

February 18, 2025

Chair Vanessa Delgado & Members of the Governing Board
South Coast Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765
Via Email: cob@aqmd.gov

RE: SUPPORT for Proposed Amended Rules 1111 and 1121

Dear Chair Delgado and Members of the Governing Board:

I SUPPORT South Coast AQMD's Proposed Amended Rules 1111 and 1121, which will improve air quality by creating zero-emission appliance standards for residential homes and small businesses.

My name is Andrew McNamara, Principal and Co-founder of Carbon Zero Buildings. We are a design-build general contractor specializing in retrofitting multifamily properties with heat pump water heaters. To date, our team has converted over 3,700 units from gas to electric systems, demonstrating the feasibility and scalability of this transition. We have 5 installation crews installing systems and Los Angeles, Riverside, Orange, and San Bernardino counties. We install heat pump systems in about 150 apartment units per month, and do not install any gas burning equipment

The equipment that satisfies the zero-NOx requirement most affordably is heat pumps and heat pump water heaters. Heat pumps are proven, on-the-shelf technology that have been in use for decades; four key improvements 1-2 decades ago have made them the best heating and cooling solution available: inverter-driven motors, variable speed compressors and fans, better refrigerants, all of which help them achieve the highest efficiency with SEER ratings above 20 and HSPF ratings above 11. The myths that heat pumps don't work in cold climates are from the days before these improvements. Today's reality is that heat pumps are the dominant heating appliance in Norway, Sweden, Maine, and many other cold climate locales.

The price to install a heat pump is generally a little more than for a standalone gas furnace, and roughly equivalent to the price of a furnace and air conditioner. The wide range of incentives available from the federal government, state, utilities, SoCalREN, CCAs, and some cities generally more than offsets the cost difference between a like-for-like gas replacement versus fuel switching to a heat pump. The incentives cover electrical panel upgrades and new wiring circuits,

in the minority of cases where those are needed. Operating costs (monthly energy bills) for our clients is usually lower for heat pumps than for gas appliances.

My workforce has gained expertise in heat pumps through training programs from manufacturers and hands-on experience. There's not that much my technicians need to know that's new, because we already install air conditioners, and heat pumps are essentially two-way air conditioners, with a reversing valve. For water heating, heat pumps water heaters are very similar in installation to traditional water heating, with electrical connections rather than gas ones, so electricians need to work side-by-side with our plumbing crews.

My company specializes in heat pumps in order to provide our clients with the best possible indoor air quality. Among the most critical contributors to BAD air quality are the combustion byproducts from gas appliances, which include the deadly carbon monoxide and nitrogen oxides; and the methane that leaks from pipes, valves, and the appliances themselves into our dwelling units, which include benzene, hexane, toluene, heptane, cyclohexane, and more. These toxics are as bad as they sound, causing premature deaths, lost school and work days, and asthma attacks.

These rules will achieve a greater reduction of deadly emissions than any other rule in the last three decades. I appreciate the thorough research and industry engagement your staff have performed to support the advancement of an equitable transition to zero-emission technology aimed at cleaning up the state's worst air pollution. We respectfully ask that you put the state and its residents first by passing these critical healthy air standards

Thank you,

Sincerely,

Andrew McNamara, CEM, LEED AP
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