

February 20th, 2024

Cheryl Laskowski, Ph.D.
California Air Resources Board
1001 I Street
Sacramento, CA 95814

Subject: Monarch Tractor Comments in anticipation of the Public Hearing to Consider Proposed Low Carbon Fuel Standard Amendments

Dear Dr. Laskowski,

Monarch Tractor appreciates the opportunity to submit comments regarding the potential transition of the Clean Fuel Reward to include heavy-duty vehicles not covered by the advanced clean fleets rule. While this is a step in the right direction, we believe that CARB should also consider expanding the Clean Fuel Reward to include zero-emission vehicles manufactured for use in the off-road sector.

Incentives and funding for driver-optional, electric tractors align with CARB priorities.

Like medium- and heavy-duty trucks, off-road vehicles like agricultural tractors are challenging to decarbonize. EV Tractors, like Monarch's MK-V and New Holland's recently introduced T4E, are not included in the current Advanced Clean Fleets regulations and are an ideal addition to Clean Fuel Reward eligibility.

While many off-road EVs, including agricultural tractors, are relatively new to the market, a considerable amount of funding is allocated to the early stages of commercialization for these technologies through demonstration and pilot programs. Recent changes to California's State Budget and CARB programming has greatly reduced the funds available for programs that encourage early market adoption – notably CORE.

The significant reduction of programs like CORE creates a gap in the adoption cycle for EV equipment. Consumers desire a chance to test out new technology before making a commitment to integrate it into their operations in place of legacy diesel. This is especially true in the agricultural sector. Farmers will only agree to scrap existing diesel equipment in their fleets once they've validated that EV equipment will work in their operations. This is why we urge CARB to consider including eligibility for electric off-road vehicles, including tractors, within the proposed Clean Fuel Reward regulations. This will help fill the gap and accelerate a shift towards utilization of scrap and replace programs like Carl Moyer and FARMER leading to greater decarbonization of California's medium- and heavy-duty fleets.



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About Monarch Tractor

Monarch Tractor is an innovative, mission-driven company headquartered in Livermore, California developing driver-optional electric tractors. We are committed to enabling clean, efficient, and sustainable farming practices by making them economically viable. The Monarch MK-V Tractor - which is commercially available today - brings together the benefits of electrification, smart technology, and insightful data to enable farmers to transition to more productive, precise, and sustainable farming practices. Providing a superior platform for farmers, Monarch Tractor is focused on delivering meaningful change for today's farmers and the generations of farmers yet to come.

Monarch's MK-V compact tractor is an attractive platform for significantly reducing criteria and greenhouse gas emissions in the agricultural sector. The compact tractor segment offers the opportunity for some of the most significant and cost-effective diesel emissions reductions due to its high volume, high utilization, and significant annual growth.

Monarch Tractor offers a zero-compromise solution, including equal or greater performance compared to even the most advanced diesel tractors. A swappable battery assembly enables near continuous operation and allows operators to recharge during non-peak rate hours. Autonomy adds the benefit of worker safety – from keeping humans out of the fields when air quality is hazardous to keeping workers safe with human detection and auto braking.

Thank you again for the opportunity to submit comments prior to this hearing and to provide input on potential changes to the LCFS program and Clean Fuel Reward. Please don't hesitate to contact us if you have any questions at impact@monarchtractor.com.

Thank you,

Praveen Penmetsa
CEO and Co-Founder
Monarch Tractor