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

Additional submitted attachment is included below.



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September 13, 2022

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

(Submitted via the docket to [California Energy Commission: e-comment: Submit Comment](#) and via email to 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*]

Dear CEC Staff:

These comments are submitted in response to the California Energy Commission (CEC) Proposed Regulatory Language for Air Filters published on August 29, 2022, to adopt additional amendments to the air filter regulations contained in the California Code of Regulations (CCR), Title 20 (section 1104(e)).

AHRI is the trade association representing more than 300 manufacturers of heating, cooling, water heating, and refrigeration equipment. AHRI is an internationally recognized advocate for the heating, ventilation, air conditioning, and refrigeration (HVACR) industry and certifies the performance of many of the products manufactured by its members. In North America, the annual economic activity resulting from the HVACR industry is approximately \$256 billion. In the United States alone, AHRI's members, along with distributors, contractors, and technicians, employ more than 1.3 million people.

As discussed in detail below, AHRI has been very supportive of CEC's efforts to correct the flawed air filter regulation, originally enacted in 2015. Subsequent to the work undertaken by CEC and AHRI, efforts to develop a workable regulation were productive. AHRI thanks CEC for being responsive to HVACR industry feedback to the 45-day notice of proposed language, particularly the clear and thorough definition of electronic air cleaners included in this proposal.

In the intervening years, and in the wake of the COVID-19 pandemic that brought both heightened interest in air filtration along with massive supply chain shortages, we have identified several ways to strengthen this proposal to ensure that California consumers have access to high quality air filters and appropriate information on product efficacy. To ensure air filters remain available for consumers, AHRI requests that CEC consider the need for flexibility in materials used to manufacture air filters, as the current proposal is prohibitive and will hinder Californian access to products. AHRI thanks CEC for considering the requests to move the proposed effective

date of the amendments from December 1, 2022, to April 1, 2023, but emphasizes the need for the full one-year compliance date extension. Complexities in the sale of these products require that CEC not deviate from requirements by enacting a shortened compliance window.

AHRI requests that CEC offer additional clarification for the 2026 labeling requirements discussed in the NOPA 15-day language. AHRI also asks that CEC clarify whether filters delivered within a unit need to comply with the stated labeling requirements.

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). AHRI thanks CEC for, and supports, the decision to adopt the updated AHRI Standard 680 (I-P)-2017, *Performance Rating of Residential Air Filter Equipment*, which is a critical aspect that will lead this regulation to be successful. 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.

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

AHRI thanks CEC for considering our request to 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, and we ask that CEC consider our amended recommendation for the definition of "basic model".

AHRI appreciates that CEC's proposed definition for basic model of an air filter aligns with what had previously been discussed; however, we suggest an alternative modification (**bolded** 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 **similar type and pleat spacing and** 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 and label inserts. 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 of 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	(μ 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 continues to request 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, (i.e., Home Depot, or ACE Hardware etc.), 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 create a subsequent delay in updating die-cuts, and therefore manufacturers' collective ability to comply with the timeline set forth in the regulation.

Another concern with transitioning to altered labeling requirements is the quantity of waste generated as any excess, unusable material and packaging must be discarded. Having the full year from the compliance date will provide adequate time for the approval of packaging and will allow manufacturers and retailers a smooth transition for all products. This additional time will allow products to be labeled correctly and will avoid unnecessary waste. Filter labels are purchased in bulk (approximately 6-month supplies) on a rolling basis. A one-year compliance period will allow manufacturers to obtain approvals and transition each product line to new packaging without waste. Without adequate time to transition to new labeling requirements, it is more cost-effective for manufacturers to dispose of product that is not already in compliance than it is to generate and apply corrected labeling. AHRI advises CEC that although it has been made evident that manufacturers may meet labeling requirements by adding a sticker or including a paper insert with air filters, this does not adequately address concerns, and in fact creates a lengthened production process. The process of adding a sticker or insert would require significant employee time and would invariably increase the cost of production. The additional time that AHRI is requesting would create a window for manufacturers, allowing them to distribute virtually all filters that would otherwise have to be disposed of due to noncompliance with labeling requirements. AHRI members will reach out to CEC directly to set up individual meetings to offer supplemental data regarding manufacturer costs and the quantity of waste generated.

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*¹ selling their products, it would be difficult, if not impossible, to be compliant with new labeling requirements by December 1, 2022.

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

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.

AHRI requests that DOE offer clarification regarding labeling requirements for products which are exclusively sold online. We ask that DOE confirm that if a product is not sold in a physical store, the packaging is not required to be labeled as long as the filter itself bears the required label.

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, 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

Minor modifications are necessary to ensure California consumers have continued access to air filters along with new labeling for air filter efficiency. AHRI recommends that CEC consider granting our request for a full year for manufacturers to bring their products into compliance with labeling requirements. We also urge CEC to consider a more flexible approach to filter type requirements. AHRI appreciates the opportunity to provide these comments. If you have any questions regarding this submission, please do not hesitate to contact me.

Sincerely,



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