UNDERSTANDING

GLOBAL CARBON REDUCTION OPPORTUNITIES FOR U.S. FUEL ETHANOL PRODUCERS

BRAZIL

-LCFS

-Plants must meet sustainability criteria, which include targets for the reduction of GHG emissions and low carbon farming practices.

-Current Ethanol Demand: 220 million gallons

COLOMBIA

-CI reduction requirement

-75% baseline average

-Current Ethanol Demand: 180 million gallons

JAPAN

-CI reduction requirement & ISCC PLUS Certification

-55% CI reduction compared to gasoline

-Current Ethanol Demand: 218 million gallons

EUROPEAN UNION

-CI reduction requirement & ISCC EU Certification

- 50% CI reduction requirement for biofuels produced in operations that began production on or before Oct. 5, 2015

60% CI reduction requirement for biofuels produced in operations that began production after Oct. 5, 2015

-Current Ethanol Demand: 400 million gallons

ALBERTA

-CI reduction requirement

-25% CI reduction compared to gasoline

-Current Ethanol Demand: 165 million gallons

BRITISH COLUMBIA

-LCFS

-67% CI reduction compared to gasoline

-Current Ethanol Demand: 125 million gallons

ONTARIO

-CI reduction requirement

-45% CI reduction compared to gasoline

-Current Ethanol Demand: 400 million gallons

QUEBEC

-CI reduction requirement

-45% CI reduction compared to gasoline

-Current Ethanol Demand: 240 million gallons

www.grains.org/bioethanol

LOW CARBON INTENSITY (CI) ETHANOL

USGC defines low CI ethanol as ethanol produced using enhanced techniques that reduces the amount of energy consumed during production, reducing the lifecycle greenhouse gas (GHG) emissions of the fuel.

LOW CARBON FUEL STANDARDS (LCFS)

Low carbon fuel standards, or clean fuel standards, already employed in different forms by several states and nations, work by requiring reductions in average carbon intensity across the transport sector.

INTERNATIONAL SUSTAINABILITY AND CARBON CERTIFICATION (ISCC)

ISCC is a globally applicable sustainability certification system and covers all kinds of agricultural and forest biomass, biogenic waste and residues, non-biological renewable materials and recycled carbon-based materials. Participation in this certification system allows ethanol producers to demonstrate compliance with the sustainability and GHG emissions criteria of the EU and Japan.

RENOVABIO

The RenovaBio program was launched in 2019 as Brazil's national biofuels policy. Its purpose is to acknowledge the significance of biofuels in the country's energy matrix and aid in reducing GHG emissions by regulating biofuel production, commercialization and utilization. Participation in the RenovaBio program allows ethanol producers to certify the sustainability of their biofuel production for the sale and trade of decarbonization credits (CBios).