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VIA ELECTRONIC SUBMISSION

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

RE: Comments on the Proposed Zero-Emission Forklift Regulation

Dear Chair Randolph:

Suburban Propane writes with regard to the Proposed Zero-Emission Forklift Regulation (the “Proposed Regulation”). Suburban Propane has been serving customers for more than 95 years and is the nation’s third-largest propane retailer with operations in 42 states. In California, we currently have 266 employees at 71 locations serving more than 55,000 customers.

We support California’s goal of reducing greenhouse gas emissions in its transportation sector, and some of the State’s policies to achieve this goal have been very successful, particularly the technology-neutral Low Carbon Fuel Standard (LCFS). However, the Proposed Regulation will be ineffective at reducing carbon emissions, enact an unrealistic timeline towards total electrification of forklifts, and impose severe hardships on businesses. We urge CARB to continue using the LCFS approach that embraces all available low-carbon fuels as the primary vehicle for reducing carbon emissions in the transportation sector.

As currently drafted, the Proposed Regulation would prohibit the sale of Class IV and Class V large spark-ignition forklifts (“Targeted Forklifts”) beginning January 1, 2026, and fleets would not be allowed to acquire or take possession of used 2026 or subsequent model year Targeted Forklifts. Beginning January 2028, older Targeted Forklifts would be gradually phased out in groups until January 1, 2038, when only zero-emission forklifts are permitted for use by forklift fleets. A “zero-emission forklift” is expressly defined as “a [f]orklift that uses fuel-cell-electric, battery-electric, or other zero-emission powertrain technology that meets the zero-emission standards” set forth 13 CCR 2433 as the only source of power for operational propulsion and work.



The Proposed Regulation clearly prioritizes electricity over all other low-carbon fuels as the only vehicles that conform with the ZEV definition are electric or fuel cell. This was drafted under the assumption that electricity has a lower carbon intensity than traditional or renewable propane when considering each fuel's Energy Economy Ratio ("EER"), as shown in Table 4 of the Initial Statement of Reasons ("ISOR").

However, this assumption is incorrect. The carbon intensity ("CI") score of California's electric grid, which is currently 81, reflects the average emissions generated during electricity generation. Using the average for emissions is misleading and does not accurately inform the public of the emissions generated during peak hours. During those times, peaker power plants are switched on and begin emitting carbon while generating electricity. Oftentimes, these plants emit are less efficient than those running at non-peak times and emit more carbon to generate the same number of electrons. California's marginal emissions rate, which captures carbon emitted during peak hours, shows that, depending on time of day, the electric grid's CI score increases significantly by a factor of two to three times.¹ Mandating the electrification of forklifts and other sectors of the economy would put additional strain on the grid and cause the grid's CI score to climb even higher.

In addition, the EERs for electric and propane forklifts also rely on faulty assumptions and are not borne out by the data. CARB assigned electric forklifts an EER of 3.8 and propane forklifts and EER of 0.9, which suggests that electric forklifts are 4.2 times more efficient than propane forklifts. However, propane engines have an average efficiency of 25 percent.² Even assuming that electric forklifts are 90 percent efficient, this would make electric forklifts 3.6 times more efficient, at most. Keeping propane forklifts at an EER of 0.9, this means the EER for electric forklifts should be no more than 3.2.

Taking into consideration the marginal emissions rate of California's electric grid and EERs described above, there are times of the day when the electric grid could have an EER-adjusted CI score of at least 50.63 or even higher. While that is lower than the EER-adjusted CI score for propane, it is higher than the average EER-adjusted CI score for renewable propane, which is 33.26 based on the ISOR. Further, Suburban Propane is committed to bringing more lower carbon intense propane blends. This includes blends of traditional and renewable propane, traditional propane and renewable dimethyl ether ("rDME"), and renewable propane and rDME. While not verified yet, all three blends will most likely have CI scores below the electric grids, and we have already begun selling traditional propane blends and rDME in California.

Many forklift fleets will also suffer serious financial burdens under this mandate. Electric forklifts are more expensive than propane forklifts, and given the typical battery life of 8 hours, fleets will have to purchase multiple electric forklifts and batteries just to do the job of one propane forklift, which can run

¹ See <https://www.spglobal.com/commodityinsights/en/ci/research-analysis/estimating-marginal-emissions-rates.html>.

² See https://cloudinary.propane.com/images/v1638906494/website-media/Forklift-WhitePaper_FINAL_December-2021/Forklift-WhitePaper_FINAL_December-2021.pdf?i=AA



24 hours with very little downtime for refueling. This will impose significant costs on fleet operators, which will result in business closings and job losses. CARB's own analysis shows a loss of thousands of jobs at least through 2032, as shown in the ISOR.

We encourage the Board not to focus on promoting electric energy, but rather continue using the LCFS as a primary driver for reducing transportation carbon emissions. The program has been incredibly successful. By 2022, the LCFS has reduced the CI of California's transportation fuel pool by 12.63 percent, 2.63 percentage points ahead of the 10 percent target for that year. Further, it is our understanding that CARB will initiate a rulemaking in the near future to expand the LCFS by tightening annual CI benchmarks through 2030 and extending the program with additional CI benchmarks through 2045. This will further reduce emissions in the transportation sector and incentivize the development and production of lower and lower carbon intense fuels.

For the reasons above, we urge the Board to not adopt the Proposed Regulation as written, as it will be ineffective at reducing carbon emissions and inflict serious harm on businesses. Rather, CARB should focus on strengthening and expanding the LCFS, an objectively successful program, in order to further reduce greenhouse gas emissions in the transportation sector, instead of pursuing electrification in a misguided effort to find a silver bullet. We would appreciate the opportunity to discuss with you how such low-carbon energy sources, such as traditional propane, renewable propane, and rDME, can play a role in lowering California's carbon footprint. Thank you for your consideration.

Sincerely,

/s/ Paul M. Rozenberg

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