DOCKETED	
Docket Number:	22-AAER-04
Project Title:	2022 Amendments to the Appliance Efficiency Regulations
TN #:	255245
Document Title:	Michael Ivanovich Comments - AMCA International Comments
Description:	N/A
Filer:	System
Organization:	Michael Ivanovich
Submitter Role:	Public
Submission Date:	3/23/2024 2:11:42 PM
Docketed Date:	3/25/2024

Comment Received From: Michael Ivanovich
Submitted On: 3/23/2024
Docket Number: 22-AAER-04

AMCA International Comments

The attached comments are submitted to the California Energy Commission (CEC) by Air Movement and Control Association (AMCA) International in response to the 15-day comment period regarding the federal-and-administrative-updates rulemaking for Title 20. AMCA Internationalâ€™s comments concern only portions of the rulemaking dealing with commercial and industrial fans and blowers.

Thank you for your time and consideration. Michael Ivanovich, AMCA International

Additional submitted attachment is included below.

AMCA International
Air Movement and Control Association International, Inc.
The International Authority on Air System Components Since 1917

30 West University Drive
Arlington Heights, IL 60004, USA
847-394-0150
communications@amca.org
www.amca.org

March 23, 2024

California Energy Commission
Docket Unit, MS-4
1516 Ninth Street
Sacramento, CA 95814-5512

RE:

Docket Number:	22-AAER-04. TN #: 253264
Project Title:	2022 Amendments to the Appliance Efficiency Regulations
Document Title:	Proposed regulatory language for the 15-day comment period regarding the federal-and-administrative-updates rulemaking

The following comments are submitted to the California Energy Commission (CEC) by Air Movement and Control Association (AMCA) International[1] in response to the 15-day comment period regarding the federal-and-administrative-updates rulemaking for Title 20. AMCA International's comments concern only portions of the rulemaking dealing with commercial and industrial fans and blowers.

AMCA International thanks CEC for consideration of its comments to the 45-day language. AMCA International has two comments to the 15-day language:

- AMCA International supports the elimination of the bottom three rows of Table X, as proposed on Page 91. Figure 1 below is a screen capture of the Table X section for fans and blowers. One benefit of the elimination of the rows is that if/when the U.S. Department of Energy (DOE) modifies the federal test procedure, as it ostensibly is in the process of doing, as discussed below, CEC will not have to modify Table X to accommodate the changes.
- AMCA International requests that CEC grant a second extension of the effective date for commercial and industrial fans and blowers, which could be accomplished by modifying the dates at the top of Table X (Figure 1 below) and in Section 1607 (d)(12)(C) (Figure 2 below). The first extension was granted to accommodate CEC replacing the Title 20 test procedure with the federal test procedure, which DOE published after the Title 20 rulemaking was finalized. The first extension, to April 29, 2024, coincided with the 180-day extension of an Oct. 30, 2023, deadline for the federal test procedure DOE granted to 34 fan manufacturers. The reason for the manufacturers' extension request was the hardships the manufacturers are experiencing as a

[1] AMCA International is a not-for-profit association of manufacturers of fans, dampers, louvers, air curtains, and other air-system components for commercial HVAC, industrial-process, and power-generation applications. With programs such as certified ratings, laboratory accreditation, verification of compliance, and international-standards development, it is committed to advancing the knowledge, growth, and integrity of the air-movement-and-control industry.

result of DOE omitting several sections of ANSI/AMCA Standard 214-21, *Test Procedure for Calculating Fan Energy Index (FEI) for Commercial and Industrial Fans and Blowers*, it deemed would yield ratings less conservative than wire-to-air testing.

Table X Continued - Data Submittal Requirements

	Appliance	*Required Information*	*~~Permissible~~ Possible Answers*
D	Commercial and Industrial Fans and Blowers manufactured on or after ~~November 16, 2023~~ April 29, 2024	Fan type	Centrifugal housed, centrifugal inline, centrifugal unhoused, centrifugal PRV supply, centrifugal PRV exhaust, axial inline, axial PRV, inline mixed-flow, power roof/wall ventilators, axial panel, radial housed
		Fan impeller diameter (in.)	
		Type of Motor (if fans sold with a motor)	None, Single-phase induction, Polyphase induction, Synchronous DC (including ECM), Permanent magnet AC, or Other
		Motor nameplate horsepower (if fan sold with an induction motor) (hp)	
		Pressure type	S = Static pressure T = Total pressure
		Transmission type (if fan is sold with a transmission)	Direct, V-belt, synchronous-belt, flexible coupling, none
		Type of Controller (if fan sold with controller)	None, Variable frequency drive, or Other
		Maximum fan speed (RPM)	
		Airflow at maximum fan speed (CFM)	
		Pressure at maximum fan speed (inches water gauge)	
		FEP_{act} at maximum fan speed (kW)	
		FEP_{ref} at maximum fan speed (kW)	
		Maximum pressure (inches water gauge)	
		Airflow at maximum pressure (CFM)	
		Fan speed at maximum pressure (RPM)	
		FEP_{act} at maximum pressure (kW)	
		FEP_{ref} at maximum pressure (kW)	
		Maximum air flow (CFM)	
		Pressure at maximum airflow (inches water gauge)	
		Fan speed at maximum airflow (RPM)	
		FEP_{act} at maximum airflow (kW)	
		FEP_{ref} at maximum airflow (kW)	
		~~Is the model a Series tested fan?~~	~~Yes, No~~
		~~Associated Series Tested Fan Model Number (if not a series tested fan)~~	~~Fan product line and model. (Field is N/A if it is a Series tested fan)~~
		~~Method used to determine FEP_{act} of test method in section 1604(d)(2), (AMCA 214-21) of this Article~~	~~Section 6.1, 6.2, 6.3, 6.4, or 6.5 of the test method in section 1604(d)(2), (AMCA 214-21) Applicable section(s) of AMCA 214-21 per Table 1 of 10 C.F.R. section 431.174 (Appendix A to Subpart J of Part 431)~~

FIGURE 1. Proposed changes to Table X impacting commercial and industrial fans and blowers in the 45-day and 15-day express terms. Changes reflected in the 15-day express terms are in the bottom three rows and designated by heavy strikeout font.

(16) **Commercial and Industrial Fans and Blowers**. Each commercial and industrial fan or blower, manufactured on or after ~~November 16, 2023~~ April 29, 2024, shall be marked, permanently and legibly on an accessible and conspicuous place on the unit, ~~in characters no less than 1/4 inch in tabular form (~~as shown below~~)~~:

(A) For Commercial and Industrial fans and blowers the label shall include the following information:

Fan Energy Index ≥ 1.00 Efficiency boundaries

a. maximum air flow (CFM);
b. maximum fan speed (RPM);
c. maximum pressure (inches water gauge); and
d. type of pressure ("static" or "total").

NOTE: Operation outside of these boundaries will result in an energy inefficient operation.

FIGURE 2. Proposed changes to the Title 20 permanent label for commercial and industrial fans and blowers. Note: All changes are from the 45-day express terms.

The consequence to industry of DOE omitting the sections of ANSI/AMCA Standard 214-21 is having to develop alternative efficiency-determination methods (AEDM, models validated by testing) to replace ratings that had only required calculations as instructed in AMCA Standard 214. CEC, in adopting the DOE regulation, omitted the same sections in lieu of AEDM or wire-to-air testing.

Even with a 180-day extension, which is the maximum DOE could grant by statute, meeting the deadline will be challenging to industry, with subject-matter expertise and testing resources (laboratories and staff) for AEDM scarce, especially among smaller manufacturers.

Adding to the difficulty of these circumstances, on Jan. 2, 2024, DOE published a notice of proposed rulemaking (NOPR) for an energy standard for general fans and blowers (GFB)[2] that has provisions seeking to amend the GFB test procedure. The proposed changes would establish calculation-only methods for FEI ratings, thus, alleviating the engineering and testing burdens of an AEDM that continue to challenge fan manufacturers.

While the proposed changes are welcomed by industry, the relief promised in the NOPR cannot be realized in time to meet California and DOE regulatory deadlines of April 29, 2024. Essentially, the proposed changes cannot be implemented until a final rule on the NOPR is published, which will be well past April 29.

AMCA International requested relief from DOE in a letter dated March 1, 2024. In the letter, AMCA International requests that DOE accelerate the issuance of a final rule on the proposals to amend the test procedure, set a new deadline for complying with the test procedure so industry can absorb the changes (note that updating sizing/selection software alone can take 120 days because of the complexity of the software and rigorous testing, verification, and documentation procedures), and delay enforcing the test procedure until the start of the new extension so manufacturers will not be in legal peril while the test-procedure changes are being absorbed.

AMCA International's letter to DOE is provided below as Appendix 1. In its response to AMCA International (Appendix 2), DOE states it will consider AMCA International's requests in conjunction with other input on the NOPR. DOE's response does not seem to recognize the concerns of AMCA International and its members, namely that adjusting the GFB test procedure has repercussions on manufacturers seeking to meet the DOE test procedure and Title 20 regulation.

DOE action to defer providing clarity and possibly relief until after CEC and DOE deadlines have passed leaves industry in regulatory and compliance limbo and confusion, with manufacturers legitimately concerned about their legal peril. AMCA International simply asks that CEC grant a specified deadline that would likely cover the time it takes for DOE to issue a final rule on its test-procedure changes plus 180 days for industry to absorb the changes. With the DOE final rule for the energy standard not taking effect until five years after it is published, CEC would not lose any significant energy savings by granting industry the relief it needs.

Thank you for your consideration.

Michael Ivanovich; Senior Director, Global Affairs; AMCA International; mivanovich@amca.org

[2] DOE uses "general fans and blowers," rather than the term CEC uses, "commercial and industrial fans and blowers."

Appendix 1: AMCA Letter to DOE Requesting Extensions Relating to the Test Procedure

AMCA International
Air Movement and Control Association International, Inc.
The International Authority on Air System Components Since 1917

30 West University Drive
Arlington Heights, IL 60004, USA
847-394-0150
communications@amca.org
www.amca.org

March 1, 2024

Mr. Jeremy Dommu
U.S. Department of Energy
Office of Energy Efficiency and Renewable Energy
1000 Independence Avenue SW
Washington, DC 20585-0121

Via email to: FansAndBlowers2022STD0002@ee.doe.gov

Docket: EERE–2022–BT–STD–0002; RIN 1904–AF40

Dear Mr. Dommu:

On behalf of Air Movement and Control Association (AMCA) International[1], I am writing to request two deadline extensions and the acceleration of a final ruling on the sections of the Notice of Proposed Rulemaking (NOPR) for Energy Conservation Program: Energy Conservation Standards for Fans and Blowers that amend the test procedure for general fans and blowers (GFB). To summarize:

1. AMCA requests a 30-day extension of the comment/review period for the energy-standard NOPR, which was published in the *Federal* Register on Jan. 19, 2024, with a review/comment deadline of March 19, 2024.
2. AMCA requests that DOE accelerate the issuance of a final rule on elements of the NOPR that amend the GFB test procedure (i.e., *Appendix A to Subpart J of Part 431—Uniform Test Method for the Measurement of Energy Consumption of Fans and Blowers Other Than Air Circulating Fans*). The proposed changes are welcomed by industry, but the testing relief promised by the changes cannot be realized by manufacturers in time to meet California and DOE regulatory deadlines that take effect on April 29, 2024. This is another example of the tremendous tension and burden that manufacturers are under as the DOE test procedure goes into legal effect in California for essential elements of the sales and marketing process in that state while the DOE continues its work to develop a final energy-efficiency standard and refine the test procedure that California only recently conceded governs sales and marketing to customers in its state.
3. AMCA requests a 180-day deadline extension of the GFB test procedure from the date a final rule on test procedure changes is published, as described above, and a delay in

[1] AMCA International is a not-for-profit association of manufacturers of fans, dampers, louvers, air curtains, and other air-system components for commercial HVAC, industrial-process, and power-generation applications. With programs such as certified ratings, laboratory accreditation, verification of compliance, and international-standards development, it is committed to advancing the knowledge, growth, and integrity of the air-movement-and-control industry.

enforcement of the test procedure from now until the start of the extension. Note that this extension/delay would provide an incentive for the California Energy Commission (CEC) to also extend its timetable so it can revise the Title 20 fan regulation's test procedure to match DOE's and allow the fan industry time to modify selection software, re-rate fans, and file for Title 20 compliance.

These three requests are discussed below.

Comment Extension Needed for Energy-Standard NOPR

A 30-day extension of the review/comment deadline is justified by the following complex set of circumstances:

1. This is an extraordinarily complex rulemaking that, even after more than 12 years of rulemaking activity, introduces new concepts for stakeholders to evaluate, such as multiple fan classes, adjustments to FEI ratings based on whether fans are sold with a controller, FEI levels varying by fan class, and proposed amendments to the GFB test procedure. Until the NOPR was published, all FEI-based fan-efficiency provisions in codes, standards, and the California regulation were based on FEI $\geq$ 1.00 or, for fans in variable-air-volume systems, FEI $\geq$ 0.95. Industry needs more time to develop tools, gather data, and perform analyses to adequately assess and comment on these regulatory developments. In terms of delivering promised energy savings, the rubber meets the road, so to speak, in the critical interactions between manufacturer and customer using software selection tools to choose the most efficient fan for the duty points at which the fan will be operating.
2. DOE has combined GFB and air-circulating fans (ACF) in the same rulemaking. These have entirely different energy standards and require entirely different supporting analyses, which adds to the volume and complexity of information. GFB and ACF share a NOPR and a Technical Support Document but have separate GRIM, LCC, and NIA spreadsheets. Thus, there are eight documents to review instead of the usual five.
3. The NOPR is the first look at an energy standard for ACF, which were added to the rulemaking relatively recently. AMCA believes DOE's proposed table-based method of setting and regulating ACF product classes based on diameter can be easily gamed and an alternate equation-based methodology is being explored. More time is needed to vet the new approach and achieve consensus among stakeholders.
4. AMCA has provided to DOE contractors Lawrence Berkeley National Laboratory (LBNL) and Guidehouse the AMCA 2021 Fan Shipment Database, which replaces the 2012 database LBNL and Guidehouse used for the GFB NOPR development and substantiation. AMCA believes the new data could change DOE's analyses supporting the NOPR and would like for the comment period to be extended to include review/comment on a possible Notice of Data Availability (NODA).
5. AMCA notes DOE is seeking to amend the GFB test procedure with the energy-standard NOPR. DOE proposes two possible methodologies: one based on IEC Standard 61800-9-2-23, *Adjustable Speed Electrical Power Drive Systems (PDS) - Part 9-2: Ecodesign for Motor Systems - Energy Efficiency Determination and Classification*, and another based on revised coefficients for equations in ANSI/AMCA Standard 214-21. These methods provide testing relief to manufacturers because they are meant to provide conservative ratings without need for validation testing. While AMCA supports DOE allowing these methods, it notes the IEC standard and its accompanying materials are new and highly complex. Deriving new

coefficients for ANSI/AMCA Standard 214-21 also is complex and requires analysis. AMCA would need to find a way to promulgate materials manufacturers can use. As such, more time is needed for subject-matter experts to learn and apply the IEC standard, derive ANSI/AMCA Standard 214-21 coefficients, vet these methods with manufacturers, and provide comments on what might be needed for corrections or amendments to DOE proposals.

With these considerations in mind, the request for 30 additional days seems reasonable. In effect, we just cannot get to the finish line in time with the level of confidence needed at this important juncture in the rulemaking.

Acceleration of Final Rule for NOPR Sections Proposing Changes to GFB Test Procedure
AMCA notes that proposed test-procedure changes in the energy-standard NOPR will impact not only the federal test procedure but the California Title 20 GFB regulation. Unlike the DOE regulations for GFB thus far, Title 20 has certification and labeling requirements that must be met before covered fans can be offered for sale. The Title 20 regulation's deadline was postponed to April 29, 2024, to accommodate a 45-day rulemaking seeking to update the Title 20 regulation to adopt the DOE test-procedure final rule. With the NOPR's test-procedure changes becoming final after the current language-change rulemaking is finalized, the CEC would need to undergo a process to modify the Title 20 test procedure again.

According to the CEC[2], the 45-day rulemaking has generated sufficient comments to require a 15-day rulemaking before language is finalized. Currently, the CEC is not planning to revise the April 29 deadline but is aware of DOE's proposed test-procedure changes.

Hence, AMCA asks DOE to accelerate the publication of a final rule on the energy-standard NOPR sections amending the GFB test procedure. AMCA is hopeful test-procedure changes can be finalized within 60 days of the expiration of the current (March 19, 2024) or an extended comment deadline. This would allow the CEC to adopt the changes in a timely manner following changes already in the works.

Delay of Enforcement of Test Procedure
The fan industry is caught between two evolving regulations and doing its best to comply with them. With changes being made—for all the right reasons—to the regulations at the last minute, it is highly unfair to put manufacturers in jeopardy of noncompliance. All AMCA asks for is the extension of deadlines corresponding to upcoming revisions of the regulations so commerce is not adversely affected and manufacturers are not put in legal jeopardy.

For these reasons, AMCA asks for a 180-day extension of the test-procedure deadline from the date the final rule is published. This would allow time for the CEC to revise the Title 20 test procedures and make possible corresponding changes to certification and labeling requirements. Also, it would give manufacturers time to update selection software and any representations following the re-rating of fans using the new method(s) DOE would allow in the revised test procedure.

Between now and the date the final rule is published, AMCA asks DOE for a delay in enforcement so manufacturers are not held in legal jeopardy while awaiting DOE and the CEC to finalize changes to the test procedure and Title 20 regulation.

[2] Telephone conversation with Peter Strait, Supervisor, California Energy Commission, on Feb. 28, 2024.

Thank you for your consideration.

Michael Ivanovich
Senior Director, Global Affairs
AMCA International
mivanovich@amca.org

Appendix 2: DOE response to AMCA Letter in Appendix 1.

Department of Energy
Washington, DC 20585

March 12, 2024

Michael Ivanovich
Senior Director, Global Affairs
AMCA International

Transmitted via email to Michael Ivanovich (mivanovich@amca.org)

Dear Michael:

Thank you for your letter dated March 1, 2024, regarding the Department of Energy's (DOE) notice of proposed rulemaking (NOPR) "Energy Conservation Standards for Fans and Blowers." In your letter, you request that the DOE extend the comment period on this notice by 30 days in order to allow time for your member companies to consider the topics raised in the NOPR and to collect data to inform responses to the NOPR. Secondly, you request that DOE accelerate the issuance of a final rule on the elements of the NOPR that amend Appendix A to Subpart J of 10 CFR 431. Finally, you request a 180-day extension of the compliance period of the test procedure should DOE finalize an accelerated rule in accordance with AMCA's second request.

In regard to your comment period extension request, DOE posted a copy of the pre-Federal Register publication of the NOPR on the DOE website and announced the availability of the proposal via email on December 29, 2023, which provided many stakeholders 21 additional days of review. The NOPR was then published in the Federal Register on January 19, 2024, and provided a 60-day comment period, which closes on March 19, 2024.

DOE has considered this request. We continue to believe that the comment period length is appropriate and provides a meaningful opportunity to comment on the NOPR. Therefore, DOE is denying the request to extend the comment period.

Regarding your other two requests, DOE notes that the proposed rule is still out for comment and DOE is expecting additional feedback on these provisions as part of the open rulemaking. After considering all input and data submitted, DOE will make decisions on next steps in the rulemaking.

Again, thank you for your letter. I appreciate the opportunity to be of service and trust the information provided is helpful.

Sincerely,

3/12/2024

X Lucas M. Adin

Signed by: Department of Energy
Lucas Adin
Assistant Director of
Regulatory Appliance Standards
Building Technologies Office
United States Department of Energy