Land of Confusion — Counterintuitive Premises at Heart of Debate Over RINs Policy

Do Renewable Identification Numbers Function as a Tax or Subsidy, or Both?

- **Disagreements between refiners and producers highlight debate over renewable fuels policy**
- **Viewed as a cross-subsidy, consumers are hit by the RINs tax but also benefit from subsidized ethanol**
- **Both sides in debate over RINs scheme focus on how market prices of key products are affected**
- **Blending ethanol into unfinished gasoline not enough to meet entire renewable fuels obligation**

1. Introduction

The Renewable Identification Number, or RIN, market is so misunderstood that even its main participants don't agree on its financial impact, effectiveness, or even basic fairness. RINs are a feature of the federal Renewable Fuel Standard (RFS), which requires renewable fuels like ethanol and bio-based diesel to be blended into fuels sold in the U.S. Depending on your point of view — farmer, refiner, blender, consumer, politician — you may have a very different perspective about how the system works. Our new Drill Down Report is intended to provide a basic understanding of the complexities and contradictions of the RINs market.

Let's start with the basics. RINs were designed to ensure compliance with the federal RFS, which was created by the Energy Policy Act of 2005 and expanded and extended by the Energy Independence and Security Act of 2007. To explain how the system works, we'll refer to Figure 1 (next page) and consider a simplified example of E10, a 90-10 mix of "unfinished gasoline" (oil-based blendstock for oxygenated blending, or BOB) and ethanol.

Beginning on the left-hand side, refiners and/or importers (dashed black oval) are subject to the RFS and incur Renewable Volume Obligations (RVO) that they need to fulfill for any BOB that they produce or import. When a gallon of renewable fuel (ethanol) is produced for blending into BOB, a RIN — a 38-digit number — is assigned and "attached" to that gallon of ethanol (dashed green oval).

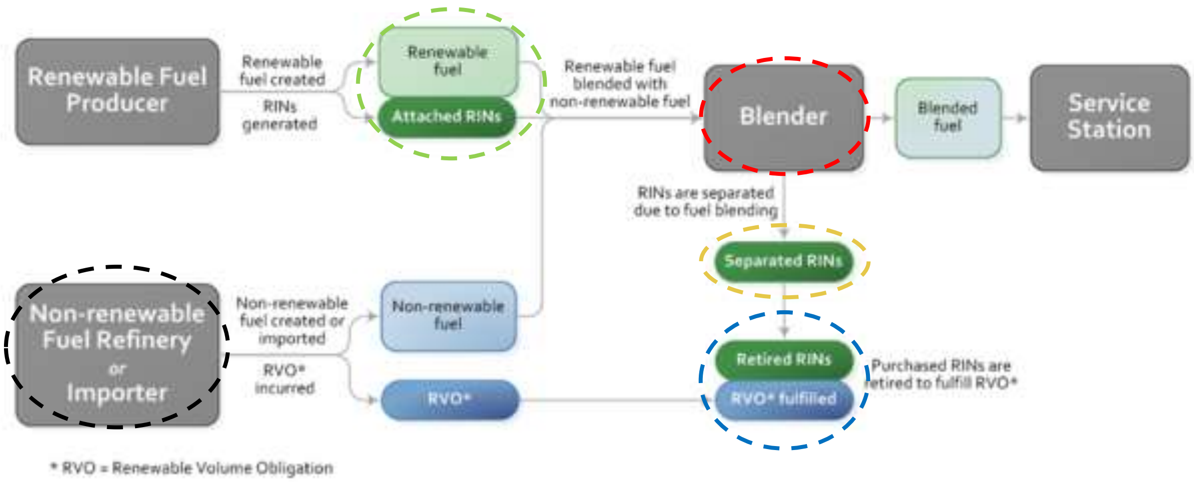

Figure 1. The Lifecycle of a RIN. Source: EPA

The refined or imported crude-based BOB then goes to the blender (dashed red oval), which may be a gasoline retailer, an independent terminal operator, or the refiner. Either way, in most cases the blending is done close to the market where the BOB-ethanol blend will be sold through service stations. As noted above, a RIN is created for each gallon of ethanol produced for the BOB market. When ethanol is physically blended with BOB or sold to a refiner for blending, the ethanol's RIN tag is separated from the ethanol (dashed yellow oval). From that point on, the RIN can be bought or sold until it is retired to fulfill an obligated party's RVO (dashed blue oval).

As is clear from Figure 1 and the general description of how RINs are designed to work, the scheme contains several steps, is reliant on many stakeholders, and includes seemingly contradictory incentives. Sections 2, 3 and 4 of this report explain the long-running debates over the RINs system, how RINs work as both a tax and a subsidy, and the impact on prices for refiners, blenders and consumers.

Section 5 shows how an understanding of the tax-and-subsidy framework helps to explain six prominent points of contention about the RIN scheme:

- Paying for RINs is an extra cost that reduces a refiner's profits.
- Some refiners don't have the pricing power to be able to pass on their RIN costs.
- Cashing out the RIN subsidy is a profit for the blender.
- An integrated refiner gets RINs free while a non-integrated refiner must buy them on the market, which gives an advantage to integrated refiners.
- Consumers pay more for E10 because of the RINs tax.
- High and volatile RIN prices indicate that the RFS is dysfunctional.

The debate over RINs goes far beyond what's covered in this report, with issues like the "ethanol blend wall," the role of higher ethanol blends like E15 and E85, the "nesting" of RIN categories, and RIN pricing all generating a lot of conversation, but the framework described here is fundamental to understanding and analyzing those topics.

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The Table of Contents for "Land of Confusion — Counterintuitive Premises at Heart of Debate Over RINs Policy" is included on the following page.

Table of Contents