BIO ISSUE BRIEF

Biotechnology Innovation Organization

The Renewable Fuel Standard

Issue Background

The Renewable Fuel Standard (RFS) sets a floor for biofuel use in the U.S. gasoline and diesel fuel markets. By requiring annually increasing volumes of biofuel and displacing petroleum, the program builds rural prosperity as it increases U.S. energy security and improves environmental health. Biofuel production creates new opportunities for biotech innovation: increasing crop productivity, growing new biomass resources, improving biofuel production efficiency, and commercializing new advanced biofuels.

Congress adopted the RFS program in 2005 and expanded it in 2007, adding requirements for cellulosic and advanced biofuels – which over their production lifecycle reduce carbon emissions by 50 percent or more compared to gasoline. Congress set goals for the production and use of 36 billion gallons of biofuel, including 21 billion gallons of advanced and cellulosic biofuels. Each year, the Environmental Protection Agency (EPA) evaluates the production capacity for these biofuels and adjusts the statutory standards. After 2022, EPA will set annual standards based on criteria laid out in the law, such as the environmental and rural development benefits of biofuel production and U.S. energy security.

Policy Position

Bringing advanced and cellulosic biofuels to market requires stable, long-term policy. Conventional biofuel producers have emerged as leading investors in new advanced biofuel technologies. To maintain an environment that supports ongoing investment, policy makers should:

- **Oppose Unwarranted Legislative or Regulatory Changes to the RFS Program:**
  - The RFS is a success in building biofuel production capacity and use; so-called reforms designed to benefit one group of stakeholders over others are not needed.
  - Policy instability – including frequent proposals to change the program rules midstream – chills the investment climate and undercuts commercialization of advanced biofuels.
- **Encourage EPA To Rapidly Approve New Biofuel Technologies and New Production Facilities:**
  - Advanced and cellulosic biofuel producers face long waits for EPA to approve new biofuel production pathways (the combination of renewable raw material, conversion technology, and process energy requirements). These delays undercut investments and commercialization efforts.
  - Additionally, newly built or recently expanded biorefineries face unwarranted delays in obtaining EPA's approval to begin generating qualifying gallons of biofuel. Without EPA's approval, advanced and cellulosic biofuels cannot reach consumers.
- **Open Markets Further for New Biofuels and Fuel Blends:**
  - Remove the regulatory bias in the gasoline standards between E10 and E15 blends.
  - Open the program to new biotech-based processes that use waste carbon to produce clean fuels.

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.
- ✓ Over the first 12 years of the RFS program, biofuels displaced nearly 2.5 billion barrels of imported oil and reduced greenhouse gas emissions by 780 million metric tons.
- ✓ According to USDA and ICF, today's ethanol production reduces greenhouse gas emissions by 43 percent compared to gasoline.
- ✓ In 2007, one acre of corn could produce 376.75 gallons of ethanol. By 2017, with biotech-based improvements to crop yields and ethanol production, one acre of corn can produce 494.5 gallons of ethanol.[1]
- ✓ America is leading the world in the development of cellulosic biofuels. In 2017, U.S. transportation fuel contained more than 250 million gallons of cellulosic biofuels.

[1] 2007 = 150.7 bushels/acre multiplied by 2.5 gallons ethanol/bushel. 2017 = 176.6 bushels/acre multiplied by 2.8 gallons/bushel.