July 24, 2015

The Honorable Janet McCabe
Acting Assistant Administrator for Air and Radiation
Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Mail Code 6101A
Washington, DC 20460

RE: EPA Renewable Fuel Standard Program: Standards for 2014, 2015, and 2016 and Biomass-Based Diesel Volume for 2017: Docket ID No. EPA–HQ–OAR–2015–0111

Dear Ms. McCabe:

From 2013 until 2015, I was privileged to serve as Special Assistant to the President for Energy and Environment on the staff of the National Economic Council at the White House. In that capacity, I participated in the interagency review process for the Environmental Protection Agency's (EPA or the "Agency") Renewable Fuel Standard (RFS) program. Since leaving the White House, I have had the opportunity to reflect upon the difficult challenges confronting policymakers faced with the task of implementing a RFS statute in a world and energy sector that has radically changed since it was last amended in 2007.

There is no doubt that developing the RFS obligations for the last two years of the program presented you and your extraordinary team, along with those of us who participated in the interagency process, with intricate, and often intractable, policy decisions. How you resolve these issues will ultimately dictate the future viability of this program and, by extension, impact the future of alternative fuels in the United States, the health of major sections of the U.S. economy, and the level of benefits to our nation's energy security and environment envisioned by Congress when the statute was enacted.

Given these stakes, I want to take this opportunity to share with you some of the conclusions I have reached after careful reflection on the last two years of the interagency review process, the current state of the transportation fuels market, EPA's current proposed rule, and the limitations of a clearly imperfect statute.

1. BRINGING MORE RENEWABLE FUEL TO MARKET

While the original supporters of the RFS may have had varied motivations—from energy security to environmental stewardship—the goal of the RFS today remains the same as it was in 2005: to substantially increase the volume of renewable fuel blended into the transportation pool. This was the fundamental purpose of the statute and it remains its most pressing challenge. It is true that the RFS has been in place since 2005 and functioned (more or less depending on your point of view) in its current form since 2007. However, for the majority of that time, renewable

fuel producers and obligated parties were part of a system that had manageable mandates and ample room within the fuel supply to grow.

As has been ably and more thoroughly discussed in other papers, and in the EPA's current proposal, the real test of the program's functionality began in late 2012 and early 2013 as the combination of reduced demand for fuel, the effective limit on ethanol blend rates, and limited infrastructure for higher ethanol blends shocked the market for Renewable Identification Numbers ("RINs")—the primary means of compliance with the RFS.

Whereas the price of RINs had been de minimis through 2012, the RIN price rose to nearly $1 by March, 2013 and well over $1 by that summer. With the statute mandating a continued rise in renewable volumes, it was not at all clear that these challenges to compliance would abate absent fundamental changes to the program or without a more rapid increase in the ability of higher ethanol blends (e.g., E85) to break into the market.

Faced with this transformative shift in the market, EPA issued in late 2013 a proposed rule establishing renewable volumetric obligations (RVOs) for 2014 that, for the first time in the program's history, acknowledged the difficult problem of the ethanol blend wall by proposing to lower the total renewable fuel mandate.[1] Predictably, this decision generated significant debate amongst stakeholders and resulted in a significant delay prior to the issuance of the current proposal.

Like the 2013 proposal, the crux of the current proposal attempts to resolve how best to use the program's capabilities and/or market forces to break through the blend wall and bring more renewable fuel into the market. Addressing this problem, EPA has asserted its view that increases in the price of RINs—rather than being indicative of a market failure—actually can function to incentivize the type of infrastructure investment necessary to make higher ethanol blends available in a cost-competitive way to consumers. As I discuss in the next section in greater detail, however, I believe that a far more cost-effective method exists to address this problem.

2. PROBLEMS IN E-85 AND BIODIESEL MARKET PENETRATION

Before focusing on potential solutions, I would like to explain what informs my thinking on the issue of E85 and biodiesel market penetration. As others have pointed out, in the simplest of terms, the RFS is designed to increase the cost of fuel with little to no renewable content and use that incremental cost to reduce the cost of renewable fuels, with a preference for renewable fuels with a low-carbon content. Thus, as EPA describes in the current proposed rule, a functional market system for the program would be designed to pass the benefits of generating RIN credits from the renewable fuel producer, to the blender, and then to the customer.[2] As Christopher Knittel, Ben Meiselman, and James Stock state in their June 2015 paper on this topic, "[i]n

[1] *2014 Standards for the Renewable Fuel Standard Program*, 78 Fed. Reg. 71732 (Nov. 29, 2013).

[2] *Renewable Fuel Standard Program: Standards for 2014, 2015, and 2016 and Biomass-Based Diesel Volume for 2017*, *Proposed Rule*, 80 Fed. Reg. 33100, 33119 (June 10, 2015) (hereinafter, the "2015 Proposed Rule").

theory, RIN prices provide incentives to consumers to use fuels with a high renewable content and to biofuels producers to produce those fuels[.]"[3]

As I stated previously, the early years of the RFS are not especially instructive in evaluating the functionality and effectiveness of this system because there was ample room in the fuel supply to blend the RFS's RVOs without breaching the blendwall. However, with the challenges that began in late 2012 and early 2013 as the market recognized that the fuel supply could not accommodate the statutory obligations without breaching the blendwall, the question of how this system was working to incentivize the use of higher ethanol blends increasingly animated the interagency review process. If the market was functioning as expected, and RIN prices were rising—making higher ethanol blends more valuable—why were we not seeing the expected rise in E85 market penetration?

In their June 2015 paper, Knittel et al. analyzed the behavior of the RINs market from January 2013 to March 2015 and described their most troubling finding as follows:

> To us, the most intriguing and challenging finding here is the near absence of pass-through of RIN prices to retail E85 prices. While RIN prices might be passed through at some retail outlets at some times, this is not the case on average using national prices. The goal of the RFS program is to expand the use of low-carbon domestic biofuels, and the key economic mechanism to induce consumers to purchase high-renewables blends is the incentives provided by RIN prices. If the RIN price savings inherent in blends with high biofuels content are not passed on to the consumer, then this key mechanism of the RFS is not functioning properly.[4]

Another data point used to evaluate the functionality of the current system is to look at whether the high RIN prices in early 2013 did indeed incentivize any additional build-out of E85 infrastructure in those areas of the country—where E85 is most readily available. Tellingly, what happened in Minnesota, the state with most stations selling E85,[5] tracked Knittel et al.'s findings—as RIN prices rose in early 2013, the number of stations selling E-85 declined.[6] Reviewing this data leads me to concur with Knittel et al.'s conclusion that the RINs market is simply not functioning as it should.

The issue of properly aligned incentives and the need for infrastructure also exists for biodiesel blending. In order to blend biodiesel, a terminal needs to add significant infrastructure, including: receipt and offloading equipment, dedicated storage tanks, heat traced transfer lines,

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[3] *See* Christopher R. Knittel, Ben S. Meiselman, and James H. Stock, *The Pass-Through of RIN Prices to Wholesale and Retail Fuels under the Renewable Fuel Standard*, National Bureau of Economic Research (June 2015), *available at*: http://www.nber.org/papers/w21343.

[4] *See id*.

[5] Department of Energy, Alternative Fuel Data Center, *E85 Fueling Station Locations by State*, available at http://www.afdc.energy.gov/data/10367.

[6] The number of stations carrying E85 in Minnesota declined from 350 in 2013 to 293 at the end of 2104, and has declined by another 8 stations since then. *2015 Minnesota E85 + Mid-B lends Station Report*, Minnesota Department of Commerce, June, 2015, available at http://mn.gov/commerce/energy/images/2015-05may-e85.pdf.

rack injection meters, and rack automation control systems.[7] The installation of terminal injection projects can cost millions of dollars,[8] and terminal owner-operators need the support and long-term financial commitment of all rack customers to proceed with the necessary capital investments. Because not all customers are in need of RIN generation, critical consensus for investing may never mature. This can delay or foreclose the necessary investments in biodiesel infrastructure. This would not happen if all of the users of the terminal were equally obligated. Importantly, I believe one of the underlying reasons that the program has failed to work as intended also presents a potential solution.

3. CHANGING THE POINT OF OBLIGATION

a. Background

The issue of the appropriate point of obligation has been understood as a critical choice in the structure of the RFS since the inception of the program. Where the compliance obligation falls within the fuel supply chain has a tremendous impact on the RFS' ability to allocate costs, award benefits, incentivize changes in the market, and achieve the goals set out by Congress in the statute. Before discussing why this issue is critically important moving forward, it is important to review the history of EPA's deliberations on this subject and understand how EPA arrived at placing the point of obligation on refiners and importers (*i.e.*, the parties who produce and supply fuel to the rack at fuel terminals) versus blenders (*i.e.*, those parties actually blending the renewable fuel into gasoline and diesel).

In the initial phase of the RFS—from 2005-2007—EPA largely based its decision on point of obligation on ease of administration. As EPA stated, "[w]hen the RFS1 regulations were drafted, the obligations were placed on the relatively small number of refiners and importers rather than on the relatively large number of downstream blenders and terminals in order to minimize the number of regulated parties and keep the program simple."[9]

In 2007, with the amended program placing increased renewable mandates onto the system, EPA once again considered the issue of whether to place the point of obligation on refiners who provide fuels to the market for further distribution at the rack or on the blenders who actually put the renewable fuel into the system. In doing so, EPA considered a new issue—the disparity in compliance burden between major integrated refiners who possess blending operations (which generate RINs) and refiners who are primarily focused on refining and do not generate their own RINs. EPA framed the issue in its 2009 proposed rule as follows:

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[7] *See, e.g.*, Michael Leister, *Biofuels Blending Infrastructure*, SAE Government and Industry Conference, May 13, 2008; Robert Jagunich, *Biofuels Mid-Stream Infrastructure Requirements*, California Energy Commission Apr. 14, 2009; Biodiesel Magazine, *Infrastructure to Market*, Sept. 10, 2010; EN Engineering, *Terminal Biodiesel Infrastructure Upgrade*, May 15, 2014, available at http://www.enengineering.com/projects/terminal-biodiesel-infrastructure-upgrade/.

[8] *See, e.g.*, California Energy Commission Report, 2011-2012 Investment Plan For the Alternative and Renewable Fuel and Vehicle Technology Program (Report CEC-600-2011-006-CTF), at 116, Aug. 2011; Biodiesel Magazine, *Infrastructure to Market*, Sept. 10, 2010.

[9] *Regulation of Fuels and Fuel Additives: Changes to Renewable Fuel Standard Program; Final Rule,* 75 Fed. Reg. 14670, 14722 (March 26, 2010) (hereinafter, the "RFS2 Final Rule").

> The result is that in some cases there are significant disparities between obligated parties in terms of opportunities to acquire RINs. If those that have excess RINs are reluctant to sell them, those who are seeking RINs may be forced to market a disproportionate share of E85 in order to gain access to the RINs they need for compliance. If obligated parties seeking RINs cannot acquire a sufficient number, they can only carry a deficit into the following year, after which they would be in noncompliance if they could not acquire sufficient RINs. The result might be a much higher price for RINs (and fuel) in the marketplace than would be expected under a more liquid market. Given the change in circumstances brought about through EISA, it may be appropriate to consider a change in the way that obligated parties are defined to more evenly align a party's access to RINs with that party's obligations under the RFS2 program.[10]

In addition to describing the problem, EPA also considered a potential solution—moving the point of obligation from refiners to blenders—specifically recognizing the impact of the blendwall on the viability of the RFS. EPA described the issue as follows:

> Given the change in circumstances brought about through EISA, it may be appropriate to consider a change in the way that obligated parties are defined to more evenly align a party's access to RINs with that party's obligations under the RFS2 program. The most straightforward approach would be to eliminate [unfinished gasoline] from the list of fuels that are subject to the standard, such that a party's RVO would be based only on the non-renewable volume of finished gasoline or diesel that he produces or imports. Parties that blend ethanol into [unfinished gasoline] to make finished gasoline would thus be obligated parties, and their RVOs would be based upon the volume of [unfinished gasoline] prior to ethanol blending. Traditional refiners that convert crude oil into transportation fuels would only have an RVO to the degree that they produced finished gasoline or diesel[.] Since essentially all gasoline is expected to be E10 within the next few years…this approach would effectively shift the obligation for all gasoline from refiners and importers to ethanol blenders (who in many cases are still the refiners).…a variation of this approach would be to move the obligations for all gasoline and diesel downstream to parties who supply finished transportation fuels to retail outlets or to wholesale purchaser-consumer facilities.
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> This variation would have the additional effect of more closely aligning obligations and access to RINs for parties that blend biodiesel and renewable diesel into petroleum-based diesel…it would have certain advantages. Currently, blenders that are not obligated parties are profiting from the sale of RINs they acquire through splash blending of ethanol. By eliminating [unfinished gasoline] from the list of obligated fuels, these blenders would become directly responsible for ensuring that the volume requirements of the RFS program are met, and the cost of meeting the standard would be more evenly distributed among parties that blend renewable fuel into gasoline. With obligations placed more closely to the points in the distribution system where RINs are made

[10] *Regulation of Fuels and Fuel Additives: Changes to Renewable Fuel Standard Program; Proposed Rule*, 74 Fed. Reg. 24904, 24963 (May 26, 2009) (hereinafter, the "RFS2 Proposed Rule").

available, the overall market prices for RINs may be lowered and consequently the cost of the program to consumers may be reduced. [11]

Despite its recognition of this issue, in the 2010 final rule, EPA elected not to change the point of obligation. Once again, EPA cited administrative considerations ("a change in the designation of obligated parties would result in a significant change in the number of obligated parties and the movement of RINs, changes that could disrupt the operation of the RFS program during the transition from RFS1 to RFS2.") but the Agency did acknowledge that it remained concerned about this issue and that it would revisit the issue of point of obligation if necessary. As EPA stated, "[w]e will continue to evaluate the functionality of the RIN market. Should we determine that the RIN market is not operating as intended, driving up prices for obligated parties and fuel prices for consumers, we will consider revisiting this provision in future regulatory efforts."[12]

b. EPA Should Revisit the Point of Obligation

Based on my review of the data and my experience and knowledge gleaned from meeting with a wide and diverse range of stakeholder groups, it is apparent to me that the current RIN market dictates EPA revisiting the RFS' point of obligation. Before elaborating further on this point, it is important to state clearly my view that EPA has ample authority to address the point of obligation in the current rulemaking. The point of obligation was addressed in both the EPA's proposed and final rules governing the program in 2009 and 2010 so the Agency unquestionably has the statutory authority to address the issue. Additionally, impacts associated with the point of obligation on the RINs market are explicitly discussed in EPA's current proposed rule.[13]

The current point of obligation is a significant factor inhibiting greater amounts of E85, and perhaps biodiesel, from reaching the market due primarily to the lack of properly aligned incentives and the resulting shortfall in blending infrastructure expansion. Reaching this conclusion only requires extending the reasoning acknowledged above by EPA in 2009, namely: a portion of obligated parties, refiners with large marketing operations, are almost immediately long on RINs at the beginning of every compliance period, a position that occurs because when they market more fuel than they refine, they generate more RINs through blending than they need for their own compliance obligations. Blending ethanol at wholesale distribution facilities at scale often requires modifications to the infrastructure.[14] At many distribution facilities, however, obligated parties long on RINs are the largest customers, and in a position to effectively block installation of infrastructure to promote large scale E85 blending. Once the RIN-long party has met its own RVO, it has little incentive to participate financially in the expansion of blending infrastructure to allow for higher level blends (E85 and E15) or additional

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[11] *See id*.

[12] *See* RFS2 Final Rule at 14722.

[13] *Renewable Fuel Standard Program: Standards for 2014, 2015, and 2016 and Biomass-Based Diesel Volume for 2017*, *Proposed Rule*, 80 Fed. Reg. 33100, 33108 and 33129 (June 10, 2015).

[14] *See, e.g.*, Michael Leister, *Biofuels Blending Infrastructure*, SAE Government and Industry Conference, May 13, 2008; *Daniel Measurement and Control Application Guide, An Introduction to Blending Ethanol*, available at http://www2.emersonprocess.com/siteadmincenter/PM%20Daniel%20Documents/Ethanol_Blending.pdf; Robert Jagunich, *Biofuels Mid-Stream Infrastructure Requirements*, California Energy Commission, Apr. 14, 2009.

advanced renewable fuels (B5-B20) because they are already have the RINs they need and do not want additional blending to lower the value of their excess RINs.

Under the current program structure, these parties also may not even have an incetive to blend to the blendwall. Because they have the RINs that they need, and the availability of fewer RINs can keep RIN prices higher, generation of fewer RINs could help them maximize their return on existing blending (E10) and, contrarily, have a direct disincentive to facilitate expansion of infrastructure and blending (B5, E85), as meeting the mandate level decreases RIN profits generated from being a RIN-long party. This is especially clear when the industry confronts the blend wall and additional capital or marketing is required to generate the RINs necessary to meet EPA's goals of increasing renewable fuels consumption and making the RFS program successful. Conversely, the RIN-short refiners supply fuels to the market, but do not market fuel and therefore do not participate in any significant way in blending of renewable fuels, thus lacking access to, or control over, RIN generating blending infrastructure.

Ironically, the current structure, which puts the point of obligation on refiners instead of where the actual compliance is achieved at the point of blending, provides the least incentive to those who are best situated to undertake the blending that the RFS seeks to motivate and imposes the greatest obligation on the parties who are most poorly situated to increasing the volumes of renewable fuel that is blended into the fuel supply. Whether RIN-long refiners sell these RINs or bank them these parties are not incentivized to invest significantly in biodiesel, advanced fuels or E-85 infrastructure that would enable more renewable fuel to reach the market. They can remain relatively content to hold their long position. They are so competitively advantaged that they do not have to discount fuels to incentivize higher-level blends and thus protect their RIN windfall. In fact, they are actually incentivized to forestall more renewable fuel from entering the market, thus protecting hydrocarbon volumes being sold and keeping the RIN price as high as possible.

Other obligated parties, in turn, are inherently short on RINs—*i.e.,* they do not have blending operations and therefore have no direct access to RINs—and are faced with ever-increasing compliance costs. EPA's current view is that the parties facing ever increasing costs for RINs will be incentivized to build new infrastructure or to invest in blending operations. To me, it is inappropriate to presume this as a path to compliance. This is akin to telling a product's manufacturer that it also must become its distributor. Stated differently, EPA expects that RIN pricing will become so severe, that it will reverse the last 20 years of de-integration in the refinery industry. EPA aims to have a RIN price that substantially alters the current market to force disadvantaged parties to enter into new business models, whereby they would participate in the entire fuel supply chain from production to bulk distribution, through terminals and ultimately to the point of sale to the retail consumer, thus gaining access and control of the volumes of renewable fuels blended and sold to consumers. It is hard to envision how this is beneficial for the refining sector as a whole, renewable fuel producers, consumers, or the RFS. Additionally, the consolidation that EPA suggests as a means of compliance might even raise concerns at other agencies like the Federal Trade Commission and antitrust division of the Department of Justice.[15]

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[15] *See, e.g.,* Edward B. Schwartz, *Toughened oversight raises antitrust hazards of oil industry collaboration*, Oil & Gas Journal (April 2013), available at: http://www.ogj.com/articles/print/volume-111/issue-4/general-interest/toughened-oversight-raises-antitrust.html.

EPA believes that the RIN-short parties can be incentivized by high RIN prices to force E85 into the market place. However, given the unbalanced market dynamics described above, pricing alone will be slow to achieve market penetration. Moreover, without pump-on-pump pricing competition for E85 at the retail level, the value of the RIN is, on average, not being passed through to the retail consumer, undermining the operation of the program by failing to use the value of RINs to lower the retail price of E85 making it more attractive to consumers and build demand for the fuel.

EPA also needs to consider the operating and export incentives created with a high RIN price. If a refiner cannot generate RINs, the only options the RIN-short refiners have other than paying high RIN prices to RIN-long parties who are disincentivized to meet the mandated volumes -- are curtailing production or exporting. If they do either, the fuel supply in the United States shrinks, and there is both less competition for the advantaged refiners and less opportunity for renewable blending. It will make meeting the RVO targets that much more difficult and likely increase the domestic cost of fuel without incentivizing the blending of renewable fuels to the degree that EPA seeks to require.

Ironically, we need not wreak havoc to realign the incentives in the market. We need only place the obligation where it will evenly apply the burden and let the market work. If EPA moves the point of obligation to the owner of the hydrocarbon fuel just before blending, it will assure that every person controlling the blending will be fully incentivized to maximize the blending of renewable fuels into the fuel supply because they will need RINs in proportion to the fuel they blend and not in proportion to the fuel that they produce.

c. No Real Administrative Advantage to Refiners

Finally, on the point of administrative ease, EPA is already regulating the blenders under the RFS program. All RIN related transactions must be executed via the EPA Moderated Transaction System (EMTS), which requires transactional, quarterly, and annual reports for all registered users.[16] As such, moving the point of obligation to the rack does not introduce any new parties to the system. According EPA's recently release EMTS data, the great majority of RINs are separated by currently obligated parties.[17] By moving the obligation to the rack, refiners will still be the predominant obligated parties, however the proportionality of the obligation will correspond to their blending capability and thus incentivize them to push as much renewable fuel as possible.

Under the current program structure, there is a misalignment between the parties obligated to ensure that blending occurs and the parties that are situated in the supply chain to blend. As EPA recognized in 2009, moving the point of obligation to blenders can better align the obligation and

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[16] *See* 40 CFR 80.1451.

[17] According to 2014 EPA EMTS data report on July 10, 2015: 11,536,302,607 of 14,052,892,893 total D6 RINs separated by obligated parties. 82.1% of all D6 RINs separated in 2014 were done by obligated parties. 84.3% when only considering blenders and obligated parties as described in the ideal EPA sequence. Greater than 11.5 billion RINs were separated by obligated parties as compared to just 2.1 billion by blenders. http://www.epa.gov/otaq/fuels/rfsdata/2014emts.htm.

the ability to blend. Moreover, moving the point of obligation to the blender more evenly distributes the cost of obligation across the obligated parties and likely reduces cost of the program to consumers. Rather than incentivizing major obligated parties to hoard RINs and withhold from infrastructure investments, obligated parties would now be able to compete on an even playing field as the RFS drafters envisioned. With all of the major parties competing for E85 market share, consumer prices have the best opportunity to be competitive with E10 and gain penetration into the market. Ultimately, this represents the best chance for policymakers to get past the difficult problems presented by the blend wall and to achieve the fundamental goal of the program—getting more renewable fuel into the market.

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Once again, having worked with you and your colleagues on this issue over the last two years, I have tremendous appreciation for the difficult decisions before you and admiration for your tireless devotion to crafting an effective program. Left unaddressed in my recommendations above is any prescription for amending the underlying statute which, under current circumstances, appears difficult and yet worthy of review and perhaps a future comment. *Until* then, I very much appreciate your invitation to comment on the proposal and I look forward to continuing to participate in the dialogue as the RFS moves forward.

Sincerely,

Ron Minsk

Ronald E. Minsk