

DOCKETED

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Comment Received From: Mike Moore

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Coordinating Proposed HVI Verification for Range Hoods with Title 20

Additional submitted attachment is included below.



May 26, 2017

California Energy Commission
1516 Ninth Street, MS-34
Sacramento, CA 95814

Re: Docket 17-BSTD-01, Proposed HVI Verification for Range Hoods, Coordination with Title 20

Dear CEC Staff and CASE Initiative Team:

This comment recommends coordination with Title 20 with respect to the CASE team's proposed requirements for field verification of minimum performance standards for domestic kitchen exhaust equipment.

To verify that dwelling unit exhaust fans are manufactured to meet minimum flow rate requirements, ASHRAE 62.2, Title 24, and the 2018 IRC and IMC all require that exhaust fans serving single dwelling units be listed and labeled either in accordance with ANSI/AMCA 210 - ANSI/ASHRAE 51 or in accordance with HVI 916, which is based on ANSI/AMCA 210 – ANSI/ASHRAE 51.

ASHRAE 62.2 ventilation requirements are currently applicable to low rise dwelling units in California, and CEC has proposed to extend the same requirements to high rise dwelling units in this code maintenance cycle. Assuming that this is achieved, all residential kitchen exhaust will need to comply with ASHRAE 62.2's minimum flow rate requirements (in accordance with HVI 916) as well as ASHRAE 62.2's maximum sone requirements (in accordance with HVI 915).

In California, the Title 24 minimum flow rate and maximum sone requirements apply not only to new installations but also to equipment installed as replacements, additions, and alterations. To enforce these code requirements, CEC is considering requiring HERS raters to field verify kitchen exhaust equipment's minimum flow rate and maximum sone performance as listed by HVI. This will greatly improve compliance in new construction. However, such an inspection during replacements, additions, and alterations can be cost prohibitive. To increase compliance in existing dwelling units, California should also regulate manufacturer-sourced residential kitchen exhaust equipment provided for sale in the state; California's Title 20 (Appliance Efficiency Regulations) is the established mechanism for accomplishing this. So, to coordinate code and standard compliance for residential kitchen exhaust equipment across new and existing buildings, California should update Title 20 to echo the current and proposed requirements in Title 24.

Following are two recommended changes to Title 20 to ensure that kitchen exhaust equipment provided for sale in California is compliant with current and proposed Title 24 requirements:

1. Alter the definition of "Residential Exhaust Fan" within the AER to include microwave hood combination units alongside "bathroom, kitchen, or utility room ceiling or wall-mounted exhaust fans." MHC units are currently exempted from any Title 20 requirements but are not exempted from Title 24/ASHRAE 62.2 requirements and should not get a free pass in terms of minimum performance standards that are intended to protect California homeowners and tenants from some of the most harmful dwelling unit pollutants:

“Residential exhaust fan” means a permanently installed bathroom, kitchen, or utility room ceiling or wall-mounted exhaust fan, including ~~“Residential exhaust fan” does not include the~~ exhaust fans included in microwave/oven hood combination units.

2. Expand Title 20 Section 1604(d) Table D-1 to include the latest versions of HVI 915, Loudness Testing and Rating Procedure, and HVI 916, Air Flow Test Procedure, as required by Title 24/ASHRAE 62.2 for new installations, replacements, additions, and alterations in California:

Appliance	Test Method
Spot Air Conditioners	ANSI/ASHRAE 128-2001
Ceiling Fans, Except Low-Profile Ceiling Fans	10 C.F.R. section 430.23(w) (Appendix U to Subpart B of part 430)
Ceiling Fan Light Kits	10 C.F.R. section 430.23(x) (Appendix V to Subpart B of part 430)
Evaporative Coolers	ANSI/ASHRAE 133-2008 for packaged direct evaporative coolers and packaged indirect/direct evaporative coolers; ANSI/ASHRAE 143-2007 for packaged indirect evaporative coolers
Whole House Fans	HVI-916, tested with manufacturer-provided louvers in place (2009)
Dehumidifiers	10 C.F.R. section 430.23(z) (Appendix X to Subpart B of part 430, active mode portion only)
Residential Exhaust Fans	HVI-916 (2009-2015) and HVI-915 (2015)
Residential Furnace Fans	10 C.F.R. section 430.23(cc) (Appendix AA to Subpart B of part 430)

3. Amend Title 20 Section 1605.3(d)(3) to align with Title 24’s sound rating requirements for residential exhaust fans. Such a change should also be considered for flow rate requirements, though this will be more difficult to achieve since minimum flow rate requirements vary as a function of intermittent or continuous settings:

(3) There are no energy efficiency standards or energy design standards for spot air conditioners, evaporative coolers, whole house fans, ~~or residential exhaust fans. There are no efficiency standards for ceiling fans, or~~ and ceiling fan light kits.

(4) Energy Efficiency Standard for Residential Exhaust Fans. Residential exhaust fan flow shall be tested, listed, and rated for air flow in accordance with HVI 915. Residential exhaust fans shall be tested, listed, and rated for sound at a maximum of 3 sones, as tested in accordance with HVI 916.

Exceptions:

1. Exhaust fans that are intended for installation outside habitable spaces, bathrooms, toilet rooms, utility rooms, and hallways, where manufacturer’s installation instructions require at least 4 ft of ductwork between the fan and the intake grille shall be exempt from the requirement to comply with HVI 916.
2. Kitchen exhaust fans tested, listed, and rated for sound at a maximum of 3 sones in accordance with HVI 916 at one or more airflow settings greater than or equal to 100 cfm need not comply with the sone rating requirement at other speed settings.

Thank you for the opportunity to comment.

Sincerely,

Mike Moore

Mike Moore, P.E.
ASHRAE 62.2 Indoor Air Quality Subcommittee Chair