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Comments on December 8 Workshop Proposed 2022 Energy Code

Additional submitted attachment is included below.



December 24, 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 undersigned organizations, we thank you for the opportunity to comment on the California Energy Commission's (CEC) 2022 Building Energy Efficiency Standards (Energy Code) proposal introduced at the December 8 workshop on heat pump baselines for multifamily and non-residential buildings.

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. California must rapidly implement a plan to cut pollution from homes and buildings, or risk locking in

emissions from natural gas that will threaten the state's climate goals. A critical piece of this plan includes shifting the market towards all-electric new construction. All-electric construction is cheaper to build and protects the health of future residents by avoiding indoor air pollution.¹ It is an environmental and health imperative that the 2022 Energy Code advances zero-emission all-electric construction and removes any barriers for all-electric construction.

We thank the CEC for their hard work on this proposal and support the proposal's shift towards a heat pump space heating baseline in many building types. We further appreciate comments made by staff during the webinar that the state's decarbonization goals are critical. However, in order to ensure the state continues to make strides towards achieving decarbonization goals, we make the following recommendations:

- 1. We support the CEC's proposal to establish a heat pump baseline for space heating in buildings types where it is feasible and cost effective; therefore, we recommend the CEC expand the baseline to cover additional building types not included in the proposal.**

We support the December 8 proposal to establish a heat pump space heating baseline for small offices, high-rise multifamily buildings, small schools, and warehouse office spaces.

Based on the CEC's criteria of feasible and cost-effective, we recommend the CEC expand the scope of the heat pump baseline proposal to include all educational facilities and multifamily buildings. The CEC's presentation only included cost-effective modeling data for small schools. However, given that many large campuses across the state (such as the University of California system) are already shifting to all-electric construction, the CEC should consider an all-electric baseline for large schools as well. The CEC's modeling also demonstrates that heat pump space heating baselines are cost-effective for both mid-rise and high-rise multifamily; therefore, the CEC should set a single electric space heating baseline across this entire building type.

- 2. We recommend the CEC reduce barriers for the electrification of building types that have typically relied on central boilers for space heating.**

¹ [Residential Building Electrification in California](#), Energy+Environmental Economics, 2019; [Electrification Guide for Large Commercial Buildings](#), Redwood Energy, 2019; [Effects of Residential Gas Appliances on Indoor and Outdoor Air Quality and Public Health in California](#), UCLA Fielding School of Public Health, 2020.

The current proposal does not include a heat pump baseline for large non-residential building types that typically rely on central boilers for space heating. Continuing to set a gas baseline for these buildings will make it costly and burdensome for all-electric buildings to comply with the code.

Considering that 40 California cities have already adopted all-electric or electric-preferred reach codes, it's imperative that the CEC support local governments leading the state's decarbonization efforts by not placing additional compliance barriers on them. We recommend that the CEC conduct additional analysis to consider where a single electric baseline for space heating may be feasible, and at a minimum, the CEC should set a fuel neutral baseline for building types that do not have an electric baseline.

3. We recommend that the CEC require mixed-fuel construction be built electrification-ready.

California's 2045 carbon neutrality goal requires the state to be forward-thinking and prepare for a carbon-free economy. Most mixed-fuel construction built in the present day will need to be electrified in the future in order to meet the state's emission reduction goals.

Although some electrification-ready measures currently exist in the code for water heating, current measures do not cover the gambit of infrastructure required to easily electrify in the future. Therefore, the CEC should pursue additional electrification-ready measures to avoid burdensome costs placed on the building owner in the future. These electrification-readiness measures should include measures in all building types (single family, multifamily, and non-residential buildings) for unitary and central water heating, space heating, cooking, and drying.

We thank the CEC for their continued work in the building code development process and look forward to continued collaboration.

Sincerely,

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