

July 23, 2018

TO: Members, Subcommittee on Environment

FROM: Committee Majority Staff

RE: Hearing entitled “Examining Renewable Identification Numbers under the Renewable Fuel Standard.”

I. INTRODUCTION

The Subcommittee on Environment will hold a hearing on July 25, 2018, at 9:15 a.m. in 2322 Rayburn House Office Building. The hearing is entitled “Background on Renewable Identification Numbers under the Renewable Fuel Standard.” The hearing will involve, among other things, a discussion of how Renewable Identification Numbers (RINs) work and their place within the Renewable Fuel Standard (RFS), EPA’s involvement with RINs, and factors influencing the RINs marketplace.

II. WITNESSES

- Brent Yacobucci, Energy and Minerals Manager, Congressional Research Service;
- Sandra Dunphy, Energy Compliance Director, Weaver and Tidwell, L.L.P.;
- Paul Niznik, Consultant, Argus Consulting Services;
- Gabriel Lade, Assistant Professor of Economics, Iowa State University; and
- Corey Lavinsky, Director of Global Biofuels, S&P Global Platts Analytics.

III. BACKGROUND

Renewable Fuel Standard

The RFS was established in the Energy Policy Act of 2005 (EPAct) and significantly expanded in the Energy Independence and Security Act of 2007 (EISA).¹ The RFS requires the use of renewable fuel in transportation fuel and contains sub-mandates for advanced biofuels (e.g., biomass-based diesel and cellulosic biofuel). More specifically, the statute calls for 9 billion gallons of total renewable fuel in 2008, which increases to 36 billion gallons by 2022, with an increasing share coming from “advanced biofuels”—biofuels produced from feedstocks other than corn starch.

¹ CRS Report R43325, [The Renewable Fuel Standard \(RFS\): An Overview](#), by Kelsi Bracmort.

According to the Congressional Research Service, the RFS mandate has been a “major impetus” for the development of the U.S. biofuel industry, especially the ethanol industry.² The United States produced 3.9 billion gallons of ethanol in 2005 and 15.8 billion gallons in 2017.³ In addition, according to the Energy Information Administration, 0.1 billion gallons of biodiesel were produced in 2005 and 1.6 billion gallons in 2017.⁴

For most of the renewable fuel categories, the statute requires Environmental Protection Agency (EPA) to announce the upcoming year’s standard by November 30. This annual percentage standard is based, in part, on expected total U.S. gasoline and diesel demand for the prior year. For 2019, EPA proposes requiring 19.88 billion gallons of biofuels to be blended into the U.S. fuel supply, up from 19.29 billion gallons in 2018. This proposal would mandate the blending of 381 million gallons of cellulosic biofuel, 4.88 billion gallons of advanced biofuel, 2.1 billion gallons of biomass-based diesel, and up to 15 billion gallons – the statutory cap – of conventional biofuel (most of which is corn ethanol).⁵

RFS Compliance using Renewable Identification Numbers (RINs)

Compliance with the RFS is measured using Renewable Identification Numbers.⁶ When qualifying biofuels are produced, each gallon is assigned a RIN — a 38-digit number, with blocks of digits corresponding to various data, including the year the RIN was generated, the producer of the fuel, and the type of fuel. Until the biofuels are sold as fuel or blended into conventional fuels, the RINs are “attached” to the fuel. Once the biofuel has been blended or sold, the RINs are detached, and can then be bought and sold like other commodities.

At the end of each year, fuel suppliers must multiply the biofuel percentage standard set at the beginning of the year by EPA by their total gasoline and diesel sales to calculate their renewable volume obligations (RVO), which indicate the total number of each type of RIN that the suppliers must submit to EPA.⁷ The total number of RINs equals the product of the liquid volume of renewable fuel multiplied by its energy equivalence value (relative to a gallon of ethanol). For example, because biodiesel has an equivalence value (EV) of 1.5 in the RFS, 1,000 gallons of biodiesel would generate 1,500 RINs. To the extent that a supplier has excess RINs, those RINs may be traded like other commodities (i.e. that supplier may sell them to others who may be short).

RIN Requirements

Each RIN is valid for use in the year they are generated and the following year – of note, suppliers may only meet up to 20 percent of their current-year obligation with the previous year’s RINs. Any party that owns RINs at any point during the year (including domestic and foreign producers;

² CRS Report R42824, Analysis of Renewable Identification Numbers (RINs) in the Renewable Fuel Standard (RFS), by Brent Yacobucci.

³ EIA Monthly Energy Review Table 10.3 Fuel Ethanol Overview, June 26, 2018.

⁴ EIA Monthly Energy Review Table 10.4 Biodiesel and Other Renewable Fuels Overview, June 26, 2018.

⁵ EPA, “Renewable Fuel Standard Program: Standards for 2019 and Biomass-Based Diesel Volume for 2020; Proposed Rule,” 83 *Federal Register*, July 10, 2018.

⁶ CRS Report R42824, Analysis of Renewable Identification Numbers (RINs) in the Renewable Fuel Standard (RFS), by Brent Yacobucci.

⁷ 40 CFR § 80.1407

refiners and blenders; exporters and importers of renewable fuels; and RIN traders) must register with the EPA and follow RIN record-keeping and reporting guidelines. RINs can only be generated if it can be established that the feedstock from which the fuel was made meets EISA's definition of renewable biomass (including land-use restrictions), and if the fuel meets EISA's lifecycle greenhouse gas emission limits. The feedstock affirmation and record-keeping requirements apply to RINs generated by both domestic renewable fuel producers and RIN generating foreign renewable fuel producers or importers.

Due to concerns over transposed digits, allegations of double-counting (intentional or unintentional) and other errors and inaccuracies, when EPA finalized rules for the expanded RFS under EISA, EPA also established a new transaction system, called EPA's Moderated Transaction System (EMTS).⁸ All RIN transactions, including generation, trade/sale/transfer, separation, and retirement, must be cleared through the EMTS. When biofuels change ownership (e.g., are sold by a producer to a blender), any attached RINs are also transferred. EPA views the EMTS solely as a "screening" system, and all due diligence remains the duty of obligated parties.⁹ Under this "buyer beware"¹⁰ system, those purchasing or receiving RINs must certify their validity on their own, and they are responsible for any fraudulent RINs they pass on to other buyers or submit to EPA for compliance.

RIN Markets

Most RINs are bought and sold through private contracts. However, because RINs may be bought and sold as commodities, there are RIN spot markets. These spot markets, though, may only provide some insight into the actual value of the total pool of RINs in a given year, as RINs may or may not be traded after they are detached by fuel suppliers.¹¹ As RINs are not completely fungible, their values may or may not be affected by the markets for other RINs – RINs for conventional ethanol may only be used for the overall (unspecified) renewable fuel mandate, but biodiesel RINs may be used to meet the biofuels-based diesel, advanced biofuel, and overall RVOs.

The market for RINs is potentially very large, although the amount of RIN trading that occurs is unclear. Although EPA reports total RINs registered by month, and the EMTS tracks trades and RIN prices, EPA does not report this data. Likewise, publicly available data from other sources, like the Oil Price Information Service, is similarly limited.¹²

RIN Program Issues and Compliance

From the beginning of the RFS program, there have been concerns with RIN generation and the RIN market. In the past, EPA has issued Notices of Violations (NOVs) to companies that the agency alleges fraudulently generated a substantial number of RINs, mostly for biomass-based diesel.¹³ These

⁸ CRS Report R42824, Analysis of Renewable Identification Numbers (RINs) in the Renewable Fuel Standard (RFS), by Brent Yacobucci.

⁹ EPA, "Regulation of Fuels and Fuel Additives: Changes to Renewable Fuel Standard Program; Final Rule," 75 *Federal Register* 14732, March 26, 2010.

¹⁰ *Ibid.*, p. 14733.

¹¹ CRS Report R42824, Analysis of Renewable Identification Numbers (RINs) in the Renewable Fuel Standard (RFS), by Brent Yacobucci.

¹² *Ibid.*

¹³ EPA, Civil Enforcement of the Renewable Fuel Standard Program, 2018.

RIN fraud cases had EPA look at establishing a system whereby RINs can be certified by third parties registered with EPA, potentially providing obligated parties with an “affirmative defense” if RINs are later found to be fraudulent.¹⁴ On July 18, 2014, EPA published a final rule in the Federal Register establishing a voluntary third-party quality assurance program option for RINs that regulated parties may exercise as a supplement to the “buyer beware” liability as prescribed under existing regulations.¹⁵ The program provides a means for ensuring that RINs are properly generated through audits of renewable fuel production conducted by independent third-parties using quality assurance plans (QAPs), provides an affirmative defense against liability for civil violations for the transfer or use of invalid RINs that had been verified under an approved QAP, defines the conditions when RINs must be replaced, and establishes a process for determining who will replace the RINs.¹⁶

In addition, spot prices for conventional ethanol RINs can dramatically fluctuate. For example, in early January 2013, the price per gallon was between \$0.05 and \$0.10, significantly less than the price of \$1.40 per gallon in mid-July 2013.¹⁷ Through the second half of 2013, prices dropped rapidly between August and November, although they rebounded somewhat in early 2014.¹⁸ Various factors have been identified by stakeholders as potentially causing the price increase, including whether sufficient amounts of ethanol are available to be blended into the gasoline supply to meet the RFS mandates and the extent to which non-obligated parties are speculating in RIN markets.¹⁹

IV. POTENTIAL HEARING ISSUES

- Is there sufficient transparency and oversight in the current RIN marketplace?
- How does the current RINs system impact various types of stakeholders?
- Regarding RIN fraud, what instances are unreported, what other types of fraud are possible in the future, and what are the implications of this fraud?
- How is RFS compliance with RINs different from the Clean Air Act’s acid rain program? Are there lessons that can be applied from the acid rain program to the RFS and RINs?
- How much are RIN prices affected by the RFS blend wall and the extent to which non-obligated parties are speculating in RIN markets?

¹⁴ CRS Report R42824, Analysis of Renewable Identification Numbers (RINs) in the Renewable Fuel Standard (RFS), by Brent Yacobucci.

¹⁵ EPA, “RFS Renewable Identification Number (RIN) Quality Assurance Program; Final Rule,” 79 *Federal Register*, July 18, 2014.

¹⁶ <https://www.epa.gov/renewable-fuel-standard-program/epa-finalizes-voluntary-quality-assurance-plan-renewable-fuel#rule-summary>

¹⁷ http://clinlawell.dyson.cornell.edu/RFS2_Review_paper.pdf

¹⁸ *Ibid.*

¹⁹ *Op. Cit.* CRS In Focus 10842, [The Renewable Fuel Standard \(RFS\): Is Legislative Reform Needed](#), by Kelsi Bracmort.

V. STAFF CONTACTS

If you have any questions regarding this hearing, please contact Jerry Couri, Wyatt Ellertson, or Mary Martin of the Committee staff at (202) 225-2927.