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*Comment Received From: Sierra Club California  
Submitted On: 11/17/2020  
Docket Number: 19-BSTD-03*

**Sierra Club CA comments on 2022 Energy Code Workshop on  
November 3, 2020**

*Additional submitted attachment is included below.*



November 17, 2020

*Via online submission*

California Energy Commission  
Dockets Office, MS-4  
1516 9th Street  
Sacramento, CA 95814-5512

**Re: Sierra Club Comments on Proposed 2022 Energy Code - Ventilation for Indoor Air Quality and Reduced Infiltration Proposals (Docket No. 19-BSTD-03)**

Dear Commissioner and Staff:

Sierra Club, on behalf of our over 500,000 members and supporters in California, appreciates the opportunity to comment on the California Energy Commission's ("CEC") 2022 Energy Code Workshop on Ventilation for Indoor Air Quality and Reduced Infiltration Proposals that took place on November 3, 2020.

We appreciate the work the CEC is doing to improve indoor air quality and reduce the health impacts caused by the pollutants emitted from gas stoves. Effective removal of the pollutants generated by gas appliances is a core element of health and safety in our homes and buildings. Therefore, we support the CEC's proposed ventilation standards that require higher capture efficiency range hoods over gas stoves. While these more stringent standards are a big improvement to protect indoor air quality, there is still more to be done to truly protect human health.

### **I. Support CEC's proposal for stronger ventilation standards over gas stoves**

We applaud the CEC for listening to the health evidence and recognizing that the exposure to nitrogen dioxide (NO<sub>2</sub>) pollution from gas stoves causes short-term and long-term health problems. As stated in our comments submitted on October 16, 2020, a clear scientific consensus shows that NO<sub>2</sub> pollution, such as that released by gas stoves, causes respiratory harm, especially for children. The relationship between gas cooking and childhood asthma is well-documented in peer-reviewed literature and federal agencies have contributed to this growing body of research.<sup>1</sup>

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<sup>1</sup> Weiwei Lin et al., Meta-Analysis of the Effects of Indoor Nitrogen Dioxide and Gas Cooking on Asthma and Wheeze in Children, 42 INT'L J. OF EPIDEMIOLOGY 1724 (2013), available at <https://doi.org/10.1093/ije/dyt150>; U.S. EPA. Integrated Science Assessment (ISA) For Oxides of Nitrogen – Health Criteria (Final Report, 2016). U.S. Environmental Protection Agency, Washington, DC, EPA/600/R-15/068, 2016, p. lxxxvii, 5-247.

Increases in indoor air pollutant concentrations can be driven by insufficient ventilation. Therefore, ventilation standards must be aligned with the most up-to-date and most protective indoor air quality guidelines.

During the workshop, comments were made questioning the CEC's responsibility and authority to consider indoor air pollution. These comments were inaccurate. The CEC has a statutory mandate to address indoor air quality when developing its building energy efficiency standards. Under Cal. Pub. Res. Code § 25402.8, "When assessing new building standards for residential and nonresidential buildings relating to the conservation of energy, the commission shall include in its deliberations the impact that those standards would have on indoor air pollution problems." Therefore, we support the CEC's responses to those comments that the CEC drafted the proposed ventilation standards based on their responsibility to protect indoor air quality.

Although more stringent ventilation standards for gas stoves will help reduce indoor air pollution, this strategy alone is not enough. Therefore, the CEC has a responsibility to go beyond updating standards for ventilation.

## **II. CEC can eliminate harmful indoor air pollutants by adopting an all-electric baseline**

We appreciate the CEC staff's proposal for more stringent ventilation standards for gas stoves, but ventilation alone will not protect Californians. To ensure that Californians will not be breathing unhealthy levels of NO<sub>2</sub> indoors, the CEC can reduce indoor sources of NO<sub>2</sub> pollution by adopting a single all-electric baseline in the 2022 code cycle.

Less than 40% of Californians use their range hoods when cooking. Surveys have shown that people do not use range hoods because they do not think they are necessary or they are too noisy. Therefore, the cleanest, and most protective option for public health, would be to transition all gas stoves to the efficient, electric alternative.

Building electrification is the solution to not only reducing GHG emissions but also protecting the health of Californians, especially the most vulnerable and sensitive populations. Phasing out polluting gas appliances to highly efficient electric alternatives for heating, cooking, and cooking will lower NO<sub>x</sub> pollution, prevent 350 premature deaths annually, and produce \$3.5 billion in annual health benefits.

Therefore, the best option for protecting Californians from exposure to indoor air pollution from gas appliances must be a combination of replacing gas stoves with electric alternatives and improving the efficacy of ventilation technology. We need both in order to reduce exposure and protect public health.

## **III. Conclusion**

In sum, Sierra Club California thanks the CEC for adhering to the clear evidence and developing more protective ventilation standards that reflect the latest science. In addition, we strongly urge

the CEC to design stronger building electrification standards for the 2022 Building Code. Designed building standards that encourage electrification will ensure our homes and communities have safe indoor air quality.

Sincerely,

A handwritten signature in black ink, appearing to read "Lauren Cullum", with a long horizontal flourish extending to the right.

Lauren Cullum  
Policy Advocate  
Sierra Club California