

DOCKETED

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ebm-papst supports Fan Energy Index for CIB standard

Additional submitted attachment is included below.

Alex Galdamez
NATURAL RESOURCES AGENCY
Docket #17-AAER-06
CALIFORNIA ENERGY COMMISSION
1516 NINTH STREET
SACRAMENTO, CA 95814-5512

9/28/2018

Re:
Efficiency Standards and Test Procedures for Commercial and Industrial Fans and Blowers

Dear Alex,

ebm-papst supports the completion of a fan energy efficiency standard for California. We have a proven track record with the development and high-volume supply of innovative, efficient fans and fan drives. My colleagues have been deeply engaged in the European ecodesign directives for fans and for ventilation units from the very beginning. EU 327/2011 has a broad scope in terms of power (125 watts to 500 kilowatts) and in terms of applications. Its success is summarized here:

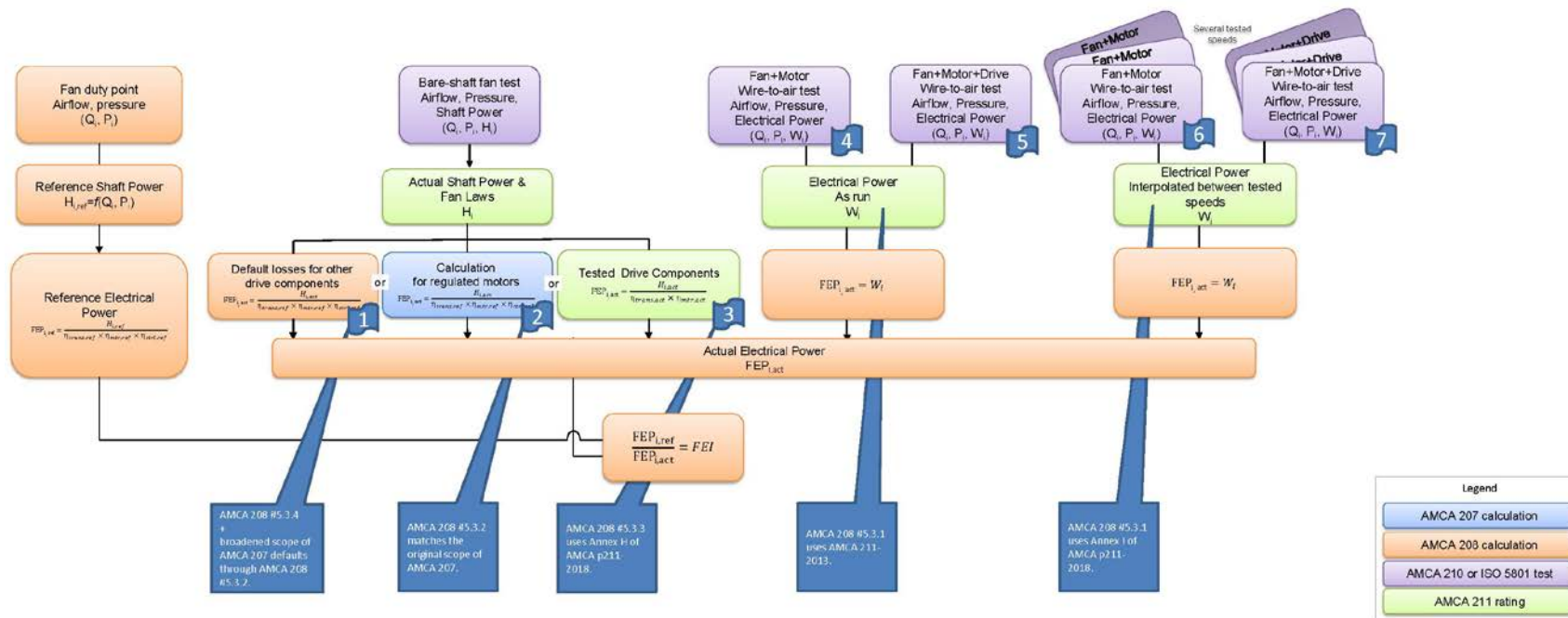
<https://vac.ebmpapst.com/de/en/vac/info-and-news/information/erp-directive.html>

The directive had adopted previously existing physical fan test standards, industry-established tolerance allowances, and it permits manufacturer certification of performance.

Here in the North America, ebm-papst Inc. engages similarly to reduce fan power consumption. Since 2012 we have contributed to AMCA test, rating, and calculations standards, to the development of ASHRAE's test method of power drive systems (often applied with fans), and to addenda of its building energy efficiency standard 90.1. In the very recent past literally all pieces have fallen into place so that the CEC can easily adopt ANSI/AMCA 208 and a standard level of FEI ≥ 1.00 across all fan types and applications in scope of that standard. Happily, the necessary laboratories and instrumentation has been existed all along, which enables implementation of a California fan standard without delay.

This is to clarify a few uncertainties:

1. The FEI is impeller-type independent. Each impeller type shall compete based on its own merits, because even forward-curved fans can reach $FEI \geq 1.00$ when applied sensibly with low loss drive components.
2. The FEI provides valid comparison for all fan types in the scope of AMCA 208, both embedded and standalone.
3. FEI requires fan testing separate from the fan applications. This is explained in figure 1 of AMCA 208.
4. Different methods to establish fan ratings are necessary to accommodate the variety of fan products. Fan manufacturers are taking full responsibility for the accuracy of performance representations regardless of the amount and methods of physical prototype testing or proprietary interpolations.
5. We are committed to serial production tolerance limits per AMCA 211 for performance and input power.



Please feel free to call me with any questions. Thank you

Armin Hauer

Manager
Regulatory and Government Affairs

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ASHRAE Chair TC5.01 Fans
Chair SPC 222
Member ASHRAE MSC SPC 90.1 and 90.2
Handbook SC chair ASHRAE TC1.09 Electrical Systems
Standards SC chair ASHRAE TC1.11 Motors and Motor Controls
Chair Blower, Fan, and Motor Section Engineering Committee

AHRI
AMCA Member Fan Committee
HVI Member HERV task force