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<b>Project Title:</b>	2025 Energy Code Pre-Rulemaking
<b>TN #:</b>	252309
<b>Document Title:</b>	BAAQMD Comments - 2025 Energy Code - Heat Pump Baseline
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Submitted On: 9/19/2023  
Docket Number: 22-BSTD-01*

**2025 Energy Code - Heat Pump Baseline**

*Additional submitted attachment is included below.*



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Dr. Philip M. Fine  
EXECUTIVE OFFICER/APCO

September 18, 2023

California Energy Commission  
Re: Docket No. 22-BSTD-01  
715 P Street  
Sacramento, CA 95814  
docket@energy.ca.gov

**RE: 2025 Energy Code Pre-Rulemaking – Heat Pump Baselines**

Dear Commissioners:

The Bay Area Air Quality Management District (Air District) appreciates the opportunity to comment on the California Energy Commission’s (CEC) 2025 Title 24 Building Energy Efficiency Standards (2025 Building Code) updated proposal on prescriptive heat pump baselines. The Air District especially supports the updates to Section 170.2(d) Water-heating systems to remove the gas instantaneous prescription option and set long-term system cost targets to heat pump water heaters; and the updates to the prescriptive requirements for Nonresidential Building Space Conditioning Alterations to rooftop package units below 65,000 Btu/h, that gas-fired single-zone rooftop unit replacements be heat pump-based. However, the Air District is concerned that the proposal for residential central air conditioning (A/C) units replacement with heat pumps is *voluntary* only.

On March 15, 2023 the Air District’s Board of Directors passed amendments to the [Building Appliances Rules 9-4 and 9-6](#), which is the first point-of-sale zero-NOx standards for space and water heating appliances in the country. NOx, or nitrogen oxides, contribute to the formation of ground level ozone and fine particulate matter, in addition to having direct air quality and health impacts. Bay Area emissions from space and water heating appliances are significant, and slightly greater than NOx emissions associated with passenger vehicles or fuel refining facilities. Public health modeling shows that the emissions reductions achieved by these rules will result in health improvements, including potentially avoiding 37-85 premature deaths per year and saving \$400-890 million per year in health benefits. In the Bay Area, people of color are most impacted from emissions from space and water heating. Reducing these emissions helps advance environmental justice in the region by improving air quality in overburdened communities. The zero-NOx standards for space heating will phase in starting January 1, 2029.

The California Air Resources Board (CARB) has included similar standards in the 2022 State Strategy for the State Implementation Plan and 2022 Scoping Plan for Achieving Carbon Neutrality. CARB is currently undertaking rulemaking on Zero-Emission Appliance Standards, with a proposed implementation date in 2030.

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The Air District strongly encourages the CEC to consider *requirements* for the replacement of residential central A/C units with heat pumps in the development of the 2025 Building Code Chapter 6. Heat pumps are zero-emission appliances that are consistent with the Air District's zero-NOx and CARB's proposed zero-emission appliance standards, support the goals of the CEC to increase building energy efficiency cost-effectively, and contribute to the state's GHG reduction goals. Since heat pumps provide both cooling and heating for space conditioning, the assumption of zero-NOx and zero-emission heating appliance installations upon burn-out of gas furnaces post-2029 in the Bay Area and 2030 statewide should be included in the analysis of the broader costs of the CEC's decision-making. Residents who install a non-heat pump A/C unit post-2025 and then are required to purchase a zero-NOx or zero-emission heating appliance—most likely a heat pump—upon gas furnace burnout while the A/C unit is still relatively new would incur an avoidable and unnecessary cost burden.

The Air District recommends that the CEC requires the replacement of residential central A/C units with heat pumps in the development of the 2025 Building Code Chapter 6. This will advance coordination and consistency with local clean building efforts, the State's own active appliance standard rule-making, the State's 2045 carbon neutrality target, and the State's goal of installing six million heat pumps by 2030. The Air District looks forward to collaboration in pursuing a cleaner, healthier, and more equitable California.

For further information on the implementation of the Air District's space heating zero-NOx standards, please contact Senior Planner Amy Dao, at [adao@baaqmd.gov](mailto:adao@baaqmd.gov).

Sincerely,



Philip M. Fine  
Executive Director/APCO