March 4, 2022

Ariel Fideldy, Manager
California Air Resources Board
1001 I Street
Sacramento, CA 95814

SUBMITTED VIA EMAIL

RE: 2022 State SIP Strategy

Dear Ms. Fideldy:

Thank you for the opportunity to comment on the California Air Resources Board's proposed 2022 State SIP Strategy (SIP). 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.

WPGA would like to emphasize that we support decarbonization efforts that take a comprehensive approach toward providing consumers with diverse clean-energy solutions and low-carbon fuel options. In that respect, we are concerned about the inclusion of a zero-emission standard for space and water heaters. Such a requirement will disproportionally impact several communities including rural communities, those who live off the grid, low-income communities, and those experiencing electric utility power disruption.

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 that would like to buy a home. Forced electrification of homes and appliances 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. This is to say that electrifying an existing home will cost tens of thousands of dollars and provide no return on investment.

Fundamentally conversion to all-electric comes with a substantial cost to homeowners and utility ratepayers. 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 amid 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 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. Turing 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, preserving 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 in the cost of the fuel, customers will avoid costly infrastructure investments, long lead times for infrastructure upgrades, 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 the 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] What's more, these emissions reductions could be actualized as early as 2025 versus waiting 5+ years for other renewable options to come online or be more affordable.

It is also critical to note that renewable propane does not only play a role in the housing sector but also in transportation. Heavy and medium-duty low-NOx trucks using renewable fuel are the most cost-effective way to address GHG and NOx emissions in the transportation sector, especially in the near term where zero-emission technology remains widely unavailable. Renewable propane provides a great opportunity to reduce emissions today, without compromising power and is also a drop-in replacement with current propane-fueled engines, vehicles, and fuel storage equipment, with no additional cost for fleets to transition to renewable propane. Through fuel and technology innovation, propane is providing a path towards achieving emission reduction goals in both the on- and off-road sector.

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

[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.

Climate change and decarbonization are complex challenges that require 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 home and fleet owners while maximizing the state's flexibility as we move forward.

Sincerely,

Ben Granholm
Regulatory Affairs Specialist