



September 19, 2022

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

RE: NCGA Comments on the August 18, 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 August 18 public workshop on Potential 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 transportation fuels.

Emission Factor Updates

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. Administering the LCFS with the benefit of the most recent data and science, including for carbon intensity measurement, supports the program's ongoing success for low carbon fuels.

As CARB considers emission factor updates, NCGA urges CARB to update the crop production data used for emission factors to quantify lifecycle GHG emissions of low carbon fuels. NCGA has previously commented on the need to consider recent assessments of biofuels, using updated data that demonstrate ongoing reductions in ethanol's carbon intensity (CI).^{1, 2} Updating crop production data used for emissions factors is an opportunity to include important new data.

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 includes land use change (LUC), which is currently assigned an impact of 7.4 grams of carbon per megajoule for corn ethanol. Because DOE/Argonne updates GREET 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.

¹ 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>

² 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>

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For example, Argonne’s recent analysis of GHG emissions reductions in corn ethanol between 2005 and 2019 shows a 15 percent reduction in GHG emission from corn production during that time. Furthermore, Argonne measured that the decline in GHG emissions from corn production contributed to the overall 23 percent decline in the CI of corn ethanol.³

For CARB, updating crop production data for emissions factors using the most recent GREET model that incorporates the most recent crop production practice and yield data from the U.S. Department of Agriculture (USDA) will support the ongoing accuracy and success of the LCFS.

Additional Carbon Reductions from Agriculture

At a high level, NCGA also urges CARB’s consideration of additional agricultural inputs in fuel pathway carbon intensity calculations. Currently there is no such incentive under the LCFS, and farmers who adopt lower carbon practices or investments are not rewarded through environmental credits. By aligning LCFS credit value with lower carbon farming practices, there is massive opportunity to improve the carbon performance on the farm. Furthermore, this approach is consistent with how average default values have been applied to the electricity grid and obligated parties under the program.

As the producers of the sustainable, primary feedstock for ethanol, corn farmers have demonstrated continuous improvements in farming practices and widespread adoption of production technologies that improve soil health and reduce GHG emissions, supporting lower carbon intensity of biofuels. For example, according to USDA’s Economic Research Service, farmers have increasingly moved to reduced tillage or no-till practices, away from conventional tillage, and are planting more cover crops. As of 2018, farmers operate 65 percent of planted corn acres as no-till or minimum-till.⁴ These changes in tillage practices help the soil retain nutrients and water, as well as store more carbon in the soil. Additional USDA data demonstrates a 50 percent increase in land planted to cover crops nationally between 2012 to 2017, with increases of more than 100 percent in top corn producing states including Iowa and Illinois.⁵

Additional federal investments, along with incentives from private carbon and ecosystems services markets, are poised to support ongoing carbon reductions from agriculture. Most recently, the U.S. Department of Agriculture announced awards of \$2.8 billion to 70 projects in the new Partnerships for Climate-Smart Commodities initiative last week.⁶ USDA projects these investments will expand climate-smart agriculture practices on millions of acres of working lands and sequester more than 50 million metric tons of carbon dioxide equivalent over the life of the projects. As part of the collaborative Farmers for Soil Health, NCGA was pleased USDA selected our joint project to receive up to \$95 million to support our goal of expanding land planted to cover crops to 30 million acres by 2030.

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, such as gasoline and diesel, and electric

³ 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>

⁴ U.S. Department of Agriculture, Economic Research Service, “Tillage Intensity and Conservation Cropping in the United States, September 2018; accessed at <https://www.ers.usda.gov/webdocs/publications/90201/eib-197.pdf?v=7027.1>

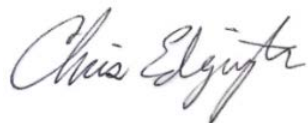
⁵ U.S. Department of Agriculture, Economic Research Service, “Cover Crops Trends, Programs and Practices in the United States, February 2021; accessed at https://www.ers.usda.gov/webdocs/publications/100551/eib-222_summary.pdf?v=3793.4

⁶ USDA Partnerships for Climate-Smart Communities. <https://www.usda.gov/climate-solutions/climate-smart-commodities>

vehicles. With California's ambitious carbon reduction goals, 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 as you continue efforts to update the LCFS.

Sincerely,

A handwritten signature in cursive script that reads "Chris Edgington". The signature is written in black ink and is positioned above the printed name.

Chris Edgington, President
National Corn Growers Association