

DOCKETED

Docket Number:	19-BSTD-03
Project Title:	2022 Energy Code Pre-Rulemaking
TN #:	235649
Document Title:	Ventamatic, Ltd. Comments - Kitchen Ventilation
Description:	N/A
Filer:	System
Organization:	Ventamatic, Ltd.
Submitter Role:	Public
Submission Date:	11/17/2020 2:40:56 PM
Docketed Date:	11/17/2020

*Comment Received From: Ventamatic, Ltd.
Submitted On: 11/17/2020
Docket Number: 19-BSTD-03*

Kitchen Ventilation

Additional submitted attachment is included below.

17 November 2020
To: Building Standards Office
California Energy Commission
1516 Ninth Street
Sacramento, California 95814

Re: Docket No. 19-BSTD-03, 2022 Energy Code Pre-Rulemaking; Response to CEC's November 3rd Proposal to Establish Minimum Capture Efficiency (CE) for Range Hoods

Dear CEC Staff:

I was pleased to participate in the Nov 3, 2020 CEC Energy Code Pre-Rulemaking. I have nearly 40 years of experience with residential and commercial ventilation, I am a licensed PE in PA for 30 years now, and share the CEC's objective of providing healthier homes. Regarding Kitchen ventilation and rangehood capture efficiency I support the efforts of CEC, AHRAE, and HVI in developing appropriate standards and guidelines. I have participated in the committees that developed Nominal Installed Airflow (NIA) as well as capture efficiency standards ASTM E 3087, and HVI 917.

In response to CEC's staff questions presented within the November 3rd workshop I would like to encourage CEC Staff to think broader and consider an alternate solution, or at least consider an alternate path to compliance. The problem doesn't have to be solved exclusively at the rangehood. Obviously you know capture efficiency is zero if the hood isn't turned on, if it turns on automatically it will be disconnected, and the expense of quiet high capture efficiency rangehoods is likely to be high initially. We surely aren't considering a range hood for the cook top, oven, microwave, toaster etc. If we consider the problem to be cooking emissions, the problem can be alternately defined as kitchen ventilation.

If that is the case, an alternative would be to require the already required ASHRAE62.2 whole dwelling ventilation fan to be located in the kitchen (beyond the cooking cone) and run continuously. In this configuration the fan would be required to be less than 1.0 sone, and would setup the kitchen as negative pressure zone so pollutants would be less likely to diffuse through the residence. The whole dwelling ventilation fan is already a requirement so there is no increase in cost. Bath fans are already available as high as 300 cfm at less than 1 sone, so no matter what reasonable airflow is deemed appropriate (if higher than required by 62.2) the fan would be operating quietly. Additionally, products are already available that operate at two speeds, so the fan could be triggered to change to a higher speed by a motion sensor, a humidity sensor, PM_{2.5}, etc. In climate zones that don't require an ERV/HRV you can require a filtered supply fan (MERV13 or HEPA) for balanced ventilation and double the benefit.

This alternative option could be easily implemented with the next code publication. The CEC would get most, if not all the health benefits without waiting for the rangehood industry to develop new more effective designs.

Respectfully,

John C. Fox, P.E.
Vice President Engineering
Ventamatic, Ltd.