

DOCKETED

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Joint Comments Air Filters NOPA

Additional submitted attachment is included below.



*Pacific Gas and
Electric Company*®



SOUTHERN CALIFORNIA
EDISON®
Energy for What's Ahead®

May 6, 2022

Mr. Alejandro Galdamez
Efficiency Division / Appliances Office
California Energy Commission
715 P Street
Sacramento, CA 95814

Docket Number: 20-AAER-02
Project Title: Air Filters

Dear Mr. Galdamez,

This letter comprises the comments of the Pacific Gas and Electric Company (PG&E), San Diego Gas and Electric (SDG&E), and Southern California Edison (SCE) in response to the California Energy Commission's (CEC) Notice of Proposed Action (NOPA) issued on March 24, 2022.

The signatories of this letter, collectively referred to herein as the California Investor-Owned Utilities (CA IOUs), represent some of the largest utility companies in the Western U.S., serving over 32 million customers. As energy companies, we understand the potential of appliance efficiency standards to cut costs and reduce consumption while maintaining or increasing consumer utility of products. We have a responsibility to our customers to advocate for standards that accurately reflect the climate and conditions of our respective service areas.

The CA IOUs appreciate the opportunity to comment on this NOPA. We offer the following comments in support of CEC's efforts:

- 1. We recommend CEC finalize the Title 20 proposed revisions on testing, certification and marking requirements for air filters.**

We thank CEC staff for working through the complexities of regulating air filters over the years to ensure benefits of this regulation to California consumers. We recommend CEC finalize the proposed revisions at the CEC business meeting scheduled on July 13, 2022 and look forward to implementation of the proposed compliance date of December 1, 2022.

2. We suggest modifications to the proposed regulatory language to clarify the scope of this rulemaking.

The Proposed Regulatory Language docketed by CEC1 defines “Air Filter” as “an air-cleaning device used for removing particulate matter from the air and designed for installation in residential ducted forced-air heating or cooling systems.” We suggest the following changes to the Regulatory Language:

- Include a definition for “Electronic Air Cleaner” based on the description of Group RII Air Cleaners in AHRI Standard 680-2017 “Performance Rating of Residential Air Filter Equipment”. We suggest the following definition: “Equipment that uses high voltage electrostatic principles to collect particulate matter. These Air Filters may be of single-stage or multi-stage configuration. Part or all of the charging and/or collecting sections may be manually cleanable, automatically cleanable, or disposable. This equipment has a power supply.”
- Modify the definition of “Air Filter” as follows:
 - Exclude air filtering media sold as rolls i.e. not encased in a frame.²
 - Clarify that the definition excludes “Electronic Air Cleaners.”³
 - Clarify that Air Filters included in federally regulated products are in scope of the rule.
 - Substitute the phrase “designed for installation in residential ducted forced-air heating or cooling systems” in the proposed definition of Air Filters with a technical characteristic that can be used to determine if products are within scope of the rule when they are not clearly marked as intended for the residential market. We anticipate that this change would simplify enforcement. We suggest including Air Filters with air filtering media encased in a frame with a nominal depth no greater than 6.0 inches.

The following suggested definition for “Air Filter” (suggested text is underlined, suggested deletions are struck out) addresses the changes listed above: “~~an~~ a disposable or reusable air cleaning device with air filtering media encased in a frame with a nominal depth no greater than 6.0 inches that is used for removing particulate matter from the air and designed for installation in residential ducted forced-air heating or cooling systems. Air Filters sold as replacement products as well as embedded in consumer products are included. Electronic Air Cleaners are excluded.”

We also suggest adding date of manufacture date to the Air Filter Market requirement shown in Tables Z-1 and Z-2 of NOPA to facilitate enforcement of the compliance date of this rule.

¹ TN#: 242443 in Docket #: 20-AAER-02

² Example of air filtering media sold as rolls: https://www.amazon.com/Aqua-Flo-Furnace-Preimum-Washable-Filter/dp/B074KVI1VGV/ref=sr_1_89?crd=UIY7TY73413Q&keywords=carbon%2Bfurnace%2Bprefilter&qid=1651257895&s_prefix=carbon%2Bfurnace%2Bprefilter%2Caps%2C102&sr=8-89&th=1

³ In the CEC Final Staff Report, CEC-400-2021-014, the 4th paragraph of Chapter 3 “Product Description” of, “Update to Testing and Marking for Air Filters”, published January 2021 includes a description of air filters based on electrostatic filtration. The paragraph titled “Test Methods” in Chapter 4 “Regulatory Approaches” states that “Electronic air filters must use AHRI 680 because those filters are incompatible with the conductive loading dust used in ASHRAE 52.2.”

3. We respectfully request that CEC consider specifying an initial resistance pressure difference more representative of filter face velocities in existing residential systems.

One of the most significant benefits of the proposed testing, certification and marking requirements for air filters is that they will provide consumers with the necessary information to replace their filters with an air filter with similar performance as originally specified by the mechanical design engineer. In our experience, an initial resistance of 0.1 inches water column (in. w.c.) is not representative of the initial resistance found in the vast majority of existing California residences. Typical residential HVAC systems are sized for a face velocity of 300 feet per minute (fpm) or more. We note that California's 2019 Title 24 Building Energy Efficiency Standards has established a requirement for a pressure drop in new residential construction of not more than 0.1 in. w.c., which is based on a face velocity of 150 fpm. Based on this requirement, we estimate that existing systems designed for a face velocity of 300 fpm will have a pressure drop on the order of 0.2 in. w.c.

An air flow listed on a filter rated at an initial resistance of 0.1 in. w.c. will be much lower than the actual air flow of the system that the filter is intended to serve. For example, a 24 in. by 24 in. filter applied on a 1,200 cubic feet per minute (cfm) system at 0.2 in. w.c. will be marked with an air flow of 600 cfm at 0.1 in. w.c. When consumers with knowledge of the airflow capacity of their system search for replacement filters, they may believe that the air filter intended for their system is not usable. Instead, they may search for a filter rated at a higher air flow.

We respectfully request that CEC consider specifying an initial pressure difference that is more representative of filter face velocities in existing residential HVAC systems.

4. We note that the U.S. Department of Energy (DOE) has proposed to define air cleaners as a consumer product. We recommend CEC participate in the DOE rulemaking.

On January 25, 2022, the U.S. Department of Energy (DOE) issued a request for information (January 2022 RFI)⁴ proposing to define a consumer air cleaner as a consumer product that:

- (1) Is a self-contained, mechanically encased assembly;
- (2) Is powered by single-phase electric current;
- (3) Removes, destroys, or deactivates particulates and microorganisms from the air; and
- (4) Excludes products that destroy or deactivate particulates and microorganisms solely by means of ultraviolet ("UV") light without a fan for air circulation; and
- (5) Excludes central air conditioners, room air conditioners, portable air conditioners, dehumidifiers, and furnaces as defined in 10 CFR 430.2.

While CEC's testing, certification and marking requirements for air filters are limited to metrics of filtration efficacy, such as Minimum Efficiency Reporting Value (MERV) and Particle Size Efficiency (PSE), and do not include requirements related to energy use, the proposed consumer air cleaner definition in DOE's January 2022 RFI potentially overlaps

⁴ 87 FR 3702

with the proposed definition for Air Filter in this NOPA, unless Electronic Air Cleaners, as described in Comment 2, are excluded. We recommend that CEC track the DOE rulemaking to determine if any gaps in scope are created between CEC's Air Filters regulation and DOE's air cleaner regulation, which can be addressed in a follow-on rulemaking by CEC.

In conclusion, we would like to reiterate our appreciation and support for CEC's latest actions summarized in this NOPA on air filters. We hope our comments provide helpful insight and we thank CEC for the opportunity to be involved in this process.

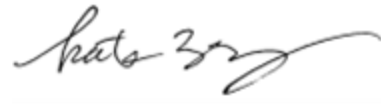
Sincerely,



Patrick Eilert
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