



October 31st, 2017

Alexander Mitchell
Manager, Emerging Technology Section
Oil and Gas and GHG Mitigation Branch
Industrial Strategies Division
California Air Resources Board
1001 I Street P.O. Box 2815
Sacramento, CA 95812

Re: Applying Quantitative Methodology to U.S. Ethanol Production

Dear Mr. Mitchell:

The framework for carbon capture utilization and storage (CCUS) that the California Air Resources Board (ARB) seeks to establish within existing Low Carbon Fuel Standard (LCFS) and Cap and Trade (C & T) policies could position California to not only meet its own emission goals but support investment in carbon capture infrastructure development nationwide. The ethanol industry, as evidenced by the signatures below, shares an interest in deploying technology that reduces carbon emissions while maintaining economic objectives. We hope that by providing input to ARB, the development of the State's approach to regulating CCUS will not only allow for the broad participation of ethanol producers, but also help California implement state policy that drives national participation in carbon capture markets.

To achieve global emissions reductions, widespread deployment of carbon capture opportunities will be critical. Ethanol production presents a unique opportunity to be the first industry sector to capture and store carbon at scale because its carbon is biogenic and it is nearly 100% pure CO₂. Additionally, as ethanol has made significant contributions toward GHG reductions achieved within California's LCFS, enabling the capture, storage and utilization component from biogenically sourced carbon presents a meaningful opportunity.

Carbon capture utilization and storage (CCUS) has extraordinary potential for our nation and for California. Capturing biogenic carbon dioxide (CO₂) from ethanol plants for use in CO₂ enhanced oil recovery (EOR) and other geologic storage methods significantly reduces net CO₂ emissions on a lifecycle basis while enabling continued use of our domestic energy resources that contribute to low carbon standards. The framework for CCUS participation that ARB establishes within the broader context of the State's existing LCFS and C&T policies could position California to not only meet its own emissions goals cost-effectively, but to drive industry investment in carbon capture and CO₂ pipeline infrastructure nationwide. Private sector leaders comprised of ethanol refineries, midstream developers,



financers and EOR producers see the potential for California state policies to drive national investments that enable large-scale carbon management.

Within the last year, the Great Plains Institute for Sustainable Development assisted ethanol producers, midstream developers, and EOR producers in convening discussions about the opportunity for ethanol to participate in this market to manage carbon. Because of the purity and abundance of biogenic CO₂ in ethanol production, the ethanol industry realizes the large-scale opportunity at hand and has convened three different meetings across the U.S. to organize and engage. The ethanol industry shares a common interest in deploying technology and infrastructure that beneficially reduces carbon emissions while achieving other economic objectives and awaits leadership from ARB. The role and opportunity for ARB to establish criteria that allows for large-scale industry participation and carbon management cannot be overstated.

We look forward to working with ARB and providing input into the Quantification Methodology. We're eager to be a part of the solution and are excited about the unique opportunity to lead in large-scale carbon management.

Sincerely,

Ethanol Industry Participants for Simple Carbon Solutions

Tod Sneller
Nebraska Ethanol Board

Western Plains Energy, LLC

Doug Durante
Clean Fuels Development Coalition

Chad E. Kuhlers
C.O.O.
Golden Grain Energy, LLC

Archer Daniels Midland Company

Nick Bowdish
President & CEO
Siouxland Ethanol, LLC

Joe Kreutzer
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Prairie Horizon Agri Energy

Michael J. Chisam
President/CEO
Kansas Ethanol, LLC

White Energy

Brian T. Cahill
President/CEO
Southwest Iowa Renewable Energy

Steve Roe
Little Sioux Corn Processors

Derek Peine
General Manager



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