

**DOCKETED**

<b>Docket Number:</b>	20-AAER-02
<b>Project Title:</b>	Air Filters
<b>TN #:</b>	249575
<b>Document Title:</b>	Response to Comments 3rd 15-day comment period
<b>Description:</b>	Response to comments received during the 3rd 15-day public comment period. December 2, 2022, through December 20, 2022.
<b>Filer:</b>	Alex Galdamez
<b>Organization:</b>	California Energy Commission
<b>Submitter Role:</b>	Commission Staff
<b>Submission Date:</b>	4/10/2023 1:14:11 PM
<b>Docketed Date:</b>	4/10/2023

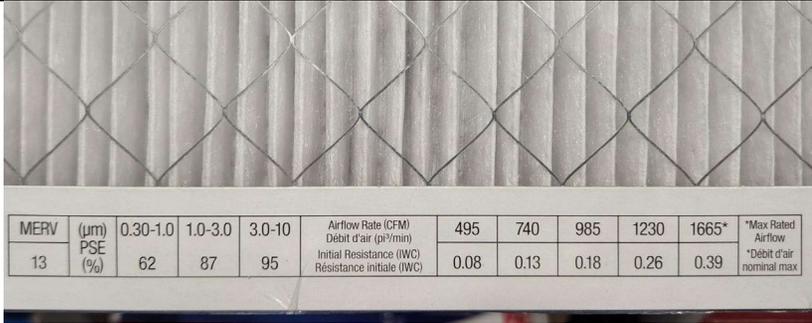
3<sup>rd</sup> 15- Day Written Comments Received: Air Filters  
Title 20, Sections 1601,1602,1604,1606 and 1607  
December 2 through December 20, 2022

<b>Commenter(s) Name(s)</b>	<b>Organization</b>	<b>Date Received</b>	<b>Comment type</b>	<b>Assigned number</b>
Steve Uhler	N/A	December 5, 2022	Written public comment	1
Jeff Miller	N/A	December 19, 2022	Written public comment	2
Jacki Donner	Home Ventilating Institute	December 19, 2022	Written public comment	3
Steve Uihler	N/A	January 25, 2023	Written public comment	4

Number	Comments/ Suggested Revisions	Response
1.1	<p>Perhaps commission staff have overlooked the statement of mailing required pursuant to 1 CCR Section 44. Public Availability of Changes to Regulations. (b). The rulemaking record shall contain a statement confirming that the agency complied with the requirements of this section and stating the date upon which the notice and text were mailed and the beginning and ending dates for this public availability period.</p> <p>Please ensure the commission has complied with section 14911. GOV-ARTICLE 6. Distribution of State Publications 14900-14912. If any state agency maintains a mailing list of public officials or other persons to whom publications or other printed matter is sent without charge, the state agency shall correct its mailing list and verify its accuracy at least once each year.</p> <p>Compliance with section 14911 is required pursuant to 11125. (e) GOV-ARTICLE 9. Meetings 11120-11133. A request for notice of more than one meeting of a state body shall be subject to the provisions of Section 14911.</p>	<p>The CEC has complied with the mailing requirement for all subsequent changes to the express terms. As is standard procedure, the appropriate statements of mailing will be included in the rulemaking record that is submitted to the Office of Administrative Law.</p>
2.1	<p>I recommend that when this air filter regulation language is eventually adopted and prepared for publishing, that CEC staff devote some care to formatting the graphic representation of the sample air filter label markings shown in Tables Z-1 and Z-2, such that when these regulations are finally published they truly provide a representation of the marking staff recommends be printed on air filters. Thus manufacturers of air filters might be able to view the graphics in Tables Z-1 and Z-2 in the adopted regulation published by the CEC and know with greater clarity what the layout and formatting of the marking is intended to be.</p> <p>The appearance of the sample air filter markings shown in tables Z-1 and Z-2 in the 3rd 15-day language express terms</p>	<p>CEC staff appreciates the recommendation and will take the necessary steps to provide manufacturers with the necessary guidance to correctly mark their air filters as required by the listed requirements in section 1607 of the proposed regulation. As stated in the regulation the two tables provided Z-1 and Z-2, are examples given on a possible way to comply with the proposed regulation.</p>

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	<p>(TN247899) apparently suggests that text contained in rows should not be aligned, and that single words should not fit entirely within the width of a single column. A copy/clip from the 3rd 15-day language express terms (TN247899) Table Z-2 is shown in Figure 1 below with marked-up indication of the locations of these improperly formatted features. Note in Figure 1 that in the second column, “(µm)” and “(%)” are out of alignment with the other text in their respective rows; and in the heading of the third column, “0.30-1.0” has wrapped into two rows of text instead of being consistent with the fourth and fifth column headers that use only 1 row of text; also the word “Resistance” in the 6th column has been split into two rows of text.</p> <p>Presumably, there are recent font size requirements imposed on CEC publications that have made it challenging to fit a properly formatted representation of the intended air filter label marking within the width of the margins of an 8.5” x 11” printed page. Note that the air filter label marking, when implemented on an air filter frame, will not be constrained to fit in the same width dimension as the 15-day language publication. Since the graphics in tables Z-1 and Z-2 provide explicit guidance for the formatting and layout of the air filter label marking intended to be implemented on the air filter frame, I recommend that CEC staff work with any available and allowable formatting options that could be leveraged to perfect the final appearance of the air filter label markings in tables Z-1 and Z-2, thus to publish final regulation language that provides properly developed explicit direction to manufacturers of air filters for implementing these label markings on their air filter products.</p> <p>An example of the improvements to the appearance of the layout and formatting I recommend is shown in Figure 2 below. The graphic in Figure 2 displays a copy of the air filter label marking layout and formatting that was posted in the 15-day language adopted by the 2015 air filter label</p>	<p>The purpose of both tables is to provide a visual aid to manufacturers, and in no way was to be interpreted as a set requirement.</p> <p>CEC staff appreciates the different examples provided by the commenter.</p>

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	<p>rulemaking (although the asterisk that should be placed next to “val 5” was erroneously missing from that posting).</p> <p>The same layout and formatting is published in the Appliance Efficiency regulations available at the following URL: <a href="#">Westlaw link section 1607</a></p> <p>Figure 3 Below is a photograph of the 3M manufacturer’s current commercially available implementation of the marking shown in Figure 2.</p> <p>Figure 1. Markups indicating formatting deficiencies in Table Z-2 from the 3<sup>rd</sup> 15-day language express terms in docket 20-AAER-02 (TN247899).</p> <table border="1" data-bbox="436 678 1245 873"> <tr> <td>MERV</td> <td>(<math>\mu</math>m)</td> <td>0.30-1.0</td> <td>1.0-3.0</td> <td>3.0-10</td> <td>Airflow Rate (CFM)</td> <td>[val1]</td> <td>[val2]</td> <td>[va3]</td> <td>[val4]</td> <td>[val5]*</td> <td rowspan="2">*Max Rated Airflow</td> </tr> <tr> <td></td> <td>PSE</td> <td>[val]</td> <td>[val]</td> <td>[val]</td> <td>Initial Resistance (IWC)</td> <td>[val]</td> <td>[val]</td> <td>[val]</td> <td>[val]</td> <td>[val]</td> </tr> </table> <p>Figure 2. Table Z copied from 15-day language from the 2015 air filters label rulemaking.</p> <table border="1" data-bbox="436 1052 1276 1190"> <tr> <td>MERV</td> <td>(<math>\mu</math>m)</td> <td>0.30-1.0</td> <td>1.0-3.0</td> <td>3.0-10</td> <td>Airflow Rate (CFM)</td> <td>[val 1]</td> <td>[val 2]</td> <td>[val 3]</td> <td>[val 4]</td> <td>[val 5]</td> <td>*Max Rated Airflow</td> </tr> <tr> <td>[value]</td> <td>PSE (%)</td> <td>[value]</td> <td>[value]</td> <td>[value]</td> <td>Initial Resistance (IWC)</td> <td>[value]</td> <td>[value]</td> <td>[value]</td> <td>[value]</td> <td>[value]</td> <td></td> </tr> </table> <p>Figure 3. Photograph taken in September 2022 of a 3M air filter on the shelf at a local Lowes store which displays implementation of the air filters marking layout and formatting adopted by the 2015 air filter marking rulemaking (as shown in figure 2).</p>	MERV	( $\mu$ m)	0.30-1.0	1.0-3.0	3.0-10	Airflow Rate (CFM)	[val1]	[val2]	[va3]	[val4]	[val5]*	*Max Rated Airflow		PSE	[val]	[val]	[val]	Initial Resistance (IWC)	[val]	[val]	[val]	[val]	[val]	MERV	( $\mu$ m)	0.30-1.0	1.0-3.0	3.0-10	Airflow Rate (CFM)	[val 1]	[val 2]	[val 3]	[val 4]	[val 5]	*Max Rated Airflow	[value]	PSE (%)	[value]	[value]	[value]	Initial Resistance (IWC)	[value]	[value]	[value]	[value]	[value]		
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3.1	<p>HVI has submitted multiple comments to this docket requesting that the draft language be modified to clarify that the scope of CEC’s proposed regulatory language excludes air filters that serve residential ventilation systems. This interpretation aligns with the original scope of the proposed regulatory language, docketed on March 24, and has been confirmed in consultation with CEC staff.</p> <p>HVI appreciates that CEC has not implemented the suggested modifications to the draft language, based on restrictions to the scope of the rulemaking and based on the suggested language being “redundant.” Understanding that CEC believes the existing language to be clear in this regard, HVI requests that, within CEC’s public comments and responses document that will accompany this rulemaking, CEC provide responses to the following questions:</p> <ol style="list-style-type: none"> <li>1. What is meant by “ducted system,” as referenced in the definition of air filter (e.g., is it “ducted system” as defined in Section 1602(c) of Title 20)?</li> <li>2. Are filters that serve residential ventilation systems (i.e., systems certified by HVI and referenced by Title 24 through reference to ASHRAE 62.2) excluded from the scope of this rulemaking?</li> </ol>	<p>HVI's comment reflects a concern that the regulations do not sufficiently differentiate between two types of systems: residential <i>ducted</i> systems, as defined by section 1602(c), and residential <i>ventilation</i> systems. As written, the proposed regulation only affects filters used in residential <i>ducted</i> systems. It does not affect residential <i>ventilation</i> systems.</p> <p>The term "residential ducted systems" is an industry term of art that's well-understood within the industry and no other entity has expressed concern about possible confusion. As the term is known, it refers to a system generally with a single air inlet filter that goes to a Heating, Ventilation, and Air Conditioning (HVAC) unit which then distributes air through</p>																								

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		<p>permanently installed ducts into various rooms.</p> <p>By contrast, the term “residential ventilation system”, such as those required by Title 24 or ASHRAE 62.2, is an industry term of art that refers to systems that do not recirculate and condition air <i>within</i> a residence, but rather that achieve energy-efficient mechanical ventilation by exchanging air <i>with the outside environment</i>. This includes systems such as Energy Recovery Ventilators (ERVs), which are a type of residential ventilation system that essentially brings in fresh air, pulls out waste air, and performs a heat exchange between the two to keep the air cool during summer and warm during winter.</p> <p>Staff understands that HVI has raised concerns about whether air filters used in residential <i>ventilation</i> systems are covered by this rulemaking. As discussed above, the scope of this rulemaking is explicitly limited to residential ducted systems by existing language, and therefore no additional change is necessary.</p> <p>Note that the definition of an “air filter” is explicitly limited to products</p>

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		<p>“designed for installation in residential ducted systems,” and explicitly excludes products designed and sold exclusively for installation in products other than residential ducted systems. Therefore, this regulation does not concern air filters designed and sold for use in residential <i>ventilation</i> systems.</p> <p>Residential <i>ducted</i> systems are defined in a way that they <i>only</i> include systems that are connected to federally-regulated HVAC systems such as air conditioners, furnaces, or heat pumps. By CEC's definition, residential ducted systems do not include other systems used for ventilation if they incidentally have ducts, such as ERVs, in residential ventilation systems.</p> <p>These ventilation systems generally do not use ducted systems as that term is commonly understood in the industry and defined in section 1602(c); therefore, air filters for these systems would not fall within the scope of these regulations. We hope this clears up any remaining confusion.</p>

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4.1	AAER-2020-02 Mailing not received pursuant to 1 CCR 44 I did not receive the required mailing.	The mailing statement is added to the final rulemaking package provided to OAL. The mailing statement is available upon final approval by OAL.