

SUSTAINABLE FUELS

Biotechnology is decarbonizing transportation

In the United States, the transportation sector emits more greenhouse gases than any other. Biotechnology is creating sustainable fuels for the road, air and sea made from plants, waste and other sustainable sources that emit less carbon. These sustainable fuels, including advanced and cellulosic biofuels, are replacing petroleum, increasing U.S. energy security, improving environmental and human health, and strengthening the bioeconomy.

Policy Position

The advancement of sustainable fuels benefits rural communities and farmers by creating new markets for crops. For the benefits of these sustainable fuels to be realized, however, policies to support the advancement of the industry are required.

Low Carbon Fuel Standards

State low carbon fuel standards are a proven driver in decarbonizing transportation. As Congress looks for solutions, a feedstock and technology neutral LCFS could drive greater investment and consumption of sustainable fuels, including in aviation.

Renewable Fuel Standard

- ❖ EPA's unwarranted expansion of small refinery exemptions (SRE) while setting them retroactively creates uncertainty in the Renewable Fuel Standard. These waivers have undermined the statute and congressional intent, putting investments made by the industry at risk preventing growth in advanced biofuels as intended. EPA must uphold the intent of the RFS and provide full transparency in the SRE process to reinstall confidence in the investor community.
- ❖ Delays in approvals for new biofuel production pathways has undercut commercialization efforts and investment. EPA must rapidly approve new pathways for advanced and cellulosic biofuels, such as commercially ready technologies like cellulosic ethanol from corn kernel fiber.

Tax Credits

Tax credits are critical to biofuel producers to build facilities and invest in research and development. New, long-term tax incentives are needed to drive new green energy breakthroughs and enable alternatives such as Sustainable Aviation Fuels (SAF) to become firmly established.

Key Points

- ✓ The **RFS drives billions of dollars of investment and economic activity** across the U.S. and supports more than 852,000 American jobs.
- ✓ Biofuel production and use creates a nearly **\$20 billion market for U.S. agriculture**, according to USDA.
- ✓ According to the USDA and the consulting firm ICF, today's **ethanol production reduces greenhouse gas emissions by 43 percent** compared to gasoline. DOE's National Argonne Laboratory shows biodiesel and renewable diesel reduce emissions by 72 percent and energy crops have the **potential to reduce emissions by 101 to 115 percent**.
- ✓ According to WHO, 4.2 million deaths occur every year due to exposure to outdoor air pollution. The American Lung Association, Upper Midwest Region found **higher volumes of biofuels can reduce ozone-forming pollutants and evaporative emissions**.
- ✓ Since 2011, the **California LCFS has prevented more than 13.7 billion gallons of petroleum from being combusted** on the state's roadways - equaling 38 million tons of carbon pollution. This policy has increased the value of the clean fuels market by an estimated \$2.8 billion.
- ✓ The aviation industry is utilizing biofuels in the development of sustainable aviation fuel (SAF) and has shown that these fuels have reduced the carbon footprint of aviation fuel by up to 80 percent over the full lifecycle.