

ETHANOL: A Low-Carbon Solution in the Fight Against Climate Change

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

- ❑ The use of ethanol and other biofuels under the Renewable Fuel Standard (RFS) 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 2020 alone, ethanol [reduced GHG emissions](#) by **47.3 million MT**, equivalent to taking **10.1 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% 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%** versus gasoline.
- ❑ Analysis by USDA [found](#) that some biorefineries could produce ethanol that offers a **70% GHG reduction** versus gasoline as soon as 2022.

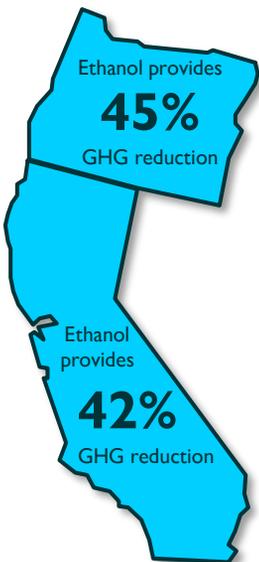
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Ethanol has generated significant carbon reductions under the California Low Carbon Fuel Standard (LCFS).

- ❑ From 2011 to 2020, ethanol [cut GHG emissions](#) from the California transportation sector by **27 million MT**, more than any other fuel used to meet LCFS requirements.
- ❑ According to the [California Air Resources Board](#), ethanol used in the state in 2020 reduced GHG emissions by **42%** compared to gasoline.

Ethanol is also the leading source of carbon reductions achieved under the Oregon Clean Fuel Standard.

- ❑ Since the CFS program began in 2016, the use of ethanol has reduced GHG emissions by **2.7 million MT**, or **49% of total reductions**.
- ❑ According to the [Oregon Dept. of Environmental Quality](#), ethanol used in the state in 2020 cut GHG emissions by **45%** compared to gasoline.



Ethanol is on a path to achieve net zero GHG emissions by 2050 or sooner.

- ❑ With the adoption of CCUS; biogas substitution; and climate-smart farming practices, corn ethanol is expected to achieve [net zero emissions](#), on average, by 2050 or sooner.