

# Pledging a Net-Zero Future

**In a July 2021 letter to President Joe Biden, RFA members from across the country memorialized their commitment to ensuring ethanol achieves a net-zero carbon footprint, on average, by mid-century or sooner.**

Specifically, RFA's board of directors—which is exclusively composed of renewable fuel producers—unanimously committed to the following goals in what was an ethanol-industry first:

- By 2030, ensure that ethanol reduces GHG emissions by at least 70 percent, on average, when compared directly to gasoline.
- By 2050, ensure that ethanol achieves net zero lifecycle GHG emissions, on average.

RFA members firmly believe that ethanol can achieve a net-zero carbon footprint in the next three decades as the supply chain embraces new practices and technologies, such as adoption of carbon capture, utilization and sequestration (CCUS) technologies, use of more renewable electricity and biogas to power biorefineries, and expansion of carbon-efficient agricultural feedstock production practices.

To support the achievement of its goals, RFA encouraged the Biden administration and Congress to move forward with a national clean fuel standard, support for CCUS and deployment of more flex-fuel vehicles.

**“Every kilowatt-hour that we use from the wind turbine has a direct effect on decarbonizing our production process.”**

– Derek Peine, General Manager,  
Western Plains Energy LLC

## By the Numbers

Ethanol has a proven track record of cutting GHG emissions from transportation.

- The use of ethanol and other biofuels under the Renewable Fuel Standard has reduced U.S. transportation sector GHG emissions by 980 million metric tons (MT) since 2008, according to a report by Life Cycle Associates.
- In 2021 alone, the use of ethanol reduced GHG emissions by 54.5 million MT, equivalent to taking 12 million cars off the road for an entire year.

Today's corn ethanol reduces GHG emissions by half compared to gasoline.

- According to the Department of Energy's Argonne National Laboratory, typical corn ethanol provides a 44-52 percent GHG savings compared to gasoline.
- Similarly, researchers from Harvard, MIT, and Tufts concluded that today's corn ethanol offers an average GHG reduction of 46 percent versus gasoline.
- An analysis by USDA found that some biorefineries could produce ethanol that offers a 70 percent GHG reduction versus gasoline as soon as 2022.

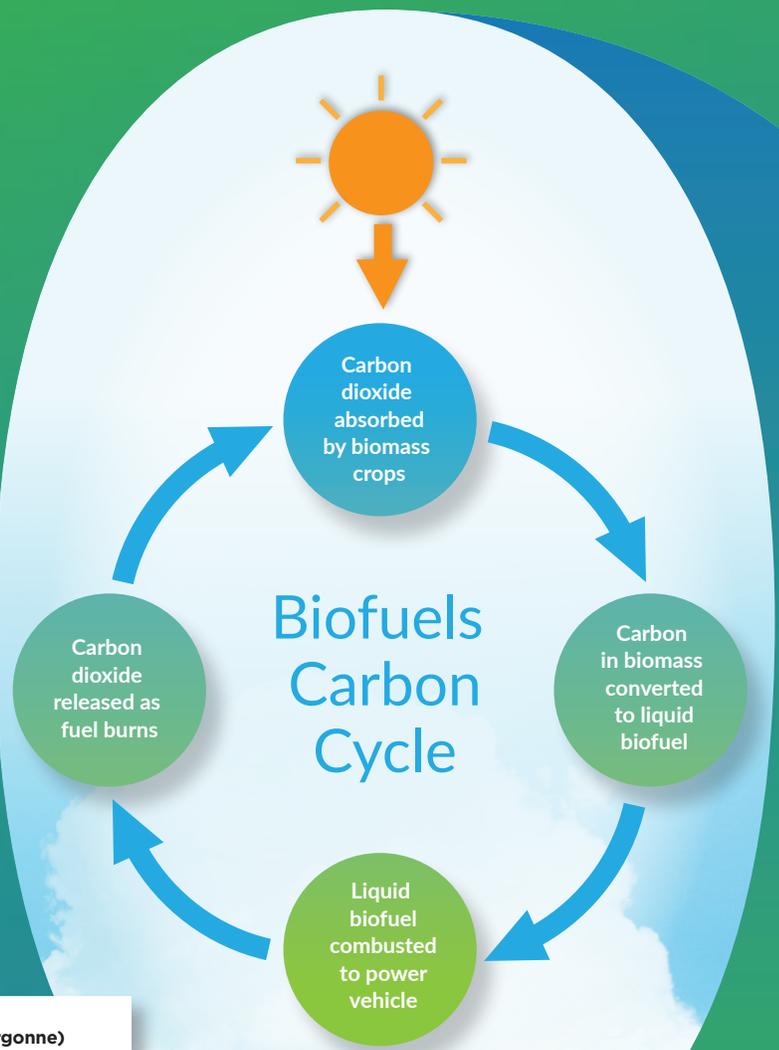
## Fulfilling the Promise

**RFA's member companies aren't just talking the talk about net-zero—they are walking the walk. Ethanol producers are already taking concrete steps toward net-zero emissions, including installation of on-site wind turbines and solar arrays to generate electricity, use of combined heat and power systems, and sourcing biogas to replace fossil natural gas. In addition, carbon capture, utilization, and sequestration (CCUS) projects are underway at several facilities.**

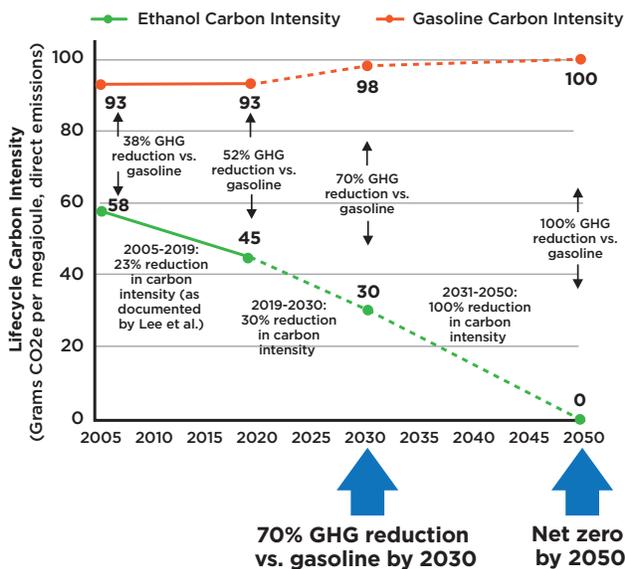


“Complex challenges call for leadership and innovative solutions. The carbon reduction goals announced by RFA today mark a bold commitment to innovation, investment, and continuous improvement in the renewable fuels sector. Ethanol producers are already producing America’s top low-carbon fuel and are eager to do their part to decarbonize our transportation sector and move our nation toward net-zero emissions.”

— RFA Chairperson  
Jeanne McCaherty,  
July 27, 2021



**ACTUAL 2005 and 2019 ETHANOL CARBON INTENSITY (DOE-Argonne) AND RFA GOALS FOR 2030 AND 2050**



\* 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, Bioproducts & Biorefining*.