



January 21, 2025

Re: Renewable Fuel Standard (RFS) Program: Partial Waiver of 2024 Cellulosic Biofuel Volume Requirement and Extension of 2024 Compliance Deadline

Agency/Docket Number: EPA-HQ-OAR-2024-0411
RIN: 2060-AW46

Taxpayers for Common Sense (TCS), National Taxpayers Union (NTU), R Street Institute, U.S. Public Interest Research Groups (PIRG), Environment America, and Friends of the Earth appreciate the opportunity to comment on the notice of proposed rulemaking published in the Federal Register on December 12, 2024, regarding the “Renewable Fuel Standard (RFS) Program: Partial Waiver of 2024 Cellulosic Biofuel Volume Requirement and Extension of 2024 Compliance Deadline.”

Introduction

Our organizations have long been critical of the Renewable Fuel Standard (RFS) program due to its market distortions, increased food and feed costs for consumers, and influence on crop production decisions that have led to the conversion of millions of acres of carbon-rich wetlands, grasslands, and forests into biofuel feedstock production areas.

On December 5, 2024, the Environmental Protection Agency (EPA) proposed a rule to partially waive the 2024 cellulosic biofuel volume requirement, reducing it from 1.09 billion RINs to 0.88 billion RINs. Notably, the proposed rule does not revise the volume requirements for other categories of fuel, including total renewable fuel.

Congress never intended the RFS to rely heavily on food- and feed-based biofuel that increases prices for consumers and worsen climate change. We urge the EPA to minimize harm to consumers, taxpayers, and the environment by ensuring that the final rule does not encourage additional production or consumption of food- and feed-based biofuel, such as corn ethanol and soy biodiesel.

Background

The Renewable Fuel Standard (RFS) is a federal mandate requiring specific volumes of biofuel to be blended into U.S. transportation fuels, such as gasoline and diesel, each year. The EPA regulates compliance with the RFS using a tradable credit system. Obligated parties—fuel refiners and importers—can fulfill their obligations by either blending the required biofuel volumes or purchasing excess credits from others. As of October 2022, there were 342 registered RIN-generating facilities in the U.S. and 146 petroleum refineries producing transportation fuel.¹

The RFS establishes volume requirements in two categories: conventional biofuel, primarily met with corn-based ethanol, and advanced biofuel, which is further divided into set volumes for biomass-based diesel (primarily soy-based biodiesel), cellulosic biofuel, and “other” advanced biofuel.

The first RFS was established in the Energy Policy Act of 2005 (P.L. 109-58) and required 7.5 billion gallons (BG) of renewable fuels to be blended by 2012. The Energy Independence and Security Act of 2007 (P.L. 110-140) significantly expanded the RFS, mandating 9 BG of biofuel consumption by 2008, rising to 36 BG in 2022.

Advanced biofuel, especially cellulosic biofuel, has consistently fallen short of statutory targets. Since 2010, the EPA has repeatedly exercised its waiver authority to reduce the cellulosic biofuel volume requirements. Starting in 2014, the EPA has also routinely reduced the required volumes for advanced biofuel and total renewable fuel.

The lack of cellulosic biofuel production is evident in the EPA’s final RFS volumes for 2023-2025. For example, the 2023 cellulosic biofuel mandate represented just 5% of the target Congress set in 2007. Despite this already reduced target, the EPA’s proposed rule further lowers the 2024 cellulosic biofuel volume requirement.

However, by lowering the 2024 cellulosic biofuel volume requirement without similarly reducing the advanced biofuel or total renewable fuel volume requirements, the EPA’s proposed rule will require an additional 210 million RINs of non-cellulosic advanced biofuel. Since soy-based biodiesel accounted for 25% of advanced biofuel consumption under the RFS in 2022, it is likely that this 210-million-RIN gap will be filled by soy-based biodiesel.² This shift would impose significant costs on taxpayers, consumers, and the environment.

We recommend the EPA adopt a final rule that does not increase the production or consumption of feed- and food-based biofuel, particularly corn ethanol and soy-based biodiesel. While our policy preference is for the EPA to terminate the RFS program altogether, if the agency chooses to move

¹ Environmental Protection Agency, “Regulatory Impact Analysis - RFS Program Standards for 2023-2025 and Other Changes,” 9.1 Proximity Analysis of Facilities Participating in the RFS Program, July 2023. <https://www.regulations.gov/document/EPA-HQ-OAR-2021-0427-1113>

² Environmental Protection Agency, “Regulatory Impact Analysis - RFS Program Standards for 2023-2025 and Other Changes,” Table 2.2-1, July 2023. <https://www.regulations.gov/document/EPA-HQ-OAR-2021-0427-1113>

forward with the proposed rule, we strongly urge it to minimize harm to taxpayers, consumers, and the climate. This can be achieved by reducing both the advanced biofuel volume requirement and the total renewable fuel volume requirement by an amount equal to the reduction in the cellulosic biofuel volume requirement in the final rule.

The Renewable Fuel Standard: Adverse Consequences for Taxpayers, Consumers, and the Environment

Distorted Markets and Failure to Spur the Production of Cellulosic Biofuel

The RFS distorts transportation fuel markets, picking winners and losers while driving greater production of specific types of transportation fuel. According to the EPA’s Regulatory Impact Analysis (RIA) of the 2023-2025 volume mandates, the RFS is projected to increase biofuel consumption by more than 10 billion gallons over the three-year period.³ The largest estimated increases are for soybean oil biodiesel (755–841 million gallons per year) and corn starch ethanol (660–787 million gallons per year).

Corn starch ethanol and soybean oil biodiesel have historically dominated biofuel consumption under the RFS and will likely continue to do so. In 2022, corn-based ethanol accounted for 78% of biofuel consumed under the program (14.03 billion gallons), while soy-based biodiesel made up 6% (995 million gallons).⁴

By contrast, cellulosic biofuel has fallen short of congressional expectations. Despite a guaranteed market and decades of taxpayer subsidies, the cellulosic biofuel industry has struggled due to higher-than-expected feedstock and capital costs and difficulty scaling up technology to commercial scale.⁵ Actual production of cellulosic biofuel through 2022 has been significantly less than the statutory volumes. Cellulosic biofuel represented just 3.7% of biofuel consumed under the RFS in 2022.⁶

This perennial failure to develop a robust cellulosic biofuel market leaves conventional biofuel—corn ethanol and soy biodiesel—to fulfill an increasing share of the RFS mandate. These fuels impose significant costs on American consumers, while delivering questionable environmental benefits.

Increased Food and Feed Prices for Consumers

The RFS has a well-documented history of driving up crop prices, contributing to global food price volatility. With 34% of U.S. corn supply directed to ethanol production and 44% of soybean oil diverted to biofuel,⁷ the RFS influences both crop prices and land-use decisions.

³ Environmental Protection Agency, “Regulatory Impact Analysis - RFS Program Standards for 2023-2025 and Other Changes,” Table 3.2-2, July 2023. <https://www.regulations.gov/document/EPA-HQ-OAR-2021-0427-1113>

⁴ Environmental Protection Agency, “Regulatory Impact Analysis - RFS Program Standards for 2023-2025 and Other Changes,” Table 2.2-2, July 2023. <https://www.regulations.gov/document/EPA-HQ-OAR-2021-0427-1113>

⁵ Environmental Protection Agency, “Regulatory Impact Analysis - RFS Program Standards for 2023-2025 and Other Changes,” 1.5 Cellulosic Biofuel, July 2023. <https://www.regulations.gov/document/EPA-HQ-OAR-2021-0427-1113>

⁶ Environmental Protection Agency, “Regulatory Impact Analysis - RFS Program Standards for 2023-2025 and Other Changes,” Table 2.2-2, July 2023. <https://www.regulations.gov/document/EPA-HQ-OAR-2021-0427-1113>

⁷ U.S. Department of Agriculture, “World Agricultural Supply and Demand Estimates,” December 2024. <https://www.usda.gov/oce/commodity/wasde/wasde1224v2.pdf>

The EPA's RIA projects that the RFS volume mandates for 2023-2025 will increase the price of corn by \$0.12-\$0.14 per bushel and soybean oil by \$0.31-\$0.50 per pound. Similar price increases are expected for sorghum, barley, oats, and distillers grains. The EPA acknowledges these higher commodity prices "may in turn have a ripple impact on food prices and the many other products produced from these commodities." Annual food cost increases are estimated at 0.44%-0.61% for 2023, 2024, and 2025.

As demand for renewable diesel, biodiesel, and other biofuel grows, the diversion of soybean oil and other vegetable oils from food production to fuel production will exert additional upward pressure on food prices. The U.S. Department of Agriculture's December 2024 *World Agricultural Supply and Demand Estimates* (WASDE) report underscores this trend. The use of soybean oil for biofuel is projected to rise from 12.51 billion pounds in 2022/23 to 14 billion pounds in 2024/25, increasing its share of the U.S. soybean oil supply from 44% to 46%.⁸ This escalating reliance on soybean oil for biofuel production will further strain commodity markets, heighten food costs, and burden taxpayers and consumers alike.

Negative Environmental Impacts

One of the primary objectives of the RFS was to reduce greenhouse gas (GHG) emissions. However, the EPA's Regulatory Impact Analysis (RIA) found that the final 2023-2025 volume mandates would increase GHG emissions compared to the alternative of ending the RFS mandate.⁹

Corn-based biofuel, the primary biofuel consumed under the RFS, has significant environmental impacts. Some estimates suggest that corn ethanol may generate higher GHG emissions than petroleum. According to the EPA's RIA, "criteria pollutant emissions from corn ethanol production are substantially higher than for gasoline on a mass per gasoline equivalent gallon basis."

Much of the estimated increase in emissions under the RFS is driven by land-use change. Peer-reviewed studies have documented the conversion of millions of acres of carbon-rich wetlands, grasslands, and forests to crop production—primarily corn and soybeans—used for biofuel production.¹⁰ This land conversion not only releases stored carbon but also degrades soil quality, increases erosion, and promotes nitrogen loss, while negatively impacting water quality and biodiversity.¹¹

The RFS also exacerbates water scarcity. Ethanol and biodiesel production are "substantially more water intensive than the petroleum fuels they would displace," according to the EPA's RIA.

⁸ Ibid.

⁹ Environmental Protection Agency, "Regulatory Impact Analysis - RFS Program Standards for 2023-2025 and Other Changes," Table 4.2.3-9 and Table 4.2.3-13, July 2023. <https://www.regulations.gov/document/EPA-HQ-OAR-2021-0427-1113>

¹⁰ Tyler J Lark et al, "Cropland expansion outpaces agricultural and biofuel policies in the United States," April 2015. <https://iopscience.iop.org/article/10.1088/1748-9326/10/4/044003/meta>

¹¹ Environmental Protection Agency, "Biofuels and the Environment: Third Triennial Report to Congress (External Review Draft)," January 2023. <https://assessments.epa.gov/biofuels/document/&deid=355339>

Producing one gallon of corn ethanol requires an average of 76 gallons of water, compared to 5.7 gallons for petroleum-based gasoline.¹²

By incentivizing the conversion of carbon-rich lands to biofuel feedstock production, the RFS undermines federal climate mitigation programs, such as agricultural conservation efforts that encourage farmers to plant grass buffers, retire sensitive lands, and restore wetlands.

Additional Taxpayer Subsidies for Biofuel and Biofuel Infrastructure

In addition to mandating biofuel use, the federal government supports biofuel producers and distributors through favorable treatment under the tax code, tariff protections, infrastructure subsidies, and other taxpayer-funded subsidies.

Biofuel producers benefit from numerous tax credits, including the Second Generation Biofuel Producer Credit (Sec. 40(b)(6)) and the Biodiesel Tax Credit (Sec. 40A). The Inflation Reduction Act of 2022 (P.L. 117-169) created new credits for transportation fuels that meet GHG reduction criteria, including the Clean Fuel Tax Credit (Sec. 45Z). This sliding-scale tax credit offers up to \$0.20 per gallon for non-aviation fuel and \$0.35 per gallon for aviation fuel,¹³ provided the fuel's emissions rate does not exceed 50 grams of CO₂ equivalent per million British thermal units. These credits will likely subsidize food- and feed-based biofuel, such as corn ethanol, with the 45Z tax credit alone projected to cost taxpayers \$19.1 billion from FY2025-2029.

The U.S. Department of Agriculture (USDA) also provides significant biofuel subsidies. Programs like the Bioenergy Program for Advanced Biofuels (BPAB) offer annual payments for biofuel production, and trade initiatives like the Market Access Program support agricultural exports, including corn ethanol.

Infrastructure subsidies for biofuel are also substantial. Programs such as the Biofuel Infrastructure Partnership (BIP) and the Higher Blends Infrastructure Incentive Program (HBIIIP) have awarded over \$800 million in grants to install or upgrade fuel dispensers, storage tanks, and other related equipment. From 2011 to 2022, the USDA also distributed \$3.24 million in grants through the Rural Energy for America Program (REAP) for biofuel infrastructure projects, including ethanol blender pumps.¹⁴

Additionally, the tax code provides further incentives. The Alternative Fuel Vehicle Refueling Property Credit (Sec. 30C) offers a 30% tax break for purchasing "clean fuel" refueling or electric vehicle charging equipment. This tax credit is estimated to cost taxpayers \$11.3 billion from FY2024-2033.¹⁵

¹² Ibid.

¹³ Taxpayers for Common Sense, "Section 45Z: Clean Fuel Production Credit," August 2024.

<https://www.taxpayer.net/energy-natural-resources/section-45z-clean-fuel-production-credit/>

¹⁴ Taxpayers for Common Sense, "Biofuel Infrastructure Subsidies," August 2022.

<https://www.taxpayer.net/agriculture/biofuel-infrastructure-subsidies/>

¹⁵ Taxpayers for Common Sense, "TCS Comments on Alternative Fuel Vehicle Refueling Property Credit," November 2024. <https://www.taxpayer.net/energy-natural-resources/tcs-comments-on-alternative-fuel-vehicle-refueling-property-credit/>

Lack of EPA Authority to Waive Mid-Year Cellulosic Volumes

Furthermore, the Clean Air Act 211(o)—the RFS statute—provides EPA with the authority to waive RFS volume requirements when there is an "inadequate domestic supply" of renewable fuel. In its proposed rule, EPA has failed to demonstrate that the U.S. currently has an inadequate domestic supply of renewable fuel as a whole. EPA admits in its proposed rule that advanced biofuel volumes are projected to exceed RFS volumes, and there currently is not a shortage of other biofuel such as corn ethanol. A separate waiver in the RFS can be utilized to waive cellulosic biofuel volumes specifically, but the adjustments must be finalized by November 30, prior to the upcoming compliance year. To summarize, EPA has not offered adequate evidence in its proposed rule to support use of the inadequate domestic supply waiver authority.

Conclusion

For these reasons, the EPA's modified Renewable Volume Obligations (RVOs) should be set at levels that avoid market distortions leading to the loss of carbon-rich land to crop production, increased greenhouse gas (GHG) emissions, higher taxpayer spending on biofuel, volatile food prices, and other negative impacts on taxpayers and consumers.

The RFS continues to impose significant costs on taxpayers, American consumers, and the environment. It has failed to stimulate meaningful production of cellulosic biofuel, instead providing a market guarantee for the well-established ethanol and soy biodiesel industries. The EPA's proposed rule is just another example of how the RFS is failing to meet its intended purposes laid out in the 2007 energy bill. The EPA must ensure that its final rule does not increase the production and consumption of corn ethanol or soy-based biodiesel.

Thank you for considering our comments. We look forward to continued engagement on this important issue.

Taxpayers for Common Sense (TCS)
National Taxpayers Union (NTU)
R Street Institute
U.S. Public Interest Research Groups (PIRG)
Environment America
Friends of the Earth