July 26, 2013

The Honorable Fred Upton
Chairman, Committee on Energy and Commerce
U.S. House of Representatives

The Honorable Henry Waxman
Ranking Member, Committee on Energy and Commerce
U.S. House of Representatives

RE: AEC Comments RFS White Paper: Implementation Issues

Dear Chairman Upton and Ranking Member Waxman,

The Advanced Ethanol Council (AEC) appreciates the opportunity to comment on the Renewable Fuel Standard Assessment White Paper: Implementation Issues. The AEC represents worldwide leaders in the effort to develop and commercialize the next generation of ethanol fuels, ranging from cellulosic ethanol made from dedicated energy crops, forest residues and agricultural waste to advanced ethanol made from municipal solid waste, algae and other feedstocks. The AEC is the only advanced biofuel group with the singular purpose of promoting advanced ethanol fuels and technologies.

General Comments on the RFS: As discussed in prior comments submitted as part of the white paper process, it is important to consider why the Renewable Fuel Standard (RFS) is necessary as an underlying component of any review of the program. If you investigate the history of ethanol use in the United States, it becomes evident that the U.S. liquid fuels industry is not price driven, open or competitive. In a competitive marketplace, if an innovator presents a valuable product for a competitive price, there is a reasonable expectation of demand. This free market principle gives investors a durable benchmark against which to judge the value of their product, which in turn attracts investment to better products. This important market dynamic is largely absent from the global liquid fuels marketplace for a number of reasons, including but not limited to the highly consolidated, vertically integrated characteristics of the oil industry, particularly with regard to wholesale markets, the anti-competitive price distorting behavior of OPEC, and blending constraints such as the blend wall. There is no better example of the consequence of this problem than ethanol, which has generally been offered at a significant discount to gasoline without increased demand significantly beyond the volume of fuel required for blending by the U.S. government.¹ With specific regard to the advanced biofuels industry, it is important to emphasize that one of the primary problems with a non-competitive marketplace is its failure to properly reward innovation. In other words, if the market does not necessarily demand a better and cheaper product,

¹ Some have argued that this discount reflects the lower energy density of ethanol relative to gasoline. This is a misleading argument, because ethanol also contains much higher octane (with lower toxicity) than gasoline, which puts ethanol in a much more expensive class of premium fuel products that are relied upon to meet the minimum performance and environmental standards for gasoline. It is not a coincidence that the primary alternatives to ethanol for octane trade at prices that often exceed $5.00 per gallon.
then there is no impetus to create one (both from within and outside of the fossil fuel sector). This is one of the primary reasons why the United States remains largely dependent on petroleum to meet consumer demand for liquid fuels. It is also the overarching reason why the RFS is necessary. The RFS provides innovators with a predictable (and flexible) expectation for demand in a marketplace that does not properly reward innovation. Most importantly, the RFS is working. The RFS statutory schedule required 15.2 billion gallons of renewable fuel blending in 2012, of which 2 billion were advanced biofuels. The renewable fuels industry met the challenge. Just five years after the enactment of RFS2, the cellulosic biofuels industry is breaking through at commercial scale.\(^2\) Given the realities of world and domestic liquid fuels markets, the cornerstone of ongoing investment and development in the advanced biofuels sector is the consistent, unchanged and durable administration of the RFS. The alternative to the RFS – or any gallons waived from the RFS – is not innovation in other areas; it is simply more fossil fuels that are increasingly scarce and carbon intensive.

General Comments on the Impacts of the RFS from an Implementation Perspective: One of the primary points of criticism for opponents of the RFS is there are implementation issues. In fact, there have been very few implementation issues to date, and those that have occurred have been addressed administratively by U.S. EPA. We discuss most of the alleged issues in this document, but would like to highlight a few examples:

- **“The RFS is Not Working to Catalyze New Industries.”** The RFS is the highest priority target for the oil industry precisely because it is working to diversify a petroleum-dominated liquid fuel marketplace with various types of renewable fuel. The original RFS targets for both the conventional and advanced biofuel pools have been achieved through 2012, including 2 billion gallons of advanced biofuels. The RFS has created an industry that now supports roughly 400,000 jobs, produces about as much fuel as we import from Saudi Arabia annually, and delivers a product that is consistently cheaper than gasoline. Higher RIN prices are providing a further market incentive to blend more renewable fuels without increasing costs to the consumer. And the cellulosic biofuels industry is just beginning to break through at commercial scale, just 5 years after the enactment of RFS2 in December 2007.

- **“The Cost of Compliance Is Skyrocketing Due to Higher RIN Prices.”** Opponents of the RFS want Congress to believe that because RIN prices have increased, the cost of compliance with the RFS has increased. This argument relies on a number of myths about how the RIN program works:

  1. The price of a RIN credit is not the equivalent of the cost of compliance with the RFS. It is an optional cost of non-compliance with the RFS. Oil companies have essentially three choices to comply with the RFS. They can either buy a wet gallon of renewable fuel

\(^2\) See AEC Progress report, [http://ethanolrfa.3cdn.net/96a2f9e04eb357bbbd_1sm6vadok.pdf](http://ethanolrfa.3cdn.net/96a2f9e04eb357bbbd_1sm6vadok.pdf).
(which comes with an attached RIN credit for free, which they can then sell), buy a RIN credit on the open market, or retire a RIN they stockpiled from the previous year. Oil companies are usually the ones selling the RINs, and they only incur the cost of a RIN credit when they choose not to buy more renewable fuel. This means that the entity profiting from the RIN sale may not only be an oil company, but their alleged compliance cost may actually be a profit.

2. In 2013, oil companies appear to have chosen to buy RINs instead of using more of a renewable fuel (ethanol) that is more than 50 cents per gallon cheaper than gasoline. This is case-in-point for the type of market distorting behavior that the RFS seeks to fix (i.e. oil companies are ignoring market signals to blend more ethanol at a discount to gasoline to instead buy a RIN, which they then complain about to Congress).

3. Higher RIN prices are a sign that the RFS is working, not vice versa. If oil companies want to avoid using renewable fuel by buying RINs, this optionality provides some level of flexibility in the marketplace that oil companies supported in 2007. However, this non-compliance will increase the price of a RIN if prevalent enough in the marketplace, which in turn incents the increased blending of renewable fuel by those interested in acquiring the now more valuable RIN with the wet gallon of renewable fuel (including independents). In essence, higher RIN prices incentivize more blending of renewable fuel. And that’s good news for both the RFS and the American consumer, because the RFS is working to create jobs, reduce foreign oil dependence and moderate pump prices.

In summary, RIN prices are an optional cost of non-compliance, oil companies often profit from higher RIN prices, higher RIN prices help facilitate the RFS, and elevated RIN prices do not necessarily increase the cost of compliance with the RFS.

- “We cannot blend more renewable fuel.” This is patently false. E15 is now certified as a legal fuel for roughly three quarters of the passenger vehicles on the road today, and even small penetration of E15 allows billions of gallons of further ethanol blending. Some oil companies, like Philips 66, are actually making it more difficult for franchisees to blend more ethanol. Obligated parties can also facilitate more E85 use, more biodiesel use, more renewable diesel use – without infrastructural or vehicle warranty problems. Again, oil companies are choosing not to blend more biofuel, most likely because they have chosen to take a run at the RFS politically.
“RIN Fraud.” Much has been made of the RIN fraud issue, but just 0.3% of total RINs generated have been found to be fraudulent. It is hard to imagine a regulatory system in any sector having a better record when it comes to consumer fraud.

“EPA is Forcing the Use of a Non-Existent Fuel in Cellulosic Biofuel.” U.S. EPA has the discretion within the statute to waive the cellulosic biofuel blending standards if the fuel is not available. The agency waived 98 percent of the cellulosic biofuel requirements from 2010-2013, but **effectively** waived 99.8 percent of the cellulosic biofuels requirements during this period because it has required the oil industry to acquire just 4.26 million waiver credits to date (representing 0.2 percent of the 1.85 billion gallons of cellulosic biofuels required by the statute from 2010-2013). Now, just five years after the signing of RFS2, the cellulosic biofuel industry is building its first wave of commercial facilities.

“U.S. EPA is Refusing to Exercise Discretion to Alleviate Pressures.” In addition to waiving nearly the entire cellulosic biofuel obligation for oil companies, U.S. EPA **voluntarily** remanded its blending requirements for previous years after the DC Circuit ruling earlier in the year. The one area in which U.S. refused to use its discretion to waive RFS gallons was in the wake of the 2012 drought. But the waiver would not have provided relief because there is year-to-year flexibility built into the RIN program by virtue of the fact that obligated parties can carry over 20 percent of their RFS obligations to ensuing years. In simple terms, oil companies have the ability to defer 20 percent of their obligation to 2013, which more than accounted for forecasts covering the potential impact of the drought. Even with the drought, the U.S. put out its 8th largest corn crop in history. The facts simply did not support the case for a waiver.

As stated in prior AEC comments, Congress is right to ask and answer questions about the energy policy impacts of different fuels. However, we encourage Congress to avoid assessing biofuel production in a vacuum. It is one thing to be responsible about minimizing the potential negative impacts of a certain fuel, but it is quite another to arrest the development of one fuel (based on these concerns) if the real world alternative is measurably worse. It is quite clear that the alternative to renewable fuels under the RFS is unconventional oil in the near to intermediate term. While the United States does have reserves of tight oil in Bakken and Eagle Ford, these reserves are not enough to fundamentally change the energy picture for the United States when it comes to domestic fuel production. Stakeholders from many sectors will be submitting their ideas for how the RFS could be more (or less) protective of the broader energy policy goals of the country, but the AEC does not believe that opening up the RFS under any of these pretenses will ultimately result in a more effective policy when it comes to its primary objective of moving the United States toward greater energy independence and security via the increased production and use of clean renewable fuels. In fact, and as discussed in previous public comments submitted by the AEC as part of this process, changing the rules just one-third of the way through a 15-year policy commitment will discourage existing and future investors from relying on Congress to hold course when it comes to making clean energy investments. As former Shell Oil President John
Hofmeister recently stated, “[w]e need a competitor for oil. We need to open the market to replacement fuels ... Competition will drive transportation fuel prices down, structurally and sustainably.” The need for competition for oil does not change by virtue of the emergence of new oil fields in the United States. The RFS is succeeding at providing competition, and it is critical that Congress not waiver on the 15-year program structure it established in 2007.

Please find below our responses to the specific questions released by the Committee:

1. Does EPA’s annual RVO-setting process work well or are there concerns? If there are problems, are they correctable by EPA? Are any statutory changes needed?

There are no statutory changes needed. U.S. EPA has the flexibility to adjust the RFS blending requirements from year-to-year in the cellulosic biofuel pool. If the pool is adjusted downward, which it has been every year since the RFS started to require the blending of cellulosic biofuels, U.S. EPA has the flexibility to also reduce the broader advanced biofuels category. To date, U.S. EPA has reduced the cellulosic biofuel blending requirement by roughly 98 percent by volume, and has allowed other advanced biofuels (e.g. biodiesel) to replace that volume without also reducing the advanced biofuel pool. This decision is consistent with the broader intent of Congress, in passing the RFS, to create domestic jobs and reduce U.S. dependence on foreign oil with low-carbon, advanced biofuels. If there is not enough advanced biofuel volume going forward to replace the volumes of cellulosic biofuel waived, we expect U.S. EPA to begin to reduce the advanced biofuel pool. This has not been necessary to date, but we encourage Congress to steer clear of this technical, decision making process. Obligated parties would like to require U.S. EPA to only require as much renewable fuel as was produced in the previous year because this would effectively short-circuit the growth aspect of the RFS by making prospective off-take agreements (i.e. in future years) nearly impossible. So while this proposal might seem reasonable on its face, it would effectively neuter the RFS where it stands today.

2. Are the cellulosic biofuel provisions in the RFS working well or do they need to be changed? Has EPA modified its cellulosic biofuel standard-setting process for 2013 and future years appropriately, following the DC Circuit’s decision to vacate EPA’s 2012 standard? If not, what further changes are needed? Should EPA be required to reduce the advanced biofuel and total renewable fuel volumes when it lowers the cellulosic biofuel volume? What would be the consequences of such a change?

The cellulosic biofuel provisions in the RFS were designed to address several market realities: (1) the ability to secure off take agreements (i.e. prospective sales agreement with oil companies) is critical to the effort to finance alternative fuel production facilities; (2) major integrated oil companies, which control critical access points in wholesale liquid fuel markets, are generally unmotivated to sign off take agreements for non-petroleum fuels; and, (3) the production of cellulosic biofuel relies on emerging technology, which by definition means that there is some year-to-year uncertainty with regard to
commercial readiness. In essence, Congress responded to this challenge by passing a waivable cellulosic biofuel standard, which facilitates the off take of whatever amount of cellulosic biofuel can be produced in the immediate term, with the balance of the RFS blending target for cellulosic biofuels being waived if there is a shortfall. In recent months, and in the wake of recent lawsuits, U.S. EPA has intensified its industry surveying process to ensure that the annual RVOs accurately reflect actual gallons coming online in the marketplace. The proposed RVO for 2013 for cellulosic biofuels is based on the expected output from facilities already built, and will almost certainly be adjusted downward in the final rule.

U.S. EPA should not be required to adjust the advanced biofuel pool downward when it waives gallons for cellulosic biofuels. The objective of the RFS is to create domestic jobs and reduce foreign oil dependence with various types of renewable fuels. There is flexibility within the advanced biofuel pool because different types of fuel scale at different rates based on market conditions that often cannot be predicted (including the global recession). The flexibility to maintain the advanced biofuel pool is a critical part of U.S. EPA’s ability to achieve the objectives set forth by the Energy Independence and Security Act of 2007 (EISA07). Requiring U.S. EPA to simultaneously reduce the advanced biofuel and overall renewable fuel pool when it waives cellulosic biofuel blending requirement would be the equivalent of using petroleum (much of which would be sourced from abroad in a global marketplace) instead of other types of available advanced biofuel (i.e. U.S. EPA only maintains the advanced biofuel pool if other types of advanced biofuel are available for commercial use). This would turn the overarching objective of EISA07 on its head.

3. How can EPA improve its enforcement of the RIN credit trading program? Does EPA have the resources that would be required to oversee RIN production and enforce against production of invalid RINs? What role should obligated parties have in verifying the integrity of RINs and what additional information do they need to exercise due diligence? Will EPA’s proposed voluntary third-party quality assurance program address the concerns of all RIN market participants? If not, what else is needed?

The RIN credit trading program is a first-of-kind regulatory structure that is being well managed by U.S. EPA. Much has been made of the RIN fraud issue but just 0.3% of total RINs generated have been found to be fraudulent. As pointed out by RFA in testimony before Congress, not a single one of the 38.6 billion D6 RINs (typically generated from corn ethanol) have been found to be fraudulent. U.S. EPA response to the advent of an isolated fraud problem was swift and appropriate, and there is nothing new about the “buyer beware” approach to RIN credit markets that U.S. EPA has chosen in the context of virtually every other transaction occurring every day in the U.S. and global economy. With regard to U.S. EPA’s new voluntary quality assurance program (QAP) for RINs, it is the product of several years of discussion about how best to help interested parties validate the authenticity of a RIN. While many parties will continue to trade RINs as they have for years, QAP is a good option to have in the event that buyers or sellers want additional protections. Given that the rate of fraud is so extraordinarily low, and the QAP
regulation already provides real time transparency/validation data to those who want it, there is no need for Congress to act legislatively to improve this very important credit trading program.

4. What is responsible for the rise in ethanol RIN prices in 2013? Can future increases in RFS compliance costs be avoided, and if so, how? If the government takes action to limit increases in RFS compliance costs, how might such action affect this market-based program?

The price of a RIN credit is not the equivalent of the cost of compliance with the RFS. It is an optional cost of non-compliance with the RFS. Oil companies have essentially three choices to comply with the RFS. They can either buy a wet gallon of renewable fuel (which comes with a RIN credit for free, which they can then sell), buy a RIN credit on the open market, or retire a RIN they stockpiled from the previous year. Oil companies are usually the ones selling the RINs, and they only incur the cost of a RIN credit when they choose not to buy more renewable fuel. This is a very important clarification because it means that the entity profiting from the RIN sale may not only be an oil company, but this alleged compliance cost may actually be a profit. It also means, in practical terms, that oil companies are choosing to buy RINs instead of using more of a renewable fuel (ethanol) that is more than 50 cents per gallon cheaper than gasoline. This is case-in-point for the type of market distorting behavior that the RFS seeks to fix. Further, if some oil companies are profiting from RIN sales and others are paying for RINs, the net cost to consumers could very well be zero. Oil companies are framing the RIN program, which they supported at the inception of RFS2, as a cost of compliance because they would prefer that the RFS be repealed.

We also encourage the Committee to consider that higher RIN prices are a sign that the RFS is working, not vice versa. If oil companies want to avoid using renewable fuel by buying RINs, this optionality provides some level of flexibility in the marketplace that oil companies supported in 2007. However, this non-compliance will increase the price of a RIN if prevalent enough in the marketplace, which in turn incents the increased blending of renewable fuel by those interested in acquiring the now more valuable RIN with the wet gallon of renewable fuel. In essence, higher RIN prices incentivize more blending of renewable fuel. And that’s good news for both the RFS and the American consumer, because the RFS is working to create jobs and reduce pump prices. Higher RIN prices and the certification of E15 as a legal fuel for 2001 and later vehicles are working together to eliminate the ethanol blend wall and bring real choice to the pump. The last thing Congress should do is get involved with RIN markets at the pricing level. The system is working as designed, and if left alone, will facilitate compliance with the RFS.

To the question of why higher RIN prices in 2013, it is very difficult to know what is driving up the price of RINs because RIN trading is not transparent. It could be large purchases of RINs by a small number of oil companies. It could be speculators playing the RIN marketplace. There are a very small number of obligated parties in the RFS, because so few companies provide petroleum fuels to American
consumers, so the behavior of a few could fundamentally change the price of RINs. If Congress is concerned about RIN markets, it should request trading information from U.S. EPA. If appropriate, Congress could take the next step of working with U.S. EPA to ensure that there is more transparency in the RIN trading markets. This solution does not require legislative change to the RFS.

5. Are increases in RIN prices likely to affect the production or marketing of renewable fuels? If so, how might this affect implementation of the RFS and RIN prices moving forward?

As discussed in the answer to Question #4, higher RIN prices are an indication of: (1) an increased reliance on credits as opposed to gallons to comply with the RFS; and, (2) the RFS working as designed.

With regard to the increased reliance on credits, the oil trade associations allege that this is happening because they cannot blend more ethanol because of the ethanol blend wall. This is a misleading claim on many fronts. First, E15 is now a certified fuel for roughly 3 out of 4 passenger vehicles on the road today, and a relatively small penetration of E15 in the marketplace alleviates the ethanol blend wall. Instead of facilitating the use of more E15, many oil companies are standing in the way by making it more difficult to add this optionality at the pump.3 Second, oil companies can more aggressively market E85, which has been around for decades and is much cheaper than gasoline. Third, oil companies can use more biodiesel or renewable diesel in distillate blends. In essence, oil companies are alleging that their back is against the wall to protect market share and take a run politically at the most game changing liquid fuel policy ever passed by Congress.

With regard to the RFS working as designed, higher RIN prices reflect higher demand for RINs as an alternative to the more intended path to compliance with the RFS (buying wet gallons of renewable fuel). But higher RIN prices also provide an incentive – especially for petroleum independents more concerned about immediate term competitiveness than longer term market domination – to use more renewable fuel. In simple terms, higher RIN prices help alleviate the blend wall. Higher RIN prices also incent the production and use of advanced biofuels, because a functioning RIN market (with real value for the RINs) demonstrates to investors that the market incentive created by the RIN program is durable and will actually change behavior in a largely non-competitive marketplace. Advanced biofuel RINs have carried some value for many years, and this value spurs innovation in the biofuels sector.

If higher RIN prices spur more renewable fuel marketing, the next question is what happens to RIN prices when this happens? When oil companies ultimately decide to start using more renewable fuel as an alternative to buying RIN credits, which basic market principles suggest should have already happened, RIN prices should fall. In essence, RIN prices fall when more renewable fuel is used. The current price of renewable fuel (ethanol especially) suggests that renewable fuel use should increase

and RIN prices should decline. This outcome depends, however, on the behavior of a highly consolidated, vertically integrated industry that has the market power to stand market principles on their head and further drive up RIN prices. But again, the RFS is not the problem itself when it comes to an industry-wide decision to avoid blending cheaper renewable fuels; it is the solution to the problem.

6. Should the provisions applicable to obligated parties be modified to provide relief for entities unable to generate sufficient RINs? Would such an approach apply different compliance requirements for refiners that blend ethanol and refiners that do not blend ethanol? What would be the justification for and potential consequences of such a change, including the potential for market distortions?

We strongly recommend that Congress avoid getting involved with relieving certain segments of the RIN marketplace. Any concern about undue RIN pressure should be addressed administratively via U.S. EPA, and certainly does not require legislative action.

First, to clarify, RINs are not generated by obligated parties. They are generated by the renewable fuel producer, and conventional ethanol markets are actually over supplied. This means that there is capacity in the market (with RINs) that is not being used.

Second, higher RIN prices do not necessarily mean that not enough RINs are being generated. In fact, this is highly unlikely given the market conditions described above. Higher RIN prices more likely suggest that one or more entities are holding RINs, or one or more entities took heavy positions in a thinly traded marketplace. The solution here is more transparency at the regulatory level.

Third, protecting entities from “RIN shortages” could have any number of deleterious consequences. Such an allowance will short circuit the predictability of a freely traded marketplace and provide some incentive for companies to stay out of the market and not comply with the RFS in an effort to seek relief at the end of the year. Such an effort would almost certainly create inequities among obligated parties, which in turn could have legal ramifications. And laying controls over the marketplace could distort RIN prices in ways that cannot be foreseen, including higher prices.

Fourth, and most importantly, manipulating a credit trading system that is working makes little sense. As discussed, RINs are traded within the industry to allow for year-to-year flexibility. There are those who profit in the oil industry from higher RIN prices, and those who do not. As such, RIN trading does not come with significant consumer cost. But higher RIN prices do facilitate ongoing compliance with the RFS and over time will ameliorate challenges like the blend wall. There is no reason to get involved with RIN markets, except by working with U.S. EPA administratively to ensure that trading is transparent and manipulation is not occurring in a thinly traded marketplace.
7. Is the RFS incentivizing refiners to make less gasoline available to the American market, either through increased exports or reduced refinery production? If so, can anything be done to address this?

Oil industry economist Phil Verleger recently called the threat to have less gasoline available for Americans “export blackmail” when asked about gasoline production in the context of RFS compliance. The oil industry has raised the prospect of increased exports and reduced refinery production, but publicly available data from the Energy Information Administration (EIA) demonstrates that these market dynamics are not actually occurring. For example, U.S. refiner/blender production of finished gasoline is higher in 2013 than it was in 2012. And exports of gasoline are roughly the same in 2013 in comparison to 2012, and are lower in 2013 than they were in 2011 (see charts below).

Oil industry claims about the reduced availability of gasoline are nothing more than scare tactics designed to convince Congress they need to repeal a forward looking policy that is creating jobs, finally introducing competition into the liquid fuels marketplace, and reducing U.S. dependence on foreign oil.

**Weekly U.S. Refiner and Blender Adjusted Net Production of Finished Motor Gasoline**

![Weekly U.S. Refiner and Blender Adjusted Net Production of Finished Motor Gasoline](image)

Source: U.S. Energy Information Administration
Thank you for the opportunity to comment on the RFS.

Sincerely,

R. Brooke Coleman
Executive Director
Advanced Ethanol Council (AEC)