To: California Air Resources Board

Re: Potential Changes to the Low Carbon Fuel Standard

Date: March 14, 2023

From: Carolyn Raffensperger, executive director of the Science and Environmental Health Network

To whom it may concern:

The Science and Environmental Health Network (SEHN) appreciates the opportunity to comment on CARB’s proposed changes to the Low Carbon Fuel Standard (LCFS). We are a national organization with offices in several states including Iowa and California.

We specifically request that CARB:

1. remove all incentives for enhanced oil recovery (EOR) in the LCFS, including fuels sourced from out-of-state;
2. revamp CARB’s carbon intensity calculations for fuels made using carbon capture and storage particularly ethanol because those calculations do not reflect real-world CO2 capture inefficiencies or account for CO2 and methane emissions across the CCS lifecycle. As a result, CARB significantly underestimates the carbon intensities of fuels made using CCS, and these methodological errors must be corrected.

Iowa is currently facing three major carbon capture and storage (CCS) projects designed to capture CO2 from ethanol plants, transport the CO2 to sites in Illinois and North Dakota. These projects are being driven, in part by the LCFS. The policy would [incentivize](https://ethanolproducer.com/articles/17176/the-door-is-open-for-ethanol-producers-and-ccs) ethanol production through technology that stores carbon underground not just in California, but anywhere in the U.S. Unfortunately, the corporations that are developing the CO2 pipelines are being coy about whether the CO2 will be used for enhanced oil recovery (EOR).

California’s incentives for CCS wouldn’t deliver carbon reductions as promised. Instead, supplementing gasoline with ethanol would *increase* climate-damaging greenhouse gas emissions, further pollute the water from Iowa to Louisiana, and divert needed funds away from real climate solutions in California and the Midwest.

Ethanol producers [say the substance generates](https://www.theguardian.com/environment/2022/jul/07/iowa-pipelines-farmers-indigenous-people-fight) less carbon than gasoline, but a recent study found that ethanol is [24% more carbon-intensive](https://www.pnas.org/doi/10.1073/pnas.2101084119) than traditional fuel. The enormous rise in nitrogen fertilizer to raise corn for ethanol has increased emissions of nitrous oxide, a potent greenhouse gas that is [289 times as powerful](https://news.yahoo.com/carbon-storage-soil-170254628.html) as CO2. Adding carbon capture to ethanol production will only compound these problems.

Building ethanol infrastructure locks in ethanol and gasoline for decades, reducing incentives for investors or policymakers to shift towards more sustainable transportation. In Iowa, [politicians](https://www.desmoinesregister.com/story/tech/science/environment/2021/06/24/electric-vehicle-accessibility-index-evs-arent-easy-buy-own-iowa-tesla-consumer-choice-center/5320251001/) are [fighting every policy and law](https://kdsm17.com/news/local/in-the-race-for-electric-cars-biofuels-hold-iowans-back) that might move the nation toward electric vehicles or public transportation. California’s low carbon fuel policy is making their obstruction of cleaner transportation that much easier.

In conclusion, it is essential that CARB look beyond the borders of California and make decisions that accurately reflect the impact of its regulations in states like Iowa. We will not meaningfully address the climate crisis by making piecemeal decisions that could arguably increase greenhouse gases. Accordingly, CARB needs to prohibit any EOR in its LCFS rule and do a full and accurate life cycle analysis of the greenhouse gases produced in fuels like ethanol produced through carbon capture and storage.