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*Comment Received From: Laura Petrillo-Groh*  
*Submitted On: 5/9/2022*  
*Docket Number: 20-AAER-02*

**AHRI Comments - Title 20 Air Filters NOPA - Docket Number 20-AAER-02**

Dear CEC Staff,

Please see the attached comments on behalf of the Air Conditioning, Heating and Refrigeration Institute.

Thank you,

Laura Petrillo-Groh

*Additional submitted attachment is included below.*

May 9, 2022

California Energy Commission  
Docket Unit, MS-4  
Re: Docket No. 20-AAER-02  
715 P Street  
Sacramento, California 95814-5512

(Submitted via email to [docket@energy.ca.gov](mailto:docket@energy.ca.gov)).

Re: AHRI Comments – Title 20 Notice of Proposed Action for Air Filters Regulation –  
Appliance Efficiency Rulemaking for Air Filters [Docket No. 20-AAER-02]

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Dear CEC Staff:

These comments are submitted in response to the California Energy Commission (CEC) Notice of Proposed Action (NOPA) published on March 25, 2022, to adopt changes to the air filter regulations contained in the California Code of Regulations (CCR), Title 20 (section 1104(e)).

AHRI represents 332 heating, ventilation, air-conditioning, and refrigeration (HVACR) and water heating equipment manufacturers. In North America, the annual output of the HVACR and water heating industry is worth more than \$44 billion. In the United States, the industry supports 1.3 million jobs and \$256 billion in economic activity annually.

As discussed in detail below, AHRI has been very supportive of CEC's efforts to correct a previously flawed regulation, originally enacted in 2015. Subsequent to work undertaken by CEC and AHRI, efforts to develop a workable regulation were productive. In the intervening years, and in the wake of the COVID-19 pandemic, which brought both heightened interest in air filtration, along with massive supply chain shortages, we have a few suggestions to strengthen this proposal and ensure that California consumers have access to high quality air filters, and appropriate information on product efficacy. To enable the continued access of filters, AHRI recommends that CEC maintain a one-year compliance date, rather than the proposed effective date of December 1, 2022. Complexities in the sale of these products require that CEC not deviate from requirements by enacting a shortened compliance window.

**AHRI appreciates the thoughtful consideration of stakeholder feedback during the pre-rulemaking process.**

AHRI provided substantial feedback during the pre-rulemaking process (Docket 17-AAER-01). One of the critical aspects that will lead this regulation to be successful, which we continue to support, is the adoption of the updated AHRI Standard 680 (I-P)-2017, *Performance Rating of Residential Air Filter Equipment*. This test procedure was amended after stakeholder meetings with CEC to include the initial resistance of the filter and calculations for extending ratings from tested products to filters of other sizes within the same family.

We also support CEC's exclusion of air filters with adjustable dimensions, as it is not possible for the manufacturer to mark the filter with all of the required information when the final face area of the filter is not a knowable quantity.

Under the Sample Air Filter Marking, Table Z, CEC has proposed removing a note stating, "The requirements of this section shall not preclude manufacturers from providing additional information" and stresses the importance that this note is duplicated in Title 20. We had previously commented that this note addresses the concerns that electronic air cleaners with removeable media be permitted to mark the removeable media with indication it should only be used in the electronic air cleaner for which it was designed. Such filters are not interchangeable with other systems. AHRI recommends that this note be retained under Tables Z-1 and Z-2.

**AHRI requests that CEC make a slight modification to the "Basic Model" definition to allow manufacturers to source materials from different suppliers for products sold under the same model number.**

AHRI appreciates CEC's proposed definition for basic model of an air filter aligns with what had previously been discussed; however, we suggest two modifications (highlighted yellow, and shown in strikeout, below):

"Basic model" of an air filter means all units of a given type of air filter, irrespective of the face area dimensions, that have the same depth and the same construction, including ~~type and~~ grade of air filter media, ~~pleat spacing,~~ pleat height, pleat support, and filter frame pattern.

Air filters have been studied extensively during the pandemic, confirming that different materials, with slightly different pressure drops still have the same level of efficacy. Unfortunately, due to pandemic-related supply chain issues, dual-sourced raw materials and components have become paramount to ensuring access to finished goods such as air filters. Labeling requirements that are performance-based rather than based on the inclusion of specific parts will allow for multiple sources of components without negatively impacting needed filtration efficacy. This will allow for swapping filter media, if needed for different Particle Size Efficiency Ranges 1, 2, and 3 (PSE1, PSE2, and PSE3) and pressure drops, with differences of up to 30%, even for the same efficacy.

For example, pre-pandemic MERV 13 filters were electrostatic. Now nanofiber filters compete, which impacts results (PSE1, PSE2, PSE3).

AHRI notes that efficiency and pressure drop are not correlated in the regulation's language for mechanical air filters. Consequently, conservative ratings indicate a preference for pressure drop.

AHRI suggests that altering product labeling and certification requirements would allow multiple versions of the basic model to be labeled alike, eliminating waste on pre-printed frames. This is important due to supply chain issues on media.

Product test results can be managed within a manufacturer's database. If there is a need for multiple versions of a filter model to fall under the same scope, then a corresponding number of test reports may be uploaded. This would allow the filter labeling to be printed with the highest pressure drop in the report, or the manufacturer's pressure drop specification for that model number (whichever value is higher). If an efficiency value must be printed on the frame in place of or in addition to the MERV rating (MERV ratings indicate efficiency), then it should be the lowest number of the test report, or the minimum required to meet the MERV rating.

To provide an example, due to supply chain shortages a product may have the following three versions and have a single difference in the filter media. The frame, pleat number, size, and spacing are all the same in this example:

Example:	A	B	C
Pressure drop	0.254	0.286	0.30
E1	57.9	52.1	59.1
E2	86.5	85.9	89.3
E3	96.1	95.4	98.0

The manufacturing specification for the item is MERV 13 at 492 FPM and 0.32" maximum pressure drop, which each of these examples would pass. Media A is preferred but is unavailable in this example. It is suggested that manufacturers be allowed to report the highest pressure drop and lowest efficiency combination or their own specification while collecting and submitting necessary supporting data.

In this case, the label would have a pressure drop 0.32" maximum or 0.30" as reported on the highest test value from example C, and would be labeled as MERV 13 minimum or minimum efficiency for each size bucket (E1 50%, E2 85%, E3 90%) or the actual value reported on the lowest test example B, like this:

**Table Z-2: Sample Air Filter Marking (ANSI/ASHRAE Standard 52.2-2017)**

MERV	( $\mu$ m)	0.30-1.0	1.0-3.0	3.0-10	Airflow Rate (CFM)	[val1]	[val2]	[val3]	[val4]	[val5]*	*Max Rated Airflow
13	PSE (%)	Report Minimum required or example B data			Initial Resistance (IWC)	Report maximum manufacture specification or example C data					

In this example, and using the proposed modification to the basic model group definition, all three test reports could be submitted to the database under the same model number. As such, the filter could be printed to cover all three versions. This would provide manufacturers with the option to change the pleat spacing of the product to make up the pressure drop for higher resistance medias. With this example, the concept of the basic model remains unaltered while the labeling and documentation for products is adjusted to simplify the supply chain process and keep production lines moving. As seen during the height of the pandemic, this is an important and difficult task.

**AHRI requests clarification from CEC regarding the requirement to have the performance table visible from the retail packaging.**

CEC previously confirmed for AHRI members in 2017 that the performance table (proposed Z-1 and Z-2) did not need to be visible from the shipping packaging, such as a box, if the product was not sold in a retail setting. Manufacturers can add the required performance table to the filter itself with minimal difficulty but adding it to the filter carton would be more costly and time consuming as the filter is not visible through the packaging. AHRI requests that CEC add clarifying language within the regulation to avoid discrepancies in compliance or confusion for manufacturers regarding labeling requirements.

AHRI also requests confirmation that filters incorporated into other products as components do not need to be labeled separately.

**AHRI Requests that CEC extend the compliance date for revised labeling requirements within 20-AAER-02 to June 1, 2023.**

AHRI Members have concerns with the proposed effective date for this rulemaking. The new labeling requirement adds a layer of complexity to the labeling process, requiring more time for manufacturers to comply. Manufacturers of private label products, which are products manufactured by a third-party that are sold under a retailer's brand name,

must have all revisions to die-cut graphics reviewed and approved before use. While this may appear to be a straightforward process, these added steps would require updates that would create a subsequent delay in updating die-cuts, and therefore manufacturers' collective ability to comply with the timeline set forth in the regulation.

On March 27, 2022, CEC gave notice of the proposed regulation. Even for manufacturers who immediately began the complex process of retesting their materials and proposing the necessary changes to *retail chains*<sup>1</sup> selling their products, it would be difficult, if not impossible, to be compliant with new labeling requirements by December 1, 2022.

*Retail chains* must discuss labeling redesign at length and approve any changes made prior to manufacturers sending updated designs to the die-cut. This approval process requires multiple meetings between manufacturers and *retail chains* and is time-consuming. As *retail chains* generally have a 90-day supply of air filters on hand, motivating a more efficient transition is difficult and could require disposing of products ready for retail.

Currently this timeline is expected to start after the publication of the final rule, at which point manufacturers who have not already started the process of transitioning to new labeling standards will find it impossible to comply. It is not a straightforward or effortless process for manufacturers to incorporate a redesign into their products, and as such they need an appropriate length of time to collaborate with chain retailers to complete a redesign and to bring their products into compliance.

Separately, air filter manufacturers compete with the beverage industry for die-cut time, and the entire supply chain has been impacted by the pandemic, making supplies tight and die-cut time scarce. Consequently, if a *retail chain* delays the change to their label, and the compliance date for the updated labeling requirements is immovable, requiring replacement of packaging in the 270-day supply chain, there is currently no excess capacity to replace this supply, and there is insufficient time to meet the schedule and replace the entire supply chain.

Finally, AHRI reminds CEC of Public Resources Code section 25402(c)(1)(A) which requires an effective date of "no sooner than one year after the date of adoption or revision" and asks that CEC modify the revised labeling standard effective date accordingly to June of 2023 instead of December 1, of 2022. This rule is being promulgated under the authority of Public Resources Code sections 25213(a), 25218(e), 25402(c)(1), and 25402.5 and should comply with 25402(c)(1)(A) and should have a one-year effective date, at minimum.

## **Conclusion**

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<sup>1</sup> AHRI is referring to "retail chains" which are specialized large retail businesses or "Big Box Stores."

Minor modifications are necessary to ensure California consumers have continued access to air filters along with new labeling for air filter efficiency. We also urge CEC to maintain a one-year effective date. AHRI appreciates the opportunity to provide these comments. If you have any questions regarding this submission, please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'LPGR', with a long horizontal flourish extending to the right.

Laura Petrillo-Groh, PE

Senior Regulatory Advisor

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