

July 31, 2020

*Via online submission*

California Energy Commission  
Docket Office, MS-4  
1516 Ninth Street  
Sacramento, CA 95814

**Re: Environmental Organizations' Support for an All-Electric Baseline in the 2022 Building Energy Efficiency Standards (Docket No. 19-BSTD-03)**

Dear Commissioners and Staff:

On behalf of the undersigned organizations, we appreciate the opportunity to comment on the California Energy Commission's ("CEC") 2022 Building Energy Efficiency Standards. With this code update, the CEC has the opportunity to ensure that the homes we build this decade are healthy, affordable, and comfortable—and that they prepare Californians to be resilient to the challenges of climate change, not contribute to it. **We therefore urge the CEC to set building standards that require efficient, all-electric new construction, by adopting an all-electric baseline for all building types in the 2022 code.**

As our organizations deeply understand, the climate crisis is real and growing in severity every day. The built environment makes a significant contribution to climate pollution: Gas appliances like furnaces and water heaters in California's homes and buildings are responsible for over 50 million tons of greenhouse gas pollution annually.<sup>1</sup> In percentage terms, California buildings were responsible for more than 26% of statewide greenhouse gas emissions in 2016.<sup>2</sup> Study after study has demonstrated that there is no reasonable path to meeting our climate goals while continuing to burn gas in buildings.<sup>3</sup> The CEC must act now because the buildings

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<sup>1</sup> See California Air Resources Board, GHG Current California Emission Inventory Data, <https://ww2.arb.ca.gov/ghg-inventory-data> (showing that the commercial and residential sectors emitted 53 million metric tons in 2017).

<sup>2</sup> Building Decarbonization Coalition, *A Roadmap to Decarbonize California's Buildings* (2019), <http://www.buildingdecarb.org/resources/a-roadmap-to-decarbonize-californias-buildings>. Emissions from buildings include fuel combustion, methane, refrigerants, and onsite electricity generation.

<sup>3</sup> See, e.g., CEC, 2018 Integrated Energy Policy Report Update, [https://ww2.energy.ca.gov/2018\\_energy policy/](https://ww2.energy.ca.gov/2018_energy policy/); CEC, Natural Gas Distribution in California's Low-Carbon Future, (Oct. 2019) (prepared by Energy & Env'tl. Economics ("E3") and UC Irvine), <https://ww2.energy.ca.gov/2019publications/CEC-500-2019-055/CEC-500-2019-055-D.pdf>; E3, Draft Results: Future of Natural Gas Distribution in California (June 26, 2019) (commissioned by CEC), <https://www.ethree.com/at-cec-e3-highlights-needfor-gas-transition-strategy-in-california/>; E3, Deep Decarbonization in a High Renewables

constructed under this code cycle will still stand—and consume energy—for many decades, until long after the time when the use of gas must drastically decline in order to meet state climate change mitigation goals, and long after the state’s 2045 deadline to achieve carbon neutrality.

Delaying the electrification of new construction places new and unnecessary costs on Californians, while adding to the harm caused by burning fossil fuels like gas. Recent analysis by Rocky Mountain Institute concludes that delaying the move to all-electric new construction until the next code cycle would result in an additional three million tons of carbon emissions by 2030—the equivalent of putting 650,000 more cars on the road for a year.<sup>4</sup> The delay would also mean over \$1 billion spend on new gas connection infrastructure that will be obsolete as California eliminates statewide greenhouse gas emissions over the next 25 years. Worse, the ratepayers at risk of shouldering these unnecessary costs will likely be low-income households and renters, who face the largest barriers to electrifying.

All-electric construction also improves air quality and public health. Californians breathe the dirtiest air in the nation. According to the American Lung Association's State of the Air Report, seven of the eight most polluted regions in the country are in California.<sup>5</sup> A meta-analysis studying over 40 years of studies on the respiratory impacts of indoor nitrogen dioxide on children found that children who live in a home with a gas stove are 42% more likely to experience asthma symptoms.<sup>6</sup> These impacts are not felt equally: the consequences of nitrogen dioxide pollution are much worse in homes with old or ineffective range hoods and in smaller homes or apartments. If all residential gas appliances in California were replaced with clean, electric alternatives, the reduction in outdoor air pollution alone would significantly improve health and well-being—with a total health savings of \$3.5 billion each year.<sup>7</sup> The housing built this decade should help solve that problem—not exacerbate it.

California has set stringent and urgently needed climate protection goals, but these targets are meaningless if state agencies do not act within their spheres of authority to bring about needed transformations of how we use energy. By establishing an all-electric baseline for all building types, the CEC will ensure that any new homes that are built with gas after 2022 are

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Future (June 2018) (commissioned by CEC),

[https://www.ethree.com/wpcontent/uploads/2018/06/Deep\\_Decarbonization\\_in\\_a\\_High\\_Renewables\\_Future\\_CEC-500-2018-012-1.pdf](https://www.ethree.com/wpcontent/uploads/2018/06/Deep_Decarbonization_in_a_High_Renewables_Future_CEC-500-2018-012-1.pdf).

<sup>4</sup> Denise Grab and Amar Shah, *California Can’t Wait on an All-Electric Building Code* (July 28, 2020), <https://rmi.org/california-cant-wait-on-all-electric-new-building-code/>.

<sup>5</sup> See American Lung Association, State of the Air Report, Most Polluted Cities List, <http://www.stateoftheair.org/city-rankings/most-polluted-cities.html>.

<sup>6</sup> Weiwei Lin *et al.*, *Meta-analysis of the effects of indoor nitrogen dioxide and gas cooking on asthma and wheeze in children*, 42(6) *Int. J. Epidemiol.* 1724 (2013). <https://pubmed.ncbi.nlm.nih.gov/23962958/>

<sup>7</sup> UCLA Fielding School of Public Health, *Effects of Residential Gas Appliances on Indoor and Outdoor Air Quality and Public Health in California* (April 2020) (commissioned by Sierra Club), <https://coeh.ph.ucla.edu/effects-residential-gas-appliances-indoor-and-outdoor-air-quality-and-public-health-california>.

held to the same rigorous energy use and greenhouse gas emission limits as the efficient electric alternative.

Fossil fuel-free homes and buildings are already becoming standard in California. In just 12 months, cities representing nearly 10% of the state's population have committed to all-electric new construction—with more cities joining all the time.<sup>8</sup> We urge the CEC to join these local leaders and get polluting fossil fuels out of California's buildings.

Sincerely,

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<sup>8</sup> Matt Gough, *California Cities Lead the Way to a Gas-Free Future* (March 27, 2020), available at <https://www.sierraclub.org/articles/2020/03/californias-cities-lead-way-gas-free-future> .