

July 27, 2021

The President The White House 1600 Pennsylvania Avenue, N.W. Washington, D.C. 20500

Dear Mr. President,

As members of the Renewable Fuels Association (RFA), we share your vision for decarbonizing the transportation fuels sector and we applaud your commitment to addressing climate change. We support your goals of achieving a 50 percent reduction in U.S. greenhouse gas (GHG) emissions by 2030 and reaching net zero emissions economywide by 2050.

Low-carbon renewable fuels like ethanol are already helping our nation confront climate change by significantly reducing GHG emissions from the transportation sector. In fact, since 2008, the use of ethanol and other renewable fuels in the United States has prevented nearly **1 billion metric tons** of GHG from entering the atmosphere.ⁱ

Today's ethanol already reduces GHG emissions by **52 percent**, on average, when compared directly to gasoline.ⁱⁱ Furthermore, many of us are already producing advanced and cellulosic ethanol that is certified by the California Air Resources Board as providing a **65-75 percent** GHG reduction compared to gasoline.ⁱⁱⁱ

But given the urgency of the climate crisis and the need to reasonably decarbonize, we can—and must—do more. Therefore, the producer members of the Renewable Fuels Association are committing today to the pursuit of the following carbon performance goals:

- By 2030, ensure that ethanol reduces GHG emissions by at least 70 percent, on average, when compared directly to gasoline. This equates to a 33 percent reduction in ethanol's average carbon footprint from 45 grams CO₂-equivalent per megajoule (g/MJ) today^{iv} to about 30 g/MJ by 2030.
- By 2050, ensure that ethanol achieves net zero lifecycle GHG emissions, on average. As ethanol producers continue to adopt carbon capture, utilization, and sequestration (CCUS) and other low- and no-carbon technologies between 2030 and 2050, U.S. ethanol can achieve **net carbon neutrality**, on average, by mid-century or even sooner.

Ethanol's carbon footprint continues to shrink rapidly, as new technology and innovation have improved the efficiency of the entire production process. In fact, a recent study by Department of Energy (DOE) scientists found that ethanol's carbon footprint shrunk by 23 percent between

2005 and 2019.^v While we are proud of these advances in efficiency and sustainability, many opportunities exist to deliver even greater GHG reductions in the near term.

In response to policies like the Renewable Fuel Standard, California Low Carbon Fuel Standard, and Oregon Clean Fuels Program, along with your recommitment to the Paris Agreement, the pace of low-carbon innovation and investment is accelerating in the renewable fuel sector. With the right policy signals, ethanol can achieve a net-zero carbon footprint in the years ahead, as the supply chain adopts CCUS technologies, uses more renewable electricity and biogas to power biorefineries, and expands carbon-efficient agricultural feedstock production practices. Innovative policies that encourage greater usage of renewable fuels will not only reduce the carbon footprint of our nation's fuel supply, but they will also inspire agricultural communities to deploy climate-smart practices that sequester carbon on farms as well.

Today's grain-based ethanol is already a low-carbon fuel that is helping to clean up our nation's transportation fuels. But with smart policy measures, including a commitment to rapidly increasing the availability of low-cost flex-fuel vehicles, ethanol can do even more. It can serve as an affordable zero-emissions fuel for light-duty cars and trucks, while also helping to decarbonize medium- and heavy-duty vehicles^{vi}, aviation, marine, and stationary power generation. Importantly, the fuel storage and distribution infrastructure already in place across the country can support rapid expansion of low- and no-carbon ethanol usage in a broad array of applications with very little additional investment.

Mr. President, RFA's members are committed to the goals of cutting ethanol's carbon footprint by an additional one-third by 2030 and reaching net zero emissions by 2050 or sooner. We look forward to working with your administration on the policy and regulatory actions—which include development of a national Clean Fuel Standard, support for CCUS, and deployment of more flex-fuel vehicles—that can make this ambitious vision a reality.

Sincerely,

Absolute Energy LLC *St. Ansgar, Iowa*

Ace Ethanol LLC Stanley, Wisconsin

Adkins Energy Lena, Illinois

Aemetis Inc. *Keyes, California*

Al-Corn Clean Fuel LLC *Claremont, Minnesota* Alto Ingredients Inc. – Pekin *Pekin, Illinois*

Alto Ingredients Inc. – Magic Valley Burley, Idaho

Alto Ingredients Inc. – Columbia Boardman, Oregon

Alto Ingredients Inc. – Stockton Stockton, California

Badger State Ethanol LLC *Monroe, Wisconsin*

Big River Resources LLC *West Burlington, Iowa*

Calgren Renewable Fuels LLC *Pixley, California*

Chippewa Valley Ethanol Co. Benson, Minnesota

CHS Inc. – Annawan Annawan, Illinois

CHS Inc. – Rochelle Rochelle, Illinois

CIE Marion, Indiana

Commonwealth Agri-Energy LLC Hopkinsville, Kentucky

Dakota Ethanol LLC Wentworth, South Dakota

E Energy Adams LLC Adams, Nebraska

East Kansas Agri-Energy LLC Garnett, Kansas

Fox River Valley Ethanol Oshkosh, Wisconsin

Golden Grain Energy LLC Mason City, Iowa

Grain Processing Corp. *Muscatine, Iowa*

Grain Processing Corp. *Washington, Indiana*

Granite Falls Energy LLC Granite Falls, Minnesota

Guardian Hankinson LLC Hankinson, North Dakota

Guardian Energy LLC Janesville, Minnesota

Guardian Lima LLC Lima, Ohio

Heartland Corn Products Winthrop, Minnesota

Highwater Ethanol LLC Lamberton, Minnesota

Husker Ag LLC Plainview, Nebraska

KAAPA Ethanol LLC *Minden, Nebraska*

KAAPA Ethanol Ravenna LLC Ravenna, Nebraska

Lincolnland Agri-Energy LLC *Palestine, Illinois*

Mid America Bio Energy & Commodities, LLC North Platte, Nebraska

Mid-Missouri Energy LLC Malta Bend, Missouri

New Energy Freedom Mason City, Iowa

Parallel Products Louisville, Kentucky

Parallel Products Ontario, California

Quad County Corn Processors Galva, Iowa

Redfield Energy LLC *Redfield, South Dakota*

Ringneck Energy LLC *Onida, South Dakota*

Show Me Ethanol LLC *Carrollton, Missouri*

Southwest Iowa Renewable Energy LLC Council Bluffs, Iowa

Trenton Agri Products LLC *Trenton, Nebraska* West Coast Waste Inc. Madera, California

Western New York Energy LLC Medina, New York

Western Plains Energy LLC Oakley, Kansas

CC:

Michael S. Regan, Administrator, U.S. Environmental Protection Agency Jennifer Granholm, Secretary, U.S. Department of Energy Thomas J. Vilsack, Secretary, U.S. Department of Agriculture Gina McCarthy, National Climate Advisor

iii California Áir Resources Board (2021), LCFS Pathway Certified Carbon Intensities.

¹ Unnasch. S. and D. Parida (2021), GHG Reductions from the RFS2 – A 2020 Update. Life Cycle Associates Report LCA.6145.213.2021. Prepared for Renewable Fuels Association.

ⁱⁱ Lee, U., Kwon, H., Wu, M. and Wang, M. (2021), Retrospective analysis of the U.S. corn ethanol industry for 2005–2019: implications for greenhouse gas emission reductions. Biofuels, Bioprod. Bioref. <u>https://doi.org/10.1002/bbb.2225</u>. ("The reduction in the 58 gCO₂e/MJ CI of corn ethanol in 2005 to 45 g/MJ in 2019 (plus the LUC value of 7.4 g/MJ) provides significant GHG emission reductions compared to the CI of 93 gCO₂e/MJ for the US average petroleum gasoline blendstock.")

https://ww2.arb.ca.gov/resources/documents/lcfs-pathway-certified-carbon-intensities (viewed June 17, 2021) ^{iv} Lee, U., Kwon, H., Wu, M. and Wang, M. (2021), Retrospective analysis of the U.S. corn ethanol industry for 2005–2019: implications for greenhouse gas emission reductions. Biofuels, Bioprod. Bioref. <u>https://doi.org/10.1002/bbb.2225</u> ^v Id.

^{vi} See, for example, ClearFlame Engine Technologies, which has developed diesel-style heavy-duty engines that run on low-carbon ethanol. <u>https://www.clearflameengines.com/</u>