

October 12, 2016

Here it is October 2016, and we first heard about the DOE plan to regulate fan efficiency back in June 2011. At that time, AMCA mobilized its members to try to understand what the regulation would be about.

It quickly became apparent that the DOE was developing their own background database, had hired some consultants, and had already begun the process. AMCA decided the best approach would be to work with the DOE and the energy advocates, and try to influence the regulation. We gathered shipment data for 2012 through 2014 from twenty three volunteer companies, which represented about 40% of the known market. There was more than a year of negotiations with the energy advocates, after which we took a common position statement to the DOE. The proposed items would accomplish the following:

- Save energy by forcing the consumer to buy more efficient fans. This ruling is potentially the largest energy saving regulation to date.
- Become involved in an \$8B efficiency rebate program.
- Minimize the investment of AMCA members, both in compliance and testing.

The joint working group held several meetings between April 2015 and September 2015, which resulted in a document called a term sheet. This document reflected the consensus of the twenty five member working group. AMCA prevailed on many of the specific items, and did not prevail on a few.

We all expected the final rule to be published in early 2016. Here is what we know, and what we don't know.

What we know:

- 1) The rule will cover fans with a shaft horsepower from 1 through an air horsepower of 150.
- 2) Different fan types will have different target efficiencies. AMCA proposed a set of values that would not allow approximately 25% of the fan selections made during 2012 through 2014.
- 3) Some fan types will be excluded from the regulation.
- 4) The DOE will issue a test standard that must be used by everyone (AMCA proposed that it be based on AMCA 210).
- 5) The regulation will not use FEG as the metric (currently in use around the world in regulations and building energy codes).
- 6) The regulation will use a calculated or measured value of Fan Electrical Power (FEP), which is the energy input to the fan and its driving source (VFD, controls, etc.).

What we don't know:

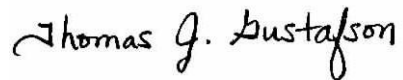
- 1) When the rule will be issued. We have heard it will be released each quarter this year, but will now probably be early 2017.
- 2) What the target efficiencies will be for each fan type.
- 3) A final definitive list of what fan types will be excluded (the DOE has a list, but some of the terms have not been fully defined).
- 4) What the final energy metric will be (AMCA has proposed one based on a calculation of allowable power for each flow/pressure point).
- 5) Whether the regulation will allow us to catalog our normal static and total efficiencies.

There are a couple interesting loose ends. The DOE has proposed that direct drive fans, and fans sold into variable speed applications will get a 'credit' in the efficiency calculations. The effect will be similar to what we saw happen in Europe, where almost all applications are direct drive with speed control.

The proposed test standard will be the next event. There will be a comment period and then the rule will be issued in the Federal Register. All fan testing done starting 180 days after that event must follow the new test standard.

From this point forward, AMCA is no longer allowed to advocate for any position. Each individual company will have to respond during the public comment periods.

Next time, we'll discuss more of the details of the calculations, and what it means to be a 'fan manufacturer'.

A handwritten signature in black ink that reads "Thomas J. Gustafson". The signature is written in a cursive style with a large, stylized 'T' and 'G'.

Thomas J. Gustafson
Chief Technology Officer/Quality Manager