereof, has been a major concern to many Northeast states for nearly a decade. Without a federal standard, little attention was paid by manufacturers to driving efficiency improvements in these products. Several states in our region recognized the lack of federal coverage of furnace fans and pursued the opportunities associated with improved furnace fan efficiencies. Between 2005 and 2008, Massachusetts, Rhode Island, New Hampshire, Vermont, and Maryland each passed legislation to develop state-level minimum efficiency standards for these products[2]. None of the states was ever able to implement such standards, as the 2007 Energy Independence and Security Act directed DOE to develop standards for furnace fans, effectively preempting state implementation.

[1] ~1000 kWh

[2] Limiting Electricity ratio (furnace fan energy/total furnace energy) values to between 2-2.3% (for various furnace technologies)

During the same time, ratepayer funded energy efficiency programs sought to achieve savings through furnace fan efficiency by requiring certain furnace fan efficiencies to qualify for incentives and other promotions.[3]

The effort to set strong energy efficiency standards for Residential Furnace fans is of paramount importance for Northeast states, as we seek to meet some of the most aggressive energy reduction goals in the country. Strong federal energy efficiency standards for this product category will help meet these goals by reducing consumption of electricity, as well as lowering peak electricity demand, significantly reducing pollution and creating new economic opportunities.

SPECIFIC FEEDBACK REGARDING THE PROPOSED RULE

We applaud the hard work that the Department has put into the development of this proposal, and, in general, support the proposal. We did, however, wish to raise some particular concerns that we feel, if addressed, will lead to a stronger Final Rule from the Department. We see this standards-setting process as a vital mechanism in transforming the market towards high efficiency HVAC products.

1) **We support the Department's proposed efficiency levels**, which reflect moving from the current baseline represented by PSC motors to efficiency levels represented by constant-torque Brushless Permanent Magnet (BPM) motors with the incorporation of multi-staging controls. The analysis suggests a 50% reduction in electricity use compared to the baseline. The analysis also shows this level is highly cost effective to consumers. By establishing a standard level based on these efficiencies, we also encourage continued development and greater cost effectiveness of higher efficiency technologies (i.e. constant-airflow BPM motors or "Electrically Commutated Motors" (ECM)).

2) **We support the Department's recently finalized test procedure**, and the efficiency rating metric Fan Energy Rating (FER). We support the Department's departure from the antiquated external static pressures (ESP) that have been used as part of the Furnace and Central Air Conditioner test procedures. ESPs used in the test procedure are more indicative of field conditions.

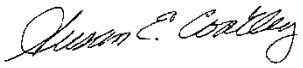
   a. We encourage DOE to investigate issues raised by manufacturers during the Public Workshop that the preliminary testing they did independently did not provide FER ratings in agreement with DOE assumptions.

3) **We encourage the Department to reconsider its five year window prior to compliance date**. We support other advocates in the call for the Department to adopt a three year compliance date, versus the five year lag time proposed. DOE has the latitude to consider the compliance date in their final rule and should exercise that authority. Three years should provide adequate time for manufacturers to adjust product lines.

Stakeholders across the Northeast/Mid-Atlantic are hopeful that the Department will seize this exciting opportunity to maximize cost-effective energy savings associated with furnace fans and finalize the efficiency levels as proposed. Feel free to contact us with clarifications or comments. Thank you again for your consideration.

[3] Massachusetts energy efficiency programs required certain efficiencies of fans (electricity ration) as part of their furnace rebate offerings.

Sincerely,



Susan E. Coakley, Executive Director

Supporting Organizations;

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