



January 7, 2022

Honorable Liane Randolph, Chair
California Air Resources Board
1001 I Street
Sacramento, CA 95814

SUBMITTED VIA EMAIL

RE: 2022 Scoping Plan Update - Building Decarbonization Workshop

Dear Chair Randolph:

Thank you for the opportunity to comment on the California Air Resources Board's 2022 Scoping Plan workshop related to building decarbonization. The Western Propane Gas Association (WPGA) seeks to be a valuable contributor in both the development of the plan and related policies and procedures that may emerge as a result of these discussions.

First, it is critical to highlight that the current median price of a home in California is over \$800,000, making this state extremely unaffordable to most people that would like to buy a home. Electrification raises the real possibility of substantially increasing housing costs, adding \$250-350 in annual utility costs in the central valley and more still in foothill and colder areas. Additionally, should the CPUC approve the proposed NEM 3.0 rate structure new home buyers will see an additional \$300-400 increase in annual utility costs.

The cost impacts to new homes adds to utility bills with a limited impact on construction costs. In existing homes, the impact is more pronounced. An existing home fueled by natural gas will cost \$18-25,000 depending on the state of electrical infrastructure in the home. This roughly \$20,000 cost would replace gas furnaces and water heaters for heat pumps. This change, from aged, existing equipment to new electric equipment would on a weighted average basis add \$50 in annual utility costs. Which is to say that electrifying an existing home will cost tens of thousands of dollars and provide no return on investment.

Fundamentally electrification reduces emissions at substantial cost to homeowners, and utility rate payers. In a state with a homeless population larger than the city of Sunnyvale, and a housing shortage in the millions, adding costs to housing will almost certainly cause more harm than it prevents.

The cost of electrification is high, and the state is prepared only to deploy costly mandates that will increase housing costs in the midst of a housing crisis so severe that the UN considers it "a violation of multiple human rights, including rights to life, housing, health, water, and sanitation."¹ Many speak of equity as it relates to climate change, but fundamentally, electrification, which relies on using a more

¹ <https://www.npr.org/sections/money/2021/06/08/1003982733/squalor-behind-the-golden-gate-confronting-californias-homelessness-crisis>

expensive form of energy, is inequitable. By displacing costs equally among residents regardless of ability to pay, the state's policies will serve to harm the most vulnerable.

Electrification is expensive and inequitable, and it also harms the ability of rural Californians to survive severe storms, and cope with grid instability. Turning on a propane stove or fireplace has no impact on the electric grid. Using propane equipment puts no added strain on the state's ability to deliver power. Instead, having propane in a home protects that home from power outages, preserves that home's ability to provide cooking and heat. Communities have learned how preparing for weather related events, including filling tanks in advance of an oncoming storm, provides energy resiliency.

Meanwhile, renewable propane, derived from sustainable sources such as used cooking oil, beef tallow, or methane capture, provides an affordable path to energy sustainability, with an immediate path for emission reductions. Deployment of renewable propane is more cost-effective than other renewable sources because renewable propane is completely fungible with conventional propane equipment. While there is a marginal increase on the cost of the fuel, customers will avoid costly infrastructure investments or the need for appliance upgrades. In existing homes that would need new appliances, converting a home to all-electric is twice as expensive as installing all new propane appliances. Propane appliances can reduce home energy costs twice as much as high-efficiency electric appliances, meaning the opportunity for cost savings in existing homes is greater if we can reduce emissions with propane-based appliances as opposed to electric. Homeowners using either renewable or conventional propane are relieved of a financial burden to upgrade their homes.

Furthermore, if California's building sector transitioned to 100% renewable propane, the state would benefit from 2.26 million tons of avoided CO₂ emissions, which is the equivalent of taking roughly 537,000 cars off the road annually. A home fueled by renewable propane will have substantially lower emissions than an all-electric one. Using renewable propane as primary heat in a home avoids the potential emissions from space and water heating associated with an electric home. Because of this, a home fueled by renewable propane in the central valley (climate zone 12) would have less than ¼ of the emissions of an all-electric home. In colder climates like Truckee this difference only grows, where a home fueled by renewable propane would avoid more than 1 ton of CO₂ emissions per year.²

Climate change and decarbonization is a complex challenge that requires the deployment of all clean energy sources. Wind, solar, and other renewable fuels – like renewable propane – all have to factor in the equation of how to combat one of the most critical issues of our time.

WPGA strongly encourages the California Air Resources Board to consider a more holistic and comprehensive approach to decarbonization as opposed to a costly one-size-fits-all solution. By including renewable fuels as a part of the solution, CARB can better ensure more efficient, market-based solutions that will keep costs down for homeowners, and maximize the state's flexibility as it moves ahead.

Sincerely,



Ben Granholm
Regulatory Affairs Specialist

² Source ConSol. Results from an analysis performed using CBECC-RES 2019 and the standard prototype home. CZ 12 showed 249 kg CO₂ for a renewable propane fueled home and 1179 kg for an all-electric one. CZ 16 showed 439 kg CO₂ for the renewable propane home, and 1876 kg for an all-electric one.