

# The US Renewable Identification Number: RINs Trading Market

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## Executive Summary

The Renewable Fuel Standard (RFS) program has experienced early success in helping renewable fuel penetrate the market for transportation fuel in the United States. In 2016, it ensured that the vast majority of gasoline consumed in the United States contains ethanol, and it was responsible for the 2.9 billion gallons (gasoline gallon equivalents) of biodiesel that were produced last year. Despite these successes, several flaws EPA and stakeholders identified when the program was created have not been resolved. Without resolving these real-world issues, the current RFS program is unsustainable.

This paper, prepared for Bracewell LLP and Valero Energy Corporation, examines the system of tradeable Renewable Identification Numbers (RINs) established under the RFS program as well as the factors that influence the price of these RINs. It demonstrates how the lack of transparency leaves the RINs market vulnerable to manipulation adversely impacts the program's ability to meet the volumes dictated under the Energy Independence and Security Act of 2007. It then explains how changing the Point of Obligation to a physical location—such as the seller of hydrocarbons at the rack where renewables are blended to create a finished fuel—would make the market more transparent and reduce the ability of speculators to profit from RIN trading without any benefit to the RFS. Changing the Point of Obligation in this manner would stabilize RIN prices and reduce distortions in the market.

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## I. Types of RINs in the RFS Program

There are four separate, but nested categories of renewable fuels subject to the RFS program. EPA assigns one of five “D-codes” to each to identify the type of renewable fuel:

- 1) Cellulosic biofuel: D-3
- 2) Cellulosic diesel: D-7
- 3) Biomass-based diesel: D-4
- 4) Advanced biofuel: D-5
- 5) Renewable fuel (non-advanced/conventional biofuel) and grandfathered: D-6

In contrast, there are only two kinds of RINs: K1 (assigned) and K2 (separated).

### The K1 “Assigned” RIN

The K1 or “Assigned RIN” is associated with the volume of fuel produced and may be attached to any of the four types of renewable fuel. The RFS program prohibits the transfer of a K1 RIN without transferring an appropriate volume of renewable fuel to the same person on the same day.<sup>1</sup> When a renewable fuel producer that is also a marketer purchases a volume of renewable fuel from another producer, they acquire an associated K1 RIN. As a result, a registered biodiesel producer that is a marketer can acquire Ethanol Assigned RINs.

If the purchaser of the renewable fuel determines that its RINs fail to meet due diligence criteria (e.g., the RIN is “illiquid”), they may opt to acquire other Assigned RINs as a swap option on the contract or “force” the producer to retain the RIN.<sup>2</sup> In general, renewable fuel importers, producers, and marketers are very familiar with the requirements of the RFS program regulations, and contracts for the sale of renewable fuels routinely include provisions allowing the producer to retain the RINs generated when the volume of fuel was produced. Such transactions are commonly known as “without RINs”—for example, “B100 without RINs” means unblended biodiesel transferred without its attached RINs.

### The K2 “Separated” RIN

The K2 or “Separated RIN” means a RIN that has been separated from a volume of renewable fuel such as through blending, or through use for “non-transportation” purposes or as a finished fuel.<sup>3</sup> There are no limits on the use or accumulation of K2 RINs, and they are no longer associated with any volume of renewable fuel. However, failure to strictly adhere to the specific rules applicable to RIN separation will invalidate the RIN, making it useless for compliance and worthless.

This RIN has a shelf life of 2 years and expires on the last day of March of every year unless special circumstance exists as established by the EPA.

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<sup>1</sup> 40 C.F.R. § 80.1460(b)(4).

<sup>2</sup> 40 C.F.R. § 80.1428, et seq.

<sup>3</sup> 40 C.F.R. § 80.1429.

## II. The RIN is a Compliance Tool, Financial Instrument, and a Commodity

As a compliance tool, a K1 RIN is evidence that a volume of renewable fuel has been generated. As the volume of renewable fuel transfers, the K1 RIN will typically follow. The quantity of K1 RINs generated when renewable fuel is produced varies based on the fuel's the Equivalency Value as follows:

- 1) Ethanol: 1.0 RIN per Wet Gallon;
- 2) Biomass-Based Diesel: 1.5-1.7 per Wet Gallon;
- 3) Cellulosic: 1.0 per Wet Gallon or higher based upon fuel type such as diesel;
- 4) Renewable Biogas: 1.0 per 77,000 btu; and
- 5) Renewable Electricity: 1.0 per 22.76 kW-hrs.

Separate from determining the RINs generated when fuel is produced, renewable fuel producers can assign K1-RINs to a renewable fuel as they deem appropriate, at a rate up to 2.5 K1 RINs per wet gallon of fuel transferred.<sup>4</sup> If a producer or importer decides to assign only 1.0 RIN per gallon, he or she may retain the remaining 1.5 RINs per gallon as unassigned or separated K2 RINs. This allows a RIN owner to bank or trade excess RINs in inventory.

Further, the RFS program regulations allow a seller to retain a K1 RIN if the buyer is not a registered party of the RFS or, if after conducting its due diligence, it rejects the RIN. A party may allocate K1 gallon-RINs to volumes of renewable fuel as he or she chooses. At the end of each quarter, the party's balance of RINs to renewable fuel in inventory may not exceed 2.5:1.<sup>5</sup> The purpose of this requirement is to prevent K1 RIN hoarding—no such limit exists for K2 RINs. Any party can own K2 RINs in any quantity.

The K2 RIN is not directly regulated by the Commodities Futures Trading Commission or the Federal Trade Commission, and this financial instrument that can be traded any number of times in the program until it is acquired to comply with an obligated party's Renewable Volume Obligation (RVO) or other retirement compliance purposes.

The value of a RIN does not differ based on whether it is a K1 (Assigned) or K2 (Separated) RIN. Fluctuations in the price of K2 RINs will affect the price of K1 RINs as well as the sale price of blended finished fuels.

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<sup>4</sup> 40 C.F.R. § 80.1428(a)(4).

<sup>5</sup> 40 C.F.R. § 80.1428(a)(5).

### III. The Three Purposes for Trading RINs

There are three reasons for trading RINs:

- 1) To offset to expenses related to renewable fuel production;
- 2) To comply with an obligated party's RVO; and
- 3) To generate a profit.

Each of these is discussed in further detail below.

#### Offset to Renewable Fuel Production

Renewable fuel producers, like petroleum producers, are subjected a litany of costs, direct and indirect, to manufacture their products. Without any further incentives, the RIN will capture the spread of the renewable fuel to the petroleum blend.

#### RIN RVO Compliance

The RIN is an expense to the obligated parties. To meet its annual RVO, an obligated party may acquire K1 RINs by blending renewable fuels or K2 RINs through spot market contracts. Initially, an obligated party's cost to acquire a RIN to meet its RVO was a few hundredths of a cent per gallon.

#### RIN for Profit

The third purpose of the RIN is profit driven. Unlike other EPA credit programs, the K2 RIN can be held, bought, and traded by non-obligated parties without limitation until retired for compliance. Because K2 RINs are an unregulated commodity, well-educated and well-funded individuals who are not otherwise subject to the RFS program have entered the market, and their significant acquisitions and dispositions of K2 RINs have led to price disruptions.

### IV. Monitoring, Owning, and Using RINs

The EPA Moderated Transaction System (EMTS) is a web-based system through which parties that own RINs report RIN transactions. For K1 RINs, the EMTS tracks the movements of each RIN and its associate volume of fuel. However, the EMTS is inadequate for tracking the price of RINs because it collects price data on either a per-RIN or per-gallon basis. In addition, recording such data is subject to human error, so it is nearly impossible to identify and assess the cause of RIN volatility where the recorder incorrectly enters the data. Furthermore, several of the data fields in EMTS are voluntary; therefore, this information is often incomplete or in many cases misleading because there is no regulatory requirement to collect or analyze that data.

#### RIN Ownership

A RIN owner can be a retailer, reseller, distributor, broker, trader, blender, marketer, obligated party, renewable fuel producer, or the government itself (*e.g.*, DOD). There are RIN owners that do not produce any renewable fuel or distribute any blended renewable fuels. Therefore, several questions need to be asked. For example—to what purpose does this person

serve the program? And how does he or she affect the market? After ten years of participation and observation in the RIN market, I firmly believe that RIN trading by non-obligated parties influence the prices of RINs in the industry. Such parties do not have any vested interest in infrastructure development or distribution of renewable fuels and participate in the RIN market for profit only. Hence, this group can materially affect the price of RINs in the absence of regulation.

The advanced RIN owner (RIN Trader) will have years, if not at least a decade, of experience in commodities trading, hedging, and derivative swaps. These are professional organizations with the skills and experience to generate scores of millions of dollars per year but yet bear no relation to the RFS program and have no interest in spurring renewable fuel infrastructure development. Instead, they use well-modeled, advanced trading techniques and strategies to leverage the RFS program for a profit.

#### The Use of RINs for Compliance

Under the RFS program regulations, RINs are the mechanism through which obligated parties demonstrate compliance with the RVO.<sup>6</sup> RINs are also the regulatory means of accounting for exported, spilled, or improperly used volumes of renewable fuels.<sup>7</sup> Obligated parties are defined as refiners (inclusive of select blenders) or importers of petroleum fuels or blendstocks used to produce finished fuels such as Gasoline Treated as Blendstock.<sup>8</sup> Individual Transmix Operators are also obligated parties.<sup>9</sup> When the EPA uses the term refiner, it refers to refinery facilities and blending facilities alike.<sup>10</sup>

#### **V. Factors Influencing the Intrinsic Value of RINs**

The intrinsic value of a RIN establishes its basis for trading. The value of a RIN is dependent upon the individual renewable fuel producer's total expenses minus the current price of the appropriate fuel<sup>11</sup> freight on board from the facility. An advanced or experienced renewable fuel producer understands the dynamics of the markets and will protect his or her inventories with risk management strategies such as option or futures contracts on feedstocks, fuel, and RINs.

#### Feedstock Prices

The feedstock is the single most important item cost for a renewable producer. While a producer can budget for all other items, feedstock prices are volatile and can cause sudden increases in RIN prices.

<sup>6</sup> See 72 Fed. Reg. 23,900, 23,924 (May 1, 2007); 75 Fed. Reg. 14,670, 14,721 (Mar. 26, 2010).

<sup>7</sup> 40 C.F.R. §§ 80.1429(f), 80.1430, 80.1432.

<sup>8</sup> 40 C.F.R. § 80.1406.

<sup>9</sup> 72 Fed. Reg. at 23924.

<sup>10</sup> *Ibid.*

<sup>11</sup> The current price is assessed by a Designated Contract Market such as the New York Mercantile Exchange (NYMEX) and the Chicago Board of Trade (CBOT).

### Production Costs

Production cost and profitability can be determined using the Iowa State University models for ethanol and biodiesel. Developed in 2009 and 2014 respectively, these models are generally considered to be reliable for determining production costs. Both models provide the basis for each type of renewable fuel without including any of the incentives described further below.

### Transportation Costs

Shipping costs are a significant portion of facility operations where there is a lack of pipeline infrastructure. This condition does not apply to renewable biogas facilities.

### Incentive Programs

The following are incentives available to producers and blenders of certain renewable fuels that can further impact the value of a RIN.

#### *Blenders Tax Credit (BTC) for Biomass-Based Diesel*

Qualified producers and blenders of biomass-based diesel can receive a subsidy in the form of a \$1.00 income tax credit for each gallon of pure biodiesel or renewable diesel produced or used in the blending process.<sup>12</sup>

#### *Biomass-Based Diesel Small Producer Credit.*

Small producers of biodiesel produced from virgin agricultural products (known as agri-biodiesel) are entitled to a tax credit of is \$0.10 per gallon (up to 15 million gallons per year).<sup>13</sup>

#### *Second Generation Biofuels Credit*

This credit applies to any alcohol fuel derived from lignocelluloses or hemicelluloses that are available on a renewable or recurring basis and or any cultivated algae, cyanobacteria, or lemna. The credit is a producer's tax credit and is \$1.01 per gallon.<sup>14</sup>

#### *State Incentives*

Most states offer incentives for renewables in the form of tax exemptions that result in gains for the company in several accounting forms. A review of several key states, such as Oregon, demonstrates that retailers of biodiesel B20 blends do not pass the incentive through to consumers. Under Oregon's biodiesel tax exemption, retailers can charge full price and keep the \$.30 per gallon tax break as additional revenue.<sup>15</sup>

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<sup>12</sup> Dep't of Energy, Alternative Fuels Data Center, *Biodiesel Production and Blending Tax Credit*, <http://www.afdc.energy.gov/laws/5831> (last updated Jan. 3, 2017); IRS Pub. 510 (2016).

<sup>13</sup> IRS Pub. 510.

<sup>14</sup> Ibid

<sup>15</sup> Under Oregon law, this incentive is limited to B20 derived from Used Cooking Oil (UCO). See Or. Rev. Stat. § 319.530.



### US EPA Regulatory Actions

EPA's actions have an effect on the price of RINs. Over the nine year history of the RFS program, EPA's decisions with regard to the annual renewable fuel percentage standards and the use of its waiver authority have influenced the price of RINs by causing speculators in the market to perceive a RIN shortage. Speculators perceive such a shortage because of the disparity between increased RVO and dwindling consumption or due to regulatory delays in the announcement of the standards. Consequently, speculators can drive the RIN pricing with swings of greater than 30% in a week.

### Inaccurate Press Reports

Press reports discussing regulatory developments can cause rapid shifts in RIN prices. For example, on January 25, 2017, a Bloomberg article discussing the impact of Trump Administration's January 20, 2017 memorandum requiring heads of Federal agencies to freeze new and pending regulations<sup>16</sup> on the RFS program caused volatility in the RINs market. As explained in the article, the memorandum required EPA to temporarily delay the effective date of its rule setting renewable fuel standards for 2017 and biomass-based diesel volumes for 2018.<sup>17</sup> Quoting an analyst from Barclays, Bloomberg suggested that the Administration may adjust the 2017 and 2018 standards. The article did not reflect some of the key issues EPA would need to consider before adjusting the standards; nonetheless, a "fire sale" of ethanol RINs ensued and the price of RINs fell 30% price in just 8 hours. Several large obligated parties and trading firms bought the rumor and acquired large long positions on ethanol RINs.

While many obligated parties trade RINs solely for RVO compliance and may try to breakeven or realize small profit, large obligated parties—trading RINs in excess of their compliance needs—and non-obligated traders often trade only to make a profit. They have no interest increasing the volumes of renewable fuel used in the U.S. economy. They often wait for cyclical demand in order to achieve a profit, sometimes in excess of 30%.

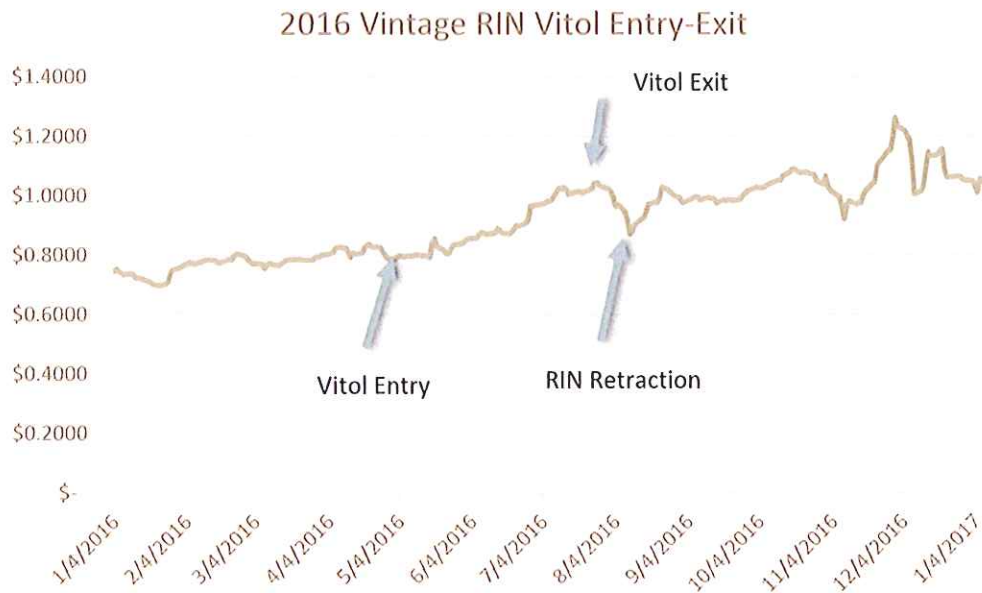
### **VI. Speculation**

There are many strategies used in the RIN trading today, including scenarios motivated by compliance, profit, or both.

To illustrate this, a spike in K2 RINs occurred in the spring of 2016 because Vitol (an obligated party) needed D4 RINs to comply with its annual obligation. Because it needed these RINs from a select group of producers, Vitol bid up the price, causing a chain reaction. RINs went from \$0.80 each in April 2016 to \$1.015 in late July, and this activity caused all other parties to engage the market. Once Vitol acquired its RINs, the price fell again to \$0.87. This activity is depicted in the graph below.

<sup>16</sup> Bloomberg Markets, *Biofuel Credits Plummet as Trump Freezes EPA Regulations*, <https://www.bloomberg.com/news/articles/2017-01-24/biofuel-credits-plunge-as-trump-orders-freeze-on-epa-regulations> (updated Jan. 25, 2017 12:44 PM).

<sup>17</sup> 81 Fed. Reg. 89,746 (Dec. 12, 2016).



Data derived from OPIS Historical RINs Price Data

In another example, when EPA finalized the 2017 RVO on November 23, 2017, speculators perceived there would be RIN shortage and caused the RINs to move again. The value for D4 swung from a low of \$0.92 to \$1.23 per RIN. RINs for each type of renewable fuel were effected as depicted in the graph below.



Data derived from OPIS Historical RINs Price Data

At the time of publication, 2016 RINs hover in the range of \$0.50-1.00 (D6 and D4, respectively).

Because the RIN market is finite and responds to small influences, a RIN owner that does not sell any fuel can cause significant volatility in the program. Further, since EPA has placed no limits on trading K2 RINs—unlike other EPA-administered credit programs such as Fuel ABT—nor has it restricted the quantity of K2 RINs a party can hold, volatility can occur rapidly and impart significant profits or expenses on the program participants.

## VII. Understanding Transactions

There have been several news reports in recent years detailing windfall profits received by some parties participating in the K2 RINs market.<sup>18</sup> To understand these gains, one must understand the transactions.<sup>19</sup>

### Yahoo IM

The RFS does not have a centralized trading platform or system. Therefore, RIN transactions commonly begin with the exchange of offers and bids on Yahoo Messenger (IM).<sup>20</sup> The Yahoo IM system is also where a significant portion of the renewable fuels offers are listed too. When parties to a trade reach an agreement of a price, they enter into a formal contract. Normally, the new buyer is either an obligated party or another entity that will use the acquired K2 RIN for another purpose such as export retirement, or purely for additional revenue.

### The K1 RINs Transaction

Renewable fuel that generates K1 RINs sells as “Assigned RINs Transferred” or “No Assigned RINs Transferred” when accompanied by the fuel. One might say this a simple pass through, but that does not mean it is free because of the intrinsic value of the RIN.

### *Ethanol Example*

Producer A is a conventional corn ethanol producer. He or she generates D6 RINs and produces a 10 million gallon batch of renewable fuel in the month of May. Producer A generates 10 million K1 D6 RINs with a market value of \$0.80 per RIN as reported by OPIS. He or she sells all 10 million gallons of ethanol to a purchaser, but Producer A does not transfer the RIN with the transaction. In June of that year, Producer A produces another 10 million gallons of ethanol and generates another 10 million K1 D6 RINs. This brings Producer A’s total banked RINs to 20 million K1 D6 RINs for 10 million gallons on hand—2.0 RINs for every gallon as required by the regulations. If the purchaser of the first 10 million gallons has no ties the RFS and does not want

<sup>18</sup> In 2014, Marathon reported \$74 million in RIN revenue. See Todd Neeley, *Renewable Identification Numbers (RIN) are Critical to Agriculture*, <http://agfax.com/2016/12/22/renewable-identification-numbers-rin-are-critical-to-agriculture/> (Dec. 22, 2016).

<sup>19</sup> Bernard L. Weinstein, *Renewable Identification Numbers (RINs) Trading under the Renewable Fuels Program: Unintended Consequences for Small Retailers* (Aug. 2016), available at <https://www.smu.edu/-/media/Site/Cox/CentersAndInstitutes/MaguireEnergyInstitute/RINS-final-8-15-16.ashx?la=en>.

<sup>20</sup> RINSTAR, RINXchange, and the Chicago Mercantile Exchange have each attempted to create a platform for RIN trading. However, each failed due to lack of support.

the RINs, the Product Transfer Document required by the regulations will indicate the volume of renewable fuel transferred but describe the transaction as “No Assigned RINs Transferred.”

In June, Producer A sells an additional volume of ethanol; however, this purchaser wishes to also acquire the RINs because he or she is a Blender. In this scenario, the transaction reflects a negotiated fuel price that accounts for the value of the RINs and the value of the volume of renewable fuel. Blender will transition the K1 RINs and to K2 RINs. Since Producer A has excess K1 RINs in inventory, the parties agree that the producer will transfer the 20 million K1 RINs with the fuel, but that Blender will transfer 10 million K2 RINs back to the producer in one month (after the RINs are separated from the fuel). At the time of the sale, the D6 K1 RINs have a market value of \$0.80 per RIN as reported by OPIS. However, between the sale and the transfer of the D6 K2 RINs back to the producer, the market increases to \$1.00 per RIN. As a result, when Producer A recovers the 10 million K2 RINs, he or she receives RINs valued at \$10 million instead of \$8 million from a month earlier. Blender realizes \$10 million as well. On a gross level, Blender has achieved \$1.00 per gallon of ethanol, which equates to a \$0.10 per gallon gasoline blend at E10.

#### *Biodiesel Example*

Producer B is a biodiesel producer that produces one million gallons of fuel. Biodiesel has an Equivalency Value of 1.5, and Producer B generates 1.5 million RINs for the batch. Producer B structures the sale as B100 with RINs, which means that he or she is passing the BTC (\$1.00 per gallon) to the purchaser (a Blender) and capturing the value of RINs. The sale will include K1 RINs as a trade. Producer B sells the biodiesel at \$3.89<sup>21</sup> FOB plant for a total of \$3,890,000.00.

At the current market price, Blender now has a basis of \$0.81 per RIN. The Blender separates the RINs by blending and converts the K1 RINs to K2 RINs. However, he or she decides to keep the K2 RINs in anticipation of a price spike. Later, the parties sell the K2 RINs on November 23, 2016 when the price reaches \$1.21 per RIN due to news of that EPA has finalized the standards for 2017. As part of the transaction, Blender also realizes the BTC. He or she recovers \$1 million from the Department of Treasury in the form of a refund, making the biodiesel now worth \$1.21 per wet gallon. At retail, the biodiesel is valued at \$2.52,<sup>22</sup> including taxes averaging \$0.40 per gallon.

Blender realizes a \$620,000 profit on the biodiesel and a margin of about 55% on the product at the expense of the taxpayer and obligated party. In addition, depending on the location and incentives available, the margin could be as high as \$2.22 million. For example, if this transaction takes place in California, the Blender realizes an additional \$300,000 in LCFS carbon credits at \$90.00 per metric ton of carbon.<sup>23</sup> If the biodiesel is a blend containing least 20%

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<sup>21</sup> CBOT, B100 SME (Soy).

<sup>22</sup> EIA, Average Retail Price United States (Dec. 21, 2016).

<sup>23</sup> CARB, Weekly LCFS Credit Transfer Activity Report (Dec. 5-11, 2016), available at [https://www.arb.ca.gov/fuels/lcfs/credit/20161211\\_wklycreditrept.pdf](https://www.arb.ca.gov/fuels/lcfs/credit/20161211_wklycreditrept.pdf).

biodiesel from UCO and that blend is distributed in Oregon, the distributor could see a profit of \$300,000.<sup>24</sup>

Producer Biodiesel Bank-Wet Gallons Millions	RIN Bank-RINS D4 Millions
1	1.5
-1	-1.5
0	0

Biodiesel RIN Value	RIN Bank-RINS D4 Millions	VALUE
\$0.81	1.5	\$1,215,000
\$1.21	1.5	\$1,815,000
\$0.40	1.5	\$620,000
Biodiesel Blender Excise		\$1,000,000
CA Biodiesel CI MT LCFS		\$300,000
Oregon UCO Biodiesel Incentive		\$300,000
Maximum Potential Incentive		\$2,220,000
Per Gallon		\$2.22

#### The K2 "Separated" RINs Transaction

K2 Separated RINs trades do not represent a volume of renewable fuel directly. The K2 RIN can sell numerous times during a 2-year period. It has a limited life and depreciates with time. The value of the K2 RIN depends on the basis cost of the acquisition method. As demonstrated by the previous trading example, K2 RIN transactions often involve large quantities of RINs because the regulations do not limit the quantity of K2 RINs a party can have in inventory.<sup>25</sup> Because K2 RIN owners can accumulate a large holding without restriction, those trading in K2 RINs can establish a large extended position in the market.

Although the transactions themselves are simple, trading K2 RINs profitably requires a high degree of sophistication because of the characteristics of the RIN discussed above. Profitable traders dealing in K2 RINs almost always have a strong mathematical or financial background. They are usually registered on one or more of the commodities exchanges, typically have years

<sup>24</sup> EIA, *Oregon Laws and Incentives for Biodeisel*, <http://www.afdc.energy.gov/fuels/laws/BIOD/OR> (last updated Nov. 10, 2016).

<sup>25</sup> 40 C.F.R. § 80.1428(a)(5).

of experience trading other commodities, and intimately know how markets function and move. An experienced profitable RIN trader will understand impacts and timing of events to maximize a sale above the basis.

### VIII. Manipulation Exists in the RINs Market

There is evidence that a single party can influence the price of K2 RINs. Because the market does not differentiate between K1 and K2 RINs, the volatility of the K2 RIN affects the price of finished blended fuels with K1 attachments.

#### Recognizing Manipulation

For most K2 RINs transactions, the Yahoo IM system helps communicate bidding since there is no transparent platform available to the markets. Here is how it works:

RIN Owner A is a non-distributor of renewable fuels or petroleum fuels. They have a strong expertise in derivatives and profound knowledge or intelligence that suggests conditions will change in the market. They acquire K2 RINs in multiple categories at an average value of \$0.85 per RIN while holding 100 million K2 RINs. RIN Owner A's intelligence indicates that sunseting of the BTC and an increase in RVO for the program will influence K2 RINs for at least nine months in 2017.

Knowing this, RIN Owner A enters the market and places a bid is for \$1 million D4 K2 RINs at \$0.86 per RIN. No sellers respond to their initial bid, so RIN Owner A slowly bids up the price. As the bid escalates, other K2 holders/traders follow the action on the Yahoo IM system in real time and industry notices there is a buyer in the market. Several transactions begin to take place, and the bid becomes tangible.

RIN Owner A decides to switch his or her role and becomes a seller. Believing the intelligence to be sound but wanting to reduce the risk, RIN Owner A sells only a portion of his or her holdings at 50 million RINs at \$1.05. The total sale is \$52.5 million with a basis cost of \$42.545 million and a gross net of \$9.955 million.

The process takes two weeks to unfold, and several thousand transactions occurred with the industry at various levels. For parties that needed RINs for compliance and that are not in the market for profit, the cost of compliance for that period escalated to \$3.696 per barrel or \$0.088 per petroleum gallon RVO.<sup>26</sup>

The action continues throughout the second quarter of 2017, and K2 RIN values approach \$1.40 per RIN on average. RIN Owner A liquidates the balance of 50 million RINs and realizes \$27.5 million net gain on the inventory without blending or distributing any fuel whatsoever. This activity escalates compliance costs of an obligated party to \$5.20 per barrel or to \$0.1137 per RVO Gallon.<sup>27</sup>

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<sup>26</sup> GRSAC RVO RIN Cost Calculator.

<sup>27</sup> Ibid.

**IX. Regulatory Change Is Needed**

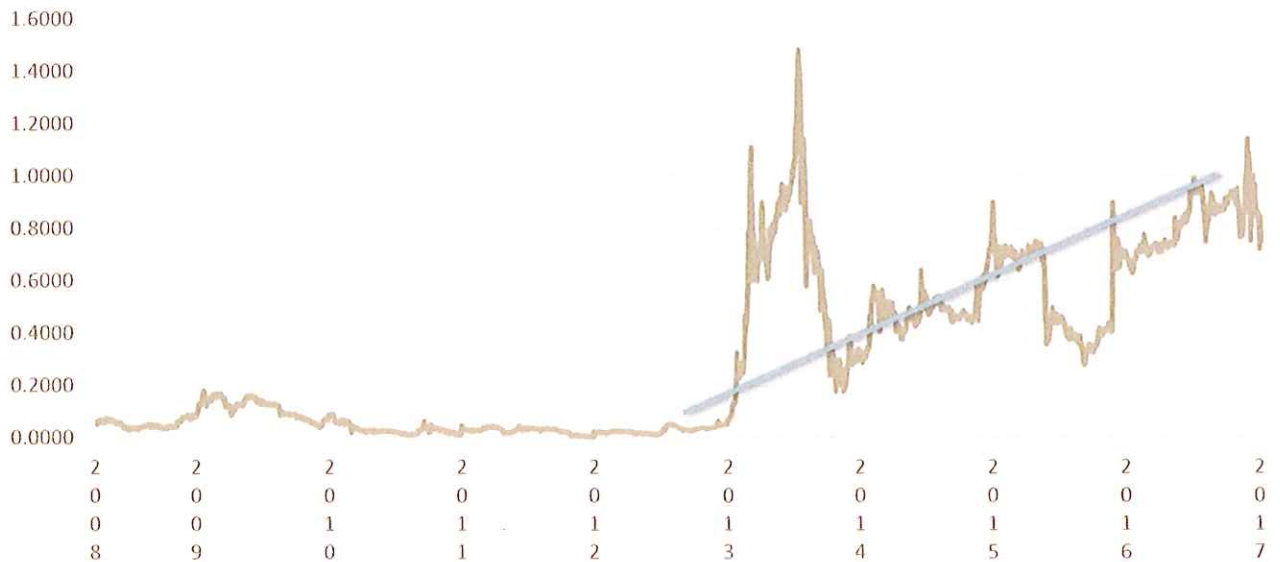
The current RFS regulations are inadequate to ensure a properly operating RIN market. To sufficiently reduce or eliminate harm to obligated parties from the type of trading described above, the regulations should be revised to change the point of obligation so that each obligated party's RVO accounts for its activities downstream of the refinery or point of import. Such a change would spur production of renewable fuels and also increase demand for and distribution of blended fuels. Higher production and blending would result in lower RIN prices and less volatility in the RIN market.

Without a change, compliance costs will escalate and financial harm may ensue, creating instability and uncertainty in the RFS program and undermining the ability to meet the goals of the statute.

It is Important to Act Now

As the program approaches ten years of activity, RIN prices have a ranged from \$0.0008 to \$1.435 each (D6 Ethanol). In the presence of shrinking domestic transportation fuel consumption and the statutory increases in the law, the RFS program will not be sustainable without these changes.

Historical Ethanol RIN Prices 2008-2017



## X. Conclusion

RINs were intended to be a compliance mechanism based upon principles of debit and credits. Because the RINs are an expense to parties that do not blend as much as they refine or import, there is a distortion that causes undue financial harm to those parties and rewards other parties that do not have any role in the production or distribution of renewable fuels in the United States. The RINs market has changed since its inception, and today's rack sellers are large companies that are more sophisticated than ever. Market speculators are present throughout the market and impact RIN prices even though they have no connection to the RFS program nor any interest in its goals.

Moving the RFS point of obligation to a point further downstream, such as blender terminals, will have the following results:

- 1) More accurate accounting of RVO volumes;
- 2) Increased production of renewable fuels, higher efficiencies, and reductions in RIN costs;
- 3) Increased bulk blending of renewables in every market, not just California, Texas, and New York; and
- 4) Increased demand for blended fuels and wider distribution to underserved markets.

The EPA, the Commodity Futures Trading Commission, or the Federal Trade Commission should review EMTS K2 RIN data to determine the significant players in the program. It should be obvious to any market regulator which companies are engaged in practices that while currently permissible distort RINs prices and result in massive profits that are not beneficial to the intended purposes of the program.



## About the Author



Ramon M Benavides entered the US Renewable Fuel Sector as a partner/producer for a biodiesel facility in October 2006 through Feb 2012. During that period, he oversaw RINs trading activities for the company and, participated with the National Biodiesel Board by serving the regulatory, technical committees and RFS1 working group.

In 2010, he was nominated and elected to the NBB governing board and served that position until the end of the term in 2012. In early 2012, he left the production program and began Global Renewable Strategies and Consulting, LLC based upon an identified need for competent business consulting with the US renewable programs.

As a consultant, he has served Obligated Parties, Renewable Fuel Producers, Foreign Renewable Fuel Producers, Legal counsels, Tax Counsels, Accountants and others. He has monitored and advised RINs Trading/Renewable Fuels transactions and has observed and deployed many trading strategies.

He developed the first Compliance Surety Survey that tracks 1200 items daily, the first and only patent pending Forensic Surveillance Testing program, and a newly developed Forensic Mass Balance Protocol that when combined with the FST provides near term identification of issues and further authenticates RIN generations outside of the EPA QAP program.

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