

DOCKETED

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2022 Update to Title 24 comment letter from EBCE, PCE, SCP and SVCE

Additional submitted attachment is included below.



November 27, 2019

Commissioner Andrew McAllister
California Energy Commission
1516 9th St
Sacramento, CA 95814

Re: Comments on 2022 Update to Title 24, Part 6, the Building Energy Efficiency Standards

Dear Commissioner McAllister,

On behalf of East Bay Community Energy, Peninsula Clean Energy Authority, Silicon Valley Clean Energy and Sonoma Clean Power, we are writing to express strong support for the CEC's 2022 building code prioritizing decarbonization as its primary goal. The linkage between natural gas consumption and climate change is well documented and well understood. If California is to meet its 2030 and 2045 climate goals, policies that reduce and/or eliminate natural gas consumption are critical. In order to align the building sector with our counties' decarbonization goals, dozens of our member jurisdictions have already adopted or are considering all-electric reach codes, electric preferred reach codes, or natural gas bans¹. We expect this trend to continue with the majority of our cities adopting similar building decarbonization measures by 2022.

¹ Jurisdictions that have adopted or are considering an all-electric or electric preferred reach codes or a natural gas bans within our service territories include Albany, Belmont, Berkeley (adopted), Brisbane, Burlingame, Campbell, County of San Mateo, County of Santa Clara, Cupertino, East Palo Alto, Fremont, Hayward, Menlo Park (adopted), Monte Sereno, Morgan Hill, Mountain View (adopted), Los Altos, Los Altos Hills, Los Gatos, Milpitas (adopted), Oakland, Pacifica (adopted), Redwood City, San Bruno, San Mateo (adopted), Santa Rosa (adopted), Saratoga, Sunnyvale, and Windsor (adopted).

A statewide code that would facilitate adoption of these reach codes by giving all-electric buildings their due credit would help the state meet its climate goals. Having reviewed the currently proposed 2022 Title 24 Building Energy Efficiency Standards, we offer the following comments for your consideration.

- 1. The CEC should create a single electric baseline for all energy sources and use energy valuation metrics that appropriately reflect the lower greenhouse gas emissions of all-electric buildings, rather than bifurcating standards for natural gas and electric construction.**

California's buildings are responsible for 25 percent of the state's climate emissions,² and more than half of those emissions come from burning gas or propane in furnaces, water heaters and other gas appliances.³ Separating performance standards for natural gas and electric heating would allow the market to continue to construct gas-fueled buildings for at least another 3 years. If we allow gas-heated building construction in the 2022 building code cycle, these buildings will stand for decades and have lasting greenhouse gas emission impacts.

Furthermore, the Future of Gas Distribution Study emphasizes that gas-heated buildings are more expensive to build, leave Californians vulnerable to higher energy bills and will cost the state even more to retrofit in the long-term.⁴ Continued investment in maintaining the gas pipeline system will result in avoidable cost impacts to Californians while undermining achievement of the state's climate goals. The state must set a clean energy standard in new construction now, as more than fifteen California cities have already done, to avoid paying major financial and climate costs down the road.

- 2. We strongly support the two-step energy design rating (EDR) approach to assess energy and grid impacts, and we recommend that it apply across all building types, residential and non-residential, for consistency.**

The two-step EDR using Time Dependent Source energy (TDS) and Time Dependent Valuation (TDV) appropriately reflect both the climate and air pollution impacts, and the electricity grid system costs of buildings. Both metrics are important to align with California's climate and housing affordability goals.

- 3. The CEC should update the TDV metric to appropriately reward load shifting, demand response, pre-cooling, energy storage, and other load flexibility technologies.**

Currently, the retail adjustment adder remains a constant value during every hour of the year. However, this "flat adder" does not properly reward the benefits of load flexibility technologies. Rather than reflecting near-zero or negative TDV prices at midday on some days, the TDV at

² Brook, M. California Energy Commission. "Building Decarbonization." June 14, 2018 IEPR Workshop on Achieving Zero Emission Buildings.

³ <https://www.nrdc.org/experts/joe-vukovich/real-climate-impact-californias-buildings>

⁴ E3 Future of Natural Gas

best reaches half the peak price or slightly lower than the average price. This isn't reflective of utility cost recovery through rates, which is mostly volumetric, with only a small share of cost recovery through fixed charges. Load flexibility technologies, such as demand response, pre-cooling, and energy storage, are critical to a decarbonized future and should be properly rewarded for their benefits to the grid. The Energy Commission should consider making the retail adjustment adder proportional to other TDV components in order to better reward the advantages of load flexibility technologies, support California towards achieving its ultimate goal of carbon neutrality by 2045, and better reflect customer cost recovery.

- 4. The CEC should update the TDV's underlying assumptions to reflect: the state's mandate of carbon neutrality by 2045 (EO B-55-18), a faster rate of building electrification, and a more realistic supply of bio- and synthetic gas.**

The TDV proposed for the 2022 building code rests on several assumptions that do not factor in the climate imperative and financial advantages of zero emission buildings. These TDV assumptions include (1) an 80 percent emission reduction by 2050 (2) a slower rate of building electrification, and (3) a 10 percent biogas pipeline blend by 2030. Assuming an 80 percent reduction by 2050 (EO B-30-15/EO S-3-05), instead of Governor Brown's more recent mandate of carbon neutrality by 2045, disregards widely accepted climate science and recommendations by the Intergovernmental Panel on Climate Change. Although a plan for achieving carbon neutrality is still in flux, California must set itself up for success by encouraging a faster rate of decarbonization.

Moreover, the Future of Natural Gas study found that achieving 80 percent greenhouse gas reductions through electrification of buildings with zero-carbon energy would save consumers between \$5 and \$20 billion versus decarbonizing the natural gas system to achieve the same reductions.⁵ In order to unlock these cost savings, the 2022 building code should both encourage a faster rate of building electrification, while simultaneously assuming a realistic supply of bio- and synthetic gas. As of now, the building code assumes that by 2030, California will fuel 10 percent of natural gas demand through biogas, when this energy source currently only meets less than 1 percent of state demand. This estimate fails to acknowledge the extremely high price of bio- and synthetic gas⁶ and that the state has no policy in place to achieve 10 percent biogas supply by 2030. Therefore, the TDV should be updated to properly reflect a more realistic, lower supply of bio- and synthetic gas.

- 5. While we strongly support the CEC's inclusion of non-combustion emissions, including refrigerants and methane leakage, the assumed methane leakage rates should be more closely aligned with widely accepted estimates.**

We strongly agree that California must account for non-combustion emissions to track these emissions and create mechanisms to incentivize non-combustion emission reduction. This is especially important for methane leakage, as the use of natural gas in buildings carries with it much more than the combustion burden. However, the proposed 0.7 percent rate for methane

⁵ E3 Future of Natural Gas

⁶ E3 Future of Natural Gas

leakage assumes there is only a rate of 0.2 percent leakage upstream. This value is less than 10 percent of the widely accepted rate of 2.3 percent.⁷ We recommend estimating methane leakage at 2.8 percent to account for 2.3 percent upstream leakage and 0.5 percent leakage behind-the-meter.

Thank you for your consideration.

Sincerely,

Nick Chaset
CEO East Bay Community Energy

Jan Pepper
CEO Peninsula Clean Energy

Girish Balachandran
CEO Silicon Valley Clean Energy

Geof Syphers
CEO Sonoma Clean Power

⁷ Alvarez, Ramón A., et al. "Assessment of Methane Emissions from the U.S. Oil and Gas Supply Chain." *Science*, American Association for the Advancement of Science, 13 July 2018, science.sciencemag.org/content/361/6398/186.full.