California Fuels and Convenience Alliance

2520 Venture Oaks Way, Suite 100

Sacramento, CA 95833

916.646.5999

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California Air Resources Board
1001 I Street
Sacramento, CA 95814

RE: Proposed LCFS Amendments – Concerns Regarding CCS Requirements for Hydrogen Infrastructure

The California Fuels and Convenience Alliance (CFCA) represents approximately 300 members, including nearly 90% of all independent petroleum marketers in the state and more than half of the state's 12,000 convenience retailers. Our members—predominantly small, family- and minority-owned businesses—play a vital role in California's fuel supply chain, serving local governments, emergency services, school districts, transit companies, independent fuel retailers, and the agriculture industry.

CFCA appreciates CARB's continued recognition of hydrogen as a key part of California's low-carbon future and acknowledges several important improvements in the proposed LCFS amendments:

- Lowered the derating cap for the Heavy-Duty Hydrogen Refueling Infrastructure (HD HRI) program
- Removed the revenue cap on HD HRI stations
- Included "blue hydrogen" (natural gas with CCS) as an eligible production pathway

While these changes are significant and appreciated, CFCA remains concerned about the requirement that fossil-based hydrogen be paired with CCS to remain eligible after 2030 and 2035, as **CCS technology remains prohibitively expensive and geographically limited.**

COST & COMPLEXITY: CCS COULD SLOW HYDROGEN ADOPTION

While we support hydrogen's growing role in decarbonizing the heavy-duty sector, requiring fossil-based hydrogen to be paired with CCS by 2030 and again as a condition for post-2035 eligibility presents several critical challenges:

- **High upfront costs and limited access to CCS infrastructure:** CCS remains prohibitively expensive and geographically limited. According to a 2023 study, a typical CCS project injecting approximately 1 million metric tons of CO_2 per year—using 3 injection wells and 1 monitoring well—has a **capital cost just under $100 million**, with operating costs averaging $8 per metric ton of CO_2. Most hydrogen producers—especially those trying to enter the market—are not in a position to finance or access this technology at the required scale within the proposed timelines.

- **Delays in hydrogen infrastructure buildout**: Hydrogen refueling stations and production hubs are still in early phases of deployment. Tying future eligibility to CCS requirements risks delaying or stalling these projects, especially among early adopters who are not vertically integrated.
- **Affordability and adoption barriers**: The added cost of CCS will likely be passed down the value chain, raising the price of hydrogen fuel. This will make it less attractive for fleets, limiting widespread adoption at a time when we need more commercial use to achieve emissions goals.

FLEXIBILITY IS KEY TO BUILDING A HYDROGEN MARKET

We respectfully urge CARB to consider modifications that will better support near- and long-term development of hydrogen infrastructure:

- Allow **alternative compliance options** or **extended timelines** for fossil-based hydrogen production in the early stages of market growth.
- Consider **graduated CCS requirements** that reflect technology and cost developments over time, rather than fixed 2030 and 2035 thresholds.
- Continue supporting **infrastructure credits** and incentives for early hydrogen investments that may not be CCS-ready but still contribute to decarbonization goals.

BALANCING CLIMATE AMBITION WITH IMPLEMENTATION REALITY

CFCA supports the state's ambition to accelerate low-carbon fuels and technologies, and we greatly appreciate the thoughtful improvements CARB has made to strengthen hydrogen's role as a viable fuel option. The recent adjustments to the HD HRI program and the inclusion of blue hydrogen under the LCFS are meaningful steps that enhance the economic feasibility and attractiveness of hydrogen infrastructure.

At the same time, we remain concerned that the CCS mandate—particularly under the accelerated timelines proposed—could unintentionally hinder near-term adoption of hydrogen. To fully realize the benefits of the recent program enhancements, we encourage CARB to maintain regulatory flexibility, support innovation, and avoid imposing requirements that could discourage early investment in this critical energy pathway.

We appreciate the opportunity to provide feedback on the proposed LCFS amendments and look forward to further engagement to ensure the regulation supports practical implementation.

If you have any questions, please contact CFCA's Sr. Director of Government Affairs, Alessandra Magnasco, at alessandra@cfca.energy.

Sincerely,

Alessandra Magnasco
Sr. Director of Government Affairs