

**DOCKETED**

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**AMCA International comments on Express Terms 2022 Energy Code**

*Additional submitted attachment is included below.*



## **AMCA International**

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The International Authority on Air System Components Since 1917

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To: California Energy Commission (CEC) staff via submission on CEC's Web page at  
<https://efiling.energy.ca.gov/EComment/EComment.aspx?docketnumber=21-BSTD-01>

From: Air Movement and Control Association (AMCA) International

RE: Express Terms 2022 Energy Code, Title 24 Parts 1 and 6 / Docket # 21-BSTD-01 / Docketed  
Date 5/6/2021

Dear CEC staff:

AMCA International thanks the California Energy Commission for the opportunity to comment on the 45-day language for the Express Terms 2022 Energy Code, Title 24 Parts 1 and 6. The comments in this document include a follow up to AMCA's comments on the Draft 2022 Energy Code Pre-Rulemaking Express Terms, submitted to Docket #19-BSTD-03 on March 5, 2021, as well as some additional comments.

Founded in 1917, AMCA International is a not-for-profit association of manufacturers of fans, dampers, louvers, air curtains, airflow-measurement devices, ducts, acoustic attenuators, impellers, and other air-system components for commercial-building heating, ventilating, and air-conditioning; industrial-process; and power-generation applications. Its mission is to advance the knowledge of air systems and uphold industry integrity on behalf of its nearly 400 members worldwide.

AMCA is pleased to have worked with the CASE team and the CEC throughout the development of the 2022 Energy Code, having submitted comments on the Air Distribution Draft CASE Report in August 2020 and comments on the Draft 2022 Energy Code Pre-Rulemaking Express Terms in March 2021. Further, AMCA recognizes that many of its comments have been accepted by the CEC and are reflected in the Express Terms 2022 Energy Code.

With this comment submission, AMCA initially remarks on its previous comments submitted for the Draft 2022 Energy Code Pre-Rulemaking Express Terms:

1. AMCA thanks the CEC for accepting the request to update references to the 2018 version of ANSI/AMCA Standard 500-D, *Laboratory Methods of Testing Dampers for Rating*.

2. AMCA requested that its three standards and an ISO standard referenced in the Draft 2022 Energy Code Pre-Rulemaking Express Terms be added to Appendix 1-A (Standards and Documents Referenced in the Energy Code).
  - This comment was accepted, and the update has been made.
  - However, AMCA requests one additional change - that its three standards (ANSI/AMCA 208-18, ANSI/AMCA 210-16, and ANSI/AMCA 500-D-18) now referenced in Appendix 1-A under the section, “AMERICAN NATIONAL STANDARDS INSTITUTE”, be separated out from that section and instead be listed under a new section, “AIR MOVEMENT AND CONTROL ASSOCIATION”. AMCA’s opinion is that by making this change, it will be simpler for the user of the 2022 Energy Code to find the AMCA standards in Appendix 1-A that are referenced in the Code.

Next, AMCA provides the following comments on changes made between the Draft 2022 Energy Code Pre-Rulemaking Express Terms and the 45-day language for the Express Terms 2022 Energy Code, Title 24 Parts 1 and 6:

1. AMCA notes that some updates were made to Section 120.10, Mandatory Requirements for Fans, in the 45-day language. To illustrate these updates, the language in Section 120.10 is duplicated below, with italicization added for emphasis to the language newly introduced with the 45-day language.
  - a) Each fan or fan array with a combined motor nameplate horsepower greater than 1.00 hp or with a combined fan nameplate electrical input power greater than 0.89 kW shall have a fan energy index (FEI) of 1.00 or higher at fan system design conditions. Each fan and fan array used for a variable-air-volume system that meets the requirements of Section 140.4(c)(2) shall have an FEI of 0.95 or higher at fan system design conditions.
    1. The FEI for fan arrays shall be calculated in accordance with ANSI/AMCA 208-18 Annex C.
    2. All FEI values shall be provided by a manufacturer, where fan selection software and/or fan catalogs display third party verified FEI values in accordance with ANSI/AMCA 208-18.

**EXCEPTION to Section 120.10(a)2:** FEI values for embedded fans do not need to be third party verified.

**EXCEPTION 1 to Section 120.10(a):** Embedded fans that are part of equipment listed under Section 110.2, Section 110.1, or equipment that has an *energy conservation* standard under 10 CFR 431, including any equipment with new energy conservation standards with effective dates prior to January 1, 2026.

**EXCEPTION 2 to Section 120.10(a):** Embedded fans and fan arrays with a combined motor nameplate horsepower of 5 hp or less or with a fan system electrical input power of 4.1 kW or less.

**EXCEPTION 3 to Section 120.10(a):** Circulation fans, ceiling fans and air curtains.

**EXCEPTION 4 to Section 120.10(a):** Fans that are intended to only operate during emergency conditions.

By lowering the minimum FEI for VAV systems to 0.95, this requirement is now more consistent with ASHRAE 90.1-2019, Section 6.5.3.1.3. Just for keeping the code simpler, AMCA with its August 14, 2020 comment had supported the CASE team's proposal of  $FEI \geq 1.00$  for all in-scope fans. AMCA supports the direction taken by the CEC with this change.

The other changes to Section 120.10 made in the 45-day language are all contained under Exception 1 to Section 120.10(a). AMCA simply notes that those changes in the 45-day language add clarity to the equipment excepted.

2. A slight change was made in the 45-day language to Section 140.4(c)1, Fan Power Budget, by adding "...at the fan system design airflow...". AMCA supports this change since it adds clarity and preciseness to the calculation of fan system electrical input power (Fan  $kW_{design,system}$ ) determined per Section 140.4(c)1(B).

If you have questions regarding these comments, please do not hesitate to contact me. Again, AMCA International thanks the California Energy Commission for the opportunity to comment on the 45-day language for the Express Terms 2022 Energy Code, Title 24 Parts 1 and 6.

Respectfully Submitted,



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