



June 26, 2024

California Air Resources Board
1001 I Street
Sacramento, CA 95814
VIA ONLINE SUBMISSION

RE: May 29th Workshop: Proposed Zero-Emission Space & Water Heater Standards

WPGA is pleased to submit comments in response to the May 29th workshop on the drafting of Zero-Emission Space & Water Heater Standards.

ALIGNING CARB RULEMAKING WITH EXISTING REGIONAL AIR DISTRICT RULES

The Western Propane Gas Association appreciates CARB's approach to this rulemaking by recognizing the precedent set by regional air districts and offering as staff Concept B an alignment with both the Bay Area (BAAQMD) and South Coast (SCAQMD) space and water heater rules, as stated on slide 13 of the staff presentation.¹ WPGA supports codifying these rules on NOx at a statewide level to minimize disruption of the manufacturing sector, retailers, installers, and compliance entities – including single-family and multi-family dwellings, businesses, nonprofits, governments, and more – as they are already seeking to conform with BAAQMD and SCAQMD rules. We would note that both these agencies recognized the difficulty of transitioning both propane and natural gas equipment as part of compliance for a host of reasons and, as such, regulated natural gas-fired appliances exclusively. Regions with propane space and water heating tend to lie within very difficult to electrify parts of the state due to frequent power outages, high energy demands from cold weather climates, rocky or inaccessible terrain that makes installation of further electric infrastructure costly and difficult – if not impossible, and predominantly lower-income communities with limited financial resources necessary to finance housing-side infrastructure upgrades.

Conforming with existing rules creates certainty in the marketplace and staggered compliance dates based on feasibility is also necessary to ensure that consumers can adapt to this rulemaking without creating hardships on renters and homeowners, or forcing businesses out of operation from the lack of technologies that can meet the rulemaking's required emissions. We would encourage CARB staff to review public comments made during the SCAQMD rulemaking on Rule 1146.2 regarding the challenges numerous business and property owners foresee in regards to compliance.

NEW PEAK DEMAND DURING LOWERED RENEWABLE GENERATION PERIODS

Currently, California's electric grid faces its most difficult challenges with peak demand from late-Spring to early-Fall driven primarily by the drop-off in solar energy generation during continued strong electric demands from 4 to 9 p.m. The so-called "duck curve"² that results in overgeneration during daylight from May to September and then significant undergeneration

¹ California Air Resources Board, "Public Workshop: Zero-Emission Space and Water Heater Standards," accessed June 26, 2024: https://ww2.arb.ca.gov/sites/default/files/2024-05/May_2024_Workshop_Slides.pdf

² California Independent System Operator, "What the duck curve tells us about managing a green grid," accessed June 26, 2024: https://www.caiso.com/documents/flexibleresourceshelprenewables_fastfacts.pdf

during sunsets and the early evening has typically been limited to those months due to the challenge from significant statewide electric-appliance cooling needs.

However, these hotter months typically serve as the most significant challenge to providing affordable, reliable, and safe energy to consumers. The shift to mostly all-electric heating, which is a realistic expectation with limited technologies that can meet 0.0 NOx standards as being proposed by staff concepts and existing rulemaking language, will now create new peak electric demand during Winter months from significant space and water heating needs.

As evidenced by federal data³, demand for natural gas and propane surges in Winter months. This demand, under the proposed rulemaking, would now need to be shifted to electricity resources that are becoming either increasingly renewable (and intermittent) per state law and energy regulations, or reliant on imported electricity from fossil generation. Other federal data⁴ on net generation from solar resources bears out this reality; solar generation dips off precariously during Winter months and makes up as little as half its Summer capacity.

We would encourage CARB to further coordinate with the California Energy Commission, California Public Utility Commission, and stakeholder energy experts on the potential catastrophic impact that this shift could have on consumers from a second peak electric-demand season in the state.

CHALLENGES OF RURAL AREAS

In addressing requested feedback on regulating space and water heaters in rural and under-resourced areas, we have a variety of concerns. Californians suffer from high electricity prices across the state. This, coupled with the higher purchase price of an electric space or water heater compared to that of a propane space or water heater, including home-side infrastructure requirements and costs to finance all the above, will not allow low-income Californians to comply with the regulation and would cause them further financial harm.

Rural areas, especially those in cold climates, face a reliability issue and may more frequently experience unexpected loss of heat or hot water caused by downed power lines, Public Safety Power Shutoffs (PSPS), and grid instability. When there are extensive power outages in communities due to cold weather events, propane space and water heaters keep California families and businesses safe and warm – providing for the health and safety of thousands upon thousands of residents. Rural and low-income communities should not have to face burdensome transition costs and an unreliable energy source.

Right now, appliance manufacturers that serve California are already working on technologies to provide ample water heating support for homes serviced by heat pumps. One such manufacturer⁵ explicitly uses propane fuel to tie in water heating to heat pumps for maximum efficiency, minimizing consumer costs, and improving the energy footprint of the home. Our industry is working closely with manufacturing partners to see what further efficiencies can be gained from hybridized systems, but still believe that there are significant barriers to fully transitioning all space heating to heat pump technologies.

³ U.S. Energy Information Administration, "U.S. Natural Gas Total Consumption," accessed June 26, 2024: <https://www.eia.gov/dnav/ng/hist/n9140us2m.htm>

⁴ U.S. Energy Information Administration, "Table 1.1.A. Net Generation from Renewable Sources: Total (All Sectors), 2014-April 2024," accessed June 26, 2024: https://www.eia.gov/electricity/monthly/epm_table_grapher.php?t=epmt_1_01_a

⁵ <https://rinnai.widen.net/s/hxzvzpc9vp/2023232.heat-pump-companion.brochure.v4.010924>

Limiting the impact of this rule to only those areas currently serviced by natural gas, where economies of scale on electric infrastructure can be met and where peak heating demands pale in comparison to cold weather climates, would protect consumers from unanticipated costs and feasibility challenges while also minimizing electric demand in regions that can scarcely afford further grid unreliability.

To address these and other concerns, we suggest an alternative approach as follows.

AN ALTERNATIVE APPROACH

WPGA supports space and water heaters fueled by conventional and renewable propane in response to CARB's request on slide 25 for "public input on alternative approaches that may yield the same or greater benefits than those associated with the proposed regulation, or may achieve the goals at lower cost."⁶

Offering the ability for consumers to purchase new propane space and water heaters is in accordance with the rules set by the regional AQMDs mentioned above. These regulatory bodies understood that propane can help meet the state's air quality goals because it is cleaner than natural gas, with no fugitive methane emissions, still provides ultra-low NOx technologies that often exceed existing state standards, and a carbon intensity comparable with the California electric grid. Blending conventional propane with renewable propane, DME, or even hydrogen can reap even greater climate benefits while protecting the consumer from burdensome costs and addressing the challenges of rural and low-income areas in California. There are new propane space and water heaters on the market today that are increasingly efficient, cost effective, and low emission. This alternative to electric space and water heaters in the limited footprint of propane-fueled space and water heaters is a balanced approach that would achieve the goals of this rulemaking at a lower cost, while protecting Californians.

CONCLUSION

WPGA appreciates the opportunity to submit feedback and looks forward to being an informative voice throughout the rulemaking process.

Sincerely,



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⁶ California Air Resources Board, "Public Workshop: Zero-Emission Space and Water Heater Standards," accessed June 26, 2024: https://ww2.arb.ca.gov/sites/default/files/2024-05/May_2024_Workshop_Slides.pdf