

**DOCKETED**

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*Comment Received From: Diane Bailey  
Submitted On: 12/23/2020  
Docket Number: 19-BSTD-03*

## **Support for 2022 Energy Code that Requires All-Electric New Construction**

Dear Commissioners and staff, please accept our comments on the 2022 Energy Code Pre-Rulemaking, Re: Docket No. 19-BSTD-03.

Thank you and happy holidays!  
-diane

*Additional submitted attachment is included below.*



### **The Campaign for Fossil Free Buildings in Silicon Valley**

350 Silicon Valley, Acterra, Bay Area for Clean Environment, Carbon Free Silicon Valley, Carbon Free Palo Alto, Carbon Free Mountain View, Citizens' Climate Lobby San Mateo County, Citizens Environmental Council of Burlingame, Clean Coalition, Climate Reality Project: Santa Clara County, Coltura, Cool Block, Earthy B, emeraldECO, Fossil Free Mid-Peninsula, GreenTown Los Altos, Kitchens of Life, Menlo Spark, Menlo Together, Mothers Out Front Silicon Valley, Pacifica Climate Committee, Peninsula Interfaith Climate Action, Project Green Home, Redwood Energy, SIDCO Homes, San Carlos Green, San Francisco Bay Physicians for Social Responsibility, Sierra Club Loma Prieta Chapter, Bay Area for Clean Environment, Securethefuture2100, Sustainable San Mateo County, Sustainable Silicon Valley, Sunnyvale Cool, Silicon Valley Youth Climate Action, and Silicon Valley Youth Climate Strike.

December 23, 2020

California Energy Commission  
Docket Office, MS-4  
Re: Docket No. 19-BSTD-03  
1516 Ninth Street  
Sacramento, CA 95814  
docket@energy.ca.gov

### **Re: Staff Workshop: 2022 Energy Code Pre-Rulemaking – December 8 Workshop Proposed 2022 Energy Code**

Dear Commissioners,

On behalf of the Campaign for Fossil Free Buildings in Silicon Valley ([FFBSV](#)), we would like to comment on the California Energy Commission's (CEC) 2022 Building Energy Efficiency Standards (Energy Code) proposal introduced at the December 8 workshop. We appreciate the CEC's efforts to set an all-electric baseline for heat pumps to encourage and accelerate the construction of zero-emission buildings.

**However, not only must the new energy code remove all barriers to electric buildings, it should require all-electric new construction across the board.** In fact, all-electric new construction is known to be cheaper, save money, improve public health, and constitute a critical response to the climate crisis that we are all living in.

FFBSV includes the 33 organizations listed above, working together to support an accelerated phase out of fossil fuels in buildings. A rapid transition away from fossil fuel use is critical to avoid the very worst and irreversible impacts of climate change. Preventing the use of fossil fuels, including natural gas, in new construction will create more affordable, cleaner, healthier, and more resilient housing and buildings for communities throughout California.

The resilience of all-electric new construction is paramount as we face longer and more destructive wildfire seasons and increasing Public Safety Power Shutdowns. Not only are new gas appliances

inoperable during grid outages (for instance, pilot lights are now prohibited for new appliances for safety reasons), gas service also takes far longer to restore than electricity after an emergency outage. In addition, fossil gas use in homes and buildings has become one of the largest sources of carbon emissions in California, threatening the stability of our climate.

### ***Building Electrification is an Urgent Climate Action***

Wildfires have burned over 4 million acres in California in 2020 with five of the largest wildfires on record this year, costing over \$18 billion.<sup>1</sup> ***There is no doubt that we're already living with the dangerous consequences of climate change including a five-fold increase of wildfires.***<sup>2</sup> Communities throughout the state also face severe flooding, more intense heat waves and extreme weather disruptions. We cannot put off action any longer to cut methane and carbon, and transition off of fossil fuels. In 2018, the Intergovernmental Panel on Climate Change (IPCC) concluded that ***we must dramatically reduce Greenhouse Gas (GHG) emissions by 2030 through rapid, far-reaching, and unprecedented measures.***<sup>3</sup> Since that report was issued, we have seen greater impacts from climate change than anticipated.<sup>4</sup> Current trends for carbon emissions and lack of action show that we are headed to *twice* the rate of warming that the Paris Climate Accord sought to contain.

In California, 40 municipalities have adopted all-electric requirements for new construction to avoid new fossil gas use because, in addition to the urgent climate action needed, there are many benefits to community health, safety, and affordability, including:

- **Economic:** All-electric homes are less expensive to build (saving roughly \$3,000 or more for each new apartment unit, for example). In all of the buildings analyzed by the 2019 Nonresidential New Construction Reach Code Cost Effectiveness Study, all-electric versions cost less to construct than their mixed-fuel counterparts. **All-Electric buildings are also more efficient.** For example, according to the California Energy Commission, a modern high efficiency heat pump electric water heater (available now at major retailers) costs roughly one third less on utility bills to operate than the most efficient gas water heater.<sup>5</sup> In addition, all-electric buildings include air conditioning combined with heating, resulting in less equipment, reduced maintenance costs and greater climate resilience.
- **Public Safety:** Fossil gas is highly flammable. In the past ten years, 9,000 gas explosions in the U.S. have killed over 500 people, and gas leaks have displaced and sickened thousands of people.<sup>6</sup> Fossil Gas also caused half the fires after two major California earthquakes.<sup>7</sup>
- **Public Health:** Gas stoves release smog-forming compounds such as nitrogen dioxide, unburnt hydrocarbons and carbon monoxide pollution that doubles risks for heart and lung disease and triples the use of asthma medications.<sup>8</sup> ***In fact, studies have shown that children living in homes using gas for cooking have a more than 40% higher risk of having asthma.***<sup>9</sup> Further, improperly vented gas appliances lead to carbon monoxide poisoning that results in thousands of emergency room visits and several hundred deaths every year.<sup>10</sup>
- **Construction Time Savings:** All-electric buildings are generally faster to design, permit, and build. The code is easier for building and planning staff to apply, and it is also easier for everyone to understand.

- **Resilience:** All-electric code today prevents a complex, costly and likely inevitable switch to electricity in the future, since gas prices are expected to rise sharply, and California is planning to eventually end gas distribution. PG&E has asked for a 24% gas rate increase and SoCalGas, a 42% increase, over the next couple years, and this is just the beginning.

The recent national election was the first to feature the climate crisis as a pivotal issue, making coordinated federal action on climate a new possibility.<sup>ix</sup> However, achieving meaningful progress will not be easy or timely. California must continue to be a leader on climate policy and community resilience, laying a strong foundation for broader action. **Please continue California's legacy of climate leadership with an all-electric building code in 2022. We urge you to adopt the policy in this code cycle, as will save money and energy, and is critically needed in this true climate crisis.** Thank you for considering our comments.

Sincerely,

Robert M. Gould, MD, President, San Francisco Bay Physicians for Social Responsibility

Kathleen Goforth, U.S. EPA (retired), Climate Reality Project, and Citizens' Climate Lobby

Bruce Naegel, Carbon Free Silicon Valley, Sustainable Silicon Valley

Kristel Wickham, Sunnyvale Cool

Ann Edminster, Design AVEnues LLC and Climate Reality Project Sonoma-Marin Building Electrification Squad

[Jennifer Thompson](#), Sustainable Silicon Valley

Bruce Hodge, Founder, Carbon Free Palo Alto

Suzanne Emerson, San Carlos Green

Justine Burt, Founder, Appraccel

Sven Thesen, Founder, ProjectGreenHome.org

Jeralyn Moran, Co-Chair, Green Sanctuary Committee, Unitarian Universalist Congregation of Palo Alto

Diane Bailey, Executive Director, Menlo Spark

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<sup>1</sup> [https://www.fire.ca.gov/media/11416/top20\\_acres.pdf](https://www.fire.ca.gov/media/11416/top20_acres.pdf)

“An Independent Review of Scientific and Technical Information, California Council on Science and Technology” published in Oct. 2020 found that: “...federal and State firefighting expenditures exceed \$3 billion per year; utility wildfire prevention and mitigation costs are approximately \$5 billion per year; whereas the insured property losses in three out of the past four years have exceeded \$10 billion per year. Evidence suggests health impacts due to wildfire smoke represent a substantial portion of the total costs to the State, and that there are impacts from the interaction of wildfire smoke and COVID-19. Yet these additional billions of dollars in costs due to wildfire smoke impacts are not consistently tracked or factored into policy planning.” <https://ccst.us/wp-content/uploads/The-Costs-of-Wildfire-in-California-One-Page.pdf>

<sup>2</sup> <https://www.climatesignals.org/node/10048>

<sup>3</sup> <https://www.ipcc.ch/sr15/> Also see: WRI blog for a roundup of the landmark reports of 2018 & a comparison of climate impacts in a 1.5 deg.C v. 2 deg.C world: <https://www.wri.org/blog/2018/12/2018-year-climate-extremes>

<sup>4</sup> For example, the 2019-2020 Australian wildfire that destroyed over 10,000 buildings and killed at least 34 people, and a massive global bleaching event for coral reefs impacting hundreds of millions of low income people who rely on fisheries for their food or livelihoods.

See: A roundup on the latest global reports showing a worsened outlook than previously understood, including an estimated 3-5 degrees C of likely warming by the end of the century, [here](#):

[https://docs.google.com/document/d/1-LHZe9kFhLymXE7CaVZmgQTx8VEfbGKAVOSK\\_x4TcDo/edit?usp=sharing](https://docs.google.com/document/d/1-LHZe9kFhLymXE7CaVZmgQTx8VEfbGKAVOSK_x4TcDo/edit?usp=sharing)

This WRI blog discusses the state of international climate negotiations as of COP25 and what is required moving ahead:

<https://www.wri.org/blog/2019/12/cop25-what-we-needed-what-we-got-whats-next>

This NYT OpEd discusses why climate action is essential in the midst of the COVID-19 pandemic and how to integrate a climate response into the economic recovery required: <https://www.nytimes.com/2020/04/15/opinion/climate-change-covid-economy.html?smid=em-share>

<sup>5</sup> Rider, Ken, Email correspondence, ken.rider@energy.ca.gov. March 2020.

<sup>6</sup> Joseph, George. “30 Years of Oil and Gas Pipeline Accidents, Mapped.” Citylab. November 30, 2016

Sellers, F., Weintraub, K. and Wootson, C. (2018). “Thousands of residents still out of their homes after gas explosions trigger deadly chaos in Massachusetts.” Washington Post. [https://www.washingtonpost.com/national/thousands-of-residents-still-out-of-their-homes-after-gas-explosions-trigger-deadly-chaos-in-massachusetts/2018/09/14/802ff690-b830-11e8-94eb-3bd52dfe917b\\_story.html](https://www.washingtonpost.com/national/thousands-of-residents-still-out-of-their-homes-after-gas-explosions-trigger-deadly-chaos-in-massachusetts/2018/09/14/802ff690-b830-11e8-94eb-3bd52dfe917b_story.html)

<sup>7</sup> Los Angeles in 1994 and San Francisco in 1989, according to the California Seismic Safety Commission. (2002). “Improving Natural Gas Safety in Earthquakes.” SSC-02-03

Taylor, Ann. “The Northridge Earthquake: 20 Years Ago Today.” The Atlantic. January 17, 2014.

<sup>8</sup> Jarvis et al. (1996) “Evaluation of asthma prescription measures and health system performance based on emergency department utilization.” <https://www.ncbi.nlm.nih.gov/pubmed/8618483>

<sup>9</sup> Lin, W., Brunekreef, B. & Gehring, U. Meta-analysis of the effects of indoor nitrogen dioxide and gas cooking on asthma and wheeze in children. Int. J. Epidemiol. 42, 1724–1737 (2013).

[viii] USDN, Methane Math, [https://sfenvironment.org/sites/default/files/fliers/files/methane-math\\_natural-gas-report\\_final.pdf](https://sfenvironment.org/sites/default/files/fliers/files/methane-math_natural-gas-report_final.pdf)

<sup>10</sup> Fact Sheet: Why 2020 Will Be Remembered As a Climate Election, <https://evergreenaction.medium.com/fact-sheet-why-2020-will-be-remembered-as-a-climate-election-4c2860820f19>