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Allow same-fuel baseline for multifamily and commercial in Draft ACM Reference Manuals and Compliance Software

Dear Commissioner McAllister,

We encourage the California Energy Commission to take all possible action now, to remove unnecessary limitations to designs incorporating high-efficiency electric equipment for domestic hot water heating (DHW) and heating, ventilation, and air conditioning (HVAC) systems in multi-family and commercial buildings. We applaud the commission's progress; the 2019 Building Energy Efficiency Standards substantially reduce technical barriers and disincentives to efficient electric DHW and HVAC in new low-rise residential buildings.

However, 70,960 housing units are currently proposed for construction in San Francisco (<https://sfplanning.org/project/pipeline-report>). While much of this development stems from massive long-term projects, we estimate that >18,000 of these units will apply for building permits under the 2019 Energy Standards. Similar to urban cores and transit-oriented development corridors throughout the state, this stock will mostly be in the form of new 4 to 10 story residential buildings, commonly with one or more street-level floors devoted to mixed uses including restaurants, retail, or grocery in order to support an active, safe, and walkable urban environment. In addition, more than 27M square feet of commercial new construction is in development in San Francisco, and we estimate that 5M to 8M square feet will apply for permit under the 2019 Energy Standards. Together, we anticipate multifamily and commercial production will increase the city's building stock by 4% to 6%.

The commission's draft 2019 Alternative Compliance Method (ACM) as proposed would discourage this massive tranche of multifamily and commercial from adopting efficient electric DHW and HVAC systems over the next three years, committing these buildings to substantially higher lifetime emissions or committing future real estate investors and ratepayers to investing in early retirement of these systems in order to mitigate GHG emissions. The Commission recognized the importance of decarbonization of buildings in the 2018 Integrated Energy Policy Report Update. We ask that the Commission take action consistent with its own findings in the IEPR, and take all remaining opportunities presented by the 2019 ACM Reference Manuals and software to facilitate accelerated adoption of efficient electric designs that offer lower source energy and GHG emissions, but are penalized by the time dependent valuation (TDV) metric.

Specifically, we request that the Commission expeditiously revise the draft ACM and adopt software revisions which add an independent electric baseline for large multifamily and commercial buildings that use electricity for space or water heating in the proposed design. We understand that the proposed single-fuel baseline approach in the draft was adopted in recent iterations of the Standards, and in part reflects the commission's desire to harmonize California's energy standards with portions of ASHRAE 90.1-2016. Respectfully, the

greenhouse gas emission reduction goals set by California, San Francisco, and jurisdictions throughout the state represent a considerably higher priority for public policy than harmonization of regulatory minutiae with ASHRAE baseline system mapping for DHW and HVAC.

An independent electric baseline is particularly important for multifamily buildings of 4 to 7 stories. A baseline of single zone constant volume system with furnace (in the context of TDV) presents undue challenge to electric designs. 4 to 7 story multifamily is key not only to market-rate infill in urban areas, but also specifically to the success of the BUILD program (SB1477). For BUILD to support market development and adoption of electric heat pumps for central water loops for DHW and HVAC systems in multifamily greater than 3 stories, it is essential that the Commission not preclude the installation of such systems.

In addition, we respectfully request that the Commission address related issues, within the limitations of the adopted standards:

- Enable software to model air-to-water heat pumps for DHW, restoring the option of performance compliance.
- Explicitly allow local jurisdictions to substitute Time Dependent Source energy (TDS) for TDV in compliance software, in order to afford the option for AHJs to ensure new construction continues to reduce source energy consumption compared to prescriptive compliance while accelerating reduction of greenhouse gas emissions.

We continue to strongly support the 2019 energy standards as a key tool for improving building energy efficiency in order to improve emissions, comfort, and climate resilience of buildings in San Francisco. We appreciate the Commission's partnership with local governments, and leadership.

Thank you,

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