August 8, 2022

Ms. Cheryl Laskowski
Low Carbon Fuel Standard Program
California Air Resources Board
1001 I St.
Sacramento, CA 95814

RE: NCGA Comments on the July 7, 2022, Public Workshop to Discuss Potential Changes to the LCFS

Dear Ms. Laskowski:

The National Corn Growers Association (NCGA) appreciates the opportunity to provide feedback following the July 7, 2022, public workshop on Potential Future Changes to the Low Carbon Fuel Standard (LCFS) program. On behalf of our 40,000 dues-paying corn farmers nationwide and the more than 300,000 corn growers who contribute to corn promotion programs in their states, NCGA writes to share our views, as the primary producers of the feedstock for low carbon ethanol, on CARB's extensive opportunity to achieve the state's carbon neutrality goals through use of low carbon fuels in transportation.

Strengthening the LCFS

The LCFS continues to be a successful policy that is driving innovation in commercially viable low carbon transportation fuels, diversifying California's fuels portfolio, and is critical in implementing California's long-term climate goals. NCGA encourages approaches that strengthen the program in ways that will accelerate sector development and innovation in this market for years to come. CARB's proposal to strengthen the LCFS targets pre- and post-2030 is critical for maintaining the success and integrity of the program, and it is an element that NCGA supports. Strengthening the targets will allow for more market certainty and will allow alternative transportation fuels to contribute more to California greenhouse gas reduction goals.

Treatment of Crop-Based Feedstocks

As it relates to the treatment of crop-based feedstocks for biofuel production and CARB's consideration of capping these feedstocks, NCGA strongly urges staff not to pursue a cap on crop-based feedstocks. We believe a cap on biofuels from any source would undermine California's decarbonization goals and the success of the LCFS, leading to greater petroleum use.

Nationwide, farmers plant fewer acres of corn today than when the federal Renewable Fuel Standard (RFS) was expanded in 2007, all while producing a crop that exceeds demand for food, feed, exports, and fuel by millions of bushels, including value-added co-products from the ethanol production process such as distillers' dried grains (DDGs) for feed and distillers' corn oil for biodiesel and renewable diesel.

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According to the U.S. Department of Agriculture (USDA), planted corn acres in 2021, at 93.3 million acres, were less than planted acres in 2007, the year the RFS was expanded, at 93.5 million acres, yet corn production was 14 percent greater in 2021 compared to 2007.[1] This increase in corn production is due to yield improvements our farmers have consistently pursued.

The RFS provides protections against land use change for biofuels – and those protections have worked. The RFS requires land used to grow eligible feedstocks for biofuels to have been used as cropland prior to 2007, and biofuels produced from land that was not previously designated as cropland prior to 2007 are not eligible for RFS credit. Furthermore, the Environmental Protection Agency (EPA) has certified that cropland acres have not exceeded 2007 levels during any year in every RFS volume rule, most recently in the final volume rule issued June 3, 2022. In this rule, EPA concluded the 382.6 million cropland acres in 2021 did not exceed the 402 million baseline cropland acres of 2007.[2]

Given this statutory limit and the loss of agriculture land to development, corn growers' incentives are focused on increasing production efficiency on the land already used for crop production. In 2022, the USDA projects a yield of 177 bushels per acre, matching last year's record corn yield. If projections are met, total production would reach 14.5 billion bushels this fall, maintaining ending stocks above 2020-21 levels, at 1.47 billion bushels.[3] Since 1997, farmer's productivity has increased by more than 25 bushels per acre, with corn yield increasing from an average of 150.7 bushels per acre in 2007 to 177 bushels per acre in 2021.[1] Overall, domestic corn production has grown steadily at a 25-year average rate of about 2 percent, or 250 million bushels per year, assuming static planted acres.[4]

Furthermore, it is important to note that the price of food is not significantly influenced by corn prices or biofuels. First, ethanol production also uses feed corn and not the sweet corn, which is consumed by people. Second, fluctuations in global food prices are more directly correlated with the cost of crude oil.[5,6] Reducing oil consumption and replacing it with cleaner alternatives lower both the demand for and price of oil, therefore beneficially impacting global food prices.

As staff noted in the July 7 workshop, both direct and indirect effects of crop-based biofuels are accounted for in the LCFS, including land use. As NCGA previously stated to CARB after the December 2021 workshop, we are again urging CARB to consider recent literature on biofuels lifecycle analysis and land use change (LUC), which demonstrates corn ethanol today is at least 44 to 52 percent lower in carbon intensity (CI) than the gasoline it replaces.[7]

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[1] U.S. Department of Agriculture, Economic Research Service, Feed Grains: Yearbook Tables. https://www.ers.usda.gov/data-products/feed-grains-database/feed-grains-yearbook-tables/

[2] 87 Federal Register 39635, July 1, 2022

[3] U.S. Department of Agriculture, "World Agriculture Supply and Demand Estimates", pg. 12. July 12, 2022. https://www.usda.gov/oce/commodity/wasde/wasde0722.pdf

[4] U.S. Department of Agriculture National Agriculture Statistics Service, Corn Yield by Year. https://www.nass.usda.gov/Charts_and_Maps/graphics/cornyld.pdf

[5] EIA, Spot Prices for Crude Oil. https://www.eia.gov/dnav/pet/pet_pri_spt_s1_m.htm

[6] FRED Economic Data, Global Price of Food Index. https://fred.stlouisfed.org/series/PFOODINDEXM#0

[7] Scully, Melissa J., et al, "Carbon intensity of corn ethanol in the United States: state of the science," (2021) Environmental Research Letters 16 043001. https://iopscience.iop.org/article/10.1088/1748-9326/abde08

We also continue to ask CARB to use the most recent Department of Energy Argonne National Laboratory Greenhouse Gases, Regulated Emissions, and Energy Use in Technologies (GREET) model, without adjustments, to evaluate biofuel and energy lifecycle emissions. GREET currently assigns corn ethanol a LUC impact of 7.4 grams of carbon per megajoule. Because GREET is updated every year, this model, including Argonne's Carbon Calculator for Land Use and Land Management Change from Biofuels Production (CCLUB), is capable of most accurately capturing updated crop yields, GHG emission reductions from farmers' improved production practices, and can incorporate other ongoing, voluntary climate-smart improvements in agriculture production. These ongoing improvements in both feedstock and biofuels production will continue to cut ethanol's CI on ethanol's path to achieving net-zero emissions.

Due to the federal limitation on eligible acreage under the RFS, higher yields from feedstock producers like corn growers and because California's approved pathways for biofuels already account for lifecycle GHG emissions, we believe any cap on crop-based feedstocks and biofuels is not only unnecessary in the LCFS but would also undermine the progress and success of the LCFS.

Higher Blends of Ethanol Can Immediately Decarbonize and Reduce California's Gasoline Consumption

Low carbon fuels such as ethanol are a near- and medium-term solution. Ethanol is low-cost, readily available, and continually improving its carbon reduction score under the LCFS. In addition to CI reductions resulting from continuous improvements in farming practices, ethanol producers are investing in and developing pathways to achieve net negative carbon scores, including greater production efficiencies, more renewable power and carbon capture, utilization, and storage technologies (CCUS) as they compete to access the California market. Ethanol use in vehicles also provides immediate air quality benefits by reducing harmful air pollutants such as CO2, NOx, PM, and VOCs at higher blends such as E15 and E85.

E85 is a proven low carbon, high octane fuel with an already large network of fueling stations across California and the United States. According to the Alternative Fuels Data Center, there are 274 publicly available retail E85 fueling stations across the state.[8] Prior to the COVID-19 pandemic, California had experienced E85 consumption growth at an average compounded rate of 30 percent annually over the prior five years, with this growth backed by the stability of the LCFS. In 2021, E85 consumption grew to a record 62 million gallons, a 55 percent or 22-million-gallon increase from 2020, as California E85 demand continues to increase. There is clearly demand for ethanol's use and benefits beyond the octane it provides when blended with gasoline, including demand driven by the significant cost savings of E85 for consumers, which has been as much as $2 per gallon in recent months.

As California consumers are already taking advantage of the benefits of E85, the state is well positioned for a requirement that all PHEVs and remaining combustion vehicles be flex fuel vehicles

[7] Lee, Uisung & et al. ANL, "Retrospective Analysis of the U.S. Corn Ethanol Industry for 2005–2019: Implications for Greenhouse Gas Emission Reductions," (2021). https://onlinelibrary.wiley.com/doi/10.1002/bbb.2225

[8] https://afdc.energy.gov/fuels/ethanol_locations.html#/analyze?region=US-CA&fuel=E85&show_map=true

(FFVs) beginning with MY2026, as we have advocated for in the ACC II rulemaking. In fact, some FFVs in California are powered by a blend of 15 percent renewable naphtha with 85 percent ethanol. These vehicles use no fossil fuels, have improved air emissions profiles over other PHEVs, and have a low carbon intensity score.

In addition to E85, the adoption of E15 in California will immediately reduce gasoline consumption in the state, a stated climate goal. Currently, CARB is undergoing a Fuels Multimedia Evaluation for E15, an effort that is being conducted in partnership with NCGA, the Renewable Fuels Association, Growth Energy and USCAR. Recent vehicle emissions testing at UC Riverside found that blending 15 percent ethanol in gasoline significantly reduced most criteria air pollutants when compared to standard E10. Furthermore, E15 does not require any alteration to existing vehicle engines and has zero impact on automakers. NCGA strongly urges CARB to convene the Fuels Multimedia Working Group and continue working towards a January 2024 implementation of E15.

The reality is that legacy combustion vehicles will remain on the road in 2045. In multiple instances, CARB staff have publicly assumed that to be true in previous workshops and updates to the Board (see Figure 1). By utilizing alternative options for these legacy fleets, such as E15 and FFVs that employ E85 as an alternative to gasoline, California can avoid further air pollution that would otherwise be emitted, as the state transitions to a zero-emission fleet.

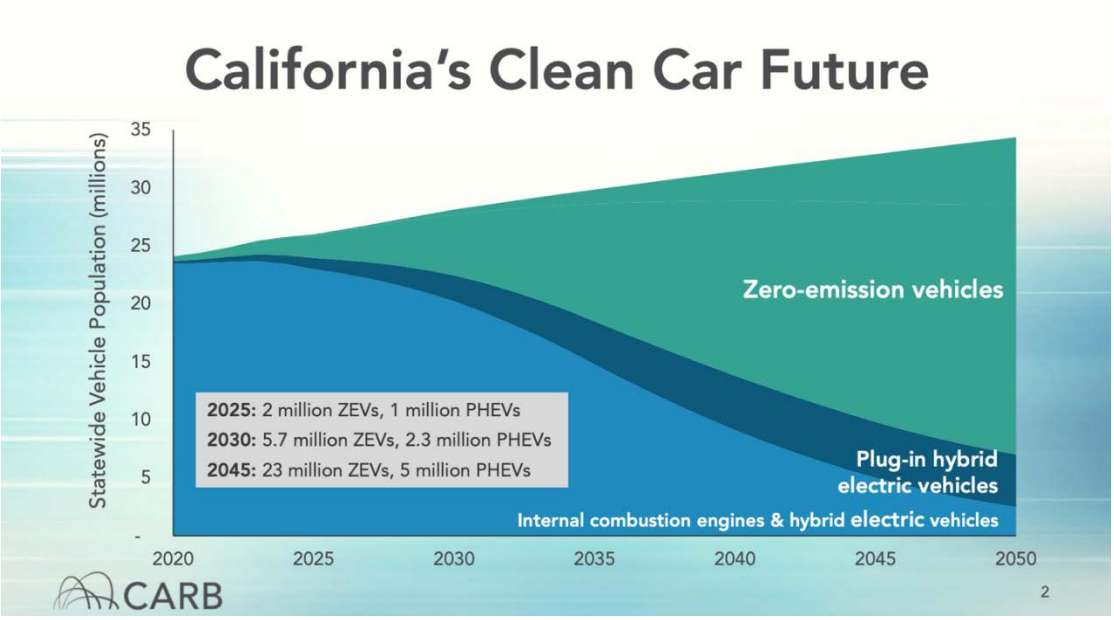


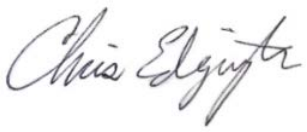
Figure 1 - Richard Corey's January 27, 2022, Presentation to the Board on CARB's 2022 Priorities

Corn farmers are proud of our leadership in expanding conservation and best management practices and are committed to further sustainability achievements. These improvements will continue to reduce the CI of ethanol. Ethanol can bridge the gap between petroleum-based fuels and electric vehicles. With Governor Newsom's Executive Order N-79-20 that creates a goal of 100 percent ZEV sales by 2035 and former Governor Brown's Executive Order B-55-18 that creates a goal to become

carbon neutral by 2045, now more than ever it is important to find GHG reductions that can make an immediate impact. Ethanol can achieve those immediate reductions.

Thank you for the consideration of our comments and we look forward to working with staff on these issues in the future.

Sincerely,



Chris Edgington, President
National Corn Growers Association